FEJF Meeting San Diego, CA December 4-5, 2001

Introductions- Pete Lahm USFS; Dave Randall, Air Sciences, Inc.; Bob Palzer, Sierra Club; Carl Gossard, BLM; Phil Harwell, Texas DNR; Jeff Schmidt BLM/NRCS; Pat Shaver NRCS; Beth Sauerhaft WA NRCS W.O.; Dennis Haddow USFWS; Mike Ziolko OR Dept of Forestry; Bruce Oulrey CARB; Patrick Gaffney CARB; Francis Bernards UT DEQ; Larry Biland EPA IX; Scott Kuehn Plum Creek Timber Co; Crystal Loesch USFS R1 (for Ann Acheson); Vickey Komie NM DEQ; Mark Fitch AZ DEQ; Mike George AZ DEQ; Karlyn Black, Eastern Research Group; Pete Stewart USFS R3; Evan Shipp San Joaquin APCD.

FEJF Vacancy Announcements – Pete Lahm

Tribal Agricultural Interest Needed – National Tribal Environmental Council (NTEC) has been advised of the vacancy. Bill Malone, Kevin McKernon already on board

Forestry Academic Interest Needed - Phil Omi has resigned; Jim Agee has declined the position. Northern Arizona University Ecological Restoration Institute will be notified of the vacancy. Bryan Jenkens is already on board. Pat Shaver recommends Dr. Rassmusson of UT, Rangeland.

Last WRAP Meeting – Pete Lahm

Funding – FEJF is funded to the levels spoken of at the last meeting, although there has been some re-shuffling between projects. Prescribed Fire Program Assessment TT has been granted an additional 25 K. Overall, the WRAP has $4 million, although most has already been allocated. Significant investment has been made into the WRAP itself, a new technical oversight position will be filled, and a new economics/policy analyst person will be hired as well.

Northern Air Managers Committee – Has been reshaped into two separate caucuses, the state and the tribal caucus. A position has been created on each caucus to coordinate among the forums and the respective stakeholder group position at WESTAR being flown currently, and NTEC has already filled its vacancy. The Public Advisory Board has been suspended.

The state of Alaska has joined the WRAP! An Alaskan Tribe will also join although, the federal recognition of the Tribe is required.

Natural Background Policy – Has been adopted by the WRAP, the first official policy. Pete Lahm and Darla Potter presented the outline and implications of the Policy. Issues were discussed between the WRAP members. Of particular concern is how entities would be required to track agricultural emissions,

especially in states like Colorado, where the state is banned from tracking agricultural burning. The final policy is available on the FEJF's Website, www.wrapair.org, and includes the WRAP appendix change that emissions estimations techniques could be used to meet the emissions tracking requirements.

The members of the NBTT, management, and content team were recognized by the WRAP for their efforts with WRAP awards by Governors Chino and Levitt. C*arl Gossard, Mike Ziolko, Mark Fitch, and Rebecca Reynolds, were awarded for their efforts in the development of the policy. Job well done!*

Categorizing Fire Emissions Policies are available for review on the WRAP website.

Coordination with the Agricultural Air Quality Task Force – A letter has gone out from the WRAP asking for further coordination efforts. Dust from tilling and other operations as well as feeding operation emissions have been mentioned and need to be discussed further within WRAP. Any outreach to the Agricultural community is welcome, and perhaps the FEJF's flyer could be beefed up a bit to include a stronger agricultural emphasis.

Task Team Updates

Emissions Task Team

Wildfire

Emissions Estimations – Dave Randall INSERT DAVE's PRESENTATION

Presentation Notes: Should be noted that the science behind smoldering emissions factor is rough.

Prescribed Fire

Status of Prescribed Fire Activity Data – Dave Randall INSERT DAVE'S PRESENTATION

Emissions Factors Used, Tom Pace and AP-42

Presentation Notes:

Cite smoldering emissions factor (.085% of previous) Question about smoldering - time of year and burn type consideration.

