

# **Grande Ronde Valley Community Response Plan La Grande Oregon- Smoke Sensitive Receptor Area**



**February 2023**

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## I. Overview

### A. La Grande Oregon- Grande Ronde Valley Community Response Plan

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Union County, in coordination with the City of La Grande, is developing an integrated Community Response Plan (CRP) for the community of La Grande Oregon, and the surrounding communities within the Grande Ronde Valley to plan for and respond to the health impacts of smoke from prescribed burning or wildfire. The purpose of this plan is to protect the health and safety of the communities within the Grande Ronde Valley from wildland fire smoke, while providing opportunities to reduce wildfire risk by utilizing planned wildland fire.

La Grande is identified as a Smoke Sensitive Receptor Area (hereafter referred to as the La Grande SSRA) consistent with [OAR 629.048-0180 \(2\)\(j\)](#). While La Grande is the designated SSRA, smoke that impacts the La Grande SSRA impacts all of communities within the Grande Ronde Valley. The Grande Ronde Valley Community Response Plan provides for response to wildland fire smoke, and qualifies the City of La Grande to request from the Oregon Department of Environmental Quality (ODEQ) and the Oregon Department of Forestry (ODF) an exemption from the 1-hour smoke intrusion threshold defined within the [2019 Oregon Prescribed Fire Smoke Management Plan](#) (SMP).

The goals for the La Grande SSRA and the Grande Ronde Valley CRP and exemption are twofold:

- To enhance coordination, communication, and notification of residents of La Grande and surrounding communities about planned prescribed fire, potential smoke, and air quality impacts, and recommendations to reduce exposure and mitigate the health impacts of fire smoke from all sources – both planned and unplanned fire on the landscape, especially to vulnerable populations defined within the Grande Ronde Valley.
- To increase opportunities to accomplish critical prescribed fire treatments in the Wildland Urban Interface (WUI) to improve forest health, reduce the risk of extreme wildfires, and increase community and firefighter safety when wildfires do occur;



- [La Grande Oregon from EOU Webcam](#) - This picture is from 10/24/2017 - the week after the last recorded smoke intrusion into the La Grande SSRA. Residual smoke is still visible on the horizon. This live camera is very useful for land management agencies to monitor smoke in the community of La Grande

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## II. Background:

### A. Area Overview

The City of La Grande Oregon is located in the Grande Ronde Valley and is nestled between the Northern Blue Mountains and Wallowa Mountains in Northeast Oregon. Northeast Oregon is an environment defined by rivers, forests, valleys, and basins, and by wildfire. The Blue Mountains are supposedly named for the blue tint of the smoky haze over these mountain ranges by the Lewis and Clark expedition as they traveled through the area.

La Grande is in the heart of the Grand Ronde Valley, and is the seat of Union County. La Grande is located along the Interstate 84 corridor approximately 250 miles east of Portland, Oregon and 160 miles northwest of Boise, Idaho.

The Grande Ronde Valley and surrounding foothills support multiple communities. There are eight incorporated communities in the county, La Grande being the largest with an approximate population of 13,082 and Summerville the smallest at 135 people. Island City is contiguous to La Grande, and these surrounding communities share the airshed in the Grande Ronde Valley.

### B. Purpose and Need

Forested landscapes are integral to landscapes of Northeastern Oregon, and wildfire is a component of this landscape. Forests have grown into an unhealthy state of overcrowding and fuels buildup. Fuels and climate conditions are contributing to large, high-severity wildfires that are devastating large areas of forested areas, and are threatening homes, communities, and the safety of residents and emergency responders. In 2021, wildfires burned over 157,000 acres in the Blue Mountains of Northeastern Oregon and Southeastern Washington at the cost of over \$83 million dollars. In 2022, over 213,000 acres burned within the Blues at a cost of about \$60 million. Wildfire smoke impacted the Grande Ronde Valley throughout most of these summers. In 2020, the Grande Ronde Valley experienced several days of wildfire smoke that was in an extreme level of health risk.

Fuels treatments of thinning, timber harvesting and using prescribed fire to remove fuels can reduce the impact of severe wildfire on the landscape and on communities. In recent wildfire history in the Blue Mountains, the 2015 Cornet / Windy Fire, the 2016 Rail Fire, the 2021 Dry Creek Fire, and the 2022 Nebo Fire all had significant control lines established in areas that had fuels treatment. Prescribed fire while restoring landscapes to healthier conditions and landscapes more resilient to wildfire and providing opportunities for containment of wildfires, can produce smoke that can impact our communities.

The Oregon Department of Environmental Quality (ODEQ) has developed guidelines that allows for smoke from prescribed fire, while protecting the health of our communities. These guidelines define the impact of air quality allowed by prescribed fire. These also provide guidance to manage smoke, and to create a plan that protects the community from smoke, while providing the opportunity to treat more area to enhance landscape resilience to severe wildfire.

The history of smoke events and intrusions across the area, paired with the anticipated need for fuels reduction, and the resulting smoke that could pose a health and safety risk to vulnerable members of the community highlights the need to design and implement a plan for the community to respond to unhealthy air quality conditions that result from all sources of smoke.



### C. Smoke Management Guidelines

In 2019, ODEQ amended its guidelines to allow prescribed fire to exceed the current standards for limits from a one-hour exposure to smoke, while still maintaining these limits within a 24-hour period. This exemption will allow defined smoke levels from prescribed fire, while still providing for healthy smoke levels. This will allow conditions that allow more healthy controlled prescribed fire on the landscape, while potentially reducing the impact of large-severity wildfire.

“Smoke intrusion” is defined as the verified entrance of smoke from prescribed burning into an SSRA at ground level that averages at or above 70 micrograms per cubic meter of particulate matter of 2.5 microns or less (PM<sub>2.5</sub>) for any one-hour period and/or averages at or above 26 micrograms per cubic meter for a 24-hour period, measured from midnight to midnight.’ 629-048-0005(27). This definition aligns with definitions for Air Quality Index (AQI) by the Department of Environmental Quality.

