

# **NEVADA DIVISION OF ENVIRONMENTAL PROTECTION**



## **ANALYSIS OF 2016 CALIFORNIA WILDFIRES AS EXCEPTIONAL EVENTS AND THEIR CONTRIBUTION TO HIGH OZONE CONCENTRATIONS IN FALLON, NEVADA**

FINAL Report  
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## LIST OF ACRONYMS AND ABBREVIATIONS

<b>agl</b>	Above ground level
<b>amsl</b>	Above mean sea level
<b>AQI</b>	Air Quality Index
<b>AQS</b>	Air Quality System
<b>BAQP</b>	Bureau of Air Quality Planning
<b>CFR</b>	Code of Federal Regulations
<b>EER</b>	Exceptional Event Rule
<b>FEM</b>	Federal Equivalence Method
<b>HMS</b>	Hazard Mapping System
<b>HYSPLIT</b>	Hybrid Single Particle Lagrangian Integrated Trajectory
<b>km</b>	kilometers
<b>m</b>	Meters
<b>mph</b>	Miles per hour
<b>NAAQS</b>	National Ambient Air Quality Standards
<b>NDEP</b>	Nevada Division of Environmental Protection
<b>NEI</b>	National Emissions Inventory
<b>NO</b>	Nitrogen Monoxide
<b>NO<sub>x</sub></b>	Oxides of Nitrogen
<b>O<sub>3</sub></b>	Ozone
<b>ppb</b>	Parts per billion
<b>Preparedness Level</b>	PL
<b>PM<sub>2.5</sub></b>	Particulate Matter Smaller than 2.5 Micrometers
<b>PM<sub>10</sub></b>	Particulate Matter Smaller than 10 Micrometers
<b>PST</b>	Pacific Standard Time
<b>tpd</b>	Tons per day
<b>U.S.</b>	United States
<b>USEPA</b>	United States Environmental Protection Agency
<b>UTC</b>	Coordinated Universal Time
<b>VOCs</b>	Volatile Organic Compounds

# **ANALYSIS OF 2016 CALIFORNIA WILDFIRES AS EXCEPTIONAL EVENTS AND THEIR CONTRIBUTION TO HIGH OZONE CONCENTRATIONS IN FALLON, NEVADA ON AUGUST 28, 2016**

## **1.0 INTRODUCTION**

The Nevada Division of Environmental Protection (NDEP) Bureau of Air Quality Planning (BAQP) operates a network of ambient air quality monitors at a variety of locations throughout the state of Nevada. In 2016, air quality monitoring was represented by eleven ambient air quality monitoring stations (Carson City (ozone [O<sub>3</sub>], particulate matter smaller than 2.5 micrometers in diameter [PM<sub>2.5</sub>]), Elko (particulate matter smaller than 10 micrometers [PM<sub>10</sub>]), Fallon (O<sub>3</sub>), Fernley (O<sub>3</sub>), Pahrump (PM<sub>10</sub>) and Gardnerville (PM<sub>2.5</sub>)) under the jurisdiction of the NDEP-BAQP. The United States Environmental Protection Agency's (USEPA) provides minimum site requirements to monitor for O<sub>3</sub> and PM based on Metropolitan Statistical Area population (40 Code of Federal Regulations [CFR] Part 58, Appendix D). The NDEP-BAQP's air monitoring network meets or, in most cases, exceeds the minimum network requirements. Ambient air monitoring data is collected and data quality is assured in accordance with 40 CFR 58; this data is submitted to the USEPA Air Quality System (AQS) database. The approval letter for the 2016 NDEP-BAQP Annual Network Plan is included in Appendix A. The data for 2016 was certified in May 2017. The Data Certification Letter was submitted to USEPA Region IX in May 2017 as well, and is included in Appendix B.

## **1.1 SCOPE OF REPORT**

Several wildfires were active in late August 2016. Smoke from two of the wildfires, the Soberanes Fire in Monterey County and the Mokulumne Fire in El Dorado County, impacted the Fallon, Nevada ozone monitoring site on August 28, 2016. The Soberanes Fire started on July 22, 2016 approximately ten miles south of Monterey Bay, California and burned a total of 132,127 acres. The fire was caused by an abandoned, illegal campfire. The lightning-caused Mokulumne Fire, located approximately 25 miles south of South Lake Tahoe, California, started August 18, 2016 and burned 655 acres. On August 26, 2016, smoke from the California wildfires began to impact western Nevada. Wildfire smoke continued to affect western Nevada through August 31, 2016. On August 28, 2016, the NDEP monitored an exceedance of the 2015 8-hour O<sub>3</sub> National Ambient Air Quality Standards (NAAQS) at the Fallon air quality monitoring site (AQS Site Code 32-001-0002) due to the smoke plume impacts. Both fires were 100 percent contained by October 11, 2016.

The NDEP is requesting exclusion of the August 28, 2016 8-hour O<sub>3</sub> data from the Fallon air monitoring site that met or exceeded the NAAQS as an exceptional event under the USEPA's regulation for *The Treatment of Data Influenced by Exceptional Events*; (81 Federal Register

68216; USEPA, 2016), known as the Exceptional Events Rule (EER; 40 CFR Parts 50 and 51). The purpose of this report is to provide documentation in support of this request. The wildfires in California were natural events that caused an exceedance of the federal standard for one of NDEP's Federal Equivalent Method (FEM) ozone monitors on August 28, 2016. The 8-hour average O<sub>3</sub> concentration reached 73 parts per billion (ppb) at the Fallon air monitoring station in Churchill County (AQS Site Code 32-001-0002). This document demonstrates that the 8-hour ozone exceedance on August 28, 2016 at the Fallon monitoring site meets the requirements for having been influenced by an exceptional event as stipulated in the EER. Table 1 lists the 8-hour ozone concentration at Fallon that is included in this request.

**Table 1. Eight-hour Federal Ozone Values at the Fallon Monitoring Site**

Monitoring Site	AQS Site Code	Maximum Daily 8-hour Average O <sub>3</sub> Concentration (ppb)	Date
Fallon	32-001-0002	73	08/28/2016

The elevated ozone concentration observed on August 28, 2016 occurred as a result of the emissions from wildfires in California. The NDEP-BAQP has submitted the 1-hour O<sub>3</sub> data from the affected monitor on the affected day to the USEPA AQS database and has placed the appropriate AQS flags throughout the data to indicate that the data was affected by an exceptional event due to wildfire. Informational flags (IT) were also included for other ozone NDEP-BAQP monitoring sites for the same time period. This flagging indicates that the ambient air quality data was influenced by the wildfire emissions, and ensures that the data is properly represented in the regulatory process.

## 1.2 EXCEPTIONAL EVENT DEFINITION AND DEMONSTRATION CRITERIA

The EER defines an exceptional event in 40 CFR Part 50 as an event that affects air quality, is not reasonably controllable or preventable, and is an event caused by human activity that is unlikely to recur at a particular location, or is a natural event.

The following analysis will address this definition and provide documentation to establish that the 2016 California wildfires meet the criteria for classification as an exceptional event as set forth in 40 CFR Part 50. Specifically, this document provides evidence that the wildfires affected air quality by demonstrating that:

1. there was a clear causal relationship between the 8-hour O<sub>3</sub> concentrations at Fallon and the wildfires;
2. the O<sub>3</sub> concentrations during the event were significantly higher than normal historical concentrations, and;
3. the 8-hour O<sub>3</sub> concentration at Fallon would not have exceeded the standard without the emissions contributed by the wildfires in California.

In addition, documentation is provided demonstrating that the California wildfires were natural events whose emissions were not reasonably controllable or preventable. Finally, information regarding reasonable and appropriate actions taken to protect public health is included in Appendix C.

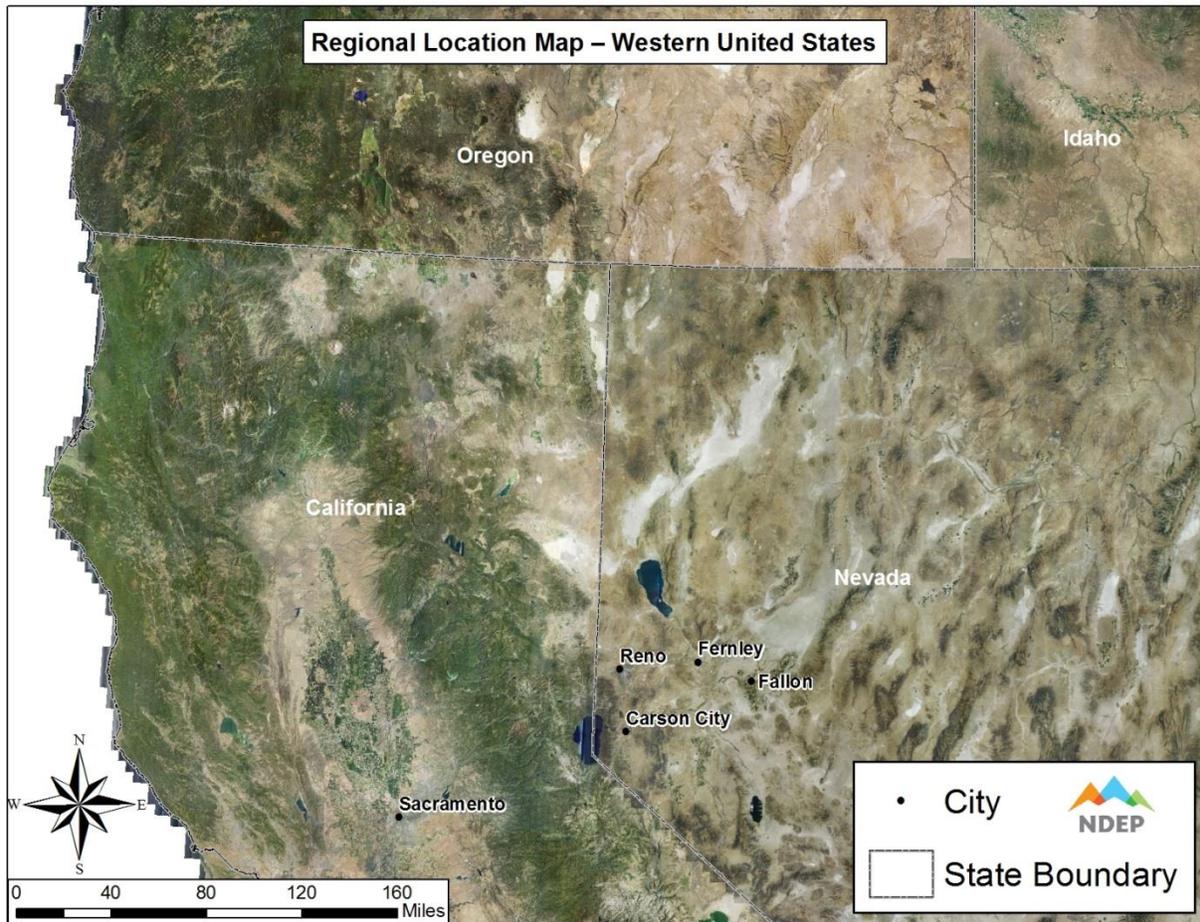
In addition to the EER, this document follows the guidance recently issued by the USEPA regarding the treatment of O<sub>3</sub> concentration data affected by wildfire (*Guidance on the Preparation of Exceptional Events Demonstrations for Wildfire Events that May Influence Ozone Concentrations*; USEPA, 2015). Specifically, the elevated O<sub>3</sub> 8-hour average concentration at the Fallon air monitoring site on August 28, 2016 was significantly higher (by more than 15 ppb) than the average concentration for this site during the month of August (2012 through 2016). The measured maximum 8-hour average for the exceedance day was also significantly higher (by more than 15 ppb) than non-event related concentrations during the month of August at the Fallon site.

## 2.0 SETTING AND BASIC CONCEPTUAL MODEL

### 2.1 REGIONAL DESCRIPTION

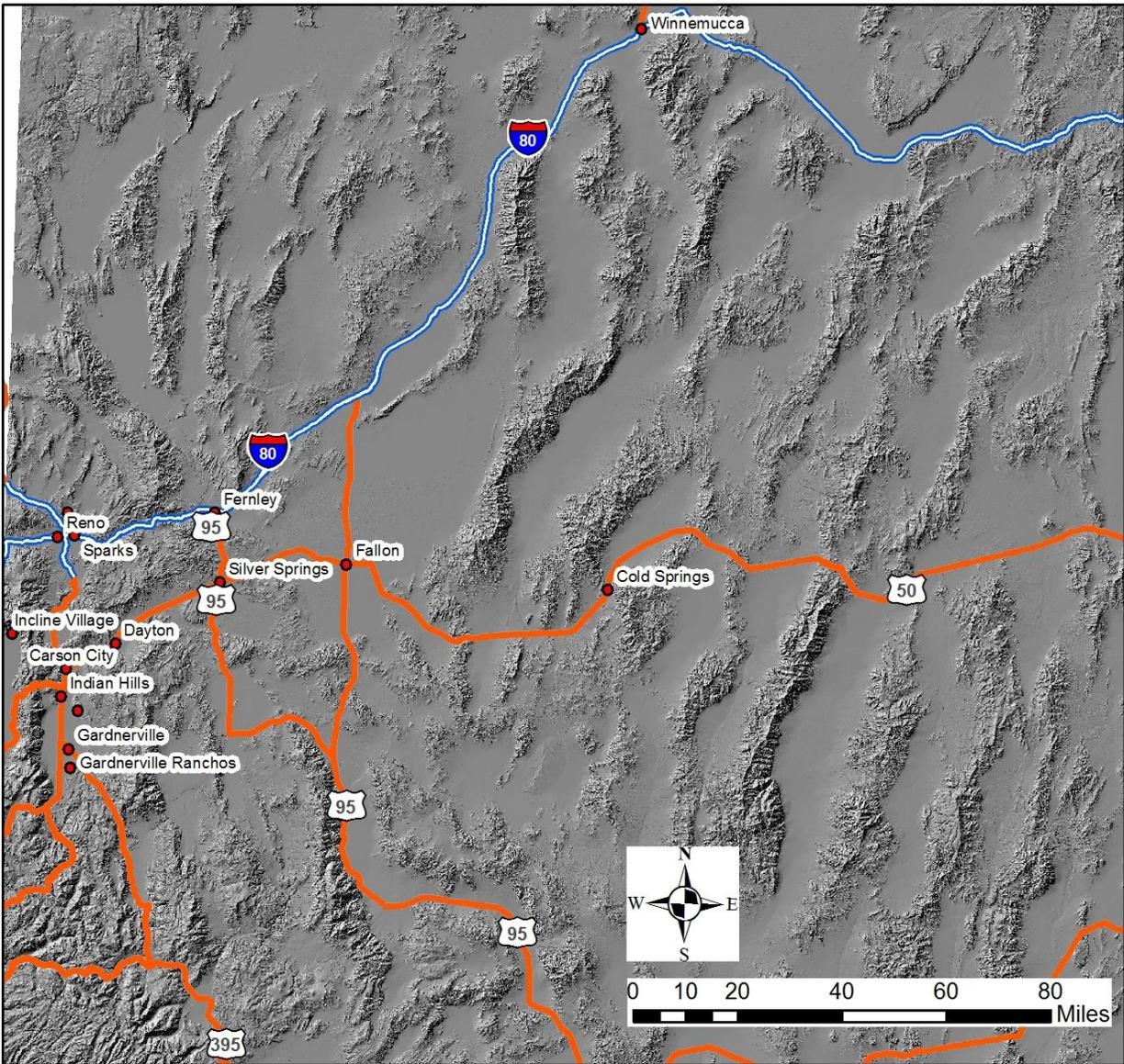
Fallon is part of Churchill County, Nevada, approximately 60 miles east of Reno, Nevada (Figure 1). The city is located in Lahontan Valley, in the southern portion of the Carson Sink, a low-lying dry lakebed that was once the terminus of the Carson River. The sink is currently fed by drainage canals of the Truckee-Carson Irrigation District, which provide water for the Stillwater Wildlife Management Area.

**Figure 1. Regional Location Map**



Lahontan Valley is bordered by the Stillwater Range to the northeast; the Lahontan Mountains, Bunejug Mountains, White Throne Mountains, Desert Mountains, and Dead Camel Mountains to the south; the Virginia Range to the west; and the Hot Springs Mountains and West Humboldt Range to the northwest and north. Interstates 50 and 95 bisect Lahontan Valley east-west and north-south, respectively. Both travel directly through Fallon (Figure 2).

**Figure 2. Shaded Relief Map of West-Central Nevada**



## 2.2 CLIMATE AND WEATHER

Lahontan Valley is part of the Basin and Range Physiographic Province, a region of internal drainage characterized by north- to northeast-trending mountain ranges separated by lower elevation valleys. The elevation in Fallon is 3,965 feet above mean sea level (amsl), and the surrounding mountains exceed 8,500 feet amsl.

Due to the rain shadow effect of the Sierra Nevada and other mountain ranges to the west and southwest, moisture associated with Pacific storms rarely reaches the valley. As a result, Fallon has an arid climate (an average of approximately five inches of precipitation per year), typical of the Great Basin region. Most of the precipitation in the area occurs in the winter (between December and May). The average daily maximum temperature is approximately 92 degrees

Fahrenheit (°F) in July and approximately 44 °F in January. Average daily minimum temperatures vary from 54 °F in July to 18 °F in January.

Weather conditions during the summer months of July, August, and September are typically dominated by a large, upper-level, synoptic-scale high pressure system over the western United States (U.S.). For northern Nevada, this usually results in very warm temperatures and light to moderate west winds. These winds are strongest during the afternoon hours and generally decrease overnight. When upper-level high pressure systems are located over the four-corners area (Arizona, New Mexico, Colorado, and Utah), south to southeast winds transport subtropical moisture into the southwestern deserts, resulting in afternoon and evening thunderstorms. This moisture sometimes extends as far north as northern Nevada. The accompanying monsoonal storms are also accompanied by strong, gusty winds, rain, and sometimes hail. The winds associated with these storms often create blowing dust conditions with reduced visibility.

Section 3 provides a more detailed discussion of the specific meteorological conditions on the event day included in this request as part of the clear causal connection between the 2016 California wildfires and the elevated ozone concentrations. Section 3 also provides information to demonstrate that the 8-hour ozone concentration at Fallon on August 28, 2016 would not have exceeded the federal standard without the impacts of the wildfire emissions.

### **2.3 DEMOGRAPHICS**

The Fallon Combined Statistical Area consists of Churchill County, Nevada. Churchill County covers approximately 4,930 square miles and has a population of 24,200. The City of Fallon has a population of approximately 8,900 (USCB, 2016).

### **2.4 POLLUTANT SEASONALITY**

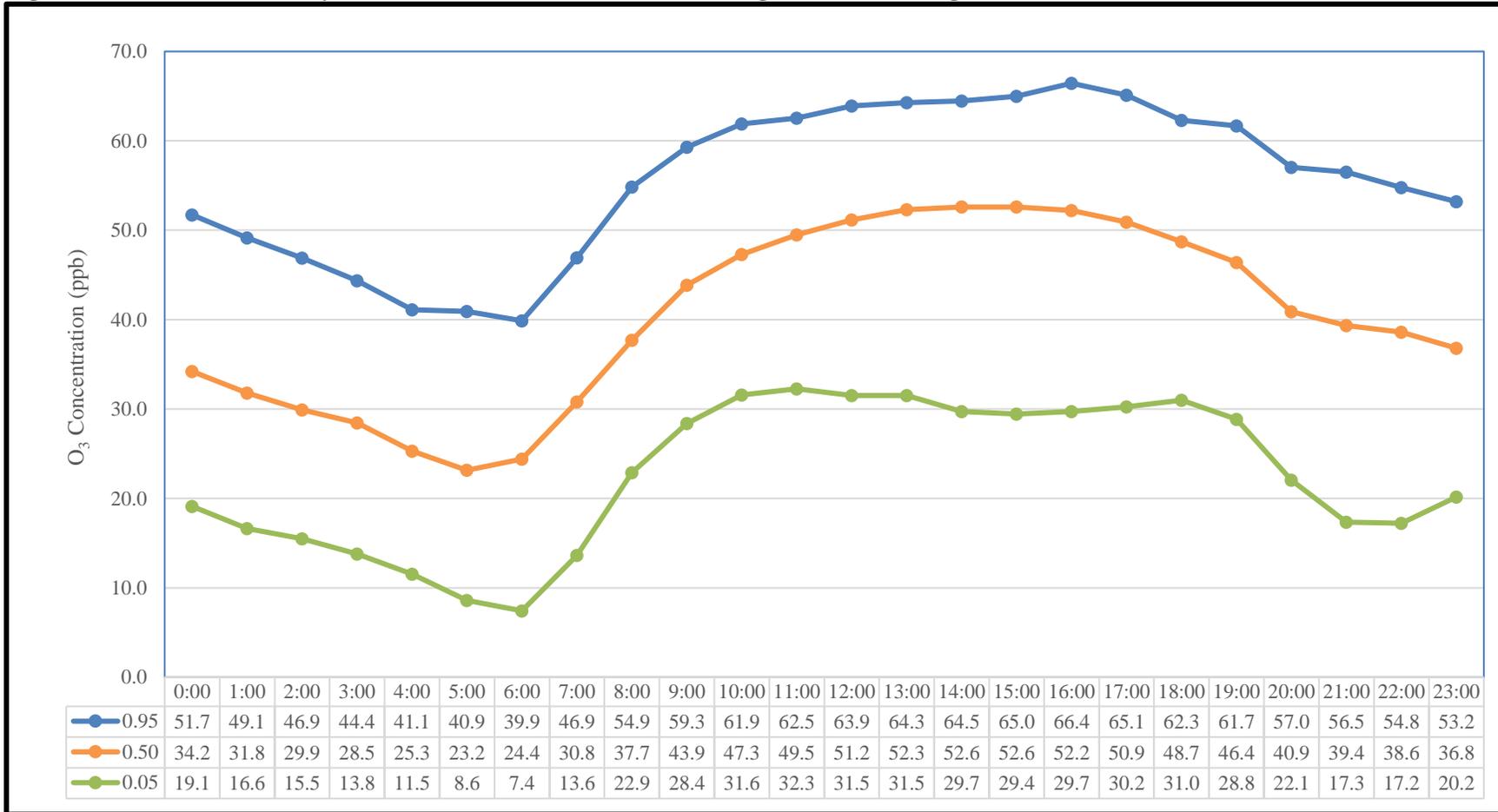
Periods of high pressure and stagnant air masses, which are conducive to pollutant build up, occur during both the winter and summer seasons in northern Nevada. Particulate matter generated in winter months, and the presence of ozone in the summer result in a seasonal pollutant pattern, with the highest particulate matter concentrations usually occurring during the winter months (except during wildfires) and the highest ozone concentrations observed during the summer months.

The ozone season in western Nevada therefore occurs from April through October. In general, the synoptic (large-scale) weather conditions leading to elevated ozone concentrations are slow moving, high pressure weather systems, which cause the air to subside, or sink. As the air sinks, it warms, forming a subsidence temperature inversion several hundred meters (m) above the surface that stabilizes and dries the atmosphere. This process limits vertical mixing of the boundary layer and traps pollutants below the height of the inversion. This process also limits cloud production, thereby increasing ozone photochemistry. In addition, calm surface winds are

conducive to high ozone concentrations because these conditions prevent the dispersion of pollutants.

Figure 3 shows the typical summer diurnal pattern of ozone concentrations in western Nevada; the highest concentrations occur in the early to mid-afternoon, during the time of highest solar radiation. The 95<sup>th</sup>, 50<sup>th</sup>, and 5<sup>th</sup> percentiles of hourly ozone concentrations at the Fallon site are shown for all days of June, July, and August, from 2012 through 2016, excluding wildfire days (August 20-21, 2015 and August 28, 2016; Figure 3).

**Figure 3. Fallon Hourly Ozone Concentrations for June-August, 2012 through 2016.**



## **2.5 CHARACTERISTICS OF NON-EVENT OZONE FORMATION**

The anthropogenic emissions contributing to ozone formation include volatile organic compounds (VOCs) and oxides of nitrogen (NO<sub>x</sub>). The main sources of these emissions are mobile sources (cars, trucks, locomotives, off-road equipment) along with stationary and area sources (industrial processes, consumer products, and pesticides). Mobile source emissions dominate the anthropogenic emissions in Churchill County, accounting for the majority of the total NO<sub>x</sub> inventory.

VOC and NO<sub>x</sub> emissions over the last decade have remained fairly constant in Churchill County, and are well below 10 tons per day (tpd). In 2014 (the most recent National Emissions Inventory for which VOC and NO<sub>x</sub> values are available), VOC and NO<sub>x</sub> precursor emissions for Churchill County were estimated at 2 and 3 tpd, respectively. VOC and NO<sub>x</sub> emissions have not changed significantly despite increases in population, vehicle activity, and economic development.

## **2.6 CHARACTERISTICS OF WILDFIRE-RELATED OZONE FORMATION**

Wildfires generate both NO<sub>x</sub> and VOC, with different burning stages generating different types of emissions. Biogenic VOCs are generated by vegetation throughout the burning cycle. NO<sub>x</sub> is generated primarily during the hot, flaming stage of the fire, while small reactive hydrocarbons, such as ethane and acetylene, are generated during the smoldering phase (Finlayson-Pitts and Pitts, 2000; Jaffe et al., 2008).

Very near fires, ozone concentrations can potentially be suppressed, despite the increase in ozone precursors generated by the wildfires. Bytnerowicz et al. (2010), Finlayson-Pitts and Pitts (2000), and Sandberg et al. (2002) provide several explanations why ozone can potentially be low at fire sites: 1) thick smoke can prevent sufficient UV light from reaching the surface, thereby inhibiting photochemical reactions, and 2) the wildfire plume typically contains high nitrogen monoxide (NO) concentrations, which can titrate ozone concentrations. Downwind of the fire (or at the top of the plume; Sith et al., 1981, quoted in Sandberg et al., 2002), away from fresh NO sources and with reduced aerosol optical depth, considerable amounts of ozone can be generated. The plume does not need to be very far downwind of fire emissions to generate ozone. Sith et al. (1981) found ozone beginning 10 kilometers (km) downwind of wildfires, in plumes less than one-hour old (quoted in Sandberg et al., 2002). Ozone and ozone precursors can also be transported quite far from a wildfire site (Finlayson-Pitts and Pitts, 2000 and Jaffe et al., 2008). Therefore, similar to the impacts of anthropogenic emissions in urban airsheds, the highest ozone concentrations due to wildfires are often found downwind of the area of greatest precursor emissions.

The impact of wildfires on ozone concentrations at both the local and regional level has been extensively evaluated in recent years. Field observations of ozone formation in smoke plumes from fires date back nearly 25 years when aircraft measurements detected elevated ozone at the edge of forest fire smoke plumes far downwind. More recently, aircraft flights through smoke

plumes have demonstrated increased ozone concentrations of 15 to 30 ppb in California (Bush, 2008), while ozonesonde measurements in Texas found enhanced ozone aloft ranging from 25 to 100 ppb attributable to long-range transport of smoke plumes from Canada and Alaska (Morris, 2006).

In addition, air quality modeling has shown increased levels of ozone from a number of large fires. McKeen (2002) found that Canadian fires in 1995 enhanced ozone concentrations by 10 to 30 ppb throughout a large region of the central and eastern United States. Lamb (2007) found similar results simulating the impacts of fires in the Pacific Northwest in 2006, with increases of over 30 ppb. Junquera (2005) further found that within 10 km of a fire, ozone concentrations could be enhanced by up to 60 ppb. Finally, in one of the most recent studies, Pfister (2008) simulated the large 2007 fires in both northern and southern California and found ozone increases of approximately 15 ppb in many locations, concluding that “Our findings demonstrate a clear impact of wildfires on surface ozone nearby and potentially far downwind from the fire location, and show that intense wildfire periods frequently can cause ozone levels to exceed current health standards.”

### **3.0 CLEAR CAUSAL RELATIONSHIP**

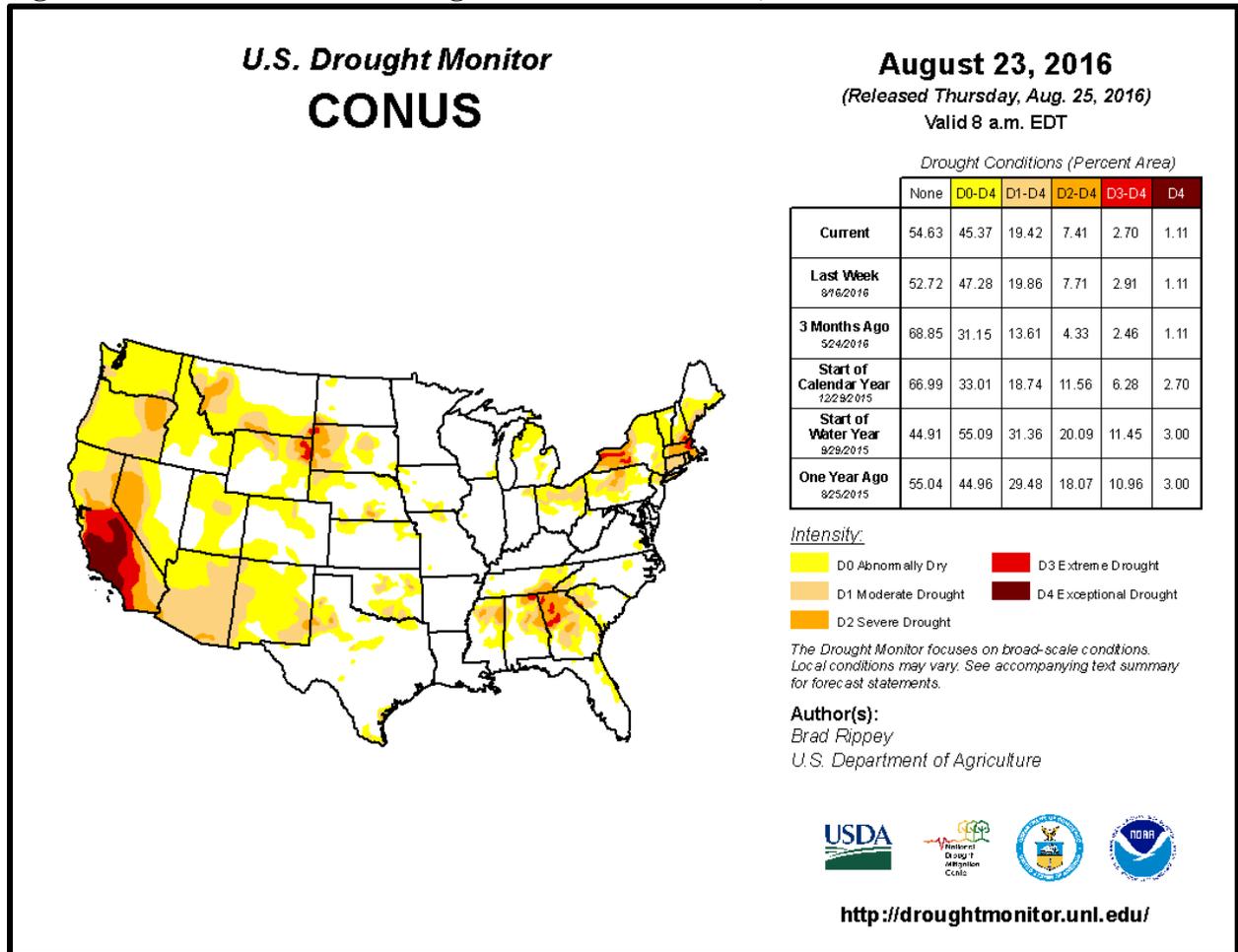
This section demonstrates a clear causal relationship between the California wildfires and the 8-hour ozone exceedance that occurred at the Fallon monitor on August 28, 2016. Specifically, this section provides evidence that: 1) the wildfires occurred, 2) the smoke plumes from the wildfires reached the Fallon monitor, and 3) that the pollutants within the smoke plumes increased ozone concentrations at the Fallon monitor.

This comprehensive weight of evidence includes: documentation of the extensive nature of the fires; a meteorological analysis; satellite imagery; ozone air quality data; ozone chemistry leading to elevated 8-hour ozone concentrations; forward and backward trajectories showing that emissions from the wildfire were transported to the Fallon monitoring location; and finally a discussion of how the 8-hour ozone concentrations exceed the normal, non-event related concentrations for the Fallon ozone monitor.

#### **3.1 DESCRIPTION OF THE EVENT**

Wildfire activity typically begins to increase through the United States in late spring. Temperatures during the winter months leading into the 2016 wildfire season were generally above normal for the much of the United States, including northern California. Most of the Pacific Northwest, northern California, and parts of the Great Basin received normal to slightly above normal precipitation, generally as rain instead of the more-typical snow; however, severe to exceptional drought conditions continued to worsen across much of California, Nevada, and southern Oregon. The warm trend continued into the spring across most of the nation, with above normal temperatures stretching from the Pacific Northwest and northern California, east through the central states. The summer of 2016 was the warmest in California on record. As a result, drought conditions continued to worsen in the west, where severe to exceptional drought continued across much of California, Nevada, and Oregon (NICC, 2016). The North American Drought Monitor for August 2016 showed severe to exceptional drought over the far west (Figure 4).

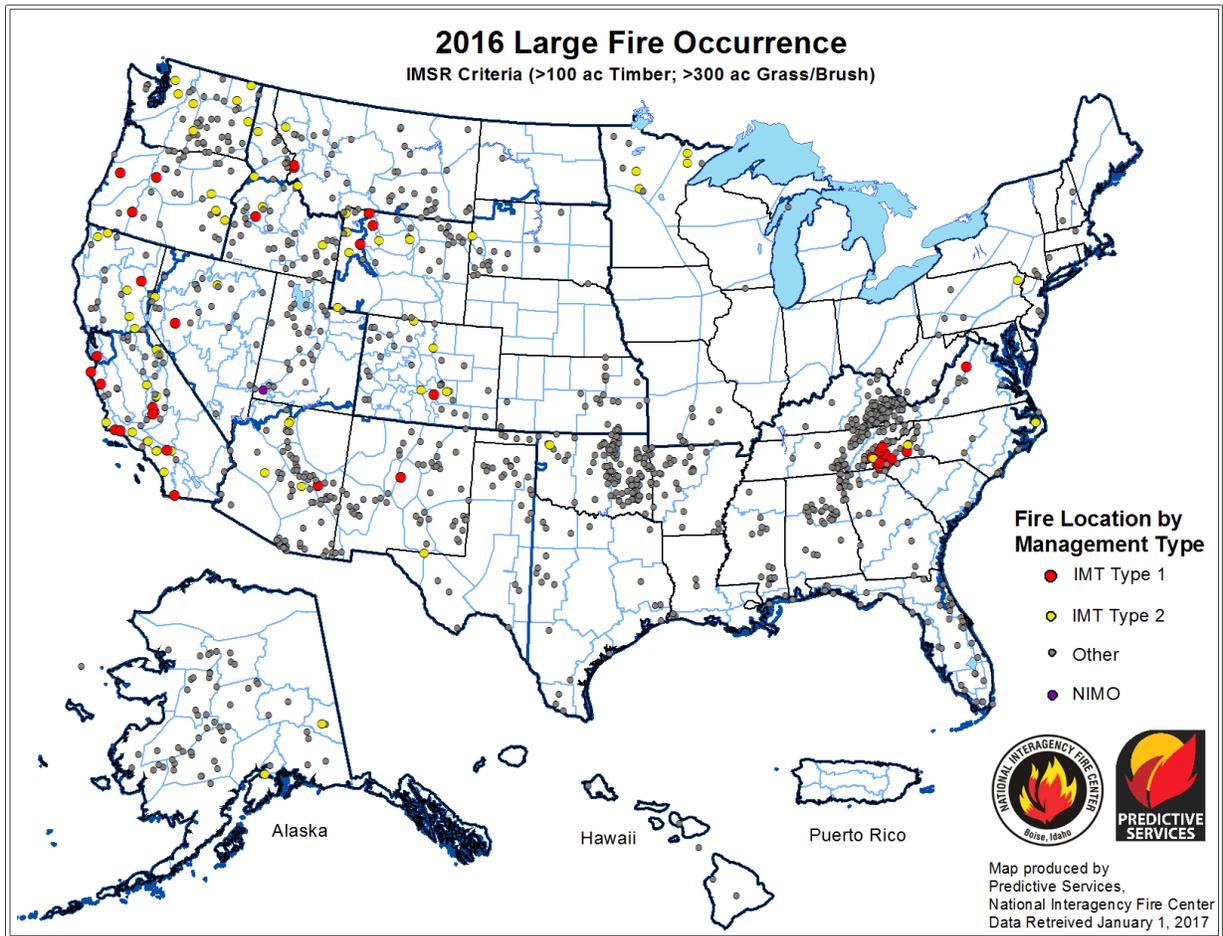
**Figure 4. United States Drought Conditions June 28, 2016.**



Although conditions were present to support significant fire activity throughout the summer fire season, for the most part these conditions fell within the average range and fire activity was generally normal, potentially due to the significant decrease in lightning strikes as compared to recent years (Rolinski, 2017).

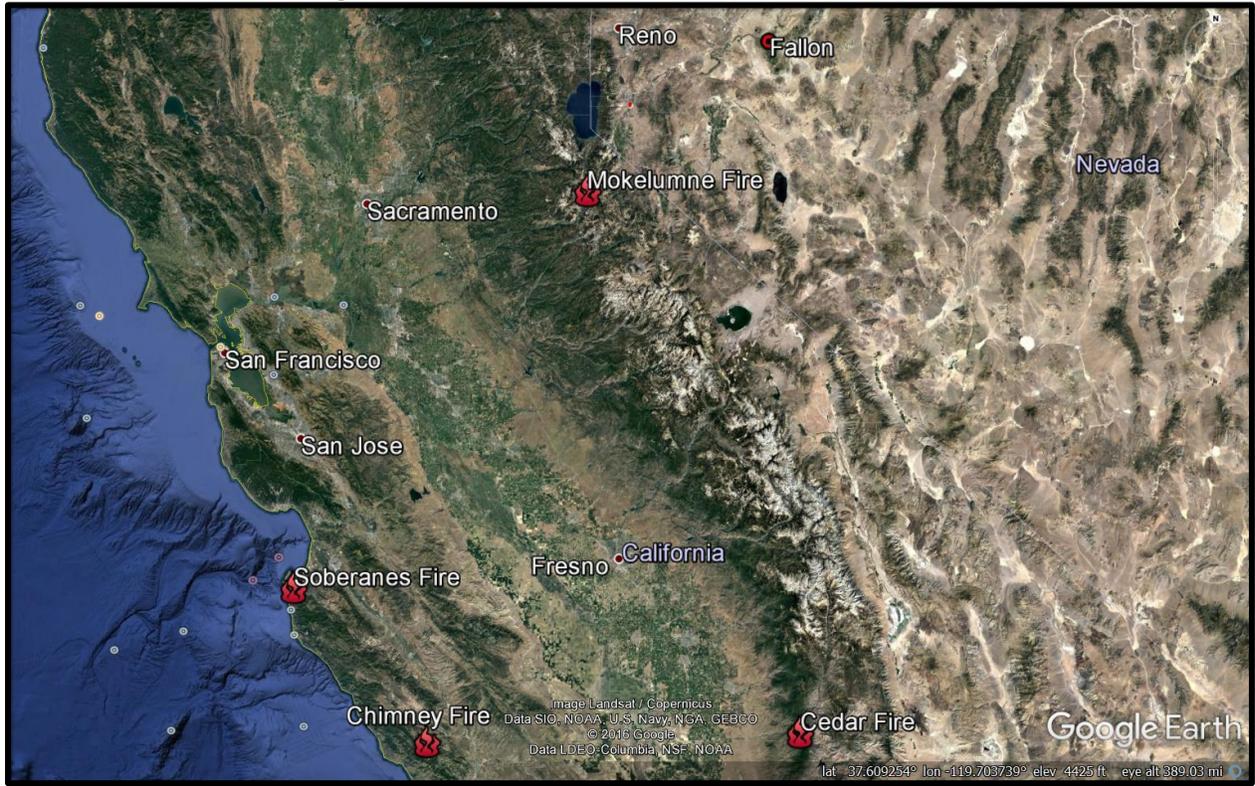
Although most of the fire activity in the United States was below normal in 2016, numerous fires in California contributed to smoke transport into Nevada. There were approximately 242 significant fires in the Pacific Northwest in 2016; 68 of those fires were in California. The national Preparedness Level (PL) was elevated to PL 2 on June 7, 2016 then was further raised to PL 3 on July 26 where it remained for three and a half weeks. On August 20 it was raised further to PL 4 where it remained for two weeks. On September 3 the PL dropped to 3 and quickly dropped to PL 2 three days later. On September 30 the PL was lowered to 1 where it remained for the rest of the calendar year (NICC, 2016). By the end of the 2016 fire season, due to large wildland fires, a total of 560,815 acres had burned in California. Figure 5 shows the locations of large wildfires during the 2016 fire season.

**Figure 5. Large Wildfires in the United States – 2016.**



The Soberanes Fire started on July 22, 2016 in Monterey County, in central California. The Mokulumne Fire started on August 19, 2016 in a rugged, remote part of Alpine County, California. Smoke from these wildland fires impacted areas in northern California and western Nevada. Figure 6 provides a map of the wildfires in California that were active on August 27, 2016, as well as the Fallon, Nevada monitoring site. Table 2 shows the number of acres burned by the Soberanes and Mokulumne Fires on August 26, 27, and 28, 2016. The Cedar and Chimney Fires are also included, as the smoke from these fires may have affected air quality in western Nevada as well.

**Figure 6. Location Map of August 27, 2016 Active Wildfires and the Fallon, Nevada Monitoring Site.**



**Table 2. Acres Burned for California Wildfires from August 25 through 29, 2016.**

NAME	FIRE START		ACRES BURNED BY DATE				
	LATITUDE	LONGITUDE	8/25/2016	8/26/2016	8/27/2016	8/28/2016	8/29/2016
Soberanes Fire	36.461°N	121.901°W	88,654	+1,408	+1,038	+353	+349
Mokelumne Fire	38.578°N	120.007°W	152	N/A	N/A	N/A	+68
Chimney Fire	35.670°N	121.004°W	41,675	+41	+51	+100	+0
Cedar Fire	35.745°N	118.584°W	23,239	+20	+20	+200	+0

USDA, 2016; <http://www.predictiveservices.nifc.gov/intelligence/intelligence.htm>

Numbers after the '+' indicate an increase in acreage burned from the previous day.

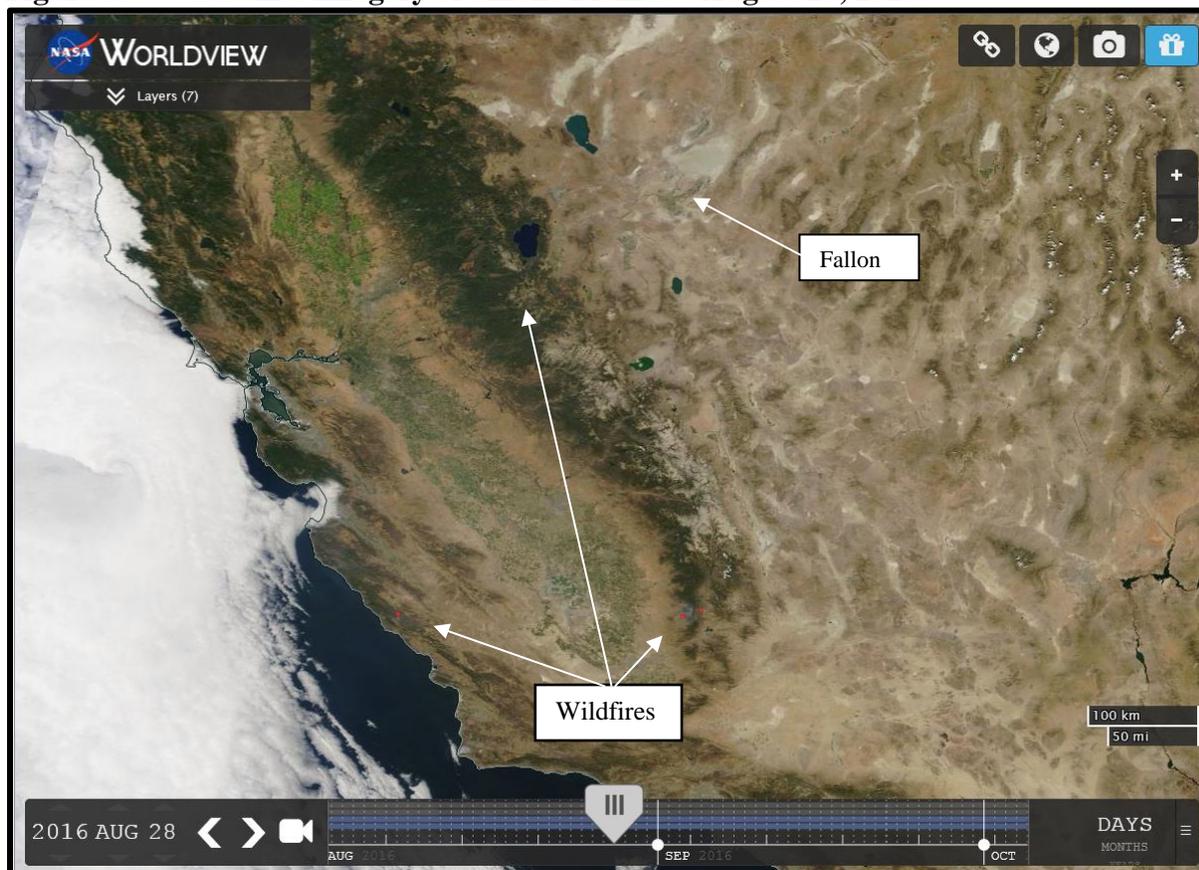
N/A: Information not available.

Air quality in northern Nevada was moderate to poor from August 26 through 31, 2016 due to smoke from California wildfires. AirNow Air Quality Index (AQI) maps showing air quality from August 25 through September 1, 2016 are included in Appendix C. Many air quality monitors in northern Nevada recorded elevated ozone concentrations during this time, along with increased concentrations of particulate matter. Figures 7 and 8 provide satellite images illustrating the extent of the smoke impacts on August 27 and 28, 2016.

Figure 7. Satellite Imagery of Smoke Plumes – August 27, 2016.



**Figure 8. Satellite Imagery of Smoke Plumes – August 28, 2016.**



### **3.2 METEOROLOGICAL CONDITIONS AND TRANSPORT PATTERNS**

Substantial amounts of NO<sub>x</sub> and VOCs were generated from the wildfires in California, causing the 8-hour ozone exceedance at Fallon on August 28, 2016. Due to the buoyancy of fire plumes, these precursors mixed throughout the boundary layer, making them available for long-range transport.

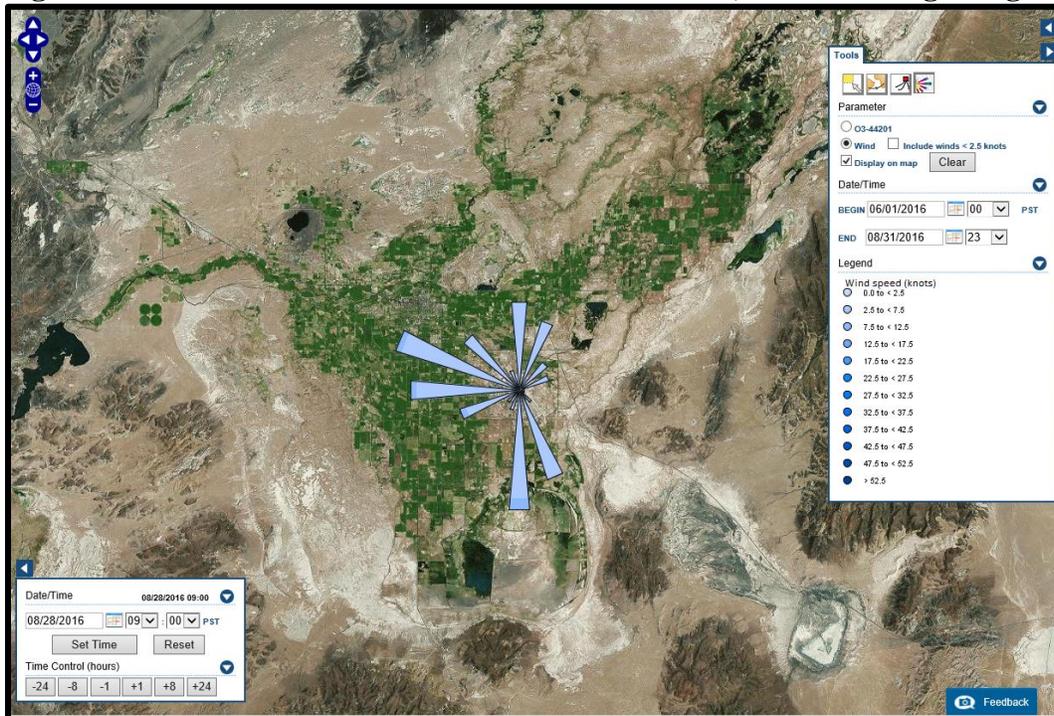
Upper level and surface weather maps for August 23 through 31, 2016 are included in Appendix D. According to the National Weather Service (NWS) in Reno, Nevada, transport winds were out of the west and ranged from 10 to 20 mph on August 27 and 28, 2016 for the West Central Nevada Basin and Range forecast area, which includes Fallon. Mixing heights for the area were 17,000-18,000 feet amsl on August 27, and increased to 18,000 to 19,000 feet amsl on August 28, before dropping to 15,000 to 16,000 feet amsl on August 29. The west transport winds coupled with the increase in mixing height on August 28 allowed smoke and ozone precursors emitted by the California wildfires to be transported to the Fallon area and mixed down to the surface on August 28, 2016. In addition, the Area Forecast Discussion for August 27 and 28, 2016 provided by the NWS Reno office include the mention of smoke and haze from California wildfires in the forecast for late August 27 and early August 28, 2016. This provides additional evidence that smoke from

the fires impacted northern and western Nevada on those days. The NWS text products are included in Appendix C.

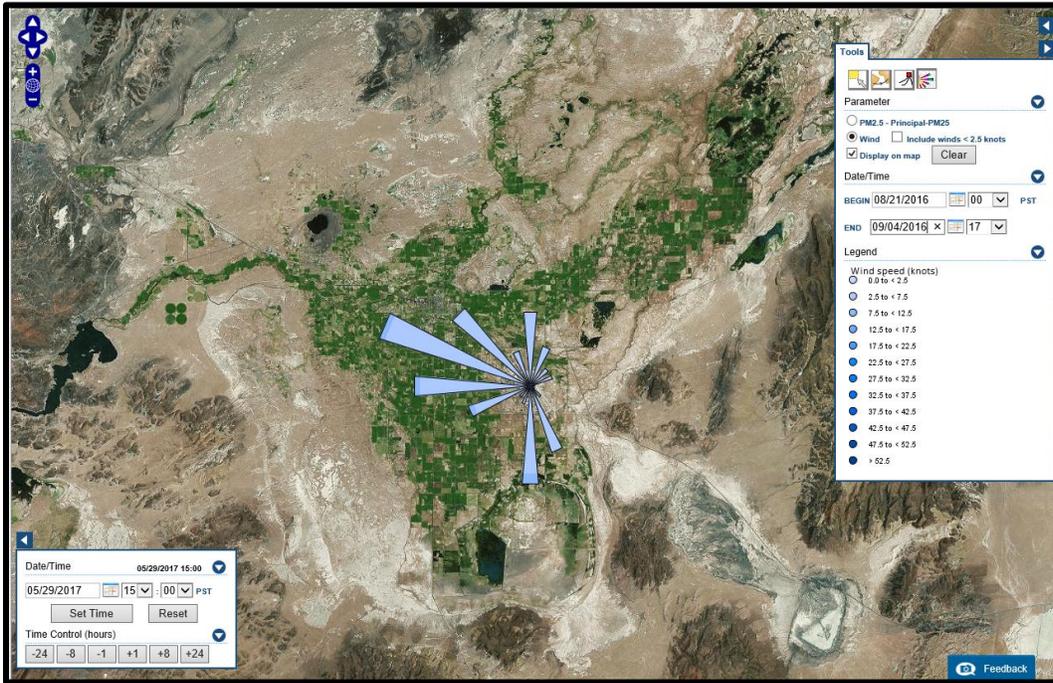
Temperature and surface wind data was analyzed from August 21 through September 4, 2016. Summer surface winds at the Fallon Naval Air Station are most commonly from the northwest or the south; Figure 9 shows wind speeds and directions for June 1 through August 31, 2016. For the two-week period before and after the event day, as well as on the event day itself, surface winds were typical of summer winds in the area (Figures 10 and 11).

Table 3 shows the temperatures and wind speeds for the Fallon Naval Air Station for the seven days before and after the exceedance. Wind speeds in northern Nevada for late August and early September average between five and seven miles per hour (mph). Surface winds throughout the two-week period before and after the event day were generally light. Overall, the weather conditions on the event day were very similar to those for the week prior to and after the exceedance; no unusual weather conditions occurred on August 28, 2016, although the ozone concentration was considerably higher than on any days preceding or following the event. This suggests that the elevated ozone values were due to smoke transported to the site from California wildfires rather than any local or regional weather phenomenon.

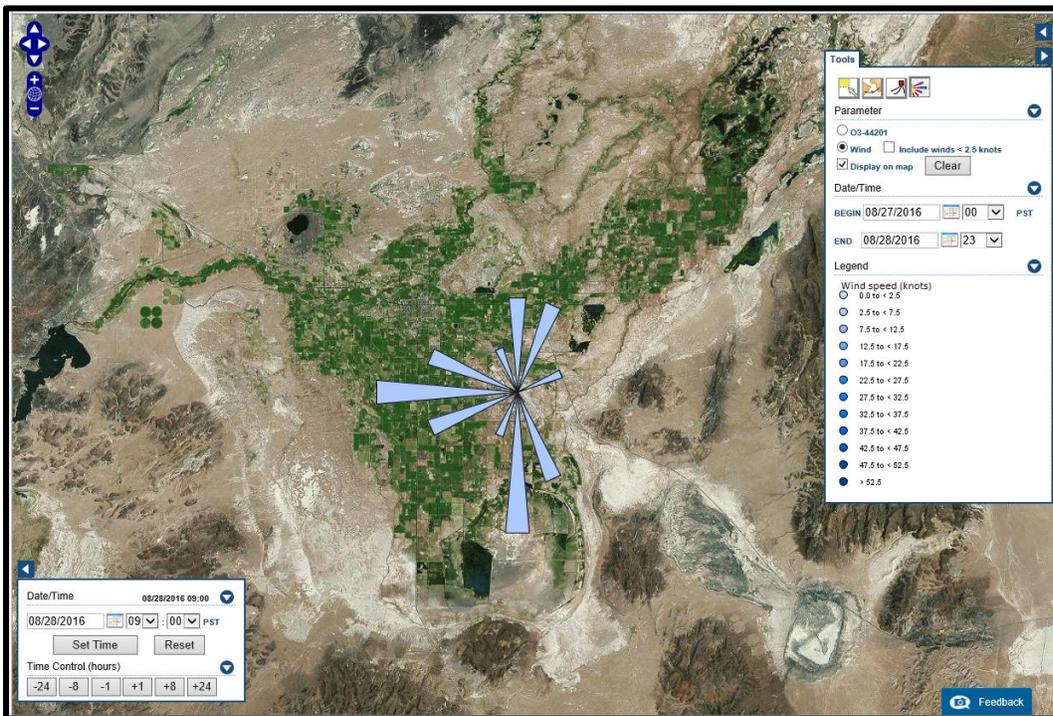
**Figure 9. Wind Rose for Fallon Naval Air Station, June 1 through August 31, 2016**



**Figure 10. Wind Rose for Fallon Naval Air Station, August 14 through September 11, 2016**



**Figure 11. Wind Rose for Fallon Naval Air Station, August 27-28, 2016**



**Table 3. Historical and Event-Related Temperature Data for Fallon Naval Air Station**

	Non-event							Event Day	Non-event						
	08/21	08/22	08/23	08/24	08/25	08/26	08/27	08/28	08/29	08/30	08/31	09/01	09/02	09/03	09/04
<b>Ozone</b>															
8-hour Maximum Concentration (ppb)	51	53	54	56	43	51	57	73	59	52	53	50	49	42	46
<b>Temperature</b>															
Max Observed (°F)	100	93	93	93	89	91	93	93	97	99	95	91	88	82	77
Historical Average (°F)	87	87	87	87	87	87	87	87	87	86	85	86	86	86	85
<b>Wind</b>															
Max Observed (mph)	7	8	8	5	5	4	7	5	4	6	5	4	5	5	8

In general, higher temperatures are associated with higher surface ozone concentrations (Jacob and Winner, 2009). Temperatures in Fallon, Nevada were generally higher than historical averages for the approximate two-week period surrounding the event day. However, ozone concentrations at the Fallon site were within the range of historical concentrations except on the event day, when they were significantly higher. This suggests that the elevated ozone concentrations were caused by smoke from the Soberanes and Mokulumne fires as opposed to high temperatures. Surface winds also increased slightly on the event day, supporting the interpretation that smoke from the fire was transported to the Fallon site and caused the elevated ozone concentrations.

To further demonstrate that smoke from the California wildfires impacted the Fallon ozone monitoring site, trajectory analyses were created using the Hybrid Single Particle Lagrangian Integrated Trajectory (HYSPLIT; Stein, 2015; Rolph, 2016) tool in the AirNow Tech online platform. HYSPLIT trajectories were generated for August 27 and 28, 2016; both forward (from the fire forward 24 hours) and backward (from the site back 24 hours) trajectories were analyzed. The Soberanes and Mokelumne Fires were approximately 250 and 75 km away from the Fallon ozone monitor, respectively. The emissions from the fires therefore traveled a considerable distance, including passing over significant topographic features. Because of this distance, as well as the heat of the plume, the smoke plume dispersed upward into the atmosphere. To account for this vertical motion, and the fact that the HYSPLIT models do not account for turbulence or vertical mixing within the troposphere, trajectories were generated at 100 m, 700 m, and 1,500 m above ground level (agl). These heights are representative of the base, middle, and top of the typical daytime planetary boundary layer, and are consistent with the *Guidance on the Preparation of Exceptional Events Demonstrations for Wildfire Events that May Influence Ozone Concentrations* (USEPA, 2015). HYSPLIT trajectories are shown in Figures 12a through 13b, for August 27 and 28, 2016. According to the *Guidance on the Preparation of Exceptional Events Demonstrations for Wildfire Events that May Influence Ozone Concentrations*, the starting heights of trajectories should be between 100 and 1,500 m agl to avoid terrain interference and to stay within the mixed layer of the atmosphere (USEPA, 2015). Forward trajectories were initiated from the start locations of both the Soberanes and Mokulumne Fires at 1700 Coordinated Universal Time (UTC; 0900 Pacific Standard Time (PST)) on August 27, 2016, and were run forward for 24 hours. Backward trajectories were initiated from the Fallon ozone monitoring site beginning at 1700 UTC (0900 PST) August 28, 2016, and were run for 24 and 48 hours. These times correspond to the hour of the maximum daily 8-hour average at the Fallon site on the event day. Forward trajectories from the fire origins show that the air masses above each fire traveled northeast toward the Fallon monitoring site. Backward trajectories from the Fallon monitoring site show that the air mass above the Fallon site during the exceedance traveled to Fallon from the area of both the Mokulumne and Soberanes smoke plumes.

Figures 12a through 13b also show Hazard Mapping System (HMS) smoke plumes for August 27 and 28, 2016. The smoke plumes from the California wildfires were clearly transported to and impacted the Fallon monitoring site. The HYSPLIT trajectories also intersect with the smoke plumes from the wildfires, providing more evidence that the plumes impacted the site.

Figure 12a. AirNow Tech Image of Active Fires, HMS Smoke Plumes, 8-Hour Ozone Concentrations, and HYSPLIT Trajectories Forward from the Mokelumne Fire – August 27, 2016 (24 hours)

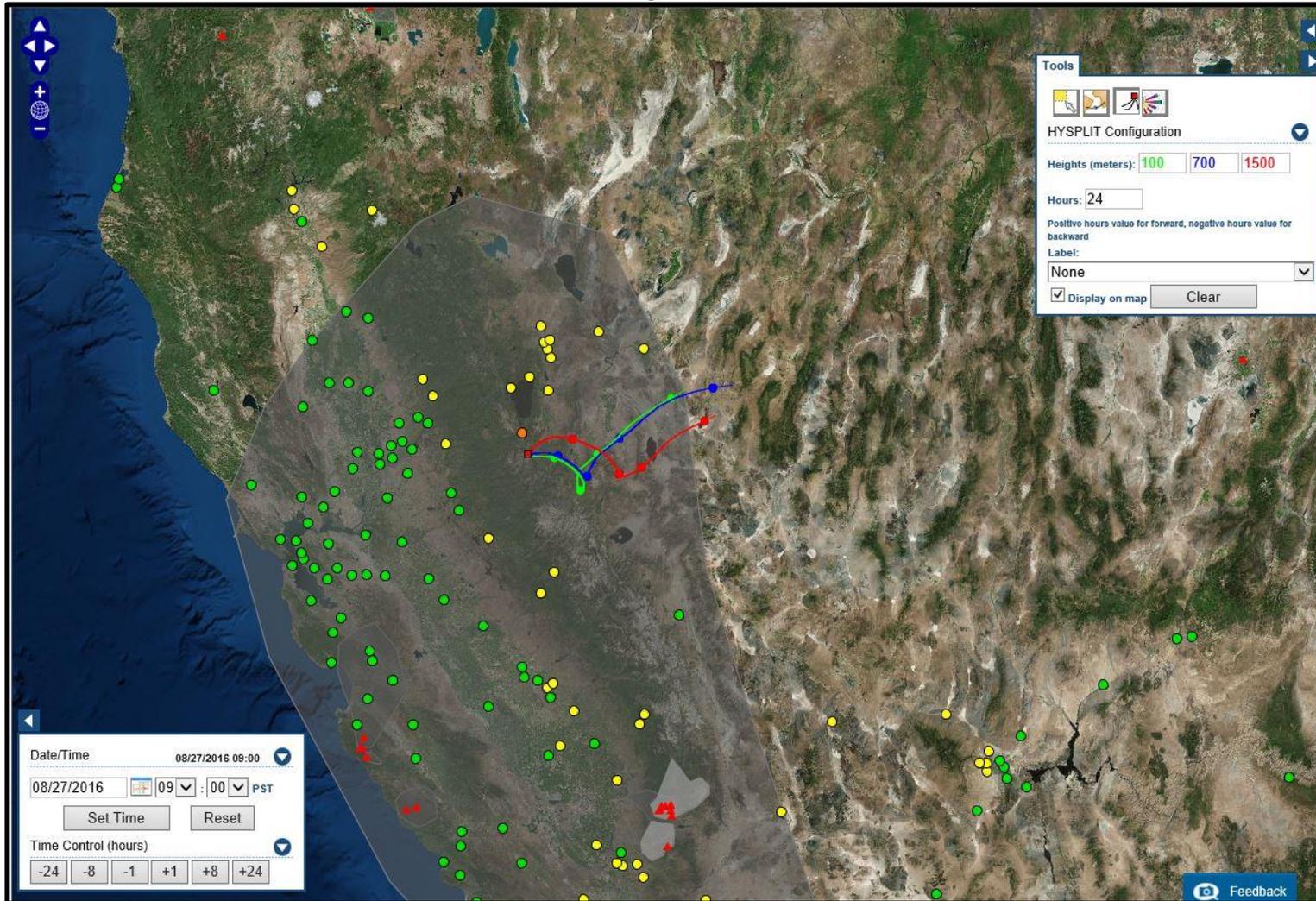
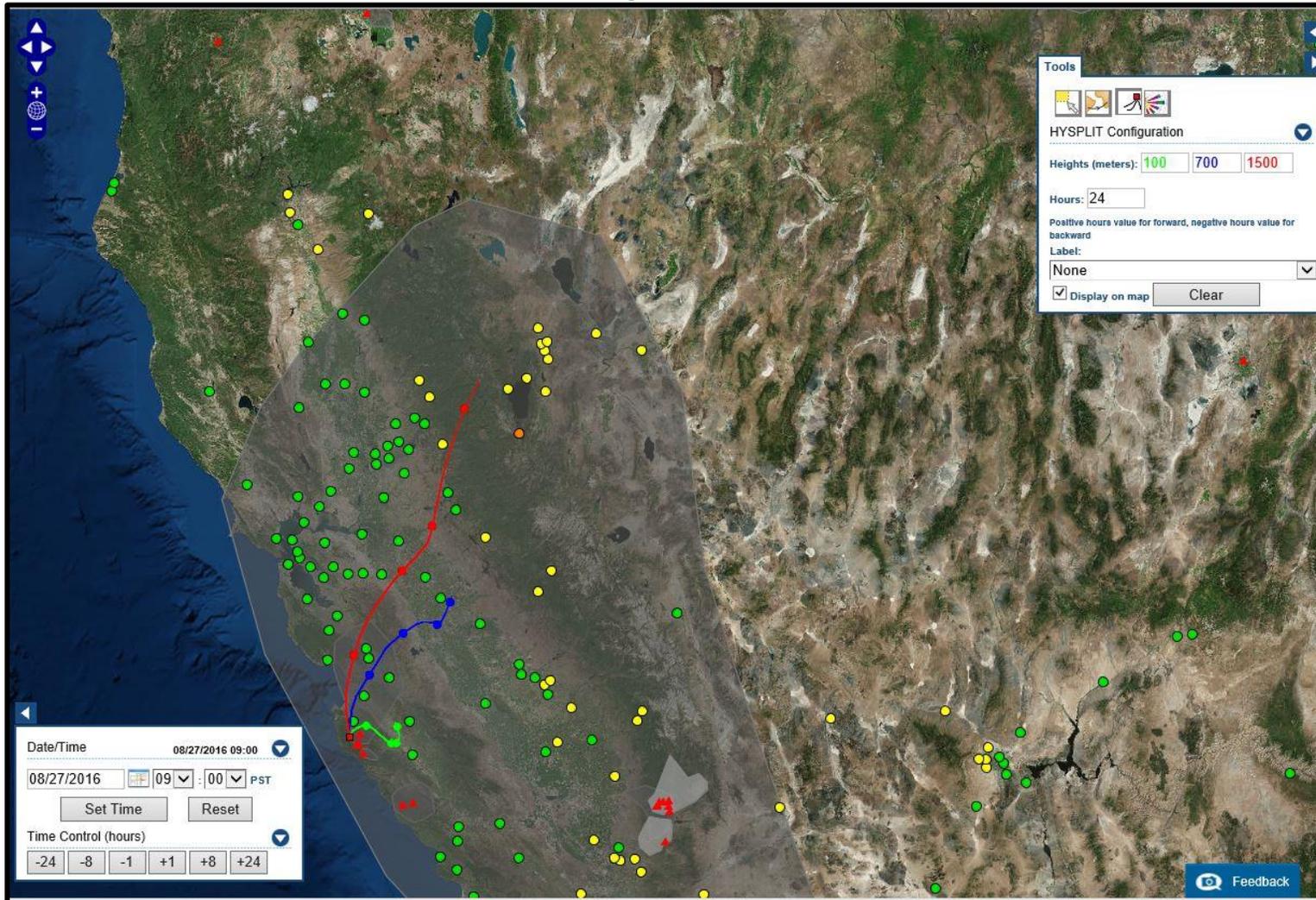
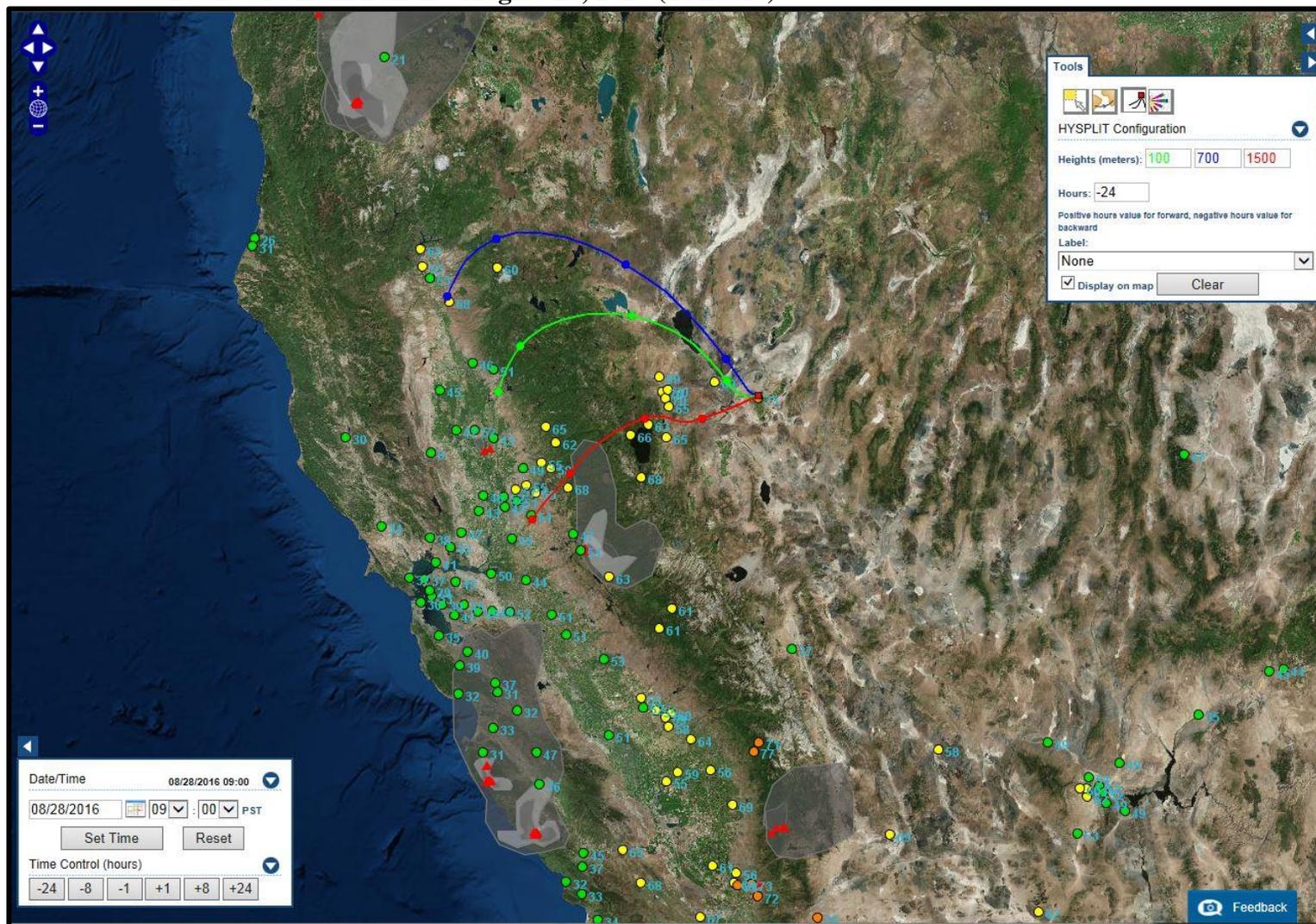


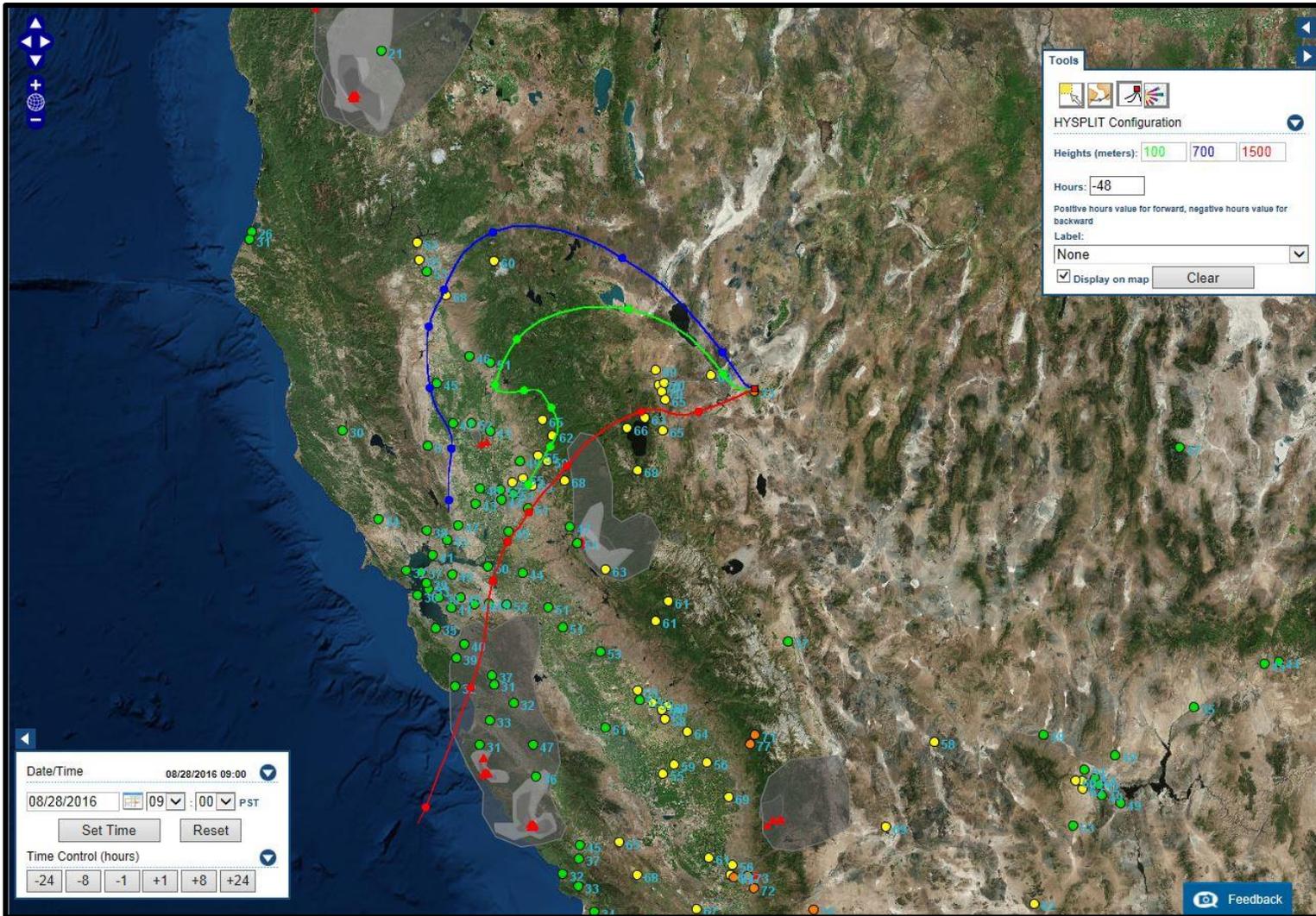
Figure 12b. AirNow Tech Image of Active Fires, HMS Smoke Plumes, 8-Hour Ozone Concentrations, and HYSPLIT Trajectories Forward from the Soberanes Fire – August 27, 2016 (24 Hours)



**Figure 13a. AirNow Tech Image of Active Fires, HMS Smoke Plumes, 8-Hour Ozone Concentrations, and HYSPLIT Trajectories Backward from Fallon – August 28, 2016 (24 hours)**



**Figure 13b. AirNow Tech Image of Active Fires, HMS Smoke Plumes, 8-Hour Ozone Concentrations, and HYSPLIT Trajectories Backward from Fallon – August 28, 2016 (48 Hours)**



### **3.3 PM<sub>2.5</sub> CONCENTRATIONS**

PM<sub>2.5</sub> is directly emitted during combustion. Elevated concentrations of PM<sub>2.5</sub> were measured at air monitors in Washoe County on August 27 and 28, 2016, providing additional evidence that emissions from the California wildfires reached ground level monitors in northern Nevada. (Appendix C).

