

No Action

Air quality in and around the Portneuf Westbench project would be negatively impacted if a wildland fire were to escape initial attack efforts and burn in untreated fuels. The risk of large scale wildfire is greatest under this alternative. Wildfire would have a much larger impact on air quality than prescribed fire due to higher burning intensities (near total consumption of fuels versus partial consumption of fuels) and production of smoke over a much shorter period of time (days to weeks versus years). Uncharacteristic wildland fire could emit up to ten times the particulates produced during a prescribed fire. Air quality in the communities of Pocatello and Inkom would likely be severely compromised during a wildfire and NAAQS violations for both PM₁₀ and PM_{2.5} would likely occur. Residents with upper respiratory problems would be negatively impacted during large wildfire events due to heavy concentrations of smoke. Vehicular accidents along both major and minor roadways could occur due to reduced visibility. Recreational experiences would be temporarily diminished due to smoke, ashfall, and reduced visibility.

Proposed Action

An analysis of potential particulates emitted during prescribed burning activities described in the proposed action was conducted using the First Order Fire Effects Model (FOFEM v 5.0). Total emissions calculations were made for both PM₁₀ and PM_{2.5} by treatment year. The estimated amount of particulate matter produced during any treatment year is well under EPA's general conformity de minimis levels (100 tons year for PM₁₀).

Table XX.

Year	Acres	Vegetation Cover Type	Treatment Units	Emissions PM ₁₀ (tons)	Emissions PM _{2.5} (tons)
1	37	mtn. shrub	4,5	0.315	0.259
2	170	mtn. shrub	7,8,9	1.445	1.190
3	15	mtn. shrub/juniper	14,15,17,18	0.128	0.105
4	119	mtn. shrub/low sage	22,23,24,25,26	0.736	0.603
6	358	juniper/mtn. shrub	36,38,41	16.650	14.068
7	388	mtn. shrub/juniper	42,43	11.308	9.522
8	393	mtn. shrub/juniper	46,48,49,50	6.139	5.129
9	108	mtn. shrub	52	0.918	0.756

Smoke produced from prescribed burning activities would temporarily reduce air quality. However, the use of prescribed fire would allow land managers to hold smoke to a minimum duration and intensity compared to that of a large wildfire event. Much of the burning would occur in the spring season when atmospheric conditions are conducive to meeting air resource objectives. Smoke would likely collect in nearby valley bottom areas for a short time following burning. For

approximately one to three days following a prescribed burning operation, residual smoke would likely settle close to the ground during the night and would remain until the onset of surface heating and lifting the following day. Proximity to the burn, wind direction, and mixing heights would determine how much individual residents would be affected. The amount of smoke produced under the Proposed Action is not expected to create health concerns among nearby populations with the possible exception of people living downwind from the burns with severe asthma or other respiratory ailments. Steps would be taken prior to burning to alert nearby residents and provide adequate notice. These steps would include radio announcements, newspaper ads, posting notices, and contacting key individuals.

Little to no visibility impairment is anticipated in surrounding Class I visibility areas. All Class I areas are more than 100 kilometers away from the project area with the exception of Craters of the Moon National Monument (see Map XX). Prevailing winds in both the spring and fall should move smoke away from and not towards this Class I visibility area.

Dust and exhaust from vehicles during machine mechanical treatments would contribute short-term effects to air quality (particulate concentrations). Effects would be localized to the immediate vicinity of the operations.