Phase A data meets the stringent temporal (Date), spatial (T/R/S), and activity information (Acres Burned and Fuel Loading) that was used in the construction of the wildfire inventory. What to do with the Phase B dataset is yet to be decided.

Pat Shaver points out that there are enormous data gaps that include spring burning of rangeland and agricultural burning that is unregulated or undocumented.

Agricultural

Aggregated Agricultural data (1996-99) acres burned has been produced over a GIS overlay. This equates to prescribed fire Dataset A, although spatial resolution is by county, and temporal resolution is annual (as closes to 1996 as possible).
INSERT DAVE'S MAP **

ETT Tasks

- 2018 Projections (funding procurement secure)
- Emissions Tracking (proposal for emissions tracking recommendation)
- Tom Pace/EPA Document

Agricultural Burning Alternatives Task Team – Karlyn Black

Non-Burning Management
Alternatives on Agricultural Lands

Fourth Progress Report
Presented to:
Fire Emissions Joint Forum

Presented by:
Eastern Research Group, Inc. (ERG) and
Enviro-Tech Communications (ETC)

San Diego, California
December 4, 2001

Overview

- Brief Summary Prior Work

- Introduce Task 2 & 3 Draft Report
  - ♦ Chpt 6: Criteria for Selecting NonBurning Alts
  - ♦ Chpt 7: Accountability Mechanisms
  - ♦ Chpt 8: Non-Statutory Administrative Barriers
  - ♦ References
- Identify Composition of Draft Final Report
- Present Timeline for Project Completion

Prior Work: Summary

- Task 1 Report Submitted (June '01)
  - ♦ Crop Production Summary
  - ♦ Ag Burning Summary
  - ♦ GIS Mapping
  - ♦ Identified Non-Burning Alternatives
  - ♦ Methodologies and Criteria Assessing Impacts
- Comments Incorporated

Prior Work: Summary (Cont'd)

- Crop Production Database (Inventory Related)
- Ag Burning Database (Inventory Related)
- Meeting Participation
- Draft Task 2 & 3 Report Submitted
- Comments Incorporated in the Draft Final
- Outline Draft Final Report Submitted (Includes Tasks 4 & 5)

Task 2 & 3 Report: Goal

To Provide Data & Methodologies
for Assessing Non-Burning Alternatives,
Identifying Accountability Mechanisms and
Non-Statutory Administrative Barriers

Task 2 & 3 Report: Contents

- Chapter 6: Criteria for Selecting Non-Burning Alternatives
  - ♦ Supports Non-Burning Alternatives Analysis
  - ♦ Addresses Applicability of Alternatives
  - ♦ Provides Case Studies

Task 2 & 3 Report: Contents

- Chapter 6: Criteria for Selecting Non-Burn Alts
- Summary

- 2 Case Studies (Rice and Grass Seed)
- Fig 6-1 Cost Curve Rice
- Fig 6-2 Cost Curve Grass Seed
- Table 6-1 Rice Straw Impacts of Using Alts
- Table 6-2 Grass Seed Impacts of Using Alts

Task 2 & 3 Report: Contents

- Chapter 7: Accountability Mechanisms
  - Identifies Mechanisms
  - Groups into Categories
  - Defines Accountability Level
  - Provides Summary and Discussion of the Accountability Mechanisms in Place in the 15 Western States

Task 2 & 3 Report: Contents

- Chapter 7: Accountability Mechanisms
- Summary:
  - Extensive Review of Relevant Statutes (all 15 states)
  - Table 7-1: 17 Mechanisms Identified
  - Comprehensive Documentation Provided (Table 7-1a)
  - Table 7-2: 5 Categories Def. by Accountability Level
  - Presence/Absence of various mechanisms appears to determine whether alternatives are in place or in use.