### **3.4 OZONE CHEMISTRY AND CONCENTRATIONS**

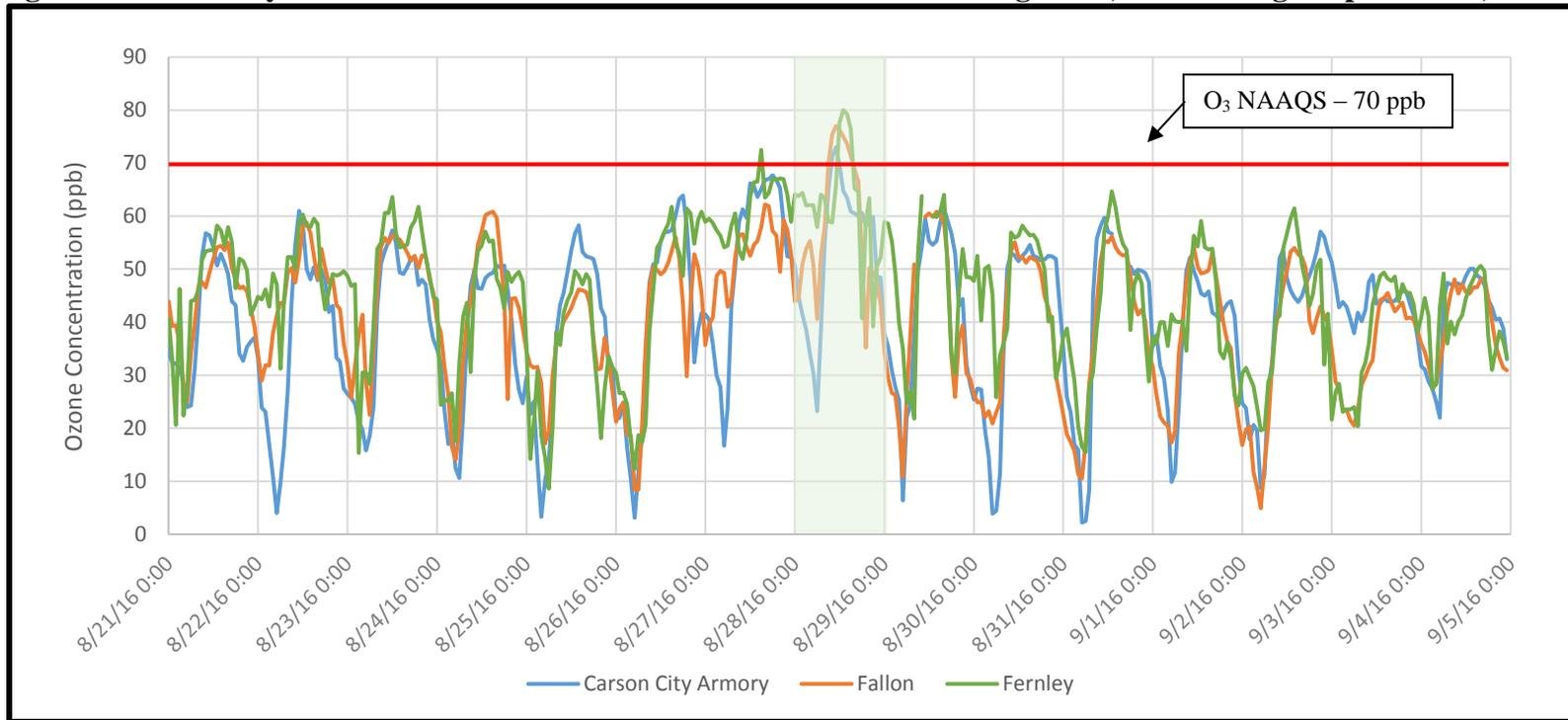
On August 28, 2016, the NDEP monitored an exceedance of the 2015 8-hour O<sub>3</sub> NAAQS, with the ozone concentration reaching 73 ppb at the Fallon monitoring site. Wildfire smoke and O<sub>3</sub> precursors from wildfires in California were transported east into Nevada on upper level winds. Ozone concentrations were elevated across Nevada, including the O<sub>3</sub> exceedance at the Fallon monitoring site. Ozone exceedances were also recorded at air monitoring sites in Reno, Nevada, within the Washoe County Air Quality Monitoring District. Table 4 lists O<sub>3</sub> concentrations across the NDEP-BAQP ambient air monitoring network for the seven days before and after the event, highlighting the exceedance at the Fallon site. Figure 14 shows the hourly ozone concentrations measured by ozone monitors within the NDEP-BAQP monitoring network for the same time period.

Although, as discussed earlier, NO from fires can result in ozone titration very close to the source of a fire, Fallon is sufficiently far enough downwind (150 km) that a reduction in ozone concentrations due to this phenomena was unlikely. In addition, while the increased smoke from the fire may have reduced the amount of solar insolation, thereby potentially reducing photochemical activity, this was offset by the substantially increased levels of ozone precursors generated by the fire, resulting in a net ozone enhancement.

**Table 4. Maximum Daily 8-hour Ozone Concentrations (in ppb) Across the Monitoring Network for August 21, 2016 through September 4, 2016.**

	Non-event							California Wildfire Impacts	Non-event						
Site	08/21	08/22	08/23	08/24	08/25	08/26	08/27	08/28	08/29	08/30	08/31	09/01	09/02	09/03	09/04
Carson City	52	52	52	48	53	59	52	66	57	52	55	47	52	44	48
Fallon	52	53	55	56	43	51	52	73	60	52	53	50	50	43	46
Fernley	55	56	57	52	46	59	61	70	60	56	56	53	53	47	46

**Figure 14. Hourly Ozone Concentrations for Network Monitors from August 21, 2016 through September 4, 2016.**



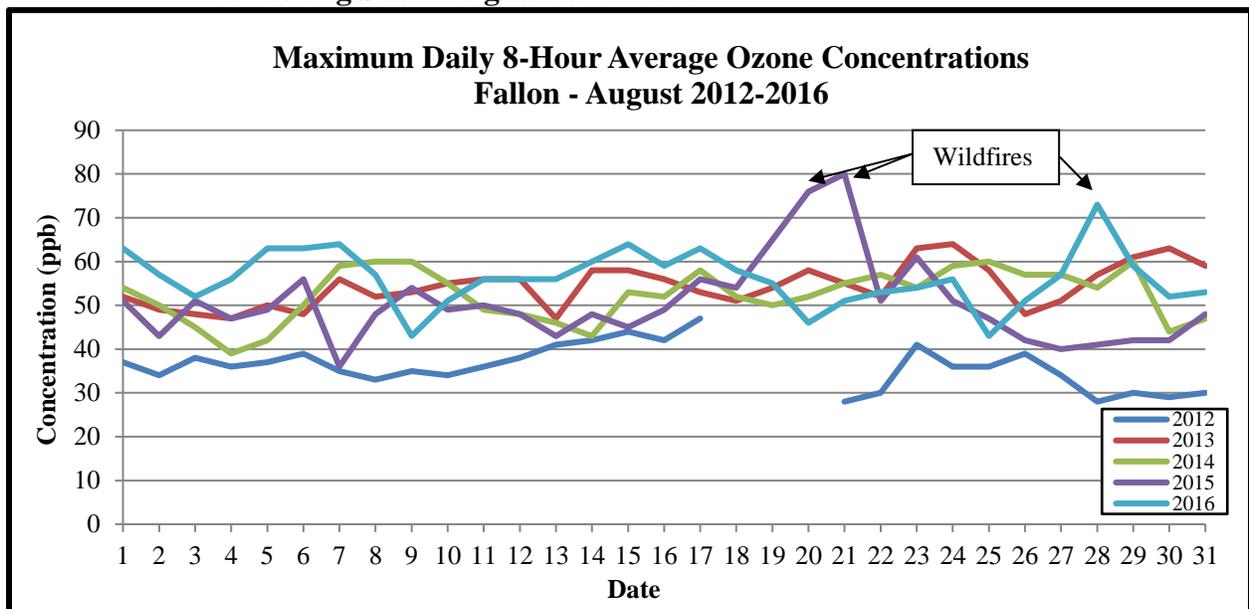
The increased precursor emissions from the fires throughout California resulted in substantial ozone formation, leading to the 8-hour ozone exceedance at Fallon on August 28, 2016. Section 2.6 summarizes the key mechanisms by which emissions from wildfires can increase ozone, as well as past research that documents increases in ozone formation downwind of wildfires.

The daily maximum 8-hour ozone concentration at the Fallon site on August 28, 2016, were more than 15 ppb higher than the average and median maximum daily 8-hour ozone concentrations historically measured during the month of August at the Fallon site (2012 through 2016). The measured concentration was approximately two standard deviations higher than the mean ozone concentrations at the site for the month of August (Table 5). In addition to the exceedance at Fallon, ozone was elevated throughout much of northern Nevada; air quality monitors in Washoe County also recorded exceedances of the 8-hour ozone standard.

### 3.5 BEYOND HISTORICAL AND BACKGROUND CONCENTRATIONS

Ozone concentrations in western Nevada are historically at their highest in the afternoon during the summer months. The measured 8-hour ozone concentration at the Fallon monitoring site on August 28, 2016 was significantly higher than the average and median concentrations for the month of August, as well as for similar non-event day concentrations. Figure 15 shows a time-series plot of 8-hour ozone concentrations at the Fallon site for all August days from 2012 through 2016.

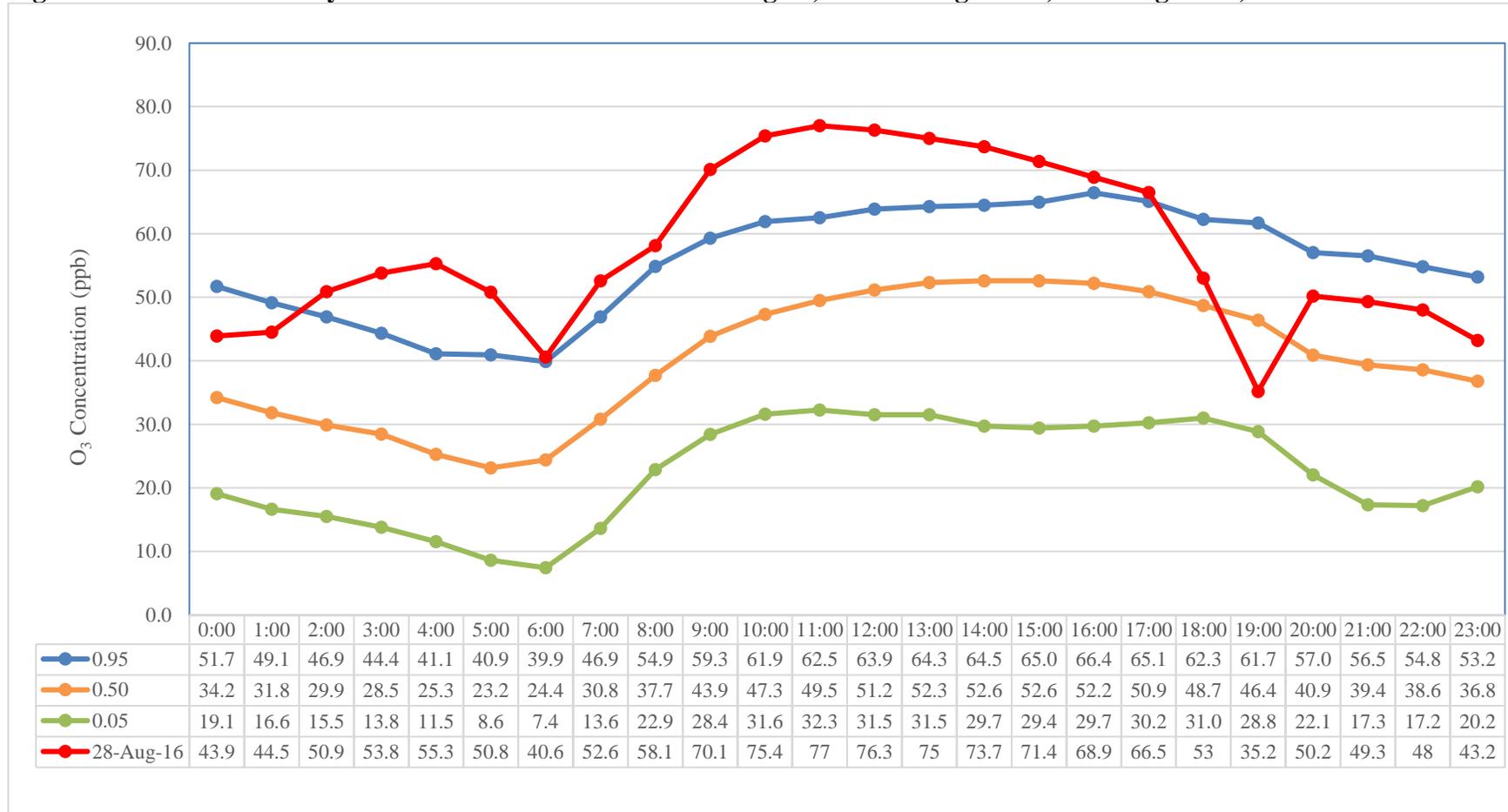
**Figure 15. Maximum Daily 8-Hour Average Ozone Concentrations at the Fallon Ozone Monitoring Site – August 2012 - 2016**



The one-hour ozone concentrations on the event day were well above the 95<sup>th</sup> percentile for summer ozone concentrations at the Fallon monitoring site (June through August, 2012 through

2016, excluding wildfire data [August 20-21, 2015 and August 28, 2016]) for several hours on both days (Figure 16).

**Figure 16. Fallon Hourly Ozone Concentrations for June-August, 2012 through 2016, with August 28, 2016.**



Historical data from the Fallon site show that the average ozone concentration for August from 2012 through 2016, (excluding August 20 and 21, 2015 and August 28, 2016) is 49.6 ppb. This data is summarized in Table 5 and shown graphically in Figure 17.

**Table 5. August Maximum Daily 8-Hour Average Ozone Statistics for Fallon**

	2012-2016		2012	2013	2014	2015*	2016	
	All Data	No Fire					All Data	No Fire
<b>Mean</b>	50.2	49.6	36.0	54.5	52.3	48.5	56.3	56.0
<b>Median</b>	51	51	36	55	53	48	56	56
<b>Std. Dev.</b>	9.6	8.9	4.9	4.8	5.9	6.2	6.4	5.7
<b>Max.</b>	80	65	47	64	60	65	73	64

\* Exceptional Events excluded  
Concentrations are in ppb.

**Figure 17. Historical Data – August Ozone FEM Mean and Maximum Daily 8-Hour Average Concentrations for Fallon**

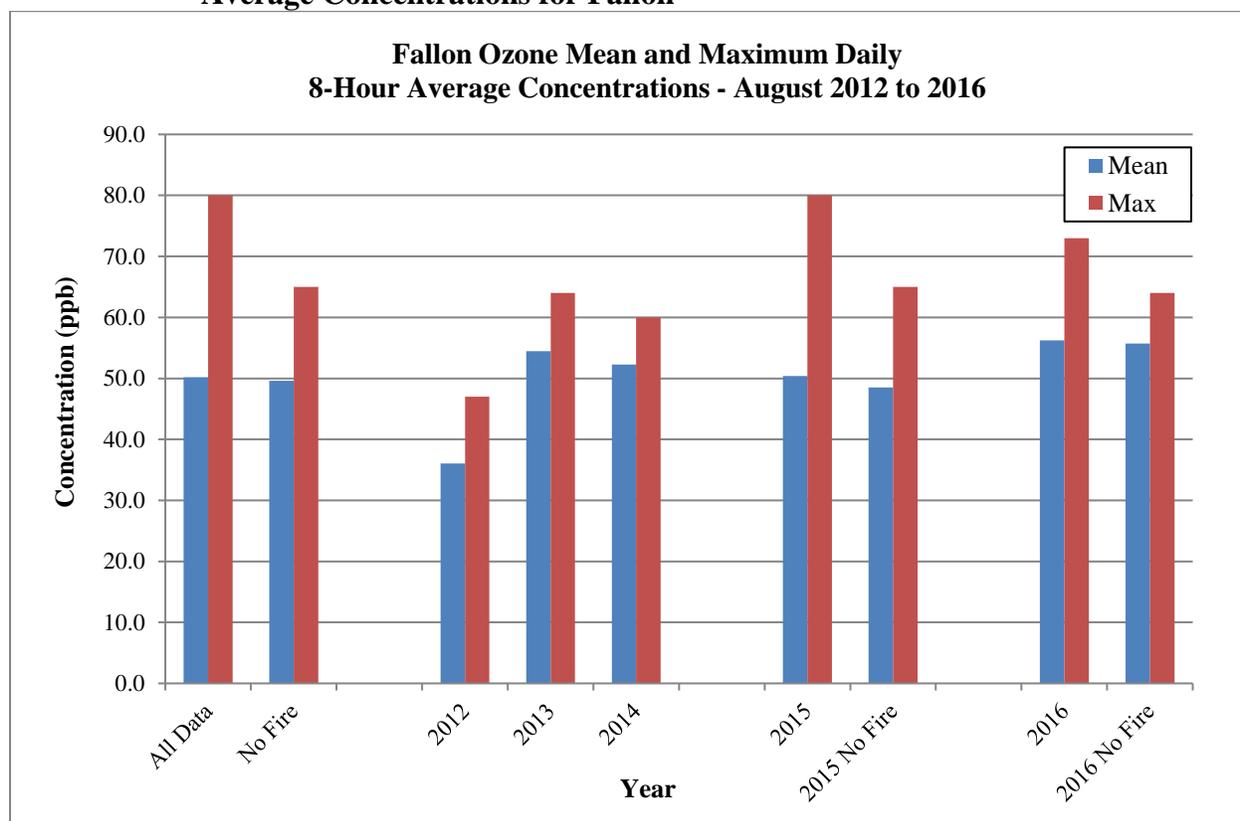
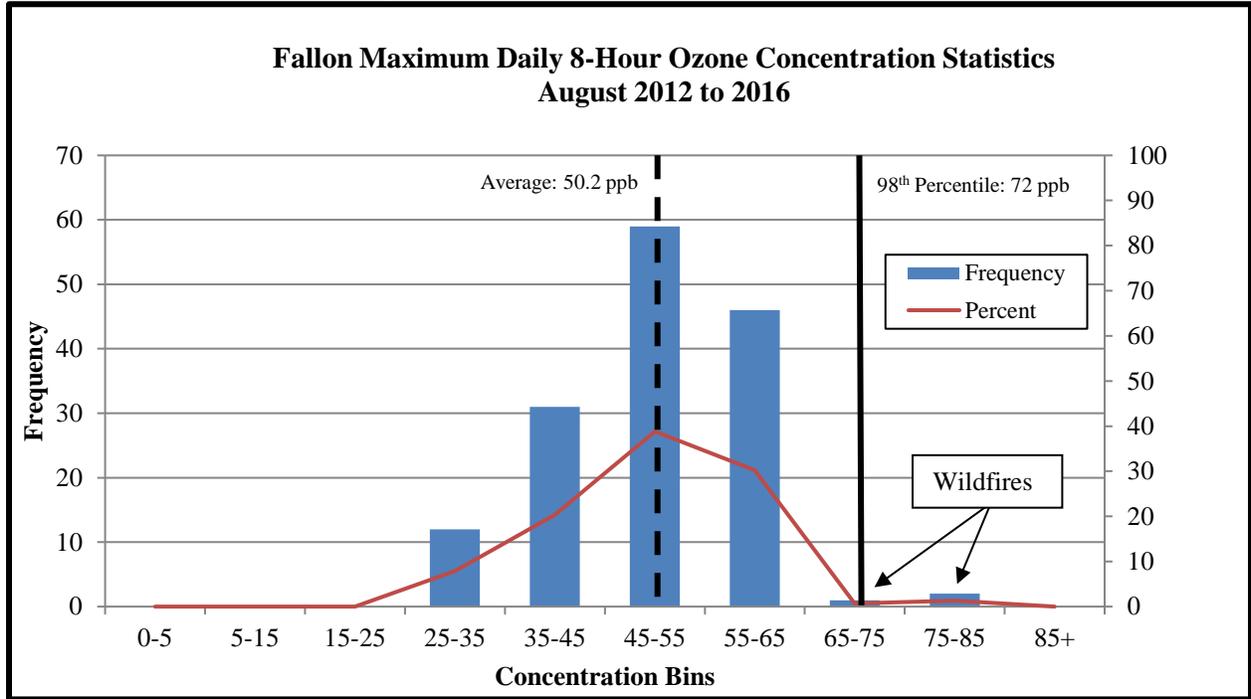


Figure 25 shows the number of August days over the five-year period 2012 through 2016 when the maximum 8-hour ozone concentration fell within established concentration bins of 10 ppb.

The curve on the graph represents the percentage for days that fall within each concentration bin. The concentration on August 28, 2016 is higher than the 98<sup>th</sup> percentile (Figure 18).

**Figure 18. Historical August Ozone Concentrations at Fallon**



To NDEP’s knowledge, there were no other unusual local ozone precursor emissions in or upwind from Fallon before or during the event days.

## 4.0 SUMMARY

Smoke from the 2016 summer California wildfires began impacting northern Nevada on August 26, and caused an 8-hour exceedance at the Fallon ozone monitoring site on August 28, 2016. This summary documents the transport of emissions from the fires to northern Nevada. Wildfire emissions transported both at the surface and aloft affected northern and western Nevada on August 28, 2016, causing the 8-hour ozone exceedance at Fallon.

This document has demonstrated a clear causal relationship between the emissions from the 2016 California wildfires and the 8-hour exceedance at Fallon on August 28, 2016, based on the following evidence:

- Meteorological and trajectory analyses document the transport of smoke and emissions from the 2016 California wildfires, demonstrating that these emissions reached northern and western Nevada, including Fallon;
- Pollution in the plume increased ozone concentrations consistent with the science of the conceptual model for the event. Ozone levels were anomalously elevated throughout northern Nevada, including the exceedances at Fallon. This regional increase in ozone, consistent with the extent and timing of increase in PM<sub>2.5</sub>, indicates that it is more likely that the fire emissions increased ozone due to increased precursors, rather than decreased ozone due to decreased solar insolation or increased ozone titration; and
- The concentration of 73 ppb at Fallon was well above normal historical levels.

## **5.0 CRITERIA FOR THE DEFINITION OF AN EXCEPTIONAL EVENT**

The criteria in 40 CFR §50.1(j) for an event to meet the definition of an exceptional event need to be met for the measured exceedances to qualify for exclusion. These criteria are:

- The event affects air quality;
- The event is not reasonably controllable or preventable; and
- The event is unlikely to reoccur at a particular location or [is] a natural event.

### **5.1 AFFECTS AIR QUALITY**

As stated in the preamble to the EER, the event in question is considered to have affected air quality if it can be shown that there is a clear causal relationship between the monitored exceedances and the event, and that the event is associated with a measured concentration in excess of normal historical concentrations. These criteria are demonstrated in Section 3. The media releases provided in Appendix C also provide evidence that the 2016 California wildfires affected air quality in the vicinity of the Fallon monitor. Given the information presented in this demonstration, the NDEP concludes that the California wildfires in late August 2016 affected air quality at the Fallon ozone monitoring site.

### **5.2 NOT REASONABLY CONTROLLABLE OR PREVENTABLE**

The EER defines a wildfire as an unplanned, unwanted wildland fire. The California wildfires were natural events occurring on wildland. NDEP BAQP is not aware of any evidence clearly demonstrating that prevention or control efforts beyond those actually taken would have been reasonable. Therefore, emissions from the California wildfires were not reasonably controllable or preventable.

### **5.3 NATURAL EVENT**

Based on the evidence provided in this demonstration, the California wildfires were “Natural Events” as defined in 40 CFR 50.1(k). According to the EER, “...wildfires on wildland initiated by accident or arson are considered natural events, and on a case-by-case basis this treatment for wildfires may bear on the appropriate treatment of accidental and arson-set structural fire,” (USEPA, 2016).

The California wildfires meet the definition of “wildfire” predominantly occurring on “wildland” as defined in 40 CFR 50.1(n) and (o). The California wildfires occurred on federal and state-owned lands.

## **6.0 PROCEDURAL REQUIREMENTS**

### **6.1 FLAGGING OF DATA**

The NDEP BAQP has submitted the ozone data from the Fallon monitor to the USEPA AQS database and has placed the appropriate flags on the data indicating that the data was affected by an exceptional event due to wildfires (Flag RT, requesting exclusion due to wildland fires). Informational flags (IT) were also included for other NDEP BAQP ozone monitoring sites for the same time period. Such flagging ensures that the air quality data is properly represented in the overall air quality planning process.

### **6.2 PUBLIC OUTREACH DURING EVENT**

An air agency requesting exclusion of air quality data affected by an exceptional event must take appropriate and reasonable actions to protect public health from exceedances or violations of the national ambient air quality standards. At a minimum, the agency must:

- Provide for prompt public notification whenever air quality concentrations exceed or are expected to exceed an applicable ambient air quality standard;
- Provide for public education concerning actions that individuals may take to reduce exposures to unhealthy levels of air quality during and following an exceptional event; and
- Provide for the implementation of appropriate measures to protect public health from exceedances or violations of ambient air quality standards caused by exceptional events.

The public was notified of air quality being affected by ozone from the California wildfires via AQI updates, National Weather Service Smoke Text Products, and NDEP's public website. The AQI maps and Smoke Text Products are provided in Appendix C.

### **6.3 PUBLIC COMMENT PERIOD**

The NDEP BAQP has prepared this documentation to demonstrate that these exceedances were due to a wildland fire natural event, in accordance with the USEPA EER. The documentation in support of this demonstration and request for the treatment of the data associated with this exceedance as an exceptional event is posted on the NDEP website at <http://ndep.nv.gov/admin/public.htm> requesting review and comment by the public for a minimum of 30 days. Direct public comments to:

Sheryl Fontaine, Ambient Air Monitoring Branch  
Nevada Division of Environmental Protection  
Bureau of Air Quality Planning  
901 South Stewart Street, Suite 4001  
Carson City, Nevada 89701  
Email: [sfontaine@ndep.nv.gov](mailto:sfontaine@ndep.nv.gov)

## 7.0 REFERENCES

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**APPENDIX A**

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**NDEP BAQP Annual Network Plan Approval Letter**



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION IX  
75 Hawthorne Street  
San Francisco, CA 94105

OCT 26 2016

Mr. Danilo Dragoni  
Chief, Bureau of Air Quality Planning  
Nevada Division of Environmental Protection  
901 South Stewart Street, Suite 4001  
Carson City, Nevada 89701

Dear Mr. Dragoni:

Thank you for your submission of the 2016 *Ambient Air Monitoring Network* Plan for the State of Nevada in June 2016. We have reviewed the submitted document based on the requirements set forth under 40 CFR 58. Based on the information provided in the plan, the U.S. Environmental Protection Agency (EPA) approves all portions of the network plan except those specifically identified below.

Please note that we cannot approve portions of the annual network plan for which the information in the plan is insufficient to judge whether the requirement has been met, or for which the information, as described, does not meet the requirements as specified in 40 CFR 58.10 and the associated appendices. EPA Region 9 also cannot approve portions of the plan for which the EPA Administrator has not delegated approval authority to the regional offices. Accordingly, the first enclosure (*A. Annual Monitoring Network Plan Items where EPA is Not Taking Action*) provides a listing of specific items of your agency's annual monitoring network plan where EPA is not taking action. The second enclosure (*B. Additional Items Requiring Attention*) is a listing of additional items in the plan that EPA wishes to bring to your agency's attention.

The third enclosure (*C. Annual Monitoring Network Plan Checklist*) is the checklist EPA used to review your plan for overall items that are required to be included in the annual network plan along with our assessment of whether the plan submitted by your agency addresses those requirements.

The first two enclosures highlight a subset of the more extensive list of items reviewed in the third enclosure. All comments conveyed via this letter (and enclosures) should be addressed (through corrections within the plan, additional information being included, or discussion) in next year's annual monitoring network plan.

If you have any questions regarding this letter or the enclosed comments, please feel free to contact me at (415) 947-4134 or Anna Mebust at (415) 972-3265.

Sincerely,



Gwen Yoshimura, Acting Manager  
Air Quality Analysis Office

Enclosures:

- A. Annual Monitoring Network Plan Items where EPA is Not Taking Action
- B. Additional Items Requiring Attention
- C. Annual Monitoring Network Plan Checklist

cc (via email): Daren Winkelman, NDEP

**APPENDIX B**

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**NDEP BAQP 2016 Data Certification Letter**



NEVADA DIVISION OF  
**ENVIRONMENTAL  
PROTECTION**

**STATE OF NEVADA**  
Department of Conservation & Natural Resources

Brian Sandoval, Governor  
Bradley Crowell, Director  
Greg Lovato, Administrator

May 1, 2017

Ms. Alexis Strauss  
Acting Regional Administrator  
U.S. EPA – Region 9  
75 Hawthorne Street  
San Francisco, CA 94105

**RE: Submittal of the State of Nevada 2016 Data Certification Package**

Dear Ms. Strauss:

Pursuant to 40 CFR Part 58, state and local government monitoring organizations must annually certify their data. Certification for the year 2016 means that (1) the ambient concentration data and the quality assurance data from January 1, 2016 through December 31, 2016 are completely submitted to the Air Quality System (AQS) by the State of Nevada, Primary Quality Assurance Organization (PQAO) 0757, and (2) the ambient data are accurate to the best of my knowledge taking into consideration the quality assurance findings. This process has taken into account the results of periodic verification, precision and accuracy checks, and any other relevant performance assessments.

Therefore, as Chief of the Bureau of Air Quality Planning for the State of Nevada, I certify that all data from the NDEP State and Local Air Monitoring System (SLAMS) and the Special Purpose Monitor (SPM) reported to EPA Region 9, enclosed on the AMP 600 summary report, have met the data certification criteria described in 40 CFR Part 58, for the year 2016.

If you have any questions or comments, please contact Daren Winkelman of my staff, at 775-687-9342, or e: [dwinkelman@ndep.nv.gov](mailto:dwinkelman@ndep.nv.gov).

Sincerely,

Danilo Dragoni, Chief  
Bureau of Air Quality Planning

DD/dw  
Enclosure

## **APPENDIX C**

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### **Sample Public Notifications**



AirNow Ozone AQI Map for August 25, 2016



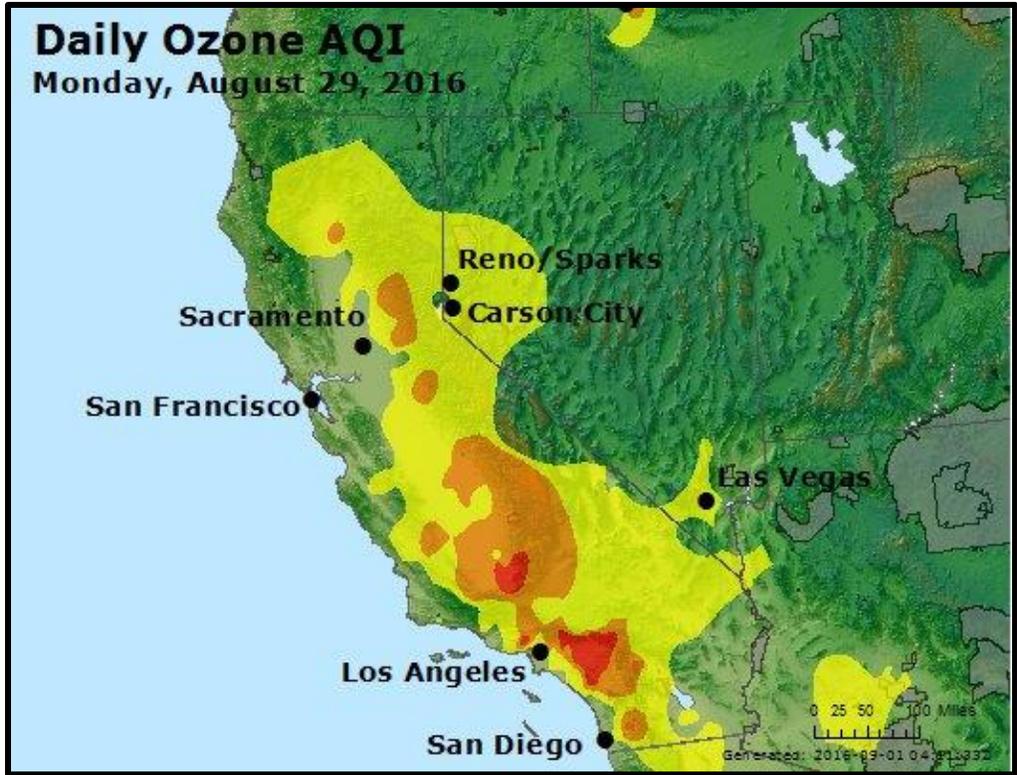
AirNow Ozone AQI Map for August 26, 2016



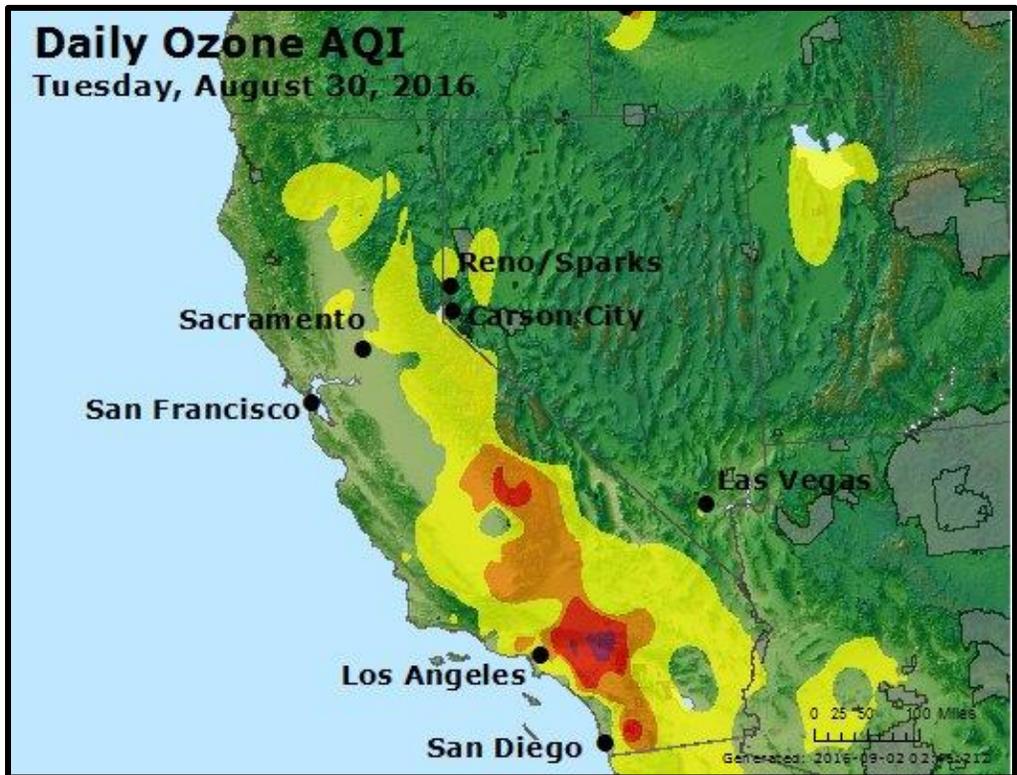
AirNow Ozone AQI Map for August 27, 2016



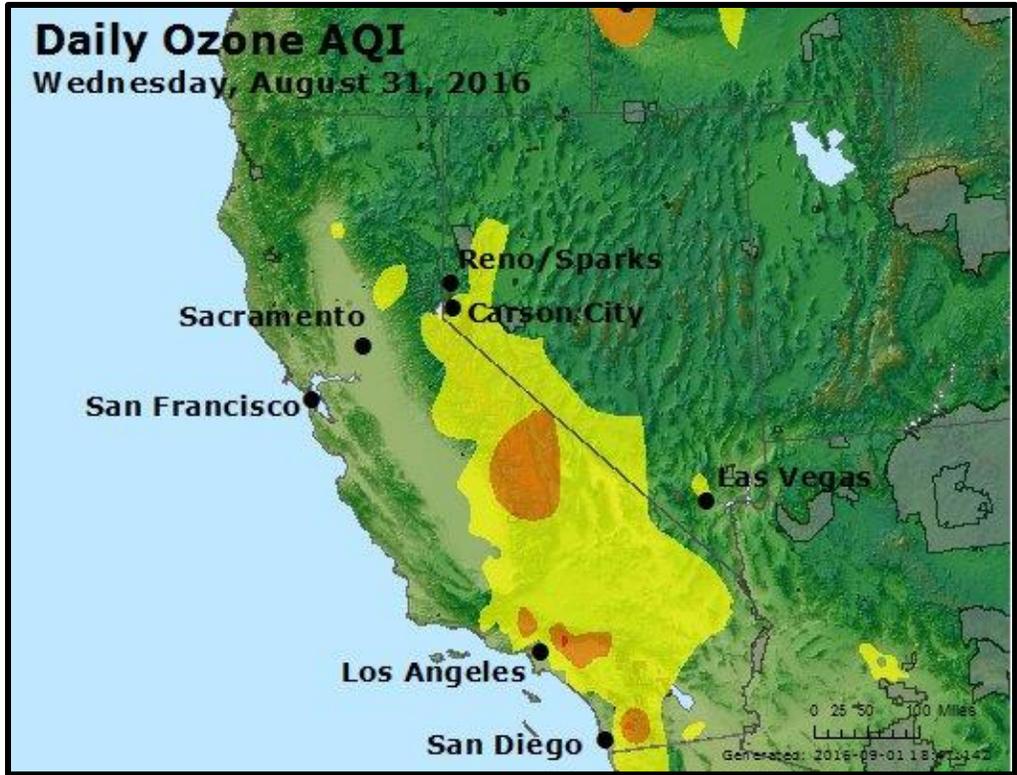
AirNow Ozone AQI Map for August 28, 2016



