Northwest Fire Science Consortium is part of a national network of consortia established by the Joint Fire Science Program to accelerate the awareness, understanding, and adoption of wildland fire science information by federal, tribal, state, local, and private stakeholders in the PNW.
During the fiscal year 2019 the priority areas for the Northwest Fire Science Consortium (NWFSC) plan of work were informed through input from our advisory board and a straw poll of our list serve and social media followers.

**PRIORITY AREAS**

1) Smoke in Washington and Oregon: air quality and cross-boundary issues with prescribed fire

2) Post-fire management and restoration

3) Landscape level planning: collaborative natural resource management and coupled human and natural ecosystems

4) Managing fuels and fuel treatments in a changing climate

**AWARENESS**

The NWFSC sends out a monthly newsletter, as well as daily tweets and face book postings. We have seen consistent growth in our social media followers and our list serve subscribers over the past 3 years (Figure 1)
The NWFSC has also seen changes in the demographics of participants\(^1\) subscribed to our list serve (Figure 2 & 3):

\[\text{Figure 2}\]

\[\text{Figure 3}\]

\(^1\) Selected agencies and institutions
The NWFSC engaged in many informal and formal briefings and personal interactions during FY 19, including attendance at the EPA Smoke Management meeting in May 2019, the Oregon Prescribed Fire Council meeting in June 2019 (for which the NWFSC sits on the steering committee), a pub talk in Eugene, OR, guest lecture at University of Oregon, and the lead on a panel discussion of prescribed fire at the Rural Voices for Conservation Coalition (RVCC) annual meeting.

On a more formal level, the NWFSC has been engaged by the State of Oregon to assist in the development of wildfire mitigation and adaptation strategies on a state-wide level. The NWFSC was asked to present on fire science delivery approaches to the Oregon Governor’s Wildfire Response Council. In addition, the NWFSC also has a seat on the Wildfire Mitigation Committee, an ad hoc committee to the Wildfire Response Council.

UNDERSTANDING

Webinars

The NWFSC hosted 10 webinars during FY 19, with over 1,000 people participating during the live webinar, and close to 1,500 views later on YouTube. All webinars are available for viewing on our website under the title “archived webinars”, or on the NWFSC YouTube page. Three of these webinars presented completed JFSP funded research:

- **Growing up: Findings from a JFSP student project on post-fire conifer regeneration trajectories in eastern Oregon** (Angela Boag, GRIN recipient)

- **Prescribed fire policy barriers: Findings from a JFSP project on challenges and strategies on federal lands across the West** (Courtney Schultz & Heidi Huber-Stearns; co-hosted with Southern Rockies Fire Science Network)

- **Evaluation of burn mosaics on subsequent wildfire behavior, severity and fire management strategies** (Susan Prichard & Paul Hessburg)

Other webinars included:

- **Oregon Smoke Management Plan update** (Nick Yonker)

- **What’s new in LANDFIRE** (Jim Smith & Kori Blankenship)

- **An outlook for the 2019 fire season in Oregon and Washington** (Josh Clark)

- **Overview & applications of the PNW quantitative wildfire risk assessment** (Rick Stratton)

- **Engaging fires before they start: Spatial fire planning for the 21st Century** (Chris Dunn)

- **Expect the unexpected fire management challenges and opportunities in a changing climate** (Amanda Rau)

- **Let’s fix the fire problem: here’s a solution** (Daniel Leavell)
Videos

The NWFSC produced 4 videos in FY 19:

3. *Fish and Fire: habitat and history in the Northwest* (Published August 2019 - 1.8K views)
4. *Restoration in a fire forest: The benefits of burning* (Published October 2018 - 4.1K views)

“This video is helpful in showing the importance of the processes involved in maintaining habitat complexity. We will be interested in seeing how this translates into specific agency action and coordination among the agencies charged with addressing fire "management" and those charged with protecting habitat and processes that allow complexity to develop over time that supports multiple species.”

Research Briefs

The NWFSC Research Briefs are exactly that – brief summaries of peer-reviewed literature that cover a variety of fire-related topics. Think of these Briefs as “CliffsNotes.” On the go managers have appreciated the upfront ‘Key Findings’ and ‘Management Implications.”

RB #19: *Adjusting the lenses: focus the role of frequent fires in dry forests*

RB #20: *Covering wildfires: media emphasis and silence*

RB #21: *Understanding climate and human impacts on historical fire regimes in the PNW*

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2 All reported views retrieved on 10/1/2019
Fire Facts

The NWFSC Fire Facts are brief and to the point fact sheets that cover a variety of fire-related topics. These 5x7 Fire Facts are extremely popular. In addition to distributing Fire Facts at our own NWFSC events, others are starting to request the NWFSC Fire Facts for distribution at their events.

1. FF #19: What are measures of fire behavior?
2. FF #20: What are types of fire?
3. FF #21: What are parts of a wildfire?
4. FF #22: What is wildfire smoke?

LEARNING

In FY19, the NWFSC provided support, both financial and in person hours, to a number of meetings (4), workshops (4), and trainings (1).

