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BEFORE THE HOUSE COMMITTEE ON ENERGY AND COMMERCE SUBCOMMITTEE ON ENVIRONMENT REGARDING AIR QUALITY IMPACTS OF WILDFIRES: MITIGATION AND MANAGEMENT STRATEGIES

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Good afternoon, Chairman Shimkus, Ranking Member Tonko, and members of the subcommittee. I am Mary Anderson, Air Quality Division program manager at the Idaho Department of Environmental Quality (DEQ). Thank you for the opportunity to testify today and provide some insight into how wildfires are impacting Idaho citizens.

Wildfires are the single largest air pollution source in Idaho and the entire Pacific Northwest. Fine particulate matter ($PM_{2.5}$) levels are decreasing nationally but increasing in the Pacific Northwest and Northern Rockies due to wildfire smoke. Since the mid-1980s, the total US area burned by wildfires has been increasing, with fires in the Pacific Northwest accounting for over 50% of the increased acreage. The length of the fire season has grown along with the number, size, and duration of wildfires. This situation is forecasted to stay the same or worsen in the future. Numerous catastrophic wildfires have become the norm during our summer months, causing heavy regional air pollution events. These catastrophic wildfires are caused by fuels that have accumulated as a result of a century of active fire suppression, drought, and climate change.

In the past, Idaho would experience a severe wildfire season with heavy localized air quality impacts every 3-4 years, with low air quality impacts in the intervening years. Now we are seeing heavy regional air quality impacts every year from large, sometimes catastrophic wildfires in Idaho, central to northern California, Oregon, Washington, Nevada, and British Columbia.

In 2017, wildfire smoke caused widespread impacts in early August, with air quality reaching the Unhealthy for Sensitive Groups category in nearly every area of Idaho. It is now fairly common to see widespread impacts in August. By the first week of September 2017, wildfire smoke thoroughly blanketed all of Idaho, exposing many Idaho citizens to potentially serious health impacts. The most severe air quality impacts were in northern and central Idaho, where Hazardous conditions were measured for four consecutive days in the Coeur d'Alene area of northern Idaho.

About 700,000 acres were burned by wildfire in Idaho in 2017. Idaho was also surrounded by wildfires, meaning wind from any direction brought smoke into the state. Nearly 5.5 million acres burned in neighboring states and British Columbia in 2017. All these fires had direct impacts on Idaho residents at one time or another throughout the wildfire season. Idaho wildfires alone released an estimated 111,000 tons of direct fine particulate pollution into the air (about 25 times the amount of fine particulate pollution emitted by all the cars and trucks in Idaho in a year).

Preliminary information for the 2018 wildfire season indicates that it is as bad as or worse than 2017. Idaho became heavily impacted by smoke around July 10 and experienced smoke impacts on a daily basis until the first full week of September. The most heavily impacted regions have been northern Idaho, central Idaho, southwest Idaho—including the densely populated Treasure Valley—and at times the rest of southern Idaho. This year, the majority of smoke came from fires outside of Idaho: Washington, Oregon, California, and southern British Columbia. The predominant weather patterns have allowed for consistent smoke brought into Idaho. We are seeing similar levels of air quality impacts as we did in 2017.

What I've described above is now the new normal. The public now experiences smoke impacts throughout the summer every year, with periods of Very Unhealthy to Hazardous air quality conditions. To deal with the smoke impacts, the public wants information so they can make decisions to protect

themselves and, in the case of schools, those they are responsible for. The public wants information about how bad the air quality is, how long the smoke will last, and what precautions they should take. Telling them to remain indoors and limit exposure is no longer sufficient. In many cases, the air quality indoors is just as bad or worse than the air quality outside.

Local governments and school districts have had to develop policies to respond to the wildfire smoke impacts brought by catastrophic wildfires. During the 2012 wildfire season, very few if any school districts had air quality policies that determined outside activity based on current or forecasted air quality. In 2018, the majority of school districts have these policies and are making daily decisions on whether to have outside recess, hold practices indoors, and cancel football games.

To ensure a coordinated response to wildfire smoke, Idaho developed a Wildfire Smoke Response Protocol, similar to Oregon and Washington. This protocol identifies organizations, partners, and other governmental entities (city and county) that play important roles in the overall response to these wildfire smoke events. The protocol highlights general duties and responsibilities, provides examples of agency actions and assistance needed, and recommends public health actions based on level and duration of smoke exposure caused by wildfire smoke. Key participants are federal land managers (US Forest Service), the Environmental Protection Agency (EPA), tribes, DEQ, the Idaho Department of Health and Welfare, and public health districts. We also work closely with county emergency managers, Red Cross, and school districts to ensure a consistent message is communicated.

To meet the public's need for information, DEQ and cooperating agencies use many tools:

- Idaho Smoke Blog
- Social media (Twitter, Facebook, NextDoor)
- Websites
- News releases

- Videos explaining our smoke forecasts
- Daily smoke and air quality forecast email blasts

DEQ responds to local community requests and federal land manager requests to supply additional air quality monitoring in areas heavily impacted by wildfire smoke. Each year, DEQ deploys between one and four additional monitors throughout the state. This deployment requires significant coordination to identify and establish a suitable location for the monitor to operate. We have deployed four monitors so far in 2018.

