



## GREAT BASIN UNIFIED AIR POLLUTION CONTROL DISTRICT

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June 12, 2023

Nolan Bobroff  
Associate Planner/Housing Coordinator  
Town of Mammoth Lakes  
P.O. Box 1609  
Mammoth Lakes, CA 93546

RE: 2022-2023 Mammoth Lakes PM10 and Meteorological Summary

Dear Mr. Bobroff:

The Great Basin Unified Air Pollution Control District (District) has monitored air quality in the Town of Mammoth Lakes since 1984. The District recently finalized the data completing the 2022-2023 air monitoring year ending March 15, 2023. District staff is pleased to provide the Town with this summary of air quality measurements recorded by the District between March 16, 2022 and March 15, 2023. The PM10 data presented are the regulatory data of record from two monitors; data through May 4, 2022 are from the District's 1-in-3-day Partisol Sequential filter-based monitor; subsequent data are from the District's continuous Thermo 1405 TEOM. The District had been testing a continuous Teledyne-API T640x PM monitor in Mammoth since September 2018, however, that monitor which utilizes a light-scattering method as a surrogate for mass measurements had proven to measure concentrations significantly higher than the filter-based monitor considered by EPA as the gold standard for monitoring. Based on these results, the T640X monitor was replaced by the 1405 PM10 TEOM monitor in May 2022. This monitor utilizes a direct mass measurement that compares well with the filter-based monitor. Hourly PM10 concentration data from the new monitor are publicly available in real time on the District website: <https://www.gbuapcd.org/>.

During the March 16, 2022 to March 15, 2023 monitoring period, the Federal PM10 standard ( $150 \mu\text{g}/\text{m}^3$  for a 24-hour average) was exceeded on zero (0) days. The California State PM10 standard ( $50 \mu\text{g}/\text{m}^3$  for a 24-hour average) was exceeded on eleven (11) days during the monitoring period.

All eleven (11) of the monitored State exceedances in 2022-2023 were due to local sources. There were no wildfire smoke events in 2022-2023 which resulted in a State exceedance. The local sources causing State exceedances were determined to be construction related between June and October (count = 2), followed by residential woodburning between December and March (count = 9).

Exceedance days and PM10 levels are listed in Table 1 for the 2022-2023 air monitoring year. An exceedance summary comparing the 2022-2023 monitoring year with past monitoring years is presented in Table 2. Both tables include exceedances caused by wildfire smoke events that have been excluded from regulatory determinations.

Figure 1 shows the daily average PM10 values during the wildfire smoke season between August and October 2022.

Figure 2 shows the daily average PM10 values for the entire monitoring year, superimposed on the prior two monitoring years for comparative purposes.

Figure 3 shows the daily average PM10 concentration during the wildfire smoke season since 1992. The figure shows that during eight of the past ten summers smoke from large-scale wildfires has impacted the Town of Mammoth Lakes.

Please contact Chris Howard, Senior Research Systems Analyst, at 760-872-8211 with any questions you may have regarding this report.

Thank you,



Phillip L. Kiddo  
Air Pollution Control Officer

Table 1. Town of Mammoth Lakes Federal and State PM10 exceedances: March 16, 2022 - March 15, 2023.

Date	PM10 Average ( $\mu\text{g}/\text{m}^3$ )	Federal PM10 Exceedance	State PM10 Exceedance
6/12/2022	53.8	No	Yes
10/31/2022	60.7	No	Yes
12/16/2022	58.8	No	Yes
12/17/2022	56.8	No	Yes
2/8/2023	50.2	No	Yes
2/16/2023	72.1	No	Yes
2/17/2023	67.9	No	Yes
2/18/2023	84.9	No	Yes
2/19/2023	51.8	No	Yes
2/20/2023	54.6	No	Yes
3/3/2023	66.2	No	Yes

Table 2. Comparison of Federal and State PM10 exceedances with prior monitoring years.

Air Monitoring Year	Federal PM10 Exceedances (>150 $\mu\text{g}/\text{m}^3$ )	State PM10 Exceedances (>50 $\mu\text{g}/\text{m}^3$ )
09-10	0	25
10-11	0	36
11-12	0	5
12-13	0	19
13-14	2	17
14-15	0	3
15-16	0	20
16-17	0	21
17-18	0	6
18-19*	4	18
19-20*	0	9
20-21*	24	39
21-22*	0	15
22-23	0	11

\* calculated number of exceedances due to less than 1:1 daily capture rate

# Summer 2022 Wildfire Smoke impacts on the Town of Mammoth Lakes

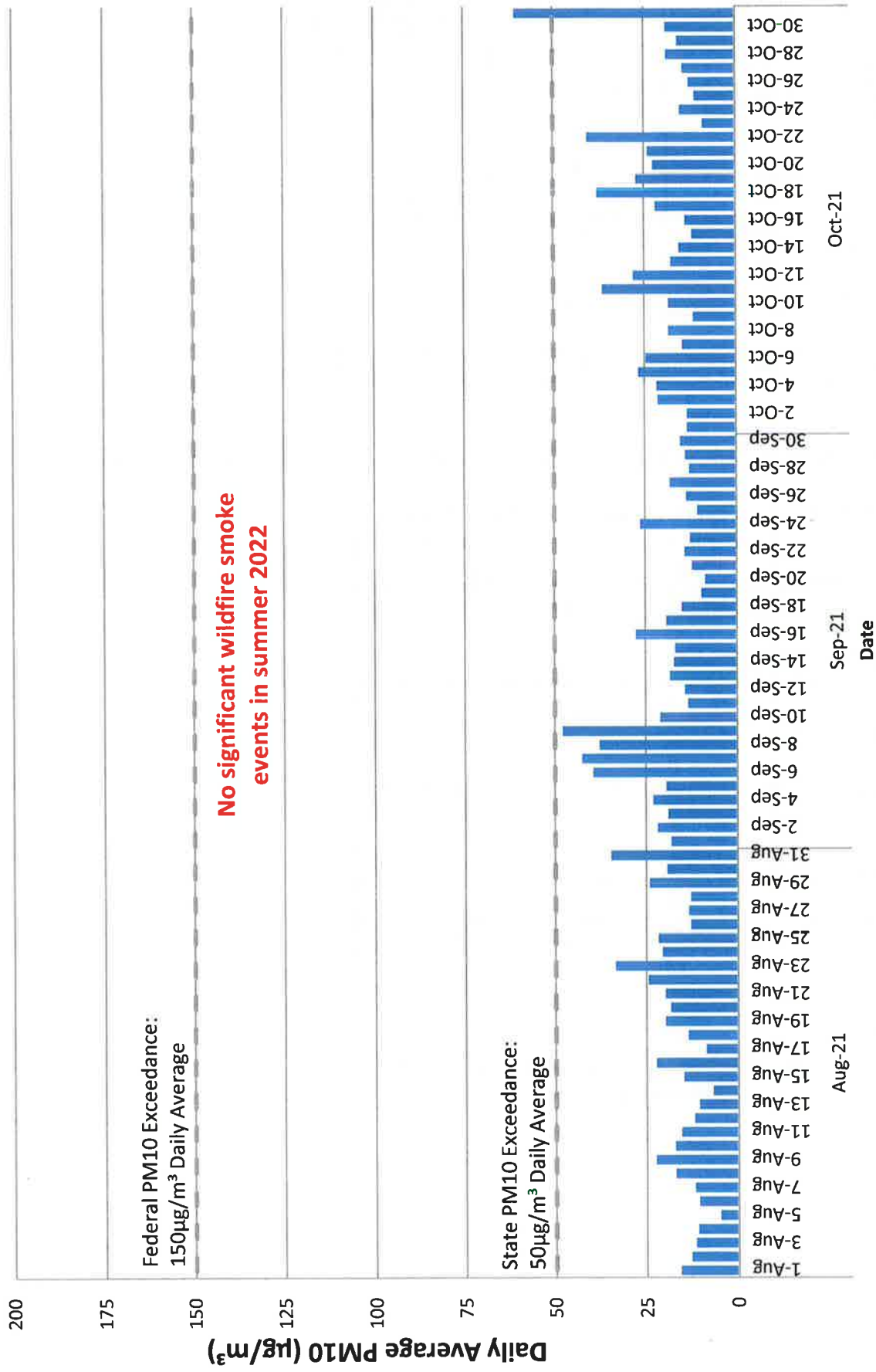


Figure 1: Summer 2022 Wildfire Smoke Impacts on the Town of Mammoth Lakes.



