



March 21, 2024 | [Fire Weather Subcommittee](#) Meeting

### **Members/Invited Attendees:**

Darren Clabo (NASF/SD State, Chair), Jim Wallmann (USFS, Vice Chair), Larry Van Bussum (NWS), Calvin Bailey (NASF/SC State), Dennis Burns (NASF/CA), Drew Daily (OK Forestry Services), Kari Fleegel (NWS), Colby Neuman (NWS), Brian Potter (USFS), Paul Sopko (USFS), Robert Swofford (BLM), David Schultz (NWCG Coordinator/BLM)

**Actual Attendees:** Dennis Burns, Darren Clabo, Drew Daily, Kari Fleegel, Brian Potter, Robbie Swofford, Jim Wallmann

**\*\*These and past notes are also available internally in our [Google Drive folder](#).**

### **Agenda**

1. **Welcome to Drew Daily** (Drew Daily)
2. **NWCG Annual Meeting Update** (Darren Clab)
3. **Haines Index and Lightning Activity Level (LAL)** (Darren Clabo)
4. **PMS 426-3 Standards for Fire Weather Stations Issue** (Darren Clabo)
5. **Mixing Height (Measuring, Defining, National Blend of Models, Use as Fire Potential Proxy, Etc.)** (all)
6. **Critical Fire Weather Patterns for the Pacific Region** (all)
7. **Glossary Items** (Jim Wallmann)
8. **Future of the Fire Weather Matrix** (Darren Clabo)
9. **Prescribed Burn Planning Tools** (Brian Potter)
10. **Meeting Notes** (David Schultz)
11. **Round Robin** (all)

1. **Welcome to Drew Daily** (Drew Daily)

Drew Daily is the Deputy Chief with Oklahoma Forestry and Ops Chief with the Northern Rockies Team 1. He is Involved with or co-author of publications revolving around megafire evolution and weather on Southern Plains. Drew is actively involved in the interagency integrated warning teams for fire weather on the Southern Plains. Drew highlighted that Research to Operations and Operations to Research drives him. A round table of introductions of others on the call was completed.

2. **NWCG Annual Meeting Update** (Darren Clabo)

Darren Clabo attended the NWCG Annual Meeting in Boise. NWCG is a large organization, with 97 total groups and 12 executive board members. Darren participated in the Fire Environment meeting that was on Friday of the NWCG Annual Meeting.

3. **Haines Index and Lightning Activity Level (LAL)** (Darren Clabo)

Several requests have been coming in to present about the current and future removal of the Haines Index and LAL. These requests are for local, regional, and national meetings. Most presentations have been around 15 minutes long, but at least a couple have been 30 minutes long. The presentation will need to be updated with potential alternatives and cross walks. A current version of the presentation, as of March 21, was located in [our FWS folder here](#) (only available internally). Contact Darren Clabo and Jim Wallmann for any updates, if you need a copy to present at a future meeting.

4. **PMS 426-3 Standards for Fire Weather Stations Issue** (Darren Clabo)

NWCG Standards for Fire Weather Stations, PMS 426-3 page:

<https://www.nwcg.gov/publications/426-3>

The Fire Weather Subcommittee is the Steward of PMS 426-3. Darren Clabo spoke with Chuck Maxwell, Predictive Services Meteorologist (USFS) with the Southwest Area Coordination Center, on the standards for fire weather stations. The concern is the varied standards for non-RAWS (Remote Automatic Weather Stations) that will be scraped and ingested into FEMS (Fire Environment Mapping System). Darren Clabo asked us to all look at PMS 426-3, and mentioned that Cheryl Bright may be invited back to an upcoming meeting to dive deeper into this topic. Cheryl is with Predictive Services as the Fire/Fuels Analyst (BIA) with the Eastern Area Coordination Center, Chair of the Fire Danger Subcommittee, and Primary Member of the Data Management Committee, Fire Behavior Subcommittee, Fire Danger Curriculum Management Unit, Fire Environment Committee, and Fire Environment Observation Unit. Along with Scott Linn and Travis Verdegan, Cheryl is one of the contacts for FEMS.

