

## EMISSIONS/ASSESSMENT TASK TEAM MEETING NOTES

December 15, 1999

February 9, 2000

Hotel Lusso, Spokane, WA

NRCS Conf. Room, Phoenix, AZ

### Emissions Estimation (3.2.2.1)

#### Participants –

##### Spokane

John Veranth  
Rick Smedley  
Mark Fitch  
Mike Zoilko  
James Scarborough  
Bryan Jenkins  
Dave Randall  
Pete Lahm  
Wei-Min Hao  
Bob Raisch

##### Phoenix

Jim Russell  
Patti Hiram  
Mark Fitch  
Mike George  
David Randall  
Pete Lahm  
Bob Raisch

#### Schedule –

Emails out – 1<sup>st</sup> week of Jan 2000  
Lit search – Feb 1, 2000  
Final scope of work – Early Jan 2000  
ID survey participants – End Jan 2000  
Design survey – mid Feb 2000  
Contractor – mid Feb 2000  
Review of survey – late Feb 2000  
Conduct survey – March 2000  
Presentation of survey results – April 2000  
Workshop – May 2000

#### Strategy –

focus on initial information gathering task (\$15K)

Literature search on available emission estimation techniques. – FEJF tasks

EMAIL request of FEJF and outer circle to request suggestions for survey participants

Forum IDs parties from whom to get information.

ALSO USE THESE RESOURCES TO ID survey participants contacts – FEJF task

Start with EPA report on Wildlands.

Go on to WESTAR report.

ID parties in affected regions – tracking the use of burning/EI – FORUM TASK

NRCS, Ag Research service

USFS

AG – CARB, local AQ mgt districts, AG commissioners, Cooperative extensions

WA – Dept of Ecology,

OR – Dept of Ag, dept of environment

Universities/academic component

Tribes, BIAID data gaps (tribal).

Look to piggy back our survey needs on BSMP survey.

Emissions Task Team writes survey – Forum approves by consensus.

Assessment and Information tools –

AP-42 fire emissions estimation methods for fuels combustion

Other state forestry and air quality agencies and USFS (or other Federal Land Manager) methods.

Other emissions information from agencies responsible for SMPs.

Other state air quality regulatory agency methods for ag burning emissions (e.g., CARB, OR, and WA).

Existing tracking systems

Survey information (to gather information and institutional needs).

FEJF Tasks –

Randall to call Jay Penner re: involvement on the Task Team (or Roland Schirmann).

WSU to conduct survey? Randall to talk with Fred Greef and Mark Schaaf about how to do this.

Adjunct to Modeling and Emissions Forums' meeting (mid March) – Start digging into emissions/assessment.

Literature search

Charge Pete's email list with providing emission estimation methodologies to the Task Team. (B. Jenkins to draft email for this request). Email to request reference list. Step two will be to request specific documents that FEJF doesn't have.

Missoula lab – summary of new emission estimation methods (attach publications). (This to be done by Wei-Min Hao.) – Pete

White paper for Emission Inventories for SIP Development (Sandberg/Peterson)  
(M. Fitch to review and summarize.)

Methodologies used to build Assessment (P. Lahm)

Methods of Colin Hardy's modification of Assessment (P. Lahm)

AP-42 (D. Randall)

NETS technique (M. Fitch/P. Lahm)

Summary of emissions estimation models (e.g., FOFEM) (CONSUME) (P. Lahm survey, Mark Schaaf?) – James Scarborough

EPA paper (passed around at meeting)??  
WESTAR paper?? (AG) - DMR

ID entities to be surveyed

Design survey

Fill out survey with appropriate content

Scope of Work for Contractor –

- Review of draft survey by contractor
- Pilot test of survey (limited states/responses)
- Contractor executes survey
  - Written survey and mailed out
  - Follow up by phone/letter
- Contractor compiles survey data
  - Data entry
  - Electronic capture
- Contractor prepares report that presents finding.

Goals of Literature Review Task and Survey Task

- Information collection (for emission factors, fire activity data gathering, and emission calculation)
- SMP EI's
- Emission estimation (for – EC2.5, OC2.5, PM2.5, PM10, NO<sub>x</sub>, VOC, SO<sub>2</sub>, NH<sub>3</sub>, CO(2)) and activity tracking techniques

- Prepare for Workshop(s)
- Allow for section of technical tools to develop emission inventories (1996 and future years)

## Other Emissions Task Team Issues -

Need for back of the envelope estimate of AG emissions (for Alternatives group).

EPA study on methane sources (worth finding – NET/TRENDS study).

Add this data gathering task to Task 1 of Alternatives contract.

Focus on activity data as a part of this effort.

Piggy back survey questions onto BSMP survey

What techniques are being used in inventories and SMP in Western US

WESTAR has information

Smoke management program (EPA through ECR) did not deal with EI issues

## Survey Content –

Name/agency/emails/phone numbers, etc.

Focus on methodologies (not data gathering)

Survey design – wildland fires, prescribed fires, natural prescribed fires, ag fires

Est. time – 30 minutes

Best if done electronically (at least provide as an option)

OPTION – post on internet site and invite participation

How many surveys do we want to collect (AND how many to we send out to get that amount)?

## Topics

Survey addresses wildland fire and agricultural fire

Do you maintain a tracking system (for acres burned, for emissions)

Quantity of burning (acres)

Fuel type (e.g., grass, ponderosa pine)

Fuel loading (e.g., lbs/acre)

Percentage of fuel burned

Fuel moisture (“crackle test”)

Pollutants collected

Ignition method (backing, heading, mass, pile stoking, chunking)

Structure composition (e.g., AG – spread, windrows, FOR – piles, activity, scatter)

Temporal resolution

Spatial resolution

What approach do they use for estimating emissions (e.g., emission factors, emission models, remote sensing).

What system do they use to calculate their emission estimates (data base, GIS system, spreadsheet)

What activity data, fuels loading, other operative factors do you collect?

Provide meta-data/process data collected to estimate emissions.

How do you collect spatial and temporal resolution data?

What methods are you aware of that you are not using and why?  
What approach do they use for estimating activities (e.g., acres burned, )  
What confidence do you have in your methodologies? Why?  
Have you considered alternative techniques?  
Do you keep track of emission reductions techniques that are employed in the field?  
Do you quantify emission reductions based on practices employed to reduce emissions? Assume no (except CA and NV – why not).  
Ask willingness to participate in workshop.

**SURVEY BUILDING – TASK TEAM TO HAVE BIWEEKLY CONFