

November 14, 2023

Sent via e-mail to the following recipients, Bitterroot National Forest:

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Darby Sula District Ranger Abbie Jossie abbie.jossie@usda.gov

Westfork District Ranger Daniel Pliley daniel.pliley@usda.gov

Supervisor Anderson and District Rangers Brown, Josie, and Pliley,

Please consider this report as new information and include this report in the project files for the following projects: The Bitterroot Front, The Lick Creek Demonstration Research Forest Project, Rye Creek Fuel Break, Sleeping Child Fuel Break, Soda Baker Wildfire Fuel Risk Reduction Fuel Break, and the Sula District Fuel Break.

Report: Prescribed fire and pile burning during poor air quality and Air Stagnation Alerts 2023.

A strong high pressure was predicted for the Bitterroot Valley on October 21st and 22nd. On the morning of October 22nd, the air in the Bitterroot Valley between Lost Horse Creek and the West Fork was poor quality. See exhibit 1.



Exhibit 1: Taken looking south from Lost Horse Creek along Highway 93 on October 22, 2023

This was after burning of 365 acres and 130 acres for the School Point Ecoburn on October 19 and 20, 2023, See exhibit 2. The Purple air monitor in Darby reported 159 that morning, see exhibit 3.

WildCAD-E MTBRC v1.6										
Open/Recent Incidents 11/10/23 10:04:20 AM										
Local Date/Time	Inc#	Fiscal	Incident Type	Name	Location	Lat/Lon	Status	Res...	Acres	Web Comment
11/06/23 0926	MTBRF-23395		Prescribed Fire	WF Landing Pile Violet Creek RX	Violet Creek	45.845367, -114.205083 45° 50' 72" x 114° 12' 3"			15	USFS RX Burn 11/6/23
11/03/23 0742	MTBRF-23364		Prescribed Fire	West Central Pile Burn RX		46.471783, -114.177450 46° 28' 31" x 114° 10' 05"			93	USFS prescribed burn 11/3
11/02/23 1537	MTBRF-23363	(0197) Other: WFSE97	Prescribed Fire	WF Pile Burn Piquett 114 / 126 RX	Piquett Creek	45.869500, -114.152233 45° 52' 18" x 114° 9' 13"			59	USFS RX Burn 11/3/23
11/02/23 0606	MTBRF-23362	(0197) Other: WFSE97	Prescribed Fire	WF Pile Burn Piquett 119 RX	Piquett Creek Drainage	45.859770, -114.189230 45° 51' 59" x 114° 11' 35"			68	USFS RX Burn 11/2/23
10/31/23 1615	MTBRF-23361		Prescribed Fire	WF Pile Burn Piquett 1 102E 131	Piquett Creek Drainage	45.842617, -114.193407 45° 50' 56" x 114° 11' 61"			138	USFS RX Burn 11/1/23
10/31/23 1337	MTBRF-23360		Prescribed Fire	West Side Landing Piles RX	Lost Horse Rd. north of Darby	46.118883, -114.233000 46° 7' 13" x 114° 13' 98"			3	USFS RX Burn
10/31/23 1106	MTBRF-23359		Prescribed Fire	Tabor Piles RX	Tabor Mtn. - 4 miles east of Waly Crawford	46.098700, -114.109807 46° 5' 52" x 114° 6' 59"			36	USFS RX Burn 11/1/23
10/30/23 1622	MTBRF-23358	(0197) Other: WFSE97	Prescribed Fire	Tepee Landing Pile Burning RX	East Fork Road	45.933310, -113.741621 45° 56' x 113° 44' 5"			10	USFS RX Burn 10/31
10/30/23 1619	MTBRF-23357		Prescribed Fire	TBH 8 Pile Burning RX	Located north of Chaffin Road along the 13326 road;	45.803717, -114.306350 45° 48' 22" x 114° 18' 38"			34	USFS RX Burn 10/31/23
10/27/23 1417	MTBRF-23356		Prescribed Fire	West Fork Pile Burning RX	East Piquett with Unit 116	45.817050, -114.170967 45° 49' 02" x 114° 10' 6"			539	USFS RX Pile Burning 10/31
10/22/23 1650	MTBRF-23355		Prescribed Fire	Soda Springs RX	Soda Springs	45.801000, -114.341283 45° 48' 06" x 114° 20' 48"	Controlled		53	
10/19/23 1211	MTBRF-23070		Prescribed Fire	School Point Ecoburn - Delta Maint RX	N. of Nez Perce Rd along FR 5933	45.803630, -114.306100 45° 48' 22" x 114° 18' 37"	Contained		130	USFS Prescribed Fire 10/19
10/19/23 1157	MTBRF-23069		Prescribed Fire	School Point Ecoburn-Echo RX		45.801430, -114.329000 45° 48' 09" x 114° 19' 74"	Controlled		365	USFS Prescribed Fire 10/20
10/18/23 0748	MTBRF-23350		Prescribed Fire	Cameron Blue 3 RX	E. of Guide Saddle	45.928500, -113.860167 45° 55' 71" x 113° 51' 61"			300	CANCELLED

Exhibit 2: Wildcad report from 10/18/2023-11/6/2023

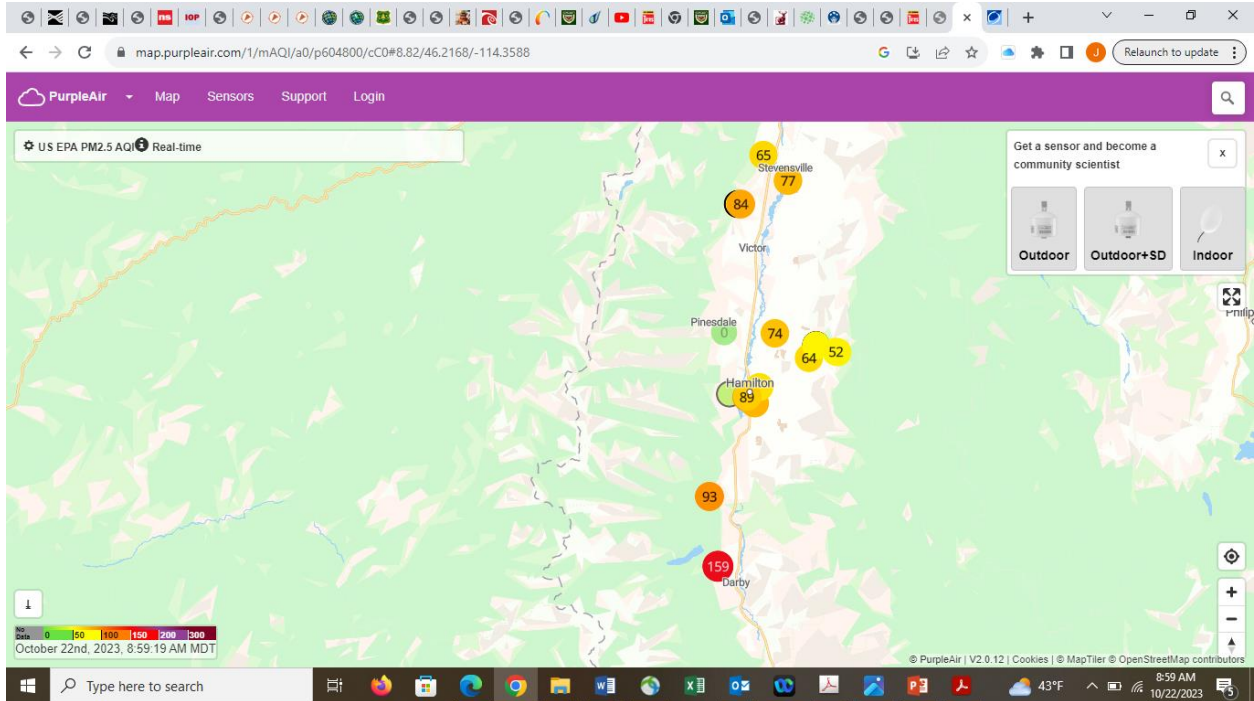


Exhibit 3: Purple Air report October 22, 2023 at 8:19 am. Darby reads 159 and Lost Horse area monitor reads 93.

The weather report for October 22, 2023 called for a strong high pressure and the morning visual air quality (see exhibit 1) as well as purple air monitors showed poor air quality. Yet the Forest service burned in the Soda Springs area and continued burns in the two School Point Eco burn areas, see exhibit 2.

