

WALLOWA COUNTY SMOKE MANAGEMENT COMMUNITY RESPONSE PLAN



Approved: March 17, 2021

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DECLARATION OF AGREEMENT

The Enterprise City Council, in coordination with the Wallowa County Board of Commissioners, has reviewed and approved the Wallowa County Smoke Management Community Response Plan (Wallowa County SMCRP). Per OAR 629-048-0180 of the 2019 Oregon prescribed fire Smoke Management Plan, the City of Enterprise and Wallowa County jointly agree to submit the Wallowa County Smoke Management Community Response Plan to the Oregon Department of Forestry and Oregon Department of Environmental Quality as a formal request for exemption from the 1-hour smoke intrusion threshold for the Enterprise Smoke Sensitive Receptor Area.



Ashley Sullivan, Mayor
City of Enterprise

3/9/2021
Date



Susan Roberts, Mayor
Wallowa County Board of County Commissioners

3/17/2021
Date



John Hillock, Commissioner
Wallowa County Board of County Commissioners

3/17/21
Date



Todd Nash, Commissioner
Wallowa County Board of County Commissioners

3/17/21
Date

EXECUTIVE SUMMARY

In the winter of 2021, Wallowa County completed its Smoke Management Community Response Plan with grant funding from the Oregon Department of Environmental Quality (DEQ). The community response plan will help protect the health of people in Wallowa County from smoke impacts, while building wildfire resilience through prescribed burning. The county's plan followed recommendations from DEQ and the Oregon Department of Forestry (ODF) and complies with OAR [629-048-0180](#). The plan also addresses the Smoke Sensitive Receptor Area (SSRA), a status of its capital city of Enterprise - a community that experiences smoke events - as described in [OAR 629-048-0140](#).

The City of Enterprise, in conjunction with Wallowa County, has approved the following Wallowa County Smoke Management Community Response Plan (hereto referred to as the Wallowa County SMCRP), consistent with OAR [629-048-0180](#). The Oregon Department of Forestry and the Oregon Department of Environmental Quality have recommended that communities that are Smoke Sensitive Receptor Areas and have experienced repeated smoke events and/or intrusions in the past, collaboratively develop a community response plan (CRP) and program. Enterprise is considered an SSRA, under [OAR 629-048-0140](#). Therefore, the intent of this SMCRP is to fulfill that need for the City of Enterprise, as well as to address planned smoke events for the remainder of Wallowa County. See **Figure 1.0** for a Wallowa County indicator map.

Figure 1.0: Wallowa County Indicator Map. The towns of Enterprise, Flora, Imnaha, Joseph, Lostine, Troy and Wallowa are shown on the map as well as the location (red) of the Enterprise SSRA.



The Wallowa County SMCRP includes the following:

- A description of the populations in Wallowa County who are vulnerable to short term smoke events,
- A notification plan to inform the vulnerable populations and the general public of anticipated smoke events,
- A list of options and mitigation measures to protect the health of vulnerable populations from short-term smoke exposure, and
- A communication plan for the entities that conduct prescribed fire, the local public health authority, and the community's public and vulnerable populations who may be impacted by smoke.

Communities that have developed and implemented a CRP plan may request an exemption from the one-hour average smoke intrusion threshold. An exemption to the one-hour smoke intrusion threshold means that smoke impacts that surpass the one-hour threshold, but not the 24-hour average threshold, shall be deemed smoke incidents, not smoke intrusions, within the SSRA.

The Wallowa County SMCRP will be implemented in the Spring of 2021 and will be included in the request to ODF and DEQ for an exemption from the one-hour smoke intrusion threshold, as outlined in the Oregon Smoke Management rules. Obtaining a one-hour intrusion exemption will allow for the expanded use of prescribed burning in the forests adjacent to the City of Enterprise and other wildland urban interfaces (WUI) leading to a more fire resilient Wallowa County landscape.

The goals for the Wallowa County SMCRP are to:

- Develop an efficient and effective communication and notification system for residents in Wallowa County who may be impacted by short-term planned smoke events, particularly the smoke vulnerable populations,
- Provide information and mitigation strategies for those in the community who are adversely affected by smoke, to cope during planned short-term smoke events, as well as wildfire events,
- Allow prescribed fire treatments within the county,
- Reduce the threat of major wildfire events,
- Improve forest health and resiliency, and
- Increase the health and safety of the community and firefighters.

Increasing the ability to conduct prescribed fire treatments within the Wallowa County forests will reduce the risk of catastrophic wildfires from destroying communities – a real threat realized across the West. Wallowa County and the City of Enterprise are being proactive in their approach to forest and community health and viability by implementing the Wallowa County SMCRP.

The health of residents, visitors and smoke-vulnerable populations in Wallowa County is vitally important, and ensuring that they experience feelings of wellbeing, a healthy environment, and a high quality of life, is crucial. Increasing the ability to conduct prescribed fire treatments within the Wallowa County forests will help prevent catastrophic fire events from occurring. Therefore, Wallowa County has a vested interest in preparing its forests and community to be healthy and resilient in the face of all fire, both prescribed and wildfire, for the short term and into the future, by implementing the Wallowa County SMCRP. The overall intent of the Wallowa County SMCRP is to provide a community plan that allows for more prescribed fire to take place, while mitigating health effects to smoke vulnerable populations during short-term smoke events.

Prescribed fire is the planned and controlled use of fire by experts under specific temperature, wind, and humidity conditions. The goal of prescribed fire is to help restore fire-dependent ecosystems, improve forest health, increase community safety and reduce the risk of catastrophic large-scale wildfires. The focus of the Wallowa County SMCRP is on smoke from prescribed forestland, both underburn scenarios and pile burns after forestry thinning or logging projects. The use of prescribed fire intends to reduce fuel loads in an effort to limit catastrophic fires and increase forest resilience. According to the Central Oregon Fire Info (2020b) page, “Prescribed fire, when used strategically and repeatedly across larger areas, helps sustain healthy forest ecosystems, reduces the risk of out-of-control fires, reduces the severity of future wildfires when they do occur, and keeps our communities and firefighters safer.”

For thousands of years, the landscape was managed by Native Americans utilizing controlled burns to manage food stands, manage hunting grounds, prevent disease and insects, and to promote the overall health of the landscape (Boyd, 1999; Zybach, 2003). This, in addition to lower intensity natural wildfires, helped maintain healthy forest stands and supported the natural fire regime, which is critical for some fire dependent plant and tree species. However, fire suppression during the past 100 years has changed the forest ecosystem and increased fuel loads. Increased fuel loads can lead to catastrophic wildfires which creates longer and more severe smoke events. The intent of prescribed burning is to help ensure that the forests can be maintained and viable for future generations.

STATE-REQUIRED COMPONENTS OF THE COMMUNITY RESPONSE PLAN

The Oregon Smoke Management rules state, that “ODF and DEQ recommend communities that are SSRAs and have experienced repeated smoke incidents and/or intrusions in the past collaboratively develop a community response plan and program.” OAR [629-048-0180](#), Section 2 lists the following required components of such a plan:

1. A description of populations in an SSRA community that are vulnerable to the health effects of short-term smoke;
2. Adequate means by which the public, especially vulnerable populations in the SSRA community, will be notified in a clear and reliable way of anticipated smoke impacts in a timely manner;
3. Adequate options for protecting the health of vulnerable populations (or helping such populations to protect themselves) from short-term exposure to smoke, and;
4. A plan and program for communications between the entities that conduct prescribed fire, the local public health authority, and the community’s public and vulnerable populations who may be impacted by smoke.

In addition, the Oregon Smoke Management rules state:

The CRP should be coordinated through the local public health authority, but developed collaboratively with members or representatives of vulnerable populations, community officials, representatives from entities that have responsibility for prescribed fire, forest restoration collaborative groups, local businesses and other interested members of the public. Since Wallowa County does not have a local public health authority, coordination occurred with the Oregon Health Authority (OHA), local health representatives and public outreach to include smoke vulnerable populations.

DESCRIPTION OF SMOKE-VULNERABLE POPULATIONS IN WALLOWA COUNTY

Multiple factors can affect a person's sensitivity to smoke, including their personal health conditions as well as the severity and duration of the smoke exposure. Smoke can also worsen symptoms in those with pre-existing health conditions. According to the Oregon Health Authority (OHA), the following are considered smoke-vulnerable populations:

- Persons with asthma or other chronic respiratory diseases, such as COPD and emphysema
- Persons with cardiovascular disease
- Persons 65 years of age or older
- Infants and children
- Pregnant women
- Smokers, especially those who have smoked for several years
- Persons without housing or access to closed-loop air conditioning
- Outdoor and farm workers

To obtain information on the smoke vulnerable populations within Wallowa County, multiple data sources were examined to compile overall demographic data for Wallowa County. The data was examined to gain insight into how many residents may be more vulnerable during short-term smoke events. The United States Census Bureau Data from 2019 was analyzed; as well as the 2019 Wallowa County Comprehensive Needs Assessment (Ladendorff, 2019). The Needs Assessment was a joint effort by the Northeastern Oregon Network, the Wallowa Valley Center for Wellness, Wallowa Memorial Hospital, Winding Waters Medical Clinic, Building Healthy Families, and the Wallowa County Local Advisory Committee to the Eastern Oregon Coordinated Care Organization, and was developed to prioritize and incorporate into the action plans and strategies of Wallowa County's community health partners, agencies and businesses. We utilized this assessment to review the health needs of the smoke vulnerable populations who may be at most risk during short term planned smoke events.

Wallowa County's total population is approximately 7,004. Since 2010 the population rose 2.8 percent. The median age is 52.6 and continues to rise each year. **Table 1.0** outlines the demographic information from the United States Census Bureau data from 2019, applicable to the Wallowa County SMCRP. Note that individuals may fall into one or more categories.

Table 1.0: Wallowa County SMCRP Demographic Information

Data Category	Total # of people	% of Population
Total Population	7004	
Persons under 5 years old	342	4.90%
Persons 65 years old and over	1978	28.20%
Pregnant Women in 2019	105	1.50%
Language other than English spoken at home	187	2.80%
Persons with a disability	1252	18.10%
Persons with a disability under 5 years old	6	1.80%
Persons with a disability over 65 years old	621	8.86%
Persons without health insurance	315	4.50%
Persons without health insurance age 5 and under	0	0.00%
Persons without health insurance under age 65	0	0.00%
Housing units	4282	
Households	3214	
Households with a computer	2778	86.4% of households
Households with broadband Internet subscription	2495	77.6% of households
Persons in poverty	941	13.40%
Persons in poverty age 5 and under	82	1.20%
Persons in poverty age 65 and older	169	2.40%

Data obtained from U.S. Census Bureau (2019.) Wallowa County Oregon Profile. Retrieved from *United States Census Bureau data page for Wallowa County, Oregon* <https://data.census.gov/cedsci/profile?g=0500000US41063>

The Wallowa County Comprehensive Needs Assessment (Ladendorff, 2019) provides even more detailed information for individuals who have health conditions that could make them more vulnerable to short-term smoke events, including those with asthma, chronic obstructive pulmonary disease (COPD), and cardiovascular health concerns (Table 2.0). The needs assessment describes community health conditions that are typically worsened by smoke events.

According to the Oregon Behavioral Risk Factors Surveillance System (OHA 2020) a fewer percent of Wallowa residents suffer from diagnosed asthma (8.8%) and COPD (3.9%) compared to the population living in the rest of the state. These data show that the prevalence of asthma and COPD are areas of strength for Wallowa County in the Needs Assessment (Ladendorff, 2019).

Only 1.9% of the Wallowa County population had ever been diagnosed with coronary heart disease – lower than Oregon’s average. On the other hand, 4.6% of Wallowa residents have had heart attacks – higher than Oregon’s average (3.6%). Heart attacks among Wallowa County residents generally occur more commonly than the rest of Oregon. The Needs Assessment pointed to heart disease prevalence and mortality as an area of average concern for Wallowa County.

Table 2.0: Wallowa County Chronic Illness Demographic Information

Illness	Wallowa County Percent of residents diagnosed	State of Oregon Percent of residents diagnosed
Asthma	6.2%	11%
Chronic Obstructive Pulmonary Disease (COPD)	2.5%	5.6%
Coronary Heart Disease	1.9%	3.4%
Heart Attacks suffered	4.6% (2016)	3.6%
*Data are age-adjusted rates, may be statistically unreliable, and should be interpreted with caution. Data is from the Oregon Behavioral Risk Factor Surveillance System (BRFSS), 2014-2017. Some interpretation comes from the Wallowa County Needs Assessment (Ladendorff, 2019).		

Overall, 33.1% of Wallowa County’s population falls into a smoke vulnerable category simply based on the age categories of under 5 or over 65. With the median age of 52.6, the percent of the population that will be 65 and over in the coming years will most likely increase. Therefore, it is critical to develop good communication and mitigation techniques when over 33% of the population is potentially vulnerable to smoke events.

In addition to the aforementioned sources, voluntary surveys were distributed via social media, email, and in public forums throughout Wallowa County during the fall of 2020. The survey helped to gain further insight into the smoke vulnerable populations, ways residents would like to be informed, what they currently do to protect their health during smoke events, and what could be helpful to them during short term planned smoke events. The survey, titled *Wallowa County Smoke Management Community Response Plan Survey*, (see **Appendix A** for survey language) was open to the public September 2 – November 30, 2020. No personally identifiable information was collected in the survey so all responses were anonymous. The survey is discussed in further detail later in the SMCRP, since the overall goal was to gain insight into best communication and smoke protection practices. A total of 327 people in Wallowa County were represented in the survey; and of these, 13 people under age five and 103 people over age 65 were represented. In addition, 28.75% of the respondents stated that someone in their household depends on a medical device, such as supplemental oxygen, dialysis, wheelchair, CPAP, or BIPAP. A total of 51.25% of the households represented said that someone in their home suffers from respiratory issues (COPD, asthma, or allergies), cardiovascular issues, or other conditions that may make them more vulnerable to smoke exposure. A total of 10% of the respondents stated that they had no health insurance.

THE HEALTH RISKS OF WILDFIRE AND PRESCRIBED FIRE SMOKE

Regardless of the source of smoke, exposure can be hazardous to your health and potentially exacerbate existing medical conditions. A person's sensitivity to smoke can be affected by the severity and duration of the smoke exposure and the person's overall health. As previously mentioned, certain groups of people are more sensitive to smoke and need to be especially cautious. Generally, the duration and severity of prescribed fire smoke is much less than that of wildfire smoke. To alleviate smoke impact, state regulations require that prescribed burning take place on days with optimal weather conditions to prevent inversions. On the other hand, wildfire events are uncontrolled and typically consume more vegetation per acre than prescribed fires and are more likely to produce higher smoke emissions for prolonged periods. While all smoke produces poor air quality, wildfires tend to have a larger scale impact to the community than smoke from a prescribed burn. Poor air quality for extended periods of time have consistently corresponded with increased use of healthcare services for smoke-related health outcomes, such as asthma and trouble breathing. OHA estimates that smoke from the 2017 Eagle Creek Fire in the Columbia River Gorge (2 million residents in seven counties) resulted in 96 excess emergency department visits and 9 excess hospitalizations for asthma. During the 2020 Oregon wildfires, statewide emergency department and urgent care visits for asthma-like-illnesses were 25% higher during active wildfires. Wildfire smoke can linger for weeks and can create breathing issues as well as visibility issues for both humans and animals.

PRESCRIBED FIRE SMOKE & THE NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS) FOR PM_{2.5}

According to DEQ, particulate matter (PM) is comprised of extremely small particle and liquid droplets found in the air. Some of these particulates are a source of pollution and can be harmful for your health, including the particulates from woodstoves, fires, dust, cars, etc. PM_{2.5} refers to particulate matter that is 2.5 microns in diameter and smaller. PM is measured in micrometers (microns, μm). This size of particulate is especially harmful when breathed in because the natural filters in our bodies cannot trap it. PM_{2.5} can be inhaled deep into lungs and remain for weeks, which can lead to new health conditions or aggravate existing health conditions such as asthma, COPD, respiratory issues, heart disease, and other cardiovascular issues (Oregon.gov 2020).

According to Oregon.gov (2020), "On December 18, 2006, EPA reduced the 24-hour fine particulate matter (PM_{2.5}) National Ambient Air Quality Standard. By issuing this rule, EPA intends to further protect vulnerable individuals from air pollution in communities across the U.S. DEQ plans to work with Oregon communities interested in developing strategies to reduce particulate pollution." Therefore, the Wallowa County SMCRP is intended to develop strategies to keep Wallowa County communities safe during short-term planned smoke events, that have the potential for releasing PM_{2.5} and other pollutants into the air.

The Air Quality Index (AQI) is a daily index of air quality based on three pollutants regulated by the federal Clean Air Act: ground-level ozone, particle pollution (PM_{2.5}), and nitrogen dioxide (Oregon.gov 2020). It provides information on how clean the air is and potential health risks associated with the air quality. The EPA, DEQ (<https://oraqi.deq.state.or.us/home/map>), and Lane Regional Air Protection Agency (LRAPA)'s websites update the AQI hourly for each monitoring station in the state. **Table 3.0** below shows the current AQI index numbers, corresponding PM_{2.5} levels, health concerns, and colors that are used to communicate impacts to health from air quality.

Table 3.0 The Air Quality Index, breakpoints, and health effects (EPA 2021).

AQI Category and Color	AQI	PM _{2.5} (µg/m ³)	Health Advisory
Good	0-50	0.0-12	Air quality is satisfactory, and air pollution poses little or no risk.
Moderate	51-100	12.1-35.4	Air quality is acceptable. However, there may be a risk for some people, particularly those who are unusually sensitive to air pollution.
Unhealthy for Sensitive Groups	101-150	35.5-55.4	Members of sensitive groups may experience health effects. The general public is less likely to be affected.
Unhealthy	151-200	55.5-150.4	Some members of the general public may experience health effects; members of sensitive groups may experience more serious health effects.
Very Unhealthy	200-300	150.5-250.4	Health alert: The risk of health effects is increased for everyone.
Hazardous	301-500	250.5-500	Health warning of emergency conditions: everyone is more likely to be affected.

WALLOWA COUNTY & ENTERPRISE PM2.5 MONITORING

There is one AQI monitoring station in Wallowa County, located in Enterprise. The monitor is located on the western edge of the city (**Appendix B**). This station has been monitoring air quality in Enterprise since July 1, 1994. The monitor station tracks the PM_{2.5} hourly data in Enterprise. Therefore, there is approximately 27 years of air quality data for the Enterprise SSRA. **Figure 2.0** below is a graph showing the PM_{2.5} daily average air quality data for Enterprise, from 2010 – 2020. Note that very few days in the past 10 years have had air quality in the Unhealthy levels. In addition, there have been no Very Unhealthy or Hazardous days. All the Unhealthy air quality days were associated with wildfire, with the exception of one prescribed fire intrusion that occurred in November of 2010.

Figure 2.0: Enterprise SSRA Daily Average PM2.5 from 2010 – 2020.

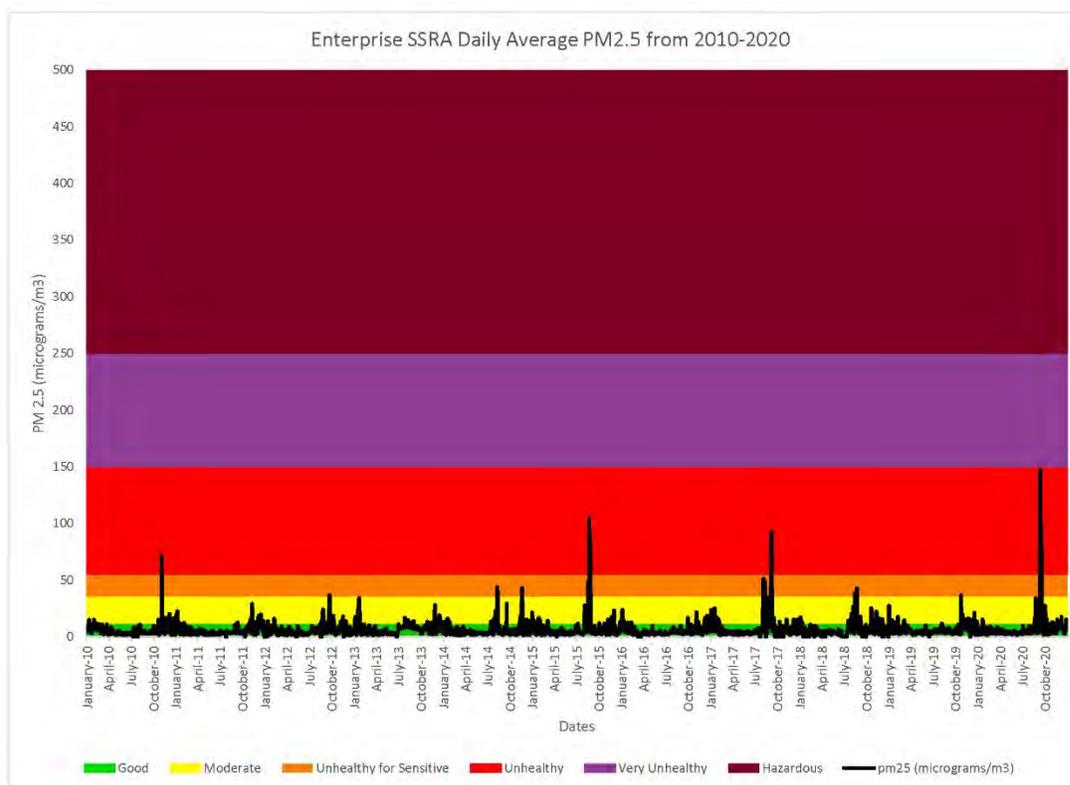


Table 4.0, below, shows the past 18 years of air quality data for Enterprise. It is important to note that the changes to the AQI index occurred in 2012; therefore, comparison may not be completely accurate, but can provide an overall picture of trends. The color codes coincide with the Air Quality Reports rather than the current AQI index. As shown in **Table 4.0**, over the past 18 years Enterprise has had an average of 26.78 days of Moderate air quality, 1.06 days of Unhealthy for Sensitive Groups air quality, and 0.89 days of Unhealthy air quality a year; based on their monitoring of PM_{2.5}. There has only been a total of 16 days of Unhealthy air quality levels. When analyzing the air quality graphs for the past ten years, the trends show that typically the worst air quality days coincided with summer wildfires or occurred in the winter, when burning piles or wood smoke could be a contribution. See **Appendix C** for the yearly PM_{2.5} graphs.

Table 4.0 The Air Quality data for Enterprise from 2003 – 2019, based on PM_{2.5} (Oregon DEQ 2013; Oregon DEQ 2020c).

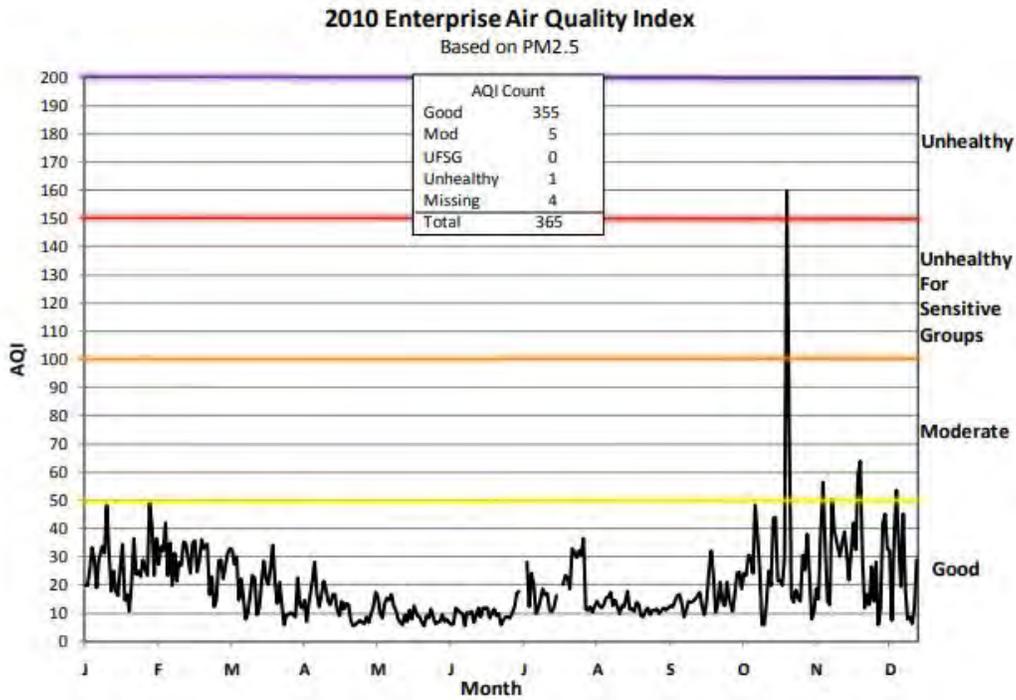
Year	Good	Moderate	Unhealthy for Sensitive Groups	Unhealthy	Very Unhealthy	Missing
2003	285	17	0	0	0	63
2004	346	15	0	0	0	5
2005	332	31	0	0	0	2
2006	338	22	1	0	0	4
2007	340	21	2	0	0	2
2008	341	21	0	0	0	4
2009	343	19	0	0	0	3
2010	355	5	0	1	0	4
2011	342	18	0	0	0	5
2012	340	13	1	0	0	12
2013	323	41	0	0	0	1
2014	329	33	3	0	0	0
2015	322	34	3	5	0	1
2016	318	31	0	0	0	17
2017	291	50	6	3	0	15
2018	272	46	2	0	0	45
2019	333	29	1	0	0	2
2020	323	36	0	7	0	0
Average	326.28	26.78	1.06	0.89	0.00	10.28
Total	5873	482	19	16	0	185

PRESCRIBED FIRE SMOKE AND AIR QUALITY IN ENTERPRISE

Fall and spring are the two main prescribed burning seasons in Wallowa County. In analyzing the Enterprise air quality yearly data from 2010 – 2020, the best air quality has been from March – June each year (**Figure 2.0**). There does appear to be a rise in moderate to unhealthy for sensitive groups air quality from October - January, which could correspond to prescribed industrial pile burning, as well as wood stove burning, and other non-regulated backyard burning. However, prescribed burning does not appear to be a significant contribution to unhealthy levels of air quality in Enterprise. It appears that the fall prescribed industrial burning, when combined with wood stove smoke and non-regulated outdoor private burning, could contribute to more days of moderate air quality levels in the fall and winter.

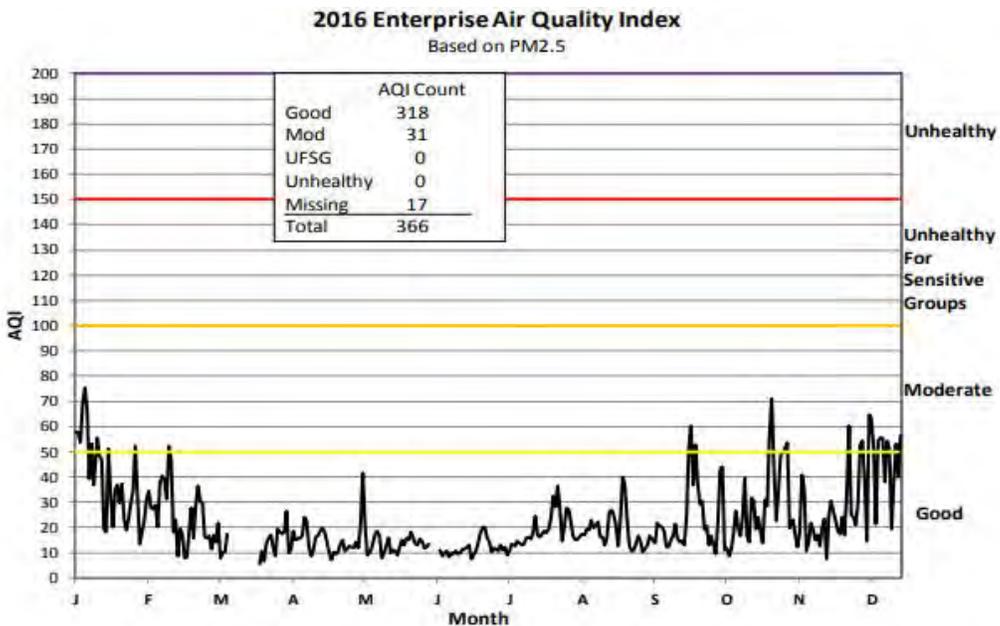
Three smoke intrusions have been noted within the Enterprise SSRA since monitoring began in 1994. In 2010, a heavy 18-hour smoke intrusion (with AQI levels ranging from Moderate to Unhealthy) occurred on November 4, from private forestland burning (ODF 2010). **Figure 3.0**, shows a spike of unhealthy air quality that correlates with this intrusion.

Figure 3: 2010 Enterprise Air Quality Index Summary, based on PM2.5 (Oregon DEQ 2011).



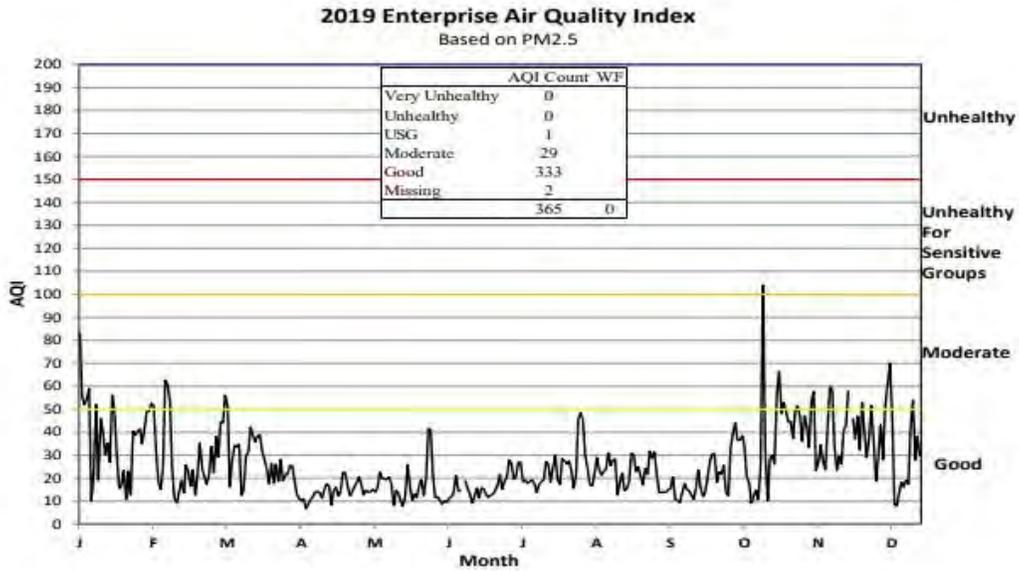
Two light smoke intrusions occurred in 2016, one on September 28, which had moderate AQI levels and lasted 14 hours, and then again from September 29-30, 2016, also with moderate AQI levels and lasted 35 hours (ODF 2016). Both these intrusions occurred on USFS property. There does appear to be a slight rise in moderate air quality at the end of September in **Figure 4.0** below; however, there are other days of poorer air quality in the fall and winter, that don't correspond to an intrusion.

Figure 4: 2016 Enterprise Air Quality Index Summary, based on PM2.5 (Oregon DEQ 2017).



The most recent intrusion occurred on October 24, 2019, on private land and lasted four hours (ODF 2019). AQI levels ranged from moderate to unhealthy for sensitive groups. The intrusion can clearly be seen as a spike in poor air quality in **Figure 6.0** below.

Figure 6.0: 2019 Enterprise Air Quality Index Summary. Based on PM2.5 (Oregon DEQ 2020).



WILDFIRE SMOKE AND AIR QUALITY IN ENTERPRISE

Wildfire trends throughout the state have increased significantly in the past ten years, and subsequently led to more wildfire smoke events. The graph in **Figure 7.0** below is taken from the Wildfire Trends and the Air Quality Index publication from DEQ. It shows the upward trends of smoke events associated with wildfire in Enterprise from 2000 – 2019.

Figure 7.0: Enterprise wildfire ≥ USG AQI wildfire smoke trends (Oregon DEQ 2020b).

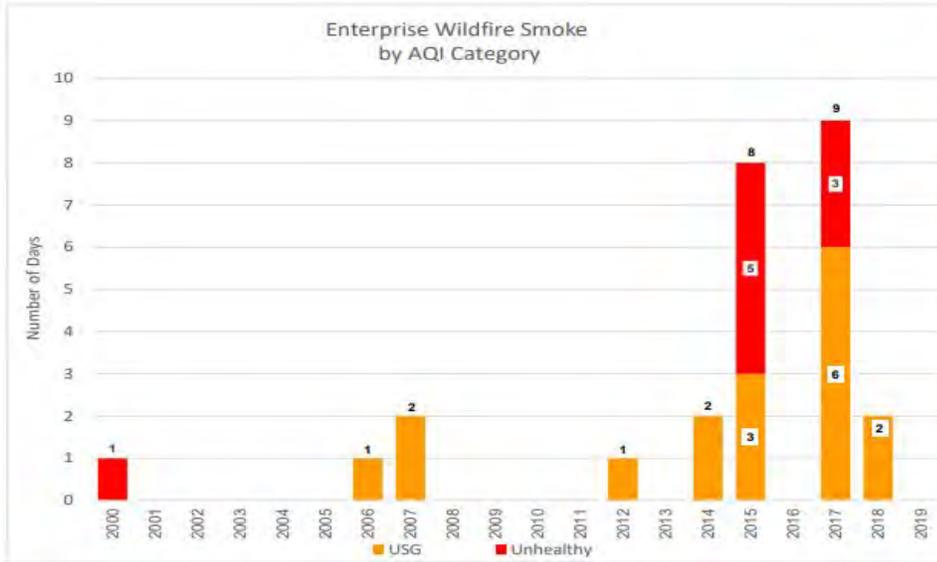
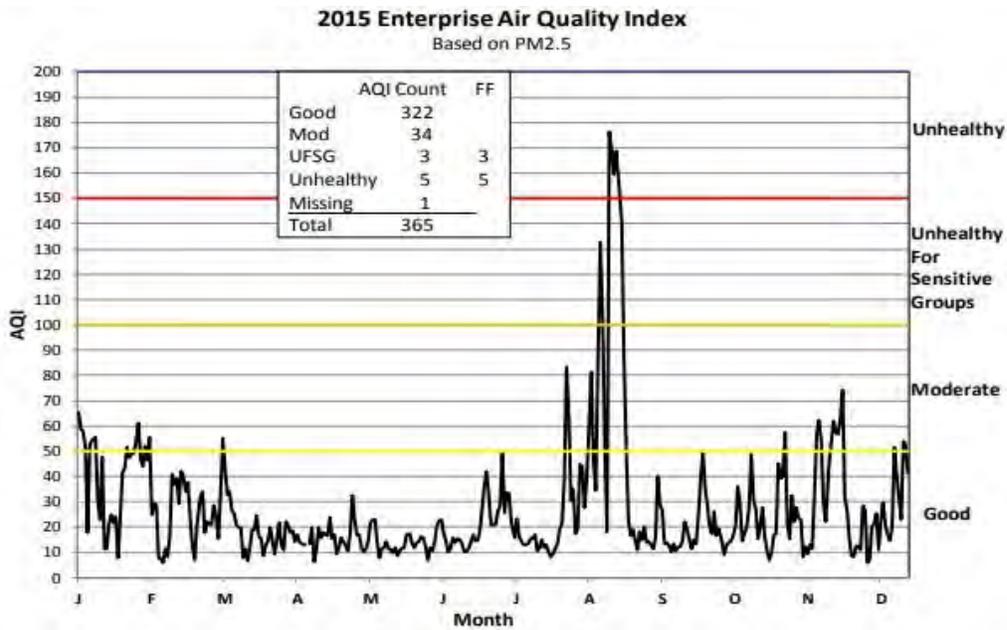


Figure 8.0 below shows an examples of air quality in Enterprise on a year with a large wildfire smoke event (2015). In contrast, **Figure 6.0** above showed a year without any large wildfire smoke event (2019). **Figure 8.0** shows the poor air quality days in July and August of 2015, due to wildfires.

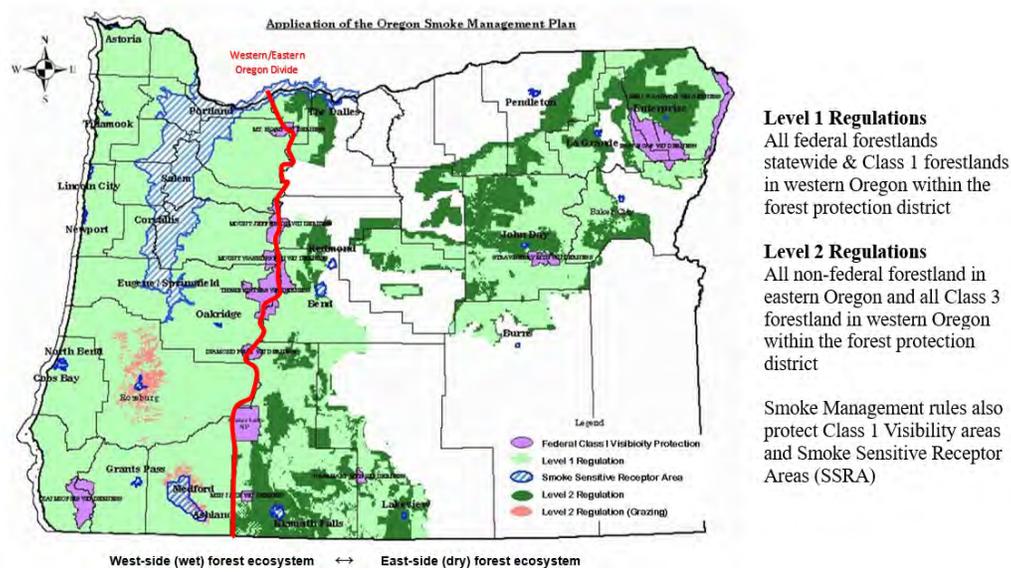
Figure 8.0: 2015 Enterprise Air Quality Summary, FF=Forest Fire Impact (Oregon DEQ 2016).



OREGON SMOKE MANAGEMENT PLAN DESIGNATIONS IN WALLOWA COUNTY

Wallowa County is located in Northeast Oregon and has land managed under four different components of the Oregon Smoke Management Plan: Level 1 Regulations, Level 2 Regulations, Federal Class I Visibility Protection Areas, and a Smoke Sensitive Receptor Area (City of Enterprise). Figure 9.0 below is a map of applications of the Oregon smoke management plan.

Figure 9.0: Applications of the Oregon Smoke Management Plan



Level 1: All Federal forestland in Oregon falls under Level 1 Regulations. These lands are required to register a thorough burn plan at least seven days in advance; these plans include how weather will be monitored, identify appropriate resources to accomplish ignition sequence and control the fire, reduce pre-burn fuel loadings, and how the burn will minimize smoke entering SSRA's or other communities. These lands are subject to fee administration, must follow the Smoke Management forecast instructions, and are required to report accomplishments the next business day following each day's ignition.

Level 2: All non-federal forests in eastern Oregon fall under Level 2 regulations. This includes all of Wallowa County's private ground, which comprises most of the pile burning in Wallowa County and limited under burns. These lands are required to register any prescribed burns through the Forest Activity Electronic Reporting and Notification System (FERNS). Operators and landowners are also required to report accomplishments by the first business day of the week following ignition but are not subject to fee administration or compliance with smoke management forecast instructions.

Class I Area Visibility Protection: Wallowa County is host to the Eagle Cap Wilderness and Hells Canyon Wilderness. Both wilderness areas were designated by Congress in 1977 as federal Class I Areas that are subject to visibility protection under the EPA's Regional Haze Rule and the federal Clean Air Act.

Smoke Sensitive Receptor Area: The city of Enterprise is a Smoke Sensitive Receptor Area (Enterprise SSRA). Enterprise SSRA was given this designation for the highest level of protection under the Smoke Management Plan and was designated because of past occurrences of smoke incidents and population density. The Enterprise SSRA vulnerable population is the focus for the development of the SMCRP and the importance to implementing the actions developed.

PARTNER AND COMMUNITY INPUT

WALLOWA COUNTY SMCRP DESIGN TEAM

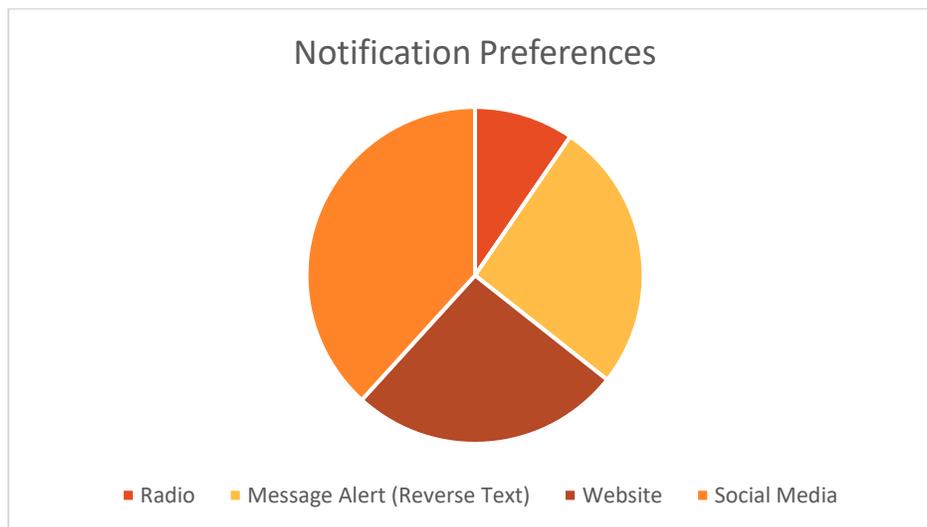
The Wallowa County SMCRP was developed through a collaborative process involving a diversity of local stakeholders from City of Enterprise, Wallowa County Commissioners, Wallowa County Emergency Services, Wallowa Memorial Hospital, Oregon Department of Forestry (ODF), Oregon Department of Environmental Quality (DEQ), Oregon Health Authority (OHA), and U.S. Forest Service – Wallowa-Whitman National Forest (WWNF). The team met monthly to bimonthly to develop the process of collecting public input, review any outreach documents, and provide feedback on the action steps as they were being developed.

PUBLIC SURVEY

In developing the Wallowa SMCRP, a survey was distributed via social media, email, and in public forums throughout Wallowa County. The survey, titled *Wallowa County Smoke Management Community Response Plan Survey*, was open to the public September 2 – November 30. No personally identifying information was collected in the survey so all responses were anonymous. All the results from the *Wallowa County Smoke Management Community Response Plan Survey* can be found in **Appendix D**.

Eighty people responded, representing 327 residents of Wallowa County. Which represents nearly 5% of the population. Some notable findings are highlighted below:

- When asked ***“What would be the best way for you to receive information when there are smoke events expected”***:
 - 80% responded social media and/or websites would be best.
 - 40% preferred reverse text or messages
 - 15% listed the radio as their preferred method



- 87% of the respondents use social media or a website to check on air quality.

- When asked: **“What needs do you have to prepare for or during a smoke event?”** Residents responded that receiving advanced notice was the largest (77%) need to prepare for a smoke event, followed by education on home air purification (47%) and 28% responded they would like assistance purchasing air purifiers and filters.



PUBLIC INPUT SESSIONS

Public input sessions were held in Lostine, Wallowa, Troy, Wallowa Lake, Flora, and Enterprise. Input was extremely helpful and has been incorporated into the SMCRP to better accommodate the varying communication needs across the county due to limited access to cell service and Internet in some parts of the county requiring a multi-faceted approach. Announcements from the public input sessions can be found in **Appendix E**.

WALLOWA COUNTY PREPAREDNESS COMMITTEE

The Wallowa County Preparedness Committee is a partnership between local health, emergency services, government agencies, nonprofit organizations, and natural resource professionals. The committee is currently meeting monthly. During spring and summer, the Oregon Department of Forestry and US Forest Service update the committee on fire season, including smoke, wildfires, and prescribed fires. This committee connects the members of our local health care services and organizations which are conducting prescribed burns. Current active members of the committee represent:

Wallowa County Health Care Providers:

Wallowa Memorial Medical Clinic
Wallowa Memorial Hospital
Winding Waters Clinic
Wallowa Valley Center for Wellness
Alpine Chiropractic Clinic
Winding Waters Clinic
Olive Branch Family Health

Assisted Living Facilities:

Wallowa Valley Senior Living
Pioneer Guest Home
Wallowa River House
Alpine House

Wallowa County Forest Managers:

USDA Forest Service Wallowa Whitman National Forest
Oregon Department of Forestry, Wallowa Unit

Wallowa County Emergency Services:

Enterprise Police Department
Wallowa County Emergency Services
Wallowa County Sheriff's Department

Partner Organizations & Local Government

Building Healthy Families-Alternative Education
Oregon Health Authority Department of Human Services
Wallowa County Commissioners
Community Connections of Northeast Oregon
Oregon Department of Environmental Quality

Information sent to this committee is dispersed to all the organizations listed above. These organizations represent many of the vulnerable populations in Wallowa County.

WALLOWA COUNTY COMMUNITIES

Wallowa County sits remotely in the Northeast corner of Oregon. There are three means to entering the county and only two are accessible year-round. Therefore, the Wallowa County landscape has led the outlying communities to develop their own communication chains. During the public outreach meetings, we spoke with local residents from the outlying communities to learn how they communicate in case of emergency or to notify their communities of events happening. We learned about various communications structures set up in these outlying areas of the county. Below we have laid out the communication structures that the communities currently have in place to meet their needs.

Troy

As a rural town with limited phone coverage, the Troy area has developed their own communication chain to spread news of events. The input from the Troy community explicitly stated that this chain is the best option for spreading the word about any announcements. This effective communication system was also evident when the input session and survey were well promoted.

The Troy community has a Facebook page titled, *Troy, OR and the Grande Ronde/Wenaha confluence*, that is monitored by many of the residents, absentee owners, and frequent visitors.

The communication chain process:

- 1) Post any announcements on the *Troy, OR and the Grande Ronde/Wenaha confluence* Facebook page and email the community contact.
- 2) The Facebook page manager then forwards the announcement via email to the community email list, calls those in the area who do not have internet, and contacts the few off-grid landowners without internet and phone.

Flora

In Flora, word of mouth, by phone or email, is the best way to get information out to the community members. The community contact has contact information for most of the residents; she knows who needs personal calls versus using social media, email, or other internet required services.

Enterprise and surrounding areas in the Wallowa River Valley

Enterprise, Joseph, Lostine, and Wallowa all have cell phone coverage and access to Internet services. The radio and newspaper are the best sources for locals who do not use Internet. In Lostine, Wallowa, and Joseph most residents are required to have post office boxes, so we recommend using the information boards at these locations along with postings signs at the gas stations and local grocery stores (as permitted by the owners). While this is a simple and less technical way, almost every resident or someone assisting a resident must get their mail, and most residents get groceries and gas locally.

Wallowa Lake

The Wallowa Lake area has unreliable cell phone coverage. An effective way to communicate with residents at the lake is contacting the Wallowa Lake Property Owners Association (WLPOA). The WLPOA has an active email list and is updating their website to use more often. As the activity on this site grows this will be a great avenue to share information with the Wallowa Lake Communities.

Imnaha

The Imnaha community is another unique rural community in Wallowa County. The Imnaha Canyon has the small town of Imnaha at the confluence of Big Sheep Creek and the Imnaha River, and the residents describe the community as running approximately 40 miles along the Imnaha River. Most landowners have landlines, but not all homes have access to internet. When speaking with residents there does not appear to be any set notification structure. Ideas for notifying the community for any potential smoke inversions include a sign at the Imnaha Tavern, a post on the Imnaha Tavern Facebook page, a sign at the Imnaha post office, calling all residents, or even a sign posted along the main road in Imnaha. At the time of this plan development there is no set communication structure.

FIREWISE COMMUNITIES

As the landowners come together to develop their Firewise Communities, a communication structure will be compiled. Currently, Wallowa County has one Firewise Community, the Lostine Canyon. At the time of this plan there are two communities in development: South Wallowa Lake and Mount Joseph/Old Ski Run area; and three neighborhoods interested in becoming Firewise communities: Wallowa Lake West Moraine and North End, Hurricane Creek, and Troy area. Each Firewise community's contact list will be housed with landowners within their communities and with the Wallowa County Firewise Coordinator. Information can be shared with the Wallowa County Firewise Coordinator to forward to the Firewise Communities. This is an excellent way to spread the word, announcements, and educational opportunities throughout the county as more Firewise communities are developed.

HOUSING COMMUNITY CONTACT INFORMATION

The community specific contact list will be housed and updated annually by Wallowa County Board of Commissioners office and Wallowa County Department of Emergency Services. The list will be reviewed and updated each May to make sure contacts for partner organizations and communities are up to date prior to fire season and the start of fall prescribed burning.

ACTION ITEM DETAILED PROCEDURES

Information was collected from the public survey, public input sessions, and design team meetings; and compiled together to create the best laid out action plan for Wallowa County in addressing the smoke vulnerable population while utilizing prescribed fires to manage our forests. From the beginning of this process, Wallowa County decided to utilize this plan as much as possible county wide. With over a third of our population falling into the smoke vulnerable category solely based on age, it is important to utilize education, notifications, and assistance where needed. The action plan has been broken down into implementation by seasons and by location; separating out burns that will have potential to affect the Enterprise SSRA and burns located in all other areas of the county.

YEAR-ROUND EDUCATIONAL OPPORTUNITIES			
<p>These educational activities can be conducted at any time during the year and are targeted to all residents of Wallowa County. Some activities, such as the newspaper articles, will have more immediate impact when provided immediately before burn season. The responsible party is identified with examples of partners that currently participate in landowner and contractor outreach. Many of these natural resource partners were not part of the plan development but routinely work with ODF and USFS to provide education to the public.</p>			
ACTIVITY	RESPONSIBLE PARTY	TARGET AUDIENCE	TIMELINE
Host a radio public service announcement about the upcoming burning season, prior to the start of season, which is determined by the local ODF and US Forest Service. These announcements can be utilized to inform the public about the upcoming season, landowners and contractors about any requirements involved with burning, and precautions to the vulnerable population.	ODF & WCDES	All Residents	Annually in the fall, prior to the peak of prescribed burn season
Submit press release to local media outlets (Wallowa County Chieftain and La Grande Observer, Wallowa Valley Online, Eagle Cap Media, KWVR) in partnership with ODF, USFS, and health care providers about prescribed fire. Including where to find information about prescribed burns in the area and what to do if there is a smoke intrusion. (Appendix F)	ODF Lead	All Residents	Annually in the fall, prior to the peak of prescribed burn season
Educate contractors and landowners on the pros and cons of burning (broadcast and pile) and non-burning alternatives (mastication, lop and scatter, biofuels). This can be a stand-alone workshop or may fit into one of OSU Extensions webinar series they host regularly.	ODF & partners (ex: NRCS, OSU Extension, USFS, SWCD, Wallowa Resources)	Contractors & Landowners	Annually
Inform contractors on rules and regulations, how to identify good burn days, and where to obtain air quality data. Add a link to this document. An example is attached in Appendix G .	ODF	Contractors & Landowners	Annually
Communicate where controlled burn information will be made available to the public.	ODF & USFS	All Residents	Annually in the fall
Educate the public on the importance of utilizing prescribed burns. This is another opportunity for a field trip, workshop, or online webinar and could be in collaboration with many of the partner entities that host similar events.	ODF Lead (ex: NRCS, SWCD, OSU Extension, USFS, Wallowa Resources)	All Residents	Annually

After controlled burns it is beneficial to show the public the benefits and successes of the burns that were conducted. This activity is recommended annually if the opportunity arises to demonstrate a positive and successful burn plan.	USFS & ODF	All Residents	Annually in the winter or spring if feasible
Provide the vulnerable community representatives and community contacts with information for protecting from smoke (Appendix H)	Wallowa County Design Team	Focus on Vulnerable Population	June/Before Fire season

DURING CONTROLLED BURN SEASON

There are different levels of regulations on controlled burns happening in Wallowa County. For the private sector burn season is year-round, but during declared fire season (June to mid-October) burn permits are required and obtained from ODF. For federal land managers, each burn plan has a specific prescription based on weather, fuel moistures, and fire behavior. These burns can be conducted anytime the prescription is met, but in most circumstances the conditions align during limited times in the fall and spring months. No controlled burning is allowed when a burn ban is in effect.

BURN LOCATION	ACTIVITY	RESPONSIBLE PARTY	TARGET AUDIENCE
All USFS/Federal Land Burns in Wallowa County	Complete all notification protocol currently in place for US Forest Service prescribed burns. Current contacts include: Blue Mountain Incident Command, Line Officer, Forest Public Affairs Officer, Oregon Dept. of Forestry, Wallowa County Sheriff's Office, Range Specialist, Archaeologist, Adjacent Public & Private Landowners	USFS	Potentially Affected Residents
USFS/Federal Land Burns Affecting the Enterprise SSRA	In addition to the regular contacts, US Forest Service is asked to contact the <i>Wallowa County Preparedness Committee</i> prior to any burns that may have impact on the Enterprise SSRA.	USFS	Potentially Affected Residents
Private Landowner Burns	Smoke Management process that needs to take place when conducting any burning of forest fuels related to a forest management activity would include: <ol style="list-style-type: none"> 1. Complete a Smoke Management Registration form at least 7 days prior to burning. 2. Check the Smoke Management Forecast prior to burning to learn of any adverse weather conditions that would cause smoke to impact a local community. Follow the recommendations of the forecast. 3. Complete a Smoke Management Accomplishment form daily and submit the form once weekly as long as burning continues. 	Contractors & Private Landowners	N/A

PUBLIC NOTIFICATION SYSTEM

Wallowa County, at the time of this plan writing, was in the transition from Alert Sense to Everbridge. The new Everbridge system will be up and running prior to Wallowa County's 2021 wildfire season. After the new system is online the committee will reconvene to work on establishing a protocol. Currently, the Wallowa County SMCRP Design Team is the best fit for these tasks. A more permanent committee may be formed in the future to continue the work of laid out by the Wallowa County SMCRP.

ACTIVITY	RESPONSIBLE PARTY	TARGET AUDIENCE	TIMELINE
Compile a comprehensive list of key organizational contacts representing vulnerable population. A beginning list of contacts is included in <i>Appendix I</i> .	Wallowa County Board of Commissioners Office & WCDES	Vulnerable Populations	Annually in the spring
Establish the new Everbridge Emergency Alert System	WCDES		Spring 2021
Test Everbridge Emergency Alert System	WCDES		Spring 2021
Research and decide what levels of notifications are needed and who is able and responsible to send them	SMCRP Team & WCDES		Fall 2021-Winter 2022
Advertise & recruit the vulnerable population and public to sign up for new notification system	SMCRP Design Team & WCDES		

FUTURE OPPORTUNITIES

Wallowa County has many steps currently in place to help limit smoke intrusions and to protect vulnerable populations if smoke intrusions do occur, but there is always more that can be done. The ideas below are options brought up by community members and design team partners for future implementation.

ACTIVITY	RESPONSIBLE PARTY	TARGET AUDIENCE	TIMELINE
Air Purifier Distribution Grant Program	SMCRP Design Team	Vulnerable Population	Spring 2022
Established Social Media Presence	SMCRP Design Team	General Population	Fall 2022
Establish and maintain an annual calendar of events	SMCRP Design Team	General Population	Fall 2021-Winter 2022
Develop a list of where information is located to distribute to the public	SMCRP Design Team	General Population	Spring 2022
Develop a list of social media outlets to determine if there is a need for a new platform or if an existing platform would be best for hosting prescribed fire information. Currently, social media pages that are options belong to USFS, ODF, City sites, Wallowa County, Northern Blue Mountain Cohesive Strategy Partnership, and other partners	SMCRP Design Team	Vulnerable Population	

ANNUAL REPORTING

As part of the SMCRP and per OAR 629-048-0180 Section 3(f) of the Oregon SMP, the City of Enterprise and Wallowa County are required to annually report the implementation of the SMCRP to ODF and DEQ. In this report the county will document continued compliance with the four required components of the SMCRP. The county will provide a summary of the methods used to communicate to the public and smoke-vulnerable populations a log of dates and times the Wallowa County SMCRP is initiated and a record of local meetings held to discuss or update the SMCRP. Unless otherwise specified, the County will submit annual reports in March of each year, prior to the commencement of each spring prescribed burn season.

CONCLUSION

Wallowa County has a long history of successful communication and collaboration between the natural resource agencies, community government, and private landowners. Many communities have taken a commitment to address their fire needs through the Firewise program, and the Wallowa County SMCRP is just another valuable resource for creating consistent and timely communication between the organizations. Through the Wallowa County Preparedness Committee, a precedent for communication between various agencies has already been set and can continue.

The Wallowa County SMCRP provides a framework for efficient and reliable communication to provide the smoke vulnerable populations of Wallowa County information on potential smoke events from prescribed fire as well as a tool to utilize during wildfire smoke events. This will allow the county to increase the amount of planned forestry burning, which will help restore forest resiliency, while at the same time ensuring the health and well-being of the smoke vulnerable populations and all of Wallowa County.

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