

WASHOE COUNTY HEALTH DISTRICT

ENHANCING QUALITY OF LIFE

Exceptional Event Demonstration for
September 11 and 14-16, 2022 PM₁₀
Exceedance due to Mosquito Fire

Submitted to U.S. EPA Region 9 on **Date**



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Acronyms and Abbreviations

AGL	Above Ground Level
AQI	Air Quality Index
AQMD	Washoe County Health District - Air Quality Management Division
AQS	Air Quality System
CAA	Clean Air Act
CFR	Code of Federal Regulations
CO	Carbon Monoxide
EE	Exceptional Event
EER	Exceptional Events Rule
EPA	U.S. Environmental Protection Agency
°F	Degrees Fahrenheit
FCCS	Fuel Characteristic Classification System
HA 87	Hydrographic Area 87
HMS	Hazardous Mapping System
HYSPLIT	Hybrid Single-Particle Lagrangian Integrated Trajectory
Lbs	Pounds
µg/m ³	Micrograms per cubic meter
MPH	Miles Per Hour
NAAQS	National Ambient Air Quality Standards
NAM	North American Mesoscale
NSPS	New Source Performance Standards
NOAA	National Oceanic and Atmospheric Administration
NO	Nitric Oxide
NO ₂	Nitrogen Dioxide
NOx	Nitrogen Oxides
NOy	Reactive Nitrogen Compounds
NWS	National Weather Service
O ₃	Ozone
PG&E	Pacific Gas and Electric
PM	Particulate Matter
PM _{2.5}	Particulate Matter less than or equal to 2.5 microns in aerodynamic diameter
PM ₁₀	Particulate Matter less than or equal to 10 microns in aerodynamic diameter
ppm	Parts Per Million
PST	Pacific Standard Time
R ²	Coefficient of Determination
SO ₂	Sulfur Dioxide
TSP	Total Suspended Particles

1.0 Introduction

1.1 Purpose

The analysis in this report demonstrates that the exceedances of the primary and secondary 24-hour PM₁₀ National Ambient Air Quality Standard (NAAQS) recorded on September 11, and 14-16 of 2022 at the Toll air monitoring site, on September 14-16 of 2022 at the Reno4 air monitoring site, and on September 14 of 2022 at the Sparks air monitoring site were caused by the Mosquito wildfire. Pursuant to the Exceptional Event (EE) requirements under the Clean Air Act (CAA), the data may be excluded from regulatory decisions for PM₁₀ NAAQS. Washoe County Health District, Air Quality Management Division (AQMD) is requesting to exclude all PM₁₀ data from the Toll (AQS ID: 32-031-0025-81102-2), Reno4 (AQS ID: 32-031-0031-81102-2), and Sparks (AQS ID: 32-031-1005-81102-4) PM₁₀ primary monitors on the previously mentioned days. Exclusion of the data caused by this exceptional event will have a regulatory impact on the approval of the 2nd 10-Year Maintenance Plan for PM₁₀.

1.2 Exceptional Events Rule Procedure

On October 3, 2016, the Environmental Protection Agency (EPA) finalized revisions to the “Treatment of Data Influenced by Exceptional Events”, regulations that govern the exclusion of event-influenced air quality data from certain regulatory decisions under the CAA Section 319(b). This rule is known as the Exceptional Events Rule (EER). The EER contains definitions, procedural requirements, requirements for air agency demonstrations, and criteria for EPA approval for the exclusion of air quality data from regulatory decisions. The EER states that the EPA has the authority to exclude air quality monitoring data from regulatory determinations related to exceedances or violations of the NAAQS and avoid designating an area as nonattainment, redesignating an area as nonattainment, or reclassifying an existing nonattainment area to a higher classification if a State adequately demonstrates that an exceptional event has caused an exceedance or violation of a NAAQS. The CAA includes four requirements that, collectively, define an exceptional event:

1. The event affected air quality,
2. The event was not reasonably controllable or preventable,
3. The event was caused by human activity that is unlikely to recur at a particular location or was a natural event,
4. There exists a clear causal relationship between the specific event and the monitored exceedance.

EPA regulations in the Code of Federal Regulations (CFR) - 40 CFR 50.14(c)(3)(iv) states that exceptional events demonstrations must address and include the following elements:

1. A narrative conceptual model; (See **Section 2** of this document)
2. A demonstration that the event affected air quality in such a way that there exists a clear causal relationship between the specific event and the monitored exceedance; (See **Section 4** of this document)
3. Analyses comparing the claimed event influenced concentrations at the monitoring site; (See **Section 4** of this document)
4. A demonstration that the event was both not reasonably controllable and not reasonably preventable; (See **Section 3** of this document)

5. A demonstration that the event was a human activity unlikely to recur at a particular location or was a natural event. (See **Section 5** of this document)

1.3 Public Comment Process

This demonstration was available for public comment from October 26 to November 26, 2023 at the AQMD website ([OurCleanAir.com](https://www.aqmd.com/our-clean-air)). A hardcopy of the plan was also available at the AQMD office. See Appendix A for AQMD's Public Comment Plan.

1.4 Agency Contacts

For information or questions regarding this Exceptional Events Demonstration, please contact the following individuals of the AQMD.

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2.0 Conceptual Model

2.1 Regional Description

Washoe County is located in the northwest portion of Nevada. It is bounded by California, Oregon, and the Nevada counties of Humboldt, Pershing, Storey, Churchill, Lyon, and Carson City (Figure 2-1). The Truckee Meadows is approximately 200 square miles in size and situated in the southern portion of Washoe County. It is geographically identified as Hydrographic Area 87 (HA 87) as defined by the State of Nevada, Division of Water Resources. Most of Washoe County's population lives in and around the Truckee Meadows.

The Truckee Meadows sits at an elevation of 4,400 feet above sea level and is surrounded by mountain ranges. To the west, the Sierra Nevada rises to elevations of 9,000 to 11,000 feet. Hills to the east reach 6,000 to 8,000 feet. The Truckee River, flowing from the Sierra Nevada eastward, drains into Pyramid Lake to the northeast of the Truckee Meadows.

Climate

Average annual wind speed measured at the Reno-Tahoe International Airport is 6.4 miles per hour (mph). January is the calmest month (4.5 mph) with April being the windiest (8.3 mph). Wintertime (November-January) averages 4.9 mph and summertime (June-August) averages 7.2 mph.

Most of Reno's precipitation falls from November through March in the form of rain and snow. Reno receives an average of 7.35 inches of precipitation per calendar year (1991-2020 climate normals). Table 2-1 lists temperature and precipitation normals as measured at the Reno-Tahoe International Airport.

Figure 2-1
Washoe County, Nevada

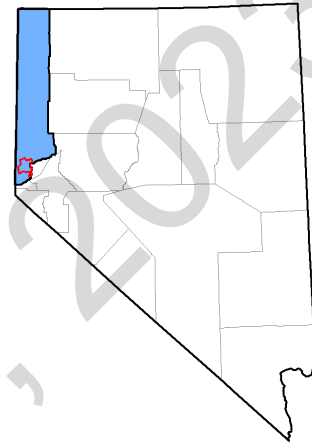


Table 2-1: Monthly Normal Temperature and Rainfall (1991-2020)

Month	Temperature (°F)			Precipitation (inches)
	Maximum	Minimum	Mean	Mean
January	47.7	26.1	36.9	1.25
February	52.1	29.0	40.6	1.03
March	59.2	34.0	46.6	0.80
April	64.7	38.5	51.6	0.44
May	74.1	46.6	60.3	0.55
June	84.6	53.8	69.2	0.41
July	93.9	60.4	77.2	0.20
August	92.1	58.1	75.1	0.24
September	83.8	50.3	67.0	0.21
October	70.4	39.7	55.1	0.50
November	56.7	31.0	43.8	0.62
December	46.7	25.7	36.2	1.1

Maximum temperatures of 90 °F or above normally occur between July 3 and August 21. Maximum temperatures typically peak at 94 °F between July 22 and July 29.

Demographics

The 2020 population of Washoe County was 486,492. Approximately two-thirds of Washoe County’s residents live in the Truckee Meadows, which includes the cities of Reno and Sparks. Anthropogenic activities such as transportation, manufacturing, freight distribution, and residential wood use are also concentrated in the Truckee Meadows.

Seasons

Washoe County experiences two distinct air pollution seasons - wintertime particulate matter (PM) and summertime ozone (O₃). Wildfire smoke throughout the year, especially during the summer months, can dramatically increase summertime PM and O₃.

Wintertime temperature inversions combined with light winds can contribute to elevated levels of Particulate Matter less than or equal to 2.5 microns in aerodynamic diameter (PM_{2.5}), Particulate Matter less than or equal to 10 microns in aerodynamic diameter (PM₁₀), Nitrogen Dioxide (NO₂), and Carbon Monoxide (CO). Inversions are common in mountain valleys such as the Truckee Meadows. Air pollution episodes persist until stronger winds scour the cold air out of the valley and break the temperature inversion.

Northern Nevada receives an abundant amount of sunshine and solar radiation during the summer months. Mobile sources (i.e., cars and trucks) emit O₃ precursors and their activity increases during the summer. Ozone concentrations are typically highest between May and September, especially during the months of June, July, and August.

Strong winds can occur at any time of year. Two-minute gusts over 40 mph are not uncommon. These winds lower the gaseous pollutant (O₃, CO, NO₂, and SO₂) concentrations but typically increase PM levels, especially PM₁₀. Hourly PM₁₀ levels can reach more than 500 micrograms per cubic meter (µg/m³) for several hours.

Attainment Status

All areas of Washoe County currently attain or are unclassifiable for all National Ambient Air Quality Standards (NAAQS). However, portions of Washoe County had previously been designated nonattainment for the following NAAQS: 1) 1971 Total Suspended Particles (TSP) (24-hour and Annual); 2) CO (8-hour); 3) 1979 O₃ (1-hour); and 4) 1987 PM₁₀ (24-hour and Annual). Some pollutants and standards, such as 1-hour O₃ and TSP, have been revoked and no longer apply. For the other pollutants, CO and PM₁₀, the HA 87 planning area was redesignated to maintenance after the standard was met. Since the 1970's, AQMD has implemented control strategies to target mobile sources, wood-burning devices, and dust control to achieve attainment with the NAAQS.

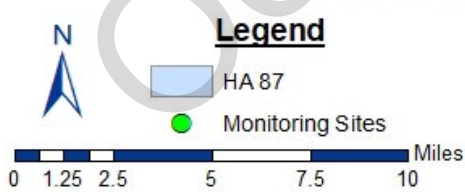
2.2 Overview of Monitoring Network

In 2022, the Washoe County Health District, Air Quality Management Division (AQMD) operated seven ambient air monitoring sites in Washoe County (Figure 2-2). The blue boundary delineates HA 87 as defined by the State of Nevada, Division of Water Resources. Table 2-2 lists the parameters monitored in 2022, sorted by site.

Table 2-2: List of Monitoring Sites and Pollutants Monitored in 2022

Site	O ₃	CO	Trace CO	Trace NO	NO ₂	NO _x	Trace NOy	Trace SO ₂	PM ₁₀	PM _{2.5}	PM _{coarse}	PM _{2.5} Speciation	Meteorology
Incline	✓												
Lemmon Valley	✓												
Reno4	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
South Reno	✓												✓
Sparks	✓	✓							✓	✓	✓		✓
Spanish Springs	✓								✓	✓	✓		
Toll	✓								✓	✓	✓		✓

Figure 2-2: Washoe County Health District - AQMD Ambient Air Monitoring Sites



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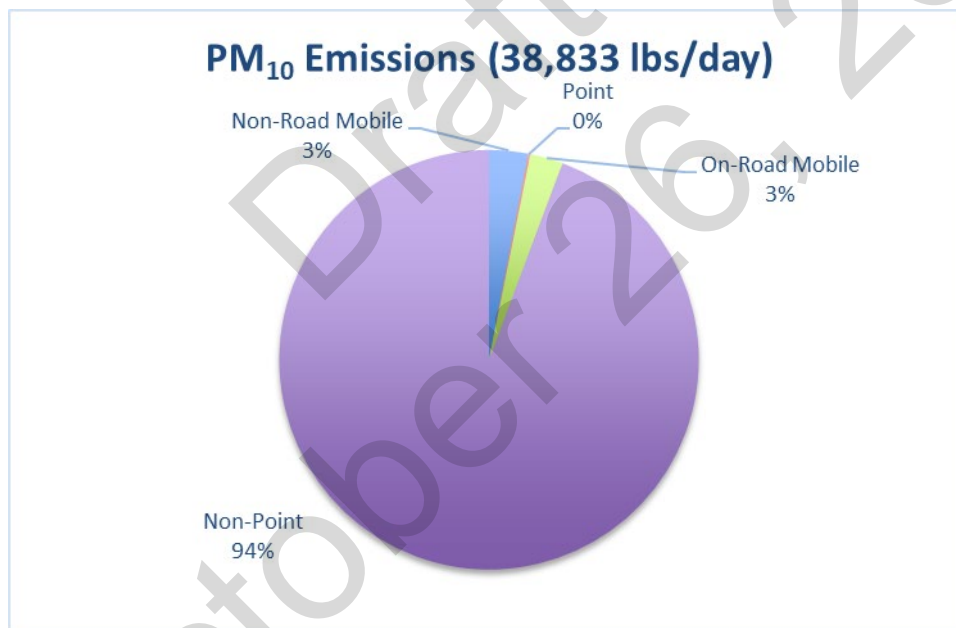


The AQMD’s ambient air monitoring network meets the minimum monitoring requirements for all criteria pollutants pursuant to Title 40, Part 58 of the Code of Federal Regulations (CFR), Appendix D. Washoe County’s monitoring network is reviewed annually pursuant to 40 CFR 58.10 to ensure the network meets the monitoring objectives defined in 40 CFR 58, Appendix D. Data was collected and quality assured in accordance with 40 CFR 58 and submitted to the Air Quality System (AQS). Additionally, 2022 data was certified on April 13, 2023. (See Appendix C).

2.3 Characteristics of Non-event PM₁₀ Concentrations

Without exceptional events, ambient PM₁₀ concentrations within Washoe County are under the limit of the PM₁₀ NAAQS standard. This is because the PM₁₀ emissions that Washoe County produces have been regulated through different policy instruments such as a dust control program, New Source Performance Standards (NSPS) for woodburning devices, and street sanding/sweeping regulations. Figure 2-3 shows that Washoe County produces 38,833 lbs/day of PM₁₀ emissions as per the 2020 Periodic Emissions Inventory. This includes emissions from wildfires within the Washoe County limits. Emissions from purely anthropogenic sources make up about 31,786 lbs/day.

Figure 2-3: PM₁₀ Emissions by Source Category



Based on historic, non-event PM₁₀ monitoring data for the previous six years, below are the characteristics of PM₁₀ levels throughout the year in the Truckee Meadows.

1. October through March: Ambient PM₁₀ concentrations are relatively high during the colder months because some Washoe County residents utilize wood-burning devices for heat. Additionally, PM₁₀ concentrations can increase after snowstorms due to local street sanding and sweeping. The Truckee Meadows region also struggles with inversion layers in which cold air gets trapped at ground level, causing poor atmospheric mixing. This inhibits PM emissions from leaving the air basin and can

cause higher concentrations of PM_{10} . Despite this, the region rarely experiences 24-hour PM_{10} averages over $100 \mu\text{g}/\text{m}^3$ during these times.

2. April through June: Ambient PM_{10} concentrations during this period are usually the lowest of the year. With higher temperatures, there is less residential wood-burning. Additionally, soil generally hasn't been dried by high temperatures such as what could be seen at the end of summertime. Wind speeds are higher in the spring which helps with air mixing and vacating any PM_{10} buildup from the region.
3. July through September: Ambient PM_{10} concentrations are the highest during this time period. This coincides with the wildfire season in the western United States. Although wildfire season is sometimes described as June-August, changes in climate in the western United States has caused wildfire smoke impacts to be more commonly felt in September rather than June. The Washoe County area has been impacted by wildfire events during these months for nine out of the last ten years. The main source of anthropogenic PM_{10} emissions during this time comes from fugitive dust that has been dried after months of high temperatures.

The wildfire events that have caused exceedances have occurred in the July through September period. For the purpose of this demonstration, it is worthwhile to evaluate the diurnal pattern of PM_{10} concentrations during this time period. Figures 2-4 through 2-6 below shows the 2016-2020 PM_{10} diurnal pattern for non-event days at the Toll, Reno4, and Sparks monitors with the 5th, 50th, and 95th percentile included. Throughout the day, PM_{10} concentrations generally rise and peak between the hours of 5:00 PST and 11:00 PST.

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Figure 2-4: 2016-2020 Wildfire Season PM₁₀ Diurnal Pattern at Toll

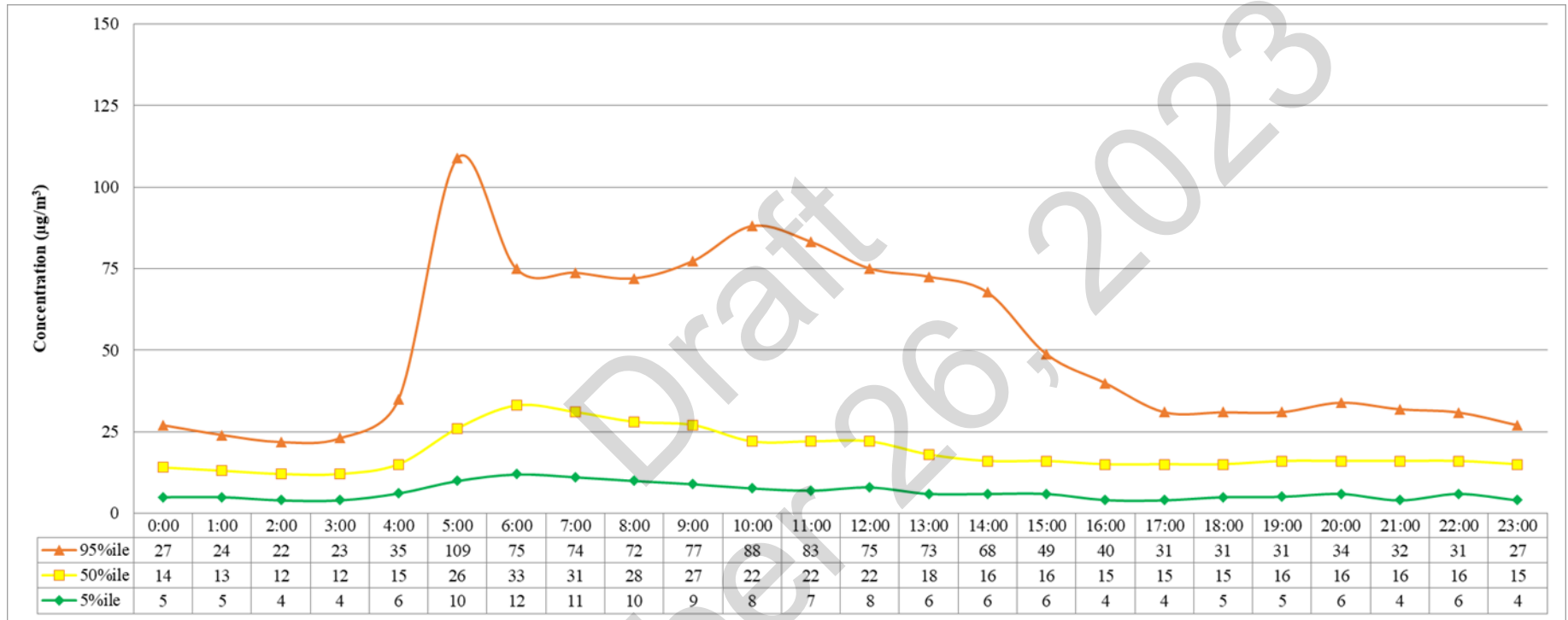


Figure 2-5: 2016-2020 Wildfire Season PM₁₀ Diurnal Pattern at Reno4

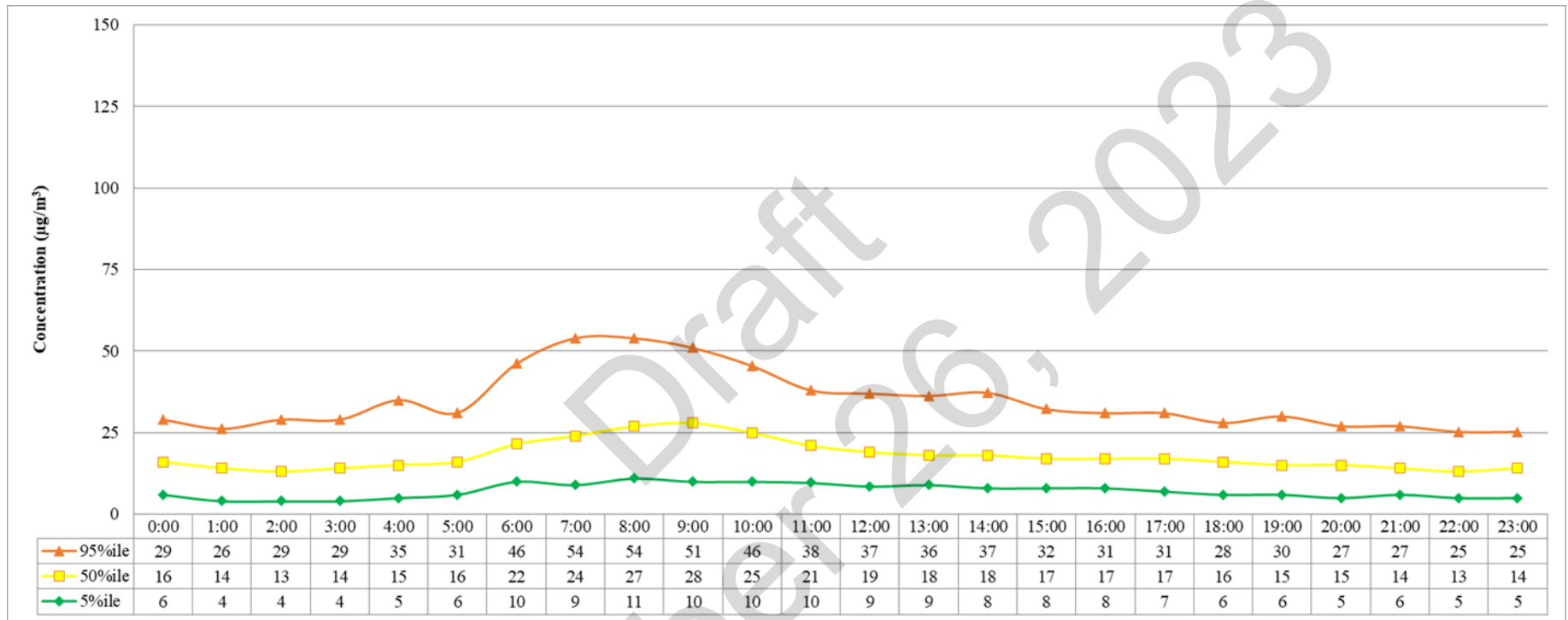
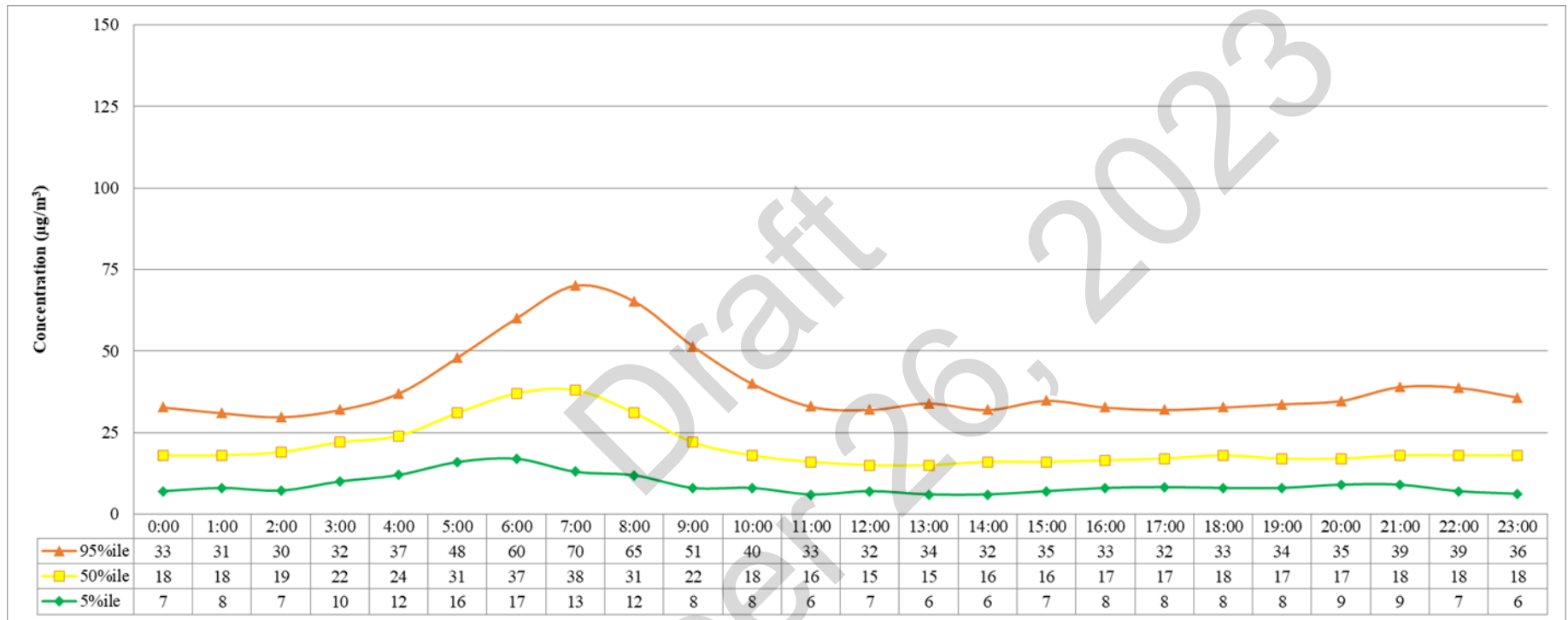


Figure 2-6: 2016-2020 Wildfire Season PM₁₀ Diurnal Pattern at Sparks



2.4 Description of Fire that caused PM₁₀ Exceedances

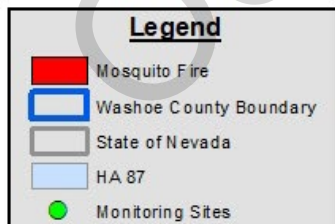
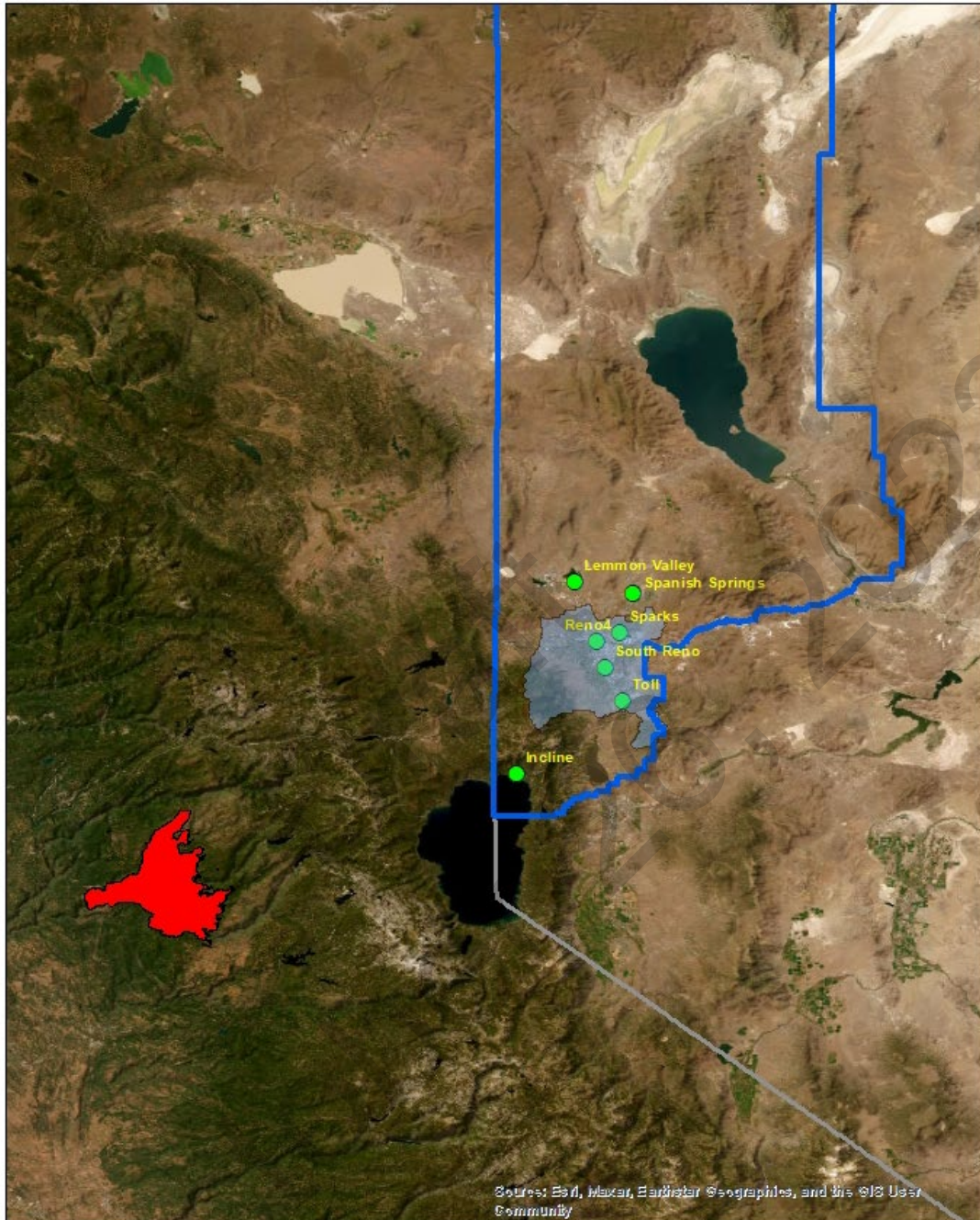
Mosquito Fire

The Mosquito Fire started on September 6, 2022 in the Tahoe National Forest in Placer County, California, approximately 60 miles southwest of the Truckee Meadows region. The cause of the fire is still under investigation although allegations have been made that the fire was caused by power transmission infrastructure. The fire grew quickly with over 35,000 acres burned in the first five days of the fire. Fire crews fought the fire until it was announced as fully contained on October 22, 2022. In total, the Mosquito Fire burned 76,788 acres with a perimeter illustrated in Figure 2-7.

An important factor in the start of the fire was dry wildfire fuels. The fire took place in an area that was considered to be either Severe or Extreme Drought based on the U.S. Drought Monitor. Figure 2-8 shows what the U.S. Drought Monitor was on September 13, 2022 and illustrates how dry the wildfire fuels were at that time.

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Figure 2-7: The Mosquito Fire in Relation to Washoe County



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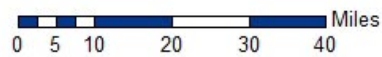
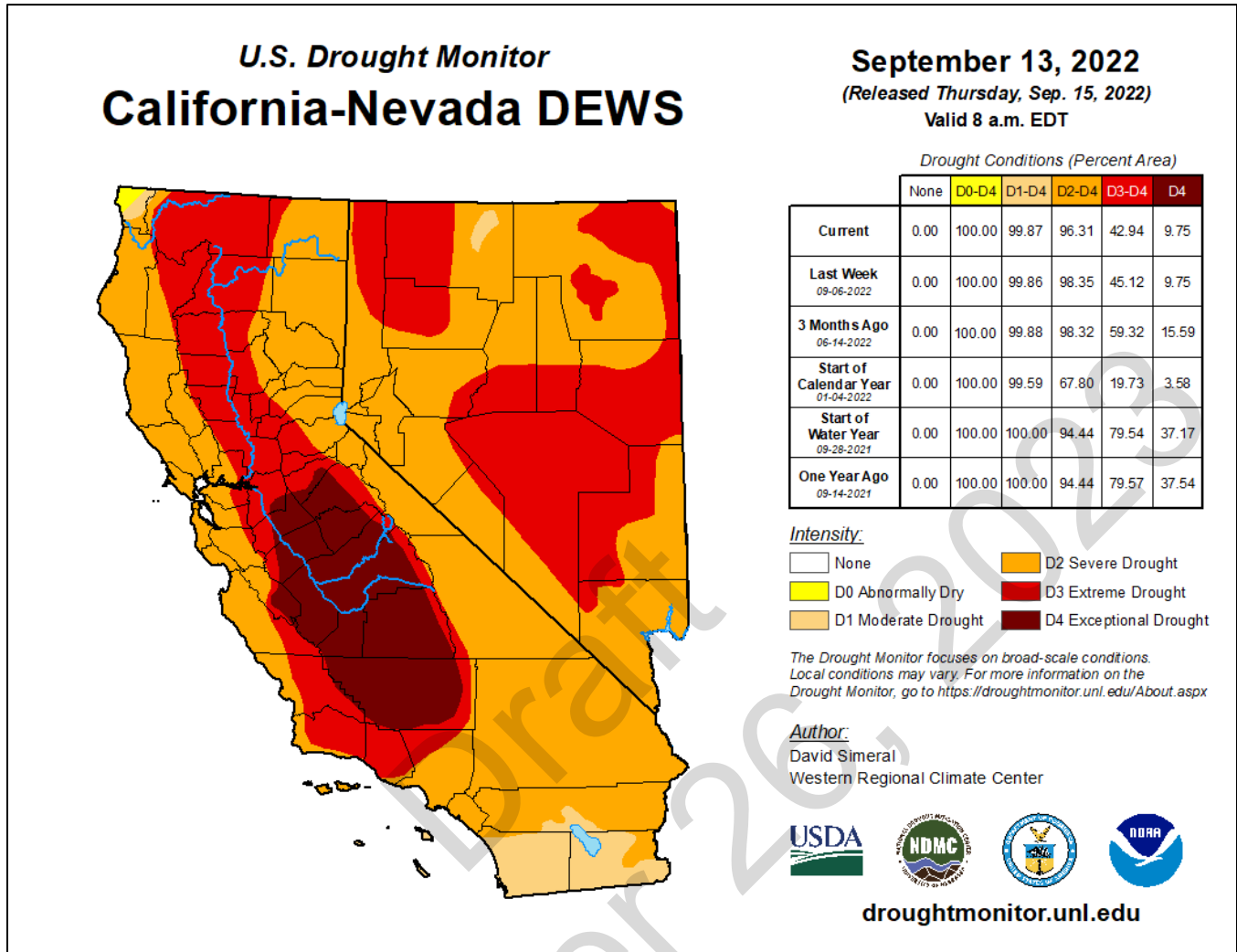


Figure 2-8: The Drought Conditions Near the Time of the Mosquito Fire



2.5 PM₁₀ Air Quality Impacts from the Mosquito Fire

2.5.1 Data Requested to be Excluded

As was mentioned in Section 1.1 of this document, the purpose of this demonstration is to request exclusion of air quality data that was elevated due to exceptional events. Table 2-3 below shows the data that is requested to be excluded as part of this exceptional events demonstration and the corresponding 24-hour PM₁₀ NAAQS averages. AQMD is requesting exclusion of all hourly PM₁₀ data points on the days of the exceedances from 0000 PST through 2300 PST. For a complete list of each data point to be excluded, see Appendix D of this document.

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Table 2-3: PM₁₀ Data Requested to be Excluded

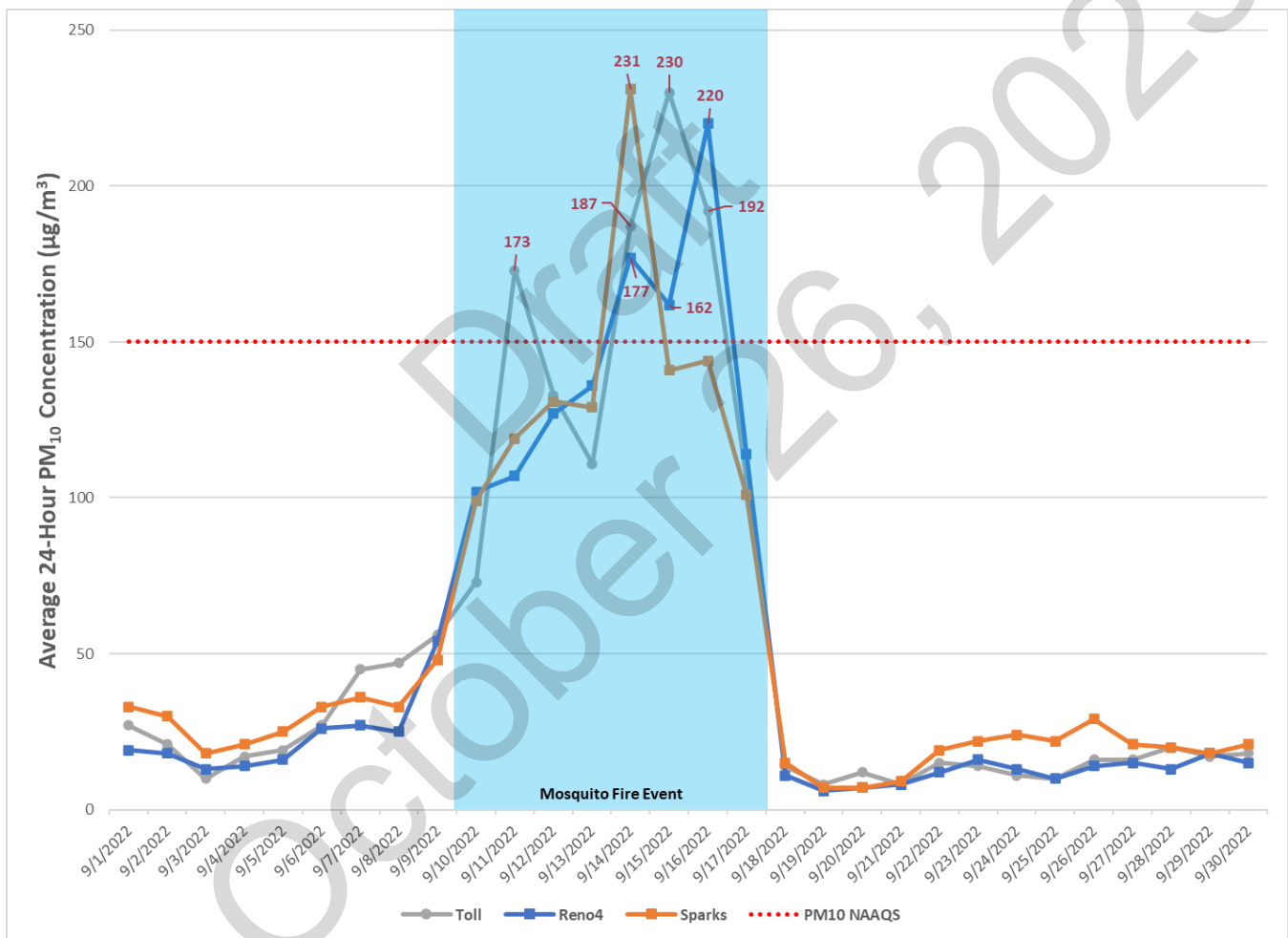
Monitoring Site (AQS ID)	9/11/2022	9/14/2022	9/15/2022	9/16/2022
Toll (AQS ID: 32-031-0025-81102-2)	173 µg/m ³	187 µg/m ³	230 µg/m ³	192 µg/m ³
Reno4 (AQS ID: 32-031-0031-81102-2)	-	177 µg/m ³	162 µg/m ³	220 µg/m ³
Sparks (AQS ID: 32-031-1005-81102-4)	-	231 µg/m ³	-	-

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2.5.2 Narrative of Air Quality Impacts

In the middle of September of 2022, wildfire smoke was transported into the Truckee Meadows from the Mosquito Fire which eventually led to various PM₁₀ exceedances at the Toll, Reno4, and Sparks air monitoring stations. On September 8, 24-hour PM₁₀ averages were as low as 47, 25, and 33 µg/m³ at Toll, Reno4, and Sparks respectively. Concentrations steadily rose until an exceedance at Toll on September 11. As the wind patterns changed, some of the smoke vacated the Truckee Meadows and dropped the PM₁₀ concentrations back below the NAAQS for a few days. Weather patterns shifted again and brought large quantities of wildfire smoke into the Truckee Meadows resulting in degraded air quality for approximately three days and numerous exceedances. An overview of 24-hour average concentrations for PM₁₀ for the month of September 2022 is shown in Figure 2-9. The days of the exceedances are denoted by the red data points between September 11 and September 16, 2022.

Figure 2-9: 24-hour PM₁₀ Concentrations in September 2022



The National Weather Service Office in Reno, Nevada provides at least two daily Area Forecast Discussions that summarize the short and long-term weather forecast for the area. It also provides a synopsis of current observations as well as weather events such as smoke and haze. Below are excerpts from Area Forecast Discussions issued on the days of the exceedances. These excerpts confirm that the previously mentioned sequence of events is accurate.

“Degraded air quality persists across the Tahoe Basin and Sierra Front with area sensors reporting unhealthy to hazardous air quality due to yesterday’s smoke influx from the Mosquito wildfire. While minor improvement is possible by late morning due to low level mixing, smoke modeling depicts another swath of smoke moving in once again across the Tahoe Basin and Sierra Front late this afternoon and evening which could worsen air quality and reduce surface visibility to around 1-3 miles. Overall, not a good time to be outdoors. For the latest air quality in your location, please visit fire.airnow.gov.”

Excerpt from NWS-Reno Area Forecast Discussion
(306 AM PDT Sun Sep 11 2022)

“Area sensors are currently reporting hazardous air quality along the I-80 corridor downwind of the Mosquito wildfire extending through Truckee into Reno/Sparks/North Valleys. From a weather perspective, there is unfortunately no good news in terms of smoke transport in the short term as we will continue to see southwesterly flow in the afternoon which will provide our familiar mid to late afternoon influx of dense smoke across portions of the Tahoe Basin and into the Truckee Meadows. Latest HRRR smoke modeling continues to show another smoke push this afternoon, with perhaps more widespread coverage extending to near Pyramid Lake with drainage flows seeping through Lyon and Mineral counties.”