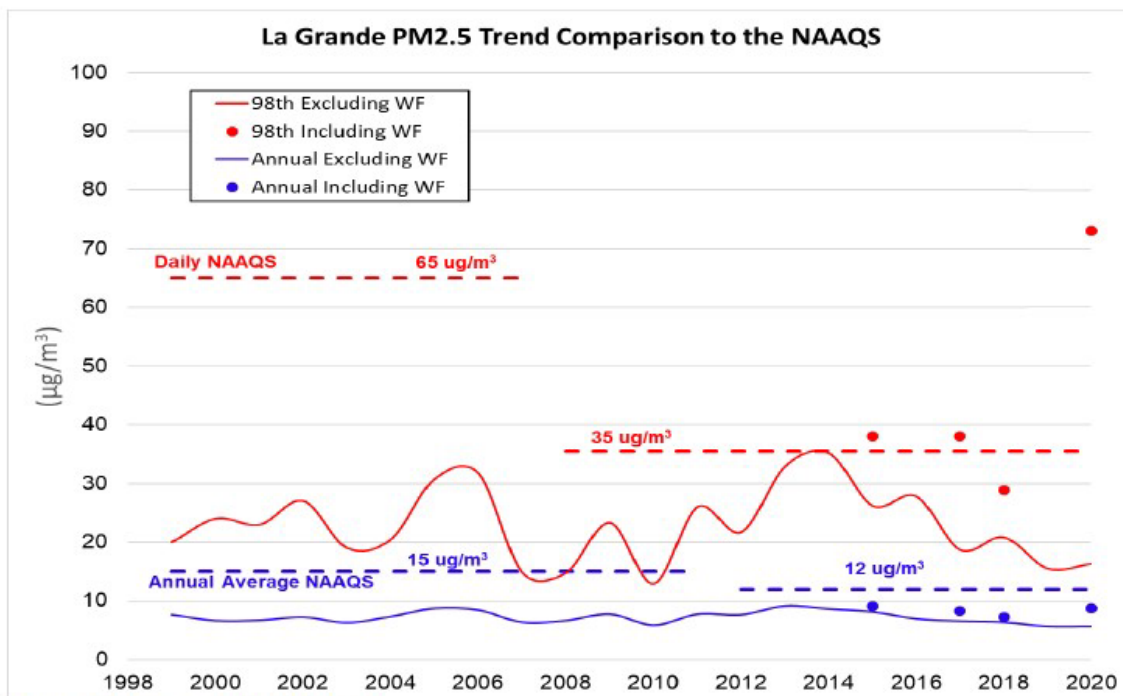


Figure 69. La Grande PM<sub>2.5</sub> trends.

Prior to 2019, smoke intrusions were determined by measurements from Nephelometers (an instrument that measures particulates in the air) of the backscattering of light (bscat). These measurements are not a direct measurement of particulate matter and are not used in the DEQ definitions of Air Quality Index. Some of the recorded incidents would most likely not have been qualified as an intrusion under the current smoke management guidelines. Fire managers in Northeastern Oregon were significant in initiating these changes to smoke management guidelines that better fit conditions in the area, providing a more accurate representation of air quality health impacts, while providing more opportunity for prescribed burning.

This plan will also provide guidance to manage smoke, and to create a plan that protects our community from smoke while providing opportunity to enhance resilience to severe wildfire.

Partners recognize that to promote more resilient public and private forest lands, increased prescribed fire will be necessary. Therefore, the successful development of this CRP will also serve to facilitate

opportunities for increased prescribed fire through the possible exemption from the current one-hour average smoke intrusion threshold.

A significant outcome of this plan will be an increase in the quality and frequency of community outreach, information dissemination, and education efforts; particularly toward those members of the community who are most at risk to health and safety due to smoke incidents regardless of the source of that smoke.

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### III. Project Goals

#### A. Goal 1 – Community Response Plan Document

Union County Emergency Services will oversee the development of the La Grande Community Response plan for Prescribed Fire Smoke. Union County will be the fiscal agent for this proposal. The county will utilize an intergovernmental agreement to transfer funds to Oregon Department of Forestry to fund their Northern Blues Cohesive Strategy Coordinator to coordinate and write the CRP. These funds will also be used to provide GIS services and to fund software, supplies and materials.

#### B. Goal 2 – Notification System

- Seek avenues to modify the existing Blue Mountain Interagency Dispatch Center website to provide information about prescribed fire smoke to the communities of Union County.
- Develop a plan to incorporate the Union County Everbridge notification system to provide information about prescribed fires and associated smoke, and
- to develop a mechanism to fund personnel to provide updated information into that system in real time

#### C. Goal 3 – Website to provide information on smoke and health

the development of an interagency website that provides information to community members in the Northern Blue Mountains about prescribed fire, smoke, health and smoke mitigation

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### IV. Smoke Vulnerable Populations

#### A. Air Pollution and Wildfire Smoke Health Impacts

Poor air quality poses a health risk to all individuals. Many factors influence a person's sensitivity to smoke, including severity and duration of smoke exposure and a person's health. Smoke may worsen symptoms for people who have pre-existing health conditions and those who are particularly sensitive to air pollution. These smoke-vulnerable populations include children, adolescents, pregnant women, the elderly, the immunocompromised and those with pre-existing chronic diseases and lung conditions are especially vulnerable to the compounding detrimental health impacts of poor air quality events.

Wildfire smoke creates and often exacerbates poor air quality situations. Of the many harmful components that exist in wildfire smoke, one of the most dangerous is particulate matter (PM), specifically fine PM (PM<sub>2.5</sub>). The microscopic particles of PM<sub>2.5</sub> are so fine that they are inhaled deep into the lungs and cross the blood-air barrier to enter the bloodstream. Short-term exposure over hours or days can lead to increased asthma attacks, acute bronchitis, increased susceptibility to respiratory infections and can lead to an increased risk of heart attack for individuals with lung disease.



## B. What is PM, and how does it get into the air?

PM stands for particulate matter (also called particle pollution): the term for a mixture of solid particles and liquid droplets found in the air. Some particles, such as dust, dirt, soot, or smoke, are large or dark enough to be seen with the naked eye. Others are so small they can only be detected using an electron microscope.

Particle pollution includes:

**PM<sub>10</sub>**: inhalable particles, with diameters that are generally 10 micrometers and smaller; and

**PM<sub>2.5</sub>**: fine inhalable particles, with diameters that are generally 2.5 micrometers and smaller.

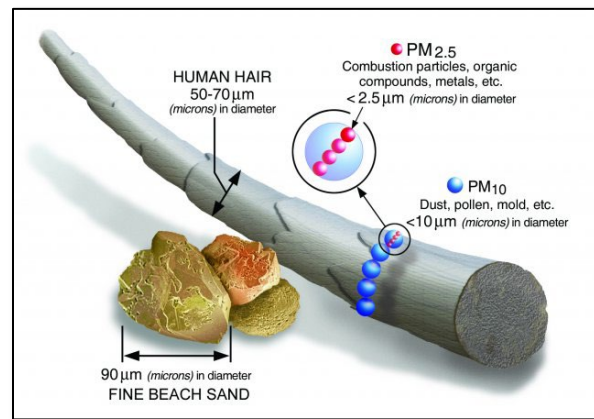


Figure 1 Size Comparison of PM Particles

The concentration and duration of smoke exposure can also increase the possibility of detrimental health effects. When smoke concentrations are at or above unhealthy levels, short-term health impacts like irritated eyes, scratchy throat, cough, shortness of breath, cardiac arrhythmias, respiratory infections and asthma attacks are more likely to develop. Multiple days of exposure to unhealthy air quality due to wildfire smoke increases the likeliness of more severe health effects and can exacerbate existing heart and respiratory conditions leading to increased numbers of heart attacks, exacerbated COPD (chronic obstructive pulmonary disease) and result in higher numbers of emergency room visits. Long-term health impacts from wildfire smoke are a bigger challenge to decipher, but ongoing research continues to try to answer this important question. Some early analysis points to a link between extended wildfire smoke exposure and a reduction in respiratory health in subsequent years.