A complaint to Montana Department of Environmental Quality (DEQ) brought a response stating that they do not have a monitor in Darby and that the Hamilton air monitor read at non-hazardous levels, so they allowed the burns, see exhibit 4. Please see the smoke map of that day showing clearly that the smoke coming from the burns in the West Fork area were traveling East and not affecting Hamilton, see exhibit 5. Without monitors along the entire Bitterroot Valley, the DEQ cannot adequately monitor air quality. The purple air monitors from Airnow.gov do offer more information, but the DEQ in this case, did not use them. This creates a tremendous lapse of protection during prescribed burning and pile burning for Bitterroot Valley residents.

OA Ofseyer, Aaron <Aaron.Ofseyer@mt.gov>
 To: You
 Tue 10/24/2023 10:04 AM

Dear Michele-

We received your email regarding prescribed fire on 10/20 in the Bitterroot Valley. Thanks for reaching out. Below you'll see data from our regulatory monitor in Hamilton showing PM 2.5 levels from 10-20 through 10-22. Unfortunately, we don't have a regulatory monitor in Darby, or further south in the valley. Anything over 35.5µg/m³ is considered 'unhealthy for sensitive groups'. As you'll see from the tables below, the highest level it reached in Hamilton over the weekend was 26.2 µg/m³.

Please reach out with any questions or concerns.

Date Printed: 10/21/2023 06:15

Daily Summary Report
 10/20/2023

Site: PS_Hamilton PS 46 Interval: 001h

Time	PM25 UGM3	RH_TEMP DEGC	TEMP_AMB_C DEGC	WDIR DEG	WSIGMA DEG	WSPD_MPH MPH	WSPD_MS M/SEC
00:00	8.9	24.0	11.9	209	51	2.6	1.2
01:00	12.9	23.7	11.1	210	29	2.3	1.0
02:00	18.2	24.1	10.5	206	39	2.5	1.1
03:00	17.0	23.8	10.1	207	57	2.3	1.0
04:00	10.9	24.1	9.9	208	25	3.4	1.5
05:00	10.9	23.8	7.8	225	41	1.5	0.7
06:00	10.4	23.9	7.7	225	49	1.7	0.8
07:00	11.4	24.0	9.4	221	53	2.6	1.2
08:00	10.9	24.2	12.4	210	37	3.2	1.4
09:00	10.9	24.6	16.6	209	58	2.6	1.1
10:00	16.0	25.7	19.4	196	59	4.0	1.8
11:00	2.9	26.0	23.1	195	43	3.6	1.6
12:00	2.1	26.2	26.3	165	55	2.8	1.2
13:00	1.3	26.1	26.8	353	67	3.0	1.3

Exhibit 4: Response from the DEQ that there are no monitors south of Hamilton.

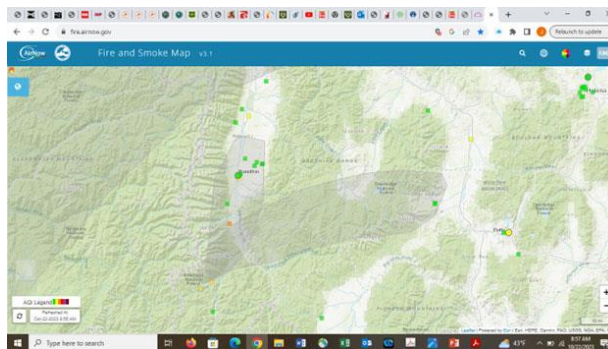


Exhibit 5: picture of the smoke map, October 22, 2023

Just a week later, on October 30, 2023, a stagnant air advisory went into effect for the Bitterroot Valley, see exhibit 6.

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The screenshot shows the KPAX Montana website interface. At the top, there is a navigation bar with the KPAX logo, a search bar, and a 'Watch Now' button. Below the navigation bar is a large advertisement placeholder. The main content area features a news article titled 'Air Stagnation Advisory issued for Western Montana'. The article includes a map of Western Montana with a shaded region indicating the advisory area. The map labels various cities and towns, including Sandpoint, Kalispell, Missoula, Hamilton, and Butte. A text box on the map reads 'AIR STAGNATION ADVISORY INVERSIONS VALLEY FOG'. Below the map, the article text states: 'MISSOULA — The National Weather Service office in Missoula has issued an Air Stagnation Advisory for parts of Western Montana until 12 p.m. on November 1, 2023. The National Weather Service says "Stagnant conditions will trap pollutants, leading to deteriorating air quality." The advisory is in effect for the Flathead and Mission valleys, the Kootenai/Cabinet Region, the West Glacier Region, the Lower Clark Fork Region, the Missoula and Bitterroot valleys, and the Potomac/Seeley Lake Region.'

