

**WRAP FEJF Meeting
February 23-24, 2005
Salt Lake City, Utah**

COMPREHENSIVE LIST OF ATTENDEES

FEJF Members:

Darla Potter, WDEQ-AQD, FEJF Co-Chair; Mark Fitch, AZDEQ, FEJF Co-Chair; Dave Randall, Air Sciences Inc.; Angel McCormack, Nez Perce Tribe; Bob Habeck, MT DEQ; Tom Webb, USEPA R9; Pat Shaver, USDA NRCS; Paul Schlobohm, BLM NIFC (representing Mike Wallace); Mike Ziolko, OR DOF (representing Council of Western State Foresters); Bob Palzer, Sierra Club

Outer Circle Participants:

Chet Sergent, NV BAQP; Darrel Johnston, WA DNR; Deb Wolfe, MT DEQ; Ron King, AK DEC; Dave Strohm, UT DEQ-DAQ; Aaron Chambers, UT DEQ-DAQ; Thomas Dzomba, USFS; Brian Mitchell, NPS; Suraj Ahuja, USDA-FS; Lisa Bye, BLM/FWS/NPS; Jim Russell, FS / BLM; James Scarborough, Air Sciences Inc.; John Veranth, U of UT; Jason Walker, NWBSN; Michael D, EST

Other WRAP Participants:

Cathy Messerschmidt, NTEC, WRAP Tribal Co-Director; Don Arkell, WESTAR, State Caucus Coordinator; Ken Cronin, NTEC, Tribal Caucus Coordinator; Melissa Estes, Zuni Tribe, IOC Co-Chair; Tom Moore, WGA, WRAP Technical Coordinator

By Phone:

Pete Lahm, USDA-FS; CARB; Coleen Campbell, CO APCD; Evan Shipp, SJV APCD; Sam Sandberg, USDA-FS; Christi Gordon, USDA-FS

PLEASE NOTE: These meeting notes have been prepared to capture questions, comments, and discussion on the various meeting topics. Please refer to the presentations and documents posted in association with this meeting for greater detail.

FEBRUARY 23, 2005 8:00 am – 5:00 pm

Introductions (All) & Agenda Review

FEJF Status

- Membership Announcements
 - Jim Lawrence retired from the Council of Western State Foresters. Until a replacement is selected, Mike Ziolko and Steve Ambrose will maintain participation as the State Forestry FEJF Member.

- Scott Kuehn, FEJF Member - Private Timber Industry Representative, has a new job with Stimson Lumber. He is still in Montana and his new employer is currently evaluating the level of participation they wish to have in the FEJF.
- Thomas Webb has been approved as the IOC Liaison to the FEJF. John Kennedy's assignment is being extended and Larry Biland is being pulled into some other duties. As a result, Tom will also start to take on a broader scope of duties overtime, including fire.
- Membership Vacancies
 - A Local Government position is open.
 - A Tribal position is open.
 - An Academic position on the wildland side is open.
 - A General Public position on the wildland side is open.
 - Emphasis for alternatives to attend if FEJF Members cannot attend the meetings.
- WRAP Announcements
 - As of January 1 Ken Cronin became the Tribal Caucus Coordinator and Cathy Messerschmidt became the WRAP Tribal Co-Director.
- STI & USFS Proposal to NASA
 - Invitation by Dana Sullivan with Sonoma Technology Inc. to participate as a technical advisor on a proposed project for enhancements to the BlueSkyRAINS fire emissions and smoke impacts forecasting system.
 - Darla and Mark are technical advisors via letter of support and providing some very specific information about ourselves. As technical advisors, we will ensure that the WRAP's interests and user needs are being met by taking an active interest and role on the project, especially during the initial stages of the project (identification of user needs and system requirements) and during the final stages of the project (evaluation, benchmarking, and feedback). Will entail attending a couple meetings, participation in several teleconferences, oral and/or written feedback and suggestions during the initial and final stages of the project, and review periodic status updates (monthly status letters) throughout the course of the 3-year project. If proposal is approved by NASA, anticipated project initiation at the beginning of May 2005.
 - Project objectives:
 - Providing near real-time predictions of the emissions and air quality impacts of existing fires or planned fires across the U.S.
 - Improve and validate the accuracy of predictions.
 - Expand the system's capabilities to meet the decision support needs of air quality agencies beyond the existing user base of fire and smoke managers.
 - Enhancements will be realized by integrating the following NASA satellite-derived data:
 - Fire locations, burn areas, durations, and other key input parameters from the MODIS daily fire product.
 - Vegetation densities from the NDVI of the MODIS instrument.
 - Geographic extents of smoke plumes from the Hazard Mapping System of the NOAA Satellite Services Division Fire Detection Program.
 - The group expressed interest in having another presentation on BlueSky.