- Pub Talk -Wildfires and Forest Management, Eugene, OR (70 attendees)
- Guest lecture, U of Oregon: Communication & wildfire in the west, Eugene, OR (16 students)
- Oregon Prescribed Fire Council meeting, Lakeview, OR (25 attendees)
- PNW Regional Forest Collaborative Workshop, Hood River, OR (120 attendees)
- Rural Voices for Conservation Coalition (RVCC), Santa Fe, NM (90 attendees)
- RVCC panel discussion on Rx Fire, Santa Fe, NM (35 attendees)
- NEWfire: Assessing the work of wildfire, Wilbur, WA (40 attendees)
- Prepare for Wildfire: Ready, Set, Go! Workshop, Corvallis, OR (50 attendees)

The NWFSC have been working closely with the Department of the Interior Office of Wildland Fire (with Rick Gividen) on developing a Fire Ecology Module for the Wildland Learning Portal. The Module was identified and selected by OWF as a valuable pilot project for the newly developed Portal. A total of 48 students from a variety of agencies, organizations, universities, and landowners participated in the pilot testing of the Module.

The Fire Ecology Module is based on content from Oregon State University’s Forestry & Natural Resources Extension Program’s Fire Science Core Curriculum, which was supported in part by the
NWFSC. Natural resource managers, early-career fire professionals, and others wanting to learn more about fire ecology will benefit from this entry level Fire Ecology Module.

The partnership between NWFSC, Extension and DOI allowed us to grow the Module in innovative ways including the use of videos, recorded interviews, quizzes, discussion boards and much more. This is a great example of DOI/academia collaboration.

**NWFSC Continuing Development: PNW Fire Science Needs Assessment**

As the activities from 2016 to 2019 were nearing completion and issues of future funding arose, it became apparent that a more strategic approach was needed to increase the effectiveness of fire science delivery and use. Thus, the NWFSC completed its second regional needs assessment, (the first was completed in 2011 as part of the initial JFSP planning grant).

The information from this assessment titled “Regionally relevant wildland fire research needs in Washington and Oregon: Local and regional research availability, applications, and gaps” was shared widely with our stakeholders and partners. In the FY 19 research effort, initial interviews with stakeholders indicated that site-specific information needs were very much apparent and had perhaps become even more pressing in recent years as the body of wildland fire research expanded, often without addressing management questions for users in their specific areas of work. One key finding indicates that differences in ecological and climatic conditions between regions and social acceptance of non-local research are key barriers for using non-local information. Stated barriers to using non-local research related to differences in fire behavior, ecological conditions, and climatic conditions across different regions or ecosystems. Social considerations such as reaching consensus and aligning findings and decisions with local knowledge were also important challenges to using non-local research.

The needs assessment identified five categories of wildland fire research most needed locally:

1) Communication and other social dimensions of wildland fire
2) Climate change on different aspects of ecological conditions and wildland fire
3) Fuels mitigation and prescribed fire
4) Ecological health, resiliency, fire effects, and post-fire restoration
5) Wildland fire in riparian areas

Recommendations of assessment:

1. Develop and share case studies of local wildland fire mitigation, management, and research efforts
2. Facilitate and distribute site-specific research on the most needed wildland fire topics
3. Support the production of synthesizing documents on needed topics
4. Consider ways that different types of unpublished data and local knowledge could be made more accessible
5. Continue providing publications and information in a variety of formats
PARTNERSHIPS

**Ongoing NWFSC partnerships:**
- The Nature Conservancy
- Fire Adapted Communities
- Fire Learning Network
- Oregon State University
- Oregon State University Extension
- Washington State University Extension
- Western Coordinating Committee for Extension
- The Center for Natural Lands Management
- US Forest Service Region 6
- PNW Research Station
- Pacific Wildland Fire Sciences Laboratory
- Sustainable Northwest
- University of Oregon, Ecosystem Workforce Program
- Bureau of Land Management

**New partnerships developed:**
- National Wildfire Coordinating group
- Western Region Cohesive Strategy group
- Oregon Department of Forestry
- Washington Department of Natural Resources
- Association of Natural Resource Extension Professionals (ANREP)

**Developing partnerships:**
- Confederated Tribes of the Warm Springs
- Colville Confederated Tribes
- Oregon Governor’s Wildfire Response Council

GOVERNANCE

**Management Team**

During the latter part of FY 19, Morgan Varner resigned his position as PI for the NWFSC after taking a position at Tall Timbers. Becky Kerns, Research Ecologist at the PNW Research Station is the new PI. There are no additional changes to the management team.

**Advisory Board**

There are two new additions to the advisory board in FY19: Phil Cheng, Oregon Department of Forestry, and Jennifer Watkins, Washington Department of Natural Resources. The NWFSC is still working on filling the vacancies for US Fish and Wildlife and the Bureau of Land Management.

Acknowledgments

-Front page photo: Amy Markus, USFS
- Page 4 photo: Emily Jane Davis, OSU
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Report prepared by Janean Creighton, NWFSC Administrative Director, November 2019