Excerpt from NWS-Reno Area Forecast Discussion
(322 AM PDT Wed Sep 14 2022)

“In terms of wildfire smoke, the same pattern will hold as we've seen over the last several days where some improvement will be in place mid-morning into early afternoon before our southwest flow transports denser smoke across the Tahoe Basin and into the greater Reno-Sparks-Carson-Carson Valley areas during the afternoon. Expected continued impacts to visibility and air quality during the afternoon. For the latest air quality information continue to visit: fire.airnow.gov or you can also refer to your local Air Quality Management Division.”

Excerpt from NWS Reno Area Forecast Discussion
(231 AM PDT Thu Sep 15 2022)

“Well, we still have to talk about smoke from the Mosquito Fire as it continues to bring significant air quality degradation to a large part of the region. Plan on similar conditions today as southwest flow remains in place, with the plume pushing more to the north

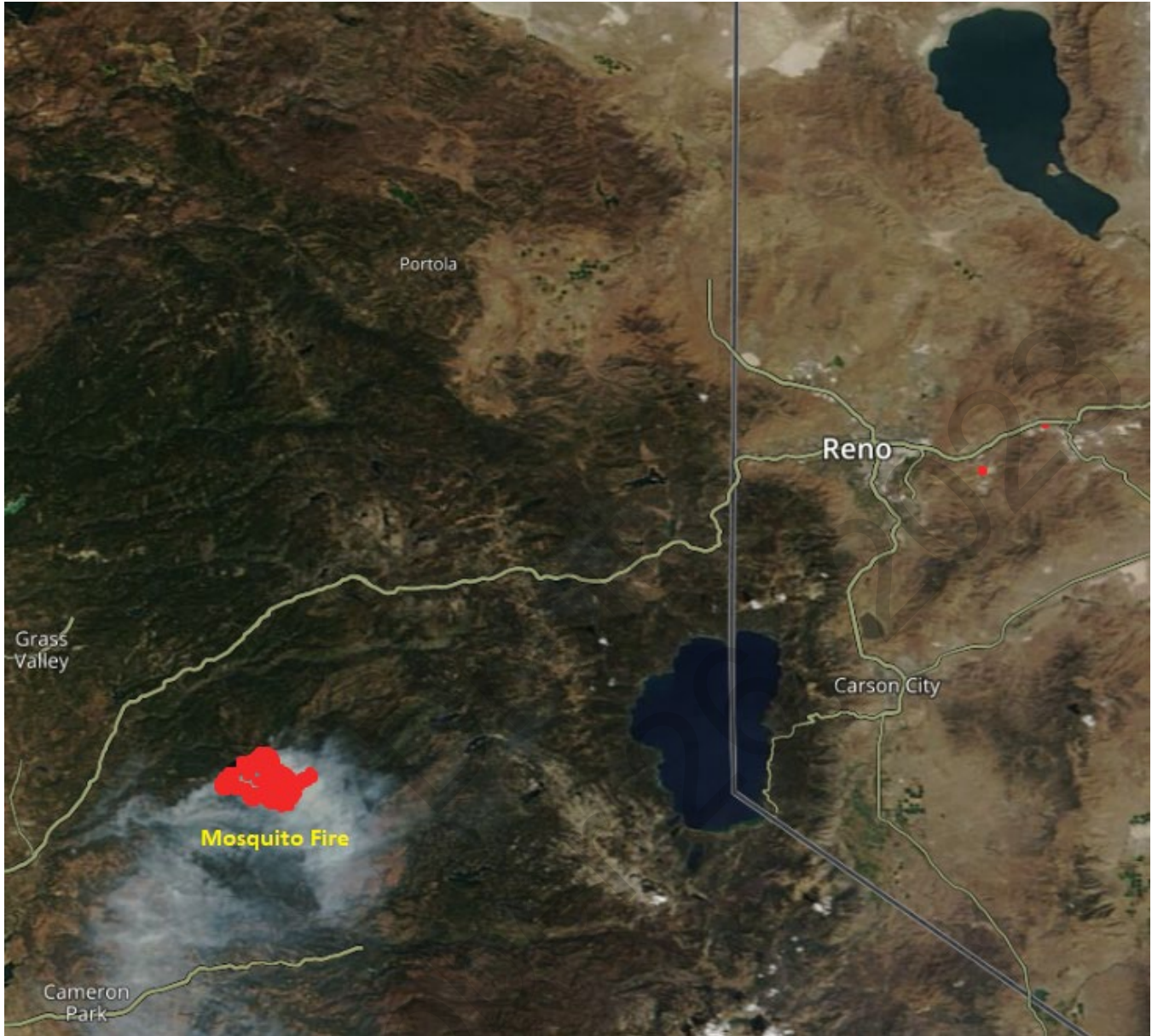
*Saturday as southerly flow deepens ahead of an incoming trough.
The good news is that changes are on the way for this weekend
into the early part of next week.*

Excerpt from NWS Reno Area Forecast Discussion
(247 AM PDT Fri Sept 16 2022)

Satellite imagery also confirms the sequence of events of the exceedances. As can be seen in Figure 2-10 below, smoke from the Mosquito fire had not entered HA 87 as of September 8, 2022. As wind patterns shifted, smoke from the fire moved into HA 87 causing numerous exceedances between September 11-16, 2022. This is seen in Figures 2-11 through 2-14 below. The wind then shifted again, causing most of the smoke to vacate HA 87 on September 17, 2022. This is illustrated in Figure 2-15. The maps shown in Figures 2-16 through 2-19 are daily weather maps that were issued by the National Weather Service around the time of the exceedances that provide extra evidence in support of the aforementioned sequence of events.

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Figure 2-10: Satellite Imagery from September 8, 2022



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Figure 2-11: Satellite Imagery from September 11, 2022

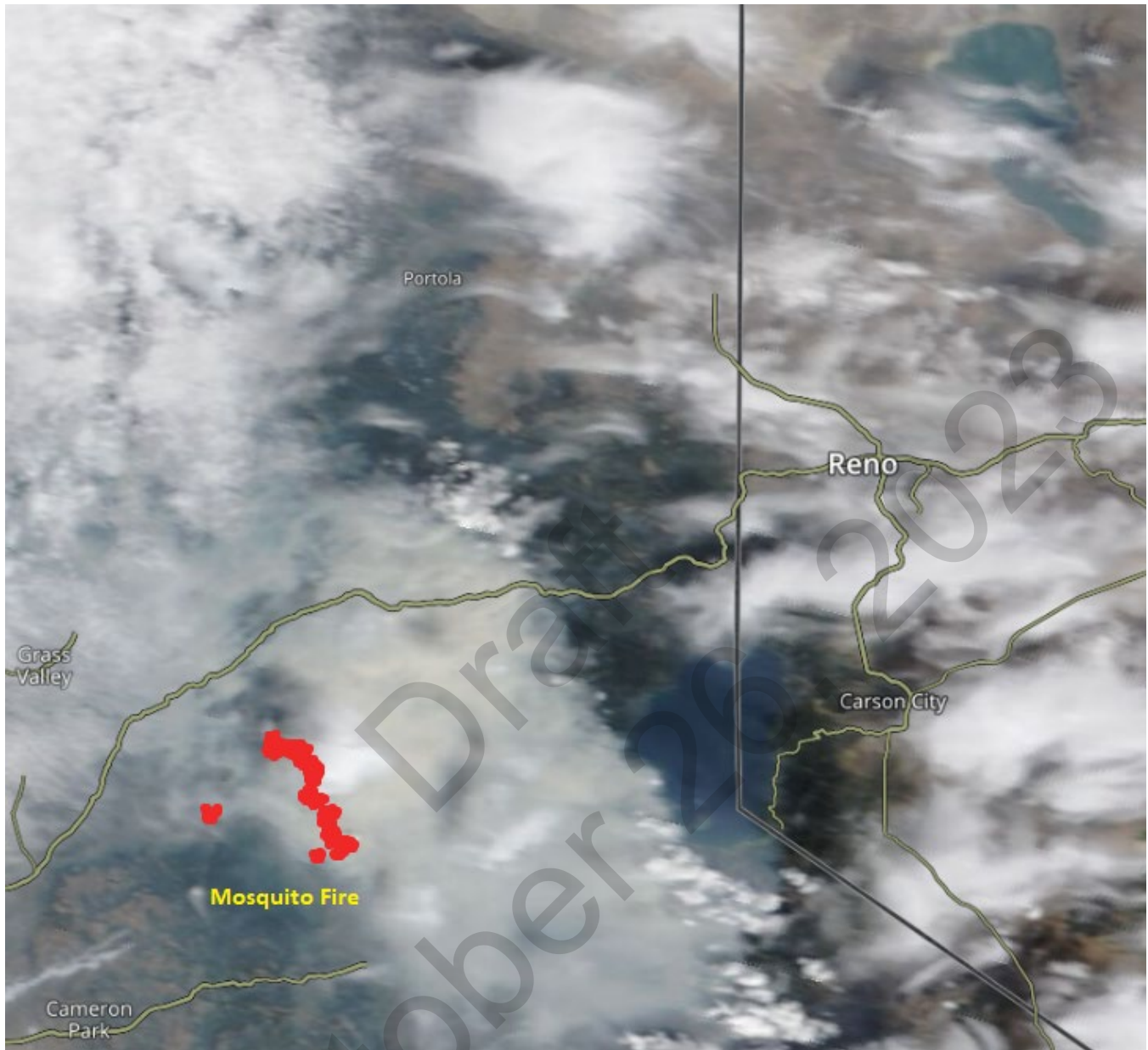


Figure 2-12: Satellite Imagery from September 14, 2022

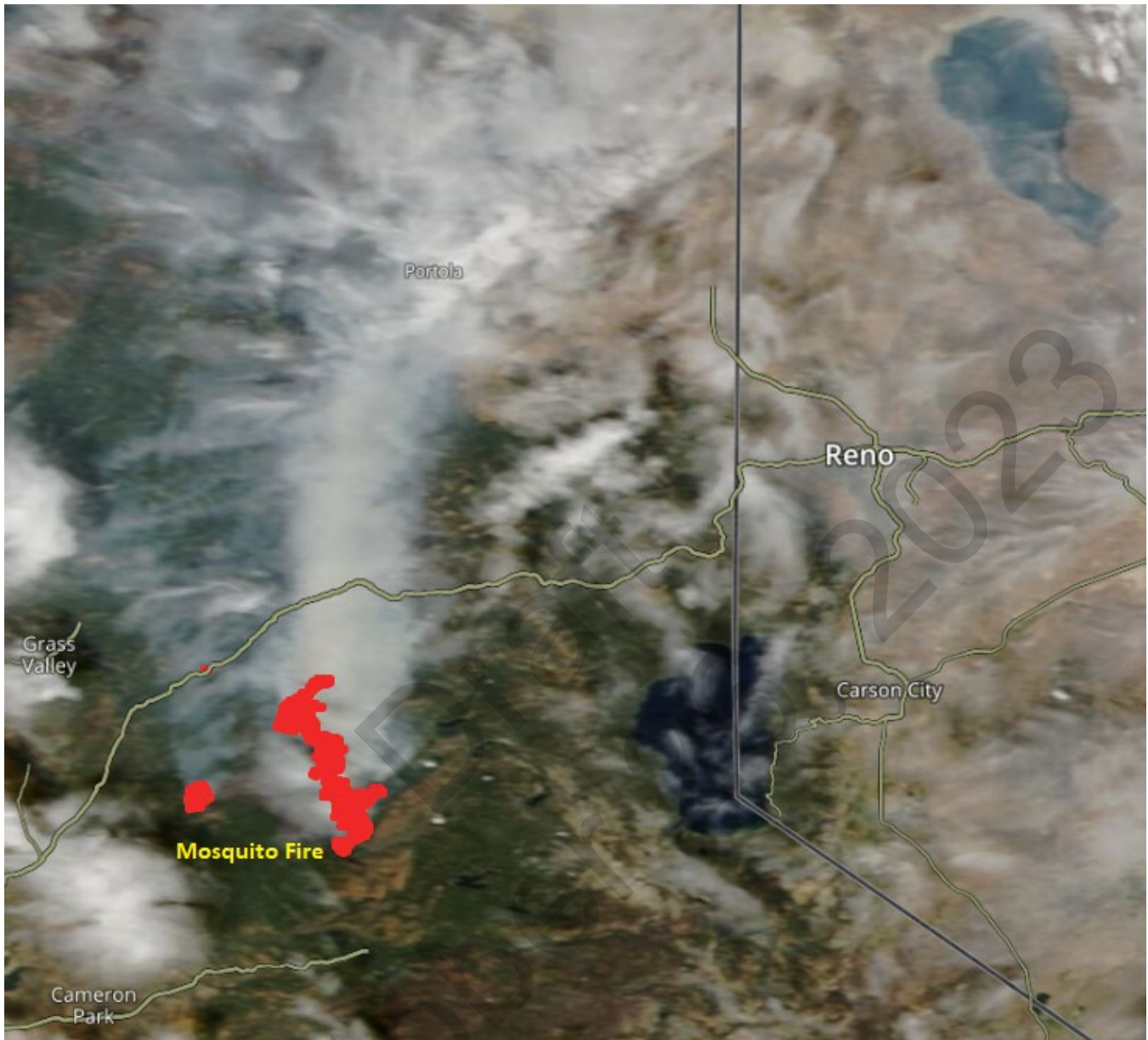


Figure 2-13: Satellite Imagery from September 15, 2022

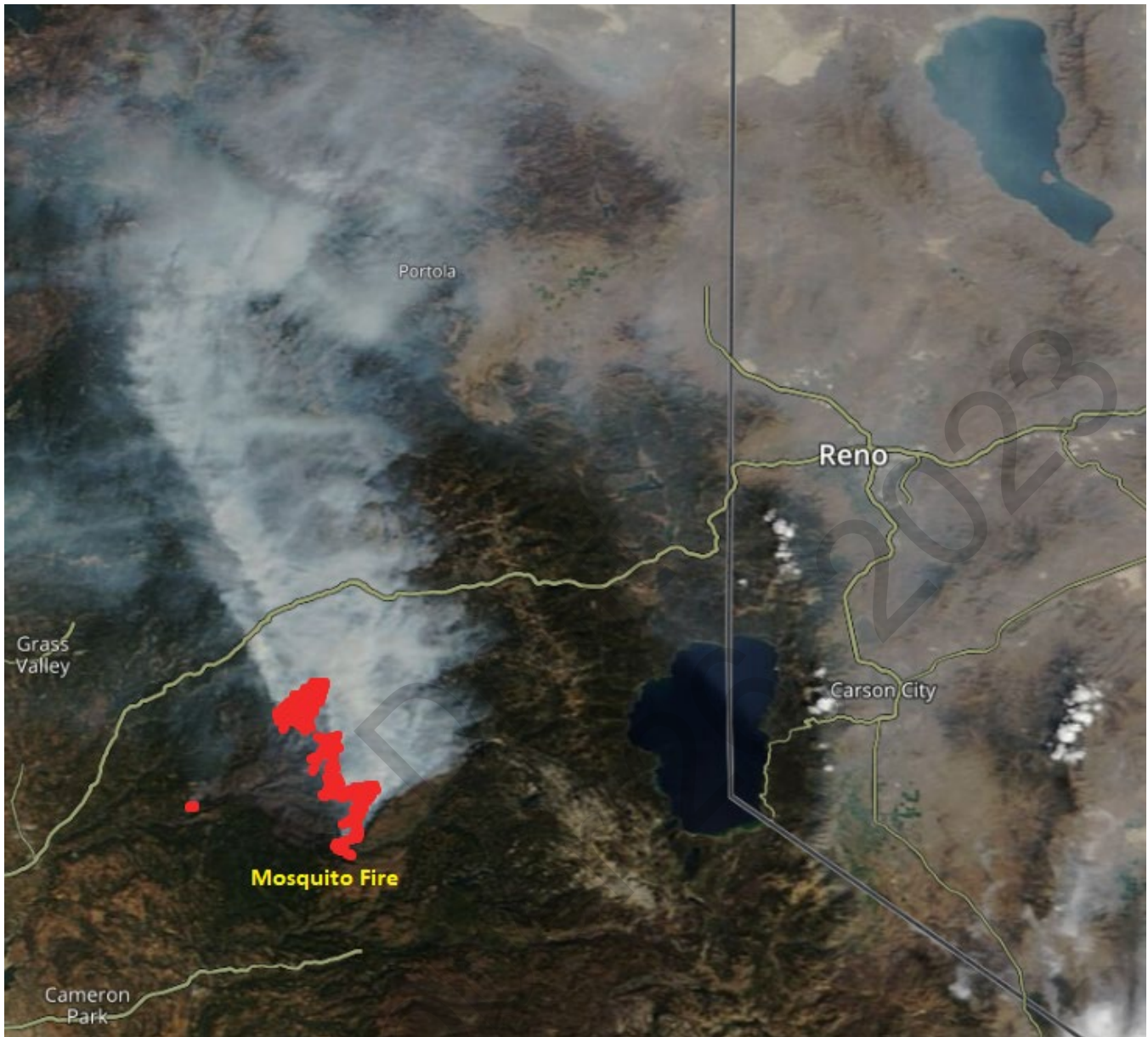


Figure 2-14: Satellite Imagery from September 16, 2022

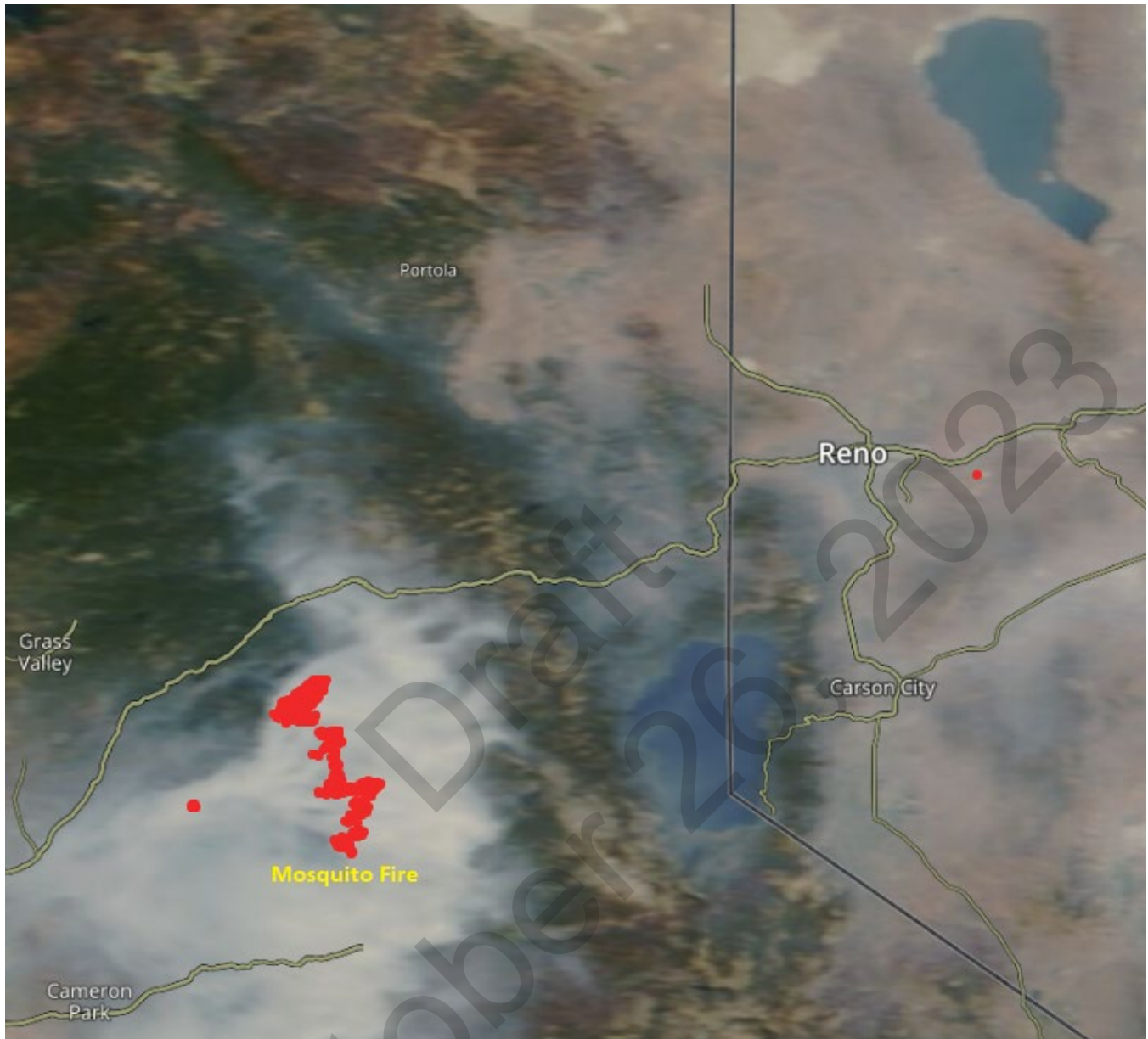


Figure 2-15: Satellite Imagery from September 17, 2022

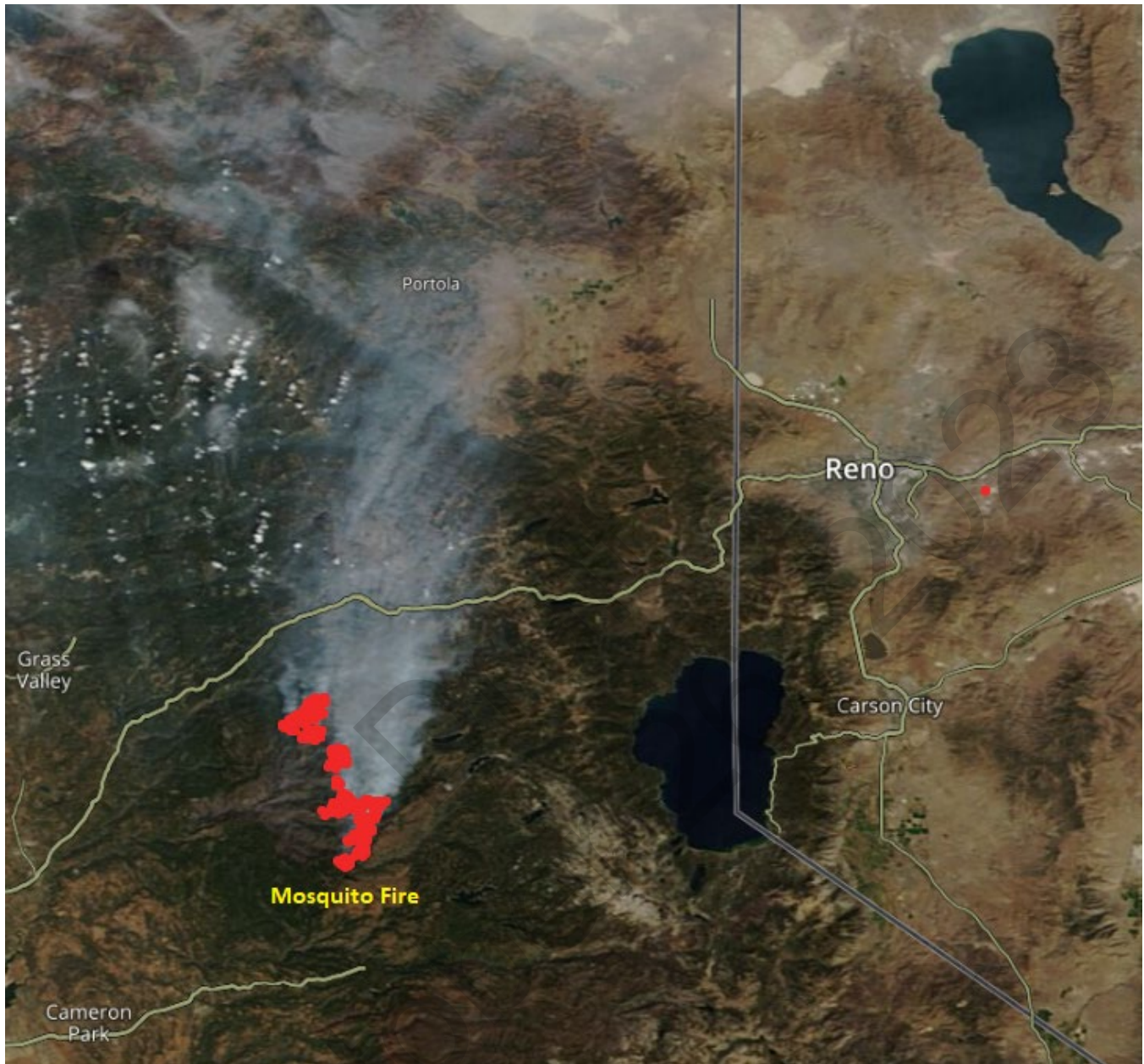


Figure 2-16: Daily Weather Maps for September 11, 2022

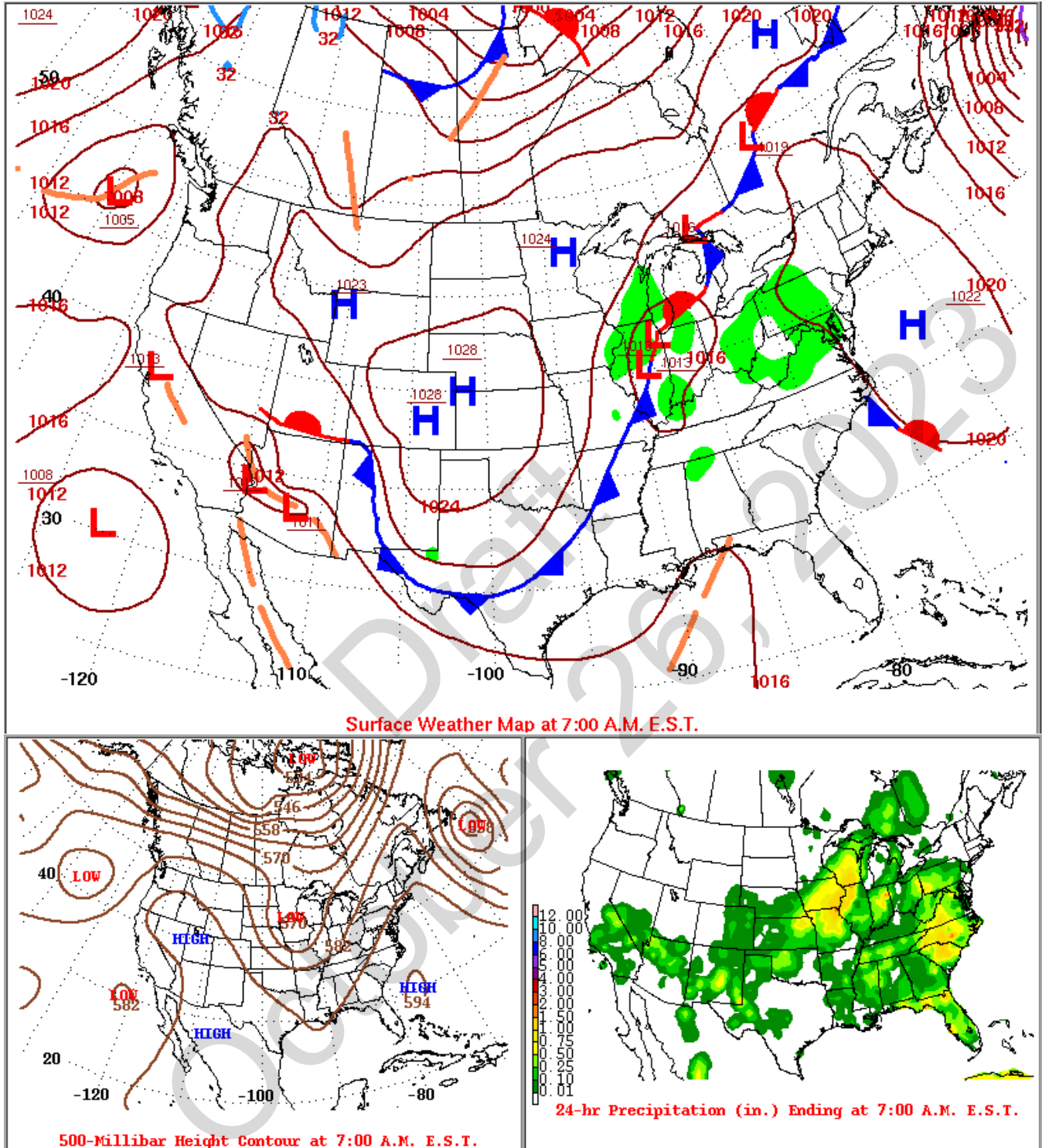


Figure 2-17: Daily Weather Maps for September 14, 2022

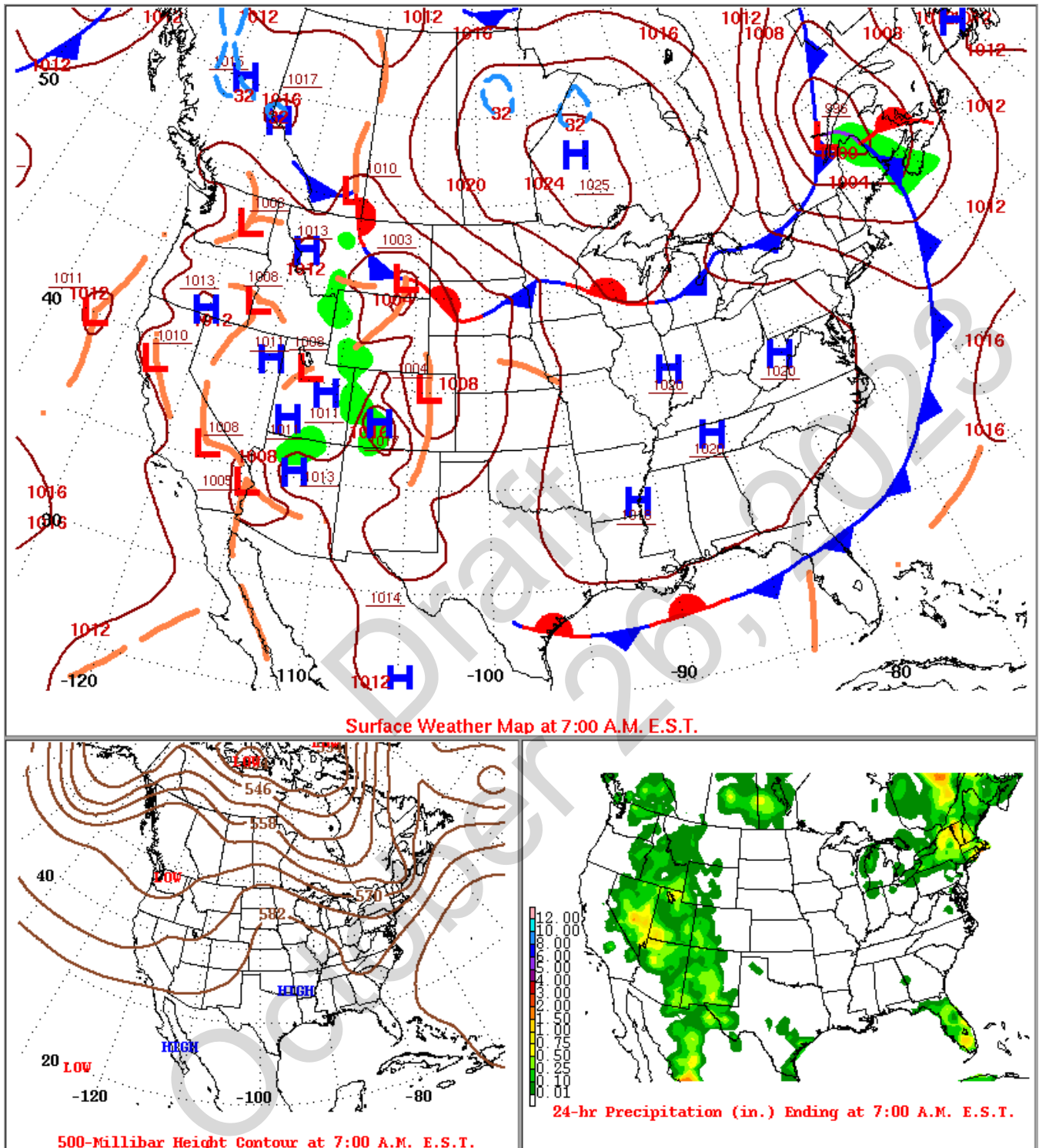


Figure 2-18: Daily Weather Maps for September 15, 2022

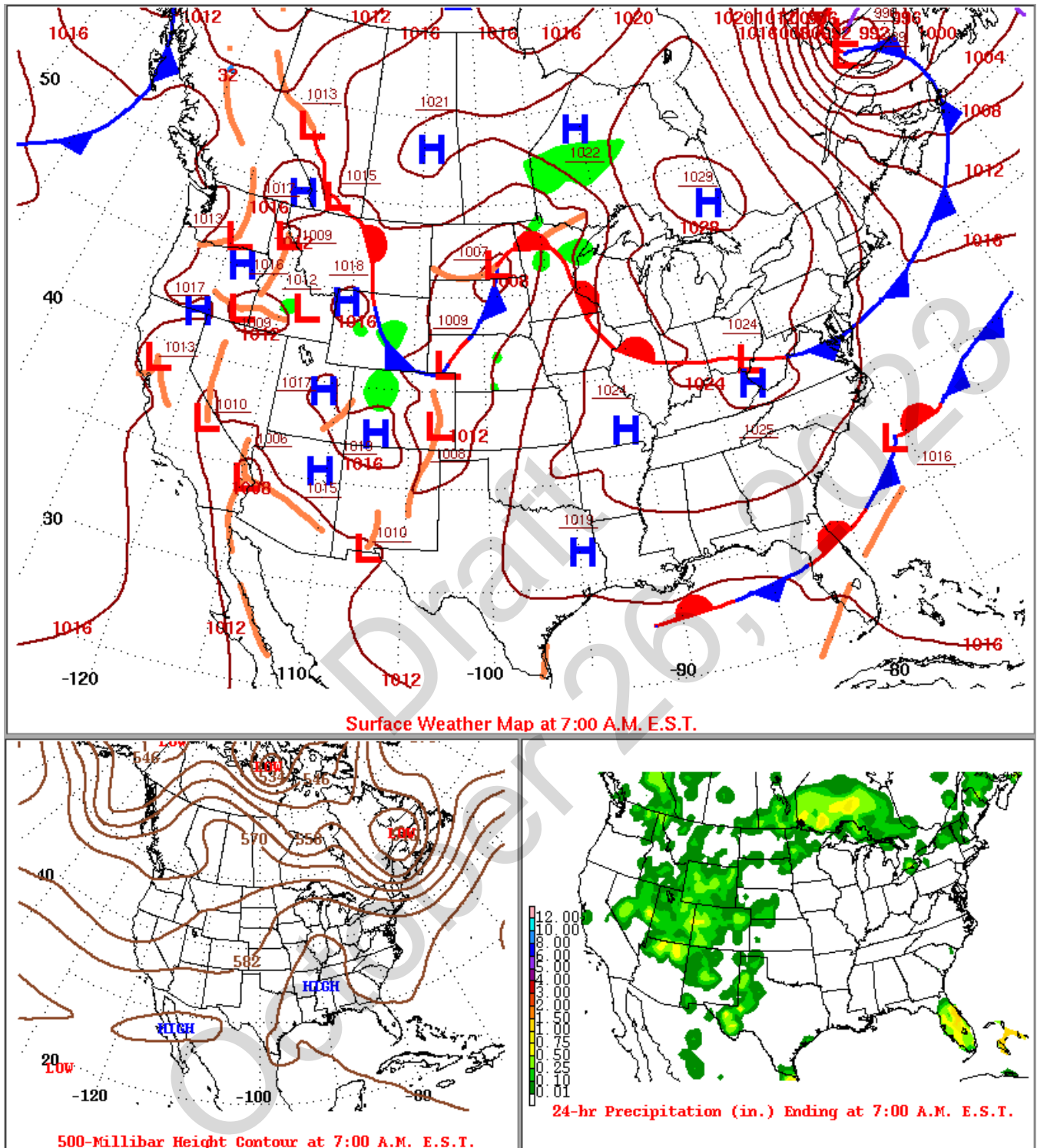
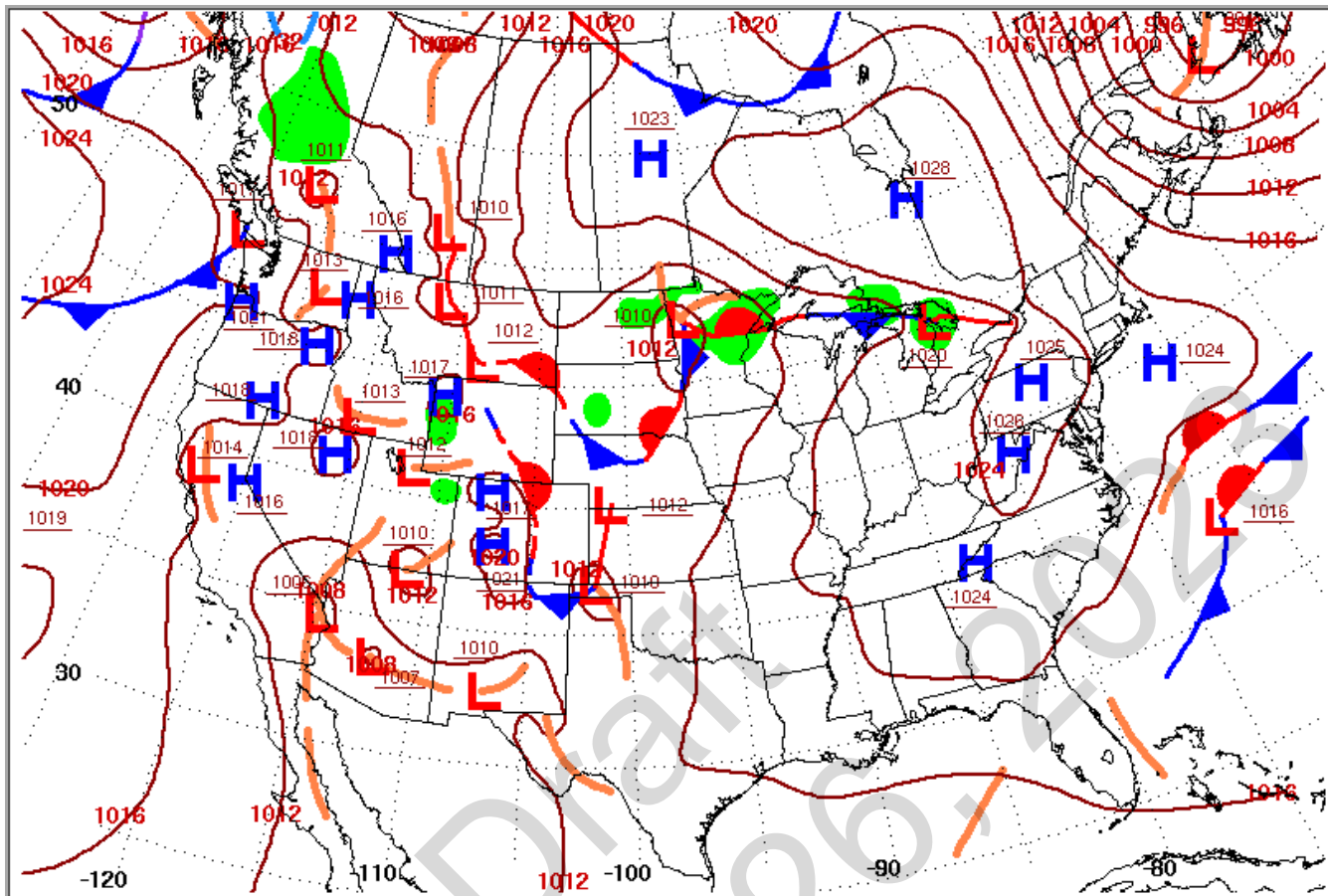
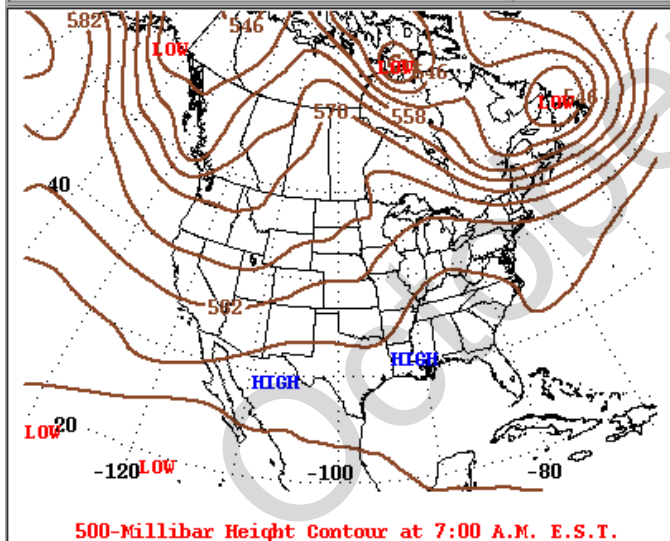


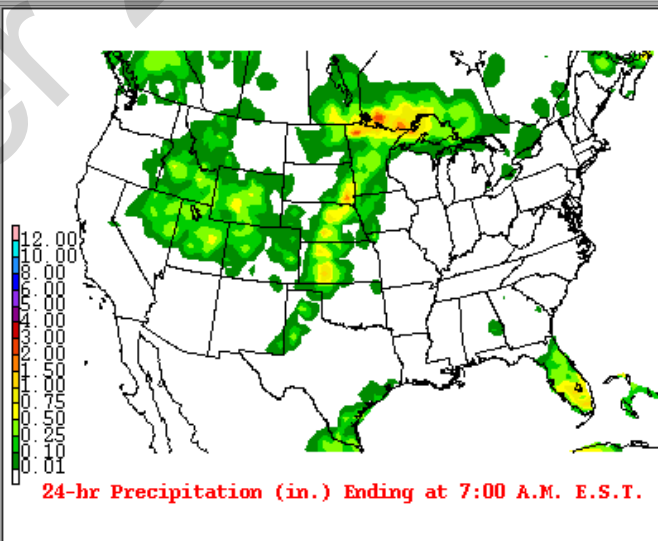
Figure 2-19: Daily Weather Maps for September 16, 2022



Surface Weather Map at 7:00 A.M. E.S.T.