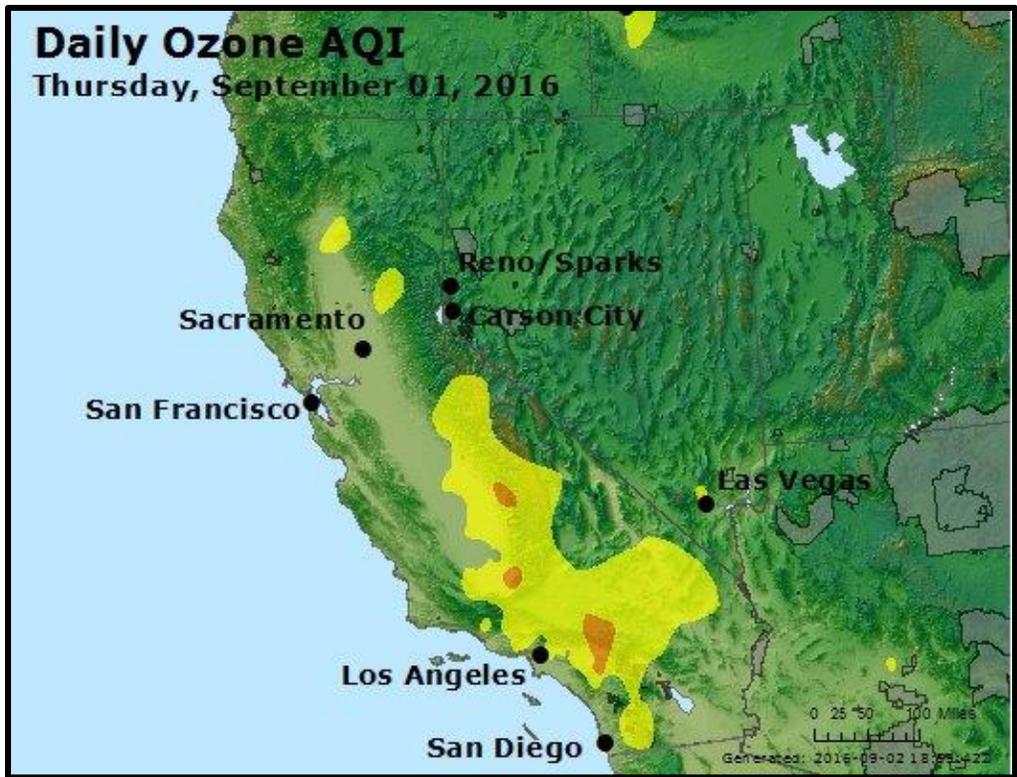
AirNow Ozone AQI Map for August 29, 2016



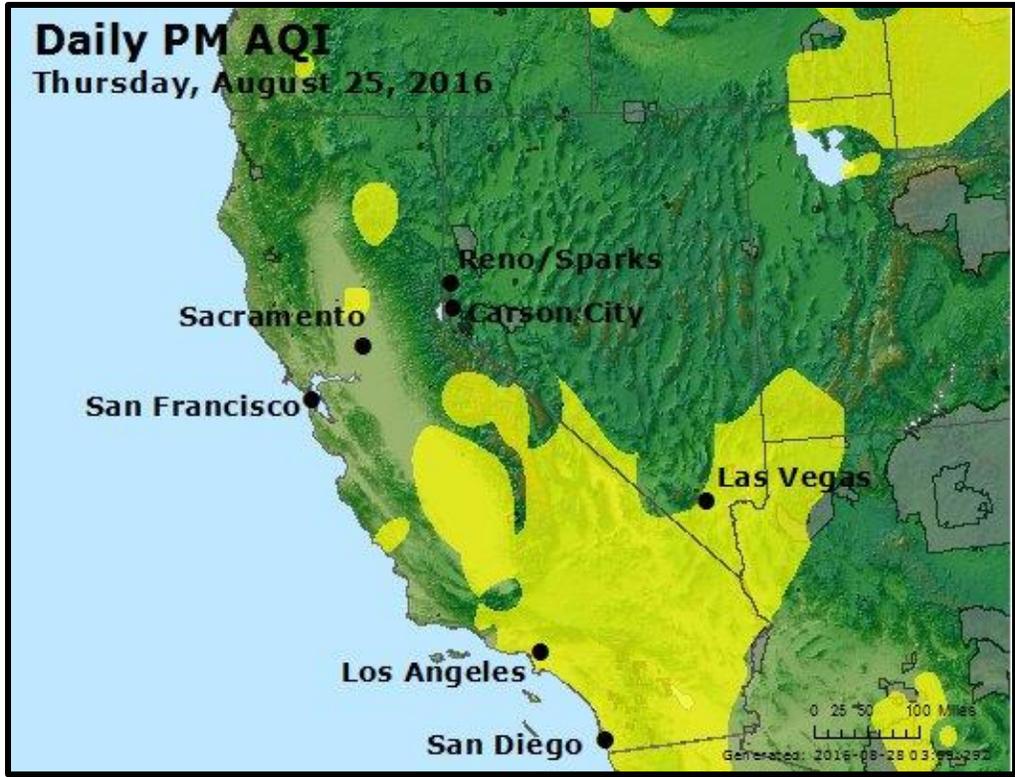
AirNow Ozone AQI Map for August 30, 2016



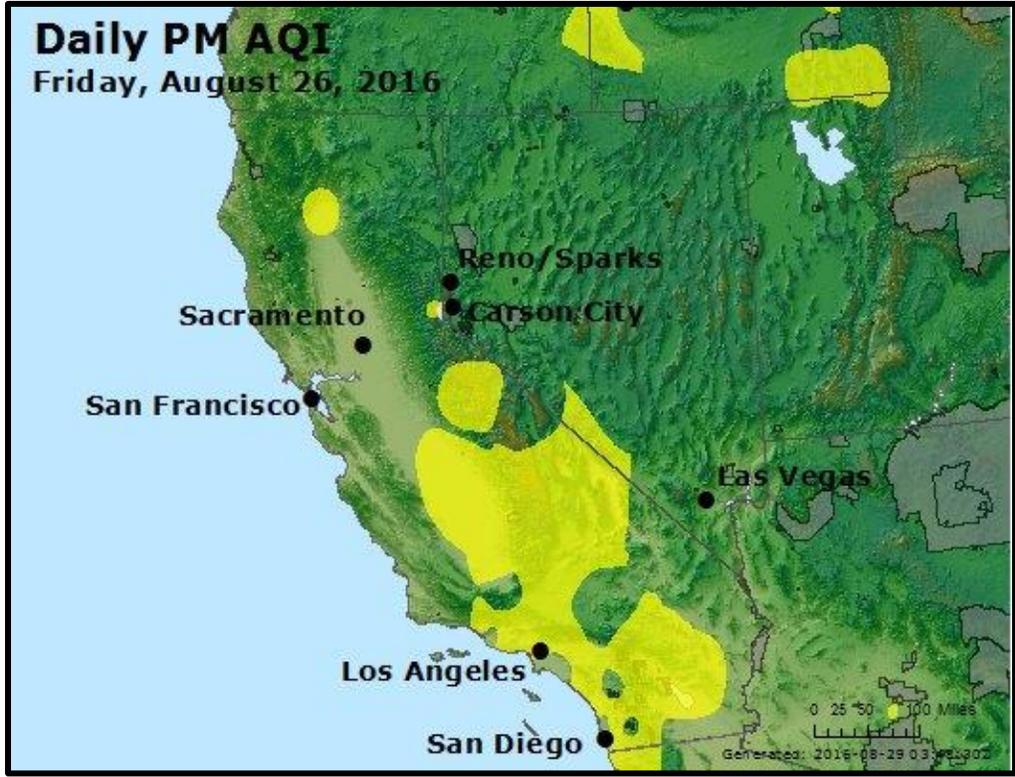
AirNow Ozone AQI Map for August 31, 2016



AirNow Ozone AQI Map for September 1, 2016



AirNow PM<sub>2.5</sub> AQI Map for August 25, 2016



AirNow PM<sub>2.5</sub> AQI Map for August 26, 2016



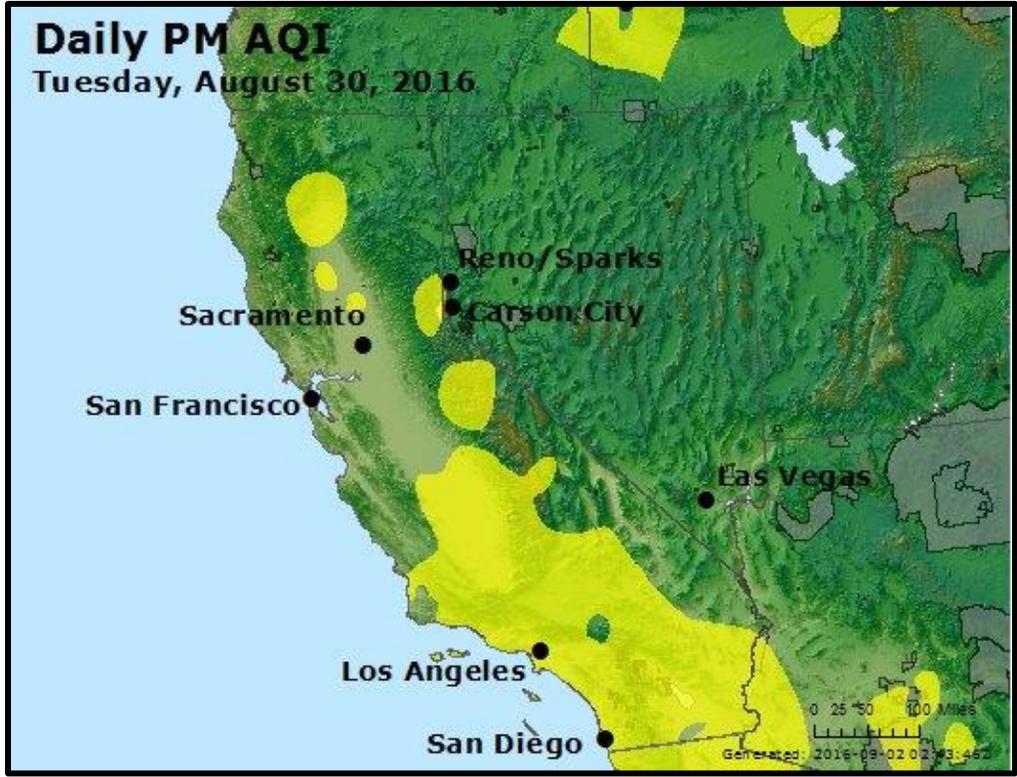
AirNow PM<sub>2.5</sub> AQI Map for August 27, 2016



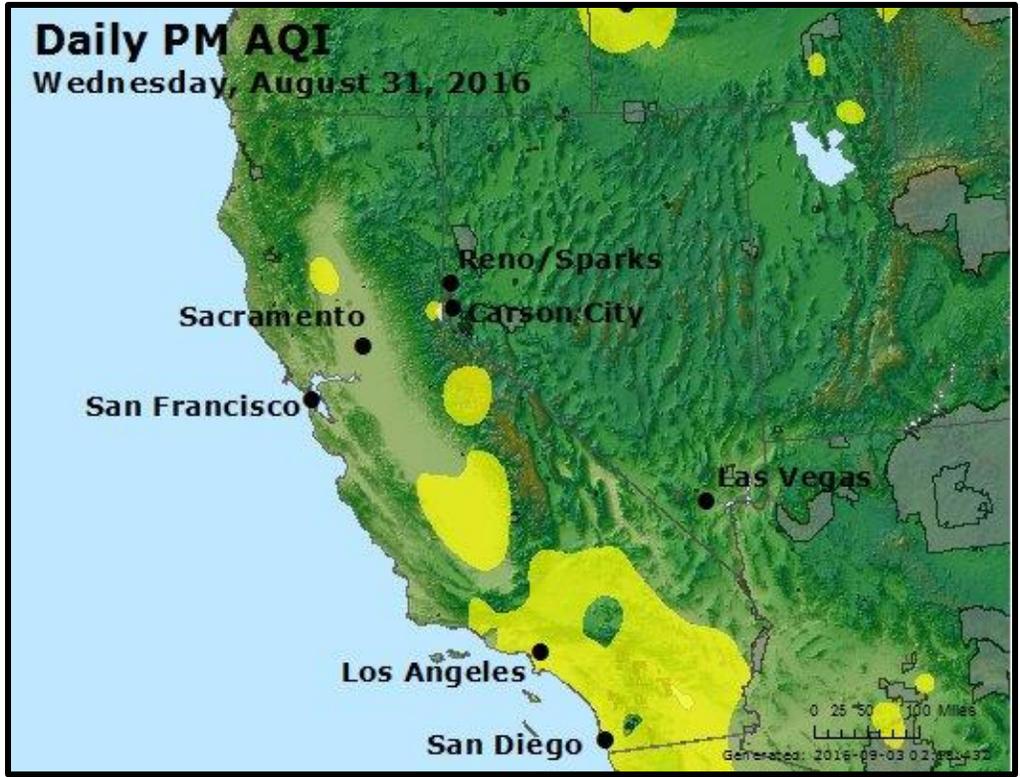
AirNow PM<sub>2.5</sub> AQI Map for August 28, 2016



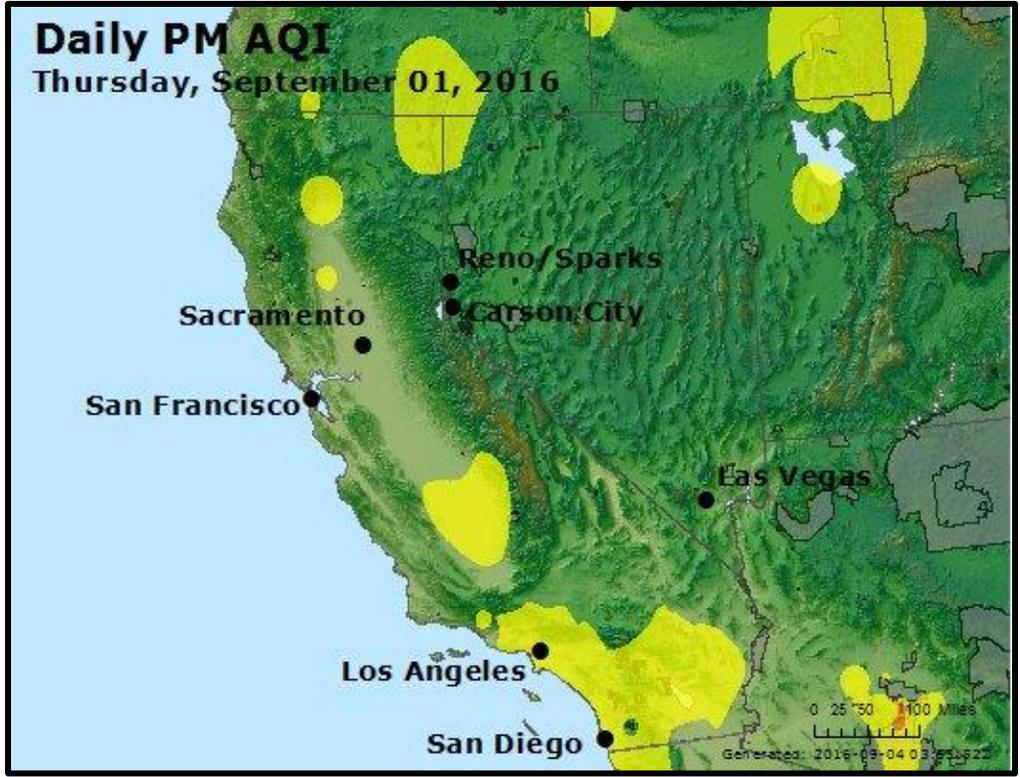
AirNow PM<sub>2.5</sub> AQI Map for August 29, 2016



AirNow PM<sub>2.5</sub> AQI Map for August 30, 2016



AirNow PM<sub>2.5</sub> AQI Map for August 31, 2016



AirNow PM<sub>2.5</sub> AQI Map for September 1, 2016

**Saturday, August 27, 2016**

**DESCRIPTIVE TEXT NARRATIVE FOR SMOKE/DUST OBSERVED IN SATELLITE IMAGERY**

**THROUGH 1730Z August 27, 2016**

**SMOKE:**

**Western United States:**

An area of light to moderate density smoke was seen from ongoing wildfires in eastern Oregon and Idaho moving eastward into northwestern Wyoming and southwestern Montana. Light density smoke was also seen across Wyoming from the wildfires.

**Central Plains:**

A plume of light density smoke was seen spanning from central Nebraska to extreme southern North Dakota mostly likely from wildfires from the Western United States.

**Canada:**

A swath of light density smoke was seen across northern Ontario moving toward James Bay. The source of the smoke is unclear but most likely resulting from the wildfires from the western United States.

**DUST:**

**Caribbean:**

African dust moving westward across the tropical Atlantic/eastern Caribbean Sea can be seen in satellite imagery stretching from the Leeward Islands to Jamaica, mostly south of Hispaniola.

DS/JW

THIS TEXT PRODUCT IS PRIMARILY INTENDED TO DESCRIBE SIGNIFICANT AREAS OF SMOKE ASSOCIATED WITH ACTIVE FIRES AND SMOKE WHICH HAS BECOME DETACHED FROM THE FIRES AND DRIFTED SOME DISTANCE AWAY FROM THE SOURCE FIRE. TYPICALLY OVER THE COURSE OF ONE OR MORE DAYS. AREAS OF BLOWING DUST ARE ALSO DESCRIBED. USERS ARE ENCOURAGED TO VIEW A GRAPHIC DEPICTION OF THESE AND OTHER PLUMES WHICH ARE LESS EXTENSIVE AND STILL ATTACHED TO THE SOURCE FIRE IN VARIOUS GRAPHIC FORMATS ON OUR WEB SITE:

JPEG: <http://www.ospo.noaa.gov/Products/land/hms.html>

GIS: <http://www.firedetect.noaa.gov/viewer.htm>

KML: <http://www.ssd.noaa.gov/PS/FIRE/kml.html>

ANY QUESTIONS OR COMMENTS REGARDING THIS PRODUCT SHOULD BE SENT TO  
SSDFireTeam@noaa.gov

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**Unless otherwise indicated:**

- Areas of smoke are analyzed using GOES-EAST and GOES-WEST Visible satellite imagery.

- Only a general description of areas of smoke or significant smoke plumes will be analyzed.
- A quantitative assessment of the density/amount of particulate or the vertical distribution is not included.
- Widespread cloudiness may prevent the detection of smoke even from significant fires.

**Saturday, August 27, 2016**

**DESCRIPTIVE TEXT NARRATIVE FOR SMOKE/DUST OBSERVED IN SATELLITE  
IMAGERY**

**THROUGH 0130Z August 28, 2016**

SMOKE:

California:

An area of light density remnant smoke originating from fires in southern California was seen across California slowly moving east with optically thicker smoke in Central Valley banked along the Sierra Nevada mountains. Several fires are still emitting light to moderate density smoke in the southern Sierra Nevada mountains and southwestern California coast.

Pacific Northwest/Intermountain West:

Two significant light to heavy density smoke plumes were seen traveling east in east-central Oregon and west-central Idaho. Multiple light to moderate density smoke plumes were seen in-between cloud cover traveling east in the northern portions of the Intermountain West.

DUST:

Caribbean:

African dust moving westward across the tropical Atlantic/eastern Caribbean Sea can be seen in satellite imagery stretching from the Leeward Islands to Jamaica, mostly south of Hispaniola.

-Cronin

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JPEG: <http://www.ospo.noaa.gov/Products/land/hms.html>

GIS: <http://www.firedetect.noaa.gov/viewer.htm>

KML: <http://www.ssd.noaa.gov/PS/FIRE/kml.html>

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SSDFireTeam@noaa.gov

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- Widespread cloudiness may prevent the detection of smoke even from significant fires.

**Sunday, August 28, 2016**

**DESCRIPTIVE TEXT NARRATIVE FOR SMOKE/DUST OBSERVED IN SATELLITE IMAGERY**

**THROUGH 1730Z August 28, 2016**

**SMOKE:**

Pacific Northwest/Intermountain West:

Two remnant smoke plumes with density ranging from light to moderate were seen from eastern Oregon all the way to the Dakotas. These smoke plumes are from wildfires in eastern Oregon and Idaho.

**DUST:**

Caribbean:

African dust is seen moving westward across the Leeward Islands and Puerto Rico.

**UNKNOWN AEROSOL:**

An unknown aerosol was seen spanning from northern Texas to Missouri. The unknown aerosol could be from sulfates.

Another swatch of unknown aerosol was seen off the eastern coast of North Carolina and Virginia spanning eastward over the western Atlantic. The unknown aerosol was likely sulfates, though there may be some remnant smoke mixed in.

An unknown aerosol was seen in central Canada in western Saskatchewan and southeastern Alberta. The aerosol was likely a mixture of sulfates and remnant smoke.

- DS/JW

THIS TEXT PRODUCT IS PRIMARILY INTENDED TO DESCRIBE SIGNIFICANT AREAS OF SMOKE ASSOCIATED WITH ACTIVE FIRES AND SMOKE WHICH HAS BECOME DETACHED FROM THE FIRES AND DRIFTED SOME DISTANCE AWAY FROM THE SOURCE FIRE. TYPICALLY OVER THE COURSE OF ONE OR MORE DAYS. AREAS OF BLOWING DUST ARE ALSO DESCRIBED. USERS ARE ENCOURAGED TO VIEW A GRAPHIC DEPICTION OF THESE AND OTHER PLUMES WHICH ARE LESS EXTENSIVE AND STILL ATTACHED TO THE SOURCE FIRE IN VARIOUS GRAPHIC FORMATS ON OUR WEB SITE:

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- Widespread cloudiness may prevent the detection of smoke even from significant fires.

**Sunday, August 28, 2016**

**DESCRIPTIVE TEXT NARRATIVE FOR SMOKE/DUST OBSERVED IN SATELLITE  
IMAGERY**

**THROUGH 1730Z August 28, 2016**

**SMOKE:**

Area from Eastern Oregon and Idaho to the Dakotas:

Smoke of varying density was visible extending from eastern Oregon across southern Idaho and over southern and eastern Montana and much of Wyoming to the Dakotas. Some of the smoke also fanned out in a southerly direction reaching northern Utah. This smoke was attributed primarily to wildfire activity over eastern Oregon, Idaho, southwestern and western Montana, and northwestern Wyoming.

California/Southern Oregon/Western and Central Nevada:

A few widely scattered wildfires from northern to south central California were producing patches of smoke affecting portions of California into southern Oregon. A larger area of aerosol surrounding the smoke was visible covering virtually all of California, western and central Nevada, and southern Oregon though it is uncertain how much of this aerosol is composed of smoke.

JS

Earlier This Morning...

**DUST:**

Caribbean:

African dust is seen moving westward across the Leeward Islands and Puerto Rico.

**UNKNOWN AEROSOL:**

An unknown aerosol was seen spanning from northern Texas to Missouri. The unknown aerosol could be from sulfates.

Another swatch of unknown aerosol was seen off the eastern coast of North Carolina and Virginia spanning eastward over the western Atlantic. The unknown aerosol was likely sulfates, though there may be some remnant smoke mixed in.

An unknown aerosol was seen in central Canada in western Saskatchewan and southeastern Alberta. The aerosol was likely a mixture of sulfates and remnant smoke.

- DS/JW

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- A quantitative assessment of the density/amount of particulate or the vertical distribution is not included.
- Widespread cloudiness may prevent the detection of smoke even from significant fires.





# National Weather Service Raw Text Product

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685  
FXUS65 KREV 272055  
AFDREV

Area Forecast Discussion  
National Weather Service Reno NV  
155 PM PDT SAT AUG 27 2016

.SYNOPSIS...

Light winds and high temperatures a few degrees above average are expected through the weekend. High pressure breaks down Monday and Tuesday for increasing breezes, with cooler temperatures likely by late week.

&&

.SHORT TERM...

Added haze for Reno and Tahoe through Sunday evening, otherwise only minor tweaks to the forecast.

High pressure will bring dry and warm conditions into early next week. Temperatures will be near to slightly (3-6 degrees) above average with highs in the upper 80s to mid 90s for western Nevada valleys and low to mid 80s in Sierra valleys. Afternoon zephyr winds are expected to be average to weak through Sunday. By Monday, the ridge of high pressure begins to slip off to the south and east with a slightly stronger zephyr possible...although the

increase is not expected to be enough to warrant too much fire weather concern.

Tuesday, an upper disturbance will move over northern California and into central and eastern Oregon. Simulations hint at some mid level clouds over northeast CA and northwest NV Tuesday morning and early afternoon as the disturbance, while quick-moving, exhibits sharp forcing and moderate lapse rates. The question will be...does the forcing hang around long enough to produce deeper elevated convection? At this time, it looks to be mainly some altocumulus with a few ACCAS embedded north of a Portola to Pyramid Lake to Gerlach line.

If any showers or thunderstorms form Tuesday morning, they will very likely be dry with swift mid-level flow and dry sub-cloud layers. At this time, the chances are low (10%) for elevated convection Tuesday morning. However, with "dry" lightning and gusty outflow winds possible, the fire weather community and outdoor events across northeast CA and northwest NV should remain informed of the latest forecasts and discussions, especially as Tuesday afternoon could bring gusty winds of 25-35 mph in the wake of the upper disturbance. Snyder

.LONG TERM...Wednesday through Saturday...

The second half of next week will feature a broad upper trough over the western U.S. This will bring periods of gusty winds and a gradual cool down by late week...with little chance for rain until at least next weekend. Highs for Thursday and Friday were moderated/warmed a touch for some areas as the trough does not look quite as deep, at least until next weekend. Snyder

&&

.AVIATION...

VFR conditions are likely through the weekend with mainly light winds. Late afternoon and early evening winds could increase by Sunday...but this is more likely Monday as thermal gradients start to increase.

Some haze has leaked into far western Nevada today, at least partially from the Mokelumne Fire on the west slopes of the Sierra south of Lake Tahoe. With southwest to west winds aloft, haze could hang around periodically for the next couple days (depending on smoke production from fires)...possibly bringing some decrease in slantwise visibility for landings at KRNO/KCXP/KRTS/KMEV. Snyder/20

&&

.REV Watches/Warnings/Advisories...

NV...None.

CA...None.

&&

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For more information from the National Weather Service visit...  
<http://weather.gov/reno>

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## National Weather Service Raw Text Product

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168

FXUS65 KREV 280939

AFDREV

Area Forecast Discussion

National Weather Service Reno NV

239 AM PDT SUN AUG 28 2016

.SYNOPSIS...

Light winds and high temperatures a few degrees above average will continue today. High pressure breaks down Monday and Tuesday for increasing breezes, with cooler temperatures likely by late week.

&&

.SHORT TERM...

Dry and warm conditions are expected today with only a few afternoon cumulus developing in Mono and Mineral Counties. Southwest flow aloft will continue to allow haze from fires in California to move into the region.

A short wave trough is expected to move through northern California Monday night into Tuesday which will begin to cool temperatures a bit, slowly increase afternoon winds, and allow some moisture into the area. It's possible areas near the Oregon

border could see some precipitation, possibly even some high based convection, but forcing and upper level instability aren't well aligned at this point.

By Tuesday widespread gusts around 25 mph can be expected, and depending on how the trough comes through, could be a bit stronger. The combination of low humidities and gusty winds will increase fire weather concerns during the day on Tuesday before moisture begins to move into the area Tuesday night. -Zach

.LONG TERM...Wednesday through Saturday...

The medium range models are evolving toward a solution in the long term that is less aggressive than previous GFS solutions and more in line with the solution the ECMWF has been trending toward over the last 48 hours or so. Since we did not trend toward the outlier GFS solution earlier...only minor forecast changes were needed this cycle.

As stated...the models are trending toward a less amplified trough for most of the extended period as the main portion of the trough remains well north of the region in WA/OR. Thus temps were allowed to drift up a bit each day through Friday and no pops of consequence are in the forecast. Wind remains a question both Wednesday and Thursday. Timing short waves in the flow this far out is difficult at best...but there could be increased winds due to short wave activity Wednesday afternoon/evening. This could raise fire weather concerns. Winds for Thursday and Friday may be a bit lighter.

The medium range deterministic models and many of the ensemble members have a sharper short wave carving the trough farther south on Saturday. This could make Saturday the breeziest day of the extended and allow temps to fall a few degrees. But...temps should be no more than a few degrees below average. Saturday remains dry as moisture return remains cut off.

&&

.AVIATION...

VFR conditions continue into the early part of the week at least. Winds today should be fairly light through most of the day with a slightly suppressed zephyr in the late afternoon. Stronger westerly afternoon/evening winds are likely starting Monday as thermal gradients begin to strengthen.

Haze will linger around the region through early in the week...the remnants of smoke from fires in California. The haze in our region should not be so thick as to lower visibility enough to cause impacts to flight operations.

A short wave late Monday and early Tuesday could bring overnight convection with gusty surface to areas north and west of a line from Portola to Gerlach...but the likelihood of any convection is only

about 10%.

The bigger aviation impact could be blowing dust in areas down wind of dry lake beds starting Tuesday and continuing into Wednesday.

&&

.REV Watches/Warnings/Advisories...

NV...None.

CA...None.

&&

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For more information from the National Weather Service visit...

<http://weather.gov/reno>

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884  
FNUS55 KREV 271254  
FWFRE

FIRE WEATHER PLANNING FORECAST  
NATIONAL WEATHER SERVICE RENO NV  
554 AM PDT SAT AUG 27 2016

.DISCUSSION...

DRY CONDITIONS WILL CONTINUE INTO NEXT WEEK. WINDS WILL BE LIGHT INTO SUNDAY BEFORE SLOWLY INCREASING FOR NEXT WEEK BEGINNING ON MONDAY. TEMPERATURES WILL BE NEAR AVERAGE...BUT HUMIDITY WILL CONTINUE TO BE LOW WITH FAIR TO POOR OVERNIGHT RECOVERY.

NOTE: THUNDERSTORMS IMPLY GUSTY AND ERRATIC WINDS.

NOTE: PLEASE SEE OPERATING PLAN FOR DETAILED ZONE DESCRIPTIONS  
[HTTP://WWW.WRH.NOAA.GOV/FIREWX/?WFO=REV](http://www.wrh.noaa.gov/firewx/?wfo=rev)

NVZ450-280045-  
WESTERN NEVADA SIERRA FRONT-  
554 AM PDT SAT AUG 27 2016

.TODAY...

\* SKY/WEATHER.....SUNNY.  
\* MAX TEMPERATURE....  
\* VALLEYS.....86-94.  
\* MID SLOPE.....80-90.

\* 24 HR TREND.....2 DEGREES WARMER.  
 \* MIN HUMIDITY.....  
 \* VALLEYS.....8-14%.  
 \* MID SLOPE.....9-15%.  
 \* 24 HR TREND.....LITTLE CHANGE.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...UPSLOPE 4 TO 8 MPH BECOMING WEST AROUND 10 MPH  
 WITH GUSTS TO 20 MPH IN THE AFTERNOON.  
 \* RIDGE TOP.....SOUTHEAST WINDS AROUND 10 MPH SHIFTING TO THE  
 WEST IN THE AFTERNOON.  
 \* HAINES INDEX.....4-5.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.  
 \* MIXING HEIGHT.....16500-17500 FT MSL.  
 \* TRANSPORT WINDS...VARIABLE WINDS TO 10 MPH.  
 \* VENTILATION.....GOOD.

.TONIGHT...

\* SKY/WEATHER.....CLEAR.  
 \* MIN TEMPERATURE....  
 \* VALLEYS.....42-52.  
 \* MID SLOPE.....52-62.  
 \* 24 HR TREND.....2 DEGREES COOLER.  
 \* MAX HUMIDITY.....  
 \* VALLEYS.....64-74%.  
 \* MID SLOPE.....23-33%.  
 \* 24 HR TREND.....3-4% WETTER VALLEYS...LITTLE CHANGE MID SLOPES.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...WEST WINDS AROUND 10 MPH. GUSTS UP TO 25 MPH IN  
 THE EVENING.  
 \* RIDGE TOP.....WEST WINDS 10 TO 15 MPH. GUSTS UP TO 25 MPH IN  
 THE EVENING.  
 \* HAINES INDEX.....4-5.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.

.SUNDAY...

\* SKY/WEATHER.....SUNNY.  
 \* MAX TEMPERATURE....  
 \* VALLEYS.....86-94.  
 \* MID SLOPE.....80-90.  
 \* MIN HUMIDITY.....  
 \* VALLEYS.....8-14%.  
 \* MID SLOPE.....9-15%.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...UPSLOPE 4 TO 8 MPH BECOMING SOUTHWEST AROUND 10 MPH  
 WITH GUSTS UP TO 20 MPH IN THE AFTERNOON.  
 \* RIDGE TOP.....SOUTHWEST WINDS 10 TO 15 MPH. GUSTS UP TO 25 MPH  
 IN THE AFTERNOON.  
 \* HAINES INDEX.....4-5.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.  
 \* MIXING HEIGHT.....17000-18000 FT MSL.  
 \* TRANSPORT WINDS...SOUTHWEST 10 TO 15 MPH.

\* VENTILATION.....EXCELLENT.

.EXTENDED...

.SUNDAY NIGHT...CLEAR. LOWS 43-53. SOUTHWEST WINDS AROUND 10 MPH IN THE EVENING BECOMING DOWNSLOPE 2 TO 5 MPH.

.MONDAY...CLEAR. HIGHS 86-94. LOWS 42-52. SOUTHWEST WINDS 10 TO 15 MPH.

.TUESDAY THROUGH WEDNESDAY...CLEAR. HIGHS 82-92. LOWS 39-49. SOUTHWEST WINDS 10 TO 20 MPH.

.THURSDAY...CLEAR. HIGHS 78-86. LOWS 34-44.

.FRIDAY...SUNNY. HIGHS 75-81.

\$\$

CAZ272-280045-

GREATER LAKE TAHOE AREA-

554 AM PDT SAT AUG 27 2016

.TODAY...

\* SKY/WEATHER.....SUNNY.

\* MAX TEMPERATURE....

\* VALLEYS.....72-82.

\* MID SLOPE.....69-77.

\* 24 HR TREND.....LITTLE CHANGE.

\* MIN HUMIDITY.....

\* VALLEYS.....13-23%.

\* MID SLOPE.....15-25%.

\* 24 HR TREND.....LITTLE CHANGE.

\* 20-FOOT WINDS.....

\* VALLEYS/SLOPE...UPSLOPE 4 TO 8 MPH BECOMING WEST AROUND 10 MPH WITH GUSTS TO 20 MPH IN THE AFTERNOON.

\* RIDGE TOP.....EAST WINDS AROUND 10 MPH SHIFTING TO THE WEST WITH GUSTS TO 25 MPH IN THE AFTERNOON.

\* HAINES INDEX.....4-5.

\* LAL.....1.

\* CHC WETTING RAIN...0%.

\* MIXING HEIGHT.....16500-17500 FT MSL.

\* TRANSPORT WINDS...VARIABLE WINDS TO 10 MPH.

\* VENTILATION.....GOOD.

.TONIGHT...

\* SKY/WEATHER.....CLEAR.

\* MIN TEMPERATURE....

\* VALLEYS.....35-45.

\* MID SLOPE.....46-56.

\* 24 HR TREND.....LITTLE CHANGE.

\* MAX HUMIDITY.....

\* VALLEYS.....80-95%.

\* MID SLOPE.....30-45%.

\* 24 HR TREND.....LITTLE CHANGE.

\* 20-FOOT WINDS.....

\* VALLEYS/SLOPE...WEST WINDS AROUND 10 MPH WITH GUSTS TO 20 MPH IN THE EVENING BECOMING DOWNSLOPE 2 TO 5 MPH.

\* RIDGE TOP.....SOUTHWEST WINDS 10 TO 15 MPH. GUSTS UP TO 25 MPH  
 IN THE EVENING.

\* HAINES INDEX.....4-5.

\* LAL.....1.

\* CHC WETTING RAIN...0%.

.SUNDAY...

\* SKY/WEATHER.....SUNNY.

\* MAX TEMPERATURE....

\* VALLEYS.....72-82.

\* MID SLOPE.....68-76.

\* MIN HUMIDITY.....

\* VALLEYS.....12-22%.

\* MID SLOPE.....14-24%.

\* 20-FOOT WINDS.....

\* VALLEYS/SLOPE...UPSLOPE 4 TO 8 MPH BECOMING SOUTHWEST AROUND 10 MPH  
 WITH GUSTS UP TO 20 MPH IN THE AFTERNOON.

\* RIDGE TOP.....SOUTHWEST WINDS 10 TO 15 MPH WITH GUSTS TO 35  
 MPH.

\* HAINES INDEX.....4-5.

\* LAL.....1.

\* CHC WETTING RAIN...0%.

\* MIXING HEIGHT.....16500-17500 FT MSL.

\* TRANSPORT WINDS...SOUTHWEST 10 TO 15 MPH.

\* VENTILATION.....EXCELLENT.

.EXTENDED...

.SUNDAY NIGHT...CLEAR. LOWS 35-45. SOUTHWEST WINDS AROUND 10 MPH IN  
 THE EVENING BECOMING DOWNSLOPE 2 TO 5 MPH.

.MONDAY...CLEAR. HIGHS 72-82. LOWS 35-45. SOUTHWEST WINDS 10 TO  
 15 MPH.

.TUESDAY THROUGH WEDNESDAY...CLEAR. HIGHS 70-80. LOWS 33-43.  
 SOUTHWEST WINDS 10 TO 15 MPH.

.THURSDAY...CLEAR. HIGHS 67-75. LOWS 29-39.

.FRIDAY...SUNNY. HIGHS 64-69.

\$\$

NVZ453-280045-  
 WEST CENTRAL NEVADA BASIN AND RANGE-  
 554 AM PDT SAT AUG 27 2016

.TODAY...

\* SKY/WEATHER.....SUNNY.

\* MAX TEMPERATURE....

\* VALLEYS.....87-95.

\* MID SLOPE.....84-94.

\* 24 HR TREND.....2-4 DEGREES WARMER.

\* MIN HUMIDITY.....

\* VALLEYS.....7-13%.

\* MID SLOPE.....9-15%.

\* 24 HR TREND.....LITTLE CHANGE.

\* 20-FOOT WINDS.....

\* VALLEYS/SLOPE....SOUTHWEST WINDS AROUND 10 MPH. GUSTS UP TO 25 MPH IN THE AFTERNOON.  
 \* RIDGE TOP.....LIGHT WINDS BECOMING WEST 10 TO 15 MPH IN THE AFTERNOON.  
 \* HAINES INDEX.....4-5.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.  
 \* MIXING HEIGHT.....17000-18000 FT MSL.  
 \* TRANSPORT WINDS...WEST AROUND 10 MPH.  
 \* VENTILATION.....EXCELLENT.

.TONIGHT...

\* SKY/WEATHER.....CLEAR.  
 \* MIN TEMPERATURE....  
 \* VALLEYS.....42-52.  
 \* MID SLOPE.....51-61.  
 \* 24 HR TREND.....LITTLE CHANGE.  
 \* MAX HUMIDITY.....  
 \* VALLEYS.....35-45%.  
 \* MID SLOPE.....21-31%.  
 \* 24 HR TREND.....LITTLE CHANGE.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...WEST WINDS AROUND 10 MPH. GUSTS 25 TO 30 MPH IN THE EVENING.  
 \* RIDGE TOP.....WEST WINDS 10 TO 15 MPH. GUSTS 25 TO 30 MPH IN THE EVENING.  
 \* HAINES INDEX.....5.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.

.SUNDAY...

