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Oregon Smoke Management Review Committee
2600 State Street
Salem, Oregon 97310

To the Oregon Smoke Management Review Committee:

Please accept this letter and my comments, submitted in my role as a Harney County Commissioner, as you discuss proposed changes to the state smoke management plan. I will address the following topics: (1) introductory comments, (2) smoke intrusion and Oregon DEQ's protective air quality standards, and (3) the public health need to balance prescribed burning with other forest management options.

As a concerned official with statutory local Public Health Authority responsibilities, I know that we need to get this right. We need to be mindful of what is at stake regarding human health and also consider how that fits into the context of being a county with significant federal lands ownership and management responsibilities. To that end, I have spent considerable time and effort reading, researching, learning and reaching out to experts and local citizens on the health effects of smoke inhalation. I have heard from many local residents who already suffer during the current levels of yearly prescribed fire smoke that they must try to protect themselves from and tolerate. I am active in the Harney County Restoration Collaborative, and have considered what the US Forest Service advocates as they attempt to do a better job actively and responsibly managing National Forests in our region.

With all that in mind, I have learned the following information and developed the following recommendations.

Introductory Comments: Increased prescribed fire will increase negative health impacts (related to smoke inhalation) to vulnerable residents. This is known. In fact, the only healthy thing for human lungs to breathe is clean air. Our vulnerable population includes far more than "just" the elderly and/or those with established respiratory conditions; pregnant women, babies, children, athletes, and people who spend a lot of time outdoors are also highly vulnerable. Cumulative smoke inhalation over time has been shown to trigger predispositions toward, and/or cause, serious respiratory and heart health conditions. I am concerned that the health impacts of smoke inhalation have been minimized in the discussions.

Much more research on smoke tolerance and harm is welcome and is needed. ***The lack of a comprehensive series of studies, however, must not invite the temptation to cite the lack of such studies as license to push the envelope of health tolerance for smoke.***

Smoke Intrusion, Oregon DEQ's Protective Air Quality Standard, and Health Impacts: The definition of a “smoke intrusion” is a very important element related to public health concerns around prescribed burning. It is my understanding that the US Environmental Protection Agency (EPA) has not established national ambient air quality standards (NAAQS) for PM2.5 (particulates) for averaging periods less than 24 hours. There is no scientifically-peer reviewed and accepted thresholds for health effects to occur at averaging periods for any concentrations of smoke less than the 24-hour concentrations, **but not because there are no health effects at sub-24-hour concentrations; rather because no scientifically-peer reviewed work has been done to provide this sorely needed information.**

Oregon Department of Environmental Quality (DEQ) believes that the empirically-based and dated NAAQS and the tiered Air Quality Index (AQI) for public health concerns are not protective enough. I agree. There are occasions when, despite the 24-hour average for PM2.5 concentration not exceeding the NAAQS, there are short-term periods within in which the hourly PM2.5 concentration is very high. The difference between the national and the state standards are substantial, with Oregon's DEQ standard being significantly more protective of human health. People don't breathe on a 24-hour average and the DEQ standard recognizes this.

Like DEQ and many of my constituents here in frontier rural Harney County, **I am concerned about these sub-24-hour periods with relatively high particulate concentration, and believe the public deserves protection from these events to the full extent that public policy allows.**

While we don't fully know how the size and length of smoke exposure affects health risks, we know the following: “... the longer you are exposed to pollutants from wood smoke, the higher the risk of developing smoke-related illnesses. Short-term exposures to intense smoke can lead to lung and cardiovascular problems in some people, especially if they are already susceptible to these diseases. Longer term exposure *over a few days or weeks* increases the risk and the chance of health impacts as your cumulative dose increases.” [Richard E. Peltier, *The Conversation*, Dec 7, 2017]

Some assessments stress that prescribed fire (at today's pace and scale) has fewer negative smoke-related health impacts than wildfire and wood stove use, due to its shorter durations -- as if that type of comparison lessens the additional health risks that are added from prescribed burning. That way of thinking misses the point: *cumulative doses of smoke inhalation over time contributes to deteriorating and often fatal health outcomes.*

From an environmental equity standpoint as well, we need to be especially diligent in protecting public health across the rural areas of southwest, central, and eastern Oregon, for these residents suffer far more than other areas of the state with smoke inhalation issues. Additionally, as the rural demographic of an increasingly older population base continues, the vulnerability of rural communities will increase.