Task 2 & 3 Report: Contents

- Chapter 8: Non-Statutory Administrative Barriers
  - Identifies General Categories
  - Defines Each Category
  - Provides a Summary and Discussion for the Non-Statutory Administrative Barriers Currently In Place in the 15 Western States

Task 2 & 3 Report: Contents

- Chapter 8: Non-Statutory Administrative Barriers
- Summary:
  - Table 8-1: 6 General Categories Identified
  - Each Category is Defined by Impact or Result
  - 12 Barriers Identified to date
  - Fall into 3 of the General Categories Identified
  - Economic, Geographic, and Political/Cultural

Draft Final Report: Outline

- Task 1 Report: Sects 1, 2, 3, 4 and 5
- Task 2 & 3 Report: Sects 6, 7, 8 & 9
  - ♦ Case Studies (3 proposed)
  - ♦ Developing Impl. Plan Strategy
  - ♦ Impl. Plan Discussion Agency Roles & Resp. etc
  - ♦ Discussion of Strategies to Inc. Stakeholder Involv.
  - ♦ Summary & Conclusions

Draft Final Report: Outline Cont'd

- Acronyms
- References
- Appendices
  - ♦ Crop Production Spreadsheets
  - ♦ Crop Production Maps
  - ♦ Ag Burning Spreadsheets & Maps
  - ♦ List of Survey Participants & Contact Info

Timeline for Project

- Task 2/3 Report: Submitted
- Comments on 2/3 Report: Due 11/30
- Draft Final: To Be Submitted 12/14
- Comments on Draft Final: Due 12/28
- Final Report: Due 1/4/02

Presentation Notes:

Task 1 Report (Submitted June, 2001) is available on FEJF's Website
Ag Burning Database, what crops are burned, where, and when.

Task 2 & 3 Report will be posted on FEJF's website shortly.

A similar subjective rating analysis ERG used to rate alternatives was developed from surveys and communications asked of folks in the field, coupled with a finalized "assessment" of the collected information. Regulatory structures and agricultural communities were surveyed, not stakeholders such as health departments and the general public.

Accountability Mechanisms- State regulatory framework was researched for reference to both agricultural burning and open burning. The presence or absences of accountability

mechanisms are related to what alternatives are utilized and whether they are utilized or not.

Some barriers: Accountability at state or local levels
Accountability not enforced
No Accountability – Not important, No burning, etc.
No Assessment Process
No Emissions Tracking/Impacts not addressed
Issuance of Permits/ No Accountability/ No specific activity data

Bottom Line: Use of Non-Burning Alternatives is more expensive, and is therefore less feasible.

Case Studies (No-Charge): Such as: Non Statutory administrative barriers that prevent non-burning agricultural alternatives to be utilized, even though regulatory framework and money is there for a grower to utilize the alternatives.

Timeline presented in Karlyn's presentation will change, subject to revision.

Alternatives Discussion:

Bob Palzer recommends ways to increase involvement of ag stakeholders, perhaps by doing some PR work with other entities, such as environmental groups.
Larry Biland recommends creating an angle that will encourage economic growth to the farmer, utilizing an alternative will mean more dollars per acre.
Beth, Francis: Need to create a centralized and cohesive strategy that will make the American Farm Bureau, Beef Association, etc. a more integral part of the process of making recommendation and encouraging farmers to utilize burning alternatives.

Bob: Perhaps some case studies of marketing of stubble (international trade or other) that would take agricultural bi-products of a grower's hands so it wouldn't have to be burnt.

Basic Smoke Management Program TT – Scott Kuehn

Elements of a BSMP has been available for review, however there have not been any comments received to date. The final report with recommended components of a basic smoke management program is available on the FEJF website, although the final product can be modified if necessary. The final report is not available for the Tribal Basic Smoke Management Program Recommendations. Final reports need to incorporate agriculture in its recommendations, and may change slightly as elements of an Enhanced Smoke Management Program are recommended. SMP surveys were also conducted with states outside of the WRAP regions, so that elements from other programs could be incorporated into FEJF recommendations.

Tasks for BSMP TT: ITEP needs a scope of work for collection of tribal programs from cooperative tribal entities.

