



## **Fire Environment Committee Annual Meeting**

February 1-2, 2023

1000-1430

<b>Attendees</b>		
<input checked="" type="checkbox"/> Chair: Nick Nauslar	<input checked="" type="checkbox"/> Vice-Chair: Robyn Heffernan	<input checked="" type="checkbox"/> NWCG Coordinator: Katy O'Hara
<input checked="" type="checkbox"/> NASF: Goeff Marshall	<input checked="" type="checkbox"/> BIA: Cheryl Bright	<input checked="" type="checkbox"/> USFS: Billy Gardunio
<input checked="" type="checkbox"/> USFS: Wesley Hall	<input checked="" type="checkbox"/> USFS: Pete Lahm	<input checked="" type="checkbox"/> USFS: Tami Parkinson
<input checked="" type="checkbox"/> NOAA: Larry Van Bussum	<input checked="" type="checkbox"/> Associate Member: Tim Brown	<input type="checkbox"/> Support Staff: Jonathan Fox
<input checked="" type="checkbox"/> Liaison: Cole Belongie	<input type="checkbox"/> Liaison: Kevin Hires	<input checked="" type="checkbox"/> Notetaker: Sandoval
<b>Additional Attendees:</b> Adam Kochanski, Rod Linn, Roshelle Pederson, Tim Chavez, Christopher Moore, Darren Clabo, Jean-Baptiste Filippi, Janice Coen, Dan Jiminez, James Menakis, Rick Mowery, Shelby Law, Kenneth Shedden, Francisco Romero		

<b>Topic</b>	<b>Presenter(s)</b>
Firecaster	Jean-Baptiste Filippi
WRF-SFIRE and WRFx	Adam Kochanski
FIRETEC and QUIC-Fire	Rod Linn
Safety Zone Research	Dan Jiminez
EPA Update	Pete Lahm
FEMS Update	Shelby Law
Desert Research Institute Update	Tim Brown
Prescribed Fire Update	Frankie Romero
Subcommittee Updates	Subcommittee Chairs
Subcommittee Participation	All
Integrated Fire Environment Decision Support Services	Nick Nauslar, Robyn Heffernan, Larry Van Bussum, Cheryl Bright
Data Architecture	Roshelle Pederson

### **Firecaster – Jean-Baptiste Filippi**

Presentation

### **WRF-SFIRE and WRFx Developments – Adam Kochanski**

Presentation

Question: Grid resolution is stated as 150m-550m—Is it possible if techniques for underlying meteorological modeling “pre-run” to run at higher resolutions within a similar timeframe?

Actual fire spread model runs on refined-atmospheric model at 150m. Could potentially run the meteorological cyclically whether with or without fire. We are not likely to have the resources to do continuous runs with no fire—personnel/system are at full load with only a few fires—do not have capacity to do non-fire runs. Coupled, to work operationally, would likely need to have 200m+.



Question: Is live fuel modeling available?

Not yet, but it will be—working to move from prototype to operational application in WRFx system.  
Would need determine format for providing actual data.

### **FIRETEC and QUIC-Fire – Rod Linn**

Presentation

### **Fire Safety Zone Guidelines – Dan Jiminez**

Presentation

Question: Where do we go with this? How do we move this forward?

- gathering data is challenging
- looking at what process to follow to socialize and get the standard adopted/changed
- need a process and a timeline—we’ve had peer-reviewed science for a year and have had difficulty in getting new processes enacted

### **EPA Update – Pete Lahm**

Presentation

Question: Is prescribed fire included in the “Exceptional Event Rule”?

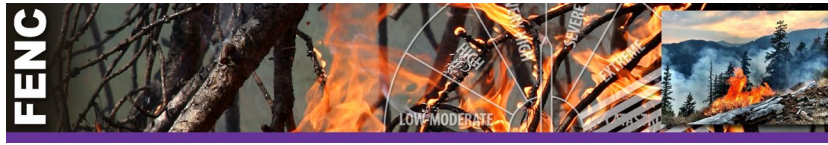
- it can be. EER applies to wildfires/natural events. Rx fire is a separate non-natural even, but it could potentially qualify.
- you cannot conduct or plan to conduct a Rx fire that exceeds the standard, however, if it exceeds due to a unplanned meteorological condition, it could possibly get an exception under the EER.

Question: Is there any discussion on waiving the EER to include Rx fire? Can “predictable” smoke count for something?

- this would require a change to Clean Air Act—a legislative process

Question: How is it measured?

- exceedance is measured at a regulatory monitor (prepositioned). They typically coincide with more populated areas. A lot of underserved, smaller communities do not have monitors. Many monitors are not up to regulatory standards.



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## **FEMS Update – Shelby Law**

### Presentation

Question: Will Pocket Card be incorporated?