The DEQ standards are more protective of human health related to smoke inhalation, and should be maintained. Even the potential for wildfires sometime in the future, and the desire by many to increase the pace and scale of prescribed burning as a forest management strategy, **should not create undue pressure to align Oregon's smoke policies with EPA's standards, due to the adverse impact it would have on communities, people, and vulnerable groups.**

The Public Health Need to Balance Prescribed Burning with Other Forest Management Options:

Prescribed burning is a deliberate, planned, optional policy and decision being hailed as the “best” approach to attempt to lessen the frequency and intensity of future wildfires through planned, human-initiated fire in wooded areas. The present advocacy and recommendations from people, agencies, and organizations to increase the pace and scale of prescribed fire as a critical (perhaps primary) forest management tool has become the conventional wisdom, particularly as destructive wildfires have increased in frequency and scope over the past 20 years. These partners sincerely want to do a better job of managing National Forests; yet they continue to pursue the same management strategies they have for many years, but now with a focus on pushing the air quality limits to gain additional prescribed fire burn days.

While I do not dispute their concerns and understand their desire to work toward healthier forests, the risks and hazards to human life from prescribed fire and its smoke are significant – and there are other, safer options. There are many other tools and options to reduce forest fuels that do not generate the smoke hazards of prescribed fire, including the “mechanical thinning” that most Oregon forest collaboratives state in their correspondence and discussions.

Unfortunately, however, there is a lot of pressure right now from natural resource collaboratives to weaken Oregon's clean air protections in order to conduct more prescribed burns, for the purpose of reducing wildfires long term. Increasing the pace and scale of prescribed fire is being touted as the "only way" to "catch up" on reducing forest fuels across the state (to hopefully mitigate the threat of future wildfires). For this reason, they are looking to change smoke management regulations in order to find a regulatory way to enable more burning. Unfortunately, there are negative health impacts to this approach.

The US Forest Service, other natural resource agencies, and forest collaboratives are urging increasing the pace and scale of prescribed fire as the only realistic way to respond to the future threat of wildfire. This is simply untrue. The truth is, Oregon engages in sufficient levels of safe prescribed burning practices now. Oregon does not, however, engage in sufficient pace and scale of non-burning methods to manage forest fuels, such as mechanical, commercial, non-commercial, and biological thinning.

There is so much potential for better forest management and increased economic opportunities if forest agencies would break free of their "group think" and add additional strategies to achieve their forest management goals. The fact that they have been in an "urgent" state of dealing with forest fuel loads *for 20 years now* tells me continuing their current approach is not a winning approach. With no real desire or mandate to do the work involved in creating appropriate avenues for significant increases in mechanical, commercial, non-commercial, and biological thinning, agencies will continue to fall behind in their goals, even if they are successful in weakening the protective air quality policies we have now. And vulnerable Oregonians will suffer greater smoke inhalation and serious health effects immediately from increased levels of prescribed burn practices every year -- likely without achieving the wildfire mitigation goal after all.

Some say it's a trade off that pits the health impacts on people today against potentially more serious health impacts on people concentrated near wildfires in the future. They say that even the specter of future wildfires with thicker smoke justifies the additional, immediate increased levels of annual prescribed fire smoke.

I disagree. That is a misleading, specious argument. *We have a responsibility to our communities and vulnerable populations today not to weaken protective, safe air quality standards for the purpose of achieving additional burn days, especially when there are already additional, non-smoke options available, that pose no such health risk.*

Changes in smoke management regulations are not needed; the political will to shift to a comprehensive, diverse, and safer array of forest management strategies is needed.

Increasing the pace and scale of prescribed fire as a forest management tool is only acceptable to me as a public official if it can be done within safe, protective air quality standards and practices. *There are other options. We have safe standards in place now, and I do not support making the standards less safe.*

Summary: Support of plans to increase the pace and scale of prescribed burning needs to be contingent on 1) the extent that the effects of the smoke can be mitigated to meet the existing, protective DEQ standards in Oregon and 2) that significant increases in combined commercial and non-commercial mechanical and biological thinning be implemented in a sustained fashion, in conjunction with any health-tolerant increases in prescribed burn strategies and operations.

On behalf of our vulnerable populations, I stand *against efforts to weaken Oregon's DEQ air quality standards.* Fortunately, Oregon has better, more protective standards than the less protective EPA standards. Oregon DEQ standards are important for public health reasons and are not excessively stringent. They are satisfactory. This is one policy that is good for public health protections. It balances health concerns with realistic implementation parameters. *We should not seek to make health trade-offs when there are other, safer options available.*

I look forward to working with the natural resource, public lands, conservation, and public health sectors to find creative ways to move forward while protecting the health of our vulnerable residents.

Respectfully,



Patty Dorroh
Harney County Commissioner