# Town of Mammoth Lakes - PM10 March 16, 2022 - March 15, 2023

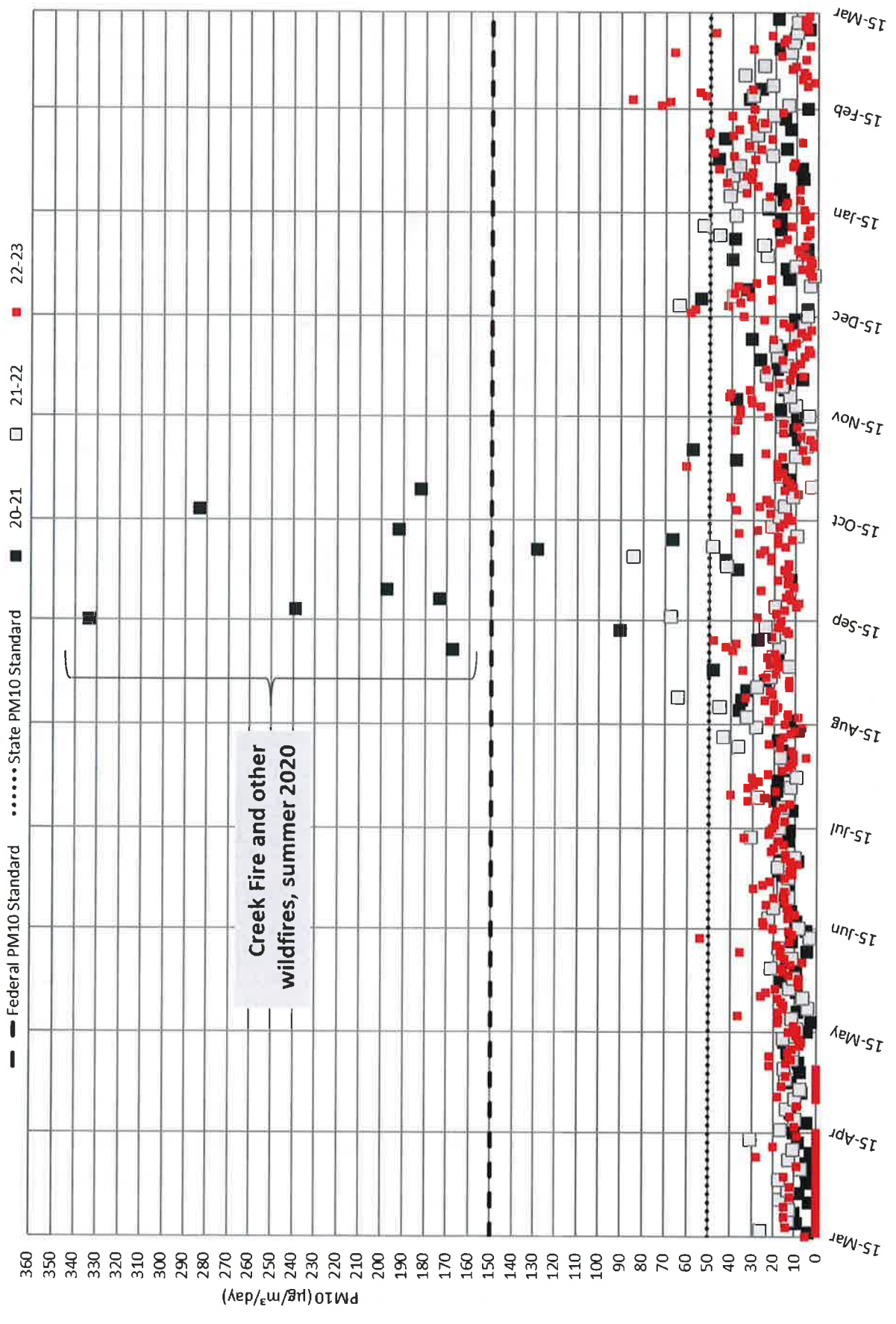


Figure 2: Town of Mammoth Lakes - PM10, March 16, 2022 - March 15, 2023. Note 1-in-3-day schedule from 8/18/2018-3/15/2022.