500-Millibar Height Contour at 7:00 A.M. E.S.T.



24-hr Precipitation (in.) Ending at 7:00 A.M. E.S.T.

3.0 Not Reasonably Controllable or Preventable

Section 40 CFR 50.14 (c)(3)(iv)(D) requires a demonstration that the event was both not reasonably controllable and not reasonably preventable. Wildfires on wildland satisfy both requirements unless there is evidence to the contrary. This is explained in 40 CFR 50.14(b)(4) which states:

The Administrator shall exclude data from use in determinations of exceedances and violations where a State demonstrates to the Administrator's satisfaction that emissions from wildfires caused a specific air pollution concentration in excess of one or more national ambient air quality standard at a particular air quality monitoring location and otherwise satisfies the requirements of this section. Provided the Administrator determines that there is no compelling evidence to the contrary in the record, the Administrator will determine every wildfire occurring predominantly on wildland to have met the requirements identified in paragraph (c)(3)(iv)(D) of this section regarding the not reasonably controllable or preventable criterion.

As was shown in Figure 2-7, the wildfire that caused the PM₁₀ exceedances between September 11-16, 2022, was started in the State of California on US Forest Service land. According to the definition of wildland provided in 40 CFR Part 50, §50.1(o), the Mosquito fire occurred on wildland because the areas that the fire started were in areas with little human activity.

40 CFR 50.1(o): Wildland means an area in which human activity and development are essentially non-existent, except for roads, railroads, power lines, and similar transportation facilities. Structures, if any, are widely scattered.

In addition, since the wildfire was not within the jurisdiction of Washoe County and the pollution impacts were due to interstate transport, there is no reasonable control method that AQMD could have taken to prevent the PM₁₀ exceedances from happening. The exceedances were caused by the excessive PM₁₀ emissions from the Mosquito fire, not from anthropogenic sources within Washoe County. This is proven beyond a reasonable doubt in Section 4 of this document, Clear Causal Relationship.

4.0 Clear Causal Relationship

4.1 Fire Emissions Analysis

As can be seen in Figure 2-9, smoke from the Mosquito fire impacted the Toll, Reno4, and Sparks PM₁₀ monitors starting on September 7, 2022. Between September 7 – September 16, 2022, the wildfire grew quickly and burned through large amounts of fuel, sending thousands of tons of emissions into the air, some of which was transported to the Truckee Meadows region, causing PM₁₀ exceedances. PM₁₀ emissions from the fire during this time frame were estimated by AQMD using the U.S Forest Service BlueSky Playground tool, Version 3.5. The inputs to the BlueSky Playground modeling tool include 1) Latitude and Longitude of fire origination, 2) Emissions Type, 3) Fuel Moisture Condition, 4) FCCS Fuelbed type and 5) acreage burned. For the fire, the latitude and longitude were (39.006, -120.745), the emissions type was “Wildfire”, the Fuel Moisture Condition was “Dry”, and the FCCS Fuelbed type was “Fuel bed code 16 – Jeffrey pine-ponderosa pine-Douglas Fir-California black oak forest.” The Fuel Moisture Condition was determined to be “Dry” as a conservative estimate based on the U.S. Drought Monitor from September 13, 2022 shown in Figure 2-8. Fire acreage growth for the fire was determined by changes in acreage burned between daily Fire Updates issued by the United States Forest Service and CalFire. Updates were written daily, or more frequently, by the Incident Command Team in charge of the incident. By finding the difference in fire size listed on consecutive daily updates, daily fire growth can be calculated.

As can be seen in Table 4-1, the total PM₁₀ emissions that resulted from the Mosquito Fire between September 7 and September 16 was approximately 36,051.42 tons. As was mentioned in Section 2.3, and as per the 2020 Emissions Inventory, Washoe County produces approximately 38,833 lbs/day of PM₁₀. That is approximately 93% of Washoe County’s annual PM₁₀ emissions over the course of 10 days of the fire.

Table 4-1: PM₁₀ Emissions Calculations for the Period Prior and During the Exceedances

Date	Mosquito Fire Growth (Daily Acres)	Mosquito Fire PM₁₀ Emissions (Daily Tons)
September 7, 2022	5,705	2,884.94
September 8, 2022	8,000	4,045.49
September 9, 2022	15,880	8,030.31
September 10, 2022	7,741	3,914.52
September 11, 2022	9,261	4,683.17
September 12, 2022	2,113	1,068.52
September 13, 2022	1,630	824.27
September 14, 2022	13,446	6,799.46
September 15, 2022	3,893	1,968.64
September 16, 2022	3,623	1,832.10
Total	71,292	36,051.42

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4.2 Comparison of Event PM₁₀ Concentrations to Historical Concentrations

In order to prove that the days of the exceedances had abnormally high PM₁₀ concentrations, AQMD compared the hourly data to what would be expected on a non-event day in wildfire season. AQMD completed a diurnal pattern analysis to do this. Each hour on the exceedance days were compared to the 5th percentile, 50th percentile, and 95th percentile of historical hourly concentrations. The historical concentrations were from the five-year period from 2016-2020 in the wildfire season of July-September. This analysis was done at the Toll, Reno4, and Sparks PM₁₀ monitors. For the Reno4 historical PM₁₀ concentrations of 2016, 2017, 2018, and 2019, Reno3 data was used to add to Reno4's 2020 data.

As can be seen in Figure 4-1 through 4-8 below, the hourly PM₁₀ concentrations at Toll, Reno4, and Sparks on the days of the exceedances were much higher than what would be expected based on historical concentrations. Most hourly concentrations were orders of magnitude higher than what would be expected (50th percentile). Additionally, most hourly concentrations were much higher than the 95th percentile of the data set.

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Figure 4-1: 2016-2020 PM₁₀ Diurnal Pattern Comparison for Toll on 09/11/22

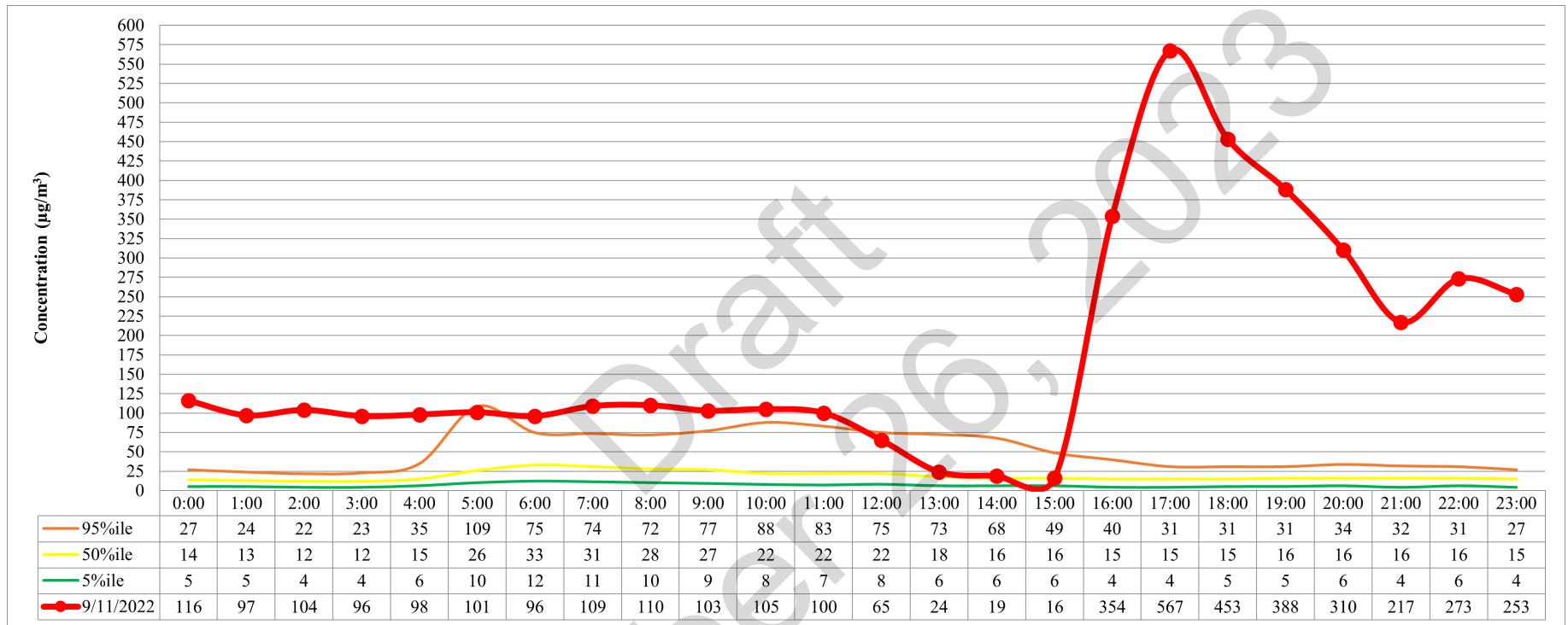


Figure 4-2: 2016-2020 PM₁₀ Diurnal Pattern Comparison for Toll on 09/14/22

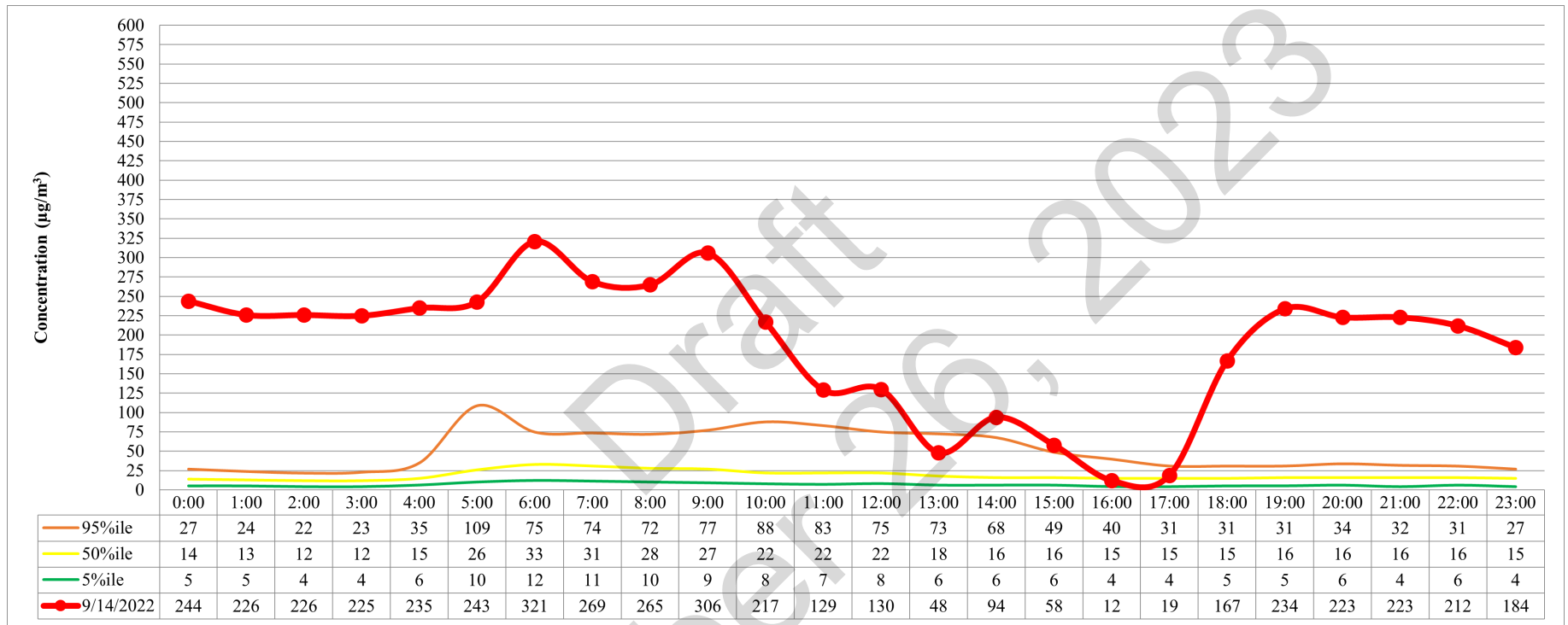


Figure 4-3: 2016-2020 PM₁₀ Diurnal Pattern Comparison for Reno4 on 09/14/22

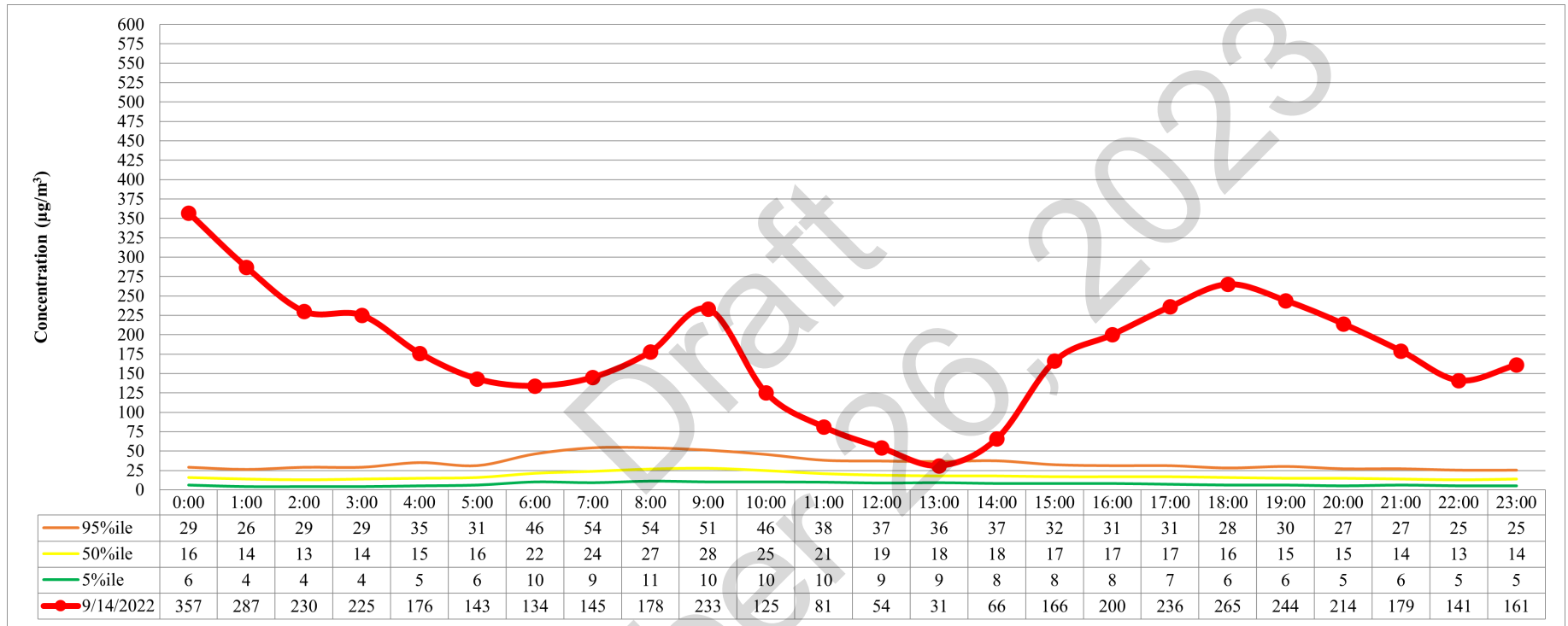


Figure 4-4: 2016-2020 PM₁₀ Diurnal Pattern Comparison for Sparks on 09/14/22

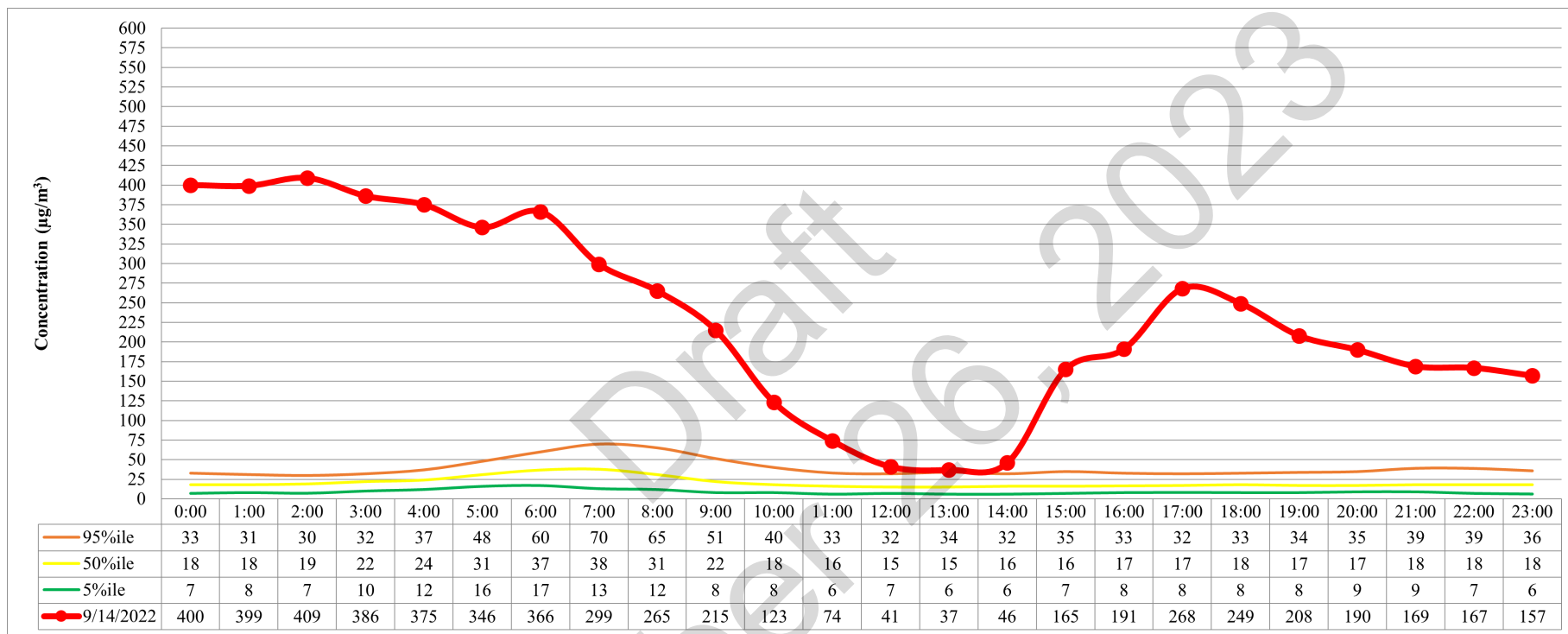


Figure 4-5: 2016-2020 PM₁₀ Diurnal Pattern Comparison for Toll on 09/15/22

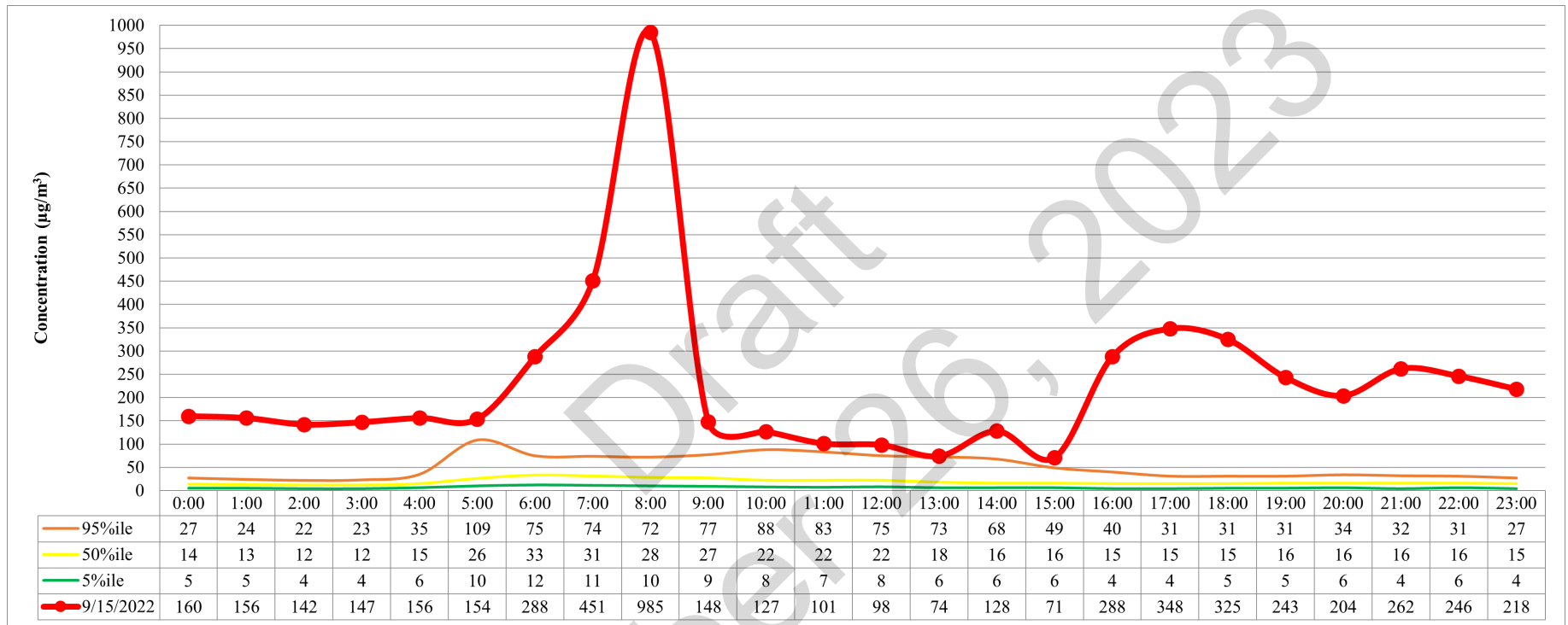


Figure 4-6: 2016-2020 PM₁₀ Diurnal Pattern Comparison for Reno4 on 09/15/22

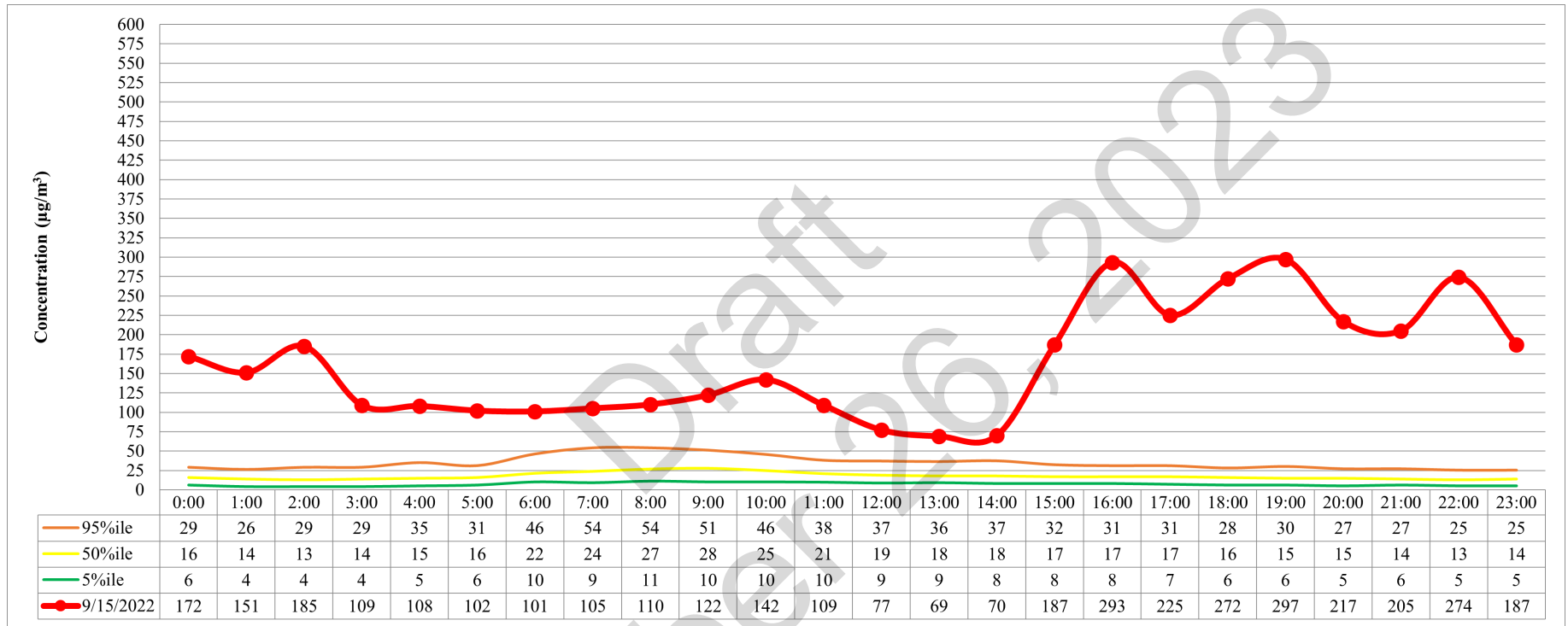


Figure 4-7: 2016-2020 PM₁₀ Diurnal Pattern Comparison for Toll on 09/16/22

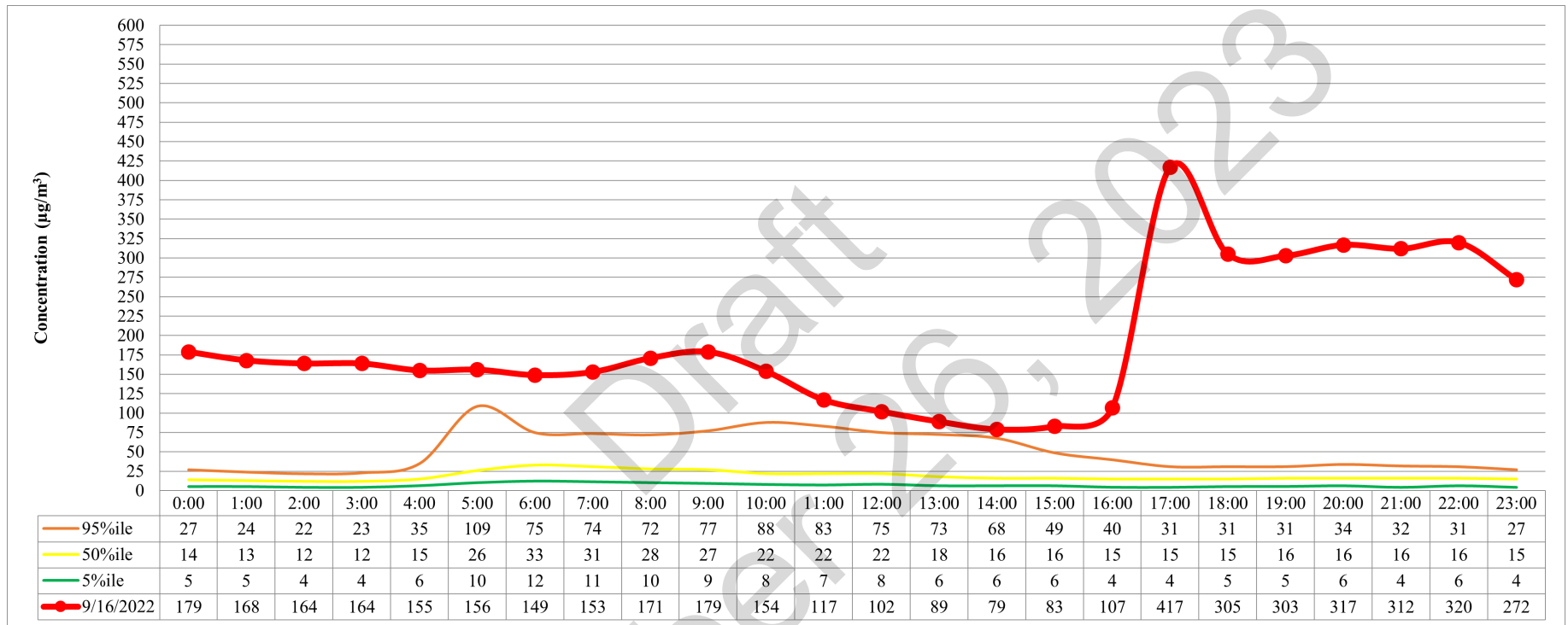
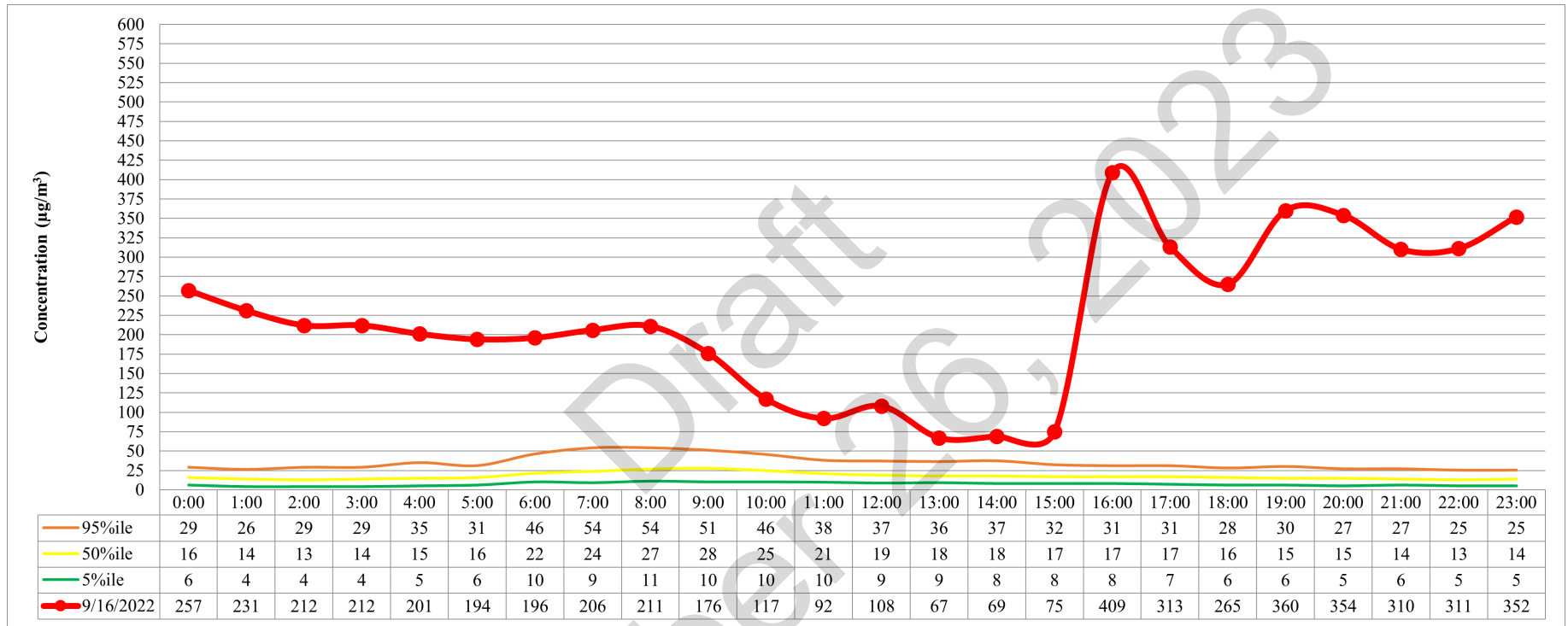


Figure 4-8: 2016-2020 PM₁₀ Diurnal Pattern Comparison for Reno4 on 09/16/22



4.3 Methods for Determining the Presence of Wildfire Smoke

4.3.1 PM_{2.5} Concentrations

Although this demonstration is written for PM₁₀, analyzing the PM_{2.5} concentrations during the event supports this demonstration by highlighting that the fine particulate matter concentrations followed the same trend as PM₁₀. If the particulate is made up of smoke, PM_{2.5} and PM₁₀ should follow the same trend. If the particulate was made up of something else such as a geologic source, PM_{2.5} would not follow the same trend as PM₁₀. As can be seen in Figure 4-9, Figure 4-10, and Figure 4-11, concentrations of PM_{2.5} and PM₁₀ followed the same trend over duration of the event at all affected monitors, thus supporting AQMD’s position that wildfire smoke was present.

Figure 4-9: 24-hour PM_{2.5} and PM₁₀ Concentrations at Toll in September 2022

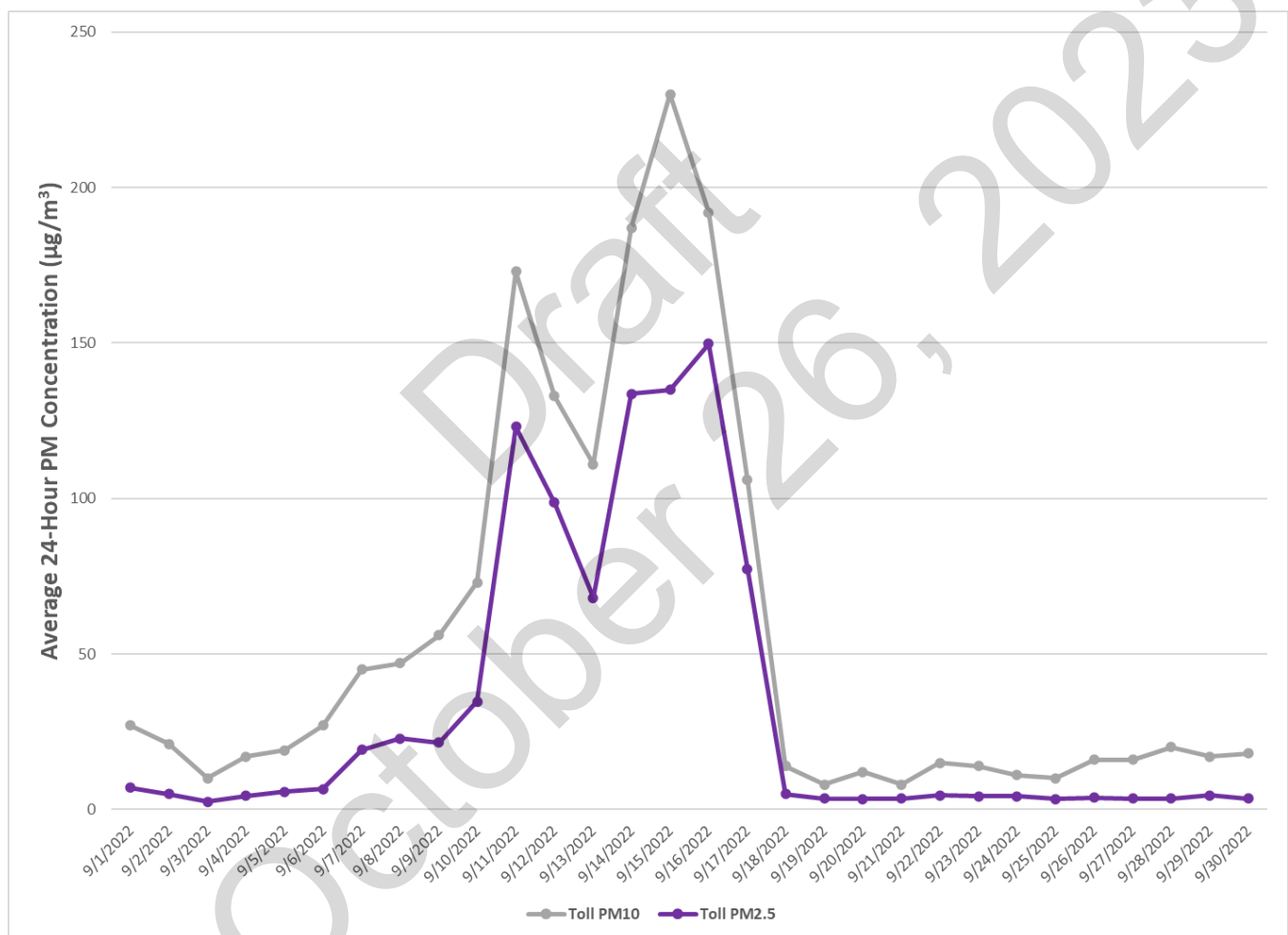


Figure 4-10: 24-hour PM_{2.5} and PM₁₀ Concentrations at Reno4 in September 2022

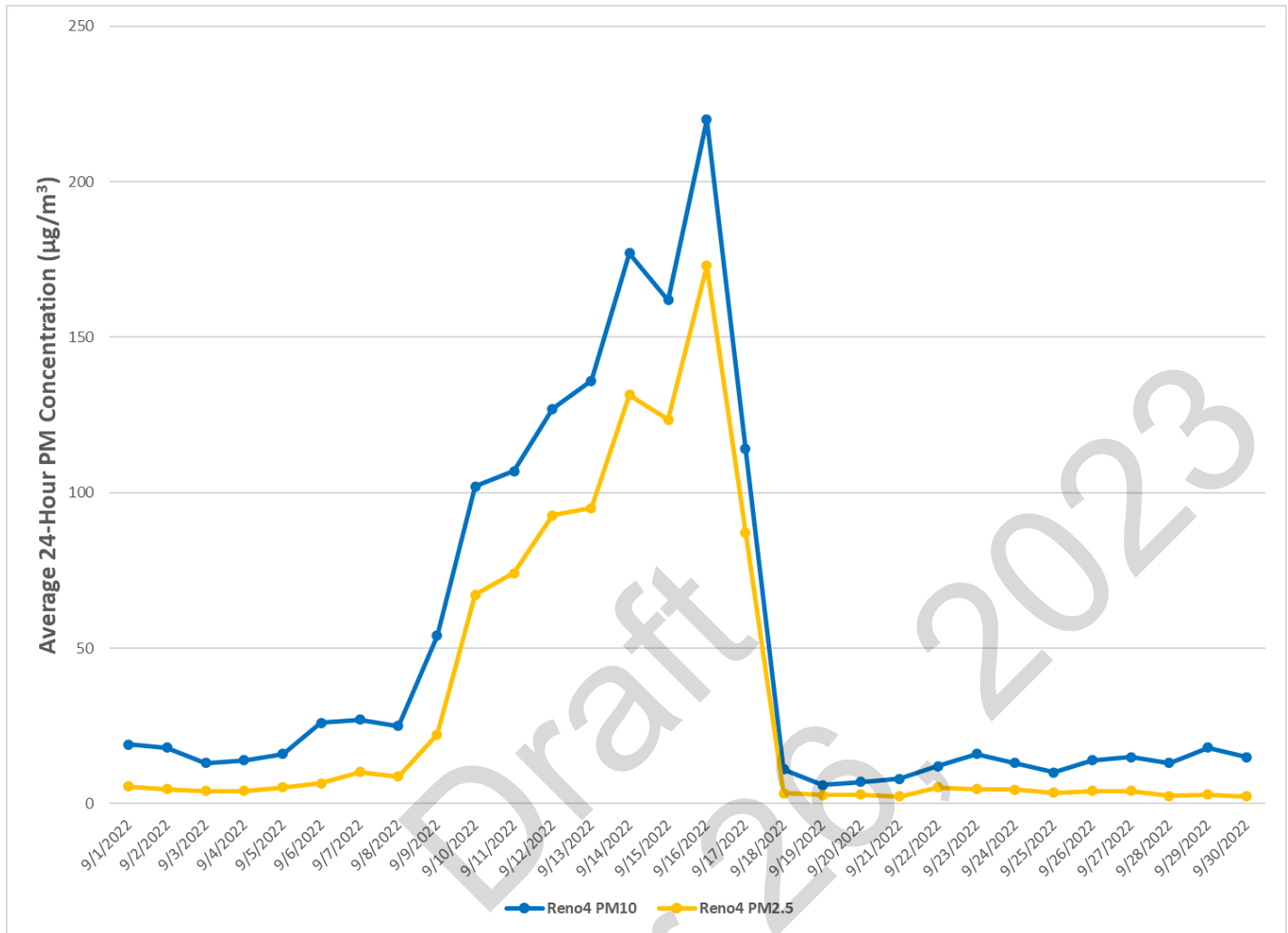
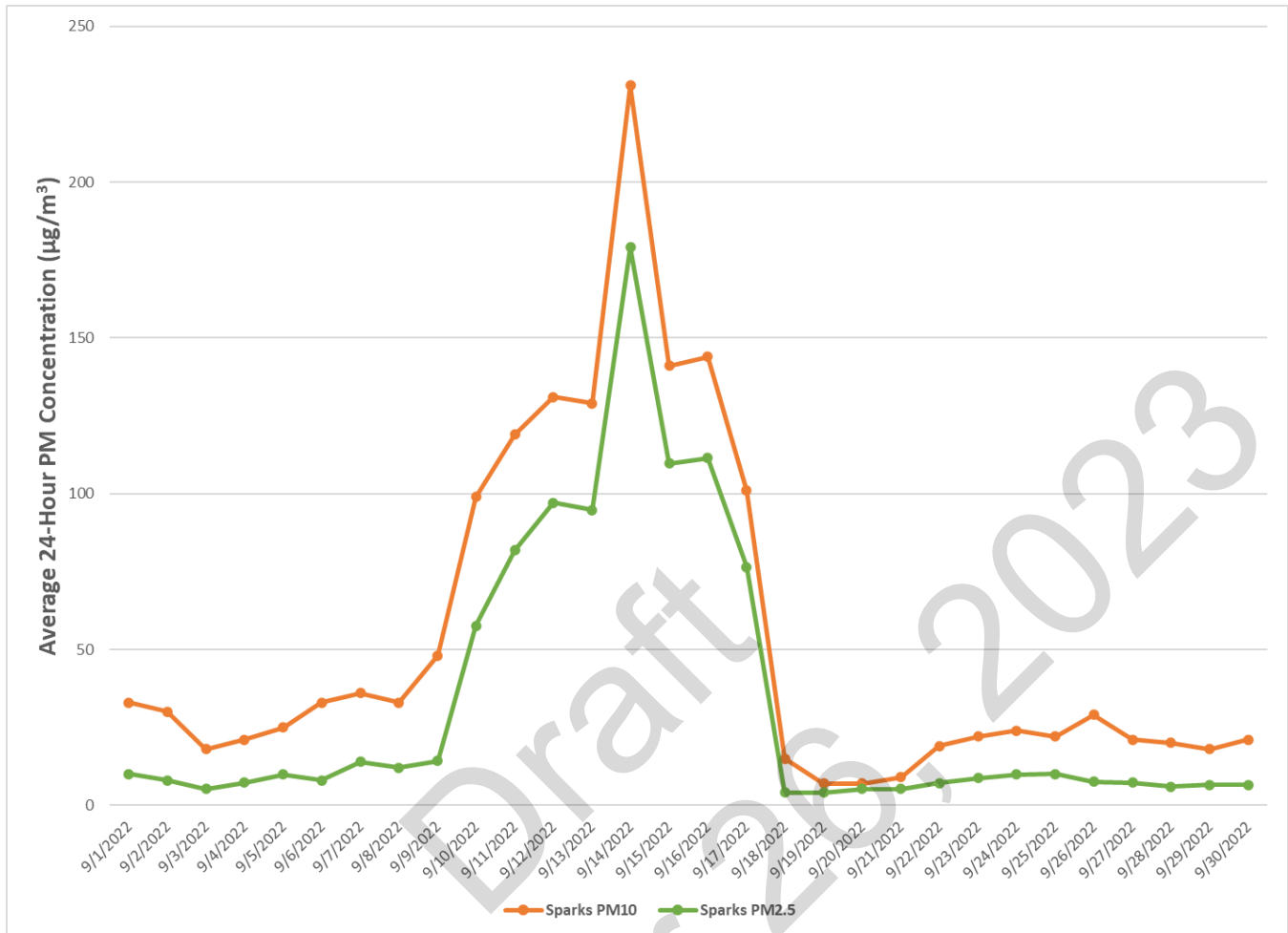


Figure 4-11: 24-hour PM_{2.5} and PM₁₀ Concentrations at Sparks in September 2022



Similar to PM₁₀, AQMD also completed a diurnal pattern analysis for PM_{2.5}. Each hour on the exceedance day was compared to the 5th percentile, 50th percentile, and 95th percentile of historical hourly concentrations. The historical concentrations were from non-event days in the five-year period from 2016-2020 during the wildfire season of July-September. This analysis was done for Reno4, and Sparks PM_{2.5} on the days of the exceedances. Since Toll did not monitor for PM_{2.5} until 2019, a diurnal was created for 2019-2020. For the Reno4 historical PM_{2.5} concentrations of 2016, 2017, 2018, and 2019, Reno3 data was used to add to Reno4's 2020 data.

As can be seen in Figure 4-12 through 4-19 below, nearly every hour of the exceedance was multiple times higher than what would be expected (50th percentile) and still much higher than the 95th percentile of the data set.

Figure 4-12: 2019-2020 PM_{2.5} Diurnal Pattern Comparison for Toll on 09/11/22

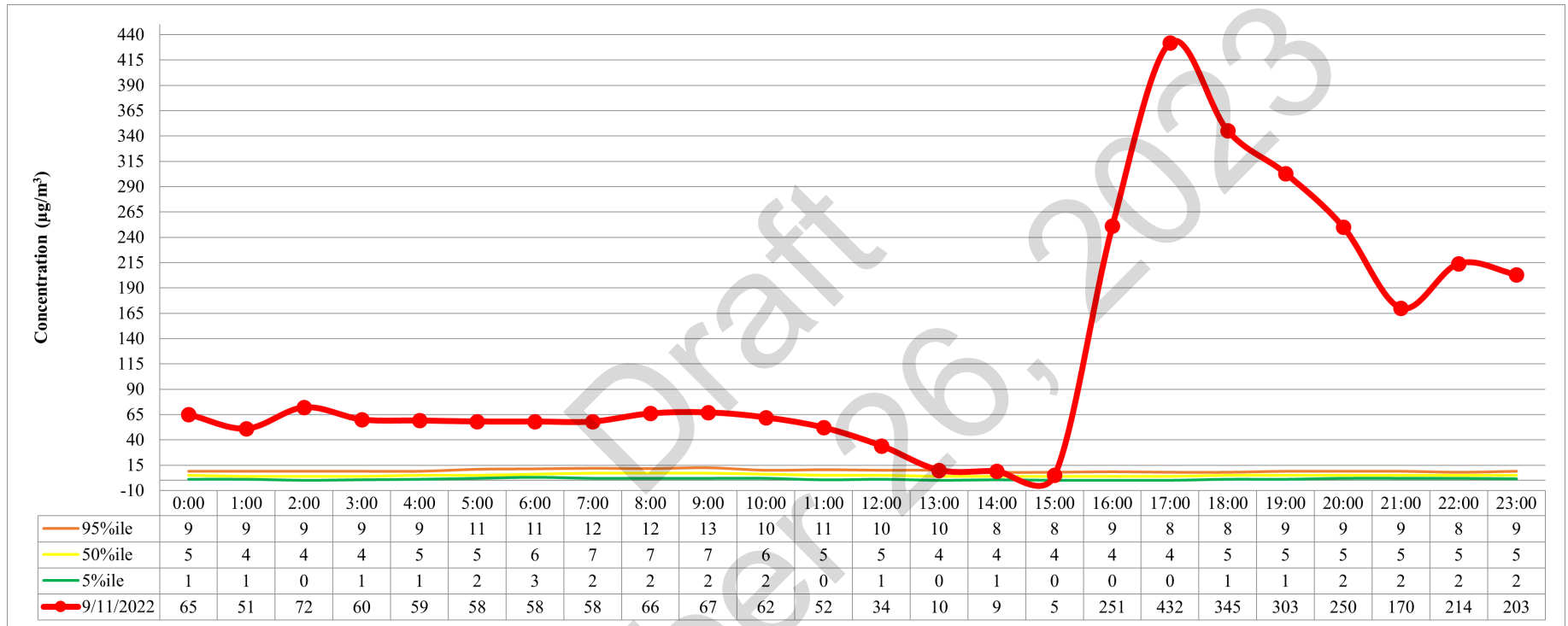


Figure 4-13: 2019-2020 PM_{2.5} Diurnal Pattern Comparison for Toll on 09/14/22

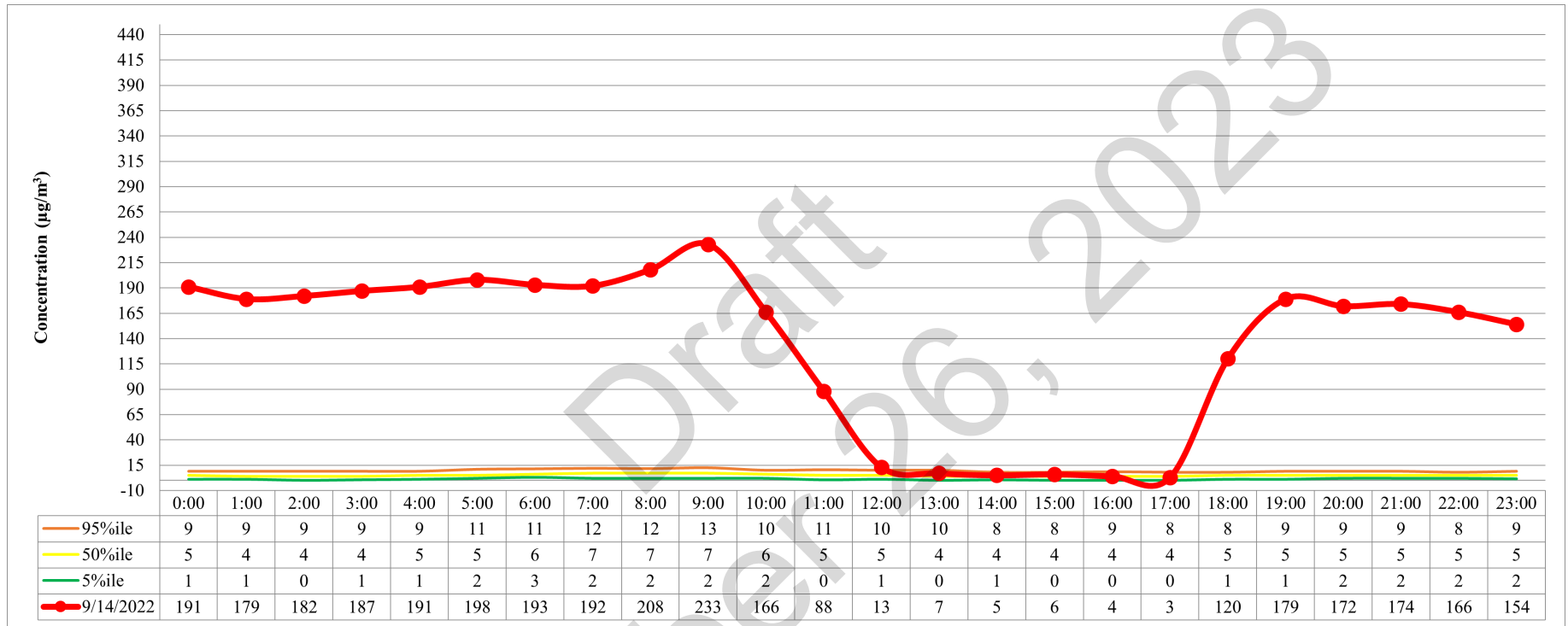


Figure 4-14: 2016-2020 PM_{2.5} Diurnal Pattern Comparison for Reno4 on 09/14/22

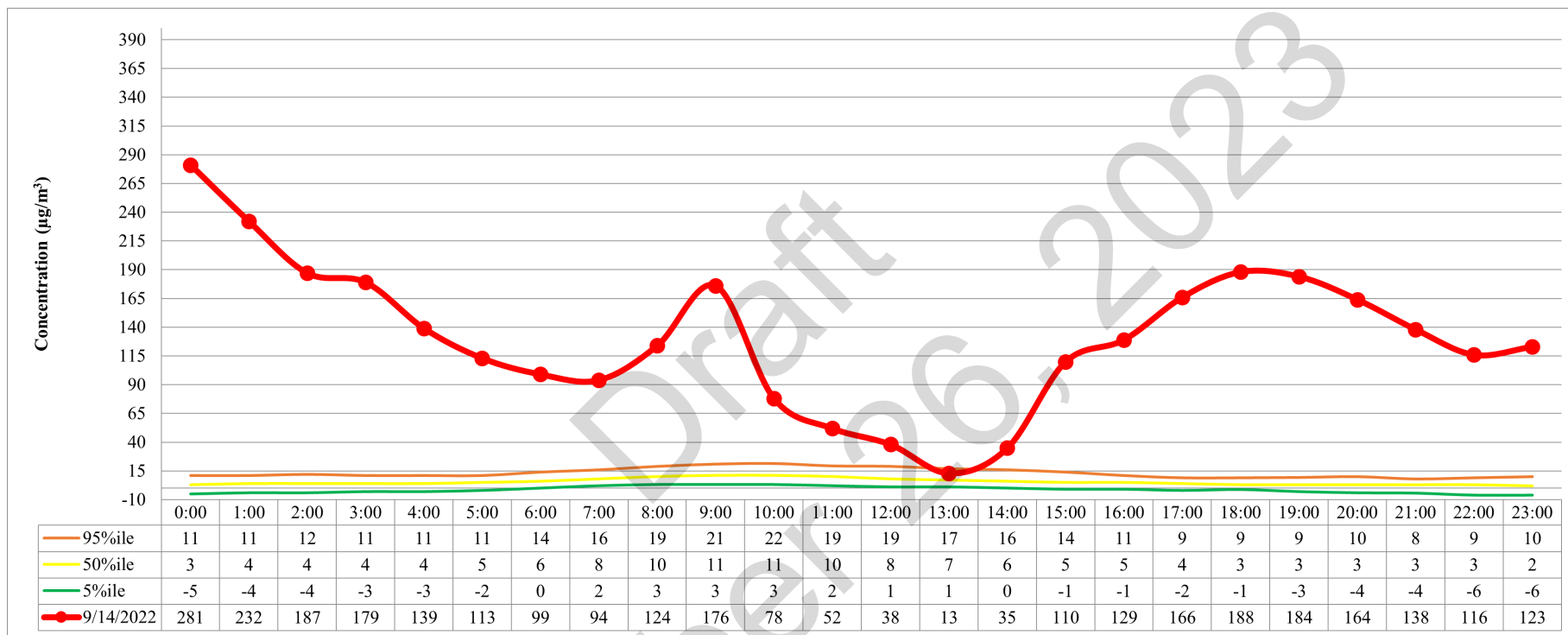


Figure 4-15: 2016-2020 PM_{2.5} Diurnal Pattern Comparison for Sparks on 09/14/22

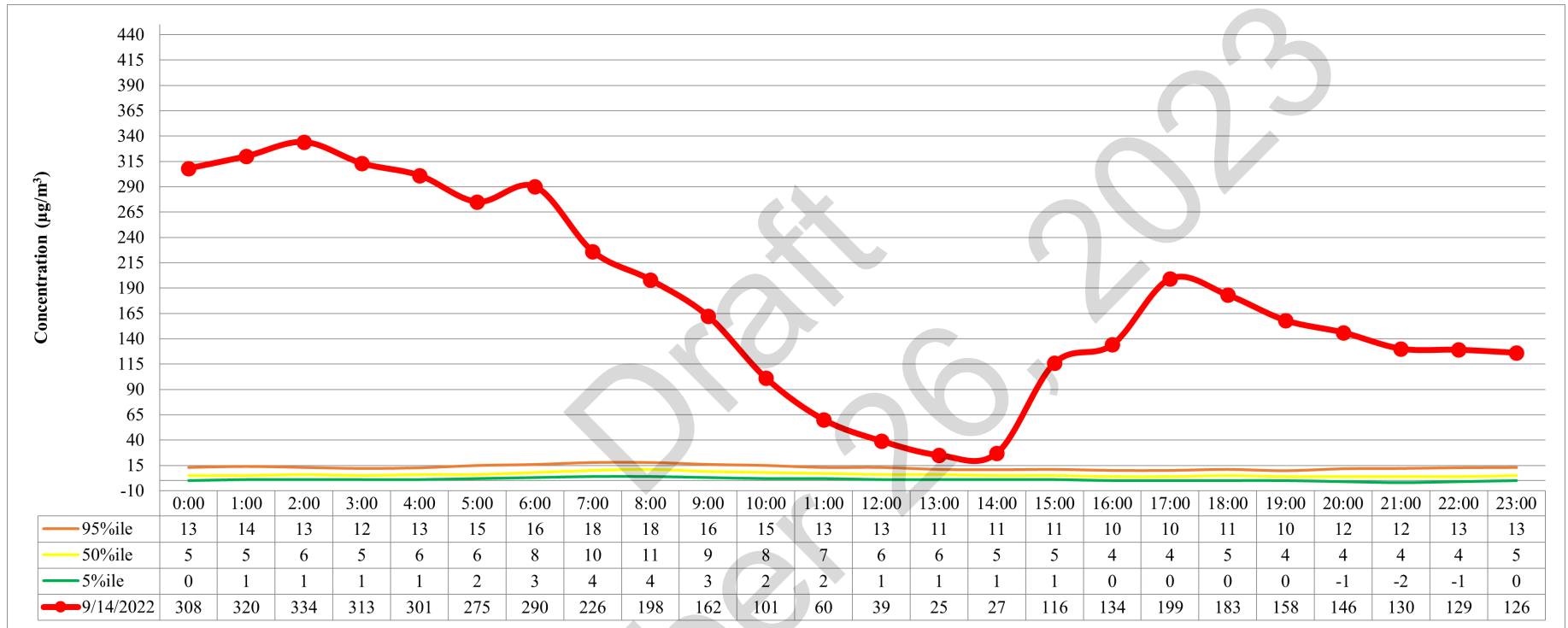


Figure 4-16: 2019-2020 PM_{2.5} Diurnal Pattern Comparison for Toll on 09/15/22

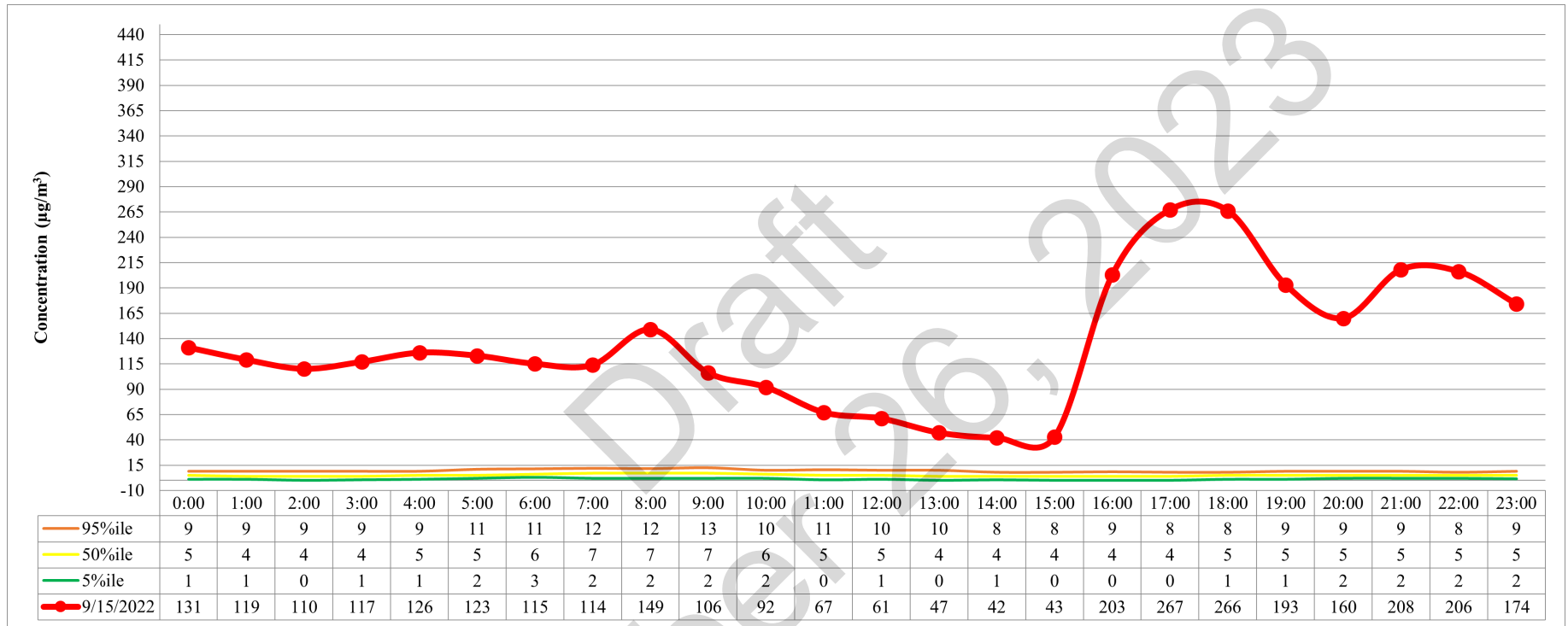


Figure 4-17: 2016-2020 PM_{2.5} Diurnal Pattern Comparison for Reno4 on 09/15/22

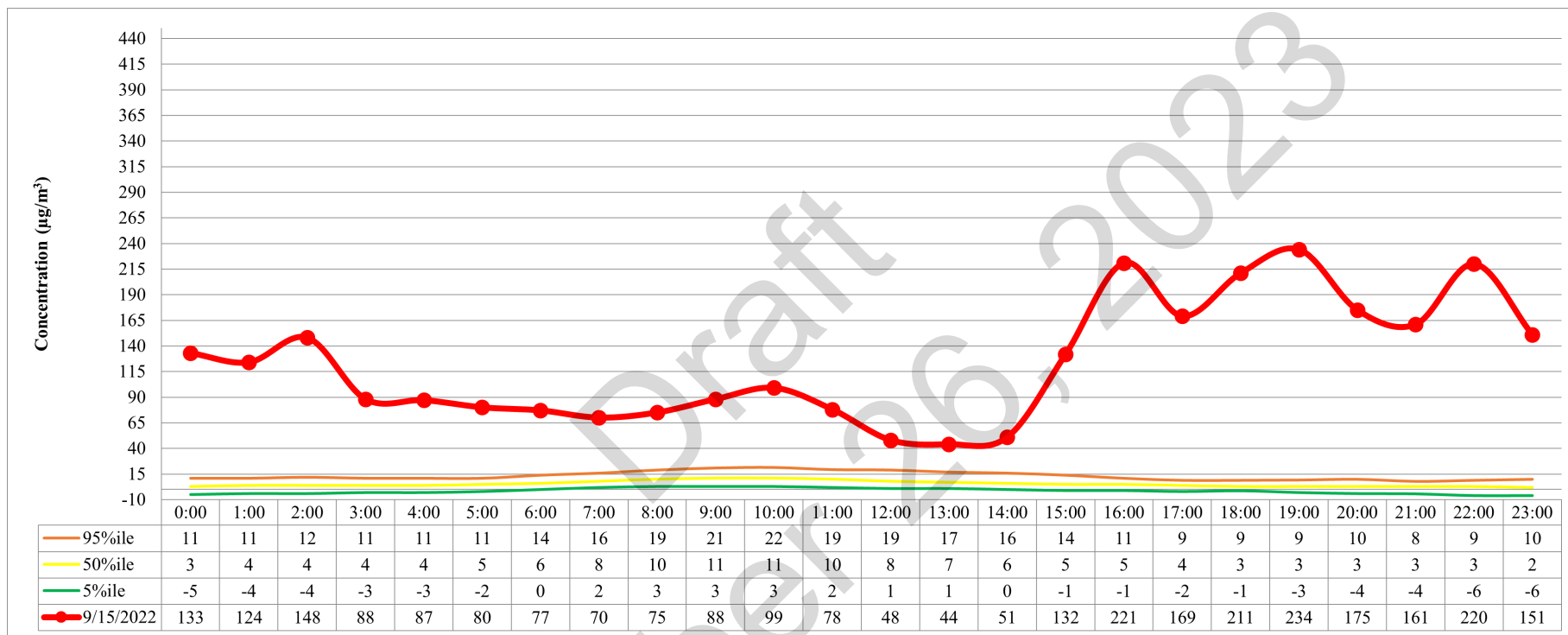


Figure 4-18: 2019-2020 PM_{2.5} Diurnal Pattern Comparison for Toll on 09/16/22

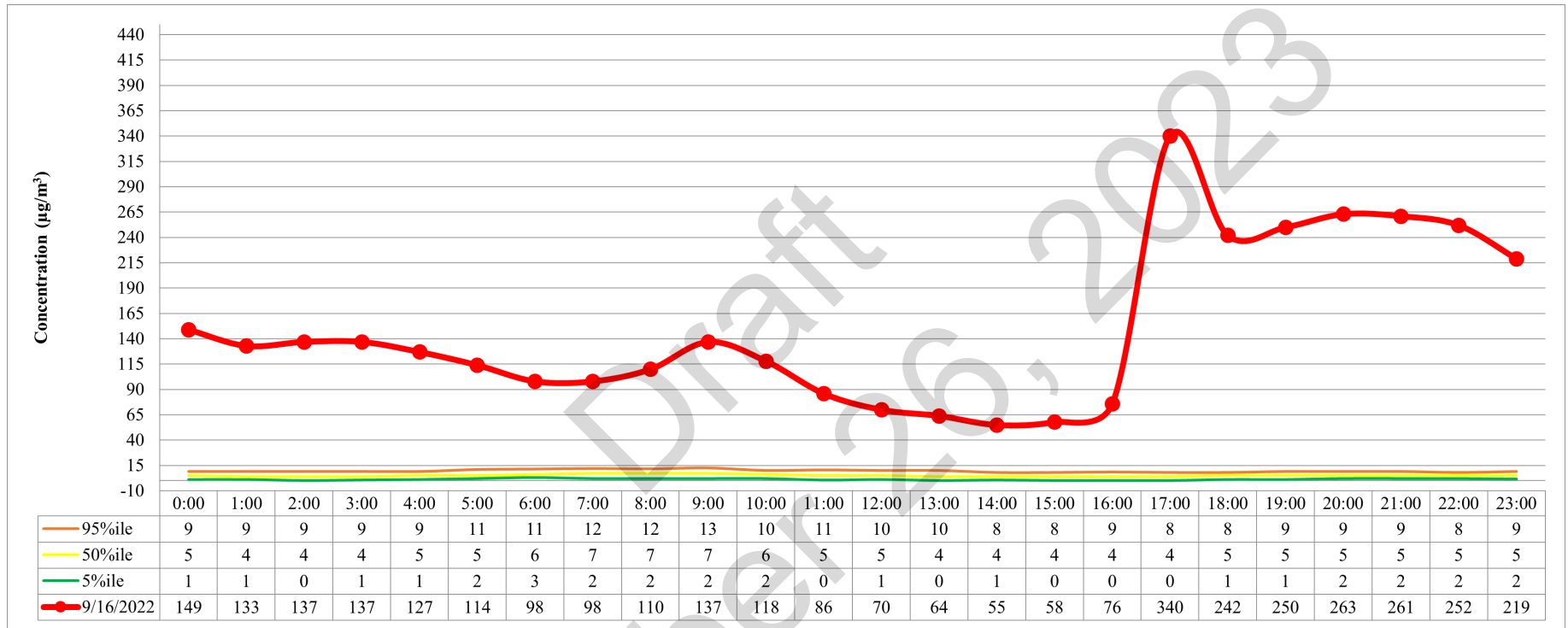
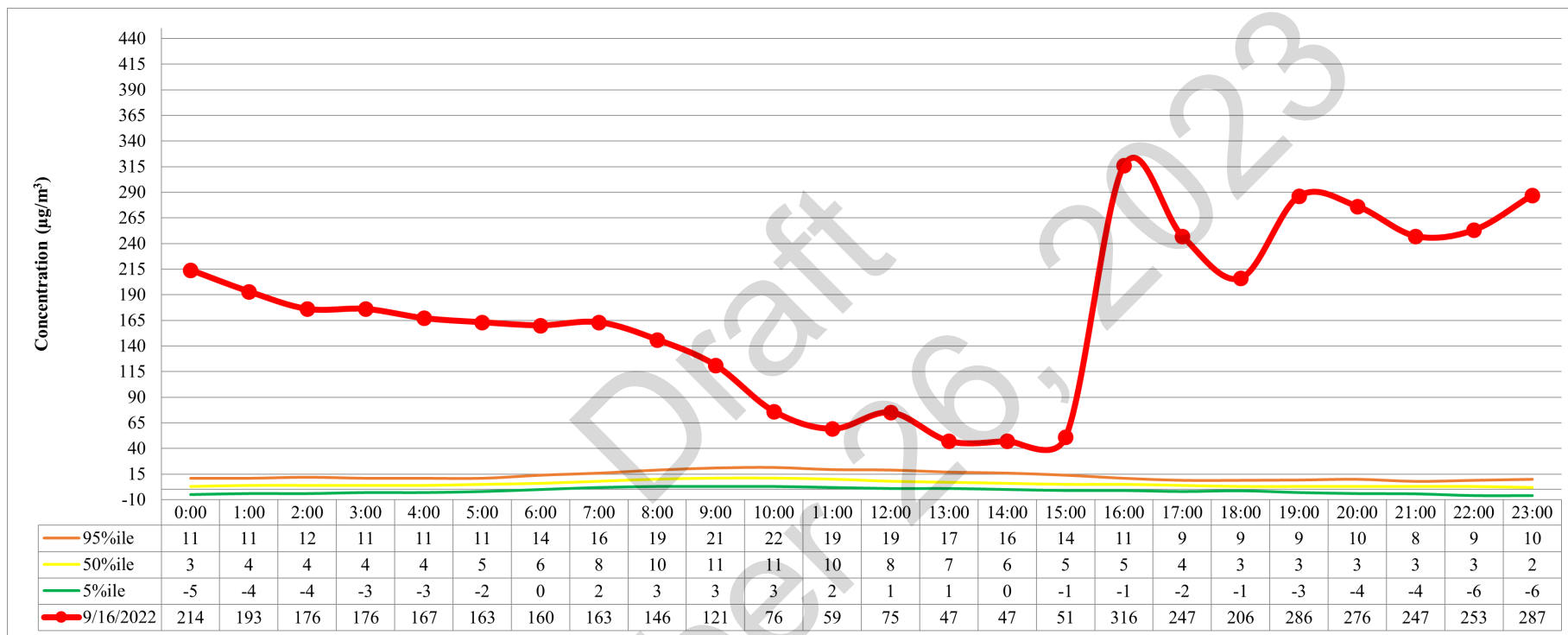


Figure 4-19: 2016-2020 PM_{2.5} Diurnal Pattern Comparison for Reno4 on 09/16/22



4.3.2 PM_{2.5}/PM₁₀ Ratio

One method for determining whether the elevated PM₁₀ concentrations were caused by wildfire smoke is by analyzing the ratio of PM_{2.5} to PM₁₀. If a higher fraction of the PM₁₀ is made up of PM_{2.5}, this is indicative that smoke is present in the region. A lower PM_{2.5}/PM₁₀ ratio would mean that more of the particulate is larger than 2.5 microns and is most likely of a geologic origin. As can be seen in Table 4-2, Table 4-3, and Table 4-4, the PM_{2.5}/PM₁₀ ratio at Toll, Reno4, and Sparks started to increase on September 6, 2022, leading up to the exceedance days. The days of the exceedances are highlighted in yellow and show an elevated ratio compared to when the monitors were less affected by the wildfire smoke on September 6 and 18 of 2022.

Table 4-2: PM_{2.5}/PM₁₀ Ratios at Toll

Toll			
Date	24-Hour Average (µg/m ³)		PM _{2.5} /PM ₁₀
	PM _{2.5}	PM ₁₀	
9/6/2022	6.5	27	0.24
9/7/2022	19.2	45	0.43
9/8/2022	22.8	47	0.49
9/9/2022	21.5	56	0.38
9/10/2022	34.7	73	0.48
9/11/2022	123	173	0.71
9/12/2022	98.7	133	0.74
9/13/2022	68	111	0.61
9/14/2022	133.7	187	0.71
9/15/2022	134.9	230	0.59
9/16/2022	149.7	192	0.78
9/17/2022	77.4	106	0.73
9/18/2022	5	14	0.36

Table 4-3: PM_{2.5}/PM₁₀ Ratios at Reno4

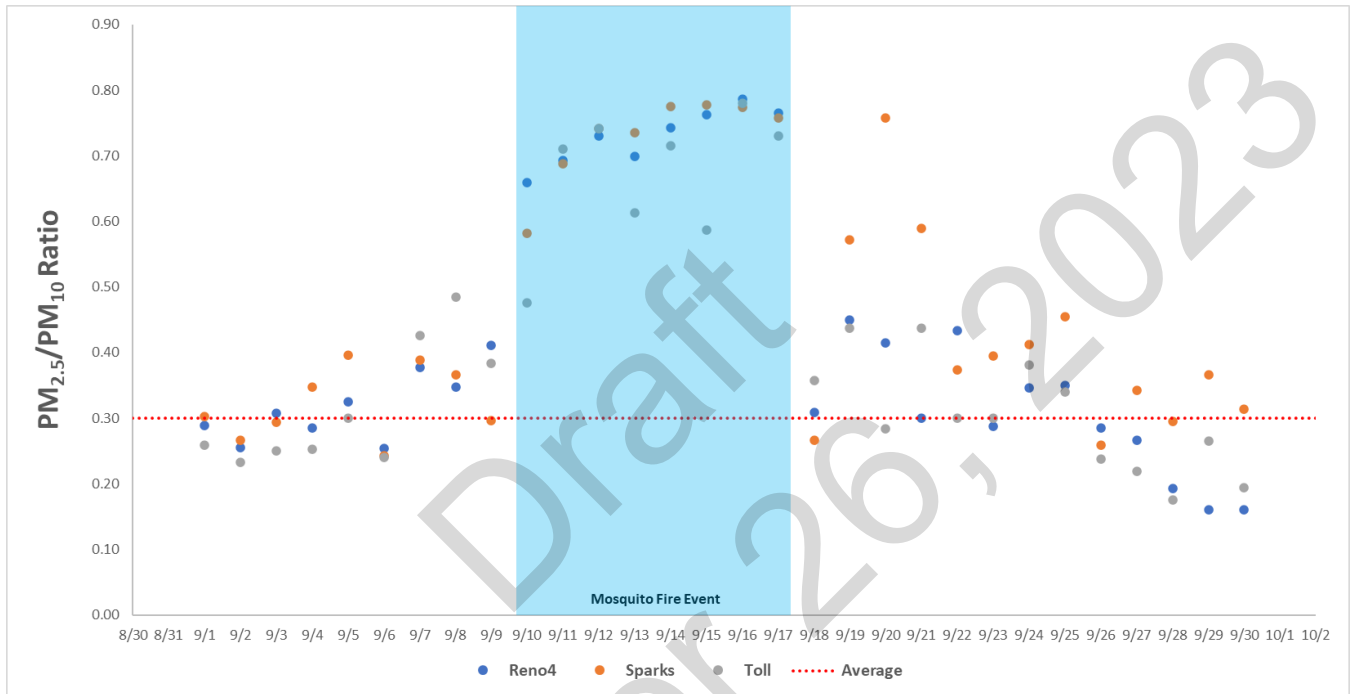
Reno4			
Date	24-Hour Average (µg/m ³)		PM _{2.5} /PM ₁₀
	PM _{2.5}	PM ₁₀	
9/6/2022	6.6	26	0.25
9/7/2022	10.2	27	0.38
9/8/2022	8.7	25	0.35
9/9/2022	22.2	54	0.41
9/10/2022	67.2	102	0.66
9/11/2022	74.1	107	0.69
9/12/2022	92.7	127	0.73
9/13/2022	95	136	0.70
9/14/2022	131.5	177	0.74
9/15/2022	123.5	162	0.76
9/16/2022	173	220	0.79
9/17/2022	87.2	114	0.76
9/18/2022	3.4	11	0.31

Table 4-4: PM_{2.5}/PM₁₀ Ratios at Sparks

Sparks			
Date	24-Hour Average (µg/m ³)		PM _{2.5} /PM ₁₀
	PM _{2.5}	PM ₁₀	
9/6/2022	8	33	0.24
9/7/2022	14	36	0.39
9/8/2022	12.1	33	0.37
9/9/2022	14.2	48	0.30
9/10/2022	57.6	99	0.58
9/11/2022	81.8	119	0.69
9/12/2022	97.1	131	0.74
9/13/2022	94.8	129	0.73
9/14/2022	179.1	231	0.78
9/15/2022	109.7	141	0.78
9/16/2022	111.4	144	0.77
9/17/2022	76.5	101	0.76
9/18/2022	4	15	0.27

The $PM_{2.5}/PM_{10}$ ratio during the Mosquito Fire event was higher than the rest of September 2022 and what would be expected on a typical summer day. AQMD determined what a typical summertime $PM_{2.5}/PM_{10}$ ratio would be by finding the regional average ratio during July-September between 2016 and 2020. The regional average ratio is the average of the Reno4 and Sparks $PM_{2.5}/PM_{10}$ ratios. The $PM_{2.5}/PM_{10}$ ratio that could be expected when not influenced by wildfire smoke or other events is 0.30. As can be seen in Tables 4-2 through 4-4, the ratios on the days of the exceedances were at least twice what would be expected. This supports AQMD's position that the exceedances were caused by wildfire smoke. Figure 4-20 illustrates this.

Figure 4-20: $PM_{2.5}/PM_{10}$ Ratios throughout September 2022



4.3.3 PM_{2.5}/CO Ratio

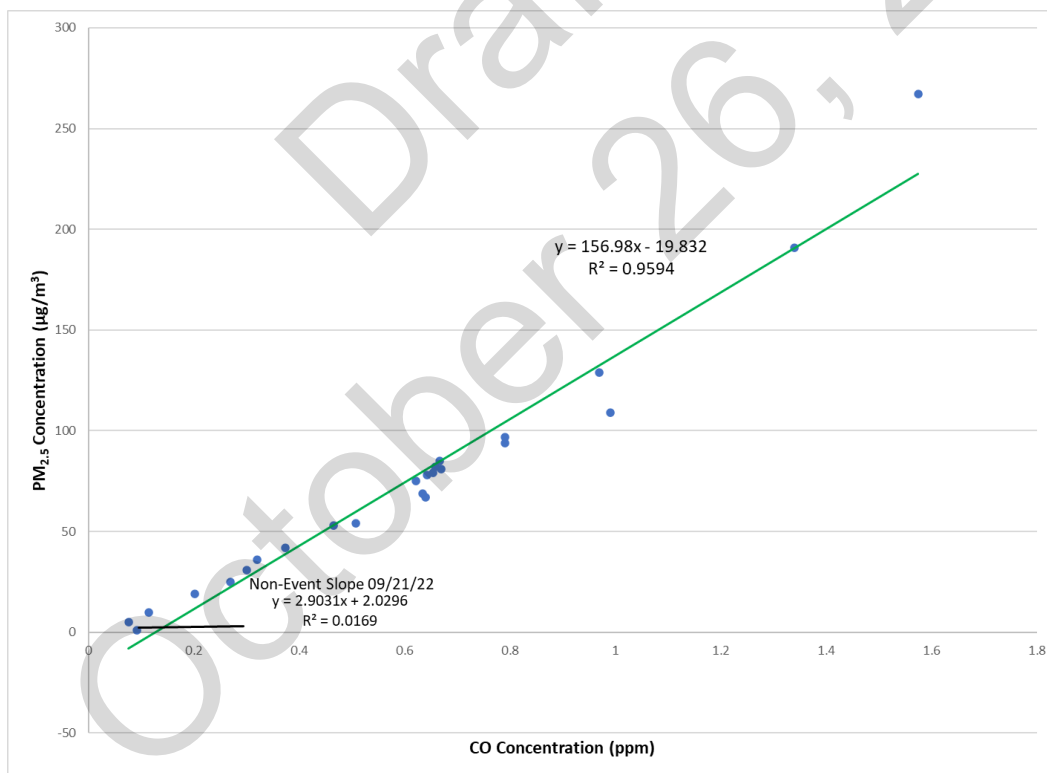
It has been documented that ambient PM_{2.5} and CO concentrations are correlated in the presence of wildfire smoke in urban areas.¹ AQMD completed a linear regression analysis that compared the PM_{2.5} and CO concentrations at the Reno4 and Sparks monitoring sites on the days of the exceedances. Since the Toll monitoring site does not measure CO, this same analysis was done using Reno4 as a proxy. This information was then compared to a linear regression analysis completed for a non-event day on September 21, 2022. The equation and coefficient of determination (R²) that resulted from the linear regression on the non-event day is shown below.

Non-Event Slopes (September 21, 2022)

Reno4: $y = 2.9031x + 2.0296$	$R^2 = 0.0169$
Sparks: $y = 8.8227x + 3.0909$	$R^2 = 0.1794$

As can be seen in Figure 4-21 through 4-25, a strong correlation was found on the days of the exceedances between PM_{2.5} and CO concentrations. The coefficients of determination for the exceedance days ranged from 0.9594 at a minimum to 0.9827 at a maximum. Even at the minimum, this analysis signals a strong presence of wildfire smoke on the days of the exceedances.

Figure 4-21: Hourly PM_{2.5}/CO at Reno4 on September 11, 2022



¹ Jaffe, D. A., Schnieder, B., and Inouye, D.: Technical note: Use of PM_{2.5} to CO ratio as an indicator of wildfire smoke in urban areas, Atmos. Chem. Phys., 22, 12695–12704, <https://doi.org/10.5194/acp-22-12695-2022>, 2022.