## C. Vulnerable populations within the Community of La Grande and in Union County.

### Total Populations of Communities in Union County

Population Incorporated City/Town	Certified Estimate July 1, 2020
La Grande	13,460
Elgin	1,730
Island City	1,140
Union	2,175
Cove	555
Imbler	305
<b>Total Union County</b>	<b>26,840</b>

[Portland State University Population Research Center](#)

[US Department of Health and Human Services emPOWER](#) site identifies individuals in communities that are Medicare beneficiaries, and of those beneficiaries those that are in high vulnerability health conditions requiring electrical equipment such as oxygen concentrators

HHS EmPOWER	Medicare Beneficiaries	Electricity-Dependent Beneficiaries
Cove	528	31
Elgin	817	70
Imber	133	11
La Grande	3,846	260
North Powder	226	11
Summerville	273	16
Union	732	50
<b>Total Union County</b>	<b>6,555</b>	<b>449</b>

In data provided by the [Oregon Health Authority](#) for vulnerable populations, estimates in Union County area as follows:

Union County Health Risk	Total of Adult Age Groups	Approx # of People
Asthma	13.3%	3,570
COPD	7.5%	2,013
Heart Attack	4.2% (65 and older 11%)	1,127
CHF/heart attack/stroke	7.3% (65 and older 16.8%)	1,960

The [Community Health Needs Assessment](#) was prepared by the Grande Ronde Hospital in La Grande to identify health needs within the hospital's community. This assessment compared mortality rates within the communities of Union County to those of the State of Oregon. These indicators are expressed in death rate per 100,000 people. The population tables above can be used to extrapolate approximate rates within Union County. Notable in this assessment is that the mortality rates for heart disease and for Chronic Lower respiratory disease are higher in Union County communities than the rates for the State of Oregon.

## *Mortality Indicators*

	Union County	Oregon	La Grande	Union	Elgin
Total Mortality (Death Rate per 100,000)	983	815	1,007	926	916
Cancer Mortality (Death Rate per 100,000)	227	191	226	221	245
Heart Disease Mortality (Death Rate per 100,000)	202	169	203	212	174
Chronic Lower Resp Disease Mortality (Death Rate per 100,000)	73	49	73	68	79
Cerebrovascular Disease Mortality (Death Rate per 100,000)	61	51	58	89	32
Unintended Injuries Mortality (Death Rate per 100,000)	47	41	45	43	63
Alzheimer's Mortality (Death Rate per 100,000)	26	32	31	13	16
Flu and Pneumonia Mortality (Death Rate per 100,000)	25	14	24	26	24
Diabetes Mortality (Death Rate per 100,000)	23	28	23	13	40
Suicide Mortality (Death Rate per 100,000)	22	15	20	30	24
Motor vehicle crash death rate	15	14			
Alcohol Induced Mortality (Death Rate per 100,000)	11	14	10	9	24
Age-adjusted Death Rate, (Avg per year 07-09)	897	821	941	825	695

Oregon Office of Rural Health, 2009

### D. Protecting the health of vulnerable populations from short-term exposure to smoke

An element of the communications strategy would be to provide information to the community on how to minimize the health impacts from smoke.

Provisions for funding to protect populations from smoke impact have been identified in OR SB 762. These provisions include:

- Creation of a wildfire emergency shelter program, including clean air shelters and evacuation services.
- Funds for a grant program for filtrations systems to handle wildfire smoke

An element of the proposed communication strategy would be to provide information about these programs, and how to apply to these funding opportunities.

#### 1. Key Messages

Smoke is made up primarily of small particles, gases, and water vapor. These particles can be inhaled deeply into the lungs, damaging lung tissue and causing respiratory and cardiovascular problems. Regardless of the source, smoke is a form of air pollution that can pose a health risk. Symptoms of short-term smoke exposure can include:

- Watery or dry eyes
- Persistent cough, phlegm, wheeze, scratchy throat, or irritated sinuses
- Headaches
- Shortness of breath, asthma attack, or lung irritation
- Irregular heartbeat, chest pain, or fatigue

#### 2. Recommendations

The following guidelines are things members of the public and vulnerable populations can do to minimize short-duration smoke impacts from prescribed fire or wildfire:

- Limit your exposure to smoke.
- Reduce time spent outdoors when smoke is present. This can usually provide some protection, especially in a tightly closed, air-conditioned house. Set your A/C or heating unit to recycle or recirculate when at home or in your car, to limit your exposure.
- Reduce the time you engage in vigorous outdoor activity. This can be an important, effective way to lower the amount of smoke you are breathing in. It can minimize health risks during a smoke event.
- Stay hydrated. Drink plenty of water.
- Reduce other sources of indoor smoke and dust. These can be burning cigarettes, candles, gas or propane ranges, wood-burning stoves and furnaces, and vacuuming.
- If you have heart or lung disease or respiratory illnesses such as asthma, follow your healthcare provider's advice about prevention and treatment of symptoms.
- More vulnerable or smoke-sensitive persons may consider using an indoor high-efficiency air filter (HEPA) or electrostatic precipitator for your home or to help create one or more rooms with cleaner air to breathe.
- Before you go to bed at night, close doors and windows to prevent outside smoke from getting inside and keep indoor air clean.
- If you feel like smoke is already impacting your health, avoid outdoor physical exertion and remain indoors. Contact your medical provider if you experience serious health problems caused by smoke.

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## V. Fire, Smoke, and Air Quality Analysis

### A. Residential wood heat and debris burning

The City of La Grande established [an Air Quality Program](#) in 1991 in response to the Oregon Department of Environmental Quality (DEQ) finding that within the City's Urban Growth Boundary, the air exceeded the National Ambient Air Quality Standard (NAAQS). Air sampling conducted in 1988 had determined that particulate matter less than 10 microns (PM10) concentration exceeded the 24-hr NAAQS. The primary sources were determined to be smoke from wood-burning stoves and outside debris burning.

The DEQ directed that a State Implementation Plan (SIP) describing strategies to restore healthful air quality was necessary. That plan established recommendations to the public for use of wood-burning stoves and outside burning based on predicted AQS levels. It also established awareness programs and educational programs for schools.

As AQI levels met defined levels for GREEN/GOOD; YELLOW/MODERATE and RED/UNHEALTHY, residents were asked to curtail the use of wood-burning stoves and outside burning. Daily recommendations were provided on a pre-recorded phone message called "[The Wood Burn Call](#)". Provisions were made for use of DEQ or EPA-certified stoves and wood pellet stoves.

A series of Air Quality Advisory Scripts take weather parameter information including wind speed, mixing height, current and predicted particulate measurements to guide the smoke management instructions.

