

West Bend After Action Review Supplemental Material

[Refer to our West Bend project website here](#) to find supplemental materials for the West Bend AAR.

Report contact: huber@uoregon.edu for additional information.

Methods for After Action Review: Data Collection and Tracking

Nov – Dec 2023

The University of Oregon [Center for Wildfire Smoke Research and Practice](#) (The Smoke Center) facilitated and provided note-taking at the Bend, Oregon Tabletop Exercise, and developed a report summary for U.S. EPA.

- **Dec 18, 2023:** The Wildland Fire Leadership Council (WFLC) has identified Smoke and Public Health Messaging as a priority tie-in to environmental justice and community resilience in the National Cohesive Wildland Fire Management Strategy. Smoke Center faculty researchers presented at the WFLC meeting to get feedback on the information gaps and needs WFLC members have related to prescribed fire. Our main question being: *In this rapidly evolving environment between federal, state, and local agencies, what can be done to improve the effectiveness of prescribed fire communications both with the public and among WFLC members and those they serve?*

Feb – June 2024

Smoke Center faculty researchers attended all associated USFS-led Incident Management Team (IMT) calls for the West Bend Prescribed Fire Pilot. These calls were established to engage in a three-month planning cycle to develop and review pilot project objectives (i.e., ICS 202) bi-weekly, while also establishing a “Team of Teams” approach using the IMT structure. IMT Meeting Groups included: Core Meetings: (1) Information Meeting for PIOs/public messaging; (2) C&G Meetings; (3) Agency Reps/AREPs; (4) Cooperators; and (5) Planning Meetings; and Sub-Group Meetings, underneath Ops Section Chief: (1) Research group; (2) Forest Ops group; (3) Smoke Forecasting & Monitoring group; and (4) Public Health group. *Refer to Figure 1 to see the Incident Objectives; Figure 2 to see the IMT organizational chart.*

- **Feb 20, 2024:** Smoke Center faculty researchers convened a discussion with a subset of members of the Wildland Fire Leadership Council (WFLC) on smoke messaging and related topics, as part of our preparation and conversation framing for the WFLC meeting in March.
- **March 5-6, 2024:** Smoke Center faculty researchers presented at the Wildland Fire Leadership Council (WFLC) meeting in Georgia, on a draft of a prescribed fire literature review we were conducting. We also introduced our plan for an air quality communication literature review and interviews with air quality communicators. We elicited feedback on the types of content, themes, and questions that WFLC would find most useful. We also participated in discussion around shared learning across prescribed fire tabletop exercises in Oregon, California, and Georgia, and potential tie-in's to policy at federal level.
- **May - June 2024:** Smoke Center faculty researchers drafted a high-level summary document of lessons learned, titled, “Version 1: West Bend After-Action Review”. We developed this based on meeting notes and associated documents, and participant observation of IMT calls, as well as attendance at the May 29, 2024 “Big Eddy” pre-burn field tour. The intention of this document was to identify where learning had already occurred prior to conducting an AAR. We organized this document around the five guiding principles from the PNW Regional Joint Statement of

Intent to Cooperate on Prescribed Fire and Smoke Management. These included: (1) Acting with urgency, (2) Protecting public health, safety, and property, (3) Identifying and adding the most limiting factors to implementing prescribed fire at scale as a management tool, (4) Testing new approaches, learning from them, and adapting based on experience, and (5) Being innovative and comprehensive, while applying best practices.

