



**Notes for internal group discussion only. Do not distribute
NWCG Smoke Committee
March 2016 Activity Update (3/10 & 3/24)**



Membership Issues

- Vacancy Issues: Vice SmoC Chair (Dave Mueller in a month or 2?), Training Subcomm. Co-Chair.
- Smoke Managers Subcomm. Chair
- Mike B joint R2 & Washington – Keeping Rx burning plus national cache manager – R2 cache trying to move regional to national cache. Overseeing QA/QC. Chair – Still need a co-chair.
- Be sure to use the updated email list, which includes Mary Uhl and no longer has Claudia (retired).

Status of Activity Updates – Many still in Draft. Josh is putting on website as Diana sends them in.

Web Site activity

- NIFC.gov website - Need to put on AAR for smoke intrusion doc back on the NWCG website.
- Mike/Pete/Elaine/Ursula – check site/advise what needs to be there &/or moved to NWCG site.

Special Topics Calls/Webinars

- Walk Through of the Enterprise Geospatial Portal (EGP) – Aimed at smoke and fire activity – could this be hosted by TNC? Late March – April window.
- Next Smoke Managers Call on April 28th.
- Another presentation on consumption from Tall Timbers, the session will be at Portland IAWF, can join presentation for the call if there's interest. Cindy will give Kevin Robertson a call about collaborating on a webinar with his emission work for a SmoC call.
- Josh will recruit a SmoC member to host the call and take notes on March 24th.

NWCG Business

- Major budget review from subgroups in NWCG, some funding may become available. NWCG will know by this time next month.
- For FY17 budget there is a form for 2017 projects, and a form for projects beyond 2017. Looking at years 2017-2021.
- Fire Env Behavior Committee has sent out a proposal for an intelligence section chief position.
- Fire behavior subcommittee proposing FBAN LTAN training requirement change.
- Mark/Pete will get RXB2 comments to FMC and comments on the Rx310/410 inclusions request.
- Nothing new on the RX-410 and 310-1 inclusion request.
- Elaine – input for Rx2 – 2nd International Smoke Symposium – Long Beach.

Exceptional Event Rule NPRM Comments Docket Available here:

<https://www.regulations.gov/docket?D=EPA-HQ-OAR-2015-0229>

- Beth Palma gave a presentation from EPA Region 10 Smoke Meeting. Said there were 75 substantive letters received, some environmental groups said Rx fires should never be an exceptional event. Mike will check docket to see which groups are opposed to Rx fires being EEs.

SmoC Letter Endorsing Amber Soja NASA Proposal on Wildland Fire Plume Height

- Proposal due by 3/11 (tomorrow); SmoC has been asked to write a grant support letter for using CALIPSO data in plume height analysis will improve BlueSky Framework smoke dispersion predictions.
- Amber expressed appreciation for our support letter.

Potential SmoC recommendation to JFSP Proposal



Notes for internal group discussion only. Do not distribute
NWCG Smoke Committee
March 2016 Activity Update (3/10 & 3/24)



- Support for a Smart phone app to assess visual range and instantaneous PM2.5 concentration.
- Call with Pete/Bill Malm/Susan/Mark. Many challenges to this application. Sim's proposal different from Bill's initial suggestion – Sim responded to specific RFP.
- Discussion over whether we should discuss further with JFSP - find joint funding for this project?
- Visual Range Smart Phone App Development
- Discussion of the smartphone app that is currently funded and technical info about the app is below:

"We will develop an iOS & Android smartphone/tablet app that incorporates the information from the proposed AirNow Smoke Page map and "In Your Area" tool (see Section 2.3 above), as well as novel visual range assessment tool. The app will have 4 main tabs – the "In Your Area" Summary, a Map, the Visual Range Self-Assessment Tool, and additional background Information. The "In Your Area" Summary will utilize the device's GPS location to provide a quick summary to the 5 questions listed above, providing current warnings, observations and conditions, as well as forecast smoke over the next 24-36 hours. The Map will show fire locations, observed smoke plumes, air quality monitors and conditions, and public health warnings, as well as other information as it becomes available.

The Visual Range Self-Assessment Tool will provide users with a mechanism for self-assessing how far they can see. Using augmented reality protocols, nearby landmarks will be identified in a live camera view. Users will be able to identify which landmarks they can see and which they can't see due to smoke (the initial prototype will use a slider to enable this). The distance between the furthest landmark visible and the closest landmark obscured due to smoke will provide a range for the assessed visual range and be converted into guidance on smoke concentrations, as conditions (e.g. relative humidity) allow. Specific guidance levels to be used will follow the EPA's national guidance or the state guidance for the user's location as appropriate. To accomplish the Visual Range Self-Assessment Tool, a database of landmarks consisting of buildings and natural landmarks (e.g. mountains) will be assembled and stored on a server. Landmarks are available through public GIS databases of tall buildings, mountains, and notable natural features. The app will query this data based on the user's location and display the augmented reality (Figure 2 right) overlay as the user pans their camera."

- The visual range assessment tool essentially helps an observer pick out the most distant landscape feature visible and develop a mass estimation (particle mass plus particle water). This estimation presumably would be incorporated it into their proposed database of other modeled and reported mass estimates. Identifying the distance to a *visible* feature and referencing it as the visual range will yield an overestimate of total mass and in some cases significantly so.
- A recommendation in the report "Uncertainty associated with estimating a short-term particulate matter concentration from a human sighted visual range" was to develop a smart phone application to directly measure landscape feature contrast that allows V_r to be directly calculated and therefore allows for a more accurate assessment of total mass (particulate matter plus particle water) concentration.
- The smart phone app would also include a regional and seasonal (or monthly) estimate of background aerosol species based on IMPROVE and CSN data. Using this database the particulate matter estimate could be improved by developing a simple algorithm to incorporate a measure of RH to adjust a visual range mass determination to reflect the amount of water contained in ambient background and smoke aerosols. That is, adjust the mass determination down to reflect the hygroscopicity of the ambient as well as smoke aerosol to arrive at a better estimate of true dry mass concentration, the relevant variable.

Upcoming Workshops-SmoC Participation

- IAWF International Smoke Symposium 2 (November 14-19, 2016, Long Beach, CA) - Status Report – Call for Presentations Out – help get the word out!
- American Geophysical Union, San Francisco, CA, December 14-18, 2015.
- IAWF Fire Behavior and Fuels Conference (April 11-15, 2016)---special tracks/workshops – Some reduction in smoke content, DEASCO3 workshop will no longer be held. Don Moore will be



**Notes for internal group discussion only. Do not distribute
NWCG Smoke Committee
March 2016 Activity Update (3/10 & 3/24)**



unable to attend, so one of the Smoke JFSP Tracks will be moved from this IAWF Conference to the Int'l Smoke Symposium. Still have 15+ JFSP funded project presentations at the Portland Conference.

- Ursula Parker FWS Secretary will be attending the Australia counterpart to this event. There are less smoke-related topics, but smoke modeling is included. Mike will update SmoC on content from the Australia meeting from Ursula.
- Ecologic and Public Health Tradeoffs Between Prescribed and Wildfire-Public Forum, Vancouver, BC, Canada April 18, 2016.
- Canadian Smoke Forum - Emergency Management and Health Responses, Kelowna, Canada, October 28, 2016.
 - Open forum, one day session.
- Annual EPA Region 10 Smoke Management Meeting March 14-15 in Spokane, WA.
 - Mark Fitch, Janice Peterson, and others are assembling the agenda. Emissions will be a key topic. This will be followed directly by a meeting of the WA Rx Fire Council.
- [Pacific Northwest Weather Workshop](#) March 4-5 in Seattle WA. Will have a fire and smoke focus this year, Susan O'Neill is putting together abstracts for this.
- [4th Central Oregon Fire Science Symposium](#) will meet in central Oregon.
- National Association for Clean Air Agencies in Mid-March will hold a workshop on public outreach and air quality in Chicago IL. Pete and Susan Stone will be attending.
- Susan Stone will be participating in a workshop on indoor air quality (not sure what the name of it is). She wants to bring up the topic of smoke and see if anyone is addressing indoor air quality in a smoke context.

Subcommittee Report-outs:

Smoke Technical Topics

- One short intro away from getting the Guide out for NWCG review.
- Portland conference – several presentations on emissions including JFSP.

Smoke Training

- Draft 2 of the [Smoke Exposure Guidebook](#) is available on the FRAMES portal.
- Smoke Management & Air Quality for Land Managers – Need Pete's approval, then built online.

Smoke Managers

- 15 members on the call – Future subcommittee plans was discussed.
- Rick Gillam/EPA talked about the proposed revisions to the EER.
- Status update on NEI.
- Discussed what other agencies do to assess smoke impacts from prescribed fire.
- Interim wildland fire air quality policy – status.
- Geographic update round robin discussed Rx fire in the southeast.
- Next Call slated for June 28th.

Round Robin Topics

- Mark – is talking with NASA **ARSET** (?) to see what they can offer in terms of information for smoke and air quality. What new satellites will be available and how we can use them for smoke.
- Contact Cindy if anyone has needs or ideas on workshops for the Smoke Symposium.
- Oregon Air Quality is looking for a temporary meteorologist, contact Nick Yonker.
- Chad Fischer is taking comments for the IRPG revision.