Air Quality Rating	Air Quality Index (AQI)	
GOOD	0-50	<b>GREEN/GOOD:</b> wood burning allowed in stoves and fireplaces. Outside burns allowed during October, November, April and May. Please build small, hot fires; do not damper down your stove, and burn dry, well-seasoned wood.
MODERATE	51-100	<b>YELLOW/MODERATE:</b> air pollution levels are expected to approach the health standards. No outside burning is allowed for the next 24 hours. Residents are asked to stop burning between the hours of 5 pm and 6 am, except those with DEQ or EPA-certified stoves, wood pellet stoves, and those using wood as a sole source of heat. Those continuing to burn are asked to build small, hot fires. Please do not damper down your stove, and burn dry, well-seasoned wood.
UNHEALTHY for Sensitive Groups (UFGS)	101-150	
UNHEALTHY	151-200	<b>RED/ UNHEALTHY:</b> air pollution levels are expected to exceed the health standards. No outside burning is allowed for the next 24 hours. All residents are asked to stop burning between the hours of 5 pm and 6 am, except those using wood as a sole source of heat and those using wood pellet stoves. Those continuing to burn are asked to build small, hot fires. Please do not damper down your stove, and burn dry, well-seasoned wood.
VERY UNHEALTHY	201-300	
HAZARDOUS	>300	

Wood has always been a primary source of heat in La Grande. As awareness increased of air quality through this program, residents began to change to certified wood stoves and pellet stoves. Natural Gas has also become much more available. Existing homes have been converted over to certified stoves, pellet stoves, and natural gas as primary heat. Building codes for new construction required DEQ-approved heating sources. Air quality has increased to the point that the daily recommendation system is no longer necessary. Current air quality monitoring shows that AQI impacts from heating and outside burning have significantly decreased. Currently, through funding from the Oregon DEQ, a county-wide monitoring station network (Purple-Air) is being established to enhance monitoring and awareness of air quality.

## B. Agricultural Burning

Union County has an Agricultural Smoke Management Program. The [Union County Smoke Management Plan](#) is intended to minimize health and lifestyle impacts by managing air quality while providing opportunities for optimal crop production. The objective of smoke management is to match burn levels to the airshed's dispersion capabilities while minimizing smoke impacts.

Agricultural crops including wheat and other grains and grass seed are an important part of the economy in the Grande Ronde Valley. The burning of residue in grass seed and cereal crop fields for sanitizing fields due to fungus diseases and weed contaminants, and for residue management is a key part of the success of these crops.

The opportunity to periodically burn agricultural residue is a vital part of this industry. As a tool, it effectively controls many diseases, sanitizes fields, stimulates growth, helps produce higher quality seed, and destroys "second generation" seeds that ensure seed purity. Field burning also helps to control weed, seed, and insect problems, which reduces the use of chemicals.; However, the impact on our communities and those sensitive to the smoke is a concern for all residents

The county is responsible for overseeing open field burning and propane flaming of all grass seed residue and cereal grain residue within Union County. Burn season begins June 15th and lasts until September 30th. To have optimum burn conditions with the least impact on others, growers try to burn when the weather conditions, field conditions, and dispersion forecast are all optimum. Thru a permit system and registration, the Smoke Management Office specifies the times, places, and amount of burning to be allowed.

The smoke management center gathers weather data and forecast each weekday during the burning season. Through an automated series of scripts and algorithms, a pre-recorded advisory message is put out. This is continually re-evaluated and adjusted throughout the burn day by tracking smoke drift, plume rise, and indications of shifting winds. Air quality has increased substantially since this program was initiated. This direction is for both agricultural burning guidance, and guidance for debris burning throughout Union County outside of the City of La Grande.

## C. Prescribed Fire in the La Grande SSRA Environment

### 1. Need for Prescribed Fire

[Oregon Rule 629-048-0020](#) discusses the "Necessity of Prescribed Burning" within the state of Oregon. The public policy of the State of Oregon is to preserve forests "through the prevention and suppression of forest fires." Prescribed burning is an important tool used to reduce forest fuels, re-introduce fire on the landscape, and has been demonstrated to reduce the potential for a fire to start or reduce its severity. It has also been demonstrated that fire suppression actions are more effective and lower in cost in areas with a recent history of burning.

Prescribed burning is an important forest management technique in all of Oregon's forests to reduce forest fuels for the purposes of both short term and long-term fire prevention and to aid in fire suppression. Because wildfires typically burn during hotter, drier conditions than those usually planned for prescribed fires, forest fuels are more completely consumed, producing more emissions. Also, wildfires often occur during periods of atmospheric stability, trapping smoke close to the ground where it's more likely to impact communities and health.

The Wallowa-Whitman National Forest, the Umatilla National Forest and the Northeast Oregon Unit of the Oregon Department of Forestry all have proactive prescribed burn programs in place to respond to



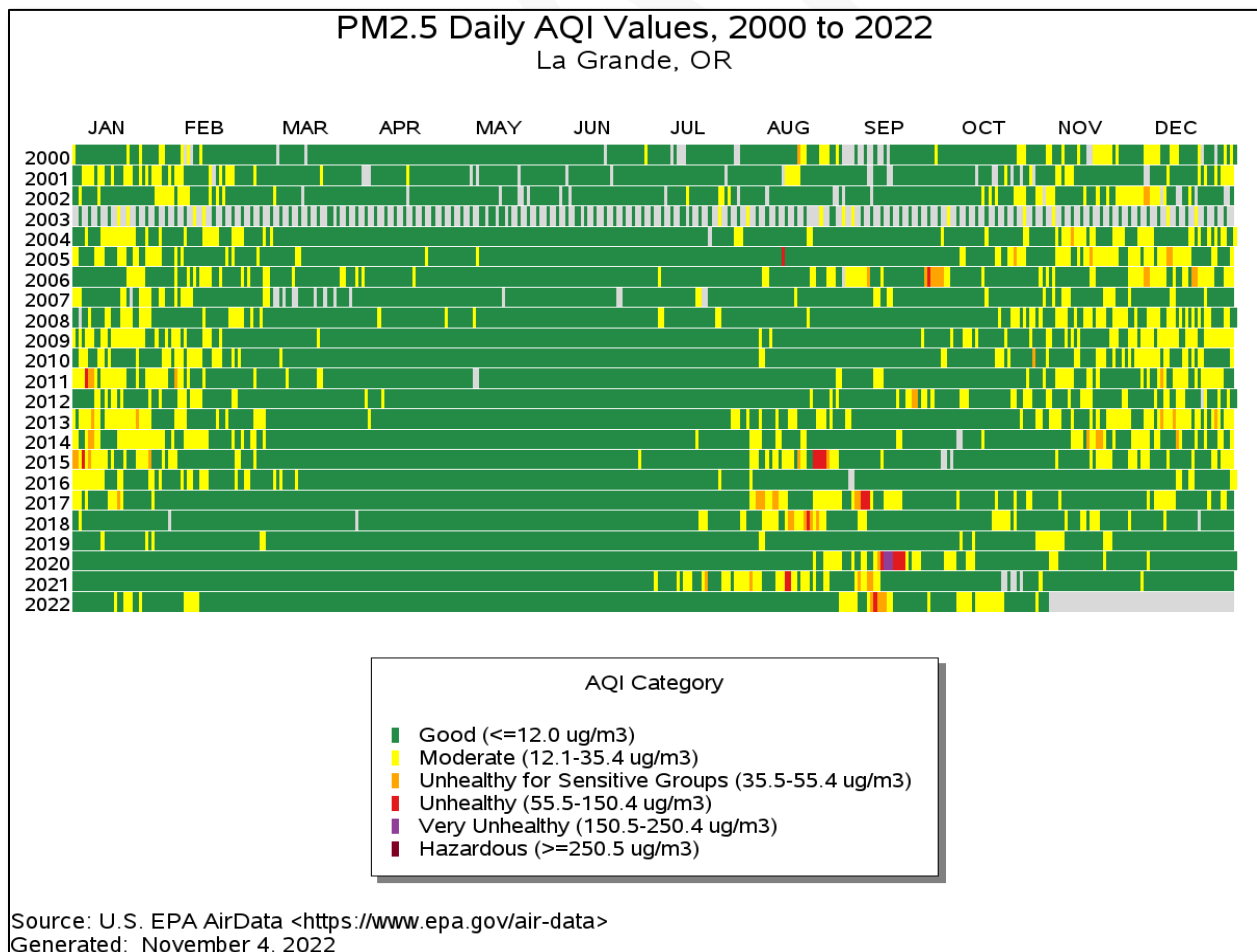
these issues and goals. While achieving these goals, these programs have the potential to impact the La Grande SSRA with smoke from these activities.