\* SKY/WEATHER.....SUNNY.  
 \* MAX TEMPERATURE....  
 \* VALLEYS.....87-97.  
 \* MID SLOPE.....85-95.  
 \* MIN HUMIDITY.....  
 \* VALLEYS.....6-12%.  
 \* MID SLOPE.....7-13%.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...UPSLOPE 4 TO 8 MPH BECOMING SOUTHWEST AROUND 10 MPH WITH GUSTS TO 20 MPH IN THE AFTERNOON.  
 \* RIDGE TOP.....SOUTHWEST WINDS 10 TO 15 MPH. GUSTS UP TO 25 MPH IN THE AFTERNOON.  
 \* HAINES INDEX.....4-5.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.  
 \* MIXING HEIGHT.....18000-19000 FT MSL.  
 \* TRANSPORT WINDS...WEST 10 TO 15 MPH.  
 \* VENTILATION.....EXCELLENT.

.EXTENDED...

.SUNDAY NIGHT...CLEAR. LOWS 47-57. WEST WINDS AROUND 10 MPH IN THE EVENING BECOMING DOWNSLOPE 2 TO 5 MPH.

.MONDAY...CLEAR. AREAS OF BLOWING DUST. HIGHS 87-97. LOWS 47-57.  
 WEST WINDS 10 TO 15 MPH.  
 .TUESDAY...PARTLY CLOUDY. AREAS OF BLOWING DUST. HIGHS 86-96. LOWS  
 47-57. WEST WINDS 15 TO 20 MPH.  
 .WEDNESDAY...CLEAR. AREAS OF BLOWING DUST. HIGHS 82-92. LOWS 43-53.  
 WEST WINDS 15 TO 20 MPH.  
 .THURSDAY...CLEAR. AREAS OF BLOWING DUST. HIGHS 80-90. LOWS 41-51.  
 .FRIDAY...SUNNY. HIGHS 76-86.

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CAZ270-278-NVZ458-280045-  
 SURPRISE VALLEY CALIFORNIA-EASTERN LASSEN COUNTY-  
 NORTHERN WASHOE COUNTY-  
 554 AM PDT SAT AUG 27 2016

.TODAY...

- \* SKY/WEATHER.....SUNNY.
- \* MAX TEMPERATURE....
- \* VALLEYS.....85-95.
- \* MID SLOPE.....79-89.
- \* 24 HR TREND.....2 DEGREES WARMER.
- \* MIN HUMIDITY.....
- \* VALLEYS.....7-15%.
- \* MID SLOPE.....10-17%.
- \* 24 HR TREND.....LITTLE CHANGE.
- \* 20-FOOT WINDS.....
- \* VALLEYS/SLOPE...WEST WINDS 10 TO 15 MPH. GUSTS 25 TO 30 MPH IN  
 THE AFTERNOON.
- \* RIDGE TOP.....WEST WINDS 10 TO 15 MPH. GUSTS 25 TO 30 MPH IN  
 THE AFTERNOON.
- \* HAINES INDEX.....4-5.
- \* LAL.....1.
- \* CHC WETTING RAIN...0%.
- \* MIXING HEIGHT.....15500-16500 FT MSL.
- \* TRANSPORT WINDS...WEST 10 TO 15 MPH.
- \* VENTILATION.....EXCELLENT.

.TONIGHT...

- \* SKY/WEATHER.....CLEAR.
- \* MIN TEMPERATURE....
- \* VALLEYS.....40-50.
- \* MID SLOPE.....50-60.
- \* 24 HR TREND.....3 DEGREES COOLER.
- \* MAX HUMIDITY.....
- \* VALLEYS.....55-65%.
- \* MID SLOPE.....23-33%.
- \* 24 HR TREND.....LITTLE CHANGE.
- \* 20-FOOT WINDS.....
- \* VALLEYS/SLOPE...WEST WINDS 10 TO 15 MPH. GUSTS UP TO 30 MPH  
 IN THE EVENING.
- \* RIDGE TOP.....WEST WINDS 10 TO 20 MPH WITH GUSTS 25 TO 30 MPH.
- \* HAINES INDEX.....4-5.
- \* LAL.....1.

\* CHC WETTING RAIN...0%.

.SUNDAY...

\* SKY/WEATHER.....SUNNY.

\* MAX TEMPERATURE....

\* VALLEYS.....85-95.

\* MID SLOPE.....79-89.

\* MIN HUMIDITY.....

\* VALLEYS.....7-15%.

\* MID SLOPE.....9-17%.

\* 20-FOOT WINDS.....

\* VALLEYS/SLOPE...UPSLOPE 4 TO 8 MPH BECOMING SOUTHWEST 10 TO 15  
MPH WITH GUSTS TO 25 MPH IN THE AFTERNOON.

\* RIDGE TOP.....SOUTHWEST WINDS 10 TO 15 MPH WITH GUSTS 25 TO 30  
MPH.

\* HAINES INDEX.....4-5.

\* LAL.....1.

\* CHC WETTING RAIN...0%.

\* MIXING HEIGHT.....16500-17500 FT MSL.

\* TRANSPORT WINDS...WEST 15 TO 20 MPH.

\* VENTILATION.....EXCELLENT.

.EXTENDED...

.SUNDAY NIGHT...CLEAR. LOWS 40-50. SOUTHWEST WINDS 10 TO 15 MPH IN  
THE EVENING BECOMING DOWNSLOPE 2 TO 5 MPH.

.MONDAY...CLEAR. HIGHS 85-95. LOWS 39-49. SOUTHWEST WINDS 15 TO  
20 MPH.

.TUESDAY...PARTLY CLOUDY. AREAS OF BLOWING DUST. HIGHS 82-92. LOWS  
38-48. SOUTHWEST WINDS 15 TO 20 MPH.

.WEDNESDAY...CLEAR. AREAS OF BLOWING DUST. HIGHS 79-89. LOWS 35-45.  
WEST WINDS 15 TO 20 MPH.

.THURSDAY...PARTLY CLOUDY. AREAS OF BLOWING DUST. HIGHS 76-86. LOWS  
35-45.

.FRIDAY...PARTLY CLOUDY. HIGHS 70-80.

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CAZ271-280045-

WESTERN LASSEN/EASTERN PLUMAS/EASTERN SIERRA/EASTERN NEVADA COUNTIES-  
554 AM PDT SAT AUG 27 2016

.TODAY...

\* SKY/WEATHER.....SUNNY.

\* MAX TEMPERATURE....

\* VALLEYS.....83-93.

\* MID SLOPE.....78-86.

\* 24 HR TREND.....LITTLE CHANGE.

\* MIN HUMIDITY.....

\* VALLEYS.....9-17%.

\* MID SLOPE.....12-20%.

\* 24 HR TREND.....LITTLE CHANGE.

\* 20-FOOT WINDS.....

\* VALLEYS/SLOPE...UPSLOPE 4 TO 8 MPH BECOMING WEST 10 TO 15 MPH

WITH GUSTS 25 TO 30 MPH IN THE AFTERNOON.

- \* RIDGE TOP.....LIGHT WINDS BECOMING WEST 10 TO 15 MPH WITH GUSTS TO 25 MPH IN THE AFTERNOON.
- \* HAINES INDEX.....4-5.
- \* LAL.....1.
- \* CHC WETTING RAIN...0%.
- \* MIXING HEIGHT.....15000-16000 FT MSL.
- \* TRANSPORT WINDS...WEST AROUND 10 MPH.
- \* VENTILATION.....VERY GOOD.

.TONIGHT...

- \* SKY/WEATHER.....CLEAR.
- \* MIN TEMPERATURE....
- \* VALLEYS.....35-45.
- \* MID SLOPE.....45-55.
- \* 24 HR TREND.....2-4 DEGREES COOLER MID SLOPES...LITTLE CHANGE VALLEYS.
- \* MAX HUMIDITY.....
- \* VALLEYS.....70-85%.
- \* MID SLOPE.....39-49%.
- \* 24 HR TREND.....8-12% WETTER VALLEYS...LITTLE CHANGE MID SLOPES.
- \* 20-FOOT WINDS.....
- \* VALLEYS/SLOPE...WEST WINDS 10 TO 15 MPH WITH GUSTS 25 TO 30 MPH IN THE EVENING BECOMING DOWNSLOPE 2 TO 5 MPH.
- \* RIDGE TOP.....SOUTHWEST WINDS 10 TO 15 MPH. GUSTS UP TO 25 MPH IN THE EVENING.
- \* HAINES INDEX.....4.
- \* LAL.....1.
- \* CHC WETTING RAIN...0%.

.SUNDAY...

- \* SKY/WEATHER.....SUNNY.
- \* MAX TEMPERATURE....
- \* VALLEYS.....81-91.
- \* MID SLOPE.....76-86.
- \* MIN HUMIDITY.....
- \* VALLEYS.....8-18%.
- \* MID SLOPE.....12-18%.
- \* 20-FOOT WINDS.....
- \* VALLEYS/SLOPE...UPSLOPE 4 TO 8 MPH BECOMING SOUTHWEST 10 TO 15 MPH WITH GUSTS TO 25 MPH IN THE AFTERNOON.
- \* RIDGE TOP.....SOUTHWEST WINDS 10 TO 15 MPH WITH GUSTS TO 25 MPH.
- \* HAINES INDEX.....4-5.
- \* LAL.....1.
- \* CHC WETTING RAIN...0%.
- \* MIXING HEIGHT.....16500-17500 FT MSL.
- \* TRANSPORT WINDS...SOUTHWEST 10 TO 15 MPH.
- \* VENTILATION.....EXCELLENT.

.EXTENDED...

.SUNDAY NIGHT...CLEAR. LOWS 35-45. SOUTHWEST WINDS 10 TO 15 MPH IN THE EVENING BECOMING DOWNSLOPE 2 TO 5 MPH.

.MONDAY...CLEAR. HIGHS 82-92. LOWS 33-43. SOUTHWEST WINDS 10 TO 15 MPH.  
 .TUESDAY THROUGH WEDNESDAY...CLEAR. HIGHS 78-88. LOWS 30-40. SOUTHWEST WINDS 15 TO 20 MPH.  
 .THURSDAY...PARTLY CLOUDY. HIGHS 73-83. LOWS 30-40.  
 .FRIDAY...PARTLY CLOUDY. HIGHS 67-77.

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CAZ273-280045-  
 MONO AND EASTERN ALPINE COUNTIES-  
 554 AM PDT SAT AUG 27 2016

.TODAY...

- \* SKY/WEATHER.....SUNNY THEN BECOMING PARTLY CLOUDY.
- \* MAX TEMPERATURE....
- \* VALLEYS.....79-89.
- \* MID SLOPE.....73-83.
- \* 24 HR TREND.....LITTLE CHANGE.
- \* MIN HUMIDITY.....
- \* VALLEYS.....10-18%.
- \* MID SLOPE.....12-20%.
- \* 24 HR TREND.....LITTLE CHANGE.
- \* 20-FOOT WINDS.....
- \* VALLEYS/SLOPE...UPSLOPE 4 TO 8 MPH BECOMING SOUTH AROUND 10 MPH WITH GUSTS TO 20 MPH IN THE AFTERNOON.
- \* RIDGE TOP.....SOUTH WINDS AROUND 10 MPH.
- \* HAINES INDEX.....4-5.
- \* LAL.....1.
- \* CHC WETTING RAIN...0%.
- \* MIXING HEIGHT.....19000-20000 FT MSL.
- \* TRANSPORT WINDS...VARIABLE WINDS TO 10 MPH.
- \* VENTILATION.....GOOD.

.TONIGHT...

- \* SKY/WEATHER.....PARTLY CLOUDY THEN BECOMING CLEAR.
- \* MIN TEMPERATURE....
- \* VALLEYS.....33-43.
- \* MID SLOPE.....42-52.
- \* 24 HR TREND.....LITTLE CHANGE.
- \* MAX HUMIDITY.....
- \* VALLEYS.....75-90%.
- \* MID SLOPE.....34-44%.
- \* 24 HR TREND.....LITTLE CHANGE.
- \* 20-FOOT WINDS.....
- \* VALLEYS/SLOPE...SOUTHWEST WINDS AROUND 10 MPH WITH GUSTS TO 20 MPH IN THE EVENING BECOMING DOWNSLOPE 2 TO 5 MPH.
- \* RIDGE TOP.....SOUTH WINDS AROUND 10 MPH.
- \* HAINES INDEX.....4-5.
- \* LAL.....1.
- \* CHC WETTING RAIN...0%.

.SUNDAY...



\* TRANSPORT WINDS...VARIABLE WINDS TO 10 MPH.  
 \* VENTILATION.....GOOD.

.TONIGHT...

\* SKY/WEATHER.....CLEAR.  
 \* MIN TEMPERATURE....  
 \* VALLEYS.....42-52.  
 \* MID SLOPE.....50-60.  
 \* 24 HR TREND.....LITTLE CHANGE.  
 \* MAX HUMIDITY.....  
 \* VALLEYS.....55-70%.  
 \* MID SLOPE.....26-36%.  
 \* 24 HR TREND.....2-4% WETTER MID SLOPES...LITTLE CHANGE VALLEYS.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...NORTHEAST WINDS AROUND 10 MPH WITH GUSTS UP TO 20  
 MPH IN THE EVENING BECOMING DOWNSLOPE 2 TO 5 MPH.  
 \* RIDGE TOP.....NORTHEAST WINDS AROUND 10 MPH SHIFTING TO THE  
 WEST AFTER MIDNIGHT.  
 \* HAINES INDEX.....6.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.

.SUNDAY...

\* SKY/WEATHER.....SUNNY.  
 \* MAX TEMPERATURE....  
 \* VALLEYS.....84-94.  
 \* MID SLOPE.....82-90.  
 \* MIN HUMIDITY.....  
 \* VALLEYS.....8-14%.  
 \* MID SLOPE.....9-14%.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...UPSLOPE 4 TO 8 MPH BECOMING NORTHWEST AROUND 10  
 MPH WITH GUSTS TO 20 MPH IN THE AFTERNOON.  
 \* RIDGE TOP.....SOUTH WINDS AROUND 10 MPH.  
 \* HAINES INDEX.....6.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.  
 \* MIXING HEIGHT.....19000-20000 FT MSL.  
 \* TRANSPORT WINDS...SOUTHEAST AROUND 10 MPH.  
 \* VENTILATION.....EXCELLENT.

.EXTENDED...

.SUNDAY NIGHT...CLEAR. LOWS 45-55. WEST WINDS AROUND 10 MPH IN THE  
 EVENING BECOMING DOWNSLOPE 2 TO 5 MPH.  
 .MONDAY...CLEAR. HIGHS 85-95. LOWS 45-55. SOUTHWEST WINDS 10 TO  
 15 MPH.  
 .TUESDAY...PARTLY CLOUDY. HIGHS 84-94. LOWS 44-54. WEST WINDS 15 TO  
 20 MPH.  
 .WEDNESDAY...CLEAR. HIGHS 82-92. LOWS 42-52. WEST WINDS 15 TO  
 20 MPH.  
 .THURSDAY...CLEAR. HIGHS 81-91. LOWS 38-48.  
 .FRIDAY...SUNNY. HIGHS 77-87.

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.8 TO 14 DAY OUTLOOK FOR (SAT SEP 3 THROUGH FRI SEP 9)  
BELOW NORMAL TEMPERATURES AND NEAR NORMAL PRECIPITATION.

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[HTTP://WEATHER.GOV/RENO](http://weather.gov/reno)

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## National Weather Service Raw Text Product

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320  
 FNUS55 KREV 272130  
 FWFREV

FIRE WEATHER PLANNING FORECAST  
 NATIONAL WEATHER SERVICE RENO NV  
 230 PM PDT SAT AUG 27 2016

.DISCUSSION...

DRY CONDITIONS WILL CONTINUE INTO NEXT WEEK. WINDS WILL BE LIGHT INTO SUNDAY BEFORE SLOWLY INCREASING FOR NEXT WEEK BEGINNING ON MONDAY. TUESDAY COULD BE QUITE BREEZY ALONG THE SIERRA FRONT FROM DOUGLAS COUNTY TO THE OREGON BORDER. TEMPERATURES WILL BE NEAR AVERAGE...BUT HUMIDITY WILL CONTINUE TO BE LOW WITH FAIR TO POOR OVERNIGHT RECOVERY.

NOTE: THUNDERSTORMS IMPLY GUSTY AND ERRATIC WINDS.

NOTE: PLEASE SEE OPERATING PLAN FOR DETAILED ZONE DESCRIPTIONS  
[HTTP://WWW.WRH.NOAA.GOV/FIREWX/?WFO=REV](http://www.wrh.noaa.gov/firewx/?wfo=rev)

NVZ450-281445-  
 WESTERN NEVADA SIERRA FRONT-  
 230 PM PDT SAT AUG 27 2016

.TONIGHT...

\* SKY/WEATHER.....CLEAR. HAZE IN THE EVENING.  
 \* MIN TEMPERATURE....  
 \* VALLEYS.....43-53.  
 \* MID SLOPE.....51-61.  
 \* 24 HR TREND.....LITTLE CHANGE.  
 \* MAX HUMIDITY.....  
 \* VALLEYS.....64-74%.  
 \* MID SLOPE.....23-33%.  
 \* 24 HR TREND.....LITTLE CHANGE.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...WEST WINDS 10 TO 15 MPH. GUSTS UP TO 25 MPH IN  
 THE EVENING.  
 \* RIDGE TOP.....WEST WINDS 10 TO 15 MPH. GUSTS UP TO 25 MPH IN  
 THE EVENING.  
 \* HAINES INDEX.....4-5.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.

.SUNDAY...

\* SKY/WEATHER.....SUNNY. HAZE.  
 \* MAX TEMPERATURE....  
 \* VALLEYS.....86-94.  
 \* MID SLOPE.....80-90.  
 \* 24 HR TREND.....LITTLE CHANGE.  
 \* MIN HUMIDITY.....  
 \* VALLEYS.....8-14%.  
 \* MID SLOPE.....9-15%.  
 \* 24 HR TREND.....LITTLE CHANGE.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...UPSLOPE 4 TO 8 MPH BECOMING SOUTHWEST AROUND 10 MPH  
 WITH GUSTS UP TO 20 MPH IN THE AFTERNOON.  
 \* RIDGE TOP.....SOUTHWEST WINDS 10 TO 15 MPH. GUSTS UP TO 25 MPH  
 IN THE AFTERNOON.  
 \* HAINES INDEX.....4-5.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.  
 \* MIXING HEIGHT.....17000-18000 FT MSL.  
 \* TRANSPORT WINDS...SOUTHWEST 10 TO 15 MPH.  
 \* VENTILATION.....EXCELLENT.

.SUNDAY NIGHT...

\* SKY/WEATHER.....CLEAR. HAZE IN THE EVENING.  
 \* MIN TEMPERATURE....  
 \* VALLEYS.....43-53.  
 \* MID SLOPE.....54-64.  
 \* MAX HUMIDITY.....  
 \* VALLEYS.....63-73%.  
 \* MID SLOPE.....23-33%.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...WEST WINDS AROUND 10 MPH WITH GUSTS TO 20 MPH IN  
 THE EVENING BECOMING DOWNSLOPE 2 TO 5 MPH.  
 \* RIDGE TOP.....SOUTHWEST WINDS 10 TO 15 MPH. GUSTS UP TO 25 MPH  
 IN THE EVENING.  
 \* HAINES INDEX.....5.

\* LAL.....1.  
 \* CHC WETTING RAIN...0%.

.MONDAY...

\* SKY/WEATHER.....SUNNY.  
 \* MAX TEMPERATURE....  
 \* VALLEYS.....86-94.  
 \* MID SLOPE.....81-91.  
 \* MIN HUMIDITY.....  
 \* VALLEYS.....8-13%.  
 \* MID SLOPE.....8-14%.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...UPSLOPE 4 TO 8 MPH BECOMING SOUTHWEST AROUND 10  
 MPH WITH GUSTS TO 20 MPH IN THE AFTERNOON.  
 \* RIDGE TOP.....SOUTHWEST WINDS 10 TO 15 MPH. GUSTS UP TO 25 MPH  
 IN THE AFTERNOON.  
 \* HAINES INDEX.....5.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.  
 \* MIXING HEIGHT.....14000-15000 FT MSL.  
 \* TRANSPORT WINDS...SOUTH 15 TO 20 MPH.  
 \* VENTILATION.....EXCELLENT.

.EXTENDED...

.MONDAY NIGHT...CLEAR IN THE EVENING THEN BECOMING PARTLY CLOUDY.  
 LOWS 44-54. WEST WINDS 10 TO 15 MPH IN THE EVENING BECOMING  
 DOWNSLOPE 2 TO 5 MPH.  
 .TUESDAY THROUGH WEDNESDAY...CLEAR. HIGHS 82-92. LOWS 39-49. WEST  
 WINDS 10 TO 20 MPH.  
 .THURSDAY...CLEAR. HIGHS 79-87. LOWS 34-44. WEST WINDS 15 TO 20 MPH.  
 .FRIDAY...CLEAR. HIGHS 77-83. LOWS 34-44.  
 .SATURDAY...PARTLY CLOUDY. HIGHS 74-80.

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CAZ272-281445-  
 GREATER LAKE TAHOE AREA-  
 230 PM PDT SAT AUG 27 2016

.TONIGHT...

\* SKY/WEATHER.....CLEAR. HAZE IN THE EVENING.  
 \* MIN TEMPERATURE....  
 \* VALLEYS.....35-45.  
 \* MID SLOPE.....46-56.  
 \* 24 HR TREND.....LITTLE CHANGE.  
 \* MAX HUMIDITY.....  
 \* VALLEYS.....84-94%.  
 \* MID SLOPE.....30-40%.  
 \* 24 HR TREND.....LITTLE CHANGE VALLEYS...UP TO 5% WETTER MID SLOPES.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...WEST WINDS AROUND 10 MPH WITH GUSTS TO 20 MPH IN  
 THE EVENING BECOMING DOWNSLOPE 2 TO 5 MPH.  
 \* RIDGE TOP.....SOUTHWEST WINDS 10 TO 15 MPH. GUSTS UP TO 25 MPH



MPH WITH GUSTS TO 20 MPH IN THE AFTERNOON.

- \* RIDGE TOP.....SOUTHWEST WINDS 10 TO 20 MPH WITH GUSTS TO 40 MPH.
- \* HAINES INDEX.....5.
- \* LAL.....1.
- \* CHC WETTING RAIN...0%.
- \* MIXING HEIGHT.....14000-15000 FT MSL.
- \* TRANSPORT WINDS...SOUTH 15 TO 20 MPH.
- \* VENTILATION.....EXCELLENT.

.EXTENDED...

.MONDAY NIGHT...CLEAR IN THE EVENING THEN BECOMING PARTLY CLOUDY.  
 LOWS 36-46. WEST WINDS 10 TO 15 MPH IN THE EVENING BECOMING  
 DOWNSLOPE 2 TO 5 MPH.

.TUESDAY THROUGH WEDNESDAY...CLEAR. HIGHS 70-80. LOWS 33-43.  
 SOUTHWEST WINDS 10 TO 15 MPH.

.THURSDAY...CLEAR. HIGHS 67-77. LOWS 29-39. SOUTHWEST WINDS 10 TO  
 15 MPH.

.FRIDAY...CLEAR. HIGHS 66-72. LOWS 29-39.

.SATURDAY...PARTLY CLOUDY. HIGHS 63-68.

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NVZ453-281445-

WEST CENTRAL NEVADA BASIN AND RANGE-

230 PM PDT SAT AUG 27 2016

.TONIGHT...

- \* SKY/WEATHER.....CLEAR.
- \* MIN TEMPERATURE....
- \* VALLEYS.....42-52.
- \* MID SLOPE.....50-60.
- \* 24 HR TREND.....LITTLE CHANGE.
- \* MAX HUMIDITY.....
- \* VALLEYS.....36-46%.
- \* MID SLOPE.....21-31%.
- \* 24 HR TREND.....LITTLE CHANGE.
- \* 20-FOOT WINDS.....
- \* VALLEYS/SLOPE...WEST WINDS AROUND 10 MPH WITH GUSTS TO 25 MPH.  
 WINDS DROPPING TO LESS THAN 10 MPH AFTER MIDNIGHT.
- \* RIDGE TOP.....WEST WINDS 10 TO 15 MPH. GUSTS 25 TO 30 MPH IN  
 THE EVENING.
- \* HAINES INDEX.....5.
- \* LAL.....1.
- \* CHC WETTING RAIN...0%.

.SUNDAY...

- \* SKY/WEATHER.....SUNNY.
- \* MAX TEMPERATURE....
- \* VALLEYS.....87-97.
- \* MID SLOPE.....85-95.
- \* 24 HR TREND.....LITTLE CHANGE.
- \* MIN HUMIDITY.....

\* VALLEYS.....6-13%.  
 \* MID SLOPE.....7-12%.  
 \* 24 HR TREND.....LITTLE CHANGE.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...UPSLOPE 4 TO 8 MPH BECOMING SOUTHWEST AROUND 10  
 MPH WITH GUSTS TO 20 MPH IN THE AFTERNOON.  
 \* RIDGE TOP.....SOUTHWEST WINDS 10 TO 15 MPH. GUSTS UP TO 25 MPH  
 IN THE AFTERNOON.  
 \* HAINES INDEX.....4-5.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.  
 \* MIXING HEIGHT.....18000-19000 FT MSL.  
 \* TRANSPORT WINDS...WEST 15 TO 20 MPH.  
 \* VENTILATION.....EXCELLENT.

## .SUNDAY NIGHT...

\* SKY/WEATHER.....CLEAR.  
 \* MIN TEMPERATURE....  
 \* VALLEYS.....44-54.  
 \* MID SLOPE.....52-62.  
 \* MAX HUMIDITY.....  
 \* VALLEYS.....34-44%.  
 \* MID SLOPE.....21-31%.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...WEST WINDS AROUND 10 MPH WITH GUSTS TO 20 MPH IN  
 THE EVENING BECOMING DOWNSLOPE 2 TO 5 MPH.  
 \* RIDGE TOP.....WEST WINDS 10 TO 15 MPH WITH GUSTS TO 25 MPH.  
 \* HAINES INDEX.....5.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.

## .MONDAY...

\* SKY/WEATHER.....SUNNY.  
 \* MAX TEMPERATURE....  
 \* VALLEYS.....87-97.  
 \* MID SLOPE.....85-95.  
 \* MIN HUMIDITY.....  
 \* VALLEYS.....6-12%.  
 \* MID SLOPE.....7-12%.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...UPSLOPE 4 TO 8 MPH BECOMING SOUTHWEST AROUND 10  
 MPH WITH GUSTS TO 20 MPH IN THE AFTERNOON.  
 \* RIDGE TOP.....SOUTH WINDS 10 TO 15 MPH WITH GUSTS TO 25 MPH.  
 \* HAINES INDEX.....5.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.  
 \* MIXING HEIGHT.....14000-15000 FT MSL.  
 \* TRANSPORT WINDS...SOUTH 10 TO 15 MPH.  
 \* VENTILATION.....EXCELLENT.

## .EXTENDED...

.MONDAY NIGHT...CLEAR. AREAS OF BLOWING DUST IN THE EVENING. LOWS  
 47-57. WEST WINDS 10 TO 15 MPH.

.TUESDAY THROUGH THURSDAY...CLEAR. AREAS OF BLOWING DUST. HIGHS  
86-96. LOWS 41-51. WEST WINDS 15 TO 20 MPH.  
.FRIDAY...CLEAR. HIGHS 78-86. LOWS 41-51.  
.SATURDAY...PARTLY CLOUDY. HIGHS 76-86.

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CAZ270-278-NVZ458-281445-  
SURPRISE VALLEY CALIFORNIA-EASTERN LASSEN COUNTY-  
NORTHERN WASHOE COUNTY-  
230 PM PDT SAT AUG 27 2016

.TONIGHT...

\* SKY/WEATHER.....CLEAR.  
\* MIN TEMPERATURE....  
\* VALLEYS.....42-52.  
\* MID SLOPE.....53-63.  
\* 24 HR TREND.....LITTLE CHANGE.  
\* MAX HUMIDITY.....  
\* VALLEYS.....57-67%.  
\* MID SLOPE.....23-33%.  
\* 24 HR TREND.....LITTLE CHANGE.  
\* 20-FOOT WINDS.....  
\* VALLEYS/SLOPE...WEST WINDS 10 TO 15 MPH WITH GUSTS TO 25 MPH IN  
THE EVENING. DECREASING TO AROUND 10 MPH AFTER MIDNIGHT.  
\* RIDGE TOP.....WEST WINDS 10 TO 20 MPH WITH GUSTS 25 TO 30 MPH.  
\* HAINES INDEX.....4-5.  
\* LAL.....1.  
\* CHC WETTING RAIN...0%.

.SUNDAY...

\* SKY/WEATHER.....SUNNY.  
\* MAX TEMPERATURE....  
\* VALLEYS.....85-95.  
\* MID SLOPE.....79-89.  
\* 24 HR TREND.....LITTLE CHANGE.  
\* MIN HUMIDITY.....  
\* VALLEYS.....7-15%.  
\* MID SLOPE.....10-15%.  
\* 24 HR TREND.....LITTLE CHANGE.  
\* 20-FOOT WINDS.....  
\* VALLEYS/SLOPE...UPSLOPE 4 TO 8 MPH BECOMING SOUTHWEST 10 TO 15  
MPH WITH GUSTS TO 25 MPH IN THE AFTERNOON.  
\* RIDGE TOP.....SOUTHWEST WINDS 10 TO 15 MPH WITH GUSTS 25 TO 30  
MPH.  
\* HAINES INDEX.....4-5.  
\* LAL.....1.  
\* CHC WETTING RAIN...0%.  
\* MIXING HEIGHT.....16500-17500 FT MSL.  
\* TRANSPORT WINDS...WEST 15 TO 20 MPH.  
\* VENTILATION.....EXCELLENT.

.SUNDAY NIGHT...

\* SKY/WEATHER.....CLEAR.

\* MIN TEMPERATURE....  
 \* VALLEYS.....43-53.  
 \* MID SLOPE.....53-63.  
 \* MAX HUMIDITY.....  
 \* VALLEYS.....60-70%.  
 \* MID SLOPE.....23-33%.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...SOUTHWEST WINDS 10 TO 15 MPH WITH GUSTS TO 25  
 MPH IN THE EVENING BECOMING DOWNSLOPE 2 TO 5  
 MPH.  
 \* RIDGE TOP.....SOUTHWEST WINDS 10 TO 20 MPH. GUSTS 25 TO 30 MPH  
 IN THE EVENING.  
 \* HAINES INDEX.....4-5.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.

.MONDAY...

\* SKY/WEATHER.....SUNNY.  
 \* MAX TEMPERATURE....  
 \* VALLEYS.....85-95.  
 \* MID SLOPE.....79-89.  
 \* MIN HUMIDITY.....  
 \* VALLEYS.....8-13%.  
 \* MID SLOPE.....8-13%.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...UPSLOPE 4 TO 8 MPH BECOMING SOUTH 10 TO 15 MPH  
 WITH GUSTS TO 25 MPH IN THE AFTERNOON.  
 \* RIDGE TOP.....SOUTHWEST WINDS 10 TO 15 MPH WITH GUSTS TO 25  
 MPH.  
 \* HAINES INDEX.....5.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.  
 \* MIXING HEIGHT.....14500-15500 FT MSL.  
 \* TRANSPORT WINDS...SOUTHWEST 20 TO 25 MPH.  
 \* VENTILATION.....EXCELLENT.

.EXTENDED...

.MONDAY NIGHT...CLEAR IN THE EVENING THEN BECOMING PARTLY CLOUDY.  
 AREAS OF BLOWING DUST IN THE EVENING. LOWS 44-54. SOUTHWEST WINDS  
 10 TO 15 MPH IN THE EVENING BECOMING DOWNSLOPE 2 TO 5 MPH.  
 .TUESDAY...PARTLY CLOUDY. AREAS OF BLOWING DUST. HIGHS 82-92. LOWS  
 38-48. SOUTHWEST WINDS 15 TO 20 MPH.  
 .WEDNESDAY...CLEAR. AREAS OF BLOWING DUST. HIGHS 79-89. LOWS 35-45.  
 WEST WINDS 15 TO 20 MPH.  
 .THURSDAY...PARTLY CLOUDY. AREAS OF BLOWING DUST. HIGHS 77-87. LOWS  
 35-45. WEST WINDS 15 TO 20 MPH.  
 .FRIDAY...PARTLY CLOUDY. HIGHS 73-83. LOWS 35-45.  
 .SATURDAY...MOSTLY CLOUDY. HIGHS 71-81.

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CAZ271-281445-  
 WESTERN LASSEN/EASTERN PLUMAS/EASTERN SIERRA/EASTERN NEVADA COUNTIES-

230 PM PDT SAT AUG 27 2016

## .TONIGHT...

\* SKY/WEATHER.....CLEAR.  
 \* MIN TEMPERATURE....  
 \* VALLEYS.....35-45.  
 \* MID SLOPE.....45-55.  
 \* 24 HR TREND.....2-4 DEGREES COOLER MID SLOPES...LITTLE CHANGE  
 VALLEYS.  
 \* MAX HUMIDITY.....  
 \* VALLEYS.....71-81%.  
 \* MID SLOPE.....34-44%.  
 \* 24 HR TREND.....5-10% WETTER VALLEYS...LITTLE CHANGE MID SLOPES.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...WEST WINDS 10 TO 15 MPH WITH GUSTS TO 25 MPH  
 IN THE EVENING BECOMING DOWNSLOPE 2 TO 5 MPH.  
 \* RIDGE TOP.....SOUTHWEST WINDS 10 TO 15 MPH. GUSTS UP TO 25 MPH  
 IN THE EVENING.  
 \* HAINES INDEX.....4.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.

## .SUNDAY...

\* SKY/WEATHER.....SUNNY.  
 \* MAX TEMPERATURE....  
 \* VALLEYS.....81-91.  
 \* MID SLOPE.....76-86.  
 \* 24 HR TREND.....2 DEGREES COOLER.  
 \* MIN HUMIDITY.....  
 \* VALLEYS.....8-18%.  
 \* MID SLOPE.....12-18%.  
 \* 24 HR TREND.....LITTLE CHANGE.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...UPSLOPE 4 TO 8 MPH BECOMING SOUTHWEST 10 TO 15  
 MPH WITH GUSTS TO 25 MPH IN THE AFTERNOON.  
 \* RIDGE TOP.....SOUTHWEST WINDS 10 TO 15 MPH WITH GUSTS TO 25  
 MPH.  
 \* HAINES INDEX.....4-5.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.  
 \* MIXING HEIGHT.....16500-17500 FT MSL.  
 \* TRANSPORT WINDS...SOUTHWEST 10 TO 15 MPH.  
 \* VENTILATION.....EXCELLENT.

## .SUNDAY NIGHT...

\* SKY/WEATHER.....CLEAR.  
 \* MIN TEMPERATURE....  
 \* VALLEYS.....35-45.  
 \* MID SLOPE.....46-56.  
 \* MAX HUMIDITY.....  
 \* VALLEYS.....71-81%.  
 \* MID SLOPE.....36-46%.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...SOUTHWEST WINDS 10 TO 15 MPH WITH GUSTS TO 25

MPH IN THE EVENING BECOMING DOWNSLOPE 2 TO 5 MPH.

- \* RIDGE TOP.....SOUTHWEST WINDS 10 TO 15 MPH WITH GUSTS TO 25 MPH.
- \* HAINES INDEX.....4-5.
- \* LAL.....1.
- \* CHC WETTING RAIN...0%.

.MONDAY...

- \* SKY/WEATHER.....SUNNY.
- \* MAX TEMPERATURE....
- \* VALLEYS.....82-92.
- \* MID SLOPE.....77-85.
- \* MIN HUMIDITY.....
- \* VALLEYS.....8-16%.
- \* MID SLOPE.....11-17%.
- \* 20-FOOT WINDS.....
- \* VALLEYS/SLOPE...UPSLOPE 4 TO 8 MPH BECOMING SOUTHWEST 10 TO 15 MPH WITH GUSTS TO 25 MPH IN THE AFTERNOON.
- \* RIDGE TOP.....SOUTHWEST WINDS 10 TO 15 MPH WITH GUSTS 25 TO 30 MPH.
- \* HAINES INDEX.....5.
- \* LAL.....1.
- \* CHC WETTING RAIN...0%.
- \* MIXING HEIGHT.....13500-14500 FT MSL.
- \* TRANSPORT WINDS...SOUTH 20 TO 25 MPH.
- \* VENTILATION.....EXCELLENT.

.EXTENDED...

.MONDAY NIGHT...CLEAR IN THE EVENING THEN BECOMING PARTLY CLOUDY. LOWS 36-46. SOUTHWEST WINDS 10 TO 15 MPH IN THE EVENING BECOMING DOWNSLOPE 2 TO 5 MPH.

.TUESDAY...PARTLY CLOUDY. HIGHS 78-88. LOWS 31-41. SOUTHWEST WINDS 15 TO 20 MPH.

.WEDNESDAY...CLEAR. HIGHS 75-85. LOWS 30-40. SOUTHWEST WINDS 15 TO 20 MPH.

.THURSDAY...PARTLY CLOUDY. HIGHS 74-84. LOWS 30-40. WEST WINDS 15 TO 20 MPH.

.FRIDAY THROUGH SATURDAY...PARTLY CLOUDY. HIGHS 69-79. LOWS 30-40.

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CAZ273-281445-  
MONO AND EASTERN ALPINE COUNTIES-  
230 PM PDT SAT AUG 27 2016

.TONIGHT...

- \* SKY/WEATHER.....PARTLY CLOUDY THEN BECOMING CLEAR. HAZE IN THE EVENING.
- \* MIN TEMPERATURE....
- \* VALLEYS.....32-42.
- \* MID SLOPE.....42-52.
- \* 24 HR TREND.....LITTLE CHANGE.

\* MAX HUMIDITY.....  
 \* VALLEYS.....84-94%.  
 \* MID SLOPE.....32-42%.  
 \* 24 HR TREND.....LITTLE CHANGE.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...SOUTHWEST WINDS AROUND 10 MPH WITH GUSTS TO 20  
 MPH IN THE EVENING BECOMING DOWNSLOPE 2 TO 5  
 MPH.  
 \* RIDGE TOP.....SOUTH WINDS AROUND 10 MPH.  
 \* HAINES INDEX.....4-5.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.

.SUNDAY...