- **June 5-12, 2024:** Given the vast amount of information to work with and the significant time commitment that local, state, and federal agencies put into this project, we connected with each of the meeting groups to check in with group members to see how they would prefer to share out, either by (1) holding the time of their group’s meeting to do a group AAR, or (2) engaging in an AAR on an individual level by (2a) completing an online Qualtrics survey with open-ended questions (i.e., AAR questionnaire) or (2b) joining a Teams call with Smoke Center faculty researchers to complete the AAR questionnaire. Additionally, for both individual approaches, we let agencies decide if they wanted to engage in the AAR questionnaire as an agency group together or as individuals. All groups decided to engage in the AAR questionnaire on an individual level, rather than using the time of one of the existing group meeting times. We also asked each of the groups what types of questions and topics they think would be most useful in the AAR questionnaire to help inform its design.
- **June 12 - 24, 2024:** Smoke Center faculty researchers created the AAR questionnaire and received feedback on these from key participants heavily involved in the pilot.

June – Aug 2024

Smoke Center faculty researchers conducted an After-Action Review (AAR) of the West Bend Pilot through a survey and MS Teams interviews. The survey was conducted through an online survey platform, Qualtrics. We distributed the link to each of the meeting groups involved in the pilot, along with a copy of “Version 1: West Bend After-Action Review” for all involved in the pilot to comment on. We received 35 survey responses and conducted 8 interviews on Teams (i.e., 3 respondents started a survey, but requested to complete the rest of the survey via an interview), resulting in a total of 37 unique responses. These findings reflect 12 different organizations involved in the pilot. We also incorporated any feedback provided on “Version 1: West Bend After-Action Review”.

- **June 24, 2024:** Smoke Center faculty researchers presented at the Wildland Fire Leadership Council (WFLC) meeting. We provided a recap of a draft prescribed fire literature review we conducted and comments we received on the draft from the U.S. EPA. We also discussed our plan for an After-Action Review of the West Bend Prescribed Fire Pilot Project and how that tied into intentions set during the Bend, Oregon Prescribed Fire Tabletop Exercise. Lastly, we shared a timeline we developed of the policies, agreements, and statements of intent established at the federal and regional level over the past year, as well as local work occurring in Bend, Oregon that set the stage for the West Bend Prescribed Fire Pilot project.

Sept – Oct 2024

Smoke Center faculty researchers analyzed West Bend After Action Review survey results using MS Excel, categorized by survey questions. Following this, we developed summaries of common themes for each question in MS Word, and organized these around the five guiding principles from the PNW Regional Joint Statement of Intent to Cooperate on Prescribed Fire and Smoke Management.

Oct – Nov 2024

Smoke Center faculty researchers presented findings at the West Bend Pilot post-burn tour and agency representative calls. We revised the West Bend AAR based on feedback from these, primarily for clarity and additional context.