Responding to wildfire smoke impacts requires significant resources from DEQ and other agencies throughout Idaho. To properly respond to wildfires and help mitigate health impacts from smoke, the communities that are repeatedly hard hit by wildfire smoke must be made "smoke ready" before the smoke event occurs. This means working with the communities and counties to identify tools citizens can use to protect themselves from the smoke. An example of smoke ready community action is identifying the sensitive populations (elderly, people with lung or heart issues) and purchasing a cache of room-sized HEPA filters prior to the wildfire season. Establishing a smoke ready community must be done prior to the wildfire season in order to respond to the emergency in a timely manner. To be effective, smoke ready communities require funding, similar to the way Firewise programs are funded. Funding for both these programs would allow the communities to prepare for wildfires from both the fire safety and public health aspect.

Many types of open burning occur in Idaho throughout the year. Prescribed burning—which includes burning for forest health, slash burning after a timber harvest, and rangeland burning—typically occurs in the spring and fall, outside the wildfire season. Prescribed burning is conducted by state and federal land managers and landowners. Agricultural burning also occurs during these times as does residential

backyard burning. During the winter, a high percentage of the population in rural Idaho uses wood to heat their homes, which creates additional smoke impacts.

Prescribed fire is an important tool in reducing fuels that contribute to catastrophic wildfire, but prescribed fire also causes smoke that needs to be managed. When prescribed fire is being discussed as a way to mitigate wildfire impacts, it is important to remember that reasonable and effective smoke management principles and decisions must be used to truly lessen smoke impacts and not simply move smoke from one time of year to another.

Smoke from prescribed fire has the potential to jeopardize attainment demonstration in some of our nonattainment areas (areas not meeting air quality standards) if not applied appropriately. Data can be flagged as “exceptional,” thereby excluding it from attainment demonstrations, but only if adequate smoke management principles are adopted and applied.

To manage prescribed burning smoke impacts, the Montana/Idaho Airshed Group was created to implement a prescribed fire smoke management program for organizations that conduct large-scale burning and the agencies that regulate this burning. The airshed group is an effective collaboration of state and federal agencies and most large private landowners to limit smoke impacts from prescribed fire while providing as much flexibility as possible. The airshed group is composed of three units: Montana, North Idaho, and South Idaho, formed in 1978, 1990, and 1999, respectively.

As a group, the members sign a memorandum of understanding and commit to abide by the group’s operating guide, which details policies and procedures. The group’s members are committed to working together to manage air quality in a responsible manner so as not to impact public health.

The key to the airshed group is coordinating burn requests and approvals to look at the regional picture, not just burns on an individual basis. The airshed group uses a meteorologist to provide a weather

forecast specifically for prescribed burning. A coordinator evaluates all burns that are proposed, other burning/emissions sources occurring in the area, and current and forecasted air quality to determine if and how much burning can be approved. This process helps to ensure that smoke does not accumulate in valleys and impact the public.

DEQ works closely with the airshed group during the active burn season. We review the weather forecast, air quality data, and proposed burns and provide recommendations to the airshed group on a daily basis.

Currently, the airshed group is staffed with two meteorologists from federal agencies who provide part of their time to the airshed group. One US Forest Service staff person reviews all proposed burns in Montana and Idaho, coordinates with both Idaho and Montana DEQs, and makes a burn recommendation for each proposed burn. Staff are barely able to keep up with the workload at the current rate. If prescribed burning is increased, one person will not be sufficient to manage the workload.

Burn decisions in Idaho are very much driven, and limited, by the weather. Northern Idaho is very mountainous. Smoke from prescribed burning can sink into the valleys and impact those populations. Burn managers require specific weather conditions to ensure the burn accomplishes the intended goals. Using best smoke management practices also requires good weather that will allow the smoke to rise high into the atmosphere and disperse so as not to impact the public.

Burning, whether wildfire or prescribed, is a large part of Idaho's air quality concerns. In order to respond to, and effectively manage, all the planned open burning, DEQ is developing a comprehensive smoke management program that addresses all types of burning in a consistent manner statewide. This smoke management program has two goals. The first is to protect public health, which is a key component of DEQ's mission. We protect public health by ensuring open burning does not cause an

exceedance of a National Ambient Air Quality Standard. The second goal is to provide flexibility to burners when it will not jeopardize public health.

Idaho also participates in a smoke management group facilitated by EPA Region 10. This group consists of air quality regulatory agencies; health agencies; private, state, and federal land managers; researchers; and interested stakeholders and strives to improve all aspects of wildfire response and smoke management of prescribed burning and agricultural burning.

According to a study funded by the Joint Fire Science Program, funding is one of the biggest hurdles for prescribed burning in Idaho. If funding is resolved, air quality could become the main hindrance. Air quality smoke management programs, and staffing, will need to adapt now to be ready to handle increased use if other issues are resolved.

Conclusion

There is no short-term, quick fix. We need to address all causes of wildfires and look at new, innovative solutions and mitigation strategies to address the matter. The key to success will be working in partnership with all stakeholders: state and federal land managers, large and small prescribed burners, the general public, environmental groups, and others who use burning as a tool. The only way to make progress is to have an open, honest, and trusting dialogue based on facts and science.