\* SKY/WEATHER.....SUNNY. HAZE.  
 \* MAX TEMPERATURE....  
 \* VALLEYS.....80-90.  
 \* MID SLOPE.....73-83.  
 \* 24 HR TREND.....LITTLE CHANGE.  
 \* MIN HUMIDITY.....  
 \* VALLEYS.....10-18%.  
 \* MID SLOPE.....10-18%.  
 \* 24 HR TREND.....LITTLE CHANGE.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...UPSLOPE 4 TO 8 MPH BECOMING SOUTH AROUND 10 MPH  
 WITH GUSTS TO 20 MPH IN THE AFTERNOON.  
 \* RIDGE TOP.....SOUTH WINDS 10 TO 15 MPH WITH GUSTS TO 35 MPH.  
 \* HAINES INDEX.....5.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.  
 \* MIXING HEIGHT.....19000-20000 FT MSL.  
 \* TRANSPORT WINDS...SOUTHEAST 10 TO 15 MPH.  
 \* VENTILATION.....EXCELLENT.

.SUNDAY NIGHT...

\* SKY/WEATHER.....CLEAR. HAZE IN THE EVENING.  
 \* MIN TEMPERATURE....  
 \* VALLEYS.....35-45.  
 \* MID SLOPE.....44-54.  
 \* MAX HUMIDITY.....  
 \* VALLEYS.....81-91%.  
 \* MID SLOPE.....33-43%.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...SOUTHWEST WINDS AROUND 10 MPH WITH GUSTS TO 20  
 MPH IN THE EVENING BECOMING DOWNSLOPE 2 TO 5  
 MPH.  
 \* RIDGE TOP.....SOUTHWEST WINDS 10 TO 15 MPH WITH GUSTS TO 35  
 MPH.  
 \* HAINES INDEX.....5.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.

.MONDAY...

\* SKY/WEATHER.....SUNNY.

\* MAX TEMPERATURE....  
\* VALLEYS.....81-91.  
\* MID SLOPE.....75-85.  
\* MIN HUMIDITY.....  
\* VALLEYS.....8-16%.  
\* MID SLOPE.....9-16%.  
\* 20-FOOT WINDS.....  
\* VALLEYS/SLOPE...UPSLOPE 4 TO 8 MPH BECOMING SOUTH AROUND 10 MPH  
WITH GUSTS TO 20 MPH IN THE AFTERNOON.  
\* RIDGE TOP.....SOUTHWEST WINDS 10 TO 15 MPH WITH GUSTS TO 35  
MPH.  
\* HAINES INDEX.....5.  
\* LAL.....1.  
\* CHC WETTING RAIN...0%.  
\* MIXING HEIGHT.....16500-17500 FT MSL.  
\* TRANSPORT WINDS...SOUTH 10 TO 15 MPH.  
\* VENTILATION.....VERY GOOD.

.EXTENDED...

.MONDAY NIGHT...CLEAR. LOWS 37-47. SOUTHWEST WINDS AROUND 10 MPH IN  
THE EVENING BECOMING DOWNSLOPE 2 TO 5 MPH.

.TUESDAY THROUGH THURSDAY...CLEAR. HIGHS 79-89. LOWS 27-37.  
SOUTHWEST WINDS 10 TO 15 MPH.

.FRIDAY THROUGH SATURDAY...CLEAR. HIGHS 71-81. LOWS 27-37.

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NVZ459-281445-  
MINERAL AND SOUTHERN LYON COUNTIES-  
230 PM PDT SAT AUG 27 2016

.TONIGHT...

\* SKY/WEATHER.....CLEAR.  
\* MIN TEMPERATURE....  
\* VALLEYS.....41-51.  
\* MID SLOPE.....50-60.  
\* 24 HR TREND.....LITTLE CHANGE.  
\* MAX HUMIDITY.....  
\* VALLEYS.....54-64%.  
\* MID SLOPE.....26-36%.  
\* 24 HR TREND.....LITTLE CHANGE.  
\* 20-FOOT WINDS.....  
\* VALLEYS/SLOPE...NORTHEAST WINDS AROUND 10 MPH WITH GUSTS TO 20  
MPH IN THE EVENING. SHIFTING SOUTHWEST AROUND 10 MPH  
AFTER MIDNIGHT.  
\* RIDGE TOP.....NORTHEAST WINDS AROUND 10 MPH SHIFTING TO THE  
WEST AFTER MIDNIGHT.  
\* HAINES INDEX.....6.  
\* LAL.....1.  
\* CHC WETTING RAIN...0%.

.SUNDAY...

\* SKY/WEATHER.....SUNNY.

\* MAX TEMPERATURE....  
 \* VALLEYS.....84-94.  
 \* MID SLOPE.....82-90.  
 \* 24 HR TREND.....LITTLE CHANGE.  
 \* MIN HUMIDITY.....  
 \* VALLEYS.....8-14%.  
 \* MID SLOPE.....9-14%.  
 \* 24 HR TREND.....LITTLE CHANGE.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...UPSLOPE 4 TO 8 MPH BECOMING NORTHWEST AROUND 10  
 MPH WITH GUSTS TO 20 MPH IN THE AFTERNOON.  
 \* RIDGE TOP.....SOUTH WINDS AROUND 10 MPH.  
 \* HAINES INDEX.....6.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.  
 \* MIXING HEIGHT.....19000-20000 FT MSL.  
 \* TRANSPORT WINDS...SOUTHEAST 10 TO 15 MPH.  
 \* VENTILATION.....EXCELLENT.

## .SUNDAY NIGHT...

\* SKY/WEATHER.....CLEAR.  
 \* MIN TEMPERATURE....  
 \* VALLEYS.....43-53.  
 \* MID SLOPE.....51-61.  
 \* MAX HUMIDITY.....  
 \* VALLEYS.....53-63%.  
 \* MID SLOPE.....26-36%.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...WEST WINDS AROUND 10 MPH WITH GUSTS TO 20 MPH IN  
 THE EVENING BECOMING DOWNSLOPE 2 TO 5 MPH.  
 \* RIDGE TOP.....SOUTHWEST WINDS AROUND 10 MPH.  
 \* HAINES INDEX.....5.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.

## .MONDAY...

\* SKY/WEATHER.....SUNNY.  
 \* MAX TEMPERATURE....  
 \* VALLEYS.....85-95.  
 \* MID SLOPE.....83-91.  
 \* MIN HUMIDITY.....  
 \* VALLEYS.....8-13%.  
 \* MID SLOPE.....8-13%.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...UPSLOPE 4 TO 8 MPH BECOMING SOUTH AROUND 10 MPH  
 IN THE AFTERNOON.  
 \* RIDGE TOP.....SOUTH WINDS AROUND 10 MPH.  
 \* HAINES INDEX.....5.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.  
 \* MIXING HEIGHT.....15000-16000 FT MSL.  
 \* TRANSPORT WINDS...SOUTH AROUND 10 MPH.  
 \* VENTILATION.....VERY GOOD.

.EXTENDED...

.MONDAY NIGHT...CLEAR. LOWS 46-56. WEST WINDS AROUND 10 MPH IN THE EVENING BECOMING DOWNSLOPE 2 TO 5 MPH.

.TUESDAY THROUGH WEDNESDAY...CLEAR. HIGHS 84-94. LOWS 42-52. NORTHWEST WINDS 10 TO 20 MPH.

.THURSDAY...CLEAR. HIGHS 81-91. LOWS 38-48. NORTH WINDS 10 TO 15 MPH.

.FRIDAY THROUGH SATURDAY...CLEAR. HIGHS 78-88. LOWS 38-48.

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.8 TO 14 DAY OUTLOOK FOR (SUN SEP 4 THROUGH SAT SEP 10)  
BELOW NORMAL TEMPERATURES AND NEAR NORMAL PRECIPITATION.

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[HTTP://WEATHER.GOV/RENO](http://weather.gov/reno)



## National Weather Service Raw Text Product

Displaying AFOS PIL: **FWFREV** Received: **2016-08-28 12:48 UTC**

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962  
FNUS55 KREV 281248  
FWFREV

FIRE WEATHER PLANNING FORECAST  
NATIONAL WEATHER SERVICE RENO NV  
548 AM PDT SUN AUG 28 2016

.DISCUSSION...

DRY CONDITIONS WILL CONTINUE INTO THE COMING WEEK. THE ONLY EXCEPTION COULD BE THE POSSIBILITY OF ELEVATED THUNDERSTORMS LATE MONDAY NIGHT OR EARLY TUESDAY MORNING NORTH OF PORTOLA. WINDS WILL BE LIGHT TODAY BEFORE SLOWLY INCREASING DURING THE WEEK. TUESDAY COULD BE QUITE BREEZY ALONG THE SIERRA FRONT FROM DOUGLAS COUNTY TO THE OREGON BORDER. TEMPERATURES WILL BE NEAR AVERAGE...BUT HUMIDITY WILL CONTINUE TO BE LOW WITH FAIR TO POOR OVERNIGHT RECOVERY.

NOTE: THUNDERSTORMS IMPLY GUSTY AND ERRATIC WINDS.

NOTE: PLEASE SEE OPERATING PLAN FOR DETAILED ZONE DESCRIPTIONS  
[HTTP://WWW.WRH.NOAA.GOV/FIREWX/?WFO=REV](http://www.wrh.noaa.gov/firewx/?WFO=REV)

NVZ450-290045-  
WESTERN NEVADA SIERRA FRONT-  
548 AM PDT SUN AUG 28 2016

.TODAY...

\* SKY/WEATHER.....SUNNY. HAZE.  
 \* MAX TEMPERATURE....  
 \* VALLEYS.....86-94.  
 \* MID SLOPE.....80-90.  
 \* 24 HR TREND.....LITTLE CHANGE.  
 \* MIN HUMIDITY.....  
 \* VALLEYS.....7-13%.  
 \* MID SLOPE.....9-15%.  
 \* 24 HR TREND.....LITTLE CHANGE.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...UPSLOPE 4 TO 8 MPH BECOMING SOUTHWEST AROUND 10 MPH  
 WITH GUSTS UP TO 20 MPH IN THE AFTERNOON.  
 \* RIDGE TOP.....SOUTHWEST WINDS 10 TO 15 MPH. GUSTS UP TO 25 MPH  
 IN THE AFTERNOON.  
 \* HAINES INDEX.....4-5.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.  
 \* MIXING HEIGHT.....17000-18000 FT MSL.  
 \* TRANSPORT WINDS...SOUTHWEST 10 TO 15 MPH.  
 \* VENTILATION.....EXCELLENT.

## .TONIGHT...

\* SKY/WEATHER.....CLEAR. HAZE.  
 \* MIN TEMPERATURE....  
 \* VALLEYS.....43-53.  
 \* MID SLOPE.....54-64.  
 \* 24 HR TREND.....LITTLE CHANGE.  
 \* MAX HUMIDITY.....  
 \* VALLEYS.....60-75%.  
 \* MID SLOPE.....23-33%.  
 \* 24 HR TREND.....LITTLE CHANGE.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...WEST WINDS AROUND 10 MPH WITH GUSTS TO 20 MPH IN  
 THE EVENING BECOMING DOWNSLOPE 2 TO 5 MPH.  
 \* RIDGE TOP.....SOUTHWEST WINDS 10 TO 15 MPH. GUSTS UP TO 25 MPH  
 IN THE EVENING.  
 \* HAINES INDEX.....5.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.

## .MONDAY...

\* SKY/WEATHER.....SUNNY. HAZE.  
 \* MAX TEMPERATURE....  
 \* VALLEYS.....86-94.  
 \* MID SLOPE.....81-91.  
 \* MIN HUMIDITY.....  
 \* VALLEYS.....7-13%.  
 \* MID SLOPE.....8-14%.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...UPSLOPE 4 TO 8 MPH BECOMING SOUTH AROUND 10 MPH  
 WITH GUSTS TO 20 MPH IN THE AFTERNOON.  
 \* RIDGE TOP.....SOUTHWEST WINDS 10 TO 15 MPH.  
 \* HAINES INDEX.....5.  
 \* LAL.....1.

\* CHC WETTING RAIN...0%.  
\* MIXING HEIGHT.....14500-15500 FT MSL.  
\* TRANSPORT WINDS....SOUTHWEST 15 TO 20 MPH.  
\* VENTILATION.....EXCELLENT.

.EXTENDED...

.MONDAY NIGHT...CLEAR IN THE EVENING THEN BECOMING PARTLY CLOUDY.  
HAZE IN THE EVENING. LOWS 44-54. WEST WINDS 10 TO 15 MPH IN THE  
EVENING BECOMING DOWNSLOPE 2 TO 5 MPH.

.TUESDAY...CLEAR. HIGHS 84-92. LOWS 41-51. SOUTHWEST WINDS 15 TO  
20 MPH.

.WEDNESDAY THROUGH THURSDAY...CLEAR. HIGHS 81-91. LOWS 35-45.  
SOUTHWEST WINDS 10 TO 20 MPH.

.FRIDAY...CLEAR. HIGHS 81-87. LOWS 35-45.

.SATURDAY...PARTLY CLOUDY. HIGHS 77-83.

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CAZ272-290045-  
GREATER LAKE TAHOE AREA-  
548 AM PDT SUN AUG 28 2016

.TODAY...

\* SKY/WEATHER.....SUNNY. HAZE.

\* MAX TEMPERATURE....

\* VALLEYS.....72-82.

\* MID SLOPE.....68-76.

\* 24 HR TREND.....LITTLE CHANGE.

\* MIN HUMIDITY.....

\* VALLEYS.....12-20%.

\* MID SLOPE.....14-22%.

\* 24 HR TREND.....LITTLE CHANGE.

\* 20-FOOT WINDS.....

\* VALLEYS/SLOPE...UPSLOPE 4 TO 8 MPH BECOMING SOUTHWEST AROUND 10 MPH  
WITH GUSTS UP TO 20 MPH IN THE AFTERNOON.

\* RIDGE TOP.....SOUTHWEST WINDS 10 TO 15 MPH WITH GUSTS TO 35  
MPH.

\* HAINES INDEX.....4-5.

\* LAL.....1.

\* CHC WETTING RAIN...0%.

\* MIXING HEIGHT.....16500-17500 FT MSL.

\* TRANSPORT WINDS....SOUTHWEST 10 TO 15 MPH.

\* VENTILATION.....EXCELLENT.

.TONIGHT...

\* SKY/WEATHER.....CLEAR. HAZE.

\* MIN TEMPERATURE....

\* VALLEYS.....35-45.

\* MID SLOPE.....46-56.

\* 24 HR TREND.....LITTLE CHANGE.

\* MAX HUMIDITY.....

\* VALLEYS.....80-95%.

\* MID SLOPE.....28-38%.

\* 24 HR TREND.....LITTLE CHANGE.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE....SOUTHWEST WINDS AROUND 10 MPH WITH GUSTS TO 20  
 MPH IN THE EVENING BECOMING DOWNSLOPE 2 TO 5  
 MPH.  
 \* RIDGE TOP.....SOUTHWEST WINDS 10 TO 20 MPH WITH GUSTS TO 35  
 MPH.  
 \* HAINES INDEX.....5.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.

.MONDAY...

\* SKY/WEATHER.....SUNNY. HAZE.  
 \* MAX TEMPERATURE....  
 \* VALLEYS.....72-82.  
 \* MID SLOPE.....69-77.  
 \* MIN HUMIDITY.....  
 \* VALLEYS.....11-20%.  
 \* MID SLOPE.....12-21%.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE....UPSLOPE 4 TO 8 MPH BECOMING SOUTHWEST AROUND 10  
 MPH WITH GUSTS TO 25 MPH IN THE AFTERNOON.  
 \* RIDGE TOP.....SOUTHWEST WINDS 10 TO 15 MPH WITH GUSTS TO 40  
 MPH.  
 \* HAINES INDEX.....5.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.  
 \* MIXING HEIGHT.....14000-15000 FT MSL.  
 \* TRANSPORT WINDS....SOUTHWEST 15 TO 20 MPH.  
 \* VENTILATION.....EXCELLENT.

.EXTENDED...

.MONDAY NIGHT...CLEAR IN THE EVENING THEN BECOMING PARTLY CLOUDY.  
 HAZE IN THE EVENING. LOWS 36-46. SOUTHWEST WINDS 10 TO 15 MPH IN THE  
 EVENING BECOMING DOWNSLOPE 2 TO 5 MPH.  
 .TUESDAY...CLEAR. HIGHS 70-80. LOWS 34-44. SOUTHWEST WINDS 10 TO  
 15 MPH.  
 .WEDNESDAY THROUGH THURSDAY...CLEAR. HIGHS 68-77. LOWS 30-40.  
 SOUTHWEST WINDS 10 TO 15 MPH.  
 .FRIDAY...CLEAR. HIGHS 67-75. LOWS 30-40.  
 .SATURDAY...PARTLY CLOUDY. HIGHS 65-71.

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NVZ453-290045-  
 WEST CENTRAL NEVADA BASIN AND RANGE-  
 548 AM PDT SUN AUG 28 2016

.TODAY...

\* SKY/WEATHER.....SUNNY.  
 \* MAX TEMPERATURE....  
 \* VALLEYS.....87-97.  
 \* MID SLOPE.....85-95.

\* 24 HR TREND.....2 DEGREES WARMER.  
 \* MIN HUMIDITY.....  
 \* VALLEYS.....6-13%.  
 \* MID SLOPE.....7-14%.  
 \* 24 HR TREND.....LITTLE CHANGE.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...UPSLOPE 4 TO 8 MPH BECOMING SOUTHWEST AROUND 10  
 MPH WITH GUSTS TO 20 MPH IN THE AFTERNOON.  
 \* RIDGE TOP.....SOUTHWEST WINDS 10 TO 15 MPH. GUSTS UP TO 25 MPH  
 IN THE AFTERNOON.  
 \* HAINES INDEX.....4-5.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.  
 \* MIXING HEIGHT.....18000-19000 FT MSL.  
 \* TRANSPORT WINDS...WEST 15 TO 20 MPH.  
 \* VENTILATION.....EXCELLENT.

## .TONIGHT...

\* SKY/WEATHER.....CLEAR.  
 \* MIN TEMPERATURE....  
 \* VALLEYS.....44-54.  
 \* MID SLOPE.....52-62.  
 \* 24 HR TREND.....2-4 DEGREES COOLER.  
 \* MAX HUMIDITY.....  
 \* VALLEYS.....34-44%.  
 \* MID SLOPE.....21-31%.  
 \* 24 HR TREND.....LITTLE CHANGE.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...WEST WINDS AROUND 10 MPH WITH GUSTS TO 20 MPH IN  
 THE EVENING BECOMING DOWNSLOPE 2 TO 5 MPH.  
 \* RIDGE TOP.....WEST WINDS 10 TO 15 MPH WITH GUSTS TO 25 MPH.  
 \* HAINES INDEX.....5.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.

## .MONDAY...

\* SKY/WEATHER.....SUNNY.  
 \* MAX TEMPERATURE....  
 \* VALLEYS.....87-97.  
 \* MID SLOPE.....85-95.  
 \* MIN HUMIDITY.....  
 \* VALLEYS.....6-12%.  
 \* MID SLOPE.....7-13%.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...UPSLOPE 4 TO 8 MPH BECOMING SOUTHWEST AROUND 10  
 MPH WITH GUSTS TO 25 MPH IN THE AFTERNOON.  
 \* RIDGE TOP.....SOUTHWEST WINDS AROUND 10 MPH. GUSTS UP TO 25  
 MPH IN THE MORNING.  
 \* HAINES INDEX.....5.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.  
 \* MIXING HEIGHT.....14500-15500 FT MSL.  
 \* TRANSPORT WINDS...SOUTHWEST 10 TO 15 MPH.  
 \* VENTILATION.....EXCELLENT.

.EXTENDED...

.MONDAY NIGHT...CLEAR. AREAS OF BLOWING DUST IN THE EVENING. LOWS 47-57. WEST WINDS AROUND 10 MPH.

.TUESDAY...CLEAR. AREAS OF BLOWING DUST. HIGHS 86-96. LOWS 47-57. WEST WINDS 15 TO 20 MPH.

.WEDNESDAY THROUGH THURSDAY...CLEAR. AREAS OF BLOWING DUST. HIGHS 83-92. LOWS 42-52. WEST WINDS 10 TO 20 MPH.

.FRIDAY...CLEAR. HIGHS 80-88. LOWS 42-52.

.SATURDAY...PARTLY CLOUDY. HIGHS 78-86.

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CAZ270-278-NVZ458-290045-

SURPRISE VALLEY CALIFORNIA-EASTERN LASSEN COUNTY-

NORTHERN WASHOE COUNTY-

548 AM PDT SUN AUG 28 2016

.TODAY...

\* SKY/WEATHER.....SUNNY.

\* MAX TEMPERATURE....

\* VALLEYS.....85-95.

\* MID SLOPE.....79-89.

\* 24 HR TREND.....LITTLE CHANGE.

\* MIN HUMIDITY.....

\* VALLEYS.....7-14%.

\* MID SLOPE.....10-17%.

\* 24 HR TREND.....LITTLE CHANGE.

\* 20-FOOT WINDS.....

\* VALLEYS/SLOPE...UPSLOPE 4 TO 8 MPH BECOMING SOUTHWEST 10 TO 15 MPH WITH GUSTS TO 25 MPH IN THE AFTERNOON.

\* RIDGE TOP.....SOUTHWEST WINDS 10 TO 15 MPH WITH GUSTS 25 TO 30 MPH.

\* HAINES INDEX.....4-5.

\* LAL.....1.

\* CHC WETTING RAIN...0%.

\* MIXING HEIGHT.....16500-17500 FT MSL.

\* TRANSPORT WINDS...WEST 15 TO 20 MPH.

\* VENTILATION.....EXCELLENT.

.TONIGHT...

\* SKY/WEATHER.....CLEAR.

\* MIN TEMPERATURE....

\* VALLEYS.....43-53.

\* MID SLOPE.....53-63.

\* 24 HR TREND.....LITTLE CHANGE.

\* MAX HUMIDITY.....

\* VALLEYS.....60-75%.

\* MID SLOPE.....23-33%.

\* 24 HR TREND.....3-5% DRIER MID SLOPES...LITTLE CHANGE VALLEYS.

\* 20-FOOT WINDS.....

\* VALLEYS/SLOPE...SOUTHWEST WINDS 10 TO 15 MPH WITH GUSTS TO 25 MPH IN THE EVENING BECOMING DOWNSLOPE 2 TO 5

MPH.

- \* RIDGE TOP.....SOUTHWEST WINDS 10 TO 20 MPH. GUSTS 25 TO 30 MPH  
IN THE EVENING.
- \* HAINES INDEX.....4-5.
- \* LAL.....1.
- \* CHC WETTING RAIN...0%.

.MONDAY...

- \* SKY/WEATHER.....SUNNY.
- \* MAX TEMPERATURE....
- \* VALLEYS.....85-95.
- \* MID SLOPE.....79-89.
- \* MIN HUMIDITY.....
- \* VALLEYS.....7-12%.
- \* MID SLOPE.....8-13%.
- \* 20-FOOT WINDS.....
- \* VALLEYS/SLOPE...UPSLOPE 4 TO 8 MPH BECOMING SOUTHWEST 10 TO 15  
MPH WITH GUSTS 25 TO 30 MPH IN THE AFTERNOON.
- \* RIDGE TOP.....SOUTHWEST WINDS 10 TO 15 MPH WITH GUSTS TO 25  
MPH.
- \* HAINES INDEX.....5.
- \* LAL.....1.
- \* CHC WETTING RAIN...0%.
- \* MIXING HEIGHT.....14500-15500 FT MSL.
- \* TRANSPORT WINDS...SOUTHWEST 15 TO 20 MPH.
- \* VENTILATION.....EXCELLENT.

.EXTENDED...

.MONDAY NIGHT...PARTLY CLOUDY. AREAS OF BLOWING DUST IN THE EVENING.  
 LOWS 44-54. SOUTHWEST WINDS 10 TO 15 MPH IN THE EVENING BECOMING  
 DOWNSLOPE 2 TO 5 MPH.

.TUESDAY...CLEAR. HIGHS 82-92. LOWS 38-48. SOUTHWEST WINDS 15 TO  
 20 MPH.

.WEDNESDAY THROUGH THURSDAY...PARTLY CLOUDY. AREAS OF BLOWING DUST.  
 HIGHS 80-90. LOWS 35-45. WEST WINDS 10 TO 20 MPH.

.FRIDAY...PARTLY CLOUDY. HIGHS 76-86. LOWS 36-46.

.SATURDAY...MOSTLY CLOUDY. HIGHS 73-83.

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CAZ271-290045-

WESTERN LASSEN/EASTERN PLUMAS/EASTERN SIERRA/EASTERN NEVADA COUNTIES-  
 548 AM PDT SUN AUG 28 2016

.TODAY...

- \* SKY/WEATHER.....SUNNY.
- \* MAX TEMPERATURE....
- \* VALLEYS.....81-91.
- \* MID SLOPE.....76-86.
- \* 24 HR TREND.....LITTLE CHANGE.
- \* MIN HUMIDITY.....
- \* VALLEYS.....8-14%.
- \* MID SLOPE.....12-18%.

\* 24 HR TREND.....LITTLE CHANGE.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...UPSLOPE 4 TO 8 MPH BECOMING SOUTHWEST 10 TO 15 MPH WITH GUSTS TO 25 MPH IN THE AFTERNOON.  
 \* RIDGE TOP.....SOUTHWEST WINDS 10 TO 15 MPH WITH GUSTS TO 25 MPH.  
 \* HAINES INDEX.....4-5.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.  
 \* MIXING HEIGHT.....16500-17500 FT MSL.  
 \* TRANSPORT WINDS...SOUTHWEST 10 TO 15 MPH.  
 \* VENTILATION.....EXCELLENT.

.TONIGHT...

\* SKY/WEATHER.....CLEAR.  
 \* MIN TEMPERATURE....  
 \* VALLEYS.....35-45.  
 \* MID SLOPE.....46-56.  
 \* 24 HR TREND.....LITTLE CHANGE.  
 \* MAX HUMIDITY.....  
 \* VALLEYS.....65-80%.  
 \* MID SLOPE.....30-45%.  
 \* 24 HR TREND.....LITTLE CHANGE.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...SOUTHWEST WINDS 10 TO 15 MPH WITH GUSTS TO 25 MPH IN THE EVENING BECOMING DOWNSLOPE 2 TO 5 MPH.  
 \* RIDGE TOP.....SOUTHWEST WINDS 10 TO 15 MPH WITH GUSTS TO 25 MPH.  
 \* HAINES INDEX.....4-5.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.

.MONDAY...

\* SKY/WEATHER.....SUNNY.  
 \* MAX TEMPERATURE....  
 \* VALLEYS.....82-92.  
 \* MID SLOPE.....77-85.  
 \* MIN HUMIDITY.....  
 \* VALLEYS.....8-15%.  
 \* MID SLOPE.....11-18%.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...UPSLOPE 4 TO 8 MPH BECOMING SOUTHWEST AROUND 10 MPH WITH GUSTS TO 25 MPH IN THE AFTERNOON.  
 \* RIDGE TOP.....SOUTHWEST WINDS 10 TO 15 MPH WITH GUSTS TO 25 MPH.  
 \* HAINES INDEX.....5.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.  
 \* MIXING HEIGHT.....14000-15000 FT MSL.  
 \* TRANSPORT WINDS...SOUTHWEST 15 TO 20 MPH.  
 \* VENTILATION.....EXCELLENT.

.EXTENDED...  
 .MONDAY NIGHT...PARTLY CLOUDY. LOWS 36-46. SOUTHWEST WINDS 10 TO 15 MPH IN THE EVENING BECOMING DOWNSLOPE 2 TO 5 MPH.  
 .TUESDAY...CLEAR. HIGHS 78-88. LOWS 31-41. SOUTHWEST WINDS 10 TO 15 MPH.  
 .WEDNESDAY...CLEAR. HIGHS 75-85. LOWS 30-40. SOUTHWEST WINDS 15 TO 20 MPH.  
 .THURSDAY...PARTLY CLOUDY. HIGHS 73-83. LOWS 30-40. SOUTHWEST WINDS 15 TO 20 MPH.  
 .FRIDAY THROUGH SATURDAY...PARTLY CLOUDY. HIGHS 72-82. LOWS 31-41.

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CAZ273-290045-  
 MONO AND EASTERN ALPINE COUNTIES-  
 548 AM PDT SUN AUG 28 2016

.TODAY...  
 \* SKY/WEATHER.....SUNNY. HAZE.  
 \* MAX TEMPERATURE....  
 \* VALLEYS.....80-90.  
 \* MID SLOPE.....73-83.  
 \* 24 HR TREND.....LITTLE CHANGE.  
 \* MIN HUMIDITY.....  
 \* VALLEYS.....8-16%.  
 \* MID SLOPE.....10-18%.  
 \* 24 HR TREND.....LITTLE CHANGE.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...UPSLOPE 4 TO 8 MPH BECOMING SOUTH AROUND 10 MPH WITH GUSTS TO 20 MPH IN THE AFTERNOON.  
 \* RIDGE TOP.....SOUTH WINDS 10 TO 15 MPH WITH GUSTS TO 35 MPH.  
 \* HAINES INDEX.....5.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.  
 \* MIXING HEIGHT.....19000-20000 FT MSL.  
 \* TRANSPORT WINDS...SOUTHEAST 10 TO 15 MPH.  
 \* VENTILATION.....EXCELLENT.

.TONIGHT...  
 \* SKY/WEATHER.....PARTLY CLOUDY THEN BECOMING CLEAR. HAZE.  
 \* MIN TEMPERATURE....  
 \* VALLEYS.....35-45.  
 \* MID SLOPE.....44-54.  
 \* 24 HR TREND.....LITTLE CHANGE.  
 \* MAX HUMIDITY.....  
 \* VALLEYS.....76-91%.  
 \* MID SLOPE.....33-43%.  
 \* 24 HR TREND.....LITTLE CHANGE.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...SOUTHWEST WINDS AROUND 10 MPH WITH GUSTS TO 20 MPH IN THE EVENING BECOMING DOWNSLOPE 2 TO 5 MPH.  
 \* RIDGE TOP.....SOUTHWEST WINDS 10 TO 15 MPH WITH GUSTS TO 35 MPH.

\* HAINES INDEX.....5.  
\* LAL.....1.  
\* CHC WETTING RAIN...0%.

.MONDAY...

\* SKY/WEATHER.....SUNNY. HAZE.  
\* MAX TEMPERATURE....  
\* VALLEYS.....81-91.  
\* MID SLOPE.....75-85.  
\* MIN HUMIDITY.....  
\* VALLEYS.....8-15%.  
\* MID SLOPE.....9-16%.  
\* 20-FOOT WINDS.....  
\* VALLEYS/SLOPE...UPSLOPE 4 TO 8 MPH BECOMING SOUTHWEST AROUND 10 MPH WITH GUSTS TO 20 MPH IN THE AFTERNOON.  
\* RIDGE TOP.....SOUTHWEST WINDS AROUND 10 MPH WITH GUSTS 25 TO 30 MPH.

\* HAINES INDEX.....5.  
\* LAL.....1.  
\* CHC WETTING RAIN...0%.  
\* MIXING HEIGHT.....17000-18000 FT MSL.  
\* TRANSPORT WINDS...SOUTH 10 TO 15 MPH.  
\* VENTILATION.....EXCELLENT.

.EXTENDED...

.MONDAY NIGHT...CLEAR. HAZE IN THE EVENING. LOWS 37-47. SOUTHWEST WINDS AROUND 10 MPH IN THE EVENING BECOMING DOWNSLOPE 2 TO 5 MPH.  
.TUESDAY...CLEAR. HIGHS 79-89. LOWS 34-44. SOUTHWEST WINDS 10 TO 15 MPH.  
.WEDNESDAY THROUGH THURSDAY...CLEAR. HIGHS 78-88. LOWS 28-38. SOUTHWEST WINDS 10 TO 15 MPH.  
.FRIDAY THROUGH SATURDAY...CLEAR. HIGHS 76-86. LOWS 28-38.

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NVZ459-290045-  
MINERAL AND SOUTHERN LYON COUNTIES-  
548 AM PDT SUN AUG 28 2016

.TODAY...

\* SKY/WEATHER.....SUNNY.  
\* MAX TEMPERATURE....  
\* VALLEYS.....84-94.  
\* MID SLOPE.....82-90.  
\* 24 HR TREND.....LITTLE CHANGE.  
\* MIN HUMIDITY.....  
\* VALLEYS.....8-14%.  
\* MID SLOPE.....9-15%.  
\* 24 HR TREND.....LITTLE CHANGE.  
\* 20-FOOT WINDS.....  
\* VALLEYS/SLOPE...UPSLOPE 4 TO 8 MPH BECOMING NORTHWEST AROUND 10 MPH WITH GUSTS TO 20 MPH IN THE AFTERNOON.  
\* RIDGE TOP.....SOUTH WINDS AROUND 10 MPH.

\* HAINES INDEX.....6.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.  
 \* MIXING HEIGHT.....19000-20000 FT MSL.  
 \* TRANSPORT WINDS...SOUTHEAST 10 TO 15 MPH.  
 \* VENTILATION.....EXCELLENT.

.TONIGHT...

\* SKY/WEATHER.....PARTLY CLOUDY THEN BECOMING CLEAR.  
 \* MIN TEMPERATURE....  
 \* VALLEYS.....43-53.  
 \* MID SLOPE.....51-61.  
 \* 24 HR TREND.....LITTLE CHANGE.  
 \* MAX HUMIDITY.....  
 \* VALLEYS.....55-70%.  
 \* MID SLOPE.....22-32%.  
 \* 24 HR TREND.....LITTLE CHANGE.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...WEST WINDS AROUND 10 MPH WITH GUSTS TO 20 MPH IN  
 THE EVENING BECOMING DOWNSLOPE 2 TO 5 MPH.  
 \* RIDGE TOP.....SOUTHWEST WINDS AROUND 10 MPH.  
 \* HAINES INDEX.....5.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.

.MONDAY...

\* SKY/WEATHER.....SUNNY.  
 \* MAX TEMPERATURE....  
 \* VALLEYS.....85-95.  
 \* MID SLOPE.....83-91.  
 \* MIN HUMIDITY.....  
 \* VALLEYS.....8-13%.  
 \* MID SLOPE.....9-14%.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...UPSLOPE 4 TO 8 MPH BECOMING EAST AROUND 10 MPH  
 WITH GUSTS TO 20 MPH IN THE AFTERNOON.  
 \* RIDGE TOP.....SOUTH WINDS AROUND 10 MPH.  
 \* HAINES INDEX.....5.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.  
 \* MIXING HEIGHT.....15000-16000 FT MSL.  
 \* TRANSPORT WINDS...SOUTHWEST AROUND 10 MPH.  
 \* VENTILATION.....VERY GOOD.

.EXTENDED...

.MONDAY NIGHT...CLEAR. LOWS 46-56. NORTHWEST WINDS AROUND 10 MPH IN  
 THE EVENING BECOMING DOWNSLOPE 2 TO 5 MPH.  
 .TUESDAY...CLEAR. HIGHS 84-94. LOWS 44-54. WEST WINDS 15 TO 20 MPH.  
 .WEDNESDAY THROUGH THURSDAY...CLEAR. HIGHS 84-94. LOWS 39-49.  
 NORTHWEST WINDS 15 TO 20 MPH.  
 .FRIDAY THROUGH SATURDAY...CLEAR. HIGHS 80-90. LOWS 39-49.

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.8 TO 14 DAY OUTLOOK FOR (SUN SEP 4 THROUGH SAT SEP 10)  
BELOW NORMAL TEMPERATURES AND NEAR NORMAL PRECIPITATION.

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[HTTP://WEATHER.GOV/RENO](http://weather.gov/reno)

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## National Weather Service Raw Text Product

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FNUS55 KREV 282011

FWFREV

FIRE WEATHER PLANNING FORECAST  
NATIONAL WEATHER SERVICE RENO NV  
111 PM PDT SUN AUG 28 2016

...FIRE WEATHER WATCH IN EFFECT FROM TUESDAY AFTERNOON THROUGH  
TUESDAY EVENING...

.DISCUSSION...

DRY CONDITIONS WILL CONTINUE INTO THE COMING WEEK. THE ONLY  
EXCEPTION COULD BE THE POSSIBILITY OF ELEVATED THUNDERSTORMS LATE  
MONDAY NIGHT OR EARLY TUESDAY MORNING NORTH OF PORTOLA. WINDS WILL  
BE LIGHT TODAY BEFORE SLOWLY INCREASING DURING THE WEEK. TUESDAY  
AND WEDNESDAY COULD BE QUITE BREEZY ALONG THE SIERRA FRONT FROM  
DOUGLAS COUNTY TO THE OREGON BORDER. TEMPERATURES WILL BE NEAR  
AVERAGE...BUT HUMIDITY WILL CONTINUE TO BE LOW WITH FAIR TO POOR  
OVERNIGHT RECOVERY. RECOVERIES IMPROVE LATE IN THE WEEK AS  
TEMPERATURES TREND COOLER.

NOTE: THUNDERSTORMS IMPLY GUSTY AND ERRATIC WINDS.

NOTE: PLEASE SEE OPERATING PLAN FOR DETAILED ZONE DESCRIPTIONS

[HTTP://WWW.WRH.NOAA.GOV/FIREWX/?WFO=REV](http://www.wrh.noaa.gov/firewx/?wfo=rev)

NVZ450-291545-  
 WESTERN NEVADA SIERRA FRONT-  
 111 PM PDT SUN AUG 28 2016

...FIRE WEATHER WATCH IN EFFECT FROM TUESDAY AFTERNOON THROUGH  
 TUESDAY EVENING...

.TONIGHT...

\* SKY/WEATHER.....CLEAR. HAZE.  
 \* MIN TEMPERATURE....  
 \* VALLEYS.....42-52.  
 \* MID SLOPE.....53-63.  
 \* 24 HR TREND.....LITTLE CHANGE.  
 \* MAX HUMIDITY.....  
 \* VALLEYS.....58-73%.  
 \* MID SLOPE.....28-38%.  
 \* 24 HR TREND.....UP TO 5% WETTER VALLEYS...LITTLE CHANGE MID SLOPES.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...WEST WINDS AROUND 10 MPH WITH GUSTS TO 20 MPH IN  
 THE EVENING BECOMING DOWNSLOPE 2 TO 5 MPH.  
 \* RIDGE TOP.....SOUTHWEST WINDS 10 TO 15 MPH. GUSTS UP TO 25 MPH  
 IN THE EVENING.  
 \* HAINES INDEX.....5.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.

.MONDAY...