Figure 4-22: Hourly PM_{2.5}/CO at Reno4 on September 14, 2022

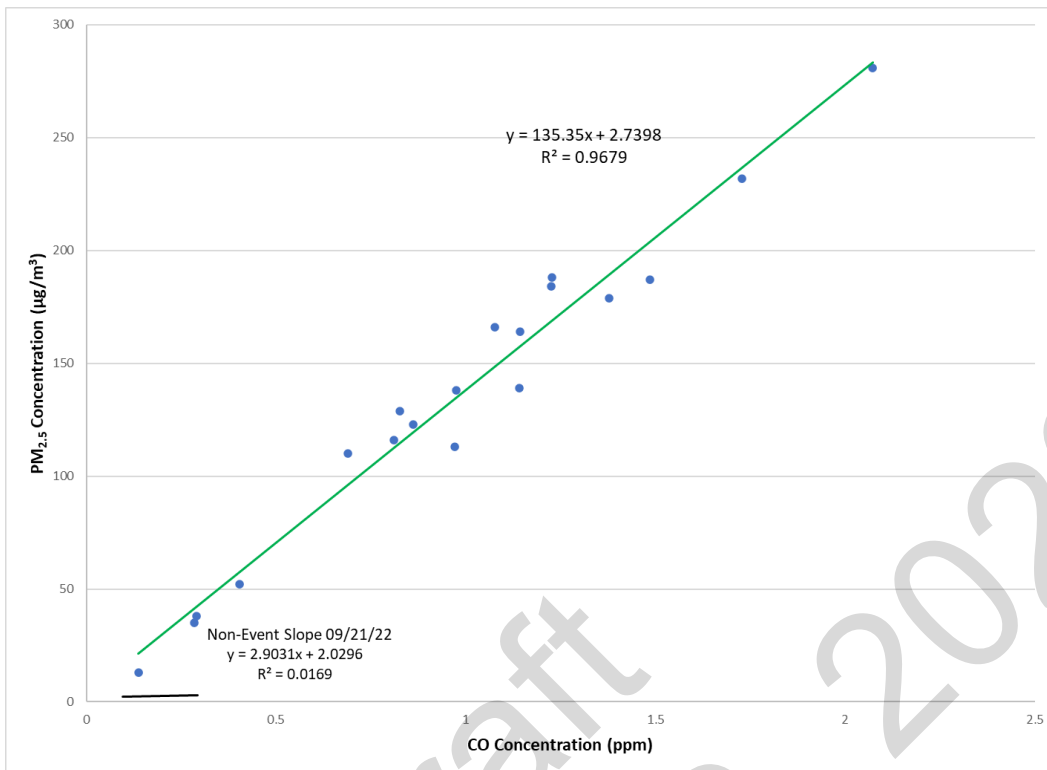


Figure 4-23: Hourly PM_{2.5}/CO at Sparks on September 14, 2022

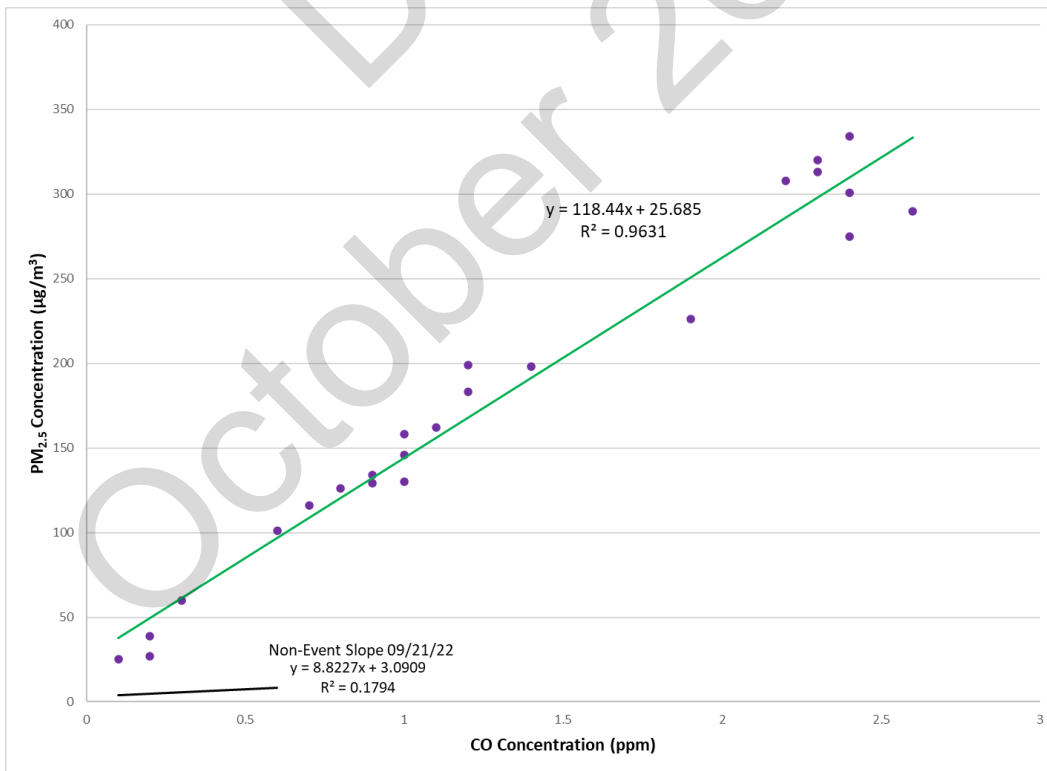


Figure 4-24: Hourly PM_{2.5}/CO at Reno4 on September 15, 2022

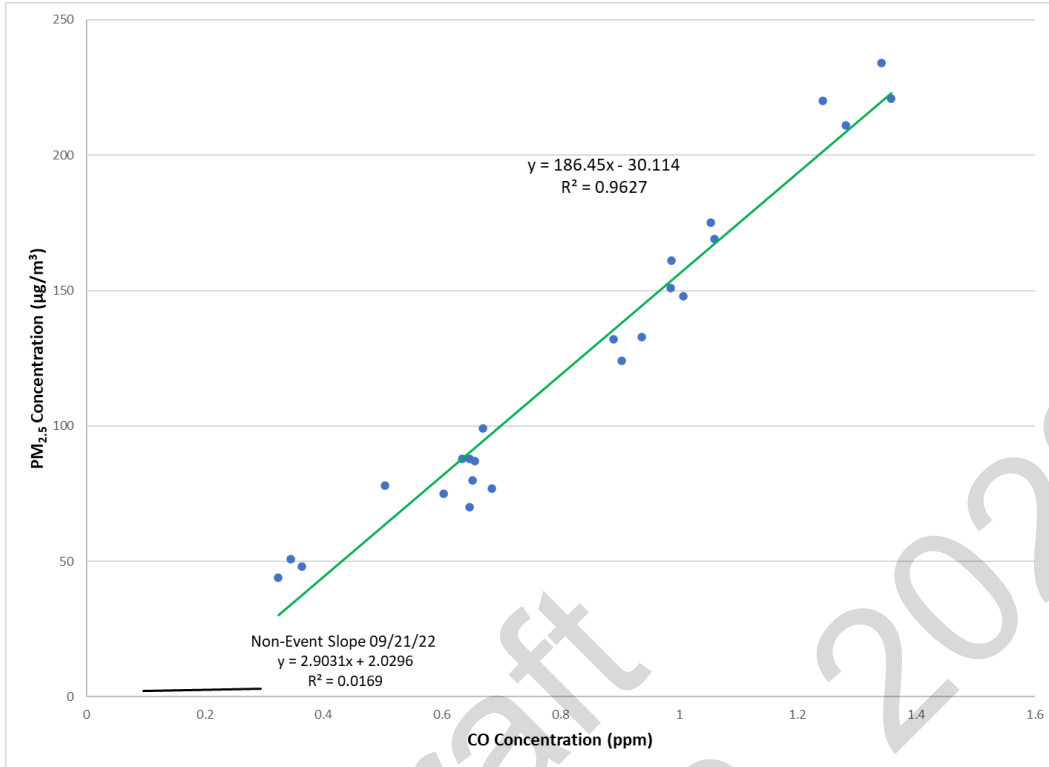
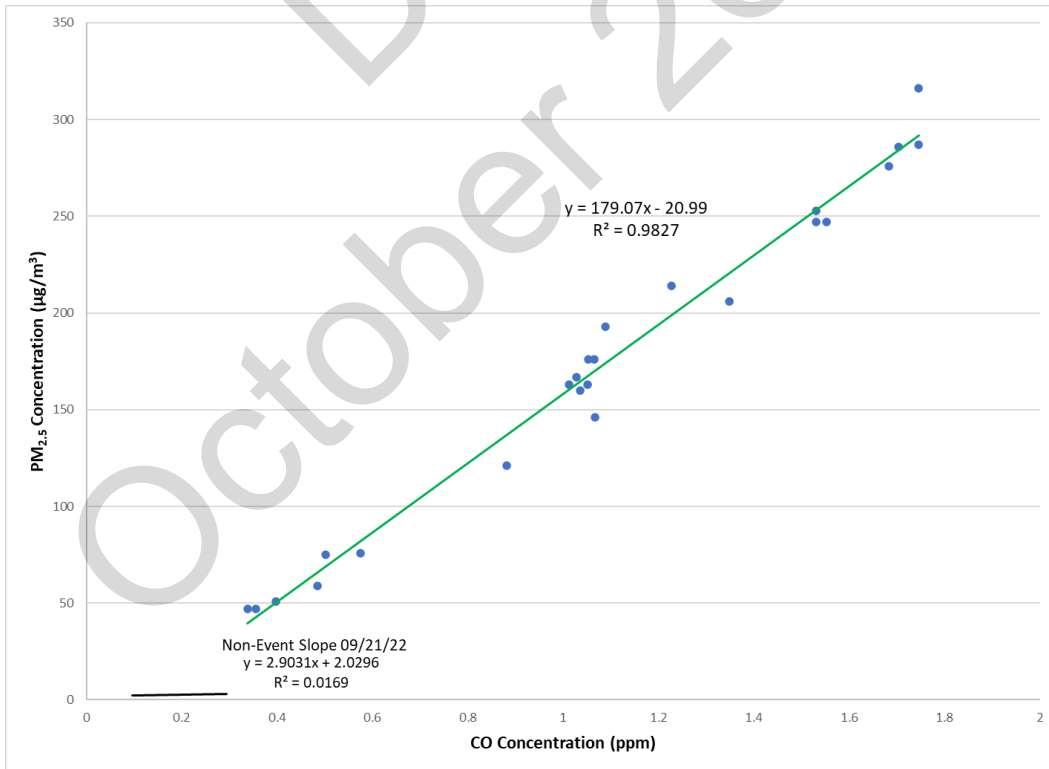


Figure 4-25: Hourly PM_{2.5}/CO at Reno4 on September 16, 2022



4.3.4 PM₁₀/CO Ratio

When an area has the presence of wildfire smoke, the CO and PM₁₀ concentrations should also be correlated, although not as strongly correlated as CO and PM_{2.5}. Similar to section 4.3.3, a linear regression analysis was completed with CO and PM₁₀ data on the days of the exceedances and compared to a non-event day on September 21, 2022. Since the Toll monitoring site does not measure CO, this same analysis was done using Reno4 as a proxy. The equation and coefficient of determination that resulted from the linear regression on the non-event day is shown below.

Non-Event Slopes (September 21, 2022)

Reno4: $y = 22.484x + 5.3048$	$R^2 = 0.1408$
Sparks: $y = 6.9896x + 8.1818$	$R^2 = 0.0282$

As can be seen in Figure 4-26 through 4-30, a strong correlation was found on the days of the exceedances between PM₁₀ and CO concentration. The coefficients of determination on the exceedance days ranged from 0.9087 to 0.9849. Even at the minimum, this analysis signals a strong presence of wildfire smoke on the days of the exceedances.

Figure 4-26: Hourly PM₁₀/CO at Reno4 on September 11, 2022

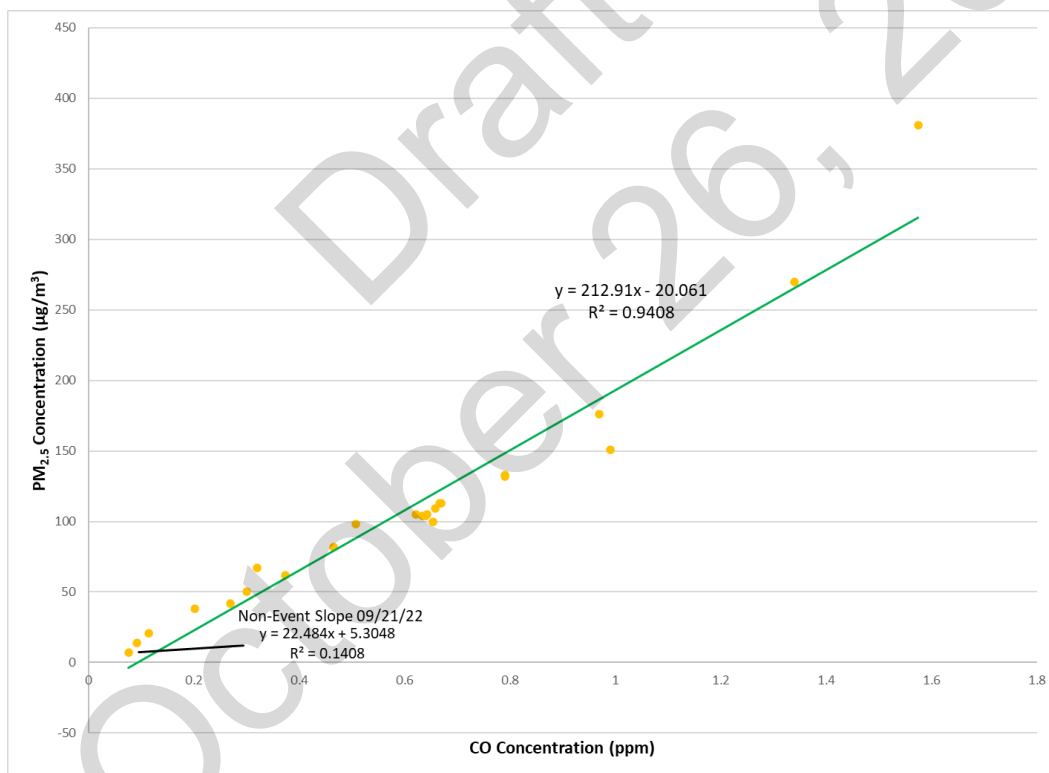


Figure 4-27: Hourly PM₁₀/CO at Reno4 on September 14, 2022

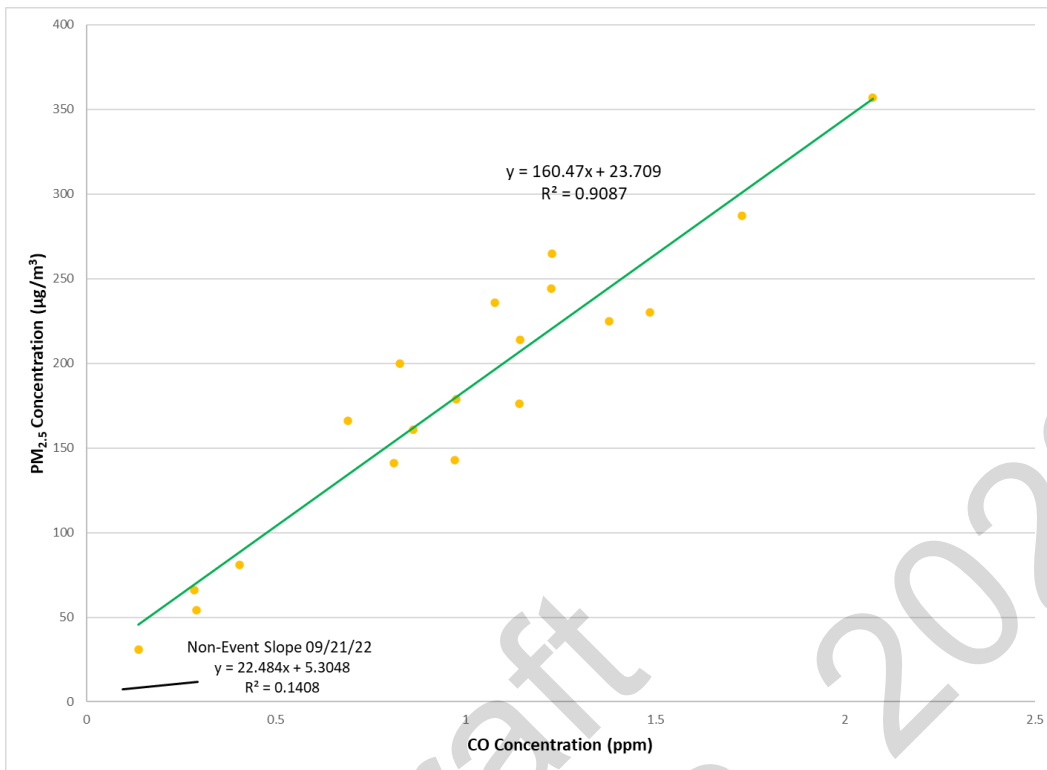


Figure 4-28: Hourly PM₁₀/CO at Sparks on September 14, 2022

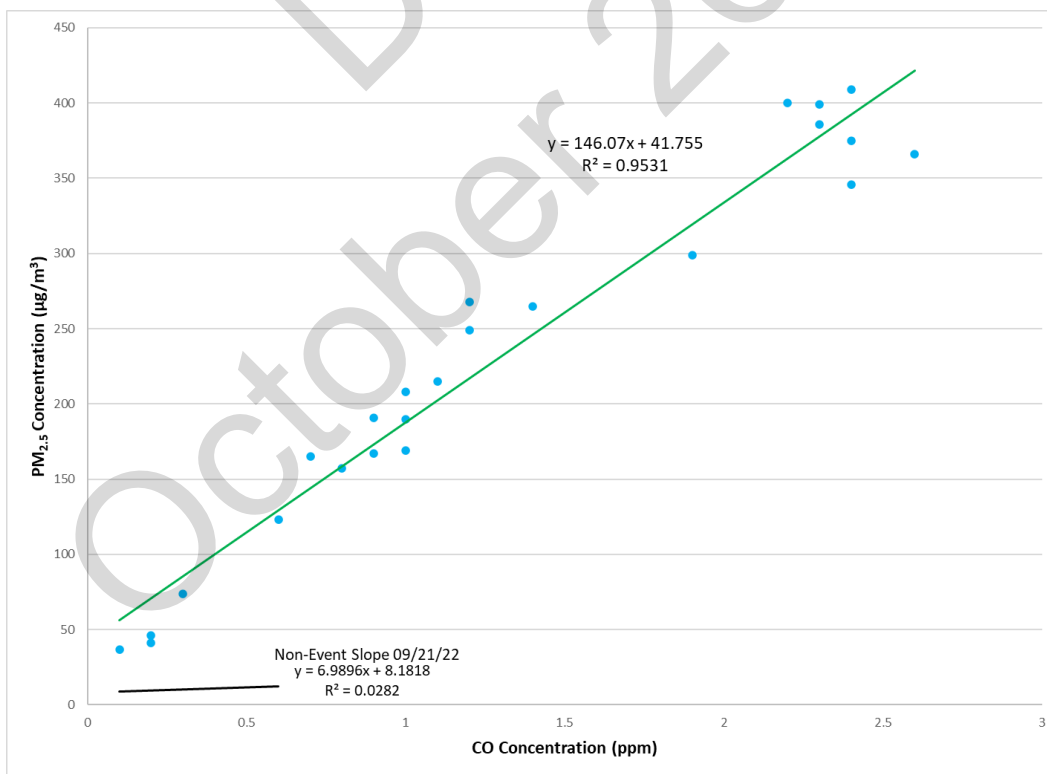


Figure 4-29: Hourly PM₁₀/CO at Reno4 on September 15, 2022

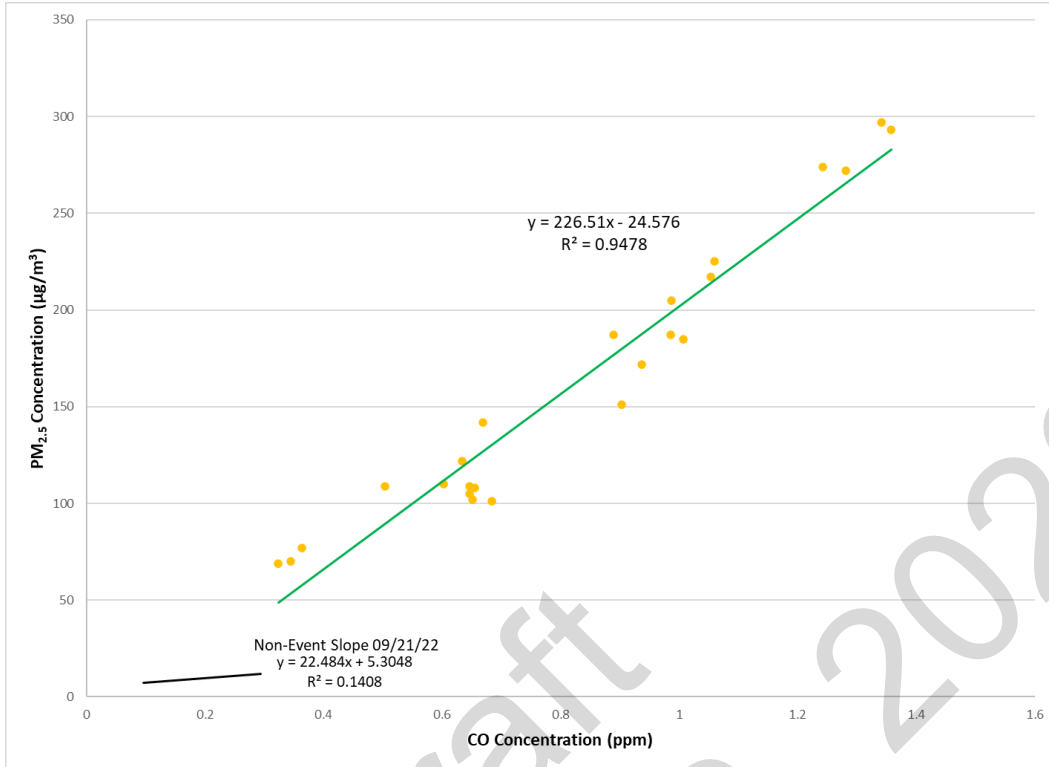
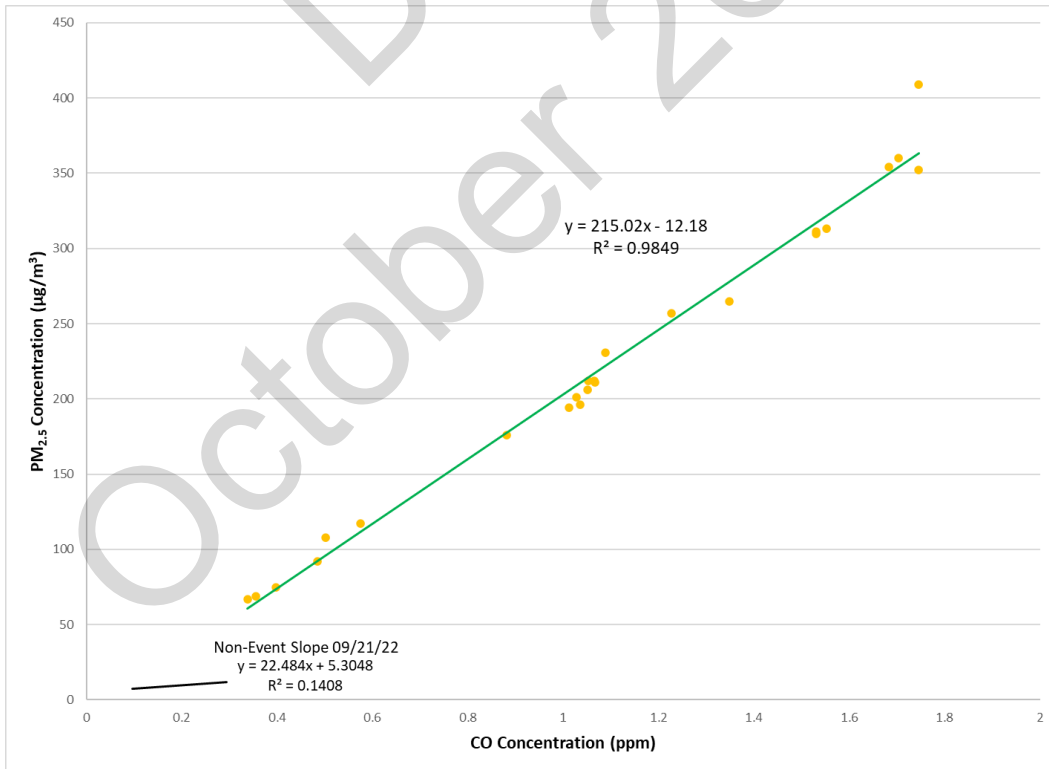


Figure 4-30: Hourly PM₁₀/CO at Reno4 on September 16, 2022



4.4 Trajectory Analysis

A trajectory analysis was completed for the event using the Hybrid Single Particle Lagrangian Integrated Trajectory (HYSPLIT) model to compute simple air parcel trajectories and determine where the smoke originated from. The HYSPLIT model's calculation method is a hybrid between the Lagrangian approach, which uses a moving frame of reference as the air parcels move from their initial location, and the Eulerian approach, which uses a fixed three-dimensional grid as a frame of reference. The trajectory models in this section were created with the EPA AirNow-Tech Navigator page and the HYSPLIT model was provided by NOAA's Air Resources Laboratory. The model used the North American Mesoscale Model (NAM) 12-kilometer domain. Each HYSPLIT was completed at 50, 1000, and 2500 meters above ground level (agl). These values were chosen to best illustrate the dynamics of the air mass that affected the Washoe County region before and during the days of the exceedances. According to NWS-Reno, 50 meters agl is a good proxy for boundary layer height in the region. The HYSPLIT figures below include the "HMS Fire" layer which shows the location of each fire, the "HMS Smoke" layer which shows where smoke is at the time, and the 24-hour, midnight to midnight average PM₁₀ concentration in µg/m³ for each air monitoring site in the region.

4.4.1 Monitoring Site Analysis - Backward Trajectory

In order to accurately understand where the affected air mass originated from, AQMD completed 24-hour backward trajectory HYSPLIT models from the affected PM₁₀ monitors at Toll, Reno4, and Sparks. In the figures below, the green line denotes 50 meters agl, the blue line denotes 1000 meters agl, and the red line denotes 2500 meters agl. The points on each line denote 6-hour increments. Because this section is for backward trajectory HYSPLIT models, the first point on the line would denote 6-hours before the start time of the model.

Figure 4-31: Backward Trajectory from Toll starting September 11, 2022 at 0000 PST

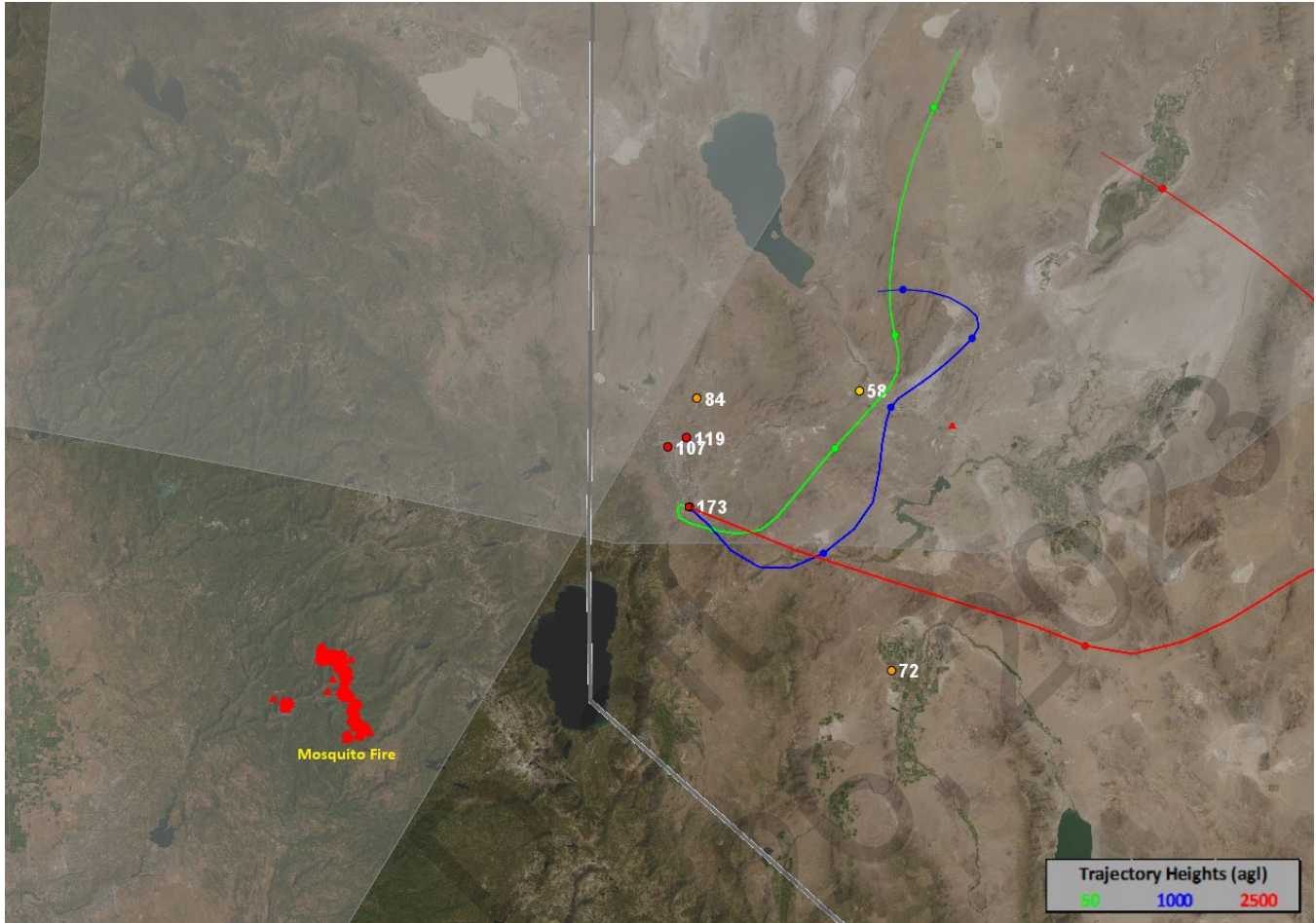


Figure 4-32: Backward Trajectory from Toll starting September 12, 2022 at 0000 PST

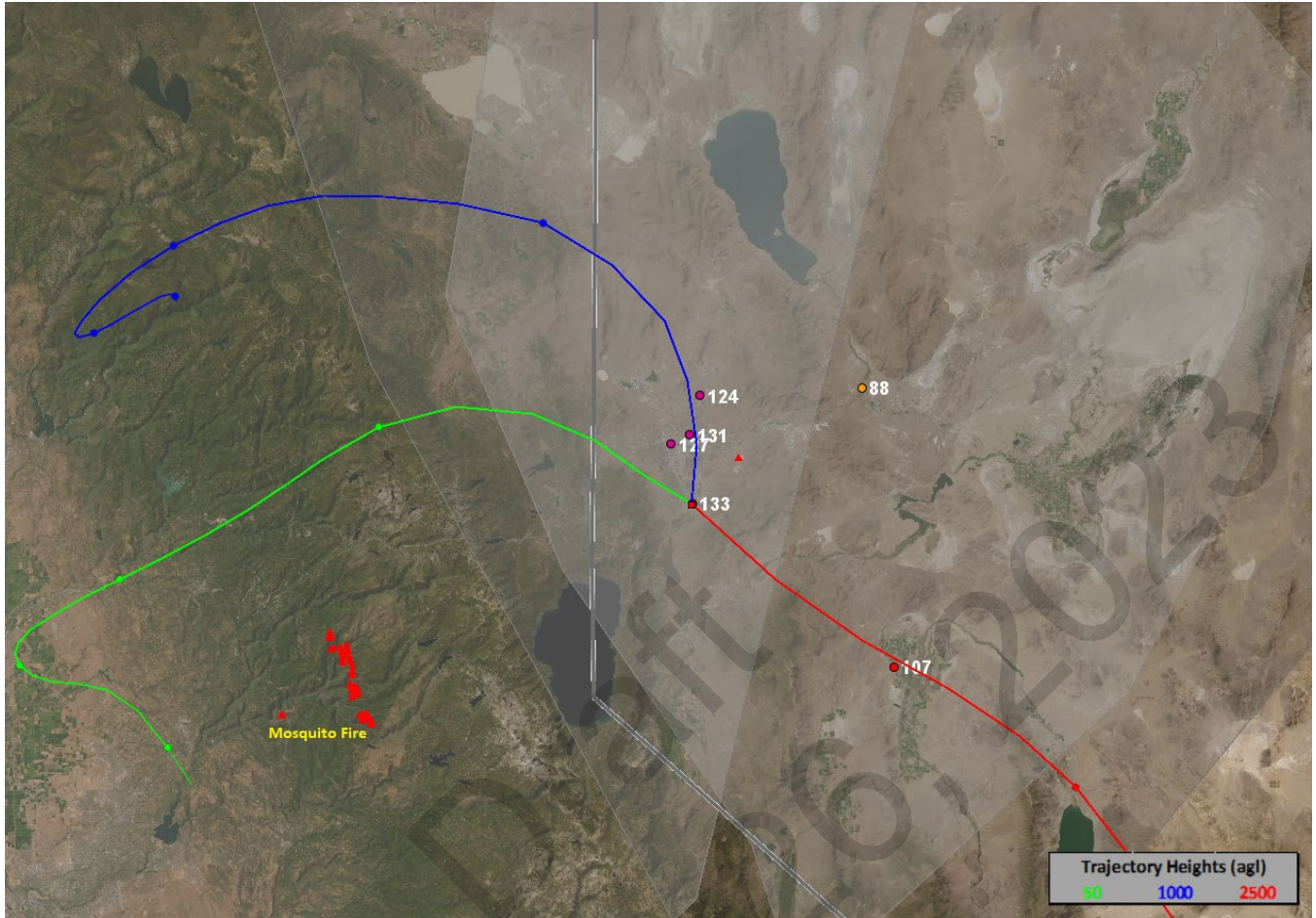


Figure 4-33: Backward Trajectory from Reno4 starting September 14, 2022 at 0000 PST

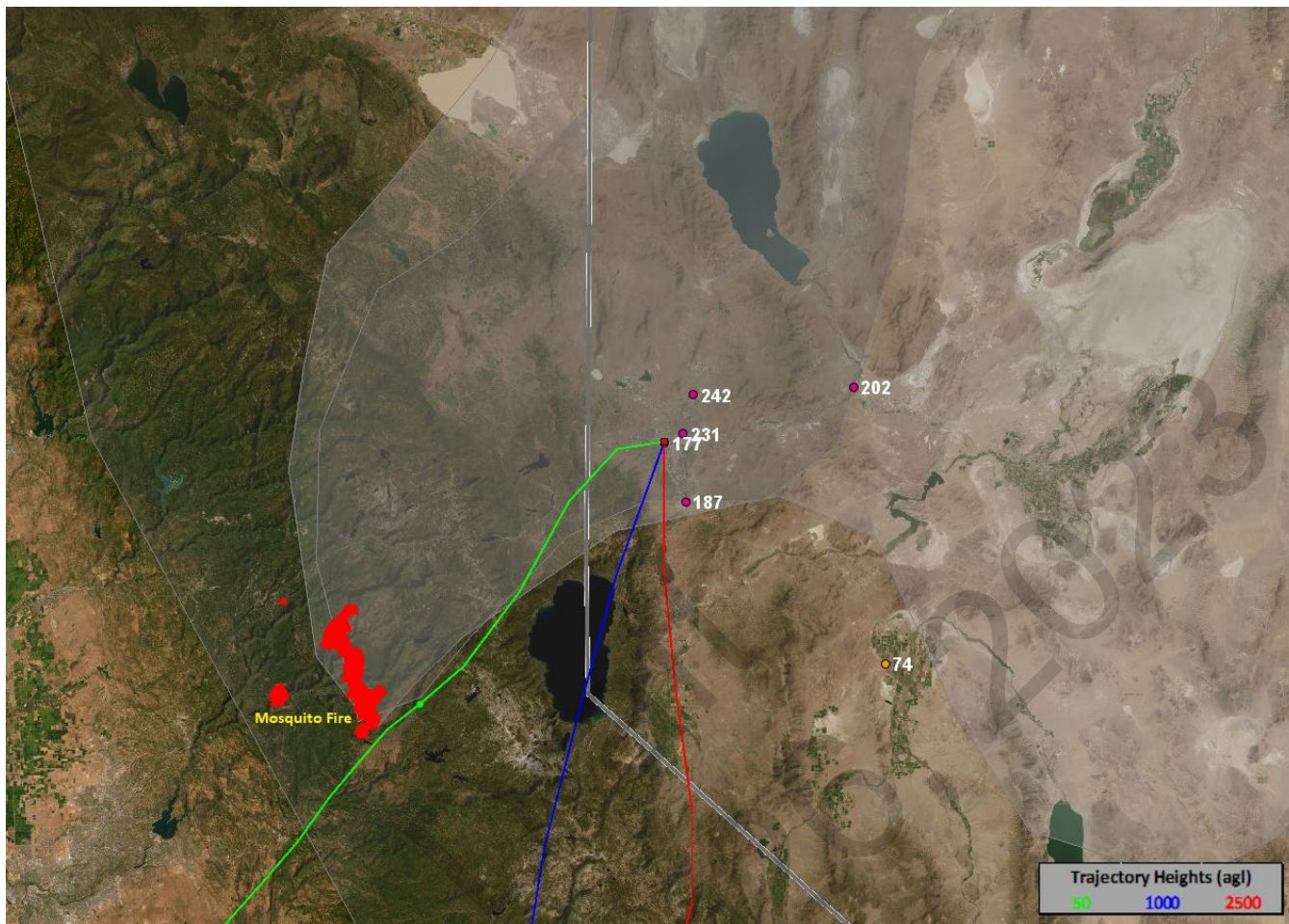


Figure 4-34: Backward Trajectory from Sparks starting September 14, 2022 at 0000 PST

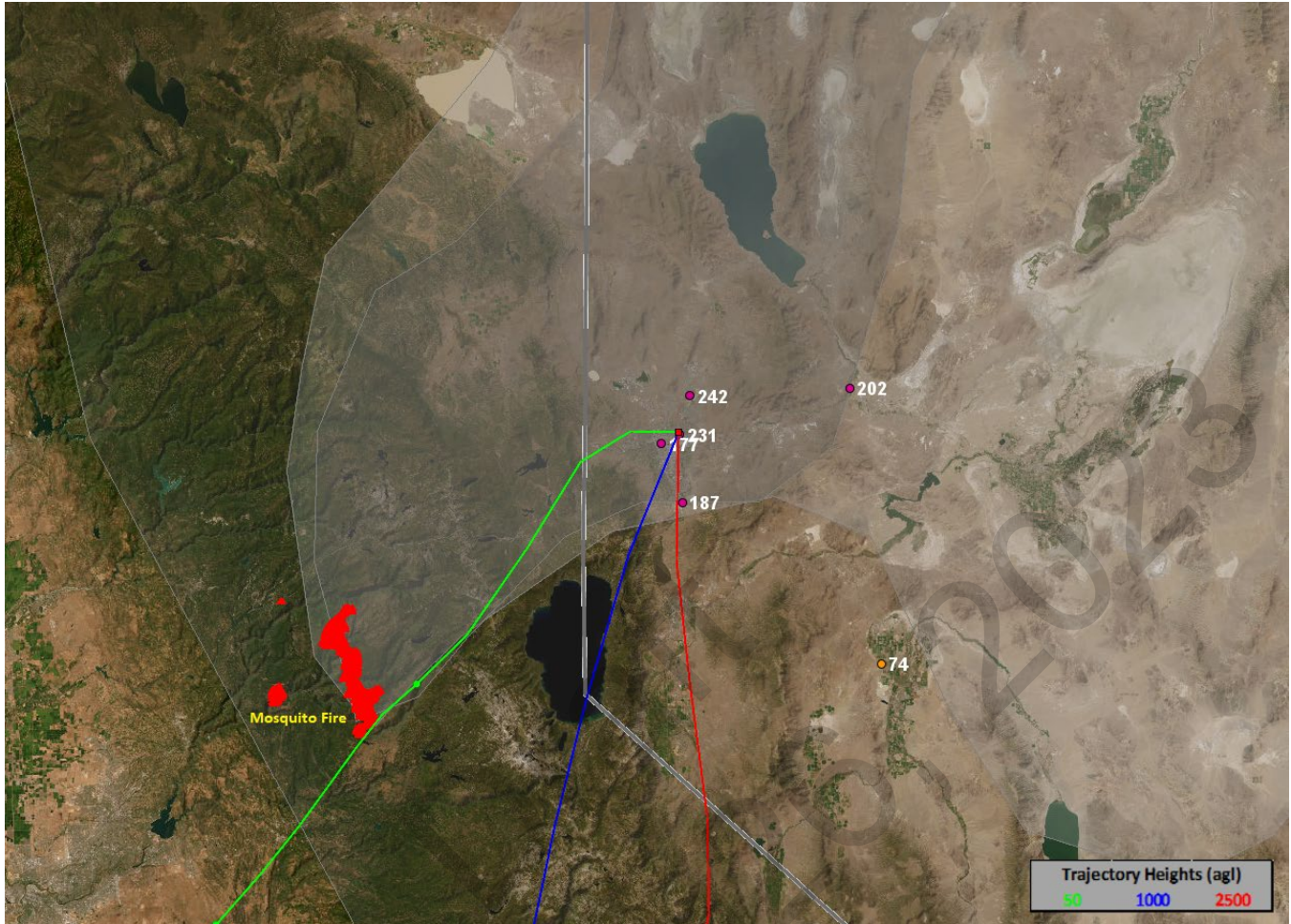
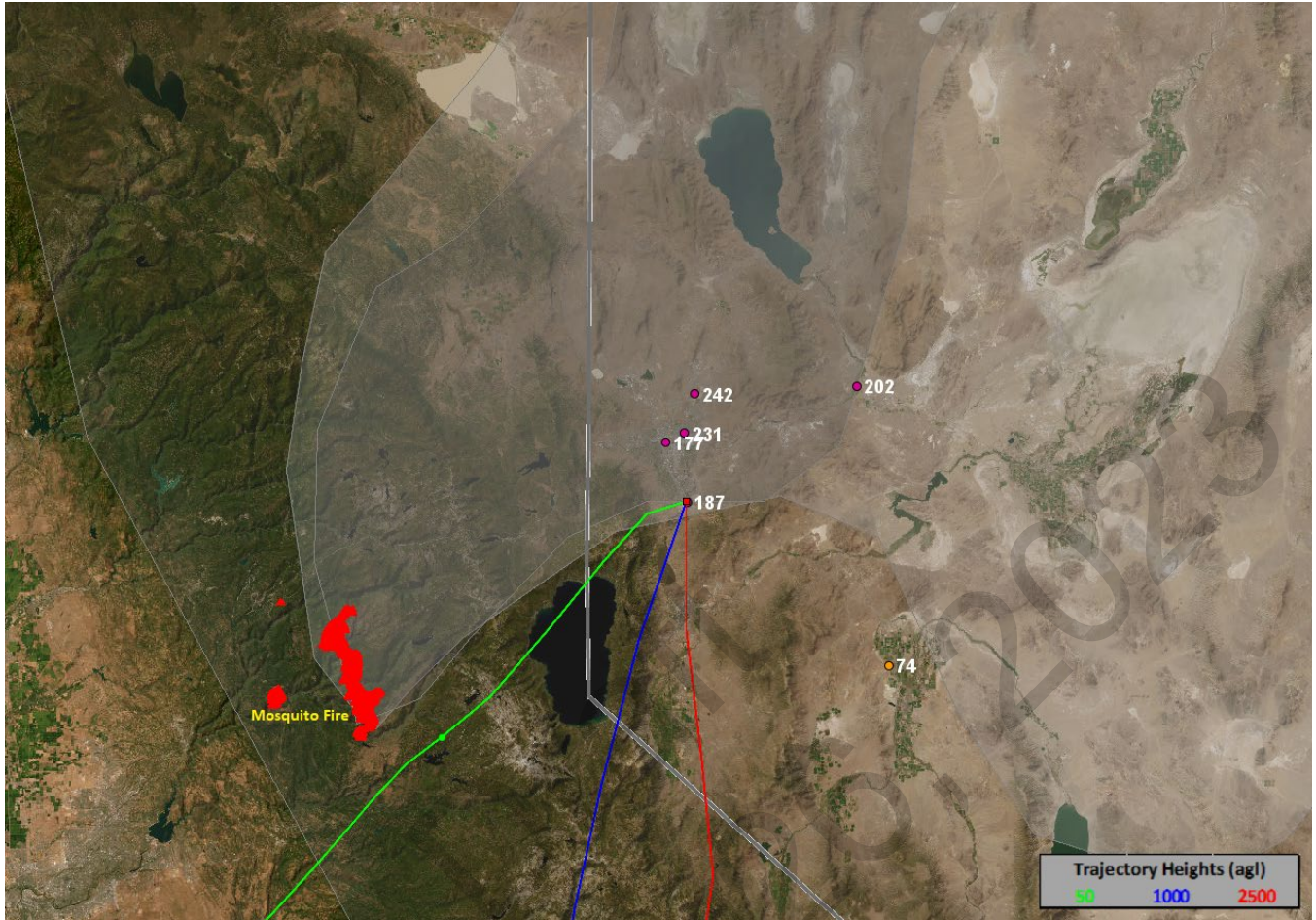