- it could be included--would fall under decision module
- not likely included in initial release, but possibly as part of FDOPs decision module phase (2024)—requires decision tree software and that part has not yet been determined.

Question: How can we use FEMS on a broader “Fire Environment” scale?

- FEMS is Fire Environment – ownership should be thought of as “environment”
- There are a lot of data or products that people may want to see as part of the system (smoke? 7-day module)

Question: Can gridded platform be a priority?

- It is part of a longer-term plan for FEMS

Question: Would FEMS be stewarded by FENC? Who is the gatekeeper for the data? If new data sources are considered, who determines the validity? Who approves what data comes in?

- should put some thought into how this will work

## **DRI Update – Tim Brown**

### Presentation

## **FENC Subcommittee Updates**

### **Fire Weather Subcommittee: Larry Van Bussum/Darren Clabo**

- Re-write of Fire Weather Handbook (Black book).
  - hoping to get it on the webpage and make 508 compliant
  - working to shorten it, update verbiage, add live links
- Updating glossary
  - terms that are not Fire Weather-related will be moved
  - updating outdated terms
  - adding missing information
- Working on Haines
  - expecting to bring back to committee in the spring



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### **Smoke Subcommittee: Pete Lahm**

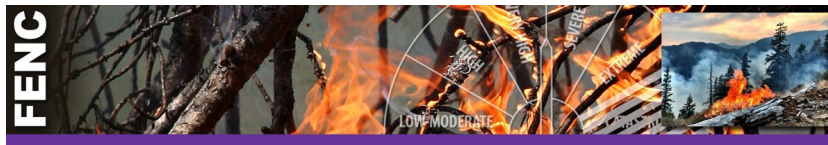
- Proposals are going forward for RX410 (FY24 workload)
  - making progress on weather app/thresholds with super fog trigger points
- Looking at mixing height ventilation indices/clearing indices calculations affecting Rx fire goals in several regions
- Working through expected change to EPA standards
  - once changes are made, will update the smoke and air quality for land managers
- Resuming/completing Safety Officer/MEDL logistics video (expected to be out in spring)
- Update to Prescribed Fire Smoke Management Field Guide – over to NWCG for publication soon
- PMS 420-3 Prescribed Fire Smoke Management Guide needs work, errata pages, and will include newly developed tools

### **Fire Danger Subcommittee: Cheryl Bright**

- Working on seasonal trend analysis standards/guidance
  - will be in addition to pocket cards
  - will have ability to use Canadian system or field sampled live fuel moistures as an example
  - will standardize to be similar to what the pocket card provides
- Working with Joint Fire Science effort to propose NFDRS live fuel moisture models
  - to figure out what to do with standards, calibration of the model.
  - consider actual fuel moisture modeling on a regional basis.
  - issue is that we need Matt Jolly to help us with scope, not sure if he has capacity to work on it.
- Working on curriculum development/updates
  - development for 191 course (currently out for review in committee), Alpha version expected in March.
  - working on plan for 291
  - working on preliminary assessment for 391 with NWCG instructional designer
  - 491 has 2 deliveries (February is Eastern session, March is the Western session)
  - 591 is being taught in March.

### **Fire Behavior Subcommittee: Chris Moore**

- Working on curriculum developments/updates
    - 190 certified in 2020 and is available
    - 290 needs some work. Establishing an agreement with U of I to get overhaul of material with our oversight.
    - 390 was re-written prior to 2020—working with NWCG to finalize
    - 490 – Northern Rockies improved course over last few years, but more is needed.
      - Exploring switching to 491 model by having 2 sessions/year with national cadre and pods. Working with GATRs and lead instructors on this.
    - S491 is being taught in April. Course is affected by transition to WFDS next-gen, content updates are needed.
  - Fire Behavior Field Reference Guide is updated and available online
  - Pocket guide is online, printed versions will be available in spring
  - Working to recruit NWS representative to the subcommittee
  - Ongoing cooperation with several universities to leverage non-agency SMEs and funding
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### **NASF: Geoff Marshall**

- Working on staffing for WFTC, hiring research data specialists to work GIS and products
- Worked with USFS to hire 4 additional METs (2x to North Ops and 2x to South Ops)
- Working on additional RAWs sensors to network

### **Predictive Services: Billy Gardunio**

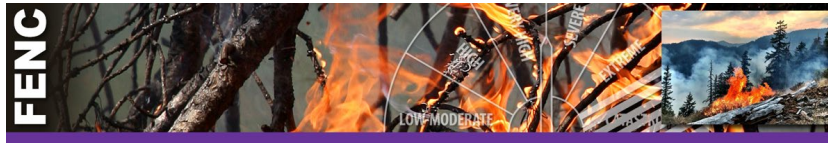
- PSOG meeting February 10<sup>th</sup>/17<sup>th</sup>
  - expect to have long term plan out to the group by the end of February to solicit feedback

### **FENC Chair Updates: Nick Nauslar**

- NWCG All-Chairs meeting is next week
  - plan to discuss personnel rotation in committees, committee support
  - plan to discuss framework/process/template for adjusting processes and standards based on new science (example: fire safety zones).
    - how does it work through the agencies?
    - important for operations personnel to understand that science needs to be trusted and SMEs need to be heard.