Drew Daily noted that having a set of standards would ease concerns with the data being ingested into FEMS. Darren mentioned that 20 foot winds should be kept as a RAWS standard, but PMS 426-3 could be updated to include the reporting standards of some of the other stations being ingested. Examples would be ASOS/AWOS (Automated Surface/Weather Observing Systems) used by the NWS and FAA, some state mesonets, or state Department of Transportation platforms).

5. **Mixing Height (Measuring, Defining, National Blend of Models, Use as Fire Potential Proxy, Etc.)** (all)

This was a topic from our last meeting where we dove into different calculations, definitions of Mixing Height. We will keep this topic for further discussion during an upcoming meeting.

6. **Critical Fire Weather Patterns for the Pacific Region** (all)

The August 2023 fires brought up the idea that the Pacific Region may need more attention when it comes to training. Darren Clabo mentioned that critical weather patterns for the Pacific Region could be included in the next deliveries of S-290. Brian Potter and Larry Van Bussum have been coordinating via email with Francis Fujioka, on his thoughts on critical weather patterns for the area. Francis Fujioka is a retired USFS Fire Meteorology Research Project Leader from the Pacific Southwest Research Station and University of Hawaii community college S-290 instructor. Francis may be interested in writing up details on critical fire weather patterns that could be included in S-290. Ian Morrison's name was also brought up. Ian is the Fire Weather Program Manager for the Pacific Region of the NWS. Brent Wachter's name was also brought up. Brent is on the Fire Behavior Subcommittee and a Meteorologist with the Northern California Geographic Area Coordination Center.
7. **Glossary Items** (Jim Wallmann)

The group looking at the NWCG glossary terms have been given further guidance. They have been asked to look for terms where the World Meteorological Organization (WMO) or American Meteorological Society (AMS) definitions already exist, and use those specific definitions. The group is also looking more broadly at terms that should be under the stewardship of the Fire Weather Subcommittee. Earlier this month Jim Wallmann met up with group member Ben Bartos, NWS Alaska Region Fire Weather Program Manager, on how to proceed. As a reminder, Larry Van Bussum would like to be part of the discussion when the terms Red Flag Warning and Fire Weather Watch are part of the update process.
8. **Future of the Fire Weather Matrix** (Darren Clabo)

Darren Clabo asked if the Fire Weather Matrix used by Incident Meteorologists on fires should be standardized. This product is currently being used in various ways depending on the needs of the Incident Management Team, with different parameters and user groups or meetings where it is displayed. A main concern is the use of the Haines Index and LAL on some Fire Weather Matrix products. Dennis Burns commented that he hasn't used it with the Haines Index on it in quite some time. Kari Fleegel showed an example of a different style of Fire Weather Matrix that was used during a prescribed burn in 2024, and noted that the product is very flexible. Darren was wondering if it was a redundant product, as a more specific forecast was available in Incident Action Plans. At this time, subcommittee members suggested that we do not try to standardize this product.
9. **Prescribed Burn Planning Tools** (Brian Potter)

Brian Potter shared a University of Washington Smoke Planner page that uses their WRF (Weather Research and Forecasting) model. It includes graphs of Relative Humidity, Transport Winds, Temperatures, Mixing Height, and needed prescribed burn parameters that show up as green boxes. This looks to be an improvement to the similar NWS Weather Activity Planner:

<https://forecast.weather.gov/wxplanner.php?site=boi>. Brian added that the Smoke Planner builds on the NWS page by incorporating more long term planning, adding how frequently certain values occur. Brian noted another project in the works is a seasonal prescribed fire outlook using ensemble forecasts for the next 45 days. Tim Brown, Research Professor, Climatology and Director of the Western Regional Climate Center, and Brian Potter will be leading a conference next year about prescribed fires.

**10. Meeting Notes** (David Schultz)

David Schultz was unavailable for this meeting, but Darren Clabo filled in. Darren relayed that while we create meeting notes, several other groups may not. It was appreciated that the creation of meeting notes were prioritized by the Fire Weather Subcommittee.

**11. Round Robin** (all)

No additional comments were made during this meeting.

Next meeting April 18, 2024 at 11 am MT

**\*\*typically the 3rd Thursday of each month\*\***