Alternatives to Wildland Burning – Pete Lahm

Request for Proposal

> Contractor: Jones and Stokes, including Barry Callenburger
> Final contract, bids were higher than budget. Negotiations are currently on the table. This contractor was most qualified to do the work, and best supported the needs of the forum. Web based system; 6-month turn around for Proposal completion, negotiated price is 146K. RFP includes all WRAP states.

Prescribed Fire Program Assessment TT – Suraj and Francis

Request for Proposal w/ 3 Phases

> Phase 1
>
> > Review planning and operational plans
> > (Tribal/State/Federal/Local/Private) to evaluate whether smoke effects are being evaluated using review criteria developed by FEJF.
>
> Phase 2
>
> > Evaluation of Smoke effects guidance
>
> Phase 3
>
> > Recommendation of how land managers can improve how smoke effects can be better incorporated into land management planning documents in support of regional haze SIPs.

Contractor – ENTRANCO - Jim Web, John Core 100K –Familiar with fire planning processes designed to minimize smoke effects.

Workshop Announcement:

The purpose of the workshop is to: 1) Provide background information on NEPA, 2) Instruct State air quality staff on how to effectively review/comment on NEPA documents, and 3) Assist the FEJF in the development of recommendations for improving how smoke effects are incorporated into planning documents in support of regional haze SIPs.

> Feb 26, 27 Boise ID WESTAR/FEJF NEPA Workshop

Day 1 – Presentations from FLM's of how they do their NEPA analysis. Examples of how smoke effects are currently being evaluated in both programmatic and project level plans.

Day 2- Break out discussions with a goal of streamlining how smoke effects are being incorporated into programmatic and project level plans. Suggestions will be used by the FEJF to develop recommendations on how to improve the way smoke effects are being evaluated in planning documents in support of regional haze SIPs.

Public Education and Outreach – Larry Biland

Comments Welcome, Draft flyer is still out for review

Enhanced Smoke Management Program TT - Mike Ziolko

Announcements

- Draft Reports are available for review, and available on FEJF's Website
- Ann Acheson has signed on to be the new ESMP's Co-Chair
- Rebecca Reynolds has been hired on as facilitator to assist the task team to develop its deliverables.
- 125 K allocated (gave 25K up to Prescribed Fire Assessment)

Ag representation badly needed… may have Greg Josten SD, Dave Jones CA.

Final Report to be delivered, June-July 2002

Report will include:

- Develop Annual Emission Goal Methodology
- Criteria for Enhanced Smoke Management Program
- Elements of and Enhanced Smoke Management Program

Breakout Groups

Emissions TT

Topics for Discussion

1. Rx Emissions Factors
2. Rx Phase II and Emissions Inventory
3. 96 Phase I Ag Emissions Inventory
4. 96 Phase II Ag Emissions Inventory
5. 2018 General Approach for both Rx and Ag

Topic #1. Prescribed Fire Emissions Factors – Straw Man Table

Overview: Started with OAQPS Emissions factors, where this data wasn't available, ETT relied on AP42. Strawman Prescribed fire emissions factors are for both broadcast and piled prescribed fires, using OAQPS when available. These emissions factors are practically twice as high as those used for Wildfire emissions factors.

Problem: Why are these numbers twice as high?
Two arguments:

1) Wildfire was dominated on flaming side by lighter fuels, no smoldering, higher emissions
2) Prescribed fire (not piled) dominated by timber, smoldering, higher emissions
Three Options for resolution:

1) Composite emissions factor for all fuels, using AP-42 where possible, OAQPS where needed (as demonstrated in the Straw Man Table)
2) Different emissions factors for timber/brush/grass
3) Use OAQPS emissions factors across the board for both prescribed fire and wildfire,

Consensus - Go with Option #3: Makes sense, OAQPS emissions factors are averaged based on both wildfire and prescribed fire emissions. Need to reference emissions factors used in 95 to those OAQPS averages we're using for 96.

Consensus - Piled emissions factors, derived from AP-42 emissions factors for piles adjusted by OAQPS empirical relationships, proposed in the straw man are ok.