\* SKY/WEATHER.....SUNNY. HAZE.  
 \* MAX TEMPERATURE....  
 \* VALLEYS.....86-94.  
 \* MID SLOPE.....81-91.  
 \* 24 HR TREND.....LITTLE CHANGE.  
 \* MIN HUMIDITY.....  
 \* VALLEYS.....8-13%.  
 \* MID SLOPE.....8-14%.  
 \* 24 HR TREND.....LITTLE CHANGE.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...UPSLOPE 4 TO 8 MPH BECOMING SOUTH AROUND 10 MPH  
 WITH GUSTS TO 25 MPH IN THE AFTERNOON.  
 \* RIDGE TOP.....SOUTHWEST WINDS 10 TO 15 MPH.  
 \* HAINES INDEX.....5.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.  
 \* MIXING HEIGHT.....15000-16000 FT MSL.  
 \* TRANSPORT WINDS...SOUTHWEST 15 TO 20 MPH.  
 \* VENTILATION.....EXCELLENT.

.MONDAY NIGHT...

\* SKY/WEATHER.....CLEAR. HAZE IN THE EVENING.  
 \* MIN TEMPERATURE....  
 \* VALLEYS.....44-54.  
 \* MID SLOPE.....54-64.  
 \* MAX HUMIDITY.....

\* VALLEYS.....62-72%.  
 \* MID SLOPE.....23-33%.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...WEST WINDS 10 TO 15 MPH WITH GUSTS TO 25 MPH IN  
 THE EVENING BECOMING DOWNSLOPE 2 TO 5 MPH.  
 \* RIDGE TOP.....SOUTHWEST WINDS 10 TO 15 MPH. GUSTS UP TO 25 MPH  
 AFTER MIDNIGHT.  
 \* HAINES INDEX.....5.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.

.TUESDAY...

\* SKY/WEATHER.....PARTLY CLOUDY THEN BECOMING SUNNY.  
 \* MAX TEMPERATURE....  
 \* VALLEYS.....84-92.  
 \* MID SLOPE.....79-89.  
 \* MIN HUMIDITY.....  
 \* VALLEYS.....9-14%.  
 \* MID SLOPE.....9-14%.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...UPSLOPE 4 TO 8 MPH BECOMING SOUTHWEST 15 TO 20  
 MPH WITH GUSTS 25 TO 30 MPH IN THE AFTERNOON. SOME  
 MIDSLOPES MAY GUST TO 35 MPH.  
 \* RIDGE TOP.....SOUTHWEST WINDS AROUND 10 MPH INCREASING TO 15  
 TO 20 MPH IN THE AFTERNOON. GUSTS UP TO 35  
 MPH.  
 \* HAINES INDEX.....5-6.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.  
 \* MIXING HEIGHT.....15500-16500 FT MSL.  
 \* TRANSPORT WINDS...SOUTHWEST 20 TO 25 MPH.  
 \* VENTILATION.....EXCELLENT.

.EXTENDED...

.TUESDAY NIGHT...CLEAR. LOWS 41-51. WEST WINDS 15 TO 20 MPH IN THE  
 EVENING BECOMING DOWNSLOPE 2 TO 5 MPH.  
 .WEDNESDAY THROUGH FRIDAY...CLEAR. HIGHS 81-91. LOWS 36-46. WEST  
 WINDS 15 TO 20 MPH.  
 .SATURDAY...PARTLY CLOUDY. HIGHS 77-83. LOWS 35-45.  
 .SUNDAY...SUNNY. HIGHS 78-83.

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CAZ272-291545-  
 GREATER LAKE TAHOE AREA-  
 111 PM PDT SUN AUG 28 2016

.TONIGHT...

\* SKY/WEATHER.....CLEAR. HAZE.  
 \* MIN TEMPERATURE....  
 \* VALLEYS.....34-44.  
 \* MID SLOPE.....45-55.  
 \* 24 HR TREND.....LITTLE CHANGE.

\* MAX HUMIDITY.....  
 \* VALLEYS.....78-93%.  
 \* MID SLOPE.....35-45%.  
 \* 24 HR TREND.....LITTLE CHANGE.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...SOUTHWEST WINDS AROUND 10 MPH WITH GUSTS TO 20  
 MPH IN THE EVENING BECOMING DOWNSLOPE 2 TO 5  
 MPH.  
 \* RIDGE TOP.....SOUTHWEST WINDS 10 TO 20 MPH WITH GUSTS TO 35  
 MPH.  
 \* HAINES INDEX.....5.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.

## .MONDAY...

\* SKY/WEATHER.....SUNNY. HAZE.  
 \* MAX TEMPERATURE....  
 \* VALLEYS.....72-82.  
 \* MID SLOPE.....69-77.  
 \* 24 HR TREND.....LITTLE CHANGE.  
 \* MIN HUMIDITY.....  
 \* VALLEYS.....12-22%.  
 \* MID SLOPE.....11-21%.  
 \* 24 HR TREND.....2% WETTER.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...UPSLOPE 4 TO 8 MPH BECOMING SOUTHWEST AROUND 10  
 MPH WITH GUSTS TO 25 MPH IN THE AFTERNOON.  
 \* RIDGE TOP.....SOUTHWEST WINDS 10 TO 15 MPH WITH GUSTS TO 40  
 MPH.  
 \* HAINES INDEX.....5.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.  
 \* MIXING HEIGHT.....15000-16000 FT MSL.  
 \* TRANSPORT WINDS...SOUTHWEST 15 TO 20 MPH.  
 \* VENTILATION.....EXCELLENT.

## .MONDAY NIGHT...

\* SKY/WEATHER.....CLEAR. HAZE IN THE EVENING.  
 \* MIN TEMPERATURE....  
 \* VALLEYS.....37-47.  
 \* MID SLOPE.....49-59.  
 \* MAX HUMIDITY.....  
 \* VALLEYS.....82-92%.  
 \* MID SLOPE.....27-37%.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...SOUTHWEST WINDS 10 TO 15 MPH WITH GUSTS TO 25  
 MPH IN THE EVENING BECOMING DOWNSLOPE 2 TO 5  
 MPH.  
 \* RIDGE TOP.....SOUTHWEST WINDS 10 TO 20 MPH WITH GUSTS TO 40  
 MPH.  
 \* HAINES INDEX.....5.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.

.TUESDAY...  
 \* SKY/WEATHER.....PARTLY CLOUDY THEN BECOMING SUNNY.  
 \* MAX TEMPERATURE....  
 \* VALLEYS.....70-80.  
 \* MID SLOPE.....67-75.  
 \* MIN HUMIDITY.....  
 \* VALLEYS.....14-24%.  
 \* MID SLOPE.....13-23%.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...UPSLOPE 4 TO 8 MPH BECOMING SOUTHWEST 10 TO 15  
 MPH WITH GUSTS UP TO 30 MPH IN THE AFTERNOON.  
 \* RIDGE TOP.....SOUTHWEST WINDS 15 TO 25 MPH WITH GUSTS TO 50  
 MPH.  
 \* HAINES INDEX.....5.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.  
 \* MIXING HEIGHT.....14000-15000 FT MSL.  
 \* TRANSPORT WINDS...SOUTHWEST 25 TO 30 MPH.  
 \* VENTILATION.....EXCELLENT.

.EXTENDED...  
 .TUESDAY NIGHT...CLEAR. LOWS 34-44. SOUTHWEST WINDS 10 TO 15 MPH IN  
 THE EVENING BECOMING DOWNSLOPE 2 TO 5 MPH.  
 .WEDNESDAY THROUGH THURSDAY...CLEAR. HIGHS 68-77. LOWS 32-42.  
 SOUTHWEST WINDS 15 TO 20 MPH.  
 .FRIDAY...CLEAR. HIGHS 67-75. LOWS 32-42. SOUTHWEST WINDS 10 TO  
 15 MPH.  
 .SATURDAY...PARTLY CLOUDY. HIGHS 65-71. LOWS 29-39.  
 .SUNDAY...SUNNY. HIGHS 66-73.

\$\$

NVZ453-291545-  
 WEST CENTRAL NEVADA BASIN AND RANGE-  
 111 PM PDT SUN AUG 28 2016

...DRY AND BREEZY CONDITIONS FOR THE VERY NORTHWESTERN PORTION OF  
 ZONE 453 TUESDAY AFTERNOON...

.TONIGHT...  
 \* SKY/WEATHER.....CLEAR.  
 \* MIN TEMPERATURE....  
 \* VALLEYS.....43-53.  
 \* MID SLOPE.....51-61.  
 \* 24 HR TREND.....3 DEGREES COOLER.  
 \* MAX HUMIDITY.....  
 \* VALLEYS.....35-45%.  
 \* MID SLOPE.....30-40%.  
 \* 24 HR TREND.....UP TO 5% WETTER.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...WEST WINDS AROUND 10 MPH WITH GUSTS TO 20 MPH IN  
 THE EVENING BECOMING DOWNSLOPE 2 TO 5 MPH.  
 \* RIDGE TOP.....WEST WINDS 10 TO 15 MPH WITH GUSTS TO 25 MPH.

\* HAINES INDEX.....5.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.

## .MONDAY...

\* SKY/WEATHER.....SUNNY.  
 \* MAX TEMPERATURE....  
 \* VALLEYS.....87-97.  
 \* MID SLOPE.....85-95.  
 \* 24 HR TREND.....LITTLE CHANGE.  
 \* MIN HUMIDITY.....  
 \* VALLEYS.....6-12%.  
 \* MID SLOPE.....7-12%.  
 \* 24 HR TREND.....LITTLE CHANGE.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...UPSLOPE 4 TO 8 MPH BECOMING SOUTHWEST AROUND 10  
 MPH WITH GUSTS TO 25 MPH IN THE AFTERNOON.  
 \* RIDGE TOP.....SOUTHWEST WINDS AROUND 10 MPH. GUSTS UP TO 25  
 MPH IN THE MORNING.

\* HAINES INDEX.....5.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.  
 \* MIXING HEIGHT.....15000-16000 FT MSL.  
 \* TRANSPORT WINDS...SOUTHWEST 10 TO 15 MPH.  
 \* VENTILATION.....EXCELLENT.

## .MONDAY NIGHT...

\* SKY/WEATHER.....CLEAR. AREAS OF BLOWING DUST IN THE EVENING.  
 \* MIN TEMPERATURE....  
 \* VALLEYS.....47-57.  
 \* MID SLOPE.....53-63.  
 \* MAX HUMIDITY.....  
 \* VALLEYS.....35-45%.  
 \* MID SLOPE.....22-32%.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...WEST WINDS AROUND 10 MPH. GUSTS UP TO 25 MPH IN  
 THE EVENING.  
 \* RIDGE TOP.....WEST WINDS 10 TO 15 MPH. GUSTS UP TO 25 MPH  
 AFTER MIDNIGHT.  
 \* HAINES INDEX.....5.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.

## .TUESDAY...

\* SKY/WEATHER.....PARTLY CLOUDY THEN BECOMING SUNNY. AREAS OF  
 BLOWING DUST IN THE AFTERNOON.  
 \* MAX TEMPERATURE....  
 \* VALLEYS.....86-96.  
 \* MID SLOPE.....83-93.  
 \* MIN HUMIDITY.....  
 \* VALLEYS.....7-12%.  
 \* MID SLOPE.....8-13%.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...UPSLOPE 4 TO 8 MPH BECOMING SOUTHWEST 10 TO 15

MPH WITH GUSTS AROUND 25 MPH IN THE AFTERNOON.  
 PYRAMID LAKE AND LOCATIONS NEAR GERLACH MAY GUST  
 HAVE PERIODIC GUSTS UP TO 35 MPH.

- \* RIDGE TOP.....SOUTHWEST WINDS 10 TO 15 MPH WITH GUSTS 25 TO 30 MPH.
- \* HAINES INDEX.....5-6.
- \* LAL.....1.
- \* CHC WETTING RAIN...0%.
- \* MIXING HEIGHT.....15500-16500 FT MSL.
- \* TRANSPORT WINDS....SOUTHWEST 20 TO 25 MPH.
- \* VENTILATION.....EXCELLENT.

.EXTENDED...

.TUESDAY NIGHT...CLEAR. AREAS OF BLOWING DUST IN THE EVENING. LOWS 46-56. WEST WINDS 10 TO 15 MPH.

.WEDNESDAY THROUGH THURSDAY...CLEAR. AREAS OF BLOWING DUST. HIGHS 83-92. LOWS 43-53. WEST WINDS 15 TO 20 MPH.

.FRIDAY...CLEAR. HIGHS 80-88. LOWS 41-51. WEST WINDS 10 TO 15 MPH.

.SATURDAY...PARTLY CLOUDY. HIGHS 78-86. LOWS 40-50.

.SUNDAY...SUNNY. HIGHS 78-86.

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CAZ270-278-NVZ458-291545-  
 SURPRISE VALLEY CALIFORNIA-EASTERN LASSEN COUNTY-  
 NORTHERN WASHOE COUNTY-  
 111 PM PDT SUN AUG 28 2016

...FIRE WEATHER WATCH IN EFFECT FROM TUESDAY AFTERNOON THROUGH TUESDAY EVENING...

.TONIGHT...

- \* SKY/WEATHER.....CLEAR.
- \* MIN TEMPERATURE....
- \* VALLEYS.....42-52.
- \* MID SLOPE.....52-62.
- \* 24 HR TREND.....LITTLE CHANGE.
- \* MAX HUMIDITY.....
- \* VALLEYS.....35-50%.
- \* MID SLOPE.....27-37%.
- \* 24 HR TREND.....3% DRIER MID SLOPES...LITTLE CHANGE VALLEYS.
- \* 20-FOOT WINDS.....
- \* VALLEYS/SLOPE...SOUTHWEST WINDS 10 TO 15 MPH WITH GUSTS TO 25 MPH IN THE EVENING BECOMING DOWNSLOPE 2 TO 5 MPH.
- \* RIDGE TOP.....SOUTHWEST WINDS 10 TO 20 MPH. GUSTS 25 TO 30 MPH IN THE EVENING.
- \* HAINES INDEX.....4-5.
- \* LAL.....1.
- \* CHC WETTING RAIN...0%.

.MONDAY...

- \* SKY/WEATHER.....SUNNY.

\* MAX TEMPERATURE....  
 \* VALLEYS.....85-95.  
 \* MID SLOPE.....79-89.  
 \* 24 HR TREND.....LITTLE CHANGE.  
 \* MIN HUMIDITY.....  
 \* VALLEYS.....8-13%.  
 \* MID SLOPE.....8-13%.  
 \* 24 HR TREND.....2% DRIER.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...UPSLOPE 4 TO 8 MPH BECOMING SOUTHWEST 10 TO 15  
 MPH WITH GUSTS AROUND 25 MPH IN THE AFTERNOON.  
 \* RIDGE TOP.....SOUTHWEST WINDS 10 TO 15 MPH WITH GUSTS TO 25  
 MPH.  
 \* HAINES INDEX.....5.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.  
 \* MIXING HEIGHT.....15000-16000 FT MSL.  
 \* TRANSPORT WINDS...SOUTHWEST 20 TO 25 MPH.  
 \* VENTILATION.....EXCELLENT.

.MONDAY NIGHT...

\* SKY/WEATHER.....PARTLY CLOUDY. AREAS OF BLOWING DUST IN THE  
 EVENING.  
 \* MIN TEMPERATURE....  
 \* VALLEYS.....44-54.  
 \* MID SLOPE.....54-64.  
 \* MAX HUMIDITY.....  
 \* VALLEYS.....59-69%.  
 \* MID SLOPE.....24-34%.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...SOUTHWEST WINDS 10 TO 15 MPH WITH GUSTS UP TO 30  
 MPH IN THE EVENING BECOMING DOWNSLOPE 2 TO 5  
 MPH.  
 \* RIDGE TOP.....SOUTHWEST WINDS 10 TO 15 MPH WITH GUSTS TO 25  
 MPH.  
 \* HAINES INDEX.....5.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.

.TUESDAY...

\* SKY/WEATHER.....PARTLY CLOUDY. AREAS OF BLOWING DUST IN THE  
 AFTERNOON.  
 \* MAX TEMPERATURE....  
 \* VALLEYS.....82-92.  
 \* MID SLOPE.....76-86.  
 \* MIN HUMIDITY.....  
 \* VALLEYS.....8-13%.  
 \* MID SLOPE.....9-14%.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...UPSLOPE 4 TO 8 MPH BECOMING SOUTHWEST 15 TO 20  
 MPH WITH GUSTS UP TO 35 MPH IN THE AFTERNOON.  
 \* RIDGE TOP.....SOUTHWEST WINDS 10 TO 20 MPH WITH GUSTS TO 35  
 MPH.  
 \* HAINES INDEX.....5-6.

\* LAL.....1.  
\* CHC WETTING RAIN...0%.  
\* MIXING HEIGHT.....15500-16500 FT MSL.  
\* TRANSPORT WINDS....SOUTH 25 TO 30 MPH.  
\* VENTILATION.....EXCELLENT.

.EXTENDED...

.TUESDAY NIGHT...CLEAR. AREAS OF BLOWING DUST IN THE EVENING. LOWS 38-48. SOUTHWEST WINDS 15 TO 20 MPH BECOMING WEST AROUND 10 MPH AFTER MIDNIGHT.

.WEDNESDAY THROUGH THURSDAY...CLEAR. AREAS OF BLOWING DUST. HIGHS 80-90. LOWS 36-46. WEST WINDS 10 TO 20 MPH.

.FRIDAY...PARTLY CLOUDY. HIGHS 76-86. LOWS 35-45. WEST WINDS 15 TO 20 MPH.

.SATURDAY THROUGH SUNDAY...PARTLY CLOUDY. HIGHS 73-83. LOWS 35-45.

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CAZ271-291545-

WESTERN LASSEN/EASTERN PLUMAS/EASTERN SIERRA/EASTERN NEVADA COUNTIES-  
111 PM PDT SUN AUG 28 2016

.TONIGHT...

\* SKY/WEATHER.....CLEAR.

\* MIN TEMPERATURE....

\* VALLEYS.....34-44.

\* MID SLOPE.....45-55.

\* 24 HR TREND.....LITTLE CHANGE.

\* MAX HUMIDITY.....

\* VALLEYS.....68-83%.

\* MID SLOPE.....35-50%.

\* 24 HR TREND.....2% WETTER VALLEYS...LITTLE CHANGE MID SLOPES.

\* 20-FOOT WINDS.....

\* VALLEYS/SLOPE...SOUTHWEST WINDS 10 TO 15 MPH WITH GUSTS TO 25 MPH IN THE EVENING BECOMING DOWNSLOPE 2 TO 5 MPH.

\* RIDGE TOP.....SOUTHWEST WINDS 10 TO 15 MPH WITH GUSTS TO 25 MPH.

\* HAINES INDEX.....4-5.

\* LAL.....1.

\* CHC WETTING RAIN...0%.

.MONDAY...

\* SKY/WEATHER.....SUNNY.

\* MAX TEMPERATURE....

\* VALLEYS.....82-92.

\* MID SLOPE.....77-85.

\* 24 HR TREND.....LITTLE CHANGE.

\* MIN HUMIDITY.....

\* VALLEYS.....8-16%.

\* MID SLOPE.....11-17%.

\* 24 HR TREND.....LITTLE CHANGE.

\* 20-FOOT WINDS.....

\* VALLEYS/SLOPE...UPSLOPE 4 TO 8 MPH BECOMING SOUTHWEST AROUND 10 MPH WITH GUSTS TO 25 MPH IN THE AFTERNOON.  
 \* RIDGE TOP.....SOUTHWEST WINDS 10 TO 15 MPH WITH GUSTS TO 25 MPH.  
 \* HAINES INDEX.....5.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.  
 \* MIXING HEIGHT.....14500-15500 FT MSL.  
 \* TRANSPORT WINDS...SOUTHWEST 20 TO 25 MPH.  
 \* VENTILATION.....EXCELLENT.

.MONDAY NIGHT...

\* SKY/WEATHER.....PARTLY CLOUDY.  
 \* MIN TEMPERATURE....  
 \* VALLEYS.....36-46.  
 \* MID SLOPE.....47-57.  
 \* MAX HUMIDITY.....  
 \* VALLEYS.....76-86%.  
 \* MID SLOPE.....36-46%.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...SOUTHWEST WINDS 10 TO 15 MPH WITH GUSTS TO 25 MPH IN THE EVENING BECOMING DOWNSLOPE 2 TO 5 MPH.  
 \* RIDGE TOP.....SOUTHWEST WINDS 10 TO 15 MPH WITH GUSTS TO 25 MPH.  
 \* HAINES INDEX.....5.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.

.TUESDAY...

\* SKY/WEATHER.....PARTLY CLOUDY.  
 \* MAX TEMPERATURE....  
 \* VALLEYS.....78-88.  
 \* MID SLOPE.....73-83.  
 \* MIN HUMIDITY.....  
 \* VALLEYS.....10-18%.  
 \* MID SLOPE.....12-18%.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...UPSLOPE 4 TO 8 MPH BECOMING SOUTHWEST 10 TO 15 MPH WITH GUSTS UP TO 30 MPH IN THE AFTERNOON.  
 \* RIDGE TOP.....SOUTHWEST WINDS 10 TO 20 MPH WITH GUSTS TO 35 MPH.  
 \* HAINES INDEX.....5.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.  
 \* MIXING HEIGHT.....13500-14500 FT MSL.  
 \* TRANSPORT WINDS...SOUTH 25 TO 30 MPH.  
 \* VENTILATION.....EXCELLENT.

.EXTENDED...

.TUESDAY NIGHT...CLEAR. LOWS 33-43. SOUTHWEST WINDS 10 TO 15 MPH IN THE EVENING BECOMING DOWNSLOPE 2 TO 5 MPH.  
 .WEDNESDAY THROUGH THURSDAY...CLEAR. HIGHS 75-85. LOWS 32-42.

SOUTHWEST WINDS 15 TO 20 MPH.  
 .FRIDAY...PARTLY CLOUDY. HIGHS 72-82. LOWS 30-40. WEST WINDS 15 TO  
 20 MPH.  
 .SATURDAY THROUGH SUNDAY...PARTLY CLOUDY. HIGHS 71-81. LOWS 29-39.

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CAZ273-291545-  
 MONO AND EASTERN ALPINE COUNTIES-  
 111 PM PDT SUN AUG 28 2016

.TONIGHT...  
 \* SKY/WEATHER.....PARTLY CLOUDY THEN BECOMING CLEAR. HAZE.  
 \* MIN TEMPERATURE....  
 \* VALLEYS.....34-44.  
 \* MID SLOPE.....43-53.  
 \* 24 HR TREND.....LITTLE CHANGE.  
 \* MAX HUMIDITY.....  
 \* VALLEYS.....70-80%. 82-92% COLDEST VALLEYS  
 \* MID SLOPE.....33-43%.  
 \* 24 HR TREND.....2% WETTER VALLEYS...LITTLE CHANGE MID SLOPES.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...SOUTHWEST WINDS AROUND 10 MPH WITH GUSTS TO 20  
 MPH IN THE EVENING BECOMING DOWNSLOPE 2 TO 5  
 MPH.  
 \* RIDGE TOP.....SOUTHWEST WINDS 10 TO 15 MPH WITH GUSTS TO 35  
 MPH.  
 \* HAINES INDEX.....5.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.

.MONDAY...  
 \* SKY/WEATHER.....SUNNY. HAZE.  
 \* MAX TEMPERATURE....  
 \* VALLEYS.....81-91.  
 \* MID SLOPE.....75-85.  
 \* 24 HR TREND.....3 DEGREES WARMER.  
 \* MIN HUMIDITY.....  
 \* VALLEYS.....8-16%.  
 \* MID SLOPE.....9-16%.  
 \* 24 HR TREND.....LITTLE CHANGE.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...UPSLOPE 4 TO 8 MPH BECOMING SOUTHWEST AROUND 10  
 MPH WITH GUSTS TO 20 MPH IN THE AFTERNOON.  
 \* RIDGE TOP.....SOUTHWEST WINDS AROUND 10 MPH WITH GUSTS 25 TO  
 30 MPH.  
 \* HAINES INDEX.....5.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.  
 \* MIXING HEIGHT.....17000-18000 FT MSL.  
 \* TRANSPORT WINDS...SOUTH 10 TO 15 MPH.  
 \* VENTILATION.....EXCELLENT.

.MONDAY NIGHT...

\* SKY/WEATHER.....CLEAR. HAZE IN THE EVENING.  
 \* MIN TEMPERATURE....  
 \* VALLEYS.....37-47.  
 \* MID SLOPE.....47-57.  
 \* MAX HUMIDITY.....  
 \* VALLEYS.....78-88%.  
 \* MID SLOPE.....32-42%.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...SOUTHWEST WINDS AROUND 10 MPH WITH GUSTS TO 20  
 MPH IN THE EVENING BECOMING DOWNSLOPE 2 TO 5  
 MPH.  
 \* RIDGE TOP.....SOUTHWEST WINDS 10 TO 15 MPH WITH GUSTS TO 35  
 MPH.  
 \* HAINES INDEX.....5.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.

.TUESDAY...

\* SKY/WEATHER.....SUNNY.  
 \* MAX TEMPERATURE....  
 \* VALLEYS.....79-89.  
 \* MID SLOPE.....73-83.  
 \* MIN HUMIDITY.....  
 \* VALLEYS.....10-16%.  
 \* MID SLOPE.....10-18%.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...UPSLOPE 4 TO 8 MPH BECOMING SOUTHWEST 10 TO 15  
 MPH WITH GUSTS UP TO 30 MPH IN THE AFTERNOON.  
 \* RIDGE TOP.....SOUTHWEST WINDS 10 TO 15 MPH INCREASING TO 15 TO  
 25 MPH IN THE AFTERNOON. GUSTS UP TO 45 MPH.  
 \* HAINES INDEX.....5-6.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.  
 \* MIXING HEIGHT.....17500-18500 FT MSL.  
 \* TRANSPORT WINDS...SOUTHWEST 20 TO 25 MPH.  
 \* VENTILATION.....EXCELLENT.

.EXTENDED...

.TUESDAY NIGHT...CLEAR. LOWS 34-44. SOUTHWEST WINDS 10 TO 15 MPH IN  
 THE EVENING BECOMING DOWNSLOPE 2 TO 5 MPH.  
 .WEDNESDAY THROUGH FRIDAY...CLEAR. HIGHS 78-88. LOWS 28-38.  
 SOUTHWEST WINDS 15 TO 20 MPH.  
 .SATURDAY THROUGH SUNDAY...CLEAR. HIGHS 72-82. LOWS 28-38.

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NVZ459-291545-  
 MINERAL AND SOUTHERN LYON COUNTIES-  
 111 PM PDT SUN AUG 28 2016

.TONIGHT...

\* SKY/WEATHER.....PARTLY CLOUDY THEN BECOMING CLEAR.  
 \* MIN TEMPERATURE....

\* VALLEYS.....42-52.  
 \* MID SLOPE.....50-60.  
 \* 24 HR TREND.....LITTLE CHANGE.  
 \* MAX HUMIDITY.....  
 \* VALLEYS.....55-70%.  
 \* MID SLOPE.....30-45%.  
 \* 24 HR TREND.....2-4% WETTER MID SLOPES...LITTLE CHANGE VALLEYS.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...WEST WINDS AROUND 10 MPH WITH GUSTS TO 20 MPH IN  
 THE EVENING BECOMING DOWNSLOPE 2 TO 5 MPH.  
 \* RIDGE TOP.....SOUTHWEST WINDS AROUND 10 MPH.  
 \* HAINES INDEX.....5.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.

.MONDAY...

\* SKY/WEATHER.....SUNNY.  
 \* MAX TEMPERATURE....  
 \* VALLEYS.....85-95.  
 \* MID SLOPE.....83-91.  
 \* 24 HR TREND.....LITTLE CHANGE.  
 \* MIN HUMIDITY.....  
 \* VALLEYS.....8-13%.  
 \* MID SLOPE.....8-13%.  
 \* 24 HR TREND.....LITTLE CHANGE.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...UPSLOPE 4 TO 8 MPH BECOMING NORTHWEST AROUND 10 MPH  
 IN THE AFTERNOON.  
 \* RIDGE TOP.....SOUTH WINDS AROUND 10 MPH.  
 \* HAINES INDEX.....5.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.  
 \* MIXING HEIGHT.....15500-16500 FT MSL.  
 \* TRANSPORT WINDS...SOUTHWEST AROUND 10 MPH.  
 \* VENTILATION.....VERY GOOD.

.MONDAY NIGHT...

\* SKY/WEATHER.....CLEAR.  
 \* MIN TEMPERATURE....  
 \* VALLEYS.....46-56.  
 \* MID SLOPE.....52-62.  
 \* MAX HUMIDITY.....  
 \* VALLEYS.....52-62%.  
 \* MID SLOPE.....25-35%.  
 \* 20-FOOT WINDS.....  
 \* VALLEYS/SLOPE...NORTHWEST WINDS AROUND 10 MPH WITH GUSTS TO 20  
 MPH IN THE EVENING BECOMING DOWNSLOPE 2 TO 5  
 MPH.  
 \* RIDGE TOP.....WEST WINDS AROUND 10 MPH.  
 \* HAINES INDEX.....5.  
 \* LAL.....1.  
 \* CHC WETTING RAIN...0%.

.TUESDAY...

\* SKY/WEATHER.....SUNNY.  
\* MAX TEMPERATURE....  
\* VALLEYS.....84-94.  
\* MID SLOPE.....82-90.  
\* MIN HUMIDITY.....  
\* VALLEYS.....8-13%.  
\* MID SLOPE.....9-14%.  
\* 20-FOOT WINDS.....  
\* VALLEYS/SLOPE...UPSLOPE 4 TO 8 MPH BECOMING SOUTHWEST 10 TO 15  
MPH WITH GUSTS AROUND 25 MPH IN THE AFTERNOON.  
\* RIDGE TOP.....SOUTHWEST WINDS 10 TO 15 MPH. GUSTS UP TO 25 MPH  
IN THE AFTERNOON.  
\* HAINES INDEX.....5-6.  
\* LAL.....1.  
\* CHC WETTING RAIN...0%.  
\* MIXING HEIGHT.....16500-17500 FT MSL.  
\* TRANSPORT WINDS...SOUTHWEST 20 TO 25 MPH.  
\* VENTILATION.....EXCELLENT.

.EXTENDED...  
.TUESDAY NIGHT...CLEAR. LOWS 44-54. SOUTHWEST WINDS 10 TO 15 MPH IN  
THE EVENING BECOMING DOWNSLOPE 2 TO 5 MPH.  
.WEDNESDAY THROUGH FRIDAY...CLEAR. HIGHS 84-94. LOWS 39-49.  
NORTHWEST WINDS 15 TO 20 MPH.  
.SATURDAY...PARTLY CLOUDY. HIGHS 78-86. LOWS 38-48.  
.SUNDAY...SUNNY. HIGHS 78-86.

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.8 TO 14 DAY OUTLOOK FOR (MON SEP 5 THROUGH SUN SEP 11)  
BELOW NORMAL TEMPERATURES AND NEAR NORMAL PRECIPITATION.

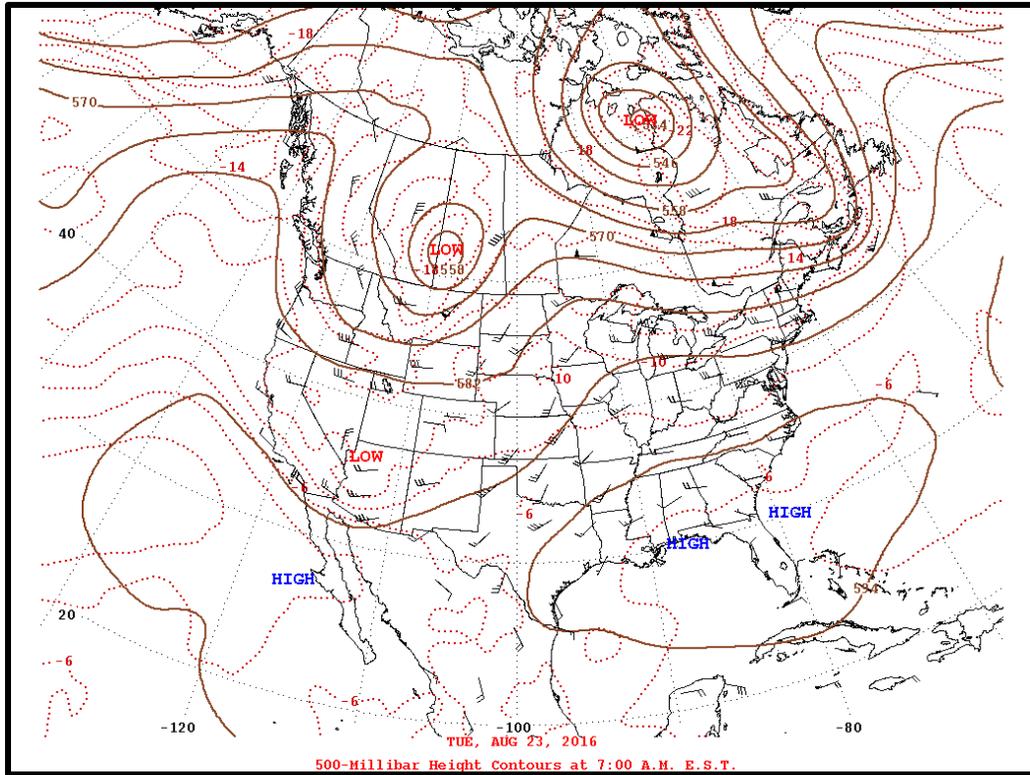
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[HTTP://WEATHER.GOV/RENO](http://weather.gov/reno)

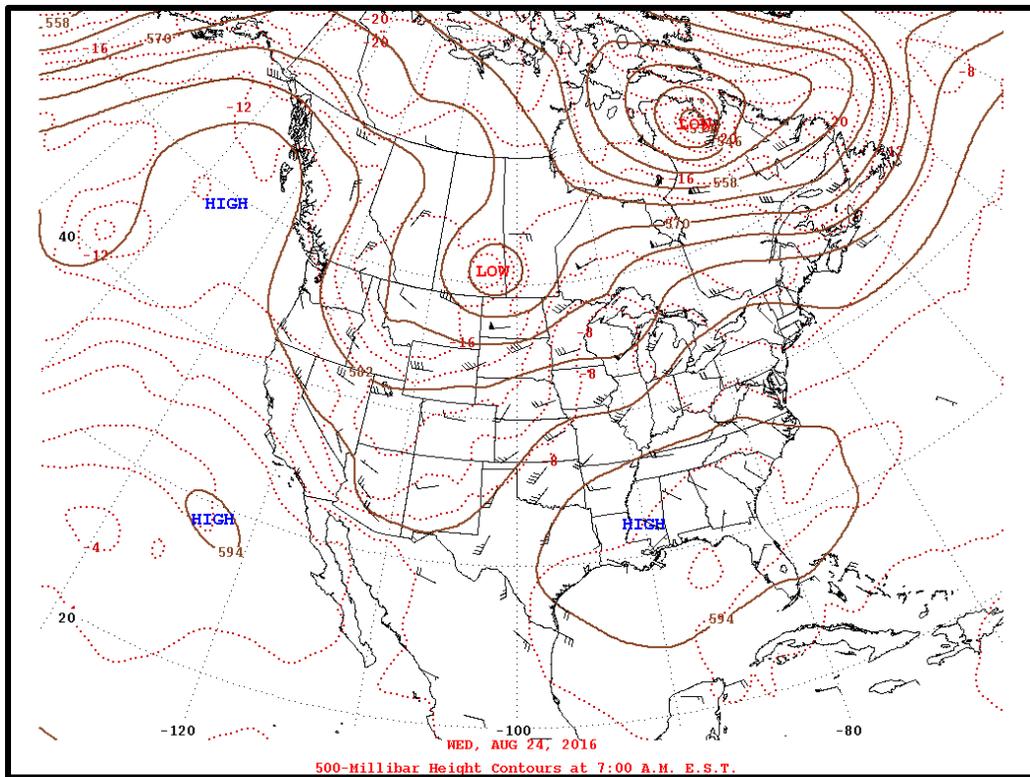
**APPENDIX D**

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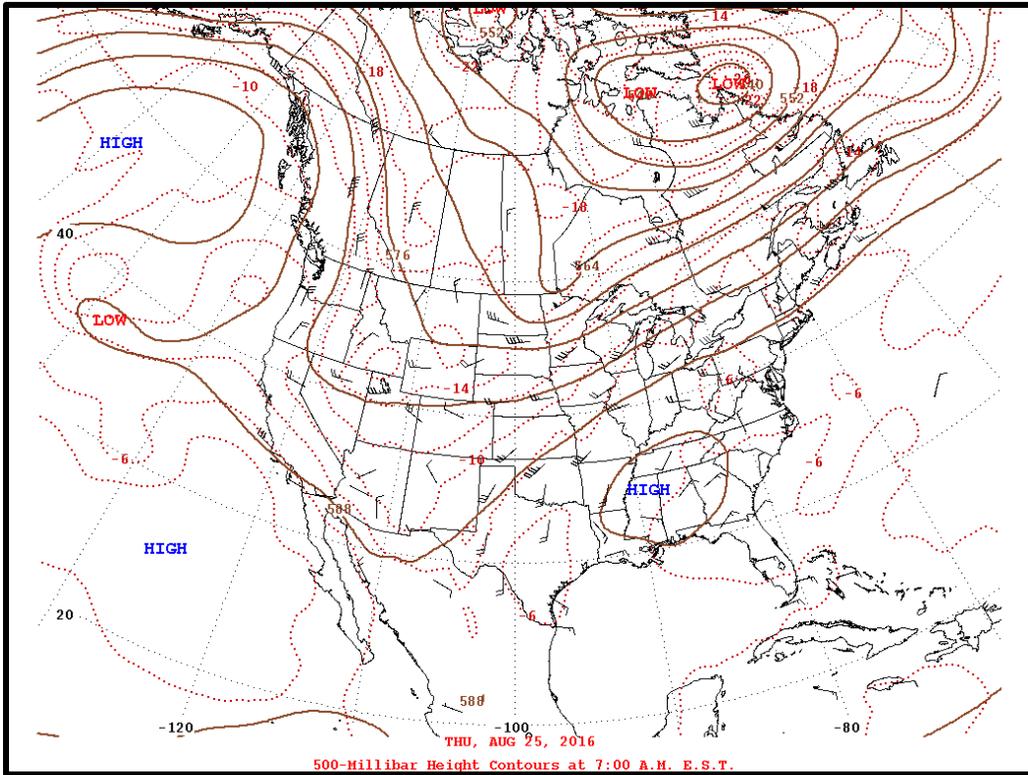
**Surface Weather Maps for the Fallon Area – June 29  
through July 5, 2016**