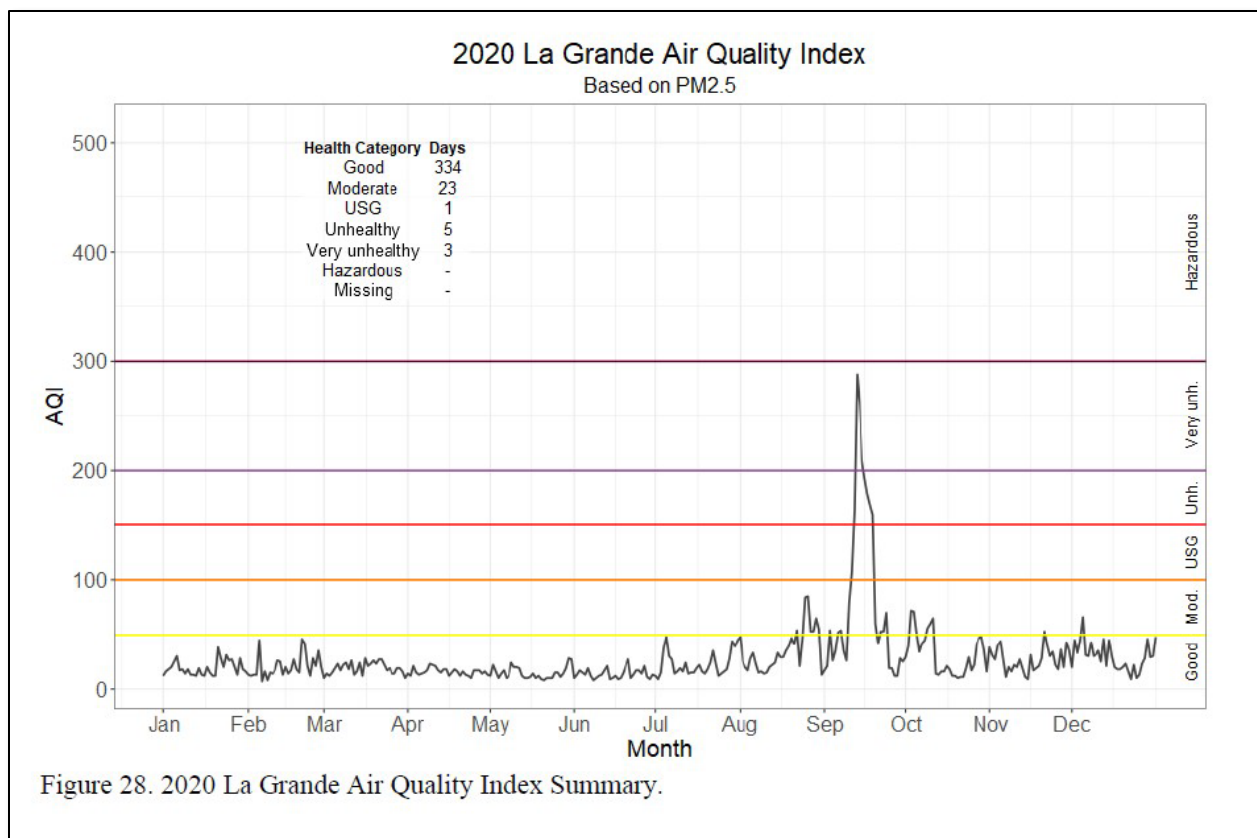
## 2. History of Prescribed and Wildfire Smoke

Prior to 2009, La Grande had been identified as a Protected Area – Non-Restricted Area by Oregon Department of Forestry Smoke Management. In 2009, the Eastern Oregon Non-Restricted areas were reclassified as Smoke Sensitive Receptor Areas (SSRA), which included the community of La Grande.

Prescribed burning adjacent to the Grande Ronde Valley is challenging because of the topography and wind patterns that can bring smoke into the valley and result in poor dispersion of smoke out of the valley. Weather conditions can be very challenging to predict in the Grande Ronde Valley, and local topographical features such as the Grande Ronde River drainage and the Blue Mts and Wallowa Mts can greatly influence weather and winds that would disperse smoke. While La Grande is the designated SSRA, smoke generally impacts all of the communities within the Grande Ronde Valley.

La Grande has a history of smoke intrusions from prescribed burning. In the past 25 years (1996-2021) there have been 14 Smoke Intrusion events in the Grande Ronde Valley (now the La Grande SSRA) Five of these events occurred in the fall of 1997 over a period of 16 days. The last recorded smoke intrusion occurred in 2017. The most significant smoke intrusion occurred in 2006, which resulted in 33 hours of smoke intrusion, 19 of those hours were at the unhealthy level of Air Quality Index Level as defined by the Clean Air Act – US DEQ. An after-action review of this event determined that a series of unpredicted weather events and miscommunications resulted in this heavy intrusion of prescribed smoke into the Grande Ronde Valley. Several recommendations and changes occurred following this event.





In the previous two graphs, the wildfire smoke event in the Fall of September that reached unhealthy levels.

The first graph also shows the prescribed Fire Smoke event in September 2006, and the wildfire smoke events in 2015 resulting from fires in Baker County, Oregon, and 2017 which resulted from smoke transported in from Northern Californian and British Columbia. (Need to verify)

### 3. Guidance and instructions for daily prescribed burn activities

ORE DEQ Can I Burn Map

BMIDC Burn Regulations Map

Oregon Smoke Management Daily Instructions

now instead of go/nogo once per unit / now a daily process meeting w deputy FS Supervisor and District Ranger

RX mon-Thur - not burning on Fridays so not to impact weekend

WX info / smoke forecast; mixing forecast;

### 4. Current Prescribed Burning Activities

Many of the current prescribed burning project areas will be discussed in the partnerships description later in this proposal. Existing Forest Service RX burning projects include East Face, Angel, Spring Creek, Main Eagle, Moss Springs and Bird Track.

