



GREAT BASIN UNIFIED AIR POLLUTION CONTROL DISTRICT

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May 14, 2021

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

RE: 2020-2021 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. We recently finalized the data completing the 2020-2021 air monitoring year ending March 15, 2021. We are pleased to provide you this summary of air quality measurements recorded by the District between March 16, 2020 and March 15, 2021. The PM10 data presented are from the District's 1:3 day Partisol monitor. The District has also been testing a continuous T640x PM monitor in Mammoth since September 2018, but the accuracy of the monitor is still being evaluated and is not presented here.

During this period, the Federal PM10 standard ($150 \mu\text{g}/\text{m}^3$ for a 24-hour average) was exceeded on eight (8) days. Since the Partisol was operated with a 1:3 day sampling rate, the calculated number of Federal exceedances was twenty-four (24) days. State PM10 standards ($50 \mu\text{g}/\text{m}^3$ for a 24-hour average) were exceeded on thirteen (13) days. Considering the Partisol 1:3 day daily sampling rate, the calculated number of State exceedances was thirty-nine (39) days.

All of the monitored exceedances except for one State exceedance were due to wildfire smoke impacts. The Town of Mammoth Lakes began to experience wildfire smoke impacts on August 17, 2020 when a widespread lightning storm ignited many wildfires throughout California. However, the largest contributor of smoke in 2020 was the Creek Fire which ignited near Shaver Lake on September 4, 2020. Smoke from the Creek Fire, combined with other statewide wildfire smoke, impacted the Town of Mammoth Lakes to varying degrees on most days between August 17, 2020 and November 5, 2020. The summer of 2020 was the most wildfire smoke-impacted since the District started monitoring in Mammoth Lakes in 1984.

The single non-wildfire-smoke exceedance of the State standard occurred on 12/20/2020 measuring $54.2 \mu\text{g}/\text{m}^3$. This winter-time exceedance was analyzed and deemed to be caused by local sources, primarily woodburning stoves, though road cinders may have had a minor contributing impact.

Exceedance days and PM10 levels are listed in Table 1 for the 2020-2021 air monitoring year. An exceedance summary comparing the 2020-2021 monitoring year with past monitoring years is shown in Table 2.

Figure 1 shows the daily average PM10 values between August and October 2020. Figure 2 shows the daily average PM10 values for the entire monitoring year, superimposed on the prior three monitoring years for comparative purposes.

Figure 3 shows the daily average PM10 during June-September for years since 1992, though since the 2020 wildfire smoke season started late and ended late, July-October is shown for 2020. The figure demonstrates that historically, large-scale wildfires in the Mammoth Lakes area have been relatively infrequent events, though the seven of the past eight summers were impacted by wildfire smoke.

Please contact me with any questions you may have.

Thank you,



Phillip L. Kiddoo
Air Pollution Control Officer

Table 1. Town of Mammoth Lakes Federal and State PM10 exceedances: March 16, 2020 - March 15, 2021.

Date	PM10 Average ($\mu\text{g}/\text{m}^3$)	Federal PM10 Exceedance	State PM10 Exceedance
9/6/2020	167.9	Yes	Yes
9/12/2020	90.4	No	Yes
9/15/2020	333.6	Yes	Yes
9/18/2020	239.1	Yes	Yes
9/21/2020	173.6	Yes	Yes
9/24/2020	197.9	Yes	Yes
10/6/2020	128.9	No	Yes
10/9/2020	66.8	No	Yes
10/12/2020	192.3	Yes	Yes
10/18/2020	283.7	Yes	Yes
10/24/2020	182.2	Yes	Yes
11/5/2020	57.7	No	Yes
12/20/2020	54.2	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
* less than 1:1 daily capture rate		

Summer 2020 Wildfire Smoke Impacts on the Town of Mammoth Lakes

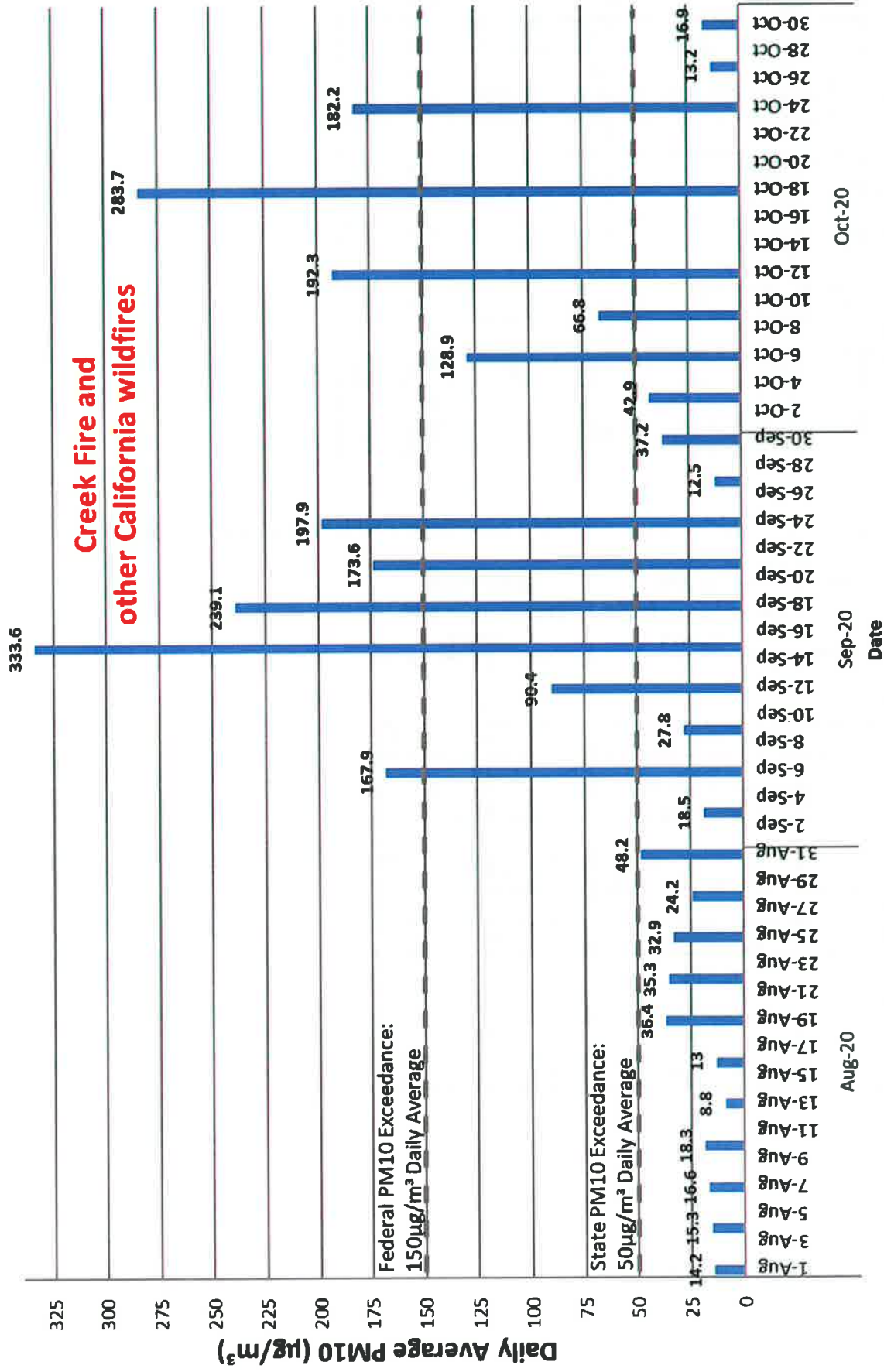


Figure 1: Summer 2020 Wildfire Smoke Impacts on the Town of Mammoth Lakes.