ERT Task Team Technical Tool Development (Mark Fitch / Dave Randall)

[See presentation posted on the FEJF website.]

- Discussion of the need to account for non-burning alternatives.
- What about taking into account the evolution of the activity (pile burning %, mosaic burning %)? Don't lose ground by evolution of the activity. Would this approach be simpler?
- Assuming vehicle exists (Fire Tracking System) exists to employ the emission reduction technique calculations.
- Smoke management (occurs after ignition and is directly affected by meteorology) versus emissions reduction techniques (occurs prior to ignition) and the relevance to visibility impacts: e.g., pile burning and associated smoke plume versus under-story burning with smoke being scavenged by the trees.
- Smoke management and ERTs go hand in hand in burn approvals but are separated in the FEJF policies to simplify the tracking purposes for annual emissions goals.
- Smoke management authorities do not dictate the type of activity (e.g., pile or broadcast) now as that is not their authority (air quality / visibility protection) and is a land management / fire behavior decision. Land managers may feel steered into selection of certain types of activities depending on the smoke management authority's decisions regarding burn approvals (e.g., Oregon, Montana). As implementation of Regional Haze SIPs occurs over time will smoke management authorities direct what type of activity (e.g., pile or broadcast) will be allowed?
- The table quantifying PM2.5 emission reductions is not complete.
 - Need to fill in the blanks with values.
 - Consider lumping emissions reduction methods to simplify the table.
- Frequency of Use table could be a starting point for jurisdictional discussions and refinements.
- One of the goals is to have more complete reduction factors for those ERTs that are used "occasionally", "commonly", and "very commonly".
- Be specific as to what the terminology means (e.g., pre-burn fuel removal same as density management?).
- Schedule ERT TT conference call to simplify the table and fill in the values.
- Refinement of tables by March 3. Conf call March 7 at 1:00 pm.
- ERT TT volunteers: Mark Fitch, Dave Randall, Jim Russell, Bob Habeck, Lisa Bye, Angel McCormack, Darrel Johnston, Suraj Ahuja, Bob Palzer, Tom Moore, Pat Shaver, Dave Strohm, Mike Wallace, Mike Ziolk, Brian Mitchell, Sam Sandberg, Darla Potter
- Ultimately will need Forum approval.
- Suggestion to bring it to the Implementation Workgroup for their information in a few months.

FEJF Workplan (Mark Fitch / Darla Potter / Tom Moore)

- 2005 Workplan Status
- Task Initiation & Task Team Formation
- 2006 Workplan Development
 - Questions to ask –
 - Reassessment of needs for the existing tasks (FTS as an example)

- Restructure into Planning (SIP) needs and Implementation
- Organizing principles for FEJF
- Policies – build implementation to support (identify key deliverables)
- Planning – focus on what we can do in SIPs/TIPs, rather than what is outside state/tribe control (e.g., emissions from Canada and Mexico)
- What do states/tribes need?
 - June 2004 workshop, note involvement of the Implementation Workgroup as well as smoke management program staff
- Are others already doing the work?
 - NWCG fire tracking – embryonic at this stage, NWCG may not be aware of data needs of air quality agencies for emissions inventories and modeling purposes.
- Advance techniques is high on the list for Alaska – emissions factors, inventories, modeling
- In terms of the planning process – Colorado needs legislative approval for the SIP, which drives the timeline for the technical work to be done by the fall of 2006 to allow for the planning process to happen
- FF1 Wildland Fire Effects Trade-Off Model Review
 - Under contract – no additional funding
- FF”E” Fire Emissions Categorization Guidance: Restoration/Maintenance Difference
 - Developed with in-kind work
 - Reprogram \$10,000 to another task
- FF9 Regional Coordination of Smoke Management Programs
 - Add \$25,000 for use of a facilitator by the Task Team to become prepared for the anticipated workshop – total \$50,000
- FF12 Smoke Management Technical and Policy Workshop
 - Idea for workshop (Lee Alter) – pollutant centric for all applicable sources
 - Tools FEJF is developing now
 - SIP planning perspective
 - Retain funding @ \$25,000
- FF”C” 2002 EI of Wildfire and Prescribed Fire: Phase I & II
 - Add \$25,000 for FLM QC notebooks that were requested by the FEJF
- FF6/3 Phase III & Phase IV Inventories & Preliminary Assessment of Apportionment Methods
 - RFP soon to be released
 - Retain funding @ \$163,224
- FF7 2002 National Wildfire EI (Inter-RPO)
 - Timing issues
 - Some things beneficial to all RPOs
 - FEPs, moisture characteristics
 - Calculating emissions as best we can
 - NFDRS basic fuel bed models