Figure 4-35: Backward Trajectory from Toll starting September 14, 2022 at 0000 PST



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Figure 4-36: Backward Trajectory from Reno4 starting September 15, 2022 at 0000 PST

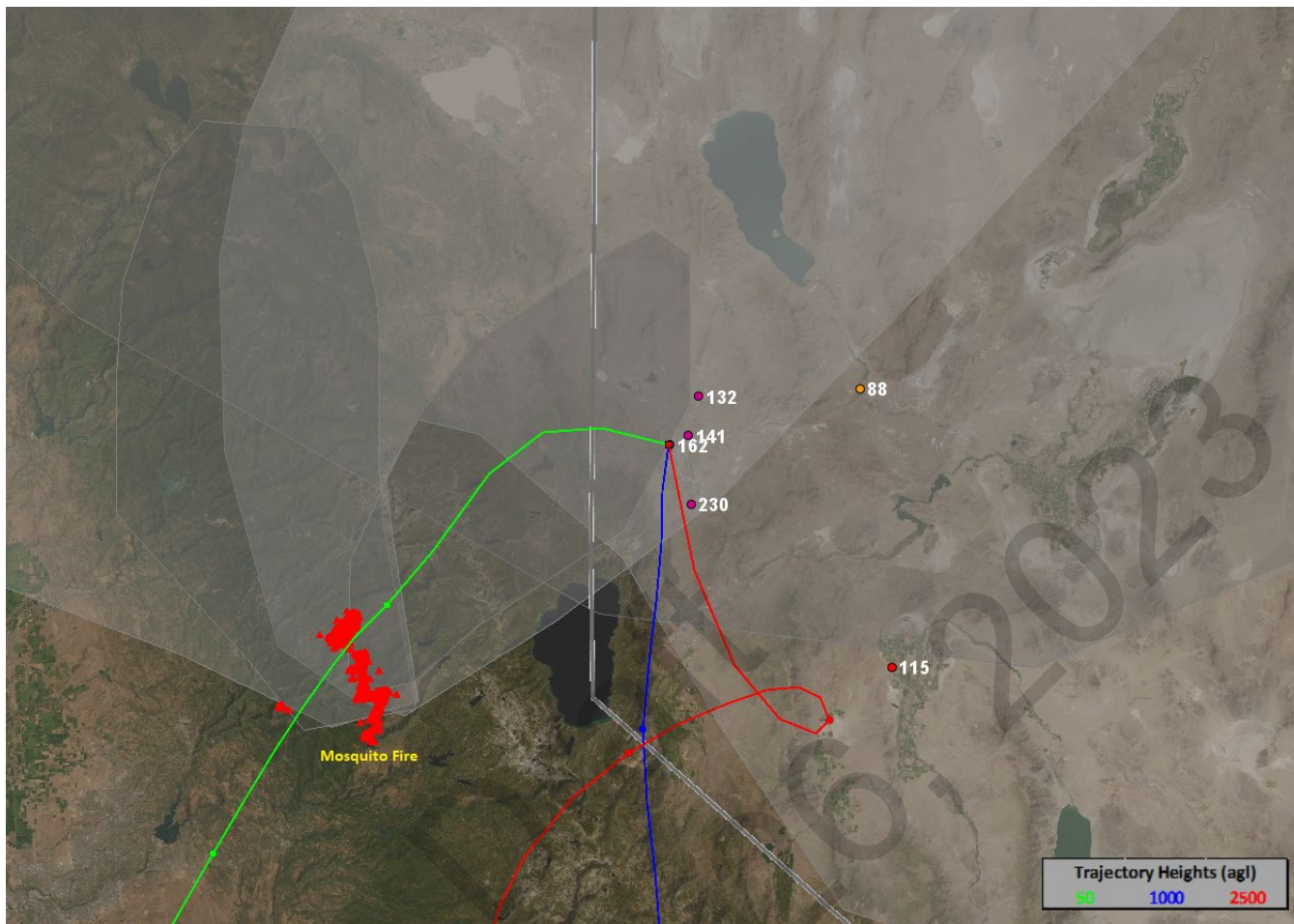


Figure 4-37: Backward Trajectory from Sparks starting September 15, 2022 at 0000 PST

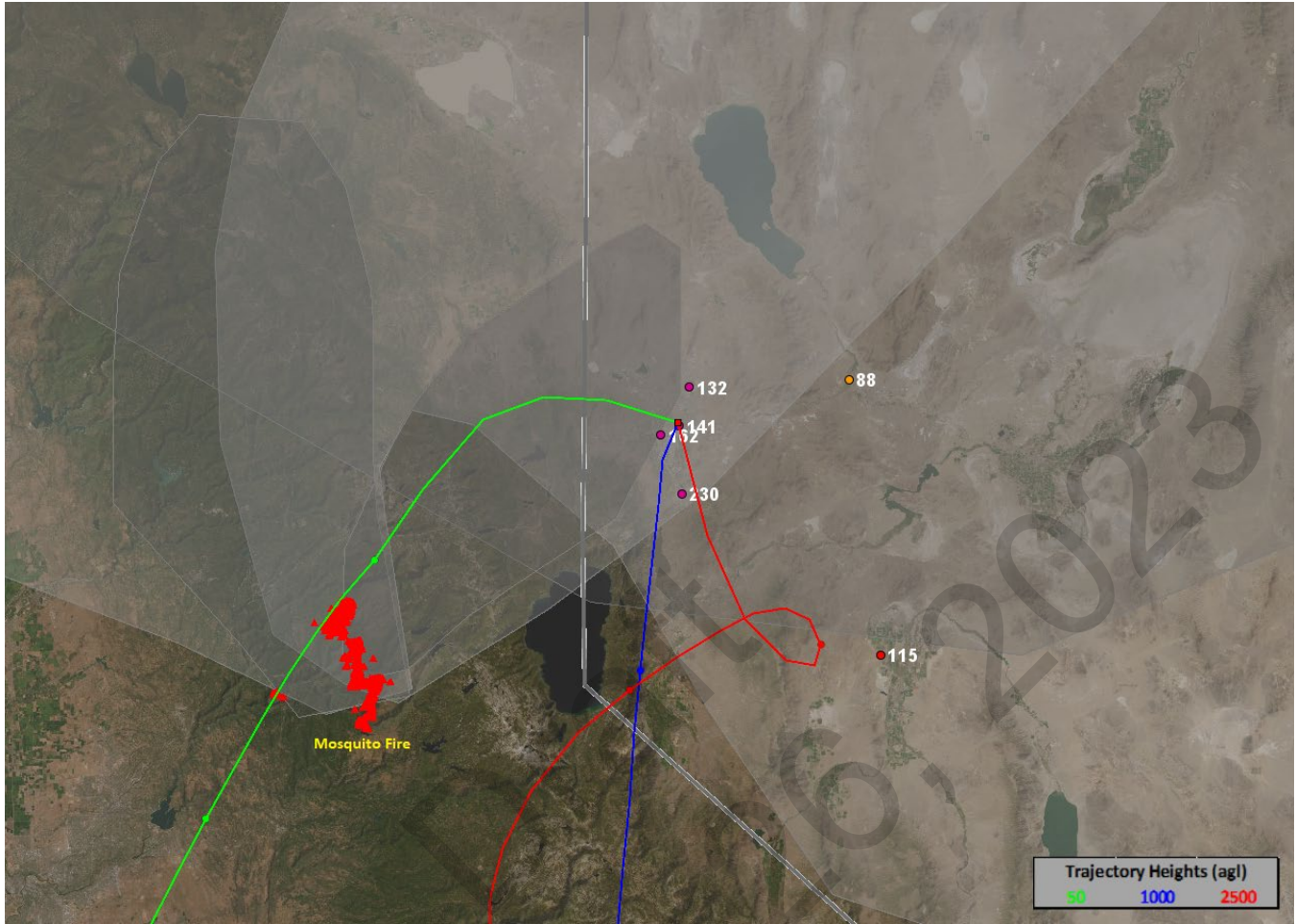


Figure 4-38: Backward Trajectory from Toll starting September 15, 2022 at 0000 PST

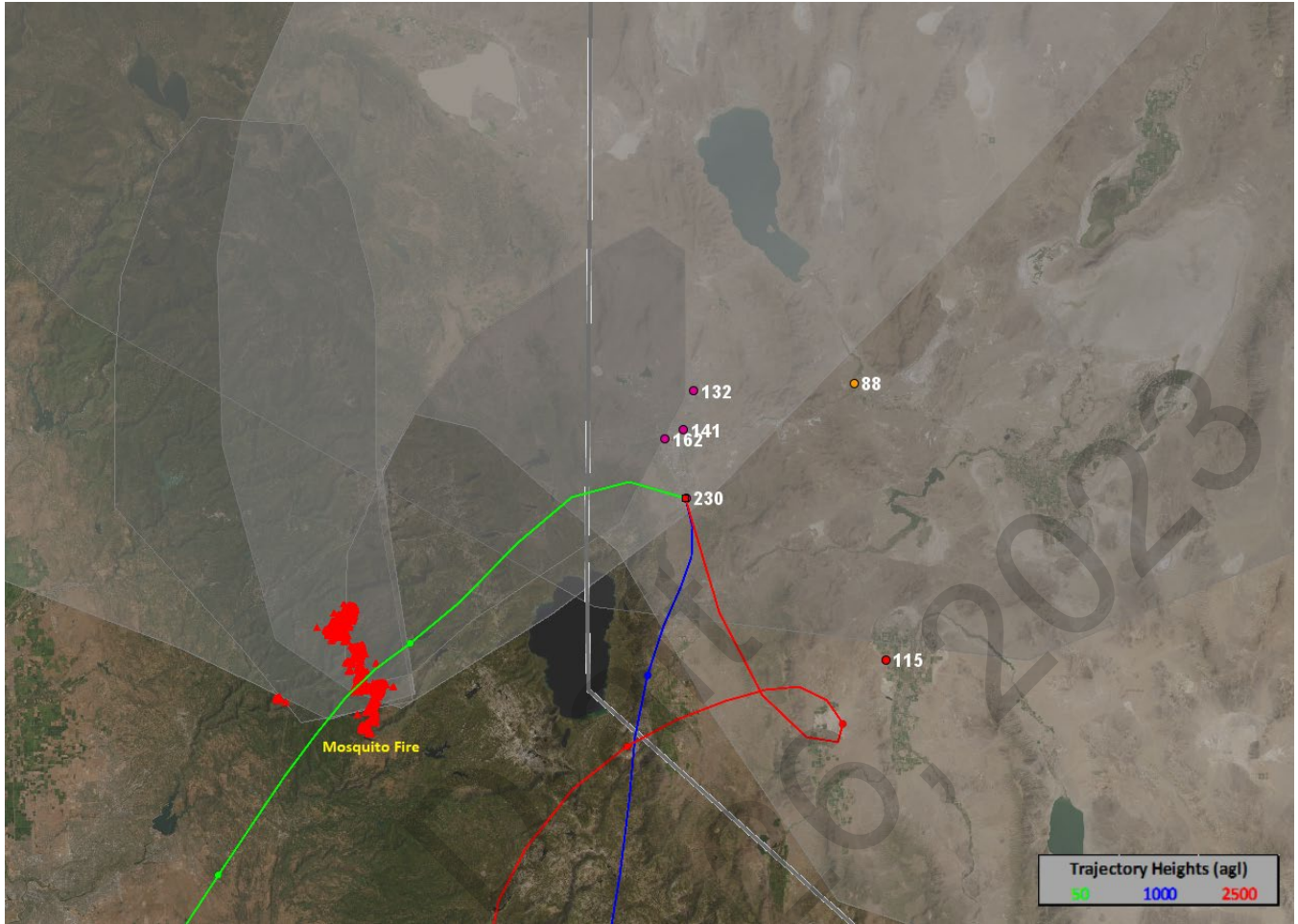


Figure 4-39: Backward Trajectory from Reno4 starting September 16, 2022 at 0000 PST

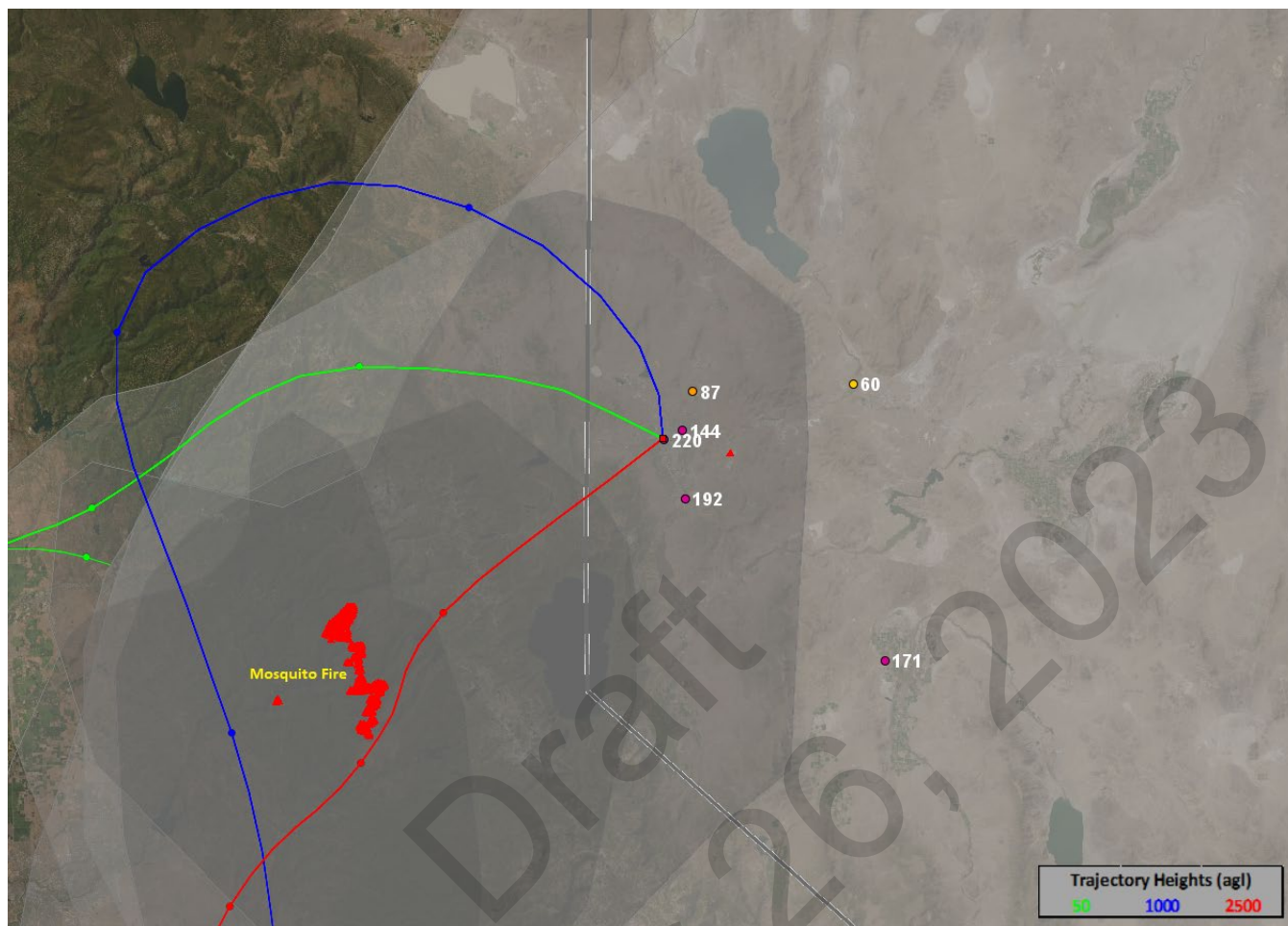
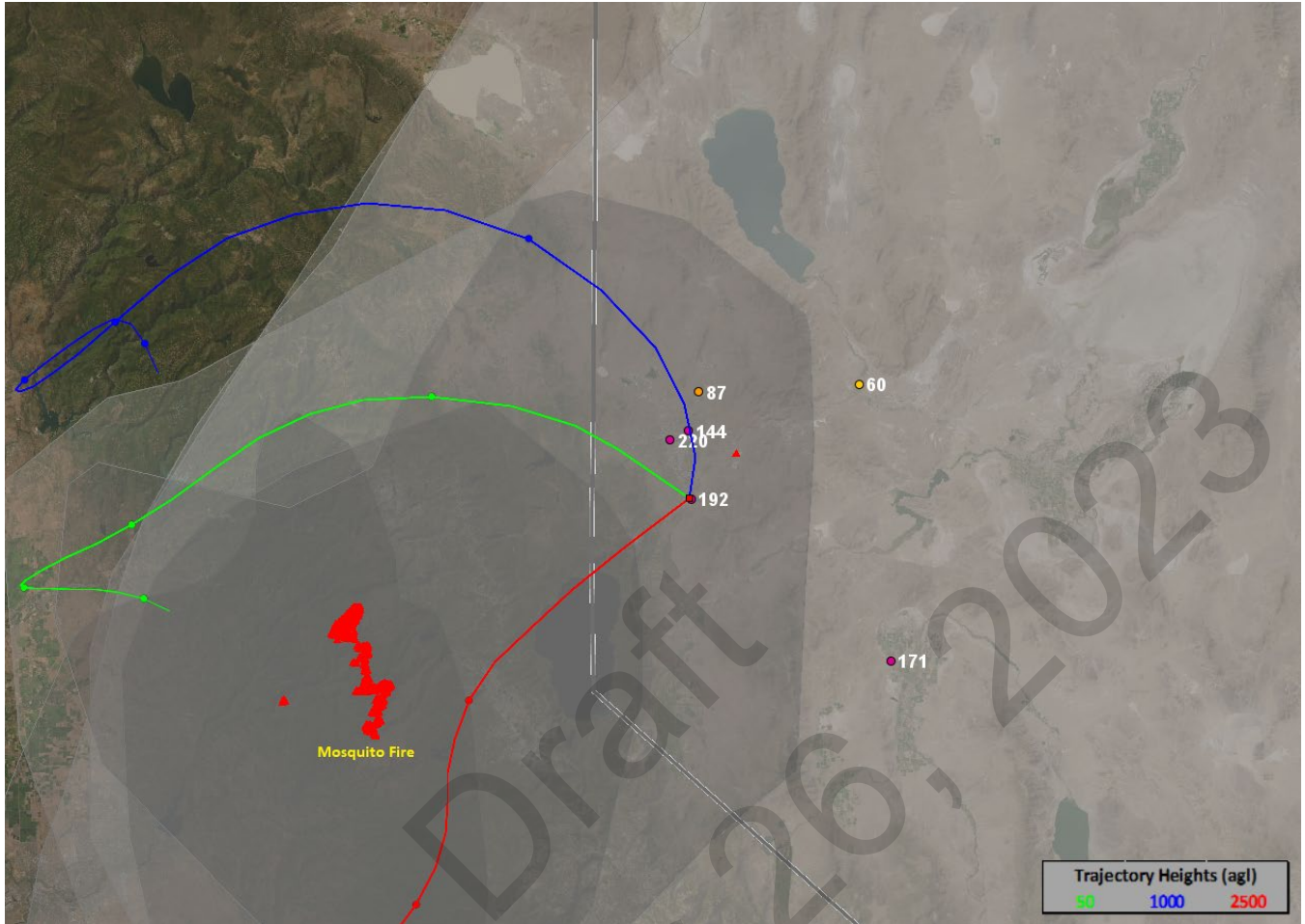


Figure 4-40: Backward Trajectory from Toll starting September 16, 2022 at 0000 PST



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Figure 4-41: Backward Trajectory from Reno4 starting September 17, 2022 at 0000 PST

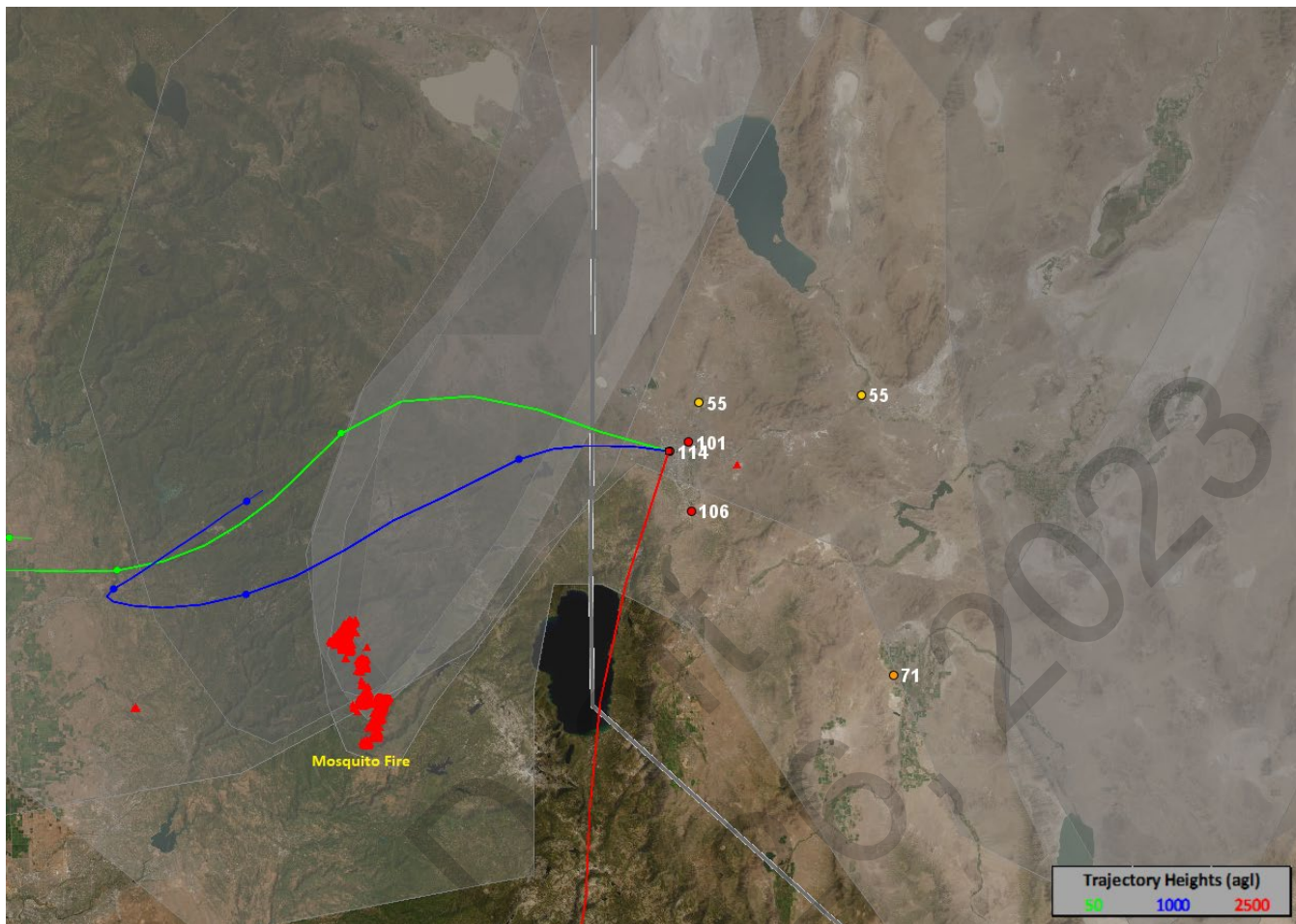
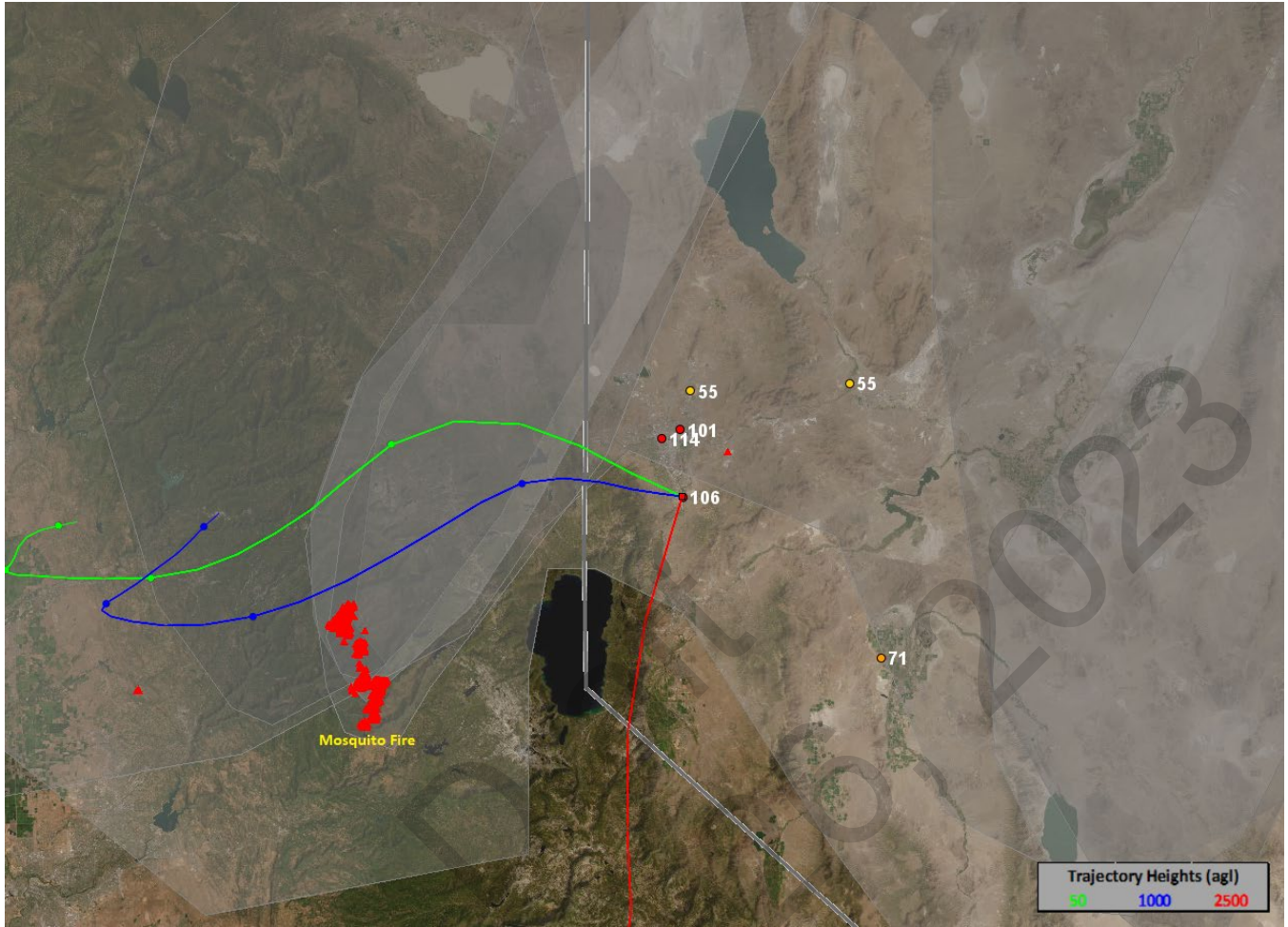


Figure 4-42: Backward Trajectory from Toll starting September 17, 2022 at 0000 PST



4.4.2 Source Analysis – Forward Trajectory

In order to fully understand where smoke emissions from each fire moved prior to and on the days of the exceedances, an emissions source analysis was done which included 24-hour forward trajectory HYSPLIT models from the Mosquito Fire. In the figures below, the green line denotes 50 meters agl, the blue line denotes 1000 meters agl, and the red line denotes 2500 meters agl. The points on each line denote 6-hour increments. Because this section is for forward trajectory HYSPLIT models, the first point on the line would denote 6-hours after the start time of the model.

Figure 4-43: Forward Trajectory from Mosquito Fire starting September 10, 2022 at 0000 PST

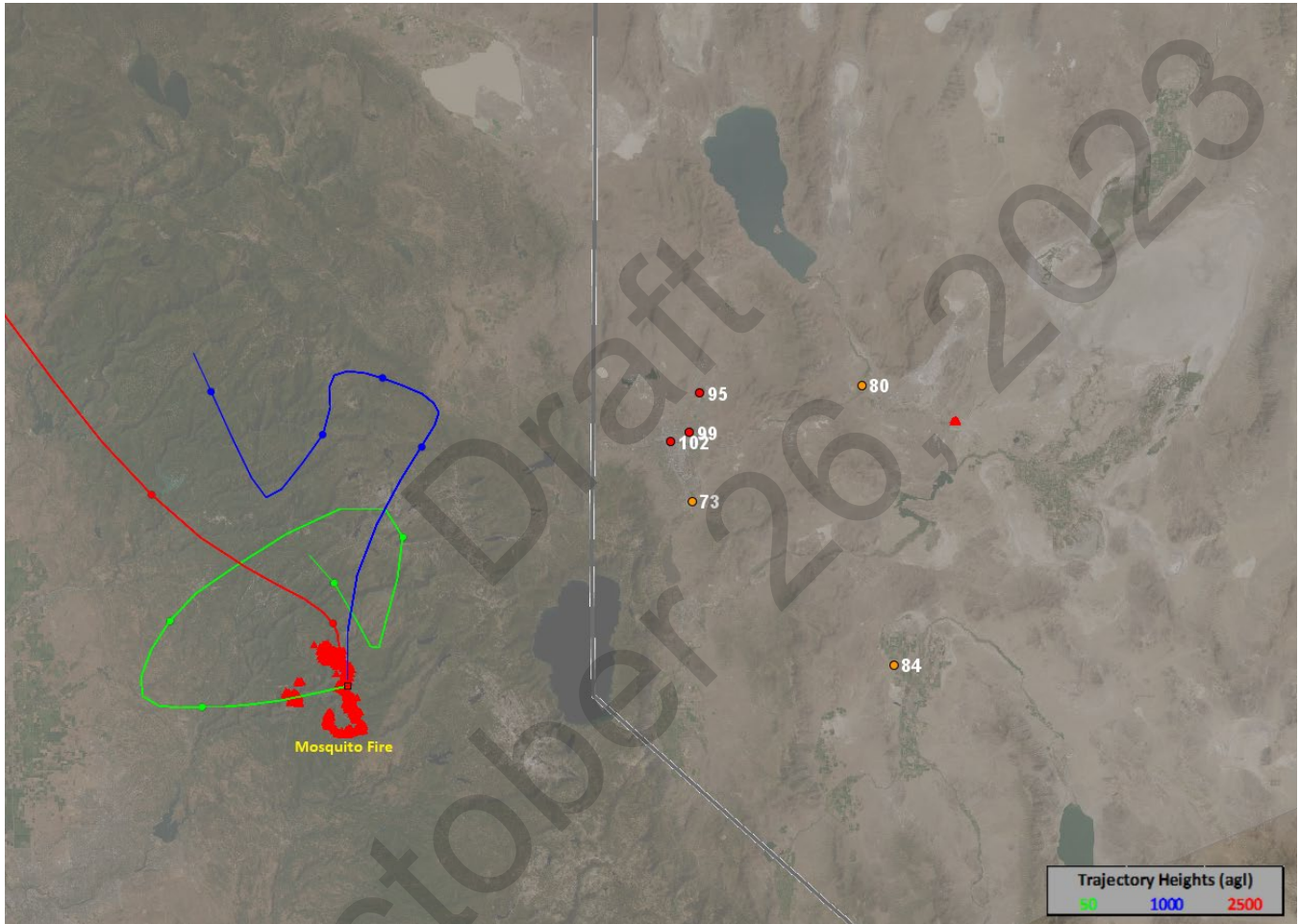


Figure 4-44: Forward Trajectory from Mosquito Fire starting September 11, 2022 at 0000 PST

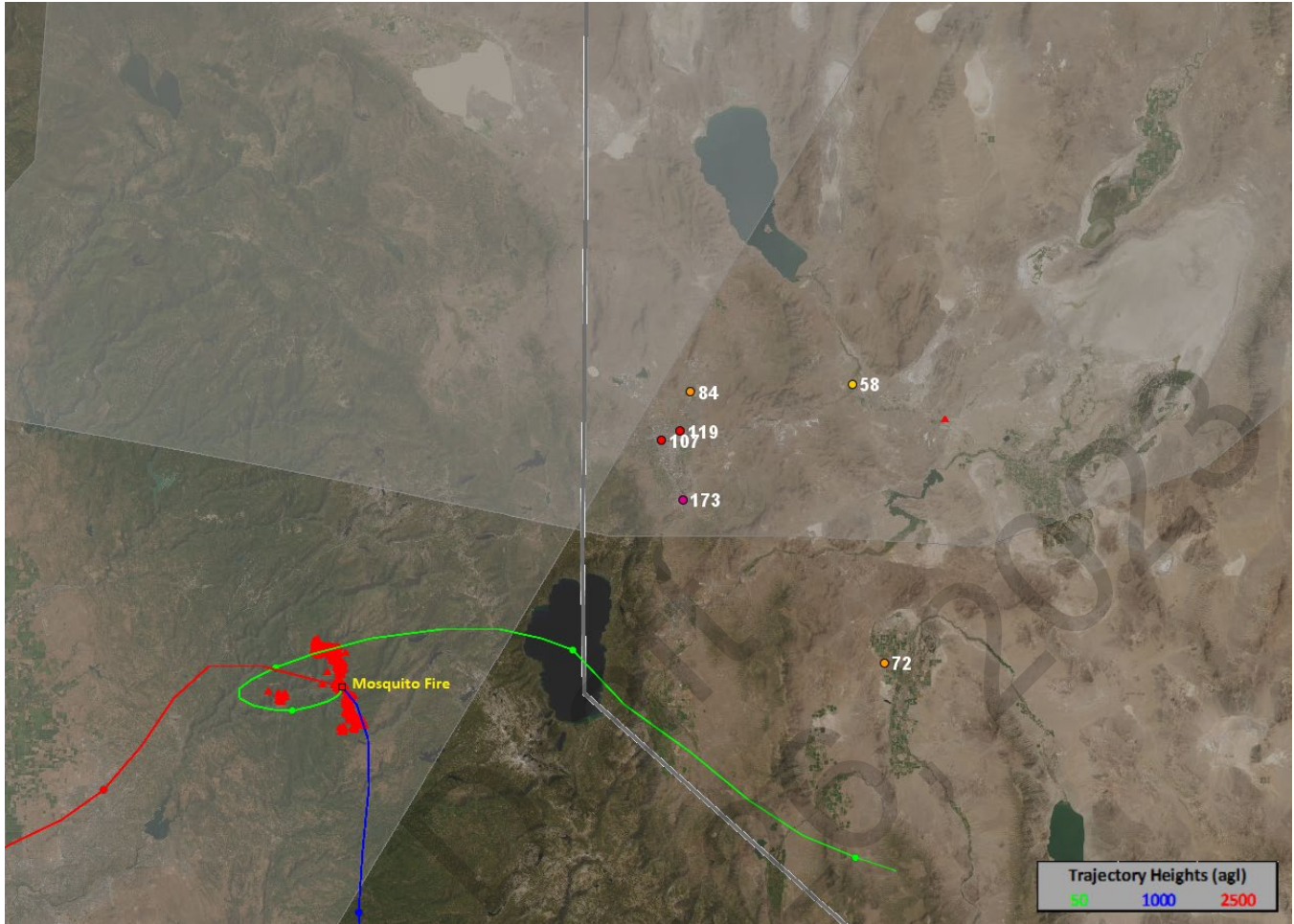


Figure 4-45: Forward Trajectory from Mosquito Fire starting September 13, 2022 at 0000 PST

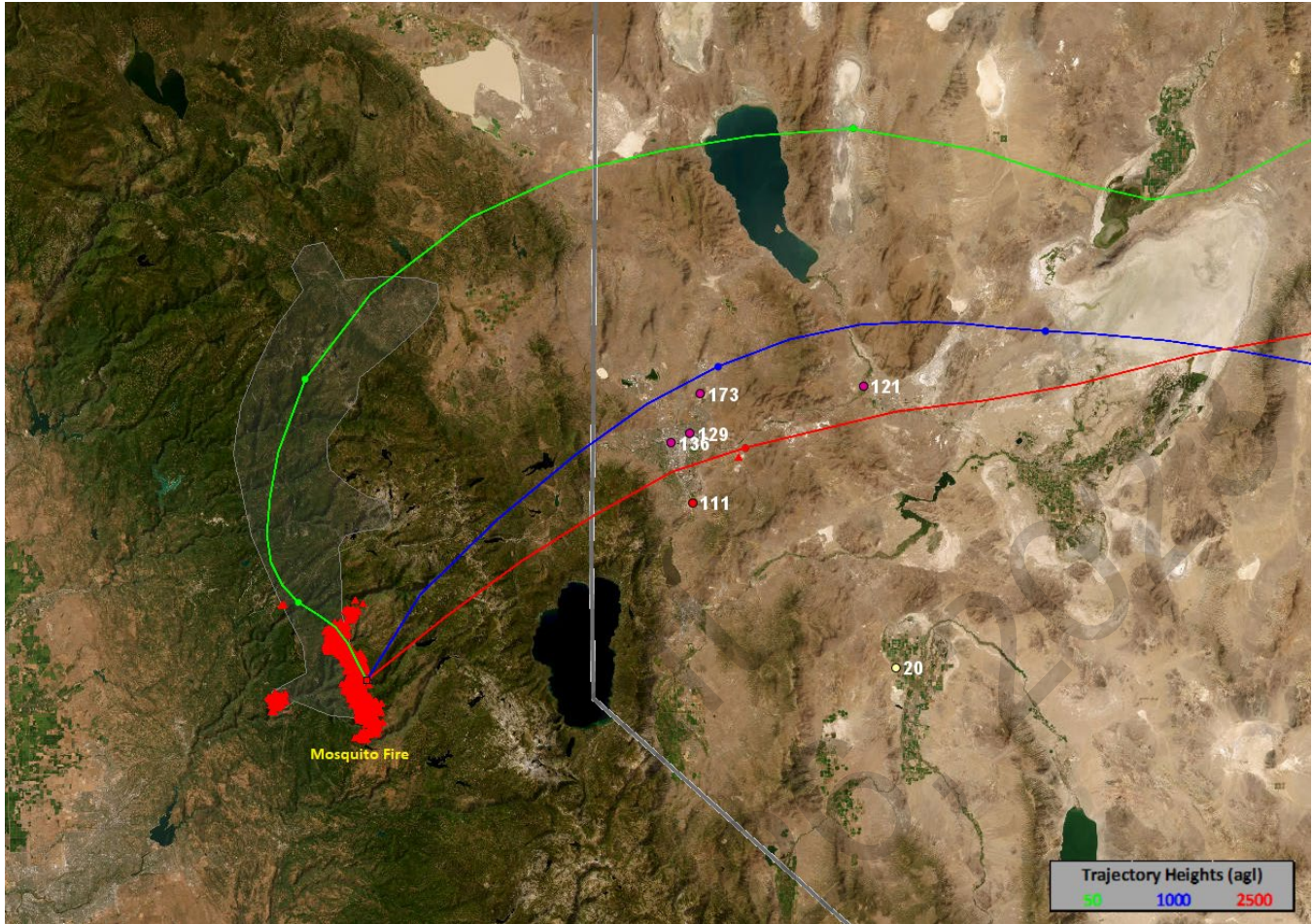


Figure 4-46: Forward Trajectory from Mosquito Fire starting September 14, 2022 at 0000 PST

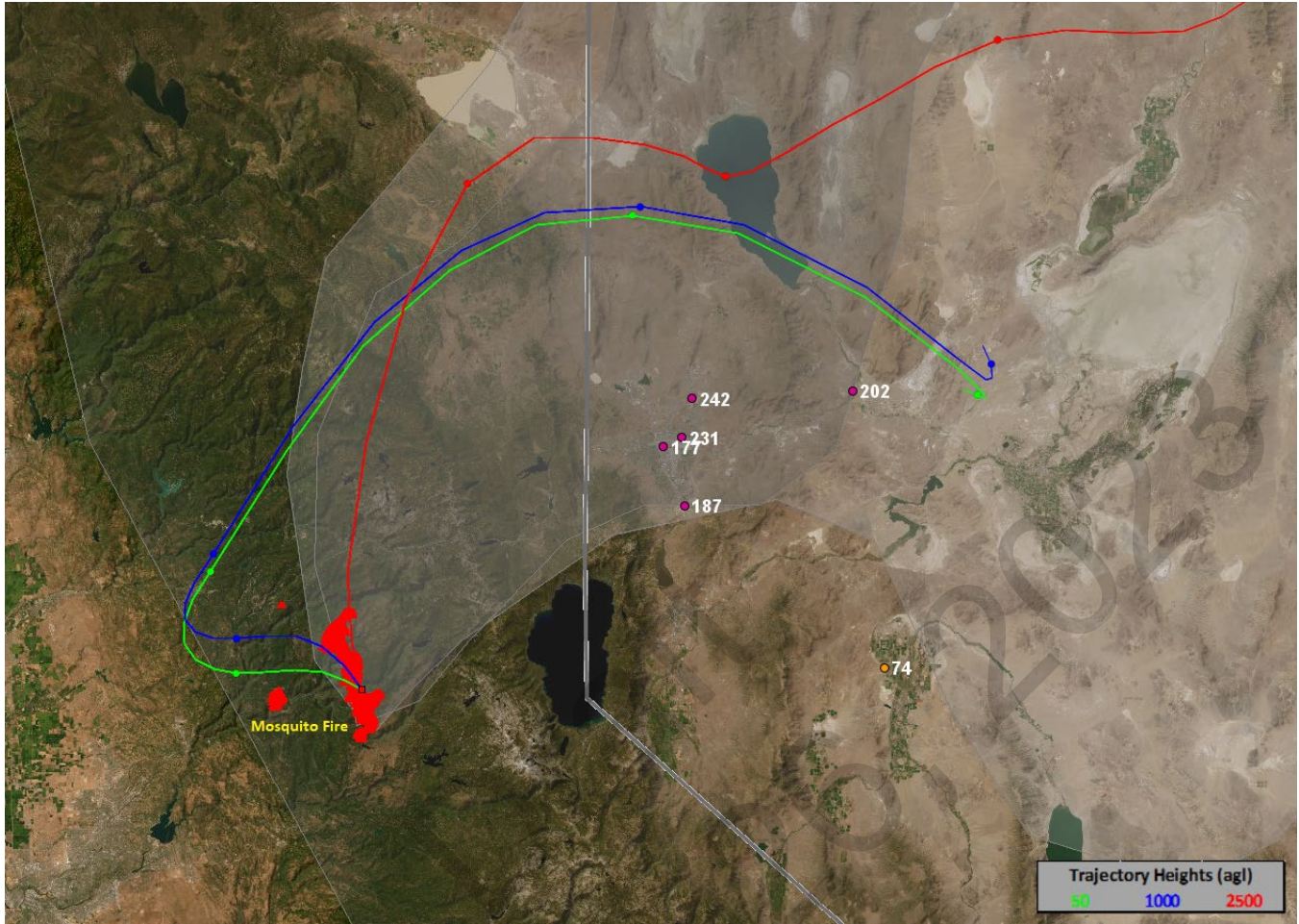


Figure 4-47: Forward Trajectory from Mosquito Fire starting September 15, 2022 at 0000 PST

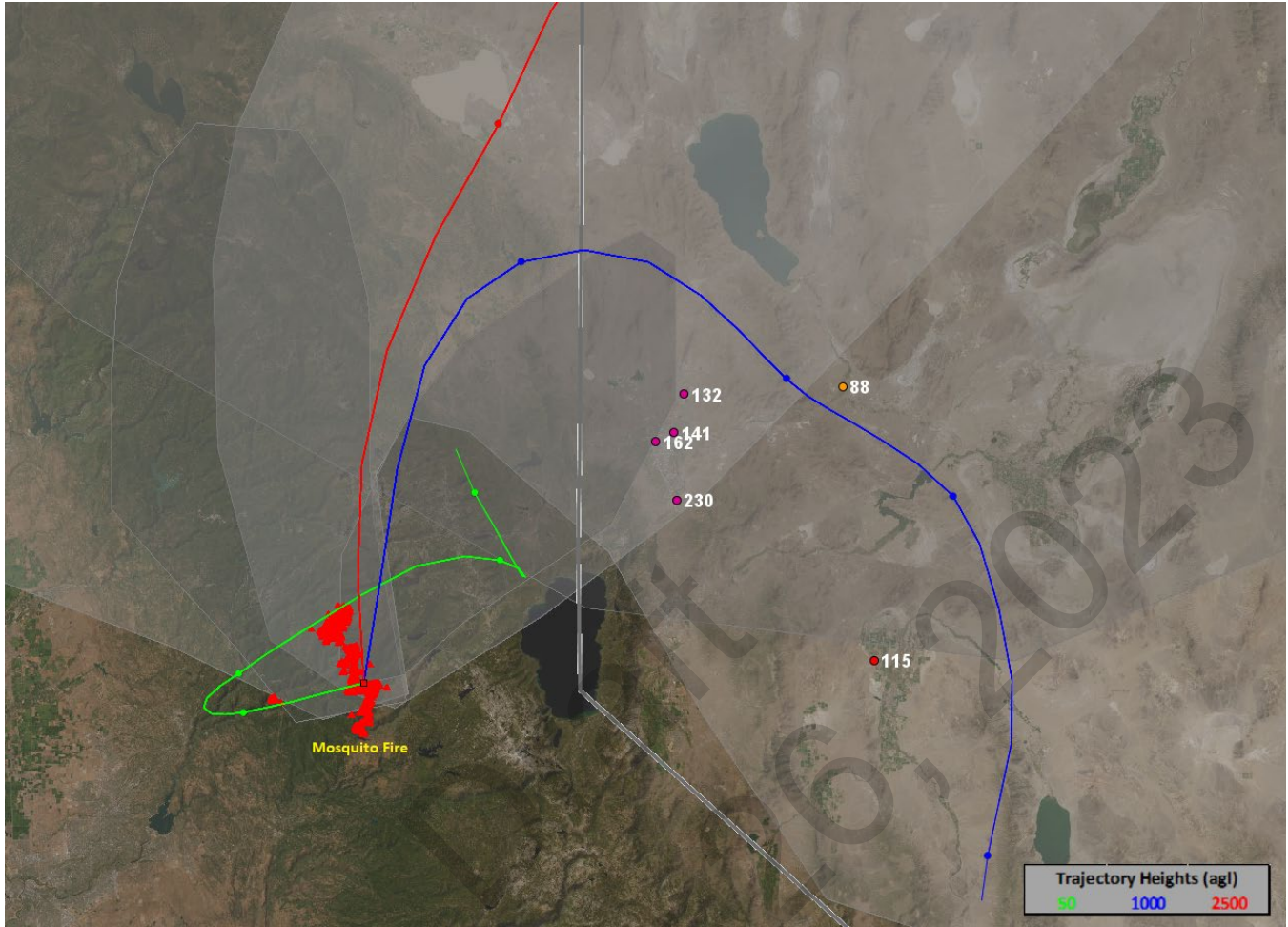
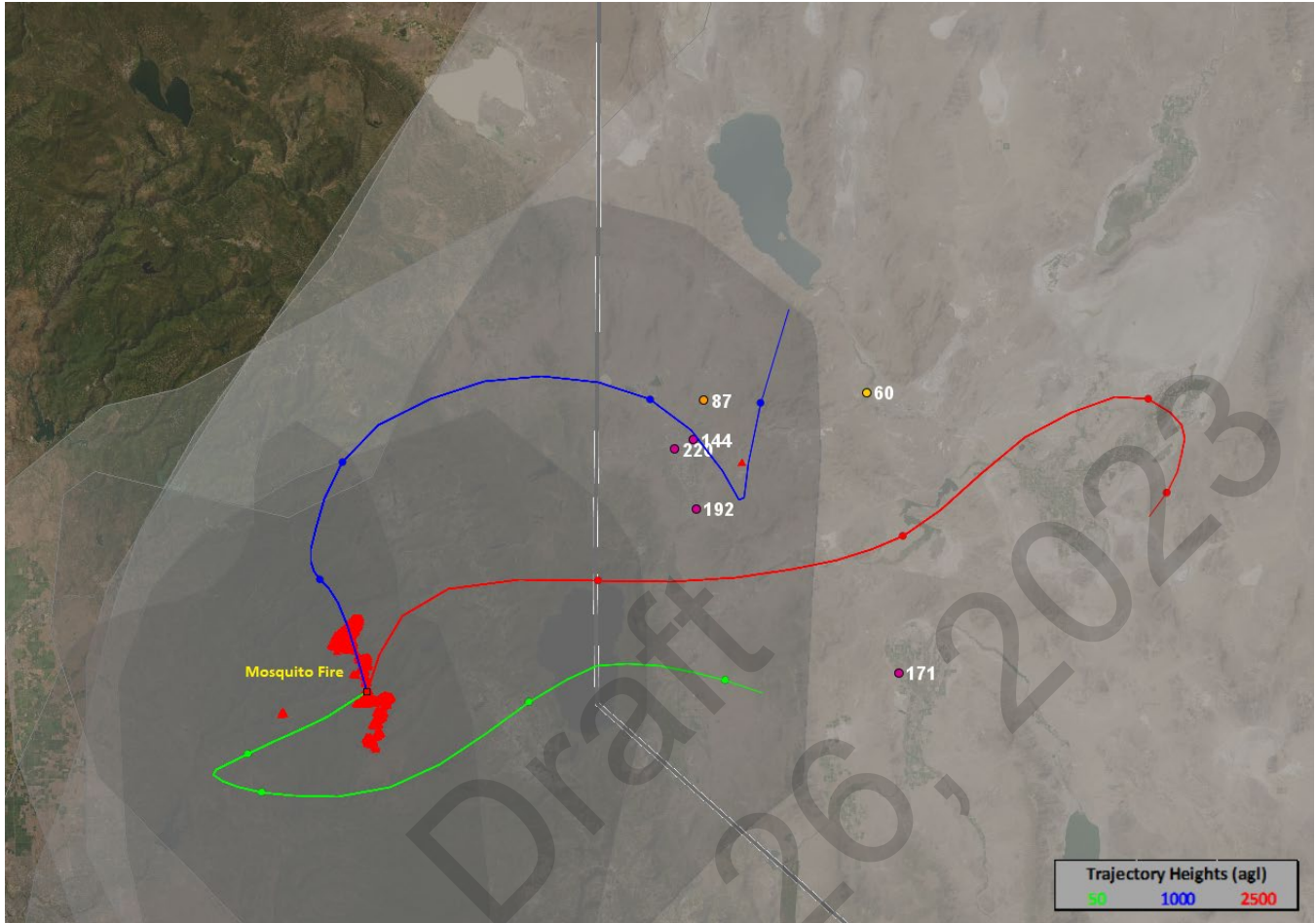


Figure 4-48: Forward Trajectory from Mosquito Fire starting September 16, 2022 at 0000 PST



4.4.3 Trajectory Analysis Explanation

The methodology behind this section is to bracket the exceedance days with forward and backward HYSPLITs. A 24-hour forward trajectory was completed for September 10, September 11 and September 13-16 of 2022 to accurately depict the characteristics of the wildfire smoke that would have affected HA 87 on the exceedance days. A 24-hour backward trajectory was completed for September 11, September 12, and September 14-16 of 2022 to characterize where the airmass on the exceedance days came from.

As can be seen in the backward trajectory section, the airmasses that affected HA 87 on the days of the exceedances originated at or near the Mosquito Fire on all trajectories besides the September 11, 2022 trajectory at 0000 PST. The difference in the trajectories on September 11, 2022 (Figure 4-31) and September 12, 2022 (Figure 4-32) show how wind patterns changed between the beginning and end of September 11, 2022, thus transporting Mosquito Fire smoke into HA 87. As can be seen in the forward trajectory section, the smoke from the Mosquito fire was transported into HA 87 on the days of the exceedances. Similar to the backward trajectory section, the differences in Figure 4-43 and Figure 4-44 show how wind patterns shifted to push smoke into the region between September 10 and September 11 of 2022. All forward trajectories after September 13, 2022 show a direct impact by the Mosquito Fire on HA 87 during the exceedance days.

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4.5 Pollution Rose Analysis

Using the AirNow-Tech Navigator Rose Tool, wind/pollution roses were generated for Toll, Reno4, and Sparks monitoring sites for the days leading to and the days of the exceedances. Hourly PM₁₀ and wind direction data was used to create the roses. These show predominantly westerly and southerly wind components that carried Mosquito wildfire smoke to HA 87.

Figure 4-49: PM₁₀ Wind/Pollution Rose for Toll and Reno4 for September 7-16, 2022

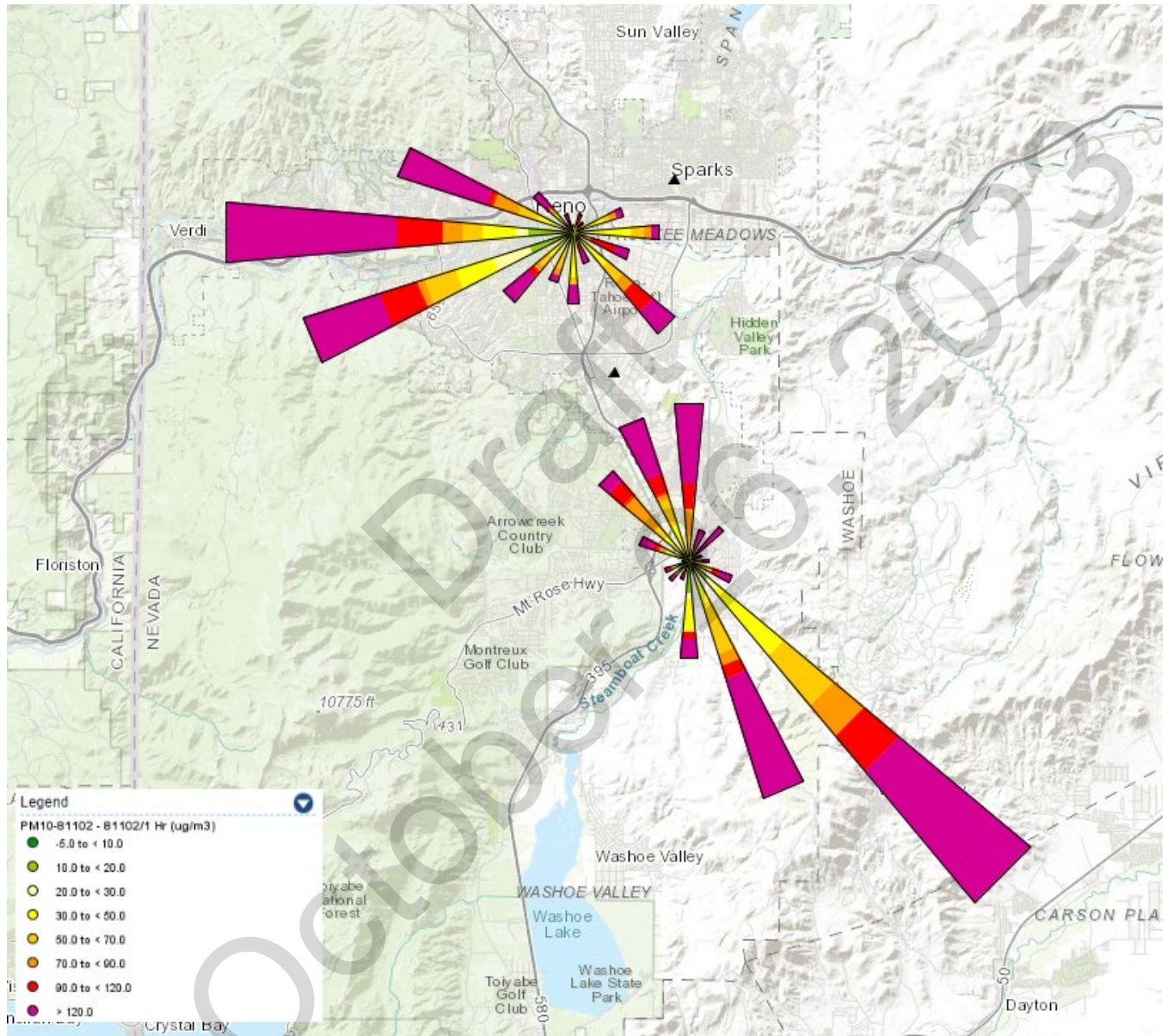
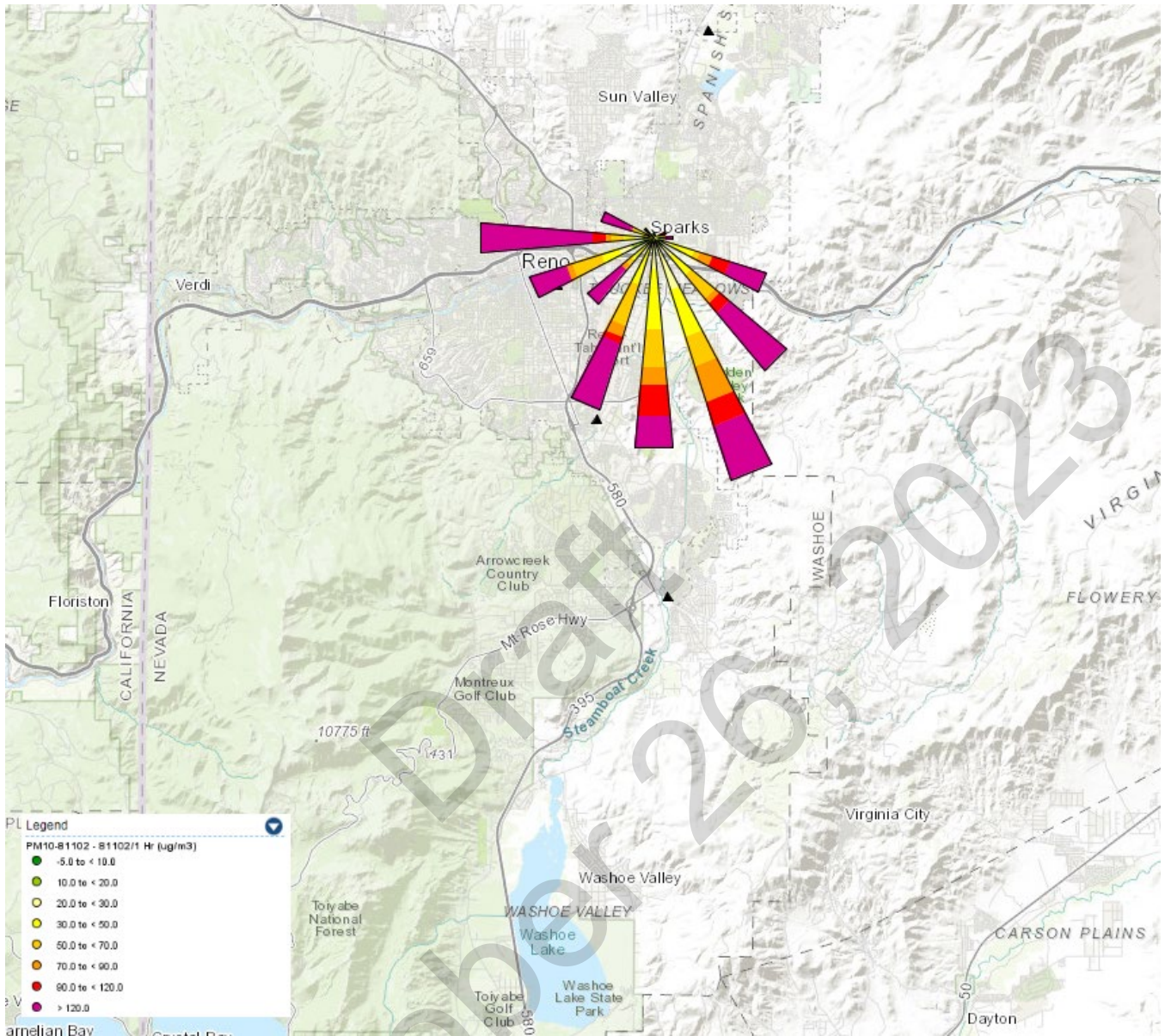


Figure 4-50: PM₁₀ Wind/Pollution Rose for Sparks for September 7-16, 2022



4.6 Conclusion Showing a Clear Causal Relationship

Section 4.0 of this document demonstrates that the elevated PM_{10} concentrations that led to the exceedances of the primary and secondary PM_{10} NAAQS were caused by the Mosquito wildfire. The emissions analysis, historical concentration comparison analysis, $PM_{2.5}$ analysis, $PM_{2.5}/PM_{10}$ ratio analysis, $PM_{2.5}/CO$ ratio analysis, PM_{10}/CO ratio analysis, trajectory analysis, and pollution rose analysis all support this premise.

The comparisons and statistical analyses provided in this section of the document supports AQMD's demonstration that the Mosquito wildfire event affected air quality in such a way that there exists a clear causal relationship between the specific event and the monitored PM_{10} exceedances on September 11 and September 14-16, 2022. Section 4.0 thus satisfies the clear causal relationship criterion as required by the EER and 40 CFR 50.14(c)(3)(iv).

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5.0 Natural Event or Human Activity Unlikely to Recur

Section 40 CFR 50.14(c)(3)(iv)(E) requires that an exceptional event be unlikely to recur at a particular location or be a natural event. The Mosquito Fire qualifies as a natural event because human activity played no direct causal role in the start of the fire. A natural event as per 40 CFR 50.1(k) is defined as:

40 CFR 50.1(k): Natural event means an event and its resulting emissions, which may recur at the same location, in which human activity plays little or no direct causal role. For purposes of the definition of a natural event, anthropogenic sources that are reasonably controlled shall be considered to not play a direct role in causing emissions.

As was mentioned in Section 2.4 of this document, the Mosquito Fire was likely started by power transmission infrastructure. AQMD sees no direct causal role by human activity for the Mosquito Fire, thus qualifying it as a natural event.

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6.0 Public Outreach

An important role that AQMD plays during exceptional events that affect air quality is to notify the public of the current air quality, the air quality forecast, and ways to mitigate potential health impacts that are a result of degraded air quality. AQMD uses a variety of outlets to reach the public during exceptional events including Twitter, Facebook, press releases, and local partners to inform citizens of degraded air quality.

As can be seen in Figure 6-1 through 6-10 below, a majority of social media posts issued by AQMD during the event included information regarding the current AQI, AQI forecasting, and AQMD's public education program, "Be Smoke Smart." "Be Smoke Smart" informs the public of the best ways to protect themselves from wildfire smoke during these events. AQMD also utilized satellite imagery in these posts to highlight the widespread smoke in the region. AQMD also shared links to the published press releases highlighting the Emergency Episodes issued during the event. The press releases are a requirement of AQMD's PM_{2.5} Mitigation Plan as well as AQMD's Emergency Episode Plan. Seen in Figure 6-2, a Stage 2 Emergency Episode for PM_{2.5} was issued on September 9, 2022. The Stage 2 Emergency Episode was rescinded and a Stage 3 Emergency Episode was issued on September 14, 2022 (Figure 6-7). This was the first time AQMD issued a Stage 3 Emergency Episode since the Caldor Fire in 2021.

AQMD's local partner, NWS Reno, was also very active on social media during the event. NWS Reno shared weather forecasts and how these forecasts impact smoke in the area. AQMD frequently reposted the NWS to increase the social media reach. These reposts are shown below in Figures 6-3 and 6-5. By working together, NWS Reno and AQMD were able to reach as many citizens as possible throughout the event to provide accurate information and actions to take.

Figure 6-1: Tweet of the Stage 2 Emergency Episode on September 9, 2022



Figure 6-2: Stage 2 Emergency Episode Press Release September 9, 2022

UPDATE: STAGE 2 AIR POLLUTION EMERGENCY EPISODE ISSUED
by Scott Oxarart | Sep 9, 2022



THIS INFORMATION HAS BEEN UPDATED. SEE THIS PAGE FOR THE LATEST UPDATES.

Reno/Sparks, Nev. Sept. 9, 2022 – Due to the [Mosquito Fire](#) burning west of Lake Tahoe, the Washoe County Health District – Air Quality Management Division (AQMD) has issued a Stage 2 Emergency Episode. This means that air quality in the Reno-Sparks area is expected to get progressively worse at times Saturday evening and Sunday.

After issuing an [air quality advisory](#) on Thursday, a Stage 2 Emergency Episode warns residents that air quality could be in the “Unhealthy for Sensitive Groups” to “Unhealthy” air quality index (AQI) range, with a chance it could hit the “Very Unhealthy” range through Sunday. [See what those ranges mean here.](#)

Thursday’s advisory was upgraded to a Stage 2 because the 24-hour fine particulate matter (PM_{2.5}) AQI is expected to be above 100 on Saturday and 150 on Sunday. Those in sensitive groups including children, older adults, and those with heart/lung disease should avoid strenuous outdoor activities. Everyone else should reduce strenuous outdoor activities.

| [Sign up for Washoe County Air Quality updates here.](#)

Periods of smoke and clearing may rapidly fluctuate during the weekend depending on wind patterns. AQMD has issued these recommendations to reduce exposure to smoke:

- Check the AQI on both AirNow and AirNow’s Fire and Smoke Map for the AQI nearest you
- Avoid or reduce outdoor and physical activities when it is smoky
- Stay indoors with the windows and doors closed
- Keep air clean. Do not vacuum, light candles, fry food, or smoke
- Consult your physician for health questions, especially those with heart and lung issues

During wildfires, the role of the AQMD is to provide the most current and accurate information and data possible so that the residents and businesses of Washoe County can make the best decisions possible regarding their health.

AQMD can issue a Stage 1, Stage 2, Stage 3, or Stage 4 Emergency Episode with the Stage 4 meaning the conditions are the most severe. [More information on the stages can be found here.](#) The Emergency Episode rule was recently revised and adopted by the District Board of Health on July 22, 2021. An air pollution Emergency Episode for Washoe County is not a state of emergency as issued by the Governor or President. The main purposes of an Emergency Episode are to notify the public of the air pollution levels, give recommendations to reduce exposure, and reduce or stop emissions from a local source if it is determined to be significantly contributing to the Emergency Episode.

Visit [OurCleanAir.com](#) for additional information on the Air Quality Management Division.

Figure 6-3: NWS Reno Tweet showing Mosquito Fire smoke on September 11, 2022



Figure 6-4: Tweet of the Be Smoke Smart campaign used during the Mosquito Fire

Washoe County AQMD ✓
@WashoeCountyAQ

Smoke from the **#MosquitoFire** is still causing Unhealthy air quality in the Reno/Sparks area. Here are 10 tips you can do to protect yourself from wildfire smoke. **#BeSmokeSmart**

What can I do to protect myself from wildfire smoke?

1. Reduce or stop outdoor activity.
2. Keep AC on if available, the fresh-air intake closed, filter clean, and windows closed.
3. Pay attention to air quality on AirNow.gov.
4. Follow the advice of your doctor especially those with heart or lung disease.
5. Wet or dry cloth, dust, or surgical masks do not protect you from ozone or fine particulates
6. If you are a healthy adult and you must be outside, respirators marked NIOSH N95 can provide some protection from fine particulates with adequate fit.
7. Stay hydrated. Take more breaks if exerting yourself outside.
8. Keep indoor air clean; don't burn candles, vacuum, or smoke tobacco products.
9. Use a portable air purifier. Create a clean air room in your home.
10. Consider relocating temporarily.

Keep it Clean.

Be Smoke Smart.
Protect yourself from wildfire smoke.
OurCleanAir.com

WASHOE COUNTY HEALTH DISTRICT
ENHANCING QUALITY OF LIFE

PublicHealth

f t y

10:04 AM · Sep 13, 2022

Figure 6-5: NWS Reno Tweet of the Mosquito Fire smoke rolling into the Truckee Meadows



Figure 6-6: Facebook Post of the Stage 3 Emergency Episode on September 14, 2022

Washoe County Health District: Air Quality Management Division
September 14, 2022 · 🌐

We have rescinded the Stage 2 Emergency Episode and have now issued a Stage 3 Emergency Episode. Everyone should remain indoors and reduce activity. Very Unhealthy air quality is expected today with Hazardous hours at times. #BeSmokeSmart
<https://washoelife.washoecounty.gov/.../stage-3-air.../>

👍🙄😱 7 54 shares

👍 Like 💬 Comment

Figure 6-7: Stage 3 Emergency Episode Press Release September 14, 2022

STAGE 3 AIR QUALITY EMERGENCY EPISODE ISSUED
by Scott Oxarart | Sep 14, 2022



Reno/Sparks, Nev. Sept. 14, 2022 – The Washoe County Health District – Air Quality Management Division (AQMD) has issued a Stage 3 Emergency Episode due to smoke from the Mosquito Fire burning west of Lake Tahoe. The NowCast air quality index (AQI) for the Reno-Sparks area was over 350 and in the “Hazardous” category on Wednesday morning, which was much worse than expected due to increased fire activity.

The Health District supports decisions by local organizations, including the University of Nevada, Reno and the Washoe County School District, to cancel classes and events.

The Stage 3 Emergency Episode was issued because the PM_{2.5} AQI is expected to be over 200 for a 24-period of time. This is the second time AQMD has issued a Stage 3 Emergency Episode; the first being in August 2021 due to the Caldor Fire.

Residents are encouraged to [follow air quality updates in Reno-Sparks, click here](#). [See what the colors and ranges mean here](#).

Measures residents can do include:

- Stay indoors and reduce activity
- Make sure windows and doors closed in your home.
- Consult your physician for health questions, especially those with heart and lung issues.
- [Create a clean air room](#)

[Sign up for Washoe County Air Quality updates here](#).

AQMD can issue a Stage 1, Stage 2, Stage 3, and Stage 4 Emergency Episode with the Stage 4 being the most severe. [More information on the stages can be found here](#).

Visit [OurCleanAir.com](#) for additional information on the Air Quality Management Division.

Figure 6-8: Tweet of the AQI on September 14, 2022 by the Washoe County Health District

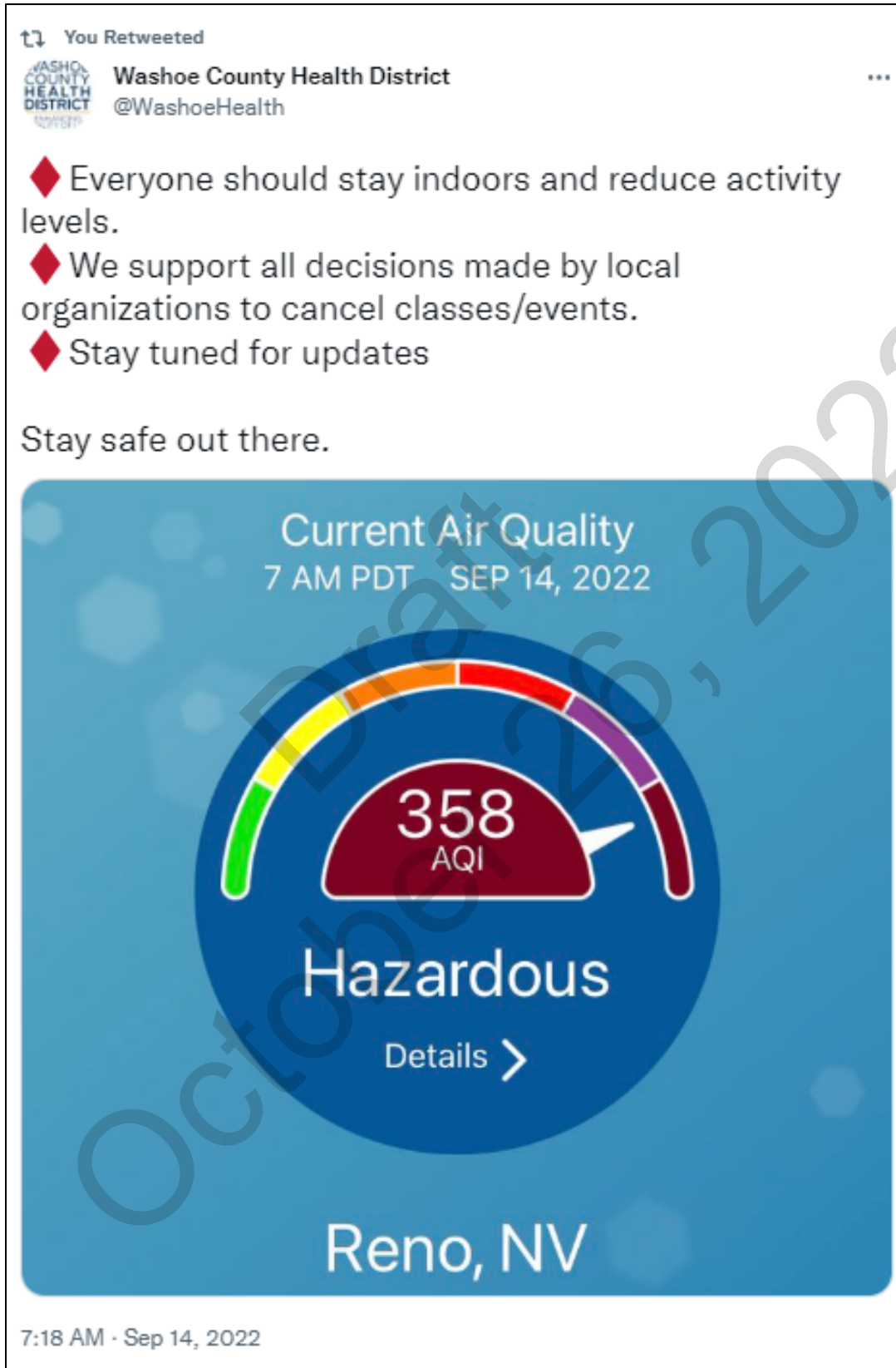


Figure 6-9: Tweet of the Historical AQIs and Current on September 15, 2022

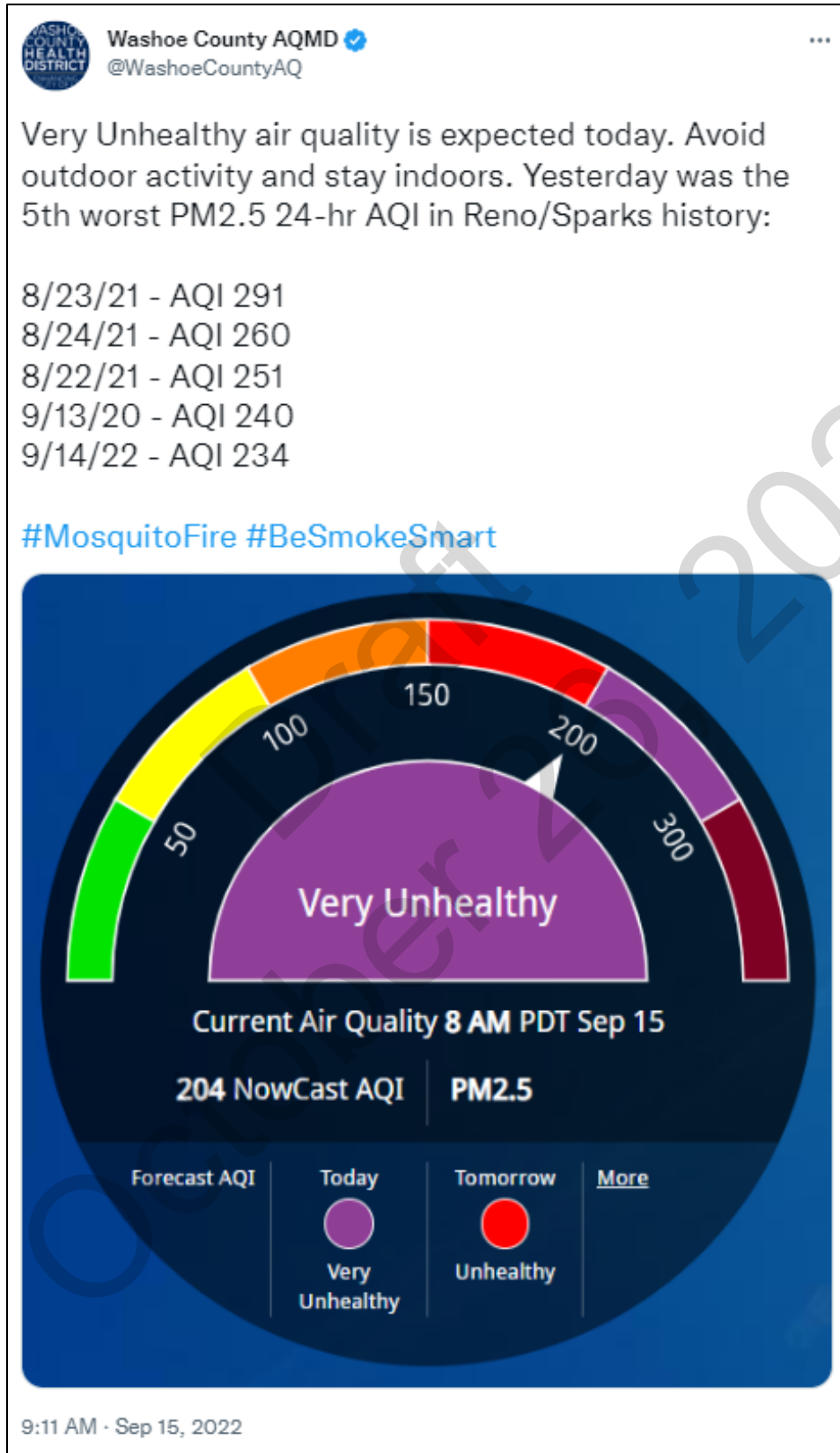





Figure 6-10: Tweet of EPA respirator factsheet on September 16, 2022

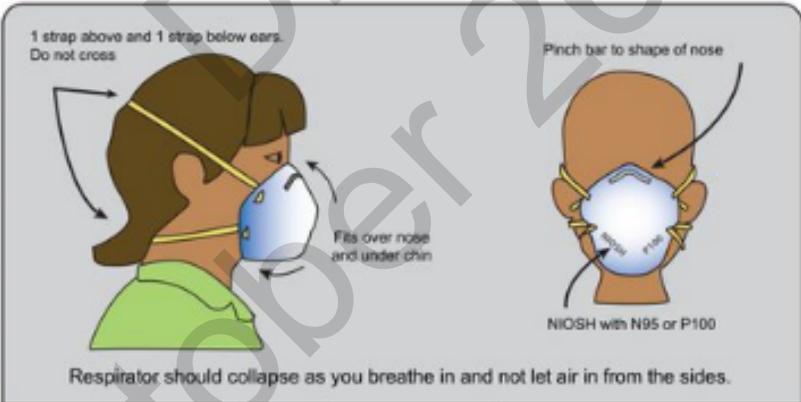
 Washoe County AQMD 
@WashoeCountyAQ

Unhealthy to Hazardous air quality from [#MosquitoFire](#) smoke is expected today into tomorrow morning. Avoid outdoor activities and reduce activity indoors. [#BeSmokeSmart](#) if you must be outdoors take extra of breaks, stay hydrated, and wear a properly fitted N95 respirator.

 **The right respirator* and proper fit can reduce your exposure to wildfire smoke.**

Cloth (wet or dry), paper masks, and tissues will **NOT** filter out wildfire smoke. Look for respirators (masks) marked NIOSH with N95 or P100. They can be found online, or in hardware, home repair, or drugstores.

* Respirators are not designed to fit children. Facial hair prevents proper fit and reduces effectiveness.



Ask your doctor before using if you have heart or lung health issues.	Throw mask away if it's dirty or you find it difficult to breathe.	If you are dizzy or nauseous, go to where there is less smoke and seek medical attention.
---	--	---

Use a respirator only after first trying other, more effective methods to avoid smoke. That includes staying indoors and reducing activity. When possible, people at risk should move away from the smoke area.

airnow.gov

9:33 AM - Sep 16, 2022

7.0 Conclusions and Recommendations

The Mosquito Fire started on September 6, 2022 in Tahoe National Forest in Placer County, California, approximately 60 miles southwest of the Truckee Meadows Region. The Mosquito Fire cause is still under investigation but was most likely caused by power transmission infrastructure. The fire emitted large quantities of PM₁₀ emissions which eventually led to numerous PM₁₀ exceedances at the Toll, Reno4, and Sparks PM₁₀ monitors between September 11 and September 16, 2022. The Mosquito Fire EE Demonstration supports the criteria for an exceptional event detailed in the 2016 Exceptional Events Rule. Specifically, the documentation used the following evidence to demonstrate the exceptional event:

- ambient air monitoring data
- statistical analyses of the monitoring data compared to historical concentrations
- analyses of wildfire smoke emissions
- satellite imagery (visible and detected smoke)
- narratives from the National Oceanic and Atmospheric Administration and National Weather Service (Reno)
- HYSPLIT trajectory analyses
- social and traditional media posts

This EE Demonstration clearly demonstrates justification for exclusion of the requested data between September 11 and September 16, 2022, due to an exceptional event under 40 CFR 50.14(c)(3)(iv). The 2022 Mosquito Fire EE Demonstration has provided evidence that:

1. Emissions from a wildfire event caused PM₁₀ exceedances at the Toll, Reno4, and Sparks monitors;
2. The event affected air quality in such a way that there exists a clear causal relationship between the event and the exceedances on September 11 and 14-16, 2022;
3. Event-influenced concentrations were unusual and above normal historical concentrations;
4. The event was related to a wildfire that was a natural event predominately occurring on wildland;
5. The event was not reasonably controllable or preventable.

The AQMD recommends that EPA Region 9 concur with the 2022 Mosquito Fire EE Demonstration and exclude the data defined in Table 2-3, from comparison to the NAAQS.

Draft
October 26, 2023

WASHOE COUNTY
HEALTH DISTRICT
ENHANCING QUALITY OF LIFE

Please contact Matt McCarthy for
questions or comments at
mmccarthy@nnph.org

Appendix A
Public Comment Plan

Draft
October 26, 2023

Public Comment Plan

This Exceptional Event Demonstration was available for public inspection from October 26 to November 26, 2023 at the AQMD website ([OurCleanAir.com](https://www.aqmd.ca.gov/our-clean-air)). AQMD issued a press release on October 26, 2023 to inform the public of the comment period. The press release provides a web link to the draft demonstration and explains how to submit written comments during the comment period. A hardcopy of the plan was also available at the AQMD office. All comments received during this inspection period are outlined below, along with the press release.