- Details of these projects can be found at the [Wallowa Whitman web site Projects Page](#).
- Current burning activities can be found on the [BMIDC Rx Burning Page](#).
- Historical information and locations of prescribed fire activities can be found on the [Northern Blues Interactive Prescribed Fire Map](#)

In 2021, the La Grande Ranger district has burned 3,056 acres in 12 projects in the area proximate to the La Grande SSRA. In the fall of 2021, approximately 1,200 additional acres of private and county owned property have had pile burning following fuels treatments. Across the Northern Blue Mountains landscape, 10,200 acres were treated on federal lands, and a total of 24,800 ac. were treated by prescribed fire across the landscape. 2022 however was a more challenging year to accomplish burning, primarily because of weather conditions. In 2022, approximately 4,200 acres were treated by prescribed burning.

### 5. Future Prescribed Burns

The need for increased pace and scale of prescribed burning in Northeastern Oregon, as well as the opportunities to allow natural fire to occur where it is beneficial, has been identified by land management agencies to reduce the impact of the ever-increasing occurrence of high severity wildfire in the Northern Blue Mountains. Many of these projects such as East Face and La Grande Valley West have already been discussed. There is currently a backlog of prescribed burning on existing projects proximate to the La Grande SSRA due to several factors, which has included inadequate funding, weather conditions, extreme fire seasons, and smoke management limitations. As discussed, funding mechanisms are becoming available, and the goals of the Grande Ronde Valley CRP is to foster responsible smoke management practices that increase opportunities for prescribed burning while providing for the health and safety of the community.

Detailed information for these projects would be provided in a completed Community Response Plan. There is currently a publicly available [Interactive Prescribed Fire Map](#) that displays where existing and planned fuels treatments areas are located proximate to the La Grande SSRA. This map can be found on the Umatilla and Wallowa-Whitman National Forests web sites.

## VI. Wildfire Mitigation Activities

Union County has completed a Community Wildfire Protection Plan with the latest revision in 2016. [The Union County CWPP](#) provides a framework for assessing current wildland-urban interface wildfire risks and identifies mitigation measures to reduce large fire potential and wildfire risks through the implementation of the three Cohesive Wildfire Strategy elements of: *creating fire-adapted communities*, *restoring resilient landscapes* and *improving wildfire response*. The CWPP identifies and prioritizes several Mitigation Action Items. Three of these action items are:

- Increase speed of project planning and implementation and scale of projects while emphasizing cross-boundary all hands-all lands approaches.
- Develop landscape treatment opportunities that reduce mortality and increase retention of overstory structure post-wildfire.
- Design projects that provide defensible space for suppression resources while retaining ecosystem integrity in fire-prone environments.

Federal and State agencies are using the mitigation action items within the CWPP to help develop and design fuel treatment projects.

### 1. Risk of Communities to Wildland Fire

Northern Union County has been identified by the state of Oregon as “high risk” as identified in [Senate Bill 762](#). On June 26, 2021 the Oregon State Senate signed SB 762. This bill provides for a comprehensive statewide response to plan to mitigate wildfires with a focus on community preparedness and public health, and provides for a program to reduce wildfire risk through the restoration of landscape resiliency and the reduction of hazardous fuels. Senate Bill 762 will provide more than \$220 million to help Oregon modernize and improve wildfire preparedness through three key strategies: creating fire-adapted communities, developing safe and effective response, and increasing the resiliency of Oregon's landscapes.

This bill defines priority for treatment and funding in SECTION 18. (1)(a) (A) On lands in the four highest eNVC (Expected Net Value Change) risk classes identified in the US Forest Service report titled “Pacific Northwest Quantitative Wildfire Risk Assessment: Methods and Results” (PNQWRA).

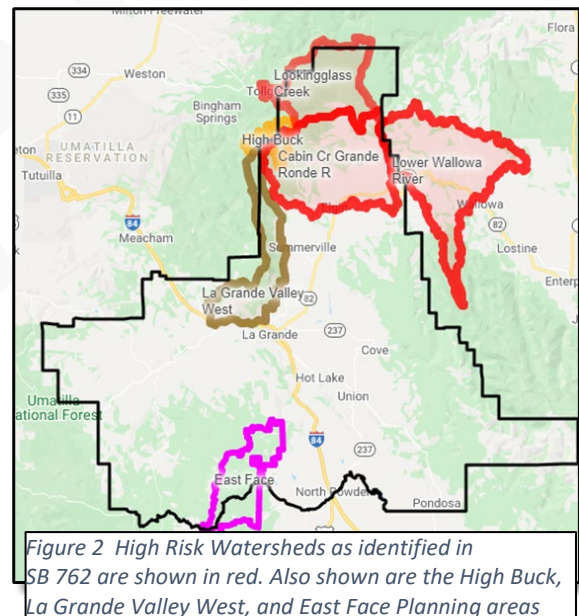


Figure 2 High Risk Watersheds as identified in SB 762 are shown in red. Also shown are the High Buck, La Grande Valley West, and East Face Planning areas



Three subwatersheds in northern Union County are designated as High Risk Class 4 in the PNQWRA (See Figure 1). These areas, which can be found in the Oregon Risk Explorer, define areas of Class 4 risk in three subwatersheds located in north Union County. This will be priority for funding for treatment by SB 762, and the N Blues All Lands Partnership is currently preparing a grant proposal for this area. Oregon Dept of Forestry in partnership with Oregon State University and US Forest Service has developed the on-line wildfire risk planning tool [Oregon Wildfire Risk Explorer](#). Figure 2 and Figure 3 are from this site.