- Ag Task Force?
 - Dealt very sketchily with irrigation ditch burning, fenceline burning, field borders
 - Request scaled back funding (2007) \$50,000
- International Emissions
 - Take off the FEJF task list – being done elsewhere
 - Mainly an issue for AK and border states where there is a need to be able to sort out local versus international emissions
 - There is remote sensing work that may be used to fill the gap in 2002 for Canada and Mexico (Tom Pace @ EPA)
- Biomass Utilization Assessment
 - Take off the FEJF task list – being done elsewhere
 - Healthy Forest Initiative
- Assessment of Section 308 Strategies and Policies for Fire
 - Take off the FEJF task list – nothing beyond what is already being done via identified FEJF tasks
- Yearly Fire Emissions Inventory Development
 - Retain as part of ongoing FTS support into the future
- FEJF propose to the Planning Team for a \$110,000 increase in funding from that allocated to the FEJF in the 2005 WRAP Workplan. An additional \$100,000 was also identified for 2007 funding needs.
- Coordination with Implementation Workgroup
 - Involvement at the
 - Lay out what FEJF is working on (highest priorities, meaningful results)
 - Regional coordination
 - Application of ERTs (reasonable progress demonstration or limitations)
 - Planning inventories
 - Lay out what FEJF has already done

Phase I / II Emission Inventory and Continuing Tasks (Air Sciences Inc.)

[See presentations by Air Sciences posted on the FEJF website.]

Essential Documentation distributed for review / Other wrap up (Dave Randall)

- Essential Documentation is posted on Air Sciences with QC downloads and needs to be posted on the WRAP FEJF ETT website. There will be a time limited comment period to make sure that everything is documented appropriately. Comments must be received so that the documentation can be deemed final by April 1, 2005.
- Useful to have the results table in the same AoH format to show the differences in the emissions between the various phases. That will be done for the presentations tomorrow.
- NIF3 format – is that published for state review? A: No, that will be part of the final documentation and will also be in the PowerPoint presentation for tomorrow.
- 33% return for a request for the QC review is actually a good result in the light that it was a voluntary request. May be higher than 33% given how the BLM responded.
- Tom needs to coordinate with Air Sciences as to what should be posted on the WRAP FEJF ETT website. Still need to final the 2018 emissions inventory (for the 309 planning effort) documentation.

QC: Large Fires / Duplicate Records / Fire Complexes / Perimeter Adjustments (Dave Randall)

- Fuel loading method adjustments for large fires gives an indication of what can be gained by looking at more refined fuel information (e.g., FCCS). This methodology is in the large fire refinement strawman that accompanied the QC notebooks and will be posted along with the Essential Documentation. There was also a comparison to FCCS and those preliminary results can also be provided to the FEJF.
- Discussion about the need to move in the direction of FCCS to obtain additional refinement of fuel information. May both decrease and increase consumption depending on a number of factors for each fire. Concern expressed about clarification of emission load between NFDRS and FCCS, one of these items is in regard to duff.

WF and Rx Burning QC packets (Joel Firebaugh)

- For future reference, please keep in mind that a lot of tribes (and some states) don't have color printers or copiers.

Rangeland Burning (non-federal lands) (James Scarborough)

- Concern about land ownership in regard to allocations to the counties, especially tribal land.
- Conflict is that the model requires specific events with spatial and temporal resolution, which has to be estimated randomly. Until a fire tracking system falls into place with active tracking, this will continue to be an issue.
- Goal is to be accurate from a burning point of view but not from a jurisdictional point of view.
- Rangeland burning should not be included in the model performance runs as it is not based on actual activity information, as is the case for most of the agricultural burning.
- If BIA conducted the fire on tribal land, that is not reflected in this inventory.
- Representative of an annual average not any particular year.
- In states where non-federal rangeland burning is performed in conjunction with a federal agency, like Wyoming, that was taken into account and is reflected in the rangeland inventory.
- Change event allocation: 0-100, 100-1000, 1000+ & associated probability 10, 70, 20
- Need to decide whether to categorize "natural" or "anthropogenic" and then document that decision.
 - Primary (vast majority of situations) – maintenance of those plant communities and ecosystems
 - Secondary (exceptions) – restoration of the plant communities
 - Frame in regard to the Fire Categorization Policy
 - Conference Call - February 28 9 am MTN
 - NBTT: Description of Fire Categorization Policy for rangeland application
 - ETT: NFDRS classification and associated N/A categorization for Rx fire for rangeland fuels

