As wildfire seasons increase in frequency and intensity, the Pacific Northwest is facing a public health crisis of extreme wildfire smoke. Rural and tribal communities in the Okanogan River Airshed Emphasis Area (ORAEA), which includes the towns of Omak and Okanogan, as well as the Western Colville Reservation, are highly impacted by smoke from both wildfires and prescribed fires. Because of this, communities in the ORAEA have a unique perspective and practiced expertise in smoke readiness and communication.

Through a series of interviews and focus group discussions, we sought to learn from the perspectives of tribal and non-tribal community members in the ORAEA about how they approach wildfire smoke risk communication. From these conversations, we distilled the strengths and challenges that interviewees identified into themes and developed a set of six recommended actions to share with other communities in the region who are similarly impacted by smoke.

**RECOMMENDED ACTIONS**

Effective smoke risk communication is rooted in community perceptions of risk, delivered through trusted channels, and addresses barriers to action. Thus, smoke risk communication strategies must:

1. Clarify what is known about the short-, medium-, and long-term impacts of wildfire smoke, including mental health impacts.
2. Clarify the actions people can take to mitigate the health impacts of smoke exposure.
3. Coordinate between local groups to ensure accuracy, consistency, and reach of risk communication.
4. Emphasize one’s health and health of one’s community as central to wildfire resilience.
6. Address and mitigate increasingly frequent and severe wildfires.
PERCEPTION OF HEALTH IMPACTS

Participants expressed concern and uncertainty around the health and lifestyle impacts of smoke. While there were many personal anecdotes of physical impacts during smoke events, concern was greatest for other people in the community whom participants viewed as especially at-risk such as elders and older adults, children, people who are unhoused, outdoor workers, and those that have underlying respiratory conditions. Beyond physical health impacts, participants also emphasized mental health impacts and changes to lifestyles and cultural activities.

Smoke is generally viewed as less of an urgent concern compared to the immediate threat of wildfire destruction. Many participants felt a lack of control around reacting to smoke events and that there is a cultural attitude around “toughness” associated with a rural lifestyle in enduring smoke.

GAPS AND OPPORTUNITIES

Staying indoors is the most common strategy for protecting against smoke; challenges include weatherizing older homes and the expense of air purifiers, masks, and new filters.

There is a need to shift from reaction to preparation and smoke-readiness in advance of smoke season.

Future efforts may include developing tools for personal and organizational risk assessment and preparation, timely and locally accurate air quality information, and reducing non-wildfire sources of smoke.

INFORMATION SHARING & TRUSTED SOURCES

Most residents get their information from sources such as local government agencies, community information boards, local news, informal community networks, and social media. Facebook is by far the most commonly used channel for information. Local and tribal agencies are generally more trusted than state or federal government because the information is locally and culturally relevant and comes from sources with whom residents have past experience. Firefighters and fire departments are especially well-trusted sources.

For non-tribal members, political ideology influences trusted channels of information. For example, some people may have a complicated view of public health agencies due to messaging around COVID-19.

PERCEPTION OF PRESCRIBED FIRE

Poor forest management and fire exclusion are perceived as exacerbating wildfires. Tribal participants described a history of burning as a cultural practice used to manage landscapes and regenerate ecosystems. Most participants viewed prescribed fire as relatively safe and beneficial but while prescribed fire was appreciated for its role in mitigating wildfire risk, they emphasized that the smoke impacts on communities also needed to be acknowledged.

“The messaging, if it’s tailored correctly, and if it’s local, tied into and accurate for these various communities, and put out by the tribes, it’s generally well accepted.”

- Healthcare Interviewee, Tribal