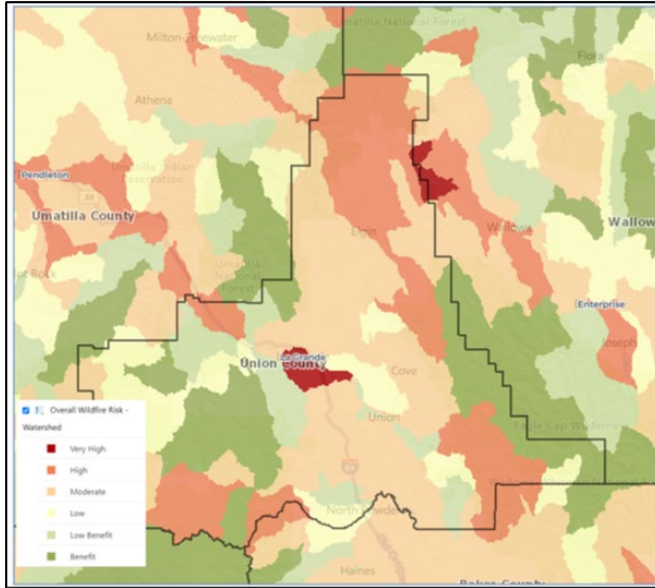


Figure 2 - Oregon WUI Hazard Rating as shown in the Oregon Risk Explorer

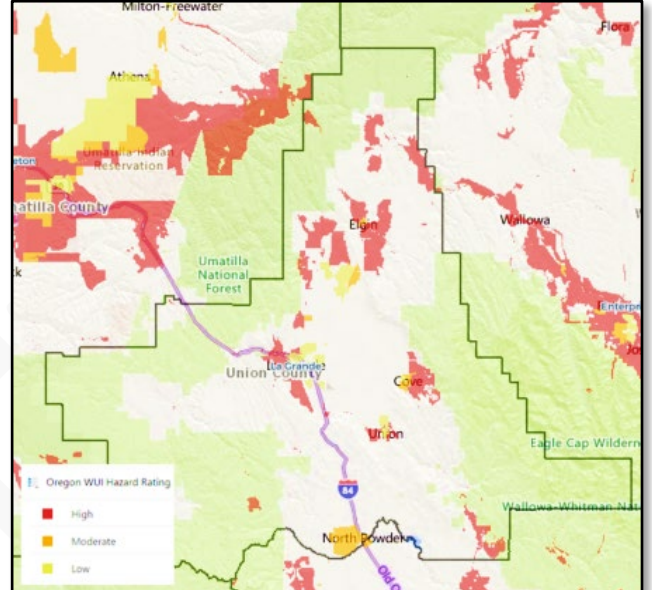


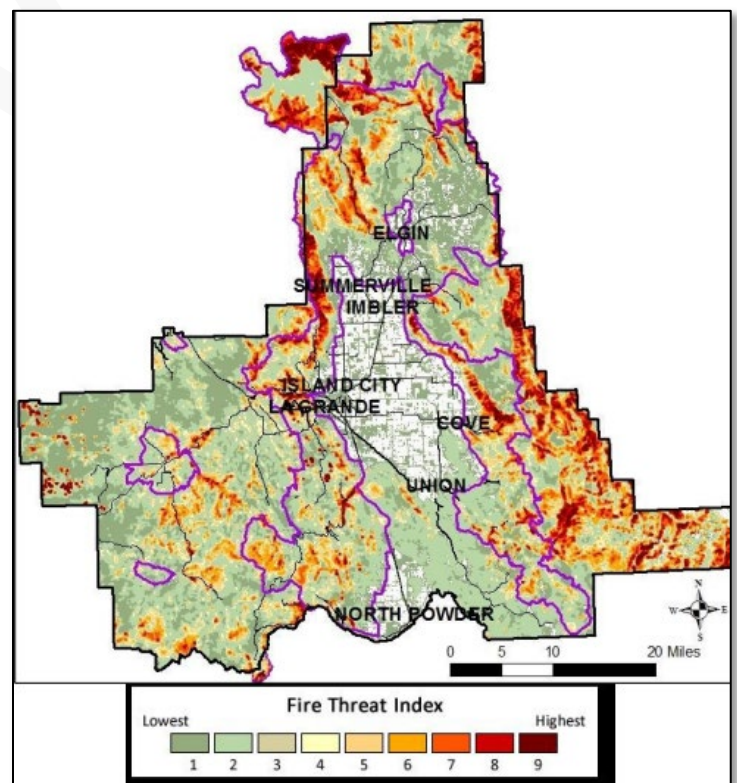
Figure 3 - Overall Wildfire Risk by watershed as shown in the Oregon Risk Explorer

## 2. The Union County Community Wildfire Protection Plan

The [Union County Community Wildfire Protection Plan](#) (CWPP) also defines high risk areas within Union County. The Union County CWPP provides a framework for assessing the current wildland urban interface wildfire risks, multiagency firefighting resource response shortfalls, and community preparedness. The CWPP also defines several Mitigation Action Items to reduce risk and impact of wildland fire. Some of those mitigations are included in this proposal.

The CWPP contains a thorough evaluation of wildfire risk throughout the county. It contains maps of fire risk as well as identifying, evaluating and ranking the risk to communities within Union County. The community of La Grande / Island City is among the highest risk as rated within the CWPP

The figure to the right shows a map of Fire Threat Index as defined in the Union County CWPP. The communities identified in the CRP proposal are indicated as high risk in this map.



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## VII. Communication Strategies

### A. Current Communication and Information Sources

It is critical to ensure that the most smoke-vulnerable individuals in the community are included in the development of communication materials and outreach plans. To do this, staff CHD s consulted with organizations serving vulnerable populations, as well as individuals that are smoke-vulnerable, to get feedback on draft messaging and identify communication strategies that would reach those most likely to experience health impacts from smoke. A survey was distributed to the community and discussions were held with key medical professionals. (See Appenix B – Survey)

Key findings from the survey were:

Insert bullets of key findings from the survey here:

- Almost half of the respondents live outside of La Grande
- Over 80% knew what AQI was (I thought would be a lot lower)
- Almost ¾ are at least moderately concerned about smoke and health
- ways to disseminate information in this community and that
- text alerts were highly valued.
- 30% did not know what the Union County emergency notifications system was, but of the 70% that did – 90 % would like to opt-in for smoke information.
- were that way to disseminate information in this community and that
- text alerts were highly valued.

These findings were incorporated into the plan and ongoing feedback will be incorporated to evaluate and improve the efficacy of the CRP communications strategy.

Current information systems for prescribed burning include information provided by the Blue Mountain Interagency Dispatch Center (BMIDC) in La Grande. As well as providing current information on the BMIDC Home Page – [www.BMIDC.org](http://www.BMIDC.org) and a [Prescribed Fire Page](#) about on-going prescribed burning, BMIDC also hosts or links to the following sources of information:

#### [Blue Mountain Fire Information Blog](#)

Information regarding current wildfire activity in the Blue Mountain area of Northeast Oregon and Southeast Washington. Hosted by Blue Mountain Interagency Dispatch Center, Oregon Department of Forestry's Northeast Oregon District, Umatilla National Forest, and Wallowa-Whitman National Forest.

#### [Blue Mountain Prescribed Fire Council](#)

Information regarding prescribed burning activity in the Blue Mountain area of Northeast Oregon and Southeast Washington. Hosted by Blue Mountain Interagency Dispatch Center, Oregon Department of Forestry's Northeast Oregon District, Umatilla National Forest, and Wallowa-Whitman National Forest.

#### [Blue Mountain Interactive Prescribed Fire Projects Map](#)

This interactive map shows active, planned and recently completed prescribed fire units for the Malheur, Umatilla, and Wallowa-Whitman National Forests.

[Nixel / Everbridge](#) Union County Emergency Services hosts a text / email notification system (Everbridge) that is used to provide reverse 911, and it is also used to provide information about wildfires and other developing emergencies, and has the capacity to provide alerts about Prescribed Fire activity and smoke conditions. Union County also provides information about their Agricultural Smoke Management Plan on their web site, and the Union County Emergency Services office has a Facebook page that has capacity to alert the public of developing incidents.



The [Wallowa-Whitman National Forest](#) and the [Umatilla National Forest](#) proximate to the La Grande SSRA provide information about RX burning on both their web pages and their Facebook pages, and the Oregon Department of Forestry also has a Facebook page that has the capacity to share information about wildfires and RX burning.

[Elkhorn Media Group](#) hosts a very active Facebook page that provides news and current information to communities in Eastern Oregon. There are 57,000 followers to this page, and they have provided information in the past about emerging wildfires and prescribed burning. They also host radio stations, and on request have provided public service announcements regarding planned prescribed burns. Our local land management agencies also provide Elkhorn Media with press releases regarding prescribed burning.

## B. Plan for Coordination and Collaboration

Our proposal is to put together an interagency Communications Strategy Design Committee to develop and implement the proposed communication strategy. This committee would include representation from the Center for Human Development, Union County Public Health (CHD), Grande Ronde Hospital, Union County Emergency Services, Union County Commissioners, the Cities of La Grande, Island City, Union, Cove, Imbler, Elgin and Summerville. This committee would also have representation from the All-Lands Partnership Communications Team, the N Blues Cohesive Strategy Partnership, Oregon Extension, Firewise, and local state, federal and rural fire agencies that implement prescribed fire.

## C. Notifications of Anticipated Smoke Impacts

Communication protocols will be standardized across all of the principal partners involved in developing the CRP. This will be implemented through the Preparedness Committee and other partners and communities. The proposal is to develop information available via internet and Facebook, and to develop and adapt existing notification systems to provide information about smoke and prescribed fire through the Everbridge / Nexus notification system that the county currently has in place. Concepts that could be explored during plan development could include: establishing additional smoke monitoring stations to help provide additional warning of developing smoke conditions, and use of new and existing web cameras to visually monitor smoke conditions. This could also include sharing information about information available on-line such as [AirNow.gov](#) and the [OregonAir](#) app available for smart devices.

## D. Proposed Communication Strategy

Many of these individual entities currently have established independent communications platforms and strategies. The emphasis of the CRP will be centered on coordinating them all to interface with one another in such a manner as to provide uniformity and compatibility when needed, and to develop a comprehensive system that would provide information across the footprint of the Northern Blues that includes Union County. This footprint also includes the Enterprise SSRA and the Baker City SSRA, and there is an opportunity to incorporate these SSRA's into a larger, comprehensive communication plan.

## E. Public Communication and Education

Our CRP will include a public communication and education strategy for communications between these entities that conduct prescribed fire, the local public health authority, and the community's public and vulnerable populations who may be impacted by smoke

The Northern Blues All Lands Partnership - Communications Team, and the Northern Blues Cohesive Strategy Partnership are pursuing opportunities to develop a similar information program. Requests from local website design providers for estimates to establish a comparable system have been

approximately \$24,000 to start a comparable system. Union County would be an active participant and recipient of this communications system. Union County will be proposing to go in with the other two SSRA's in Northeast Oregon – Enterprise SSRA and Baker County SSRA, as well as members of the All-Lands Partnership to contribute funding to the development of this information system. Additional funding opportunities could be provided by grants from Ore SB 762.

Union County would also provide funding to BMIDC for their intelligence department to develop a RX burning notification system and to provide up to date information on prescribed burning and smoke and health safety information into the Everbridge Notification System. BMICD does currently have access to the County Everbridge system to provide information about emerging wildfire incidents.

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## VIII. Partnerships

The Northern Blues All-Lands Partnership has been formed in the Northern Blue Mountains with the primary objective to collectively commit to promote and support restoration and maintenance of Blue Mountain (Northeastern Oregon and Southeastern Washington) forests to conditions more resilient to fire in the face of climate change, drought, wildfire, and insect and disease outbreaks. The mission is to cooperate under the auspices of the Northern Blues All Lands Partnership to plan and implement cross-boundary and cross jurisdictional collaboration focused on fire resiliency.

This partnership includes US Forest Service, Oregon Dept of Forestry, Washington DNR; Eastern Oregon Counties Association, representatives of timber industry, Wallowa Resources 501(c), Northern Blues Forest Collaborative; Blue Mt Chapter of Oregon Prescribe Fire Council; Western Environmental Law Center 501(c), Oregon State Extension, NRCS, and the Northern Blues Cohesive Strategy Partnership. Union County actively participates in this partnership both through the EO Counties and the NBCSP.

Union County is an active member of the Northern Blues Cohesive Strategy Partnership, whose mission is to foster implementation of the goals of the Cohesive Wildfire Strategy to *1- promote fire adapted communities; 2 – fire resilient landscapes; 3 – increase fire response capacity*. The Union County Emergency Services Coordinator has historically been the chair for this partnership.

Accomplishments of these partnerships includes receiving several funding mechanisms and developing large scale cross-boundary projects. These partnerships were key in receiving funding from the Collaborative Forest Landscape Restoration Program (CFLRP) for achieving cross boundary fuels treatment. This award alone is for approximately \$3.5 million annually over 10 years. Other sources of funding include E-Board funding of \$300,00 and RCPP Funding of approximately \$4 million. Union County contains several of these projects, including the East Face Joint Chiefs project, the La Grande Valley West Joint Chief Proposal as well as several others.

The All-Lands partnership is currently applying for grants provided for in Oregon Senate Bill 762, which could also result in significant funding source for fuels treatments and prescribed burning. The award of the La Grande Valley West Joints Chiefs Proposal would result in addition funding for fuels treatments. The approved appropriations in the Infrastructure Bill of 2021 will also be providing significant funding available for fuels treatment.

Prescribed burning within Union County will be a key component of many of these projects and funding sources.

### A. Project Partners:

*Note: Details of partnerships, partnering agencies, municipalities, and local government entities and their roles are provided in the accompanying narrative. Partners are listed as bullets in this attachment.*

- Northern Blues All Lands Partnership
- Northern Blues Cohesive Strategy Partnership

**Participating Agencies:**

- Union County Emergency Services
- Union County Community Health Department (CHD)
- US Forest Service, Wallowa Whitman and Umatilla National Forests
- Blue Mountain Interagency Dispatch Center
- Oregon Dept of Forestry – Northeast Oregon Unit,
- Washington DNR;
- Eastern Oregon Counties Association,
- Wallowa Resources 501(c),
- My Blue Mountains Woodlands 501(c)
- Northern Blues Forest Collaborative
- Blue Mt Chapter of Oregon Prescribed Fire Council;
- Western Environmental Law Center 501(c)
- Oregon State Extension,
- Natural Resources Conservation Service
- Northern Blues Cohesive Strategy Partnership (NBCSP).
- Municipalities of La Grande, Island City, Cove, Union, Imbler, Elgin, and Summerville
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**B. Firewise Communities**

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## IX. Conclusion

One of the opportunities provided by the Grande Ronde Valley Community Response Plan is to request an exemption to the one-hour smoke level as defined above, and also to have a response plan in place in the event that air quality was to reach an unhealthy level as defined over a 24-hour period. This would allow more opportunities for burning to achieve landscape resiliency goals, which could result in more area being treated. This could in turn reduce pressure to burn in marginal dispersal conditions to achieve these desired results. This also puts a plan in place to respond in the event that smoke from this prescribed burning does exceed levels that are considered healthy.

The ultimate goal as defined in the introduction is to increase landscape resilience which in turn reduces risk to people, communities, infrastructure, local economies, and the risk to first responders while protecting communities from smoke from prescribed fires

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## X. Appendix A. History of Past Smoke Intrusions

## XI. Appendix B: Smoke Survey

## XII. Appendix C: Sample Documents

### A. Press Release

### B. Educational Story

Notification to Contractors and Landowners

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