Topic #3 & 4) 96 Phase I and II Emissions Inventory – Ag Emissions

ERG is going to need a month and a half longer to complete Phase 1 of the Agricultural Activity Inventory. BEIS inventory will be used to provide more spatially resolved (4km) detail with better resolution than at county level. To date, there is virtually no Phase1 (occurring at a specific location and time and a specific quantity) data for agricultural burning. The activity data provided thus far provide no actual activity data, and can only be used to make generalized assumptions about the county-specific burning activities.

It may be possible to use data from ERG to locate crops types and seasonality of burning habits for the various crops and tie in with a 1997 Census land use map to gap fill across the WRAP, thus developing a Phase II dataset. This will not provide spatial or temporal resolution by any means, but will provide a means to consistently cover the locations and types of crops that are burned throughout the west. This data could not be used by the modelers for data calibration, but could be used to develop 2018 projections.

ETT Decision - Exclude Ag and prescribed fire Phase II. Build Ag EI's anyway to form the basis for the future EI.

Mike George (MG) (Co-Chair, Technical Oversight Committee) on the Use of the 1996 Modeling Results: 1996 will be used to verify the model...period. This is the modeler's mindset. Future inventories have to be linked to EI's used for the 1996 modeling analysis. There will be an element of source apportionment done with the 1996 modeling analysis. There are still results in the modeling that we will have to deal with in the context of making policy.

PL – Section 309 prescribes the controls for sources.

MG – if the FEJF's EI and subsequent modeling doesn't show that burning on Ag lands contributes to regional haze, then perhaps the WRAPs policies will reflect this and Ag burning activities will have less regulatory restrictions.

Make a baseline inventory for Ag, make a forecasted inventory for Ag, and use an emissions budget approach to keep emissions from burning on Ag land under the umbrella of regional haze regulations (along with prescribed fire).

By April 2002, modelers supposed to be done with 309 and move on to 308.

Proposed Concepts for Developing Future 2018 EI's for Fire Emissions Sources:

Prescribed fire – use 2015 FEP data developed in 1995.
Ag fire – use real data burning tendencies, use surrogate data across the region

ERG will continue to complete the contract with augmentation, and use the data for the 2018 projections.

1) Agricultural fire, would we be comfortable using some of the real data, without tying into any of the anecdotal data. Ground the 1996 baseline inventory with the BEIS or Census data.

2) Prescribed fire, using the fire emissions project data missing Montana, north and south Dakota, Idaho. Would a reasonable approach be to use the project data on a fifty km basis by season to have this data converted and provided to the modelers as a first cut. Yes. The next step is to data fill, and to further refine the data to less than 50 km data.

Topic #5 A) A comparison between acres burned in 1989 compared to the A dataset prescribed fire demonstrates variability

Wednesday, December 5, 2001

Agricultural Outreach Discussion

Purpose: to involve the agricultural communities to provide expert insight into each of the different task team deliverables and final FEJF products.

Possible Outreach Opportunities

- Use FEJF Flyer – add to the existing flyer and pass along to WRAP's Communication Committee.

- Also perhaps a pamphlet to distribute via state AQD Air Regulators

- Direct Outreach – FEJF member communication with the agricultural community.

Rick Sprott has discussions with farmers in UT. Beth Sauerhaft recommends contacting the National Association of Conservation Districts at the national level, and then at the state level as well. The Soil and Water Conservation Society (A more scientific presentation is recommended). Agricultural universities could put out pamphlets and handouts to students. Jeff Schmidt recommends 1) NRCS public affairs office in each state, and 2) working through the **Farm Bureaus**. Additionally, each state's Department of Agriculture. Perhaps the Cattleman's, Seedgrower's or Livestock Associations. Carl Gossard recommends the Society for Range Management. Bruce Oulrey includes the contacting the California Ag Commissioners.

Draft outreach framework should include deadlines and schedules of Policies and Rule requirements. Outreach information should include: information on RHR and timelines, WRAP information (who, what, when and why), what WRAP Forums maybe of interest, and how to get involved with WRAP/State Forums. **Perhaps include some synopsis on the website of hot topics and what policies might mean to agriculture or wildland fire and emphasize opportunities for involvement in each of the hot topic arenas (website .pdf hotsheet)** Mike Ziolko would appreciate some help in getting out some information about the work of the Enhanced Smoke Management Task Team to the Ag community.