### **Discussion:**

- NWCG staff is working on SOP/toolkit for committees (how to work across committees, hierarchy between committees, decision-making model, etc.) Should provide consistency with moving these issues/proposals forward
- Standards vs. operational implementation – there are a lot of gray areas and sideboards are often a moving target
- FENC transformational—there is a lot of new science. Sometimes it's not socialized well, and change is difficult in our community.
- Would like to see FENC take a center seat/focus on a future all chairs meeting
  - brief out big projects, newest/best science (what we're looking at and why)
  - need to have an audience to get this out
  - quarterly connections call is a possible opportunity (next one is April 6<sup>th</sup>)
    - call includes chairs, exec board, senior staff
- Do not have good strategy for how to address how slowly things move. This is a long-standing topic and we have not made any progress
  - with new board members, and the Leaders Intent Letter, this may be a good time to bring this up again
- Need some permanent curriculum staff to support committees with development as well as annual and periodic reviews/updates—would be huge to get individualized/focused support for curriculum.
  - Modularized training—should be looking at contractors to support this. There is not capacity within NWCG to support this.



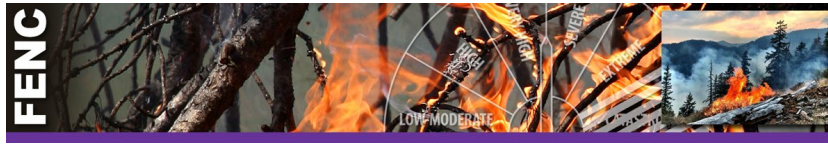
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### **Subcommittee Participation**

- Outreach/asking for support isn't working—people simply do not have the capacity to take on the workload
- Taskings from FMB—where do they fall into priorities? Where are the teeth? Projects simply are not getting done.
- Do we need something from NWCG requiring committee members spend a specific percentage of time on committee work?
- Can we get funding to pull in SMEs to assist?
- Work requires focused time/effort—can't be done "catch as catch can"
- Consider adjustment to FENC sub-structure:
  - Consider bumping some agency reps on subcommittees up to FENC level (all interconnected anyway as "fire environment")
  - Work more along the lines of task groups vs. subcommittees (except curriculum)
  - While a task group is more "short-burst", it still requires time dedication
- Consider having signed letters from the Exec Board that include expectation of time commitment that goes to supervisor
- Consider revisiting how NWCG is structured based on changes in how we support wildland fire over the last several decades
  - Begging people to help on top of their already heavy workloads to keep the system running is not a good system
  - We need to assess how we can do it differently, where is the accountability. Time to let go of the status-quo, come up with strategic solutions
  - Committees are working themselves thin to fill the basic/core needs of the wildland fire enterprise. These are not passion projects, they are keeping the train on the rails
- Could we track/monetize our time with the committees?
- If it is made to be part of performance standards, supervisors recognize it as part of "the job" and it offers some accountability.
- Could we work on expanded SME support?
  - university partnerships
  - recent retirees on contract
  - grants or different access to funding for assistance
- Recommend we use data/tangible information to paint the picture vs. being a squeaky wheel

### **Integrated Fire Environment Decision Support Services (IFEDSS) Update (Long-Term Plan)**

Presentation



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### **Prescribed Fire Update – Francisco Romero**

#### Presentation

Question: Why is drought specified/prioritized as an indicator vice fire danger or other measurable contributors?

- it is identified as a key factor—a lot of discussion on moisture level compared to historical data—considers the lingering long-term effects of drought? Not just for that day but looking at long-term trends.
- It is not a “go, no-go” criteria. Intent is for increased awareness, looking beyond the burn and current conditions.
- this was looked at as applicable on a national level, broad scale. Local areas ultimately have levels of importance for these factors. National process allows them to add to go, no-go checklists.

Question: Is anything being done to encourage/require observations from the burn site and submit to the NWS forecaster to help them better forecast? The only way NWS office will know if the observation from RAWS in the area are representative of burn location is to get weather from the burn location.

- Currently have an effort to create a conversation guide for forecasting offices to help guide the conversation to account for these things.

Question: Is there some continuing education/refresher to assess proficiency in the application?

- working to get new versions of 390 and 490 to get Behave+ and spatial modeling included

### **Data Architecture – Roshelle Pederson**

#### Presentation