Exhibit 6: Air stagnation advisory from KPAX Montana October 30 – Nov 1.

Even as this advisory was in effect the Bitterroot National Forest (BNF) burned piles in multiple locations on the Forest, see exhibit 2 and the Facebook postings throughout the air stagnation advisory, exhibit 7 and exhibit 8.

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Exhibit 7: Facebook post on October 31, 2023.



Exhibit 8: Facebook post on Nov 1, 2023.

When asked why the Bitterroot National Forest was burning during bad air days via the comment portal on Facebook, the response was that they burn less piles on bad air days, see exhibit 9. No burning should be happening on a poor dispersal day especially during an air stagnation advisory. Strangely enough, the Darby purple air monitor was disabled and eventually disappeared. Air quality exceeded health standards for the duration of the advisory. This is demonstrated in the photos taken on November 1, 2023 see exhibits 10, 11, 12, 13, and 14.

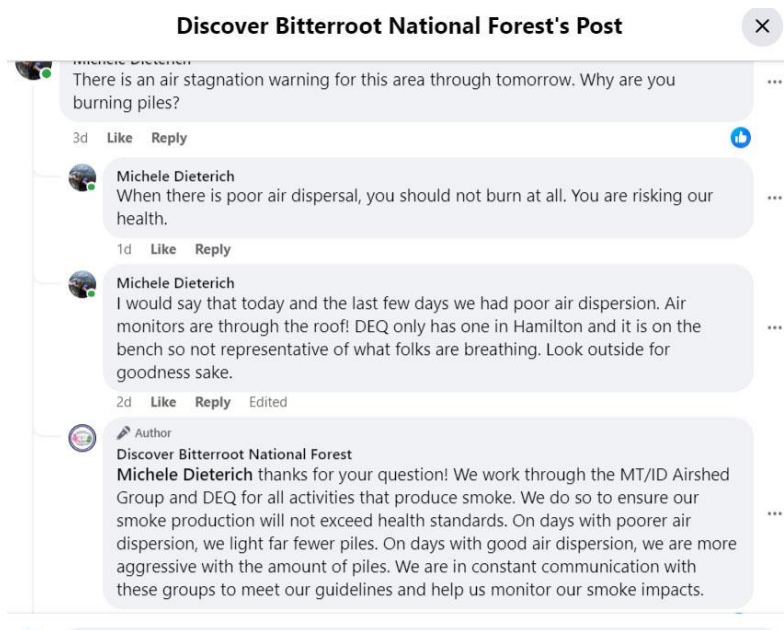


Exhibit 9: Facebook response on burning during an air stagnation advisory. Air quality standards were exceeded.

The DEQ will be putting up two purple air monitors in Darby next year. But that does not help the air quality in areas like Stevensville, Corvallis, Victor, and Florence. Nor does it help with air quality in Darby and Connor for the past 4-5 years of pile burning. Without air monitors in Darby and along the Valley, there is no mechanism in place to protect air quality and Valley residents. As happened during the recent stagnant air advisory, health standards will be exceeded now and in the future. Until proper monitors are in place throughout the valley, either burning should not happen, the BNF should look outside in the morning before burning, or best yet, the BNF should refrain from burning during air stagnation advisories, low dispersal days, and when high pressure is in the forecast.



Exhibit 10: Picture taken looking south from Lost Horse Road November 1, 2023.



