



### Outreach and Messaging

- The MyFireCommunity site has transitioned, it is difficult to access and not all of our content made the migration to the Lessons Learned Center.
- Pete received a recording of the Monday EER listening session, will work to share this.

### Conference call to bring together SmoC Projects and JFSP Consortia

- Allen Long Administrative Director of Southern Fire Exchange (formerly Forest Fire Faculty U FL).
- Helen Moore - Consortium of Appalachian Fire Mgt & Science – USFS/15 years, consortium coordinator/4 years.
- David Godwin - Program and Outreach Coordinator.
- Annie Oxarart - Southern Fire Exchange Outreach and Education (U. of FL)
  - Founded 4 years ago - created fact sheets on various types of smoke & smoke modeling, webinars on smoke modeling for Rx burn planning.
  - Goal to increase smoke topics. Begin a topic series in November/December (with Furlough it was moved to January/February) focus on smoke.
  - Scott Goodrick (FS) held workshops in VA & NC. Would like info on new smoke info. See need for growth and research.
  - Alan Long - Development of a series of online fire management courses for more detail with University level course credits on smoke.
  - Plan call w/SmoC to discuss continuing involvement- probably in a few weeks.
  - Southern Fire Exchange website: <http://www.southernfireexchange.org/index.html>

### EPA Webinar - AirNow-Tech Demo – ARA Community and FLM Air Programs Invited

- Just completed a major overhaul of AirNowTech - New features and runs faster.
- Have re-instated email report that will report pollutant data via email periodically.
- Forest service GOES linked E-Sampler monitoring data - One test file has arrived and has been imported.
- Rick Graw - If you know where wildfires occur could use this as a tool to compare impacts spatially?
  - Natalie - With the new reports page you can group data spatially, so if you had sites near a wildfire you can create a site list for those, group your query by state, and then compare impacts across different wildfire - that report is in the form of tables.
- Claudia - How would you sort out what smoke came from what fire.
  - Natalie - you could use the navigator tool (HMS fire and smoke plumes), or HYSPLIT forward or back trajectories to see what is likely to be impacting a particular monitor.
- Note – due to computer difficulties - The Meeting was re-scheduled (see January Activity Update).

### Introduction

Bill Jackson – Acting National Air Resource Program Manager (FS). Developed user interface for HYSPLIT and VSMOKE and monitoring support for go-no-go decisions for Rx fire.

### CO Monitoring Presentation - Masimo RAD57 - SmoC, ARA community and Select NWCG committees

- 2012 80+ fire deaths/half were cardiovascular related. 9 fatalities from 23-61 yr olds directly related to stress/exertion in smoke in wildfire and structural firefighting.
- JMA – firefighters are 3 times more likely to suffer cardiac death than general population. (Henry et al. 2006 – J. Am Med Assn).
  - Fire fighter rehab followed by less deaths following year. Stresses establishing a baseline for COHb, blood pressure, etc. to recognize when clean air/rest is needed.
  - RAD57 monitor—easy to use  $\pm$  3% accuracy, non-invasive, 30-45 seconds to get a reading.
- Questions & Answers:
  - Willie Begay – How did you coordinate with units/Incident Mgt on Rim Fire? **A.** They worked with the safety officer to deploy these on the fire line and medical unit in base camp. Gary Curcio or Cameron can send data collected from Rim Fire when requested.



## NWCG Smoke Committee September 2013 Activity Update



- Did strategies change (burnouts, etc.)? **A.** They saw firefighters exposed unnecessarily & rotated more often as a result.
- Nick Yonker – How long does it take for someone to get exposed to the point of needing treatment and how long does the treatment take? **A.** Exposure is based on the individual, i.e. fit individuals require more oxygen than those out of shape so effects are more pronounced. It can take 4-6 hours in clean air to recover, or 40 minutes on high-flow 100% oxygen.
- Rick Graw – What info could be provided to an IC about CO levels in the blood and effect on decision making? **A.** We don't have specific numbers in the slide show, but the brain needs O<sub>2</sub> to function, at 10% CO in the bloodstream decision making capabilities will be compromised. Cameron will send Rick case study on smoke exposure & decision making.
- Rick Graw – Can smoke be identified as a contributor to death post-mortem? **A.** Yes, USFA.FEMA.gov safety and fire deaths there is a firefighter autopsy protocol.
- Gary – if you notice people have jumped 4-7% or 40%, is that the cutoff? **A.** Once you are 5% over your baseline, you are going to have issues with your brain and heart.
- From R6 – Would this be a good tool to recommend to state agencies to monitor schools? **A.** Yes, CO exposure can present flu-like symptoms, so this monitor would help sort out if issues are related to CO.
- Susan – What is the monitor schedule? **A.** This will fluctuate. It is good to get checked periodically as opposed to at beginning or end of shift.

### Follow-up: CO Monitoring RAD57 Presentation for ARA, SmoC and select NWCG committees

- George Broyles & Joe Domitrovich plan to add comments/updates on info based on their recent research for SmoC, ARAs, OWDC, Fuels Mgt Committee, and others.
- They have used the RAD57, so they could elaborate on their experiences with the device.
- Hopefully monitoring concerns will be seriously evaluated during the off season.
- Gary would like to see a more proactive role on developing and implementing protocols.
- Mike – good tool for showing effects in various areas and activities.
- Willie Begay – State of OR is looking to fine-tune their protocol document. Would like to have Cameron Bucek on the call as well as the Red Cross as a possible mechanism for monitoring. Pete recommends being cautious about inviting a company rep on the call. George Broyles and Joe Domitrovich have practical experience with the RAD57 Monitors & should be part of dialogue.
- Training/outreach via our 10 min exposure video will yield best return on invested time/money.

### 2013 International Smoke Symposium

- Susan O'Neill will submit a paper.
- Robert Bonnie (USDA Undersecretary) is confirmed as a keynote speaker. Janice Nolen (American Lung Association) confirmed to present on tools/apps for community support.
- Registration up to 110 in-person, 20+ virtual and a couple group virtual reservations.
- Workshops-
  - Development and Deployment of Superfog Analysis Model – SAM, funded by JFSP, Christian Bartolome and Marko Princevac
- BlueSky Framework and BlueSky-enabled Tools: Latest Updates - Miriam Rorig, Susan O'Neill, Sim Larkin
- NASA ARSET: What We Can and Cannot Do using Remote Sensing Products for Air Quality Applications - Richard Kleidman
- Monday Workshop sessions will be recorded and may be on full virtual linkage.
- SmoC Table -
  - Need members to bring products/handouts, Claudia could send a note to the Smoke Managers Subcommittee. Josh will create a banner. Bring a laptop.
  - We should have folks at the table during poster sessions.



## NWCG Smoke Committee September 2013 Activity Update



- SmoC briefing papers, one page SmoC info sheet & subcommittee information sheet. Subcommittees draft a 1 paragraph on who they are & what they do - send to Pete by Oct 4.
- Add a smoke management guide revision note in some form.
- FS R&D and Fuels is putting up money to cover a special issue for the proceeding to capture articles from the sessions (J. of Frontiers of Ecology and the Environment, space for 8 articles).
- Note- shuttle that runs 2 miles to metro site, good public transit.
- Mikel created a brochure for the Virtual Symposium. Please forward to all your contacts.

### NWCG Business

- SmoC has 3 proposals in NWCG. Interest in another ARA training session; funding is tight.
- Rx Fire Guide final version will be posted in mid-October. Will be posted on NWCG site.
- Sean Cross has filled the vacant BLM Operations Chair on the Board.
- All Chairs meeting Feb 11-13<sup>th</sup> in Boise, ID.
- Goal—look at budgeting and project determination in October – list projects to fund.

### JFSP Consortia Efforts and Information Sharing

- JFSP would like items SmoC can help network through various programs/activities.
- Assist with November/December Smoke special topic webinar on modeling.

### SmoC Response to DEASCO3 Tool/Presentation

- 90 minute presentation – 60 participants – well done presentation and results summary.
- Examples relevant and air quality managers and fire managers find tool more useful.
- Mike – just got off fire assignment. Feels tool more applicable for air quality managers.
- Pete – there are a lot of transport issues from neighboring states and DEASCO3 results support the influence of smoke on ozone formation.
- Could the tool have use for wildland fire planning?
- Developers are seeking comments and suggestions to help improve the tool.

### Subcommittee Report-outs

#### Technical Smoke Topics

- Smoke Management Guide - revisions are continuing. Have input on NWCG formatting. Projecting finishing up by December.
- Susan is reviewing O3 effects from wildfire document.
- Bill Malm completed draft report on Visual range PM 2.5 for JFSP. Should consider a brief executive summary and appendix for chemical terminology.

#### Smoke Training

- Smokepedia sent to Jennifer Evans for Prescribed Fire Coalition mobile app.
- Drafting Transportation Safety and Smoke Exposure student workbooks will be included w/fire refresher videos.
- WFSTAR—Interested in offering Smoke Exposure video & workbook this upcoming season. Draft of the workbook ready for review. Transportation safety video and workbook needs further discussion.
- Risk Management is also planning on doing a driving safety video, but it is not smoke specific, so the Transportation Safety video and content differs in that regard.

#### Smoke Managers

- Minutes from the last meeting are sent today, next meeting will be Oct 29.

### Round Robin

- Brenna MacDowell of Lessons Learned- Offered to re-create the Air Quality and Fire Issues webpage.
- JFSP RFA comments sent to JFSP. Write ups completed & posted on MyFireCommunity.
- JFSP will send out e-Newsletters describing completed projects and associated webinars.
- EPA EER listening sessions. Jim Brenner/ FL FS provided Monday call notes (public). Diana Hinson/OK DEQ to provide call notes from Wednesday (state stakeholders).



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- USDA Office of Chief Economist put together technical methodology for GHG emission calculations. Want generic national approach on calculating GHG emissions from forestry and other activities.
- Susan O'Neill lecturing on smoke effects – Rx-510 Advanced Fire Effects Jan. 13-17 at NAFRE.
- NACAA Criteria Pollutant call was cancelled so no update this month. Smoke Symposium brochure will be sent to them for circulation.