Dave Randall would like to see a short (40 word) write-up that would direct any interested parties to visit FEJF's website.

In Summary, message should include:

- Deadlines
- Rule Requirements
- Opportunities for Involvement
- Newsletter Input
- Short Sound Bite
- Specific Participation
- Review of Reports

Breakout Sessions

Task Team Reports -

Public Outreach –

FEFJ flyer, call Larry at home with comments.
Need some photos of agricultural burns, and agriculture isn't mentioned in the first paragraph - perhaps it should be… yes, definitely.

Second flyer specifically for Ag will be needed.
(Engage Communications Committed in final color printing).

Next FEJF Meeting February 6-7, 2002, Tucson, AZ
Next Enhanced Smoke Management Program Meeting February 5, Tucson, AZ

WRAP Meeting Tentatively Planned May 15,16,17 in Montana or Idaho.

Emissions Task Team

Emissions factors- The same emissions factor will be used for both prescribed fire (broadcast) and wildfire. Prescribed fire piles will be given a unique empirically derived emission factor from the OAQPS factors. The OAQPS emissions factors are averaged between prescribed and wildfires. This will double wildfire emissions from what they were when AP-42 emissions factors were being used.

Phase I prescribed fire wildlands - Phase I is nearing completion. A draft inventory of prescribed fire activity will go out to states via the WRAP Emissions Forum for QA/QC. After receipt, states and agencies will have a two-week time period to ensure the activity data is sound.

Phase II prescribed fire for wildlands- Not moving forward with this dataset, because the data did not meet the temporal and spatial resolution required for modeling. The primary

purpose of the 96 model runs is for verification, based on real emissions. It's been decided that these emissions from Phase II data may distort the model calibration, and should not be submitted for modeling. The data may be used however for 2018 projection purposes. Known gaps in data (private rangelands_ will be estimated where possible and previous prescribed fire activity estimates will be referenced in final report.

Agricultural Burning – There is no data that meets temporal and spatial modeling requirements. Since, the modelers don't want any spurious data, the recommendation to the modeling forum will be not to include any agricultural emissions for modeling verification. Ag data will be used in root development of the 2018 projections.

Discussion: Lets throw out prescribed fire data all together, since we don't have much rx for most states, and we don't have anything for agricultural burning. It is however difficult to turn our backs on good data, especially since it won't be used for apportionment purposes. That being said, there should be a very, very, strong caveat sent out with the RX Phase I prescribed fire emissions inventory that indicates that the emissions inventory is woefully incomplete.

Consensus – Move forward with the wildfire emissions inventory with the new emissions factors, and phase I of the prescribed fire emissions inventory.

2018 Projections for Agricultural burning (with and without controls) and for Prescribed fire (with and without controls) RFP Development.

> Draft RFP enables a contractor to take the Fire Emissions Project Dataset, with controls built in. Does not include MT, ND, SD. Next step would be to augment or gap fill those states. Also use GIS to get a little bit better resolution (<50 km). For agricultural burning, utilize ERG county wide seasonal data for base data and verify with anecdotal review. For both datasets, the initial submittal for the base run would be county level data with gaps. $125 K earmarked – Follow-up submittal will breakdown data spatially and temporally. The contract will not be open for bid. Instead the work will be solicited to a select few individual contractors.

Consensus with RFP

ERG contract for Wildland Burning Alternatives: ERG wants more money (10K). 5k was for in-house presentations and travel expenses (out of scope). The other 5K they are claiming is apparently for out of scope work emissions development work, although bottom line is that they will be held for any deliverables that were part of the original contract. They need 60 more days and possibly 9k to finish their work – Consensus on FEJF Co-Chair negotiating final amount for out-of-scope payment.

Other Ag Updates: Bryan Jenkens is working on emissions factors for agricultural products, should be done soon.