Regional Coordination of Smoke Management Programs (Deb Wolfe)

- Tribal language regarding sovereignty and differences between SIPs, TIPS, and FIPs – look at and compare Bob Gruenig language to the similar language in the ESMP, AEG, and FTS Policies.
- If citing NTEC, NTEC is an organization not a person so please state the source of the comment, language, etc. so that as time passes that can be tracked back.
- Basis for the document
- Take off “Basic”, “Moderate”, and “Complex” labels. Confusion with Basic SMP versus Enhanced SMP by using these terms. Suggestion to go to “Tier 1”, “Tier 2”, “Tier 3”, etc.
- Discuss elements then assign later.
- IMPROVE monitoring network, utilization of data not locate and install new monitors.
- Most important centralized data.
- Oregon – Regional Coordination plan underdevelopment – two aspects – operation of the smoke management program, determination of reasonable progress. Mike Ziolk can provide a working draft to assist in the further development of the Guidance.
- Identify the objective of regional coordination. ESMP Policy and Section 110(a)
- Need to make sure the Guidance captures the need to coordinate amongst all jurisdictional agencies and authorities (state, tribe, federal, EPA).
- Is this weighted more toward prescribed fire, agricultural burning, and rangeland burning rather than wildfire?
- Process approaches can be identified in the Guidance.
- This Guidance is the implementation “play book” from which portions may be applicable to the fire tracking system, which could possibly serve to be part of the operational implementation of regional coordination.
- Need to identify spatial and temporal aspects for each element.
- Fast food concept: At this point need to identify the big menu: burgers, fries, drinks. Then at the workshop can have the broader group of stakeholders decide upon the best regional coordination package for the WRAP.
- Beer ingredient concept: foundation / purpose (water), ale or logger, type of yeast, etc. - This Guidance should lay out the ingredients for the states and tribes to choose from. Basic beer – telephone or e-mail contact list, Moderate beer – simple website updated monthly, Complex beer – regional database updated daily.
- What is successful coordination – checks and balances for evaluation.
- Obstacle identification – does it need to be in there?
 - Not all entities can share their information.
- Rather than identifying all of the elements – identify a template for regional coordination and then go from there. Montana system or the proposed plan under development in Oregon.
- Transparency of smoke management programs so that regional coordination mechanisms used in each jurisdiction are apparent.

FEBRUARY 24, 2005 8:00 AM – 3:00 pm

Schedule Next Meetings

- June 7-8, 2005 – Denver, CO

- To possibly be combined with meetings to be held with the AMRF regarding the natural background default values and IMPROVE regarding potential changes to the IMPROVE equation to reconstruct extinction.
- Breakouts, if need additional task team meeting make it on Monday.
- September 28-29, 2005 – Missoula, MT (Downtown Holiday Inn?)
- Winter 2005 – WA
- Meeting Topics
 - Based on task deliverables
 - Consider interactions with other Forums or Workgroups
 - June
 - Inter-RPO Wildfire Emissions Inventory Update; Pete Lahm, USFS & Dave Randall, Air Sciences
 - Briefing on Fire Environment Working Team by Paul Schlobohm, BLM
 - ERT Technical Tool Development
 - FEJF Workplan
 - Phase I / Phase II Emissions Inventory & Continuing Tasks
 - Regional Coordination of SMPs – breakout session
 - Fire Tracking Systems
 - Model Assessment Tasks: RMC Sensitivity Runs Phase II
 - Phase III & IV Emissions Inventory
 - Status Updates
 - N/A Guidance
 - FETM Project
 - Computer approval system in ID/MT (Scott Keuhn & Dave Grace)
 - Wei Min Hoa (NASA grants), Colin Hardy (ERTs)
 - Suggested presentations
 - Paul Ervin on ag burning and emissions credits/tradeoffs, possibly even via a virtual presentation, Cathy M. contact him.

Fire Tracking System Development (Mark Fitch / Darla Potter / Tom Moore)

- Open discussion
- Task Team: Mark F, Mike Z, Thomas D, Chet S, Ron K, Angel M, Lisa B, Paul S, Jim R, Bob H, Darla P, Tom M, Suraj A,
- No one offered to step up to lead the effort.

Phase II Emission Inventory and Continuing Tasks (Air Sciences Inc.)