# Town of Mammoth Lakes Wildfire Season PM10 June-September, 1992-2022

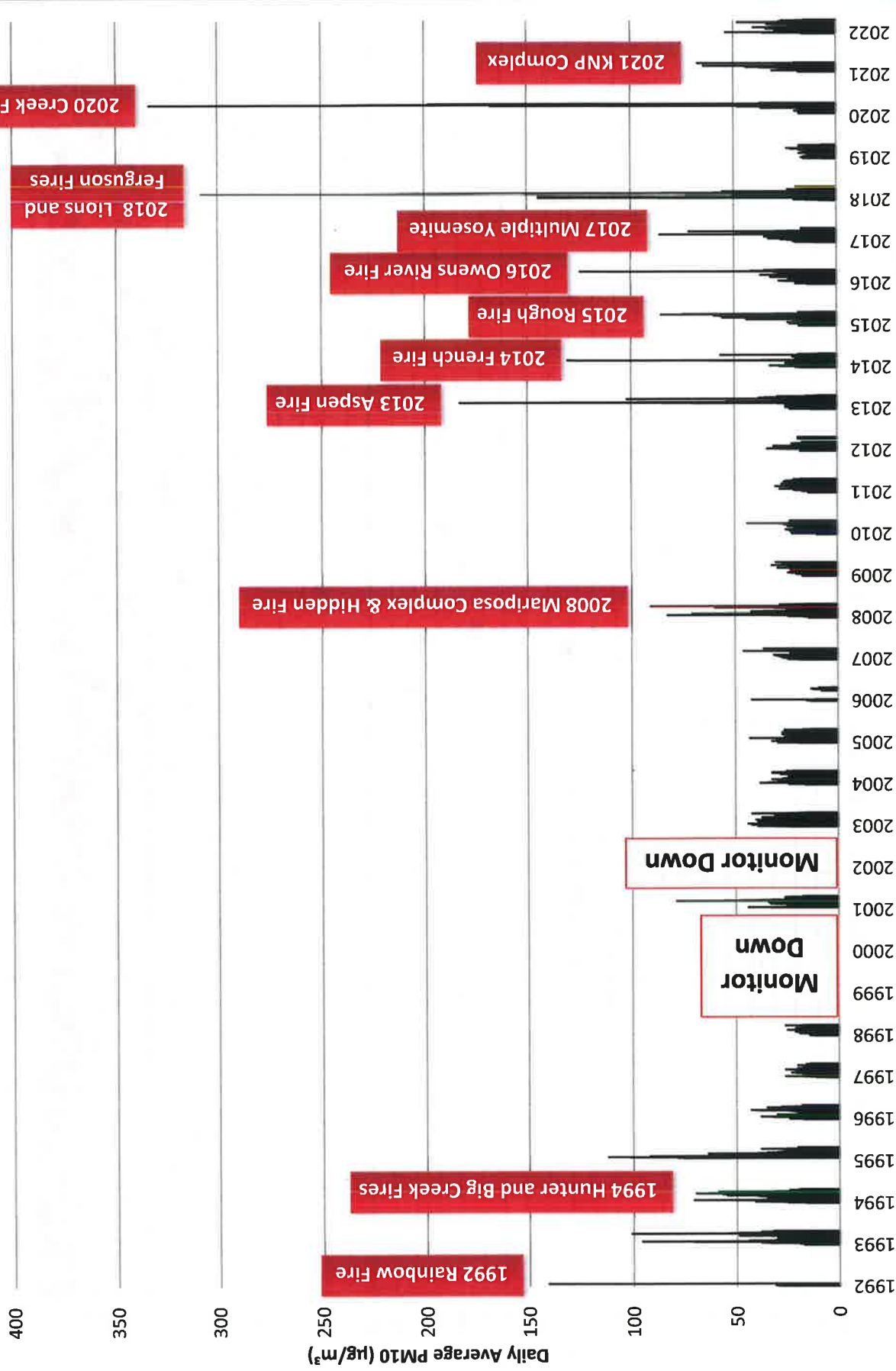


Figure 3: Town of Mammoth Lakes Wildfire Season PM10, June-September, 1992-2022, except 2020-2021, whose fire seasons were July-October.