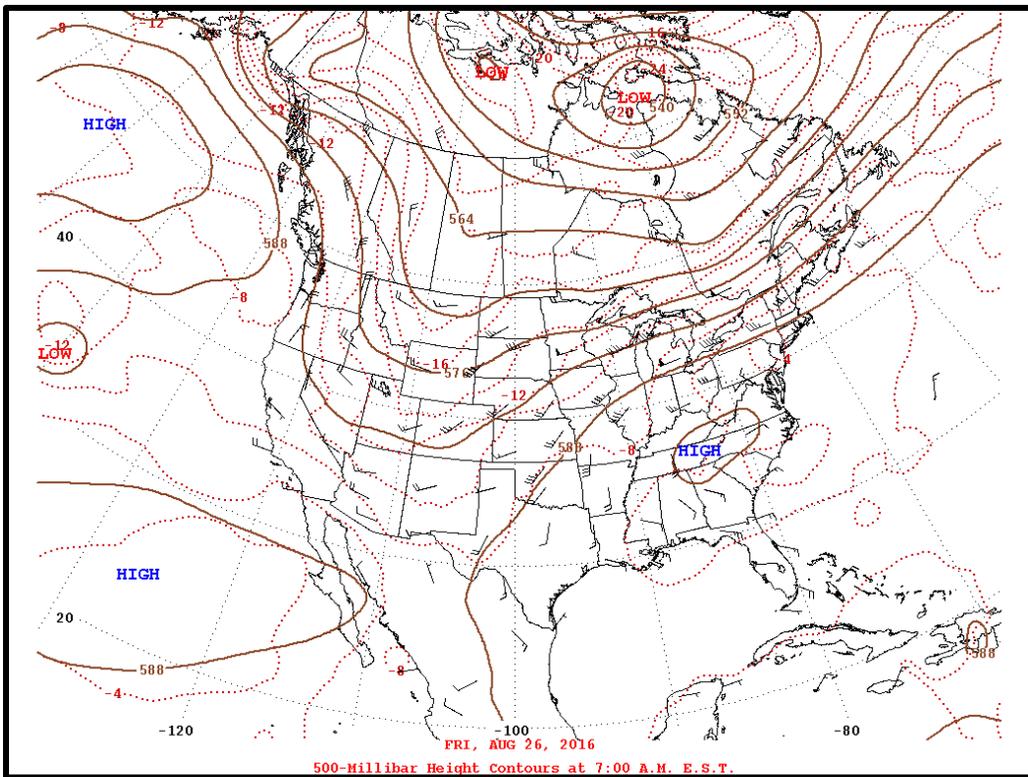
500 mb map for August 23, 2016



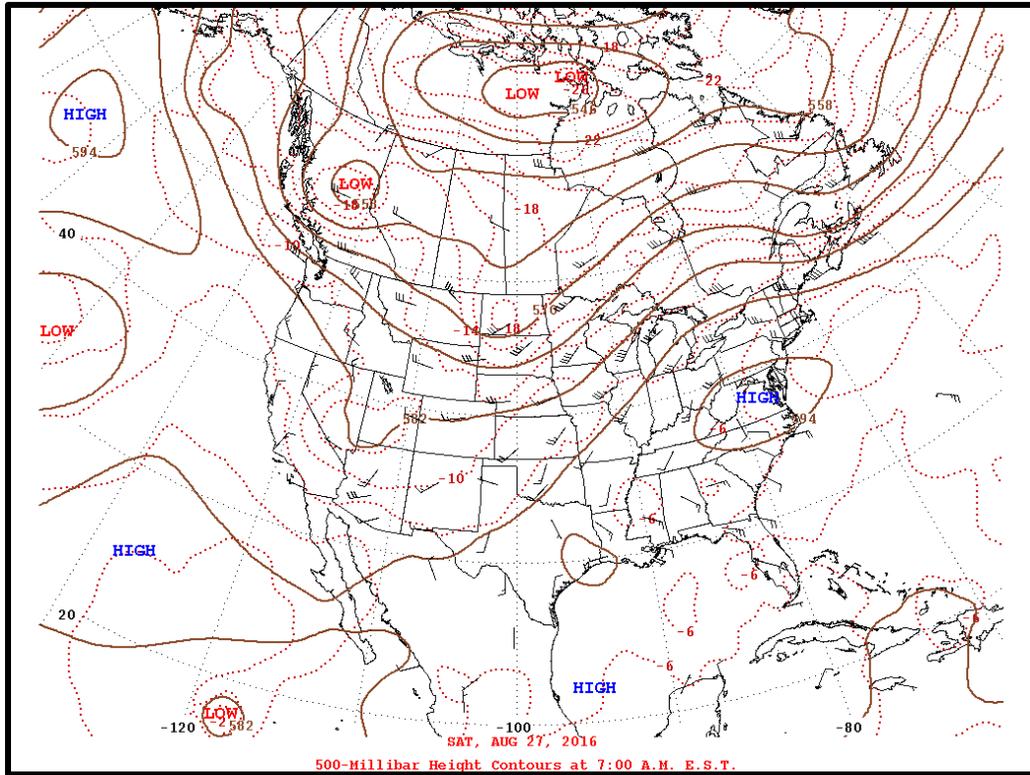
500 mb map for August 24, 2016



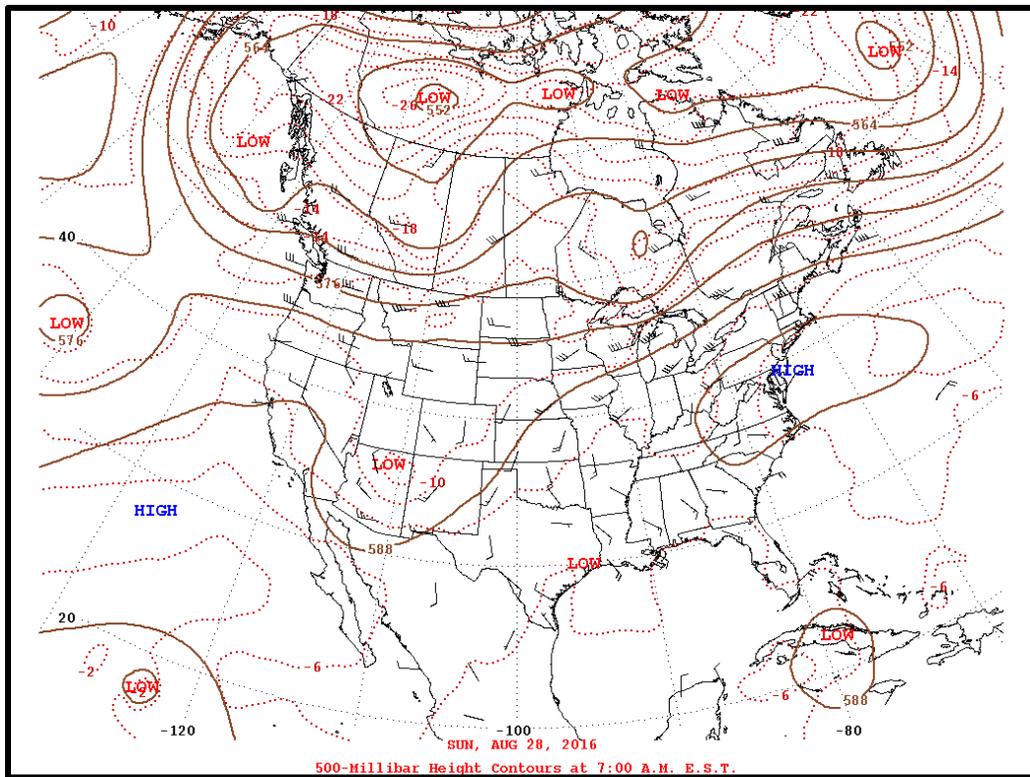
500 mb map for August 25, 2016



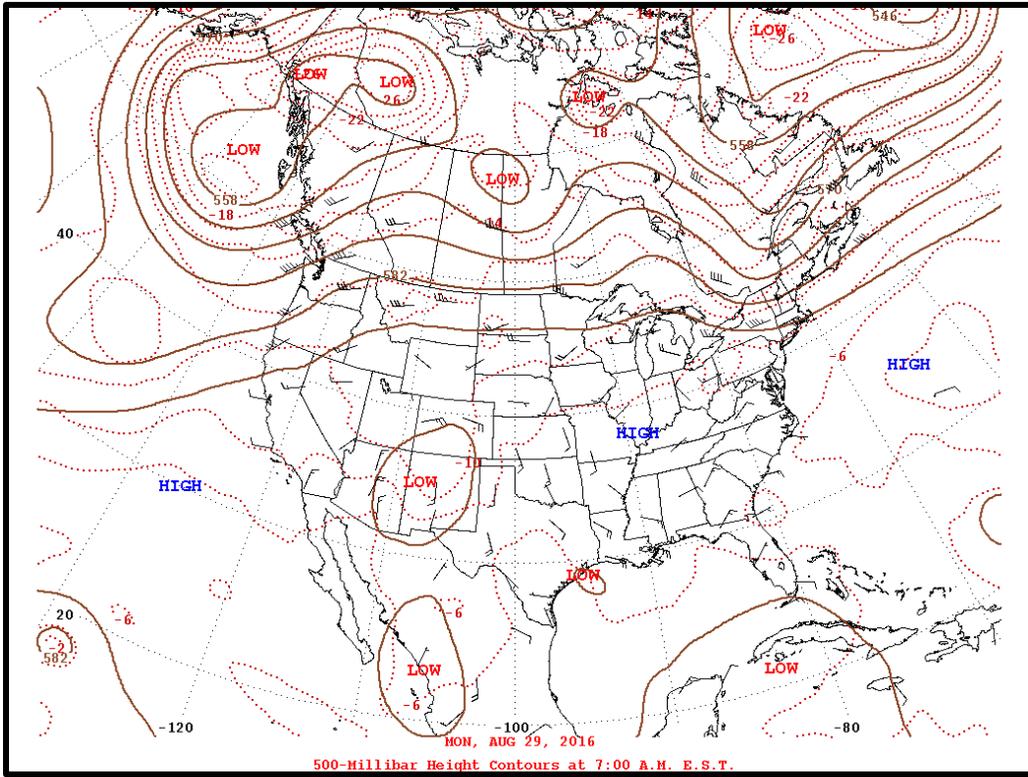
500 mb map for August 26, 2016



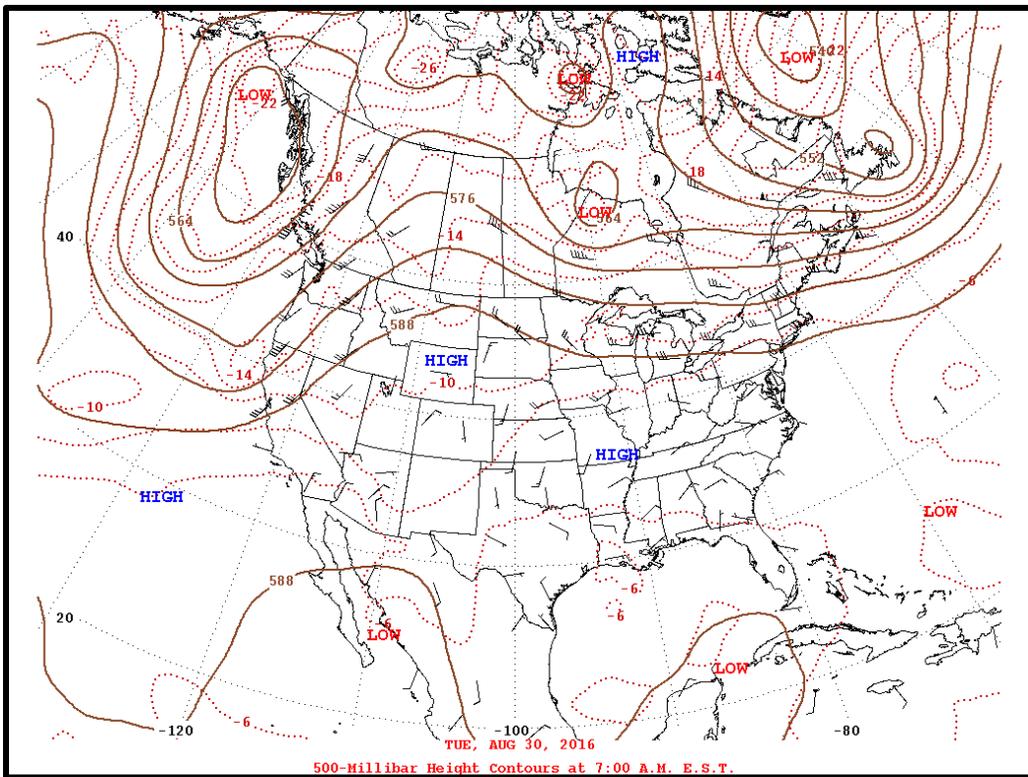
500 mb map for August 27, 2016



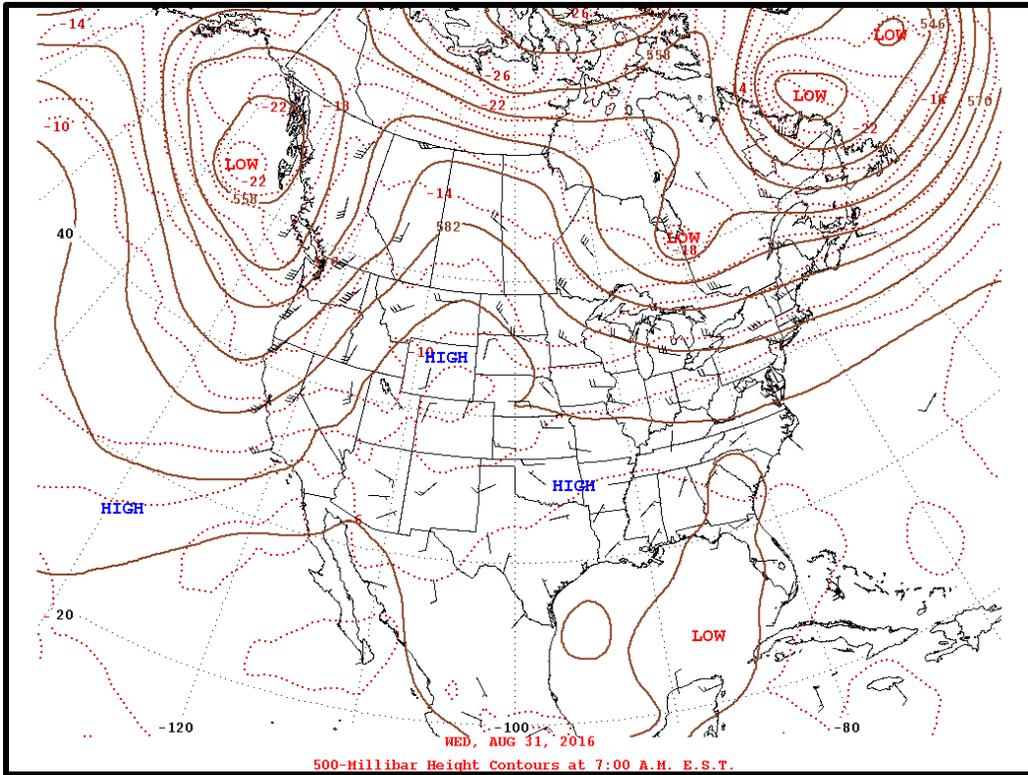
500 mb map for August 28, 2016



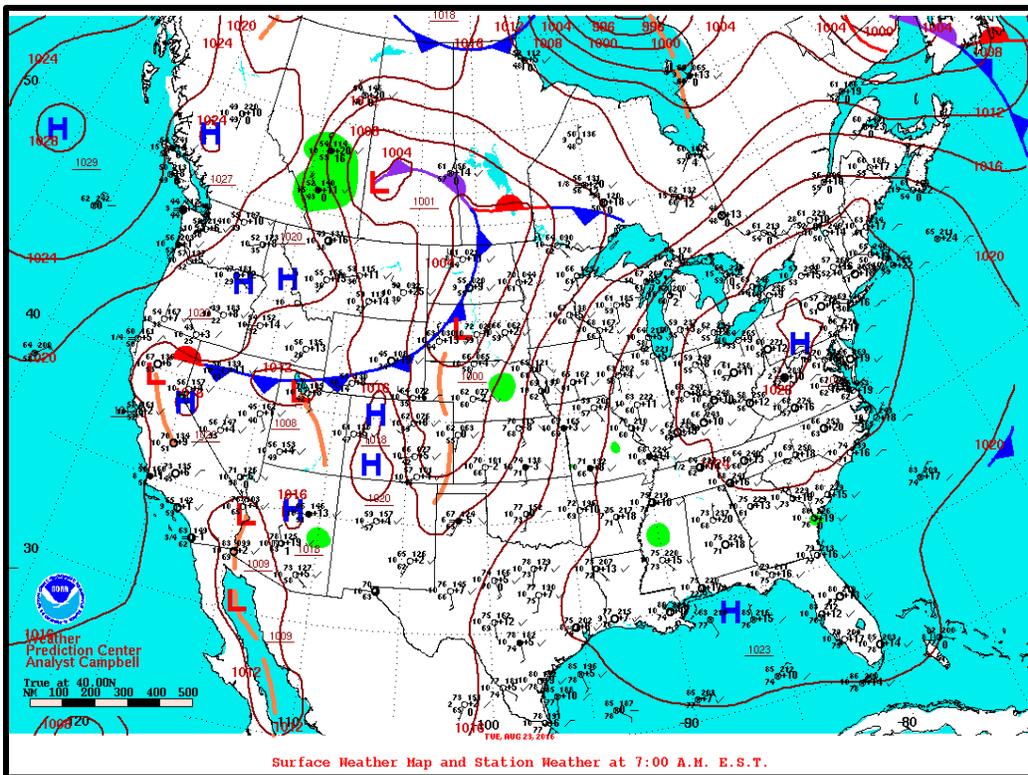
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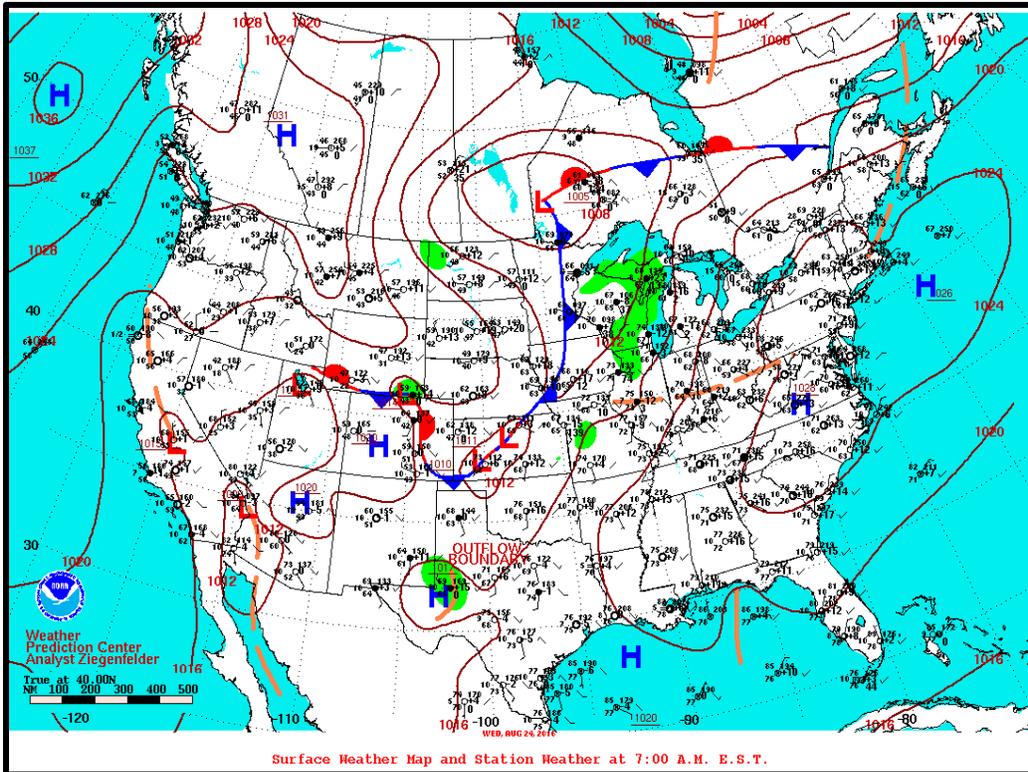
500 mb map for August 30, 2016



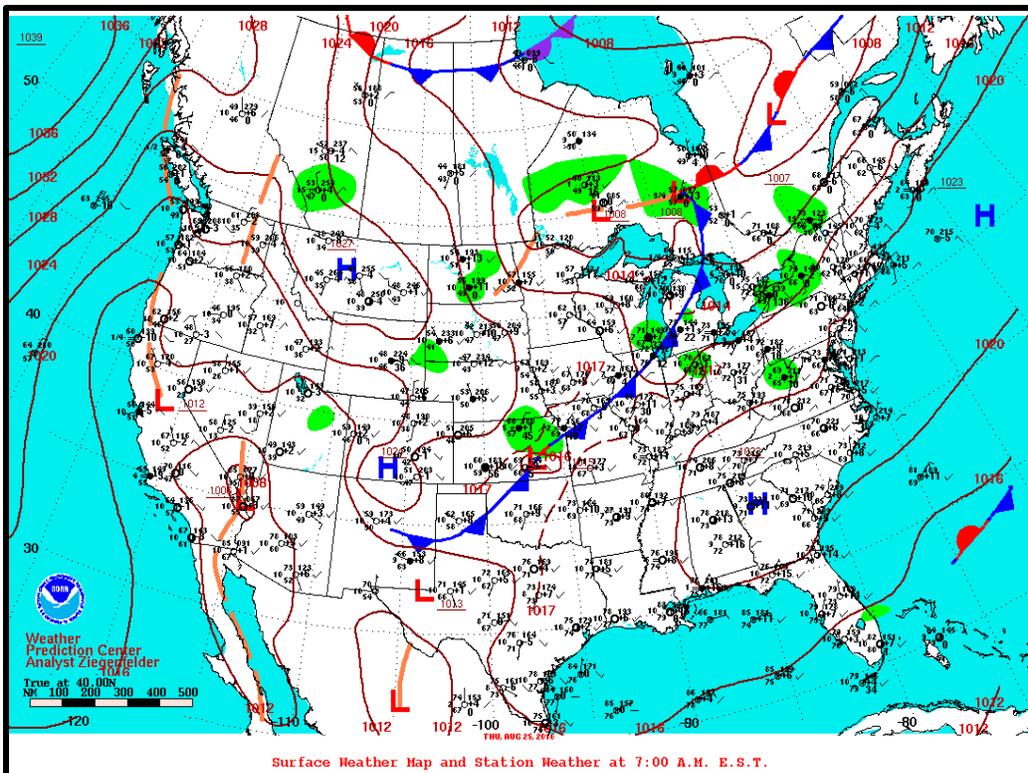
500 mb map for August 31, 2016



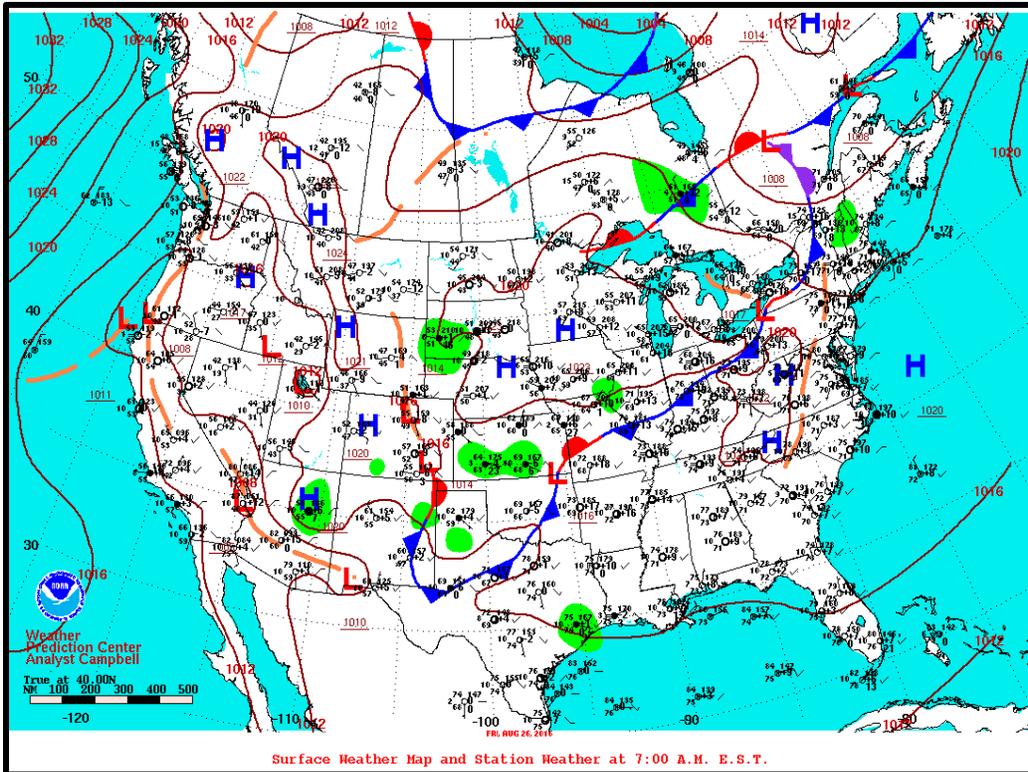
Surface map for August 23, 2016



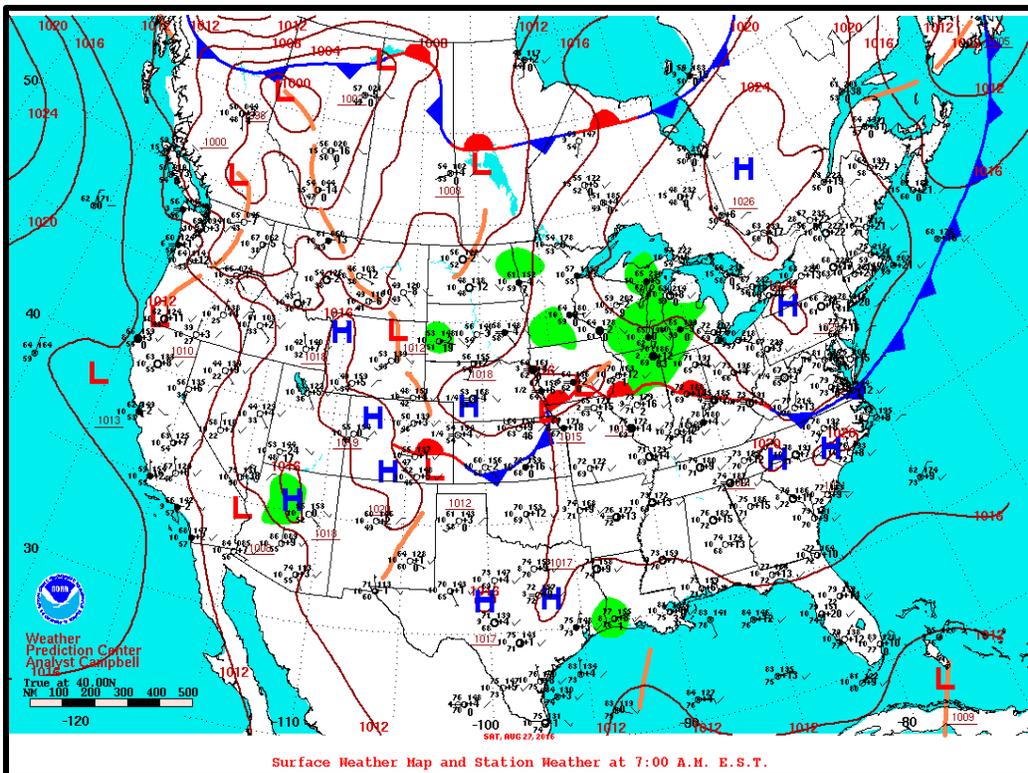
Surface map for August 24, 2016



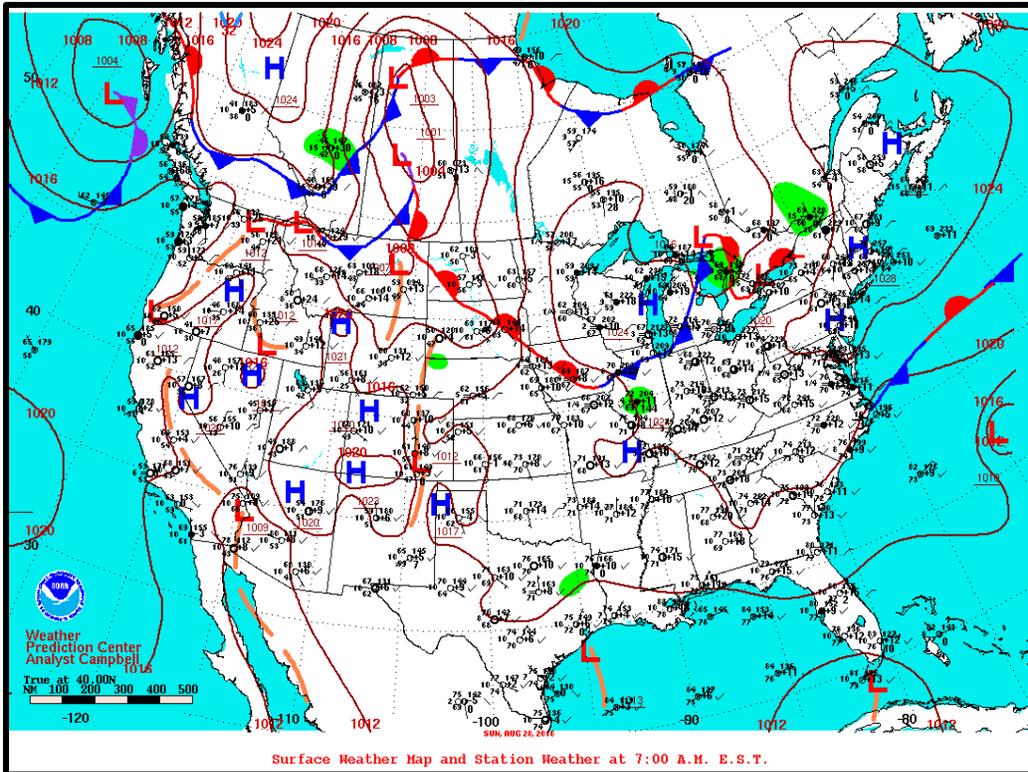
Surface map for August 25, 2016



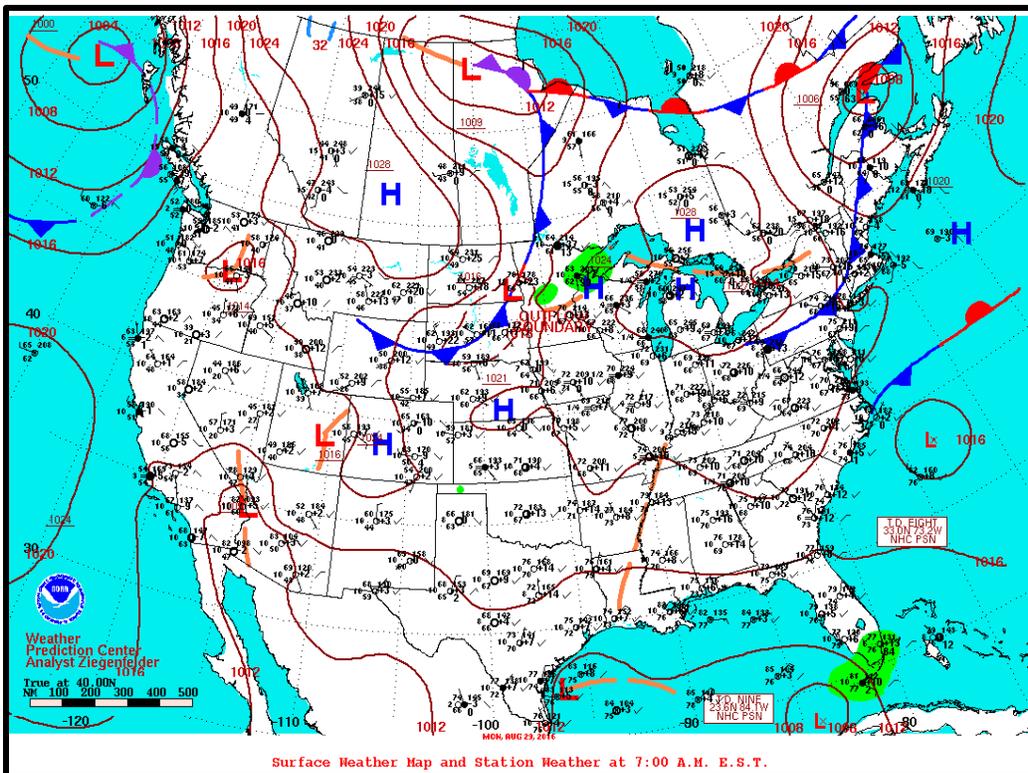
Surface map for August 26, 2016



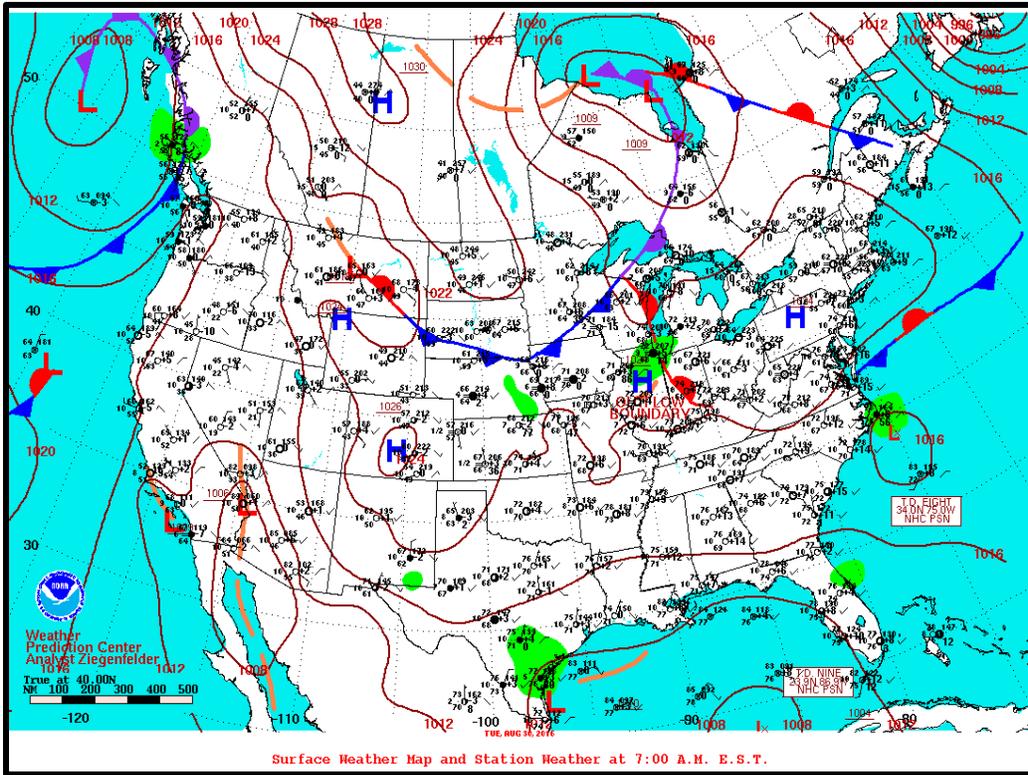
Surface map for August 27, 2016



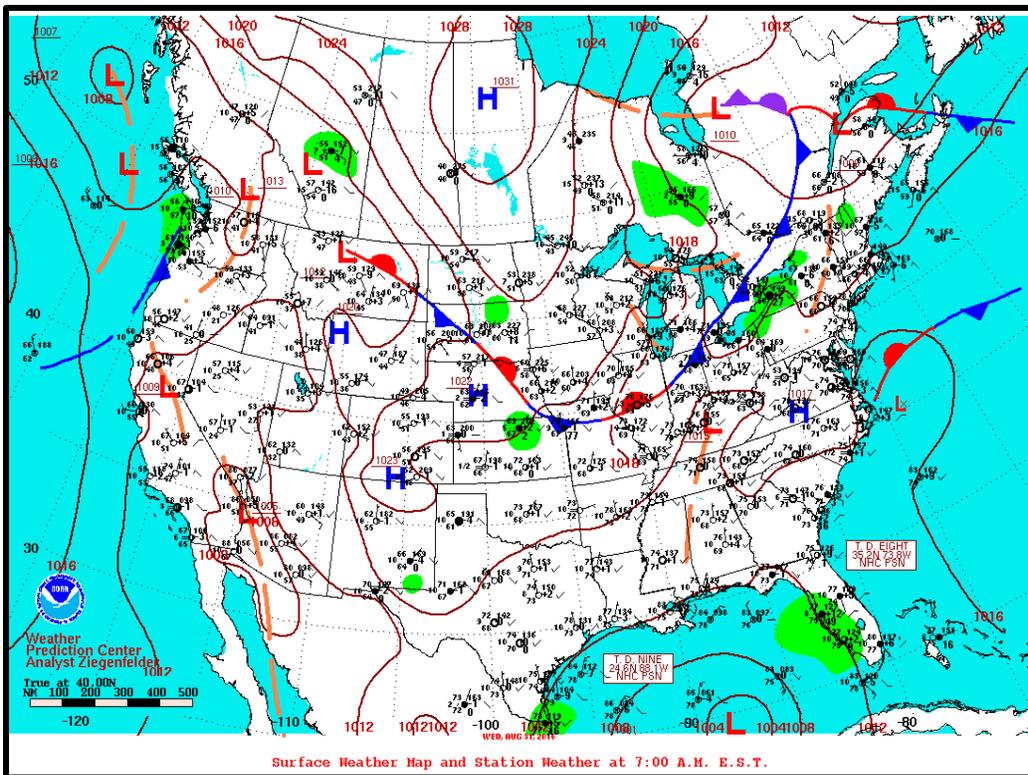
Surface map for August 28, 2016



Surface map for August 29, 2016



Surface map for August 30, 2016



Surface map for August 31, 2016