Town of Mammoth Lakes - PM10 March 16, 2020 - March 15, 2021

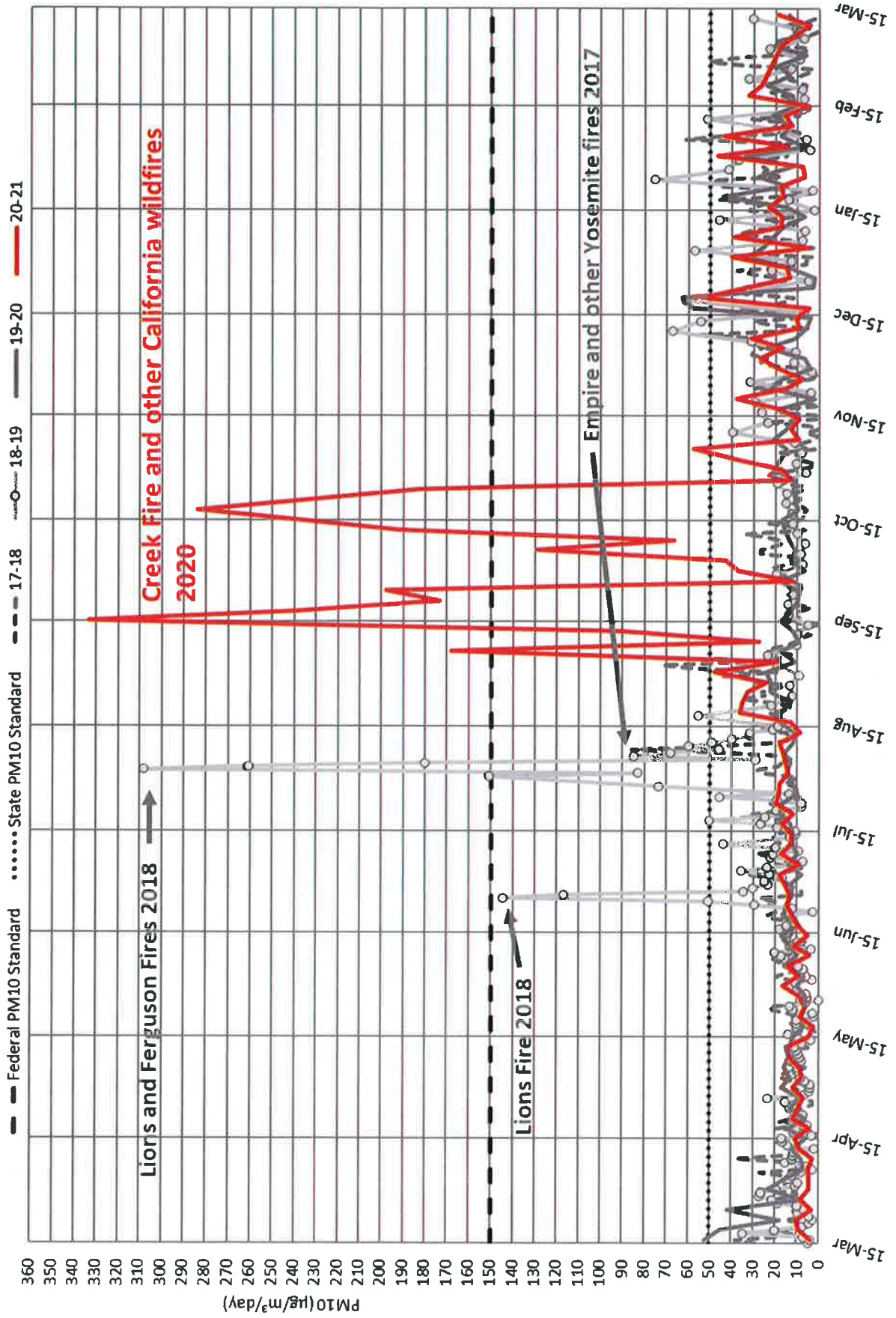


Figure 2: Town of Mammoth Lakes - PM10, March 16, 2020 - March 15, 2021.