[See presentations by Air Sciences posted on the FEJF website.]

Agricultural Burning QC Data Enhancements (Joel)

Wildfire and Prescribed Fire QC Data Enhancements (Joel)

NIF Methodology & Visual Display (James)

2002 EI Results (Dave)

- Rangeland: label non-federal prescribed rangeland fire.

- Modified bakergrams: different color scales for wildfire and prescribed fire as well as the scale should be used to help differentiate between the two.
- May be useful to link to best and worst days from the monitoring data in AoH to make the link between the emissions levels from fires and the monitored best and worst days.
- May be helpful to display pile versus broadcast in results.
- By March 10, 2005 look for document for phase II with 10 days for comments. Depending on comments co-chairs may organize conference call to resolve the comments.

Phase III & IV Emissions Inventory RFP (Mark Fitch / Tom Moore)

- Shifting gears from actual emissions inventory to planning emissions inventory.
- Phase III 2000-2004 baseline period
- Phase IV 2018 projection
- RFP may already be published
- ~1 month for bidders to respond (late March)
- Bidders call March 7
- Team to evaluate the proposals (Mar 28 – April 1)
 - Set criteria to evaluate
 - Usually via conference call
 - Determine 2-3 top bidders
 - Interviews for 2-3 top bidders via conference call
 - Decision on bidders and start project beginning of April.
- Team: Tom Moore, Mark Fitch, Darla Potter, Don McKenzie (ask), Aaron Worstell (ask), Mike Ziolk (tentative), Colleen Campbell (ask), Chet Sergent

Model Assessment Tasks (Mark Fitch)

Sensitivity Runs Phase II: Regional & Mesoscale

- 4 km only in California
- Impacts to small areas, Class I areas, tribes – could be added for near field impacts, this basically is the mesoscale work proposed with CALPUFF
- PT files drive ability to select fire size scenarios
- PM2.5 packets as surrogates for fire size and fuel loading and emissions factor
- Fire size classes from Phase II EI are not as resolved in lower range
- Rule of thumb crosswalk table to acres, fuel loading, emissions
- Think of end users for it to make sense – regulators and burners
- Results don't necessarily have to result in a de minimis level
- May indicate that burns do need to be addressed
- Fire tracking (e.g., NM Bernalillo County) ¼ acres large # of events
- Rule out where it becomes less burdensome
- Spin on the output / results will be critical
- EPA R10 tribes approached EPA (OR, WA, ID) for minor burning control

Task Status: Natural & Anthropogenic Guidance and FETM Project (Darla Potter)

FETM

- Those that would also like to review the document: Paul S, Ken C, Bob P, Suraj A

- Darla will distribute and compile comments

Natural & Anthropogenic Guidance

- After development of six versions of the *Guidance for Categorizing Natural vs Anthropogenic Fire Emissions* (Guidance) by the Natural and Anthropogenic Task Team (chaired by Bob Habeck), the sixth version was sent out in October for a directed outreach / targeted review. The WRAP Board was briefed on the Guidance at the meeting in Salt Lake City on November 10, 2004 and concerns were expressed by one WRAP Board Member regarding the classification of escaped prescribed fire. The seventh version of the Natural & Anthropogenic Guidance was distributed in early December for approval during the December meeting. At the meeting a few issues were raised, mainly focused on escaped prescribed fire, requiring the preparation of an eighth version of the Guidance. The eighth version of the Guidance was distributed to the Task Team as well as those persons that raised concerns at the December meeting. With one exception, the comments received were either editorial in nature or supportive of the revisions made to resolve the issues raised on escaped prescribed fire.
- What was thought to be the “final version” was prepared by the Task Team and distributed to the FEJF in preparation for a February 9 conference call for FEJF Members for the purposes of achieving consensus approval of the Guidance. As Mike Ziolko could not be on the call to represent his concerns on escaped prescribed fire, a commitment was made to coordinate with him after the conference call to resolve his concerns.
- Mike’s concerns were resolved while at this meeting by incorporating additional language in regard to technical challenges that may arise out of distinguishing impacts due to prescribed fire and escaped prescribed fire.
- It became apparent at this meeting that additional work is still necessary to provide some clarification regarding the following text "...with oversight by the designated tribal air quality regulatory authority or EPA..." that appears in the *Policy for Categorizing Fire Emissions* (Section 3.2.3, page 18, last paragraph) and is quoted in the *Guidance for Categorizing Natural vs Anthropogenic Fire Emissions* (Section 2.10, page 7, 2nd quotation).