- Oct 2, 2024:** Smoke Center faculty researchers presented an overview of findings from the AAR at the West Bend Pilot post-burn tour, followed by discussion. To facilitate dialogue, we provided printed copies of our findings to date. Following this, we revised the AAR to reflect attendees' comments, as well as insights and clarifications shared by other agencies' presentations during the burn tour. Burn tour participants included representatives from: Oregon Governor's Office, USFS, Oregon DEQ, U.S. EPA, Deschutes County Health Services, Deschutes County Commissioners, and others. *See Fig. 3 for post-burn tour agenda.*
- Oct 3, 2024:** As part of The Smoke Center facilitated Smoke Ready Communities group, we presented findings from the West Bend AAR and incorporated feedback based on local Oregon communities' experiences with use of local alert systems for smoke and poor air quality.
- Oct 3, 2024:** Smoke Center faculty researchers presented to organizers of the California-based EER Beneficial Fire working group on the West Bend AAR, including pilot background, communications / outreach and areas of learning from West Bend After Action Review. We adjusted the West Bend AAR to include more background information to make the report more useful for those not involved in the pilot.
- Oct 16, 2024:** Smoke Center faculty researchers presented an overview of findings from the AAR at the West Bend agency representative call, followed by 30-minute discussion. This presentation was recorded by USFS personnel facilitating the call, for others to listen to, on their own time, if they could not make the call. We incorporated comments from those who attended and those who listened to the recording and provided written feedback over email.
- Nov 13, 2024:** As part of the [Northwest Fire Science Consortium's Equity & Environmental Justice in Wildland Fire series](#), Smoke Center faculty researchers and partners (listed below) hosted an online workshop, called "Considering Public Health & Equity in Wildland Fire Air Quality." This included (1) recent learnings and promising practices from our prescribed fire literature review, (2) recent learnings from practice, with a focus on the role of land management and public health partnerships in the West Bend Pilot (including pilot background and areas of learning from the West Bend After Action Review), (3) an interactive online Canva whiteboard audience analysis exercise for air quality communication, and (4) a community voices panel discussion which included representation from local public health, community-based organizations, city/county, and OSU Extension services from Oregon and Washington state. Lastly, we shared a one-pager Resource Guide for air quality communicators, developed in partnership with the NWFSC. We had speakers from USDA Forest Service PNW Region, Oregon Health Authority's Crisis and Emergency Risk Communications Analyst, U.S. EPA Region 10's Smoke Management Coordinator and Indoor Air Specialist, Washington State Department of Health's Ambient Air Quality Epidemiologist, and Washington State Department of Natural Resources' Wildland Fire Meteorologist. *90+ attendees online.*
- Nov 13, 2024:** Smoke Center faculty researchers presented at the EER Beneficial Fire Meeting on "West Bend Rx Fire Pilot Reflections", including West Bend pilot background, communications/outreach and areas of learning from West Bend After Action Review. We shared a one-pager Resource Guide developed in partnership with NWFSC for air quality communicators. *50 attendees online.*
- Nov 21, 2024:** Smoke Center faculty researchers presented at the Wildfire Resilience Interagency Working Group Meeting on "Oregon Tabletop: West Bend Pilot Project After Action Review." *153 attendees online.*
- Nov 21, 2024:** Smoke Center faculty researchers presented at the Northwest Prescribed Fire & Smoke Management Task Force meeting. Goals of this meeting were: (1) Solidify Task Force

Figure 2. West Bend Prescribed Fire Pilot Project Incident Management Team Chart.