Draft
October 26, 2023

Appendix B

Exceptional Event Initial Notification

Draft
October 26, 2023

Initial Notification of Potential Exceptional Event Information Summary for PM₁₀

Submitting Agency: Washoe County Health District Air Quality Management Division

Agency Contact: Craig Petersen, Supervisor, Monitoring and Planning

Date Submitted: July 18, 2023

Applicable NAAQS: 1987 PM₁₀

Affected Regulatory Decision¹: 2nd 10-Year PM₁₀ Maintenance Plan

Area Name/Designation Status: Truckee Meadows Hydrographic Basin 87 PM₁₀ Maintenance Area

Design Value Period: 2020-2022

Table A(1): Information specific to each flagged monitor day that may be submitted to EPA in support of the affected regulatory decision listed above

Date(s) of Event(s)	Type of Event (high wind, volcano, wildfires/prescribed fire, other ²)	AQS Flags	Monitor AQS IDs (and POCs)	Monitor Names	24-hour average Exceedance Concentration (µg/m ³)	Notes (e.g. event name, links to other events)
09/11/2022	Wildfires	RT	32-031-0025-81102-1	Toll	173	Mosquito Fire
09/14/2022	Wildfires	RT	32-031-0025-81102-1	Toll	187	Mosquito Fire
			32-031-1005-81102-4	Sparks	231	
			32-031-0031-81102-2	Reno4	177	
09/15/2022	Wildfires	RT	32-031-0025-81102-1	Toll	197	Mosquito Fire
			32-031-0031-81102-2	Reno4	162	
09/16/2022	Wildfires	RT	32-031-0025-81102-1	Toll	192	Mosquito Fire
			32-031-0031-81102-2	Reno4	220	

¹ designation, classification, attainment determination, attainment date extension, or finding of SIP inadequacy leading to SIP call

² Provide additional information for types of event described as “other”

Table B(1): Violating Monitors Information

Monitor (AQS ID and POC)	Design Value (<u>without</u> EPA concurrence on any of the events listed in table A above)	Design Value (<u>with</u> EPA concurrence on all events listed in table A above)
32-031-0025-81102-2 32-031-1005-81102-4 32-031-0031-81102-2	5.3 expected exceedances 3.0 expected exceedances 3.7 expected exceedances	1.0 expected exceedances

Table C(1): Summary of Maximum Design Value (DV) Monitor Information

	Design Value	Design Value Monitor (AQS ID and POC)	Comment(s)
Maximum DV monitor (AQS ID and POC) without EPA concurrence on any of the events listed in table A above	5.3 expected exceedances	32-031-0025-81102-2	Includes exceptional event data from 2021
Maximum DV monitor (AQS ID and POC) with EPA concurrence on all events listed in table A above	1.0 expected exceedances 1.0 expected exceedances	32-031-0025-81102-2 32-031-1005-81102-1	Assumes exclusion of exceptional event data from 2021

Table D(1): List of any monitors (AQS ID and POC) within planning area with invalid design values (e.g. due to data incompleteness)

Monitor (AQS ID and POC)	Comment
---	---

Appendix C

2022 Data Certification Letter

Draft
October 26, 2023

**WASHOE COUNTY
HEALTH DISTRICT**
ENHANCING QUALITY OF LIFE

April 13, 2023

Dena Vallano
Manager, Air Quality Analysis Office
U.S. Environmental Protection Agency, Region 9
75 Hawthorne Street, AIR-4-2
San Francisco, CA 94105

Re: CY2022 Ambient Air Monitoring Data Certification

Dear Ms. Vallano:

Attached please find a copy of the Washoe County Health District, Air Quality Management Division's (AQMD) AQS AMP600 Data Certification Report and AMP450NC Quick Look summary report for ambient air monitoring data for all State and Local Air Monitoring Stations (SLAMS) which meet criteria in 40 CFR 58 Appendix A operated from January 1 to December 31, 2022. Included is data from Federal Reference Method (FRM) and Federal Equivalent Method (FEM) monitors for CO, NO₂, ozone, PM₁₀, PM_{10-2.5}, PM_{2.5}, and SO₂ (hourly and 5-minute average data).

This letter certifies that the ambient concentration data and the quality assurance data are completely submitted to AQS, and the ambient data are accurate to the best of my knowledge taking into consideration the quality assurance findings.

Please contact Mr. Daniel Timmons or me at (775) 784-7200 with any questions or concerns.

Sincerely,



Francisco Vega, P.E., MBA
Director, Air Quality Management Division
Washoe County Health District

Attachments:

AMP600 Data Certification Report 2022
AMP450NC Quick Look All Parameters Report 2022

cc: Fletcher Clover, Air Quality Analysis Office, U.S. EPA, Region 9

User ID: BMC MULLEN

CERTIFICATION EVALUATION AND CONCURRENCE

Report Request ID: 2095169

Report Code: AMP600

Apr. 11, 2023

GEOGRAPHIC SELECTIONS

Tribal Code	State	County	Site	Parameter	POC	City	AQCR	UAR	CBSA	CSA	EPA Region
	32	031									

PROTOCOL SELECTIONS

Parameter Classification	Parameter	Method	Duration

CRITERIA

AGENCY SELECTIONS

Washoe County District Health Department

SELECTED OPTIONS

Option Type	Option Value
MERGE PDF FILES	YES
AGENCY ROLE	CERTIFYING

DATE CRITERIA

Start Date	End Date
2022	2022

Draft
October 26, 2023

Data Evaluation and Concurrence Report Summary

Certification Year: 2022

Certifying Agency (CA): Washoe County District Health Department (1138)

Pollutants in Report:

<u>Parameter Name</u>	<u>Code</u>	<u>Monitors Evaluated</u>	<u>Monitors Recommended for Concurrence by AQS</u>	<u>Monitors NOT Recommended for Concurrence by AQS</u>
Carbon monoxide	42101	2	2	0
Nitrogen dioxide (NO2)	42602	1	1	0
Ozone	44201	7	7	0
PM10 Total 0-10um STP	81102	4	4	0
PM2.5 - Local Conditions	88101	5	5	0
Sulfur dioxide	42401	1	1	0

PQAOs in Report:

<u>PQAO Name</u>	<u>PQAO Code</u>	<u>TSA Date</u>
Washoe County District Health Department	1138	08/15/19

Summary of 'N' flags for all pollutants:

<u>PQAO</u>	<u>Code</u>	<u>AQS Site-ID</u>	<u>POC</u>	<u>AQS Recommended Flag</u>	<u>Cert. Agency Recommended Flag</u>	<u>Reason for AQS Recommendation</u>

Signature of Monitoring Organization Representative: _____

Isabella Vega

Data Evaluation and Concurrence Report for Gaseous Pollutants

Certifying Year 2022
Certifying Agency Code Washoe County District Health Department (1138)
Parameter Carbon monoxide (42101) (ppm)

PQAO Name Washoe County District Health Department (1138)
QAPP Approval Date 12/12/2019

NPAP Audit Summary:

Number of Passed Audits	NPAP Bias	Criteria Met
1	3.20599	Y

AQS Site ID	POC Monitor Type	Routine Data						One Point Quality Check			Annual PE		NPAP		Concur. Flag			
		Mean	Min	Max	Exceed. Count	Outlier Count	Perc. Comp.	Precision	Bias	Complete	Bias	Complete	Bias	PQAO Level Criteria	QAPP Appr.	Aqs Rec Flag	CA Rec Flag	Epa Concur
32-031-0031	1 SLAMS	0.238	-0.001	3.256	0	0	98	2.20	+2.13	100	0.35	100	3.21	Y	Y	Y	Y	S
32-031-1005	1 SLAMS	0.372	0.000	2.700	0	0	99	1.35	+/-1.62	100	1.65	100		Y	Y	Y	Y	S

Draft
 October 26, 2023

Data Evaluation and Concurrence Report for Gaseous Pollutants

Certifying Year 2022
Certifying Agency Code Washoe County District Health Department (1138)
Parameter Nitrogen dioxide (NO2) (42602) (ppb)

PQAO Name Washoe County District Health Department (1138)
QAPP Approval Date 12/12/2019

NPAP Audit Summary: Number of Passed Audits NPAP Bias Criteria Met
Y

AQS Site ID	POC Monitor Type	Routine Data					One Point Quality Check			Annual PE		NPAP		Concur. Flag			
		Mean	Min	Max	Exceed. Count	Outlier Count	Perc. Comp.	Precision	Bias	Complete	Bias	PQAO Level Criteria	QAPP Appr.	Aqs Rec Flag	CA Rec Flag	Epa Concur	
32-031-0031	1 SLAMS	11.8	0.0	51.4		0	97	4.55	-5.18	100	-5.53	100	Y	Y	Y	Y	S

Draft
 October 26, 2023

Data Evaluation and Concurrence Report for Gaseous Pollutants

Certifying Year 2022
Certifying Agency Code Washoe County District Health Department (1138)
Parameter Ozone (44201) (ppm)

PQAO Name Washoe County District Health Department (1138)
QAPP Approval Date 12/12/2019

NPAP Audit Summary: **Number of Passed Audits** **NPAP Bias** **Criteria Met**
Y

AQS Site ID	POC Monitor Type	Routine Data						One Point Quality Check			Annual PE		NPAP			Concur. Flag		
		Mean	Min	Max	Exceed. Count	Outlier Count	Perc. Comp.	Precision	Bias	Complete	Bias	Complete	Bias	PQAO Level Criteria	QAPP Appr.	Aqs Rec Flag	CA Rec Flag	Epa Concur
32-031-0020	1 SLAMS	0.049	0.017	0.082	0	0	99	2.05	+/-1.49	100	- 0.81	100	Y	Y	Y	Y	S	
32-031-0025	1 SLAMS	0.047	0.021	0.076	0	0	99	1.84	+/-1.50	100	- 0.19	100	Y	Y	Y	Y	S	
32-031-0031	1 SLAMS	0.048	0.015	0.080	0	0	98	1.54	+/-1.13	100	- 0.86	100	Y	Y	Y	Y	S	
32-031-1005	1 SLAMS	0.046	0.011	0.077	0	0	98	2.86	+/-2.37	100	0.59	100	Y	Y	Y	Y	S	
32-031-1007	1 SLAMS	0.048	0.020	0.079	0	0	99	0.96	+/-0.89	100	0.48	100	Y	Y	Y	Y	S	
32-031-2002	1 SLAMS	0.051	0.033	0.080	0	0	99	2.55	+/-1.96	100	5.81	100	Y	Y	Y	Y	S	
32-031-2009	1 SLAMS	0.048	0.022	0.071	0	0	99	3.30	+/-2.55	100	- 1.53	100	Y	Y	Y	Y	S	

Draft 2023
 October 26, 2023

Data Evaluation and Concurrence Report for Gaseous Pollutants

Certifying Year 2022
Certifying Agency Code Washoe County District Health Department (1138)
Parameter Sulfur dioxide (42401) (ppb)

PQAO Name Washoe County District Health Department (1138)
QAPP Approval Date 12/12/2019

NPAP Audit Summary: **Number of Passed Audits** **NPAP Bias** **Criteria Met**
Y

AQS Site ID	POC Monitor Type	Routine Data					One Point Quality Check			Annual PE		NPAP		Concur. Flag				
		Mean	Min	Max	Exceed. Count	Outlier Count	Perc. Comp.	Precision	Bias	Complete	Bias	Complete	Bias	PQAO Level Criteria	QAPP Appr.	Aqs Rec Flag	CA Rec Flag	Epa Concur
32-031-0031	1 SLAMS	0.4	- 0.5	4.0		0	98	5.10	+/-4.16	100	- 2.37	100		Y	Y	Y	Y	S

Draft
 October 26, 2023

Data Evaluation and Concurrence Report for Particulate Matter

Certifying Year:2022

Certifying Agency:Washoe County District Health Department (1138)

Parameter: PM10 Total 0-10um STP (81102) CONTINUOUS

PQAO Name: Washoe County District Health Department (1138)

Quality Assurance Project Plan Approval Date: 12/12/2019

Monitors Summaries

AQS Site ID	POC	Monitor Type	Routine Data (ug/m3)					Flow Rate Verification		Flow Rate Audit		QAPP Appr.	Collocation Concurrence Flag		
			Mean	Min	Max	Exceed. Count	Outlier Count	% Complete	Bias	% Complete	Bias		% Complete	AQS Rec Flag	CA Rec Flag
32-031-0025	2	SLAMS	21.67	-3.0	985.0	0	98	+0.66	100	+0.44	100	Y	Y	Y	S
32-031-0031	2	SLAMS	21.91	-5.0	558.0	0	98	+/-0.81	100	-0.49	100	Y	Y	Y	S
32-031-1005	4	SLAMS	26.32	-5.0	587.0	0	98	+/-0.76	100	-0.41	100	Y	Y	Y	S
32-031-1007	1	SLAMS	19.97	-3.0	820.0	0	95	+/-0.87	100	-0.59	100	Y	Y	Y	S

Parameter: PM2.5 - Local Conditions (88101)

PQAO Name: Washoe County District Health Department (1138)

Quality Assurance Project Plan Approval Date: 12/12/2019

Collocation Summary

Method	# Sites	# Sites Req	# Sites Collocated	% Collocated	CV Est	CV UB	Criteria Met?
170	4	1	1	100	11.49	12.73	Y

PEP Summary

# Methods	# Audited Methods	# PEP Required	# PEP Submitted	% Complete	Bias	Criteria Met?
1	1	5	3	60	+13.06	Y

Monitors Summaries

AQS Site ID	POC	Method	Monitor Type	Routine Data (ug/m3)					Flow Rate Audit		Collocation			QAPP Appr.	Concurrence Flag			
				Mean	Min	Max	Exceed. Count	Outlier Count	% Complete	Bias	% Complete	CV	% Complete		PQAO Crit. Met	AQS Rec Flag	CA Rec Flag	EPA Rec Concur
32-031-0025	1	170	SLAMS	6.72	-6.0	432.0	0	99	-0.55	100				Y	Y	Y	Y	S
32-031-0031	1	545	SLAMS	7.76	.8	129.7	0	100	-0.04	100				Y	Y	Y	Y	S
32-031-0031	2	170	SLAMS	8.16	-9.0	435.0	0	94	-0.73	100	12.73	100		Y	Y	Y	Y	S
32-031-1005	1	170	SLAMS	10.15	-8.0	439.0	0	99	+0.00	100				Y	Y	Y	Y	S
32-031-1007	1	170	SLAMS	7.79	-5.0	391.0	0	98	+0.12	100				Y	Y	Y	Y	S

Data Concurrence and Evaluation Report for Lead

Draft
October 26, 2023

User ID: BMC MULLEN

QUICKLOOK ALL PARAMETERS

Report Request ID: 2093798

Report Code: AMP450NC

Apr. 6, 2023

PROTOCOL SELECTIONS			
Parameter Classification	Parameter	Method	Duration
ALL	86101		
ALL	42401		H

AGENCY SELECTIONS
Washoe County District Health Department

SELECTED OPTIONS	
Option Type	Option Value
EVENTS PROCESSING	EXCLUDE REGIONALLY CONCURRED EVENTS
MERGE PDF FILES	YES
AGENCY ROLE	PQAO

SORT ORDER	
Order	Column
1	STATE_CODE
2	COUNTY_CODE
3	SITE_ID
4	PARAMETER_CODE
5	POC
6	DATES
7	EDT_ID

SCR GROUP SELECTIONS
Washoe Co,NV

DATE CRITERIA	
Start Date	End Date
2022	2022

APPLICABLE STANDARDS
Standard Description

Draft
October 26, 2023

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
AIR QUALITY SYSTEM

QUICKLOOK ALL PARAMETERS

Apr. 6, 2023

EXCEPTIONAL DATA TYPES

EDT	DESCRIPTION
0	NO EVENTS
1	EVENTS EXCLUDED
2	EVENTS INCLUDED
5	EVENTS WITH CONCURRENCE EXCLUDED

Draft
October 26, 2023

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
AIR QUALITY SYSTEM

QUICKLOOK ALL PARAMETERS

Apr. 6, 2023

Parameter	Unit	P O C	PQAO	Year	Meth	# Obs	1st Max Value	2nd Max Value	3rd Max Value	4th Max Value	Arith. Mean	Duration	Cert & Eval	EDH
Site ID: 32-031-0025	City: Reno													
		County: Washoe					Address: 684A STATE ROUTE 341, RENO NV 89521							
86101 PM10-2.5 - Local Conditions	Micrograms/cubic meter (LC)	1	1138	2022	185	8612	817.0	492.0	407.0	379.0	12.36	1 HOUR		0
Site ID: 32-031-0031	City: Reno													
		County: Washoe					Address: 1260-A Stewart St.							
42401 Sulfur dioxide	Parts per billion	2	1138	2022	600	98911	5.8	4.6	4.6	4.4	.44	5 MINUTE		0
86101 PM10-2.5 - Local Conditions	Micrograms/cubic meter (LC)	1	1138	2022	247	118	31.1	24.3	23.8	21.5	10.59	24 HOUR		0
86101 PM10-2.5 - Local Conditions	Micrograms/cubic meter (LC)	2	1138	2022	185	8209	305.0	210.0	204.0	125.0	11.59	1 HOUR		0
Site ID: 32-031-1005	City: Sparks													
		County: Washoe					Address: 750 4TH ST, SPARKS, NV 89431							
86101 PM10-2.5 - Local Conditions	Micrograms/cubic meter (LC)	1	1138	2022	185	8600	503.0	440.0	396.0	262.0	13.21	1 HOUR		0
Site ID: 32-031-1007	City: Sparks													
		County: Washoe					Address: 7200 Pyramid Hwy, Sparks, NV, 89441							
86101 PM10-2.5 - Local Conditions	Micrograms/cubic meter (LC)	1	1138	2022	185	8376	623.0	452.0	326.0	265.0	9.94	1 HOUR		0

Draft 2023
October 26

Note: The * indicates that the mean does not satisfy summary criteria.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
AIR QUALITY SYSTEM

QUICKLOOK ALL PARAMETERS

Apr. 6, 2023

METHODS USED IN THIS REPORT

PARAMETER	METHOD CODE	COLLECTION METHOD	ANALYSIS METHOD
42401	600	Instrumental	Ultraviolet Fluorescence API 100 EU
86101	185	Met One BAM-1020 System	Paired Beta Difference
86101	247	Met One E-SEQ-FRM PM10-2.5 sampler pair	Paired Gravimetric

Draft
October 26, 2023

Note: The * indicates that the mean does not satisfy summary criteria.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
AIR QUALITY SYSTEM

QUICKLOOK ALL PARAMETERS

Apr. 6, 2023

PQAOS USED IN THIS REPORT

PQAO	AGENCY DESCRIPTION
1138	Washoe County District Health Department

Draft
October 26, 2023

Note: The * indicates that the mean does not satisfy summary criteria.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
AIR QUALITY SYSTEM

QUICKLOOK ALL PARAMETERS

Apr. 6, 2023

CERTIFICATION EVALUATION AND CONCURRENCE FLAG MEANINGS

FLAG	MEANING
M	The monitoring organization has revised data from this monitor since the most recent certification letter received from the state.
N	The certifying agency has submitted the certification letter and required summary reports, but the certifying agency and/or EPA has determined that issues regarding the quality of the ambient concentration data cannot be resolved due to data completeness, the lack of performed quality assurance checks or the results of uncertainty statistics shown in the AMP255 report or the certification and quality assurance report.
S	The certifying agency has submitted the certification letter and required summary reports. A value of "S" conveys no Regional assessment regarding data quality per se. This flag will remain until the Region provides an "N" or "Y" concurrence flag.
U	Uncertified. The certifying agency did not submit a required certification letter and summary reports for this monitor even though the due date has passed, or the state's certification letter specifically did not apply the certification to this monitor.
X	Certification is not required by 40 CFR 58.15 and no conditions apply to be the basis for assigning another flag value
Y	The certifying agency has submitted a certification letter, and EPA has no unresolved reservations about data quality (after reviewing the letter, the attached summary reports, the amount of quality assurance data submitted to AQS, the quality statistics, and the highest reported concentrations).

October 26, 2023

Note: The * indicates that the mean does not satisfy summary criteria.

Appendix D

AQS Report Showing RT Flags Applied

Draft
October 26, 2023

User ID: BMC MULLEN

RAW DATA QUALIFIER REPORT

Report Request ID: 2107459

Report Code: AMP360

May. 22, 2023

GEOGRAPHIC SELECTIONS

Tribal Code	State	County	Site	Parameter	POC	City	AQCR	UAR	CBSA	CSA	EPA Region
	32	031									

PROTOCOL SELECTIONS

Parameter Classification	Parameter	Method	Duration
CRITERIA	81102		

AGENCY SELECTIONS

Washoe County District Health Department

SELECTED OPTIONS

Option Type	Option Value
MERGE PDF FILES	YES
AGENCY ROLE	PQAO
CONCURRENCE STATUS	All Data (Concurred and Non-concurred)
QUALIFIER TYPES	REQUEST EXCLUSION (EVENT) QUALIFIERS ONLY
QUALIFIER COUNTS BY MONITOR	YES
QUALIFIER CODE	RT - Wildfire-U. S. (REQEXC)

SCR GROUP SELECTIONS

Washoe Co, NV

DATE CRITERIA

Start Date	End Date
2022 09 11	2022 09 16

Draft October 26, 2023

**United States Environmental Protection Agency
Air Quality System**

Raw Data Qualifier Report (v 1.1)

Report Date: May. 22, 2023

Parameter: PM10 Total 0-10um STP (81102)

Standard Units: Micrograms/cubic meter (25 C) (001)

<u>Monitor Key / Site Address</u>	<u>Sample Date-Time</u>	<u>Value</u>	<u>Sample Qualifier Code Description</u>	<u>Action Date</u>	<u>NAAQS Standard</u>	<u>Concurrence Ind Date</u>
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-11 00:00	116	RT Wildfire-U. S.	2022-12-14		
	Event:		Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-11 01:00	97	RT Wildfire-U. S.	2022-12-14		
	Event:		Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-11 02:00	104	RT Wildfire-U. S.	2022-12-14		
	Event:		Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-11 03:00	96	RT Wildfire-U. S.	2022-12-14		
	Event:		Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-11 04:00	98	RT Wildfire-U. S.	2022-12-14		
	Event:		Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-11 05:00	101	RT Wildfire-U. S.	2022-12-14		
	Event:		Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-11 06:00	96	RT Wildfire-U. S.	2022-12-14		
	Event:		Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-11 07:00	109	RT Wildfire-U. S.	2022-12-14		
	Event:		Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-11 08:00	110	RT Wildfire-U. S.	2022-12-14		
	Event:		Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-11 09:00	103	RT Wildfire-U. S.	2022-12-14		
	Event:		Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-11 10:00	105	RT Wildfire-U. S.	2022-12-14		
	Event:		Mosquito Wildfire	2023-05-16		

United States Environmental Protection Agency

Air Quality System

Raw Data Qualifier Report (v 1.1)

Report Date: May. 22, 2023

Parameter: PM10 Total 0-10um STP (81102)

Standard Units: Micrograms/cubic meter (25 C) (001)

Monitor Key / Site Address	Sample Date-Time	Value	Code	Description	Action Date	NAAQS Standard	Concurrence Ind Date
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-11 11:00	100	RT	Wildfire-U. S. Mosquito Wildfire	2022-12-14 2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-11 12:00	65	RT	Wildfire-U. S. Mosquito Wildfire	2022-12-14 2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-11 13:00	24	RT	Wildfire-U. S. Mosquito Wildfire	2022-12-14 2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-11 14:00	19	RT	Wildfire-U. S. Mosquito Wildfire	2022-12-14 2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-11 15:00	16	RT	Wildfire-U. S. Mosquito Wildfire	2022-12-14 2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-11 16:00	354	RT	Wildfire-U. S. Mosquito Wildfire	2022-12-14 2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-11 17:00	567	RT	Wildfire-U. S. Mosquito Wildfire	2022-12-14 2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-11 18:00	453	RT	Wildfire-U. S. Mosquito Wildfire	2022-12-14 2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-11 19:00	388	RT	Wildfire-U. S. Mosquito Wildfire	2022-12-14 2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-11 20:00	310	RT	Wildfire-U. S. Mosquito Wildfire	2022-12-14 2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-11 21:00	217	RT	Wildfire-U. S. Mosquito Wildfire	2022-12-14 2023-05-16		

United States Environmental Protection Agency

Air Quality System

Raw Data Qualifier Report (v 1.1)

Report Date: May. 22, 2023

Parameter: PM10 Total 0-10um STP (81102)

Standard Units: Micrograms/cubic meter (25 C) (001)

Monitor Key / Site Address	Sample Date-Time	Value	Code	Description	Action Date	NAAQS Standard	Concurrence Ind Date
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-11 22:00	273	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-11 23:00	253	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-14 00:00	244	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-14 01:00	226	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-14 02:00	226	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-14 03:00	225	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-14 04:00	235	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-14 05:00	243	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-14 06:00	321	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-14 07:00	269	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-14 08:00	265	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		

United States Environmental Protection Agency

Air Quality System

Raw Data Qualifier Report (v 1.1)

Report Date: May. 22, 2023

Parameter: PM10 Total 0-10um STP (81102)

Standard Units: Micrograms/cubic meter (25 C) (001)

Monitor Key / Site Address	Sample Date-Time	Value	Code	Description	Action Date	NAAQS Standard	Concurrence Ind Date
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-14 09:00	306	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-14 10:00	217	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-14 11:00	129	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-14 12:00	130	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-14 13:00	48	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-14 14:00	94	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-14 15:00	58	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-14 16:00	12	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-14 17:00	19	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-14 18:00	167	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-14 19:00	234	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		

United States Environmental Protection Agency

Air Quality System

Raw Data Qualifier Report (v 1.1)

Report Date: May. 22, 2023

Parameter: PM10 Total 0-10um STP (81102)

Standard Units: Micrograms/cubic meter (25 C) (001)

Monitor Key / Site Address	Sample Date-Time Value	Code	Description	Action Date	NAAQS Standard	Concurrence Ind Date
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-14 20:00 223	RT	Wildfire-U. S.	2022-12-14		
	Event:		Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-14 21:00 223	RT	Wildfire-U. S.	2022-12-14		
	Event:		Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-14 22:00 212	RT	Wildfire-U. S.	2022-12-14		
	Event:		Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-14 23:00 184	RT	Wildfire-U. S.	2022-12-14		
	Event:		Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-15 00:00 160	RT	Wildfire-U. S.	2022-12-14		
	Event:		Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-15 01:00 156	RT	Wildfire-U. S.	2022-12-14		
	Event:		Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-15 02:00 142	RT	Wildfire-U. S.	2022-12-14		
	Event:		Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-15 03:00 147	RT	Wildfire-U. S.	2022-12-14		
	Event:		Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-15 04:00 156	RT	Wildfire-U. S.	2022-12-14		
	Event:		Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-15 05:00 154	RT	Wildfire-U. S.	2022-12-14		
	Event:		Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-15 06:00 288	RT	Wildfire-U. S.	2022-12-14		
	Event:		Mosquito Wildfire	2023-05-16		

United States Environmental Protection Agency

Air Quality System

Raw Data Qualifier Report (v 1.1)

Report Date: May. 22, 2023

Parameter: PM10 Total 0-10um STP (81102)

Standard Units: Micrograms/cubic meter (25 C) (001)

<u>Monitor Key /</u> <u>Site Address</u>	<u>Sample</u> <u>Date-Time</u>	<u>Value</u>	<u>Code</u>	<u>Description</u>	<u>Action</u> <u>Date</u>	<u>NAAQS Standard</u>	<u>Concurrence</u> <u>Ind Date</u>
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-15 07:00	451	RT	Wildfire-U. S. Event: Mosquito Wildfire	2022-12-14 2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-15 08:00	985	RT	Wildfire-U. S. Event: Mosquito Wildfire	2022-12-14 2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-15 09:00	148	RT	Wildfire-U. S. Event: Mosquito Wildfire	2022-12-14 2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-15 10:00	127	RT	Wildfire-U. S. Event: Mosquito Wildfire	2022-12-14 2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-15 11:00	101	RT	Wildfire-U. S. Event: Mosquito Wildfire	2022-12-14 2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-15 12:00	98	RT	Wildfire-U. S. Event: Mosquito Wildfire	2022-12-14 2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-15 13:00	74	RT	Wildfire-U. S. Event: Mosquito Wildfire	2022-12-14 2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-15 14:00	128	RT	Wildfire-U. S. Event: Mosquito Wildfire	2022-12-14 2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-15 15:00	71	RT	Wildfire-U. S. Event: Mosquito Wildfire	2022-12-14 2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-15 16:00	288	RT	Wildfire-U. S. Event: Mosquito Wildfire	2022-12-14 2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-15 17:00	348	RT	Wildfire-U. S. Event: Mosquito Wildfire	2022-12-14 2023-05-16		

United States Environmental Protection Agency

Air Quality System

Raw Data Qualifier Report (v 1.1)

Report Date: May. 22, 2023

Parameter: PM10 Total 0-10um STP (81102)

Standard Units: Micrograms/cubic meter (25 C) (001)

Monitor Key / Site Address	Sample Date-Time	Value	Code	Description	Action Date	NAAQS Standard	Concurrence Ind Date
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-15 18:00	325	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-15 19:00	243	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-15 20:00	204	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-15 21:00	262	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-15 22:00	246	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-15 23:00	218	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-16 00:00	179	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-16 01:00	168	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-16 02:00	164	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-16 03:00	164	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-16 04:00	155	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		

United States Environmental Protection Agency

Air Quality System

Raw Data Qualifier Report (v 1.1)

Report Date: May. 22, 2023

Parameter: PM10 Total 0-10um STP (81102)

Standard Units: Micrograms/cubic meter (25 C) (001)

Monitor Key / Site Address	Sample Date-Time	Value	Code	Description	Action Date	NAAQS Standard	Concurrence Ind Date
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-16 05:00	156	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-16 06:00	149	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-16 07:00	153	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-16 08:00	171	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-16 09:00	179	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-16 10:00	154	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-16 11:00	117	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-16 12:00	102	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-16 13:00	89	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-16 14:00	79	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-16 15:00	83	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		

**United States Environmental Protection Agency
Air Quality System**

Raw Data Qualifier Report (v 1.1)

Report Date: May. 22, 2023

Parameter: PM10 Total 0-10um STP (81102)

Standard Units: Micrograms/cubic meter (25 C) (001)

<u>Monitor Key / Site Address</u>	<u>Sample Date-Time</u>	<u>Value</u>	<u>Code</u>	<u>Description</u>	<u>Action Date</u>	<u>NAAQS Standard</u>	<u>Concurrence Ind Date</u>
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-16 16:00	107	RT	Wildfire-U. S. Event: Mosquito Wildfire	2022-12-14 2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-16 17:00	417	RT	Wildfire-U. S. Event: Mosquito Wildfire	2022-12-14 2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-16 18:00	305	RT	Wildfire-U. S. Event: Mosquito Wildfire	2022-12-14 2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-16 19:00	303	RT	Wildfire-U. S. Event: Mosquito Wildfire	2022-12-14 2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-16 20:00	317	RT	Wildfire-U. S. Event: Mosquito Wildfire	2022-12-14 2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-16 21:00	312	RT	Wildfire-U. S. Event: Mosquito Wildfire	2022-12-14 2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-16 22:00	320	RT	Wildfire-U. S. Event: Mosquito Wildfire	2022-12-14 2023-05-16		
32-031-0025-81102-2 684A STATE ROUTE 341, RENO NV 89521	2022-09-16 23:00	272	RT	Wildfire-U. S. Event: Mosquito Wildfire	2022-12-14 2023-05-16		

Monitor Qualifier Counts: RT Wildfire-U. S.

Count: 96

<u>Monitor Key / Site Address</u>	<u>Sample Date-Time</u>	<u>Value</u>	<u>Code</u>	<u>Description</u>	<u>Action Date</u>	<u>NAAQS Standard</u>	<u>Concurrence Ind Date</u>
32-031-0031-81102-2 1260-A Stewart St.	2022-09-14 00:00	357	RT	Wildfire-U. S. Event: Mosquito Wildfire	2022-12-14 2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-14 01:00	287	RT	Wildfire-U. S. Event: Mosquito Wildfire	2022-12-14 2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-14 02:00	230	RT	Wildfire-U. S. Event: Mosquito Wildfire	2022-12-14 2023-05-16		

United States Environmental Protection Agency

Air Quality System

Raw Data Qualifier Report (v 1.1)

Report Date: May. 22, 2023

Parameter: PM10 Total 0-10um STP (81102)

Standard Units: Micrograms/cubic meter (25 C) (001)

Monitor Key / Site Address	Sample Date-Time	Value	Code	Description	Action Date	NAAQS Standard	Concurrence Ind Date
32-031-0031-81102-2 1260-A Stewart St.	2022-09-14 03:00	225	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-14 04:00	176	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-14 05:00	143	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-14 06:00	134	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-14 07:00	145	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-14 08:00	178	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-14 09:00	233	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-14 10:00	125	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-14 11:00	81	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-14 12:00	54	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-14 13:00	31	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-14 14:00	66	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-14 15:00	166	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-14 16:00	200	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-14 17:00	236	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-14 18:00	265	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2	2022-09-14 19:00	244	RT	Wildfire-U. S.	2022-12-14		

United States Environmental Protection Agency

Air Quality System

Raw Data Qualifier Report (v 1.1)

Report Date: May. 22, 2023

Parameter: PM10 Total 0-10um STP (81102)

Standard Units: Micrograms/cubic meter (25 C) (001)

Monitor Key / Site Address	Sample Date-Time	Value	Code	Description	Action Date	NAAQS Standard	Concurrence Ind Date
32-031-0031-81102-2 1260-A Stewart St.	2022-09-14 19:00	244	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-14 20:00	214	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-14 21:00	179	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-14 22:00	141	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-14 23:00	161	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-15 00:00	172	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-15 01:00	151	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-15 02:00	185	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-15 03:00	109	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-15 04:00	108	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-15 05:00	102	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-15 06:00	101	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-15 07:00	105	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-15 08:00	110	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-15 09:00	122	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-15 10:00	142	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2	2022-09-15 11:00	109	RT	Wildfire-U. S.	2022-12-14		

United States Environmental Protection Agency

Air Quality System

Raw Data Qualifier Report (v 1.1)

Report Date: May. 22, 2023

Parameter: PM10 Total 0-10um STP (81102)

Standard Units: Micrograms/cubic meter (25 C) (001)

Monitor Key / Site Address	Sample Date-Time	Value	Code	Description	Action Date	NAAQS Standard	Concurrence Ind Date
32-031-0031-81102-2 1260-A Stewart St.	2022-09-15 11:00	109	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-15 12:00	77	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-15 13:00	69	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-15 14:00	70	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-15 15:00	187	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-15 16:00	293	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-15 17:00	225	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-15 18:00	272	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-15 19:00	297	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-15 20:00	217	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-15 21:00	205	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-15 22:00	274	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-15 23:00	187	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-16 00:00	257	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-16 01:00	231	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-16 02:00	212	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-16 03:00	212	RT	Wildfire-U. S.	2022-12-14		

United States Environmental Protection Agency

Air Quality System

Raw Data Qualifier Report (v 1.1)

Report Date: May. 22, 2023

Parameter: PM10 Total 0-10um STP (81102)

Standard Units: Micrograms/cubic meter (25 C) (001)

Monitor Key / Site Address	Sample Date-Time	Value	Code	Description	Action Date	NAAQS Standard	Concurrence Ind Date
32-031-0031-81102-2 1260-A Stewart St.	2022-09-16 03:00	212	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-16 04:00	201	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-16 05:00	194	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-16 06:00	196	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-16 07:00	206	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-16 08:00	211	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-16 09:00	176	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-16 10:00	117	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-16 11:00	92	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-16 12:00	108	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-16 13:00	67	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-16 14:00	69	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-16 15:00	75	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-16 16:00	409	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-16 17:00	313	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-16 18:00	265	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-0031-81102-2	2022-09-16 19:00	360	RT	Wildfire-U. S.	2022-12-14		

**United States Environmental Protection Agency
Air Quality System**

Raw Data Qualifier Report (v 1.1)

Report Date: May. 22, 2023

Parameter: PM10 Total 0-10um STP (81102)

Standard Units: Micrograms/cubic meter (25 C) (001)

<u>Monitor Key / Site Address</u>	<u>Sample Date-Time</u>	<u>Value</u>	<u>Sample Qualifier Code Description</u>	<u>Action Date</u>	<u>NAAQS Standard</u>	<u>Concurrence Ind Date</u>
32-031-0031-81102-2 1260-A Stewart St.	2022-09-16 19:00	360	RT Wildfire-U. S. Event: Mosquito Wildfire	2022-12-14 2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-16 20:00	354	RT Wildfire-U. S. Event: Mosquito Wildfire	2022-12-14 2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-16 21:00	310	RT Wildfire-U. S. Event: Mosquito Wildfire	2022-12-14 2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-16 22:00	311	RT Wildfire-U. S. Event: Mosquito Wildfire	2022-12-14 2023-05-16		
32-031-0031-81102-2 1260-A Stewart St.	2022-09-16 23:00	352	RT Wildfire-U. S. Event: Mosquito Wildfire	2022-12-14 2023-05-16		

Monitor Qualifier Counts: RT Wildfire-U. S.

Count: 72

<u>Monitor Key / Site Address</u>	<u>Sample Date-Time</u>	<u>Value</u>	<u>Sample Qualifier Code Description</u>	<u>Action Date</u>	<u>NAAQS Standard</u>	<u>Concurrence Ind Date</u>
32-031-1005-81102-4 750 4TH ST, SPARKS, NV 89431	2022-09-14 00:00	400	RT Wildfire-U. S. Event: Mosquito Wildfire	2022-12-14 2023-05-16		
32-031-1005-81102-4 750 4TH ST, SPARKS, NV 89431	2022-09-14 01:00	399	RT Wildfire-U. S. Event: Mosquito Wildfire	2022-12-14 2023-05-16		
32-031-1005-81102-4 750 4TH ST, SPARKS, NV 89431	2022-09-14 02:00	409	RT Wildfire-U. S. Event: Mosquito Wildfire	2022-12-14 2023-05-16		
32-031-1005-81102-4 750 4TH ST, SPARKS, NV 89431	2022-09-14 03:00	386	RT Wildfire-U. S. Event: Mosquito Wildfire	2022-12-14 2023-05-16		
32-031-1005-81102-4 750 4TH ST, SPARKS, NV 89431	2022-09-14 04:00	375	RT Wildfire-U. S. Event: Mosquito Wildfire	2022-12-14 2023-05-16		
32-031-1005-81102-4 750 4TH ST, SPARKS, NV 89431	2022-09-14 05:00	346	RT Wildfire-U. S. Event: Mosquito Wildfire	2022-12-14 2023-05-16		
32-031-1005-81102-4 750 4TH ST, SPARKS, NV	2022-09-14 06:00	366	RT Wildfire-U. S. Event: Mosquito Wildfire	2022-12-14 2023-05-16		

United States Environmental Protection Agency

Air Quality System

Raw Data Qualifier Report (v 1.1)

Report Date: May. 22, 2023

Parameter: PM10 Total 0-10um STP (81102)

Standard Units: Micrograms/cubic meter (25 C) (001)

Monitor Key / Site Address	Sample Date-Time Value	Code	Description	Action Date	NAAQS Standard	Concurrence Ind Date
32-031-1005-81102-4 750 4TH ST, SPARKS, NV 89431	2022-09-14 07:00 299 Event:	RT	Wildfire-U. S. Mosquito Wildfire	2022-12-14 2023-05-16		
32-031-1005-81102-4 750 4TH ST, SPARKS, NV 89431	2022-09-14 08:00 265 Event:	RT	Wildfire-U. S. Mosquito Wildfire	2022-12-14 2023-05-16		
32-031-1005-81102-4 750 4TH ST, SPARKS, NV 89431	2022-09-14 09:00 215 Event:	RT	Wildfire-U. S. Mosquito Wildfire	2022-12-14 2023-05-16		
32-031-1005-81102-4 750 4TH ST, SPARKS, NV 89431	2022-09-14 10:00 123 Event:	RT	Wildfire-U. S. Mosquito Wildfire	2022-12-14 2023-05-16		
32-031-1005-81102-4 750 4TH ST, SPARKS, NV 89431	2022-09-14 11:00 74 Event:	RT	Wildfire-U. S. Mosquito Wildfire	2022-12-14 2023-05-16		
32-031-1005-81102-4 750 4TH ST, SPARKS, NV 89431	2022-09-14 12:00 41 Event:	RT	Wildfire-U. S. Mosquito Wildfire	2022-12-14 2023-05-16		
32-031-1005-81102-4 750 4TH ST, SPARKS, NV 89431	2022-09-14 13:00 37 Event:	RT	Wildfire-U. S. Mosquito Wildfire	2022-12-14 2023-05-16		
32-031-1005-81102-4 750 4TH ST, SPARKS, NV 89431	2022-09-14 14:00 46 Event:	RT	Wildfire-U. S. Mosquito Wildfire	2022-12-14 2023-05-16		
32-031-1005-81102-4 750 4TH ST, SPARKS, NV 89431	2022-09-14 15:00 165 Event:	RT	Wildfire-U. S. Mosquito Wildfire	2022-12-14 2023-05-16		
32-031-1005-81102-4 750 4TH ST, SPARKS, NV 89431	2022-09-14 16:00 191 Event:	RT	Wildfire-U. S. Mosquito Wildfire	2022-12-14 2023-05-16		
32-031-1005-81102-4 750 4TH ST, SPARKS, NV 89431	2022-09-14 17:00 268 Event:	RT	Wildfire-U. S. Mosquito Wildfire	2022-12-14 2023-05-16		

United States Environmental Protection Agency

Air Quality System

Raw Data Qualifier Report (v 1.1)

Report Date: May. 22, 2023

Parameter: PM10 Total 0-10um STP (81102)

Standard Units: Micrograms/cubic meter (25 C) (001)

<u>Monitor Key /</u> <u>Site Address</u>	<u>Sample</u> <u>Date-Time</u>	<u>Value</u>	<u>Code</u>	<u>Description</u>	<u>Action</u> <u>Date</u>	<u>NAAQS Standard</u>	<u>Concurrence</u> <u>Ind Date</u>
32-031-1005-81102-4 750 4TH ST, SPARKS, NV 89431	2022-09-14 18:00	249	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-1005-81102-4 750 4TH ST, SPARKS, NV 89431	2022-09-14 19:00	208	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-1005-81102-4 750 4TH ST, SPARKS, NV 89431	2022-09-14 20:00	190	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-1005-81102-4 750 4TH ST, SPARKS, NV 89431	2022-09-14 21:00	169	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-1005-81102-4 750 4TH ST, SPARKS, NV 89431	2022-09-14 22:00	167	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		
32-031-1005-81102-4 750 4TH ST, SPARKS, NV 89431	2022-09-14 23:00	157	RT	Wildfire-U. S.	2022-12-14		
	Event:			Mosquito Wildfire	2023-05-16		

Monitor Qualifier Counts: RT Wildfire-U. S.

Count: 24

All Qualifiers Utilized:

<u>Qualifier</u>		<u>Qualifier</u>
<u>Code:</u>	<u>Qualifier Description:</u>	<u>Count:</u>
RT	Wildfire-U. S.	192

Draft
October 26, 2023