Exhibit 11: Photo taken on November 1, 2023 looking south on highway 93 from Lost Horse Road

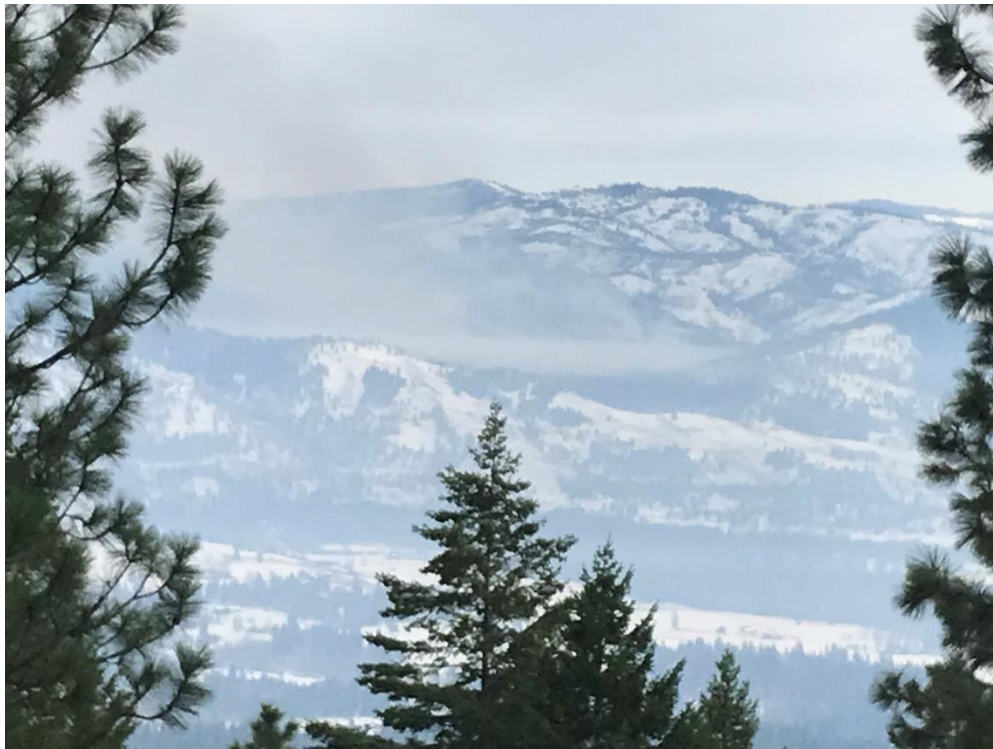


Exhibit 12: Photo taken on November 1 2023 at 1 pm, looking E to DLL2 pile burns



Exhibit 13: Photo taken on November 1 2023 at 3 pm, looking S to Darby and Piquett Cr pile burns



Exhibit 14: Photo taken on November 1 2023 at 3 pm, looking South-Lost Horse in foreground

Even without the stagnant air advisory, the burns affect air in the area. A recent facebook post announces pile burning the week of Nov 13th (exhibit 15) and the purple air monitor in Hamilton hit the red and remained in orange for quite some time (exhibit 16). Exhibit 17 and 18 are photos of the Darby area on November 14, 2023 at 9 am and 2pm showing heavy smoke in the Darby Westfork area. Again, please consider this report as new information and include this report in the project files for The Bitterroot Front, The Lick Creek Demonstration Research Forest Project, Rye Creek Fuel Break, Sleeping Child Fuel Break, Soda Baker Wildfire Fuel Risk Reduction Fuel Break, and the Sula District Fuel Break.



Exhibit 15: BNF Facebook post on Nov 13, 2023

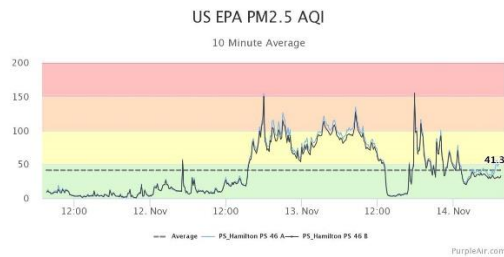


Exhibit 16: Results of DEQ monitor PS 46 showing high readings Nov 13 and 14, 2023

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Exhibit 17: Nov 14 2023 9 am looking south along 93 to Darby area from Lost Horse Creek



Exhibit 18: Nov 14 2023 2pm looking south along 93 to Darby area from Goat Mountain ridge

We implore the Bitterroot National Forest to consider public health. The cumulative burning from proposed and current projects (the Eastside alone calls for 4500 acres per year) on the BNF and inevitable fires during fire season will greatly affect public health.

Thank you for considering this information.

Sincerely,

Jim Miller, President
Friends of the Bitterroot
millerfobmt@gmail.com