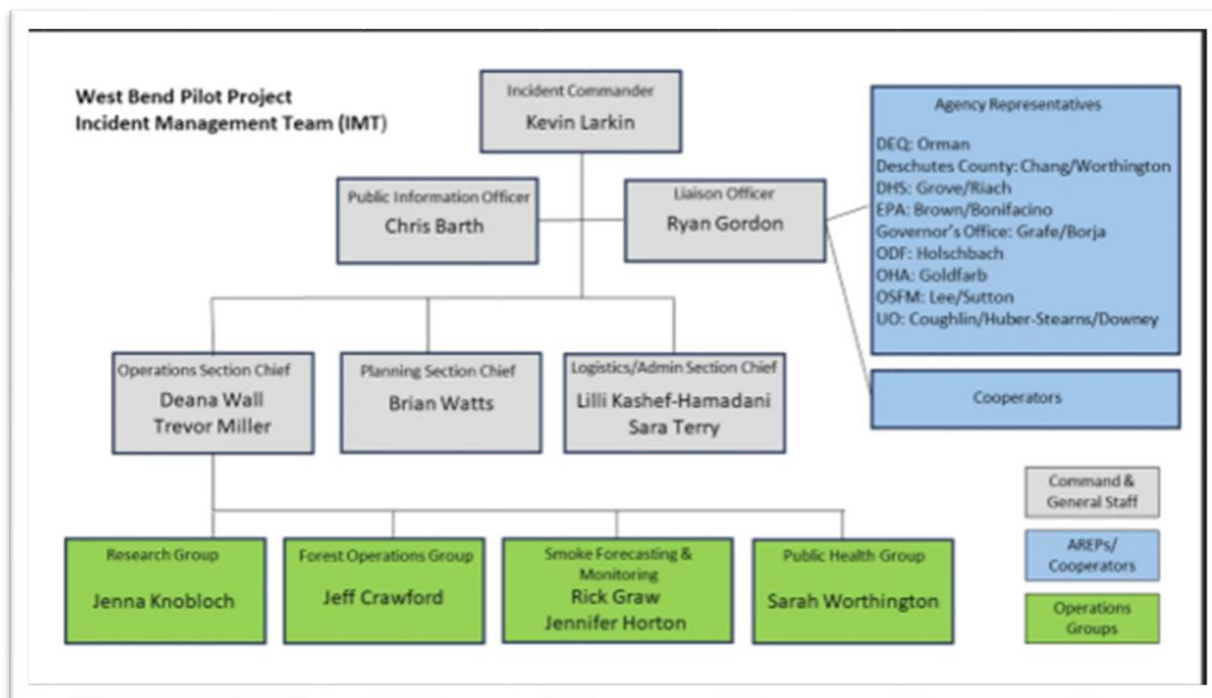


Figure 3. West Bend Pilot Project Post-Burn Tour Agenda.

West Bend Pilot Project Post-Burn Tour Wednesday, October 2		
Meeting Location: Cascade Lakes Welcome Station, 18500 Cascade Lakes National Scenic Byway, Bend, OR 97702		
Time	Item	
9:00 a.m.	<ul style="list-style-type: none"> Welcome, Introductions (<i>Kevin Larkin</i>) Opening Remarks (<i>Holly Jewkes</i>) 	Cascade Lakes Welcome Station
9:15 a.m.	<ul style="list-style-type: none"> 20 MIN Background on Pilot Project / Round Table to Implementation (<i>Kevin Larkin</i>) 10 MIN How we work through regulatory process (<i>Trevor Miller</i>) 10 MIN Community outreach leading up to event (<i>Jaimie Olle</i>) 10 MIN Deschutes County Public Health (<i>Emily Horton / Carissa Heinige</i>) 10 MIN Into to Day of Operations: UAS Smoke Video / Slideshow of photos from operations (<i>Jeff Crawford / Robert Newey</i>) 	Cascade Lakes Welcome Station
10:15 a.m.	<ul style="list-style-type: none"> 15 MIN Organize into carpool groups, restroom break, etc. 	Cascade Lakes Welcome Station
10:30 a.m.	<ul style="list-style-type: none"> Travel to Big Eddy Units - Big Eddy/Aspen Jct. (FSR 750/700) 	Travel
10:40 a.m.	<ul style="list-style-type: none"> 20 MIN Drive Tour of Big Eddy/Aspen Jct.; Drive to open area at NE edge of burn before Lava Island Day Use 10 MIN Context setting - How we apply fire to the landscape (<i>Jeff Crawford / Robert Newey</i>) 10 MIN Prescribed burn operations (<i>Jeff Crawford / Robert Newey</i>) 20 MIN Discussion around complexities of operations & additional discussion on outreach / regulatory process, time for questions (<i>Trevor Miller</i>) 10 MIN Remarks (<i>Merv George</i>) 	Big Eddy Prescribed Burn Units (2 Locations: <ul style="list-style-type: none"> Driving Tour - Big Eddy/Aspen Jct. (FSR 750/700) Lava Island Day Use Area - NE edge of burn area
11:50 p.m.	<ul style="list-style-type: none"> 10 MIN Return to Welcome Station 	
12:00 p.m.	<ul style="list-style-type: none"> Lunch / Casual discussion on long term fire effects 	Cascade Lakes Welcome Station Patio
12:30 p.m.	<ul style="list-style-type: none"> 30 MIN Operational Briefing / Smoke impact review (<i>Trevor Miller</i>) 	Cascade Lakes Welcome Station
1:00 p.m.	<ul style="list-style-type: none"> 30 MIN Review research & data collection efforts (<i>Heidi Huber-Stearns</i>) 	Cascade Lakes Welcome Station
1:30 p.m.	<ul style="list-style-type: none"> Close out for the day 	