Town of Mammoth Lakes Wildfire Season PM10 June-September, 1992-2020

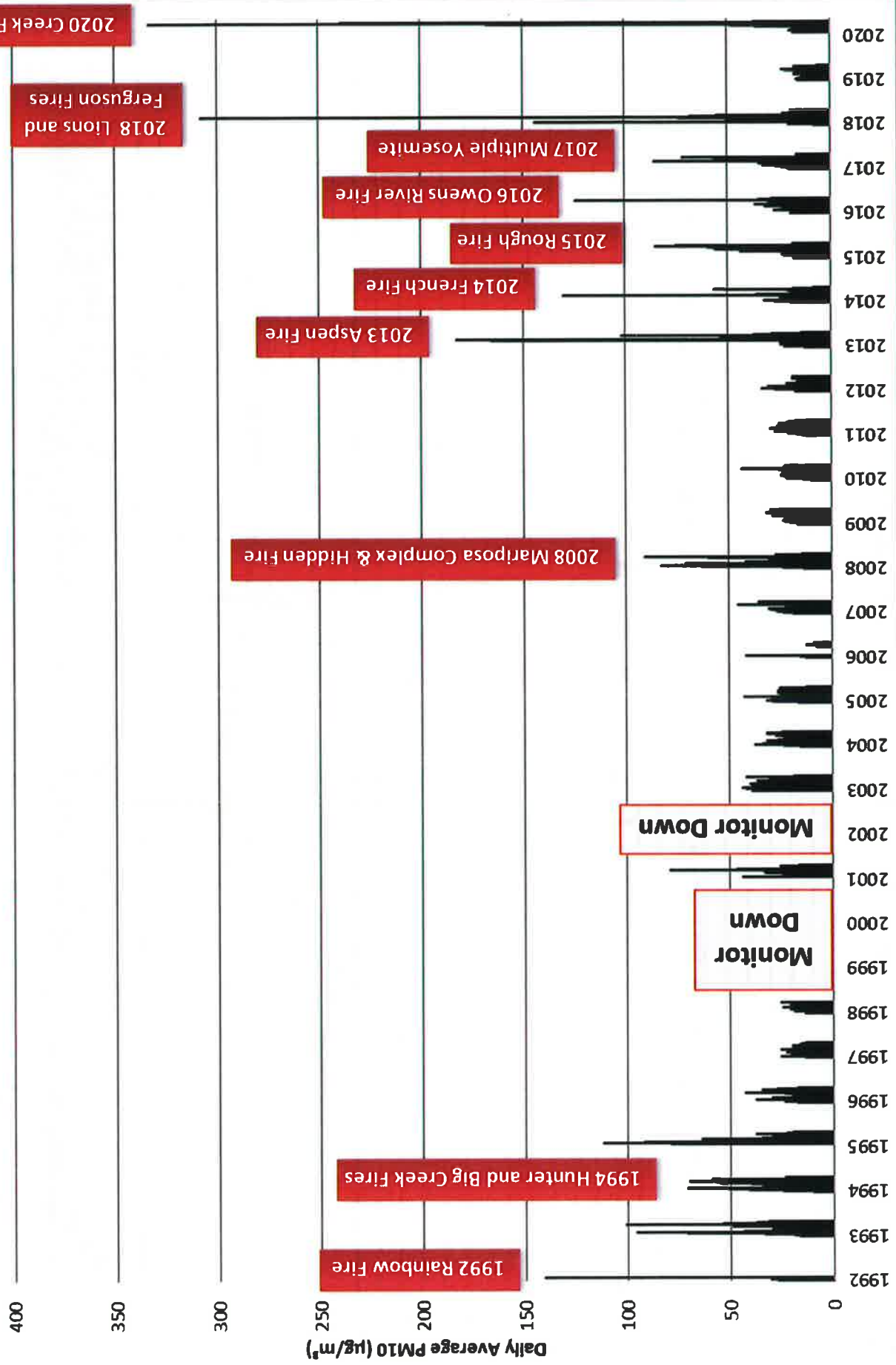


Figure 3: Town of Mammoth Lakes Wildfire Season PM10, June-September, 1992-2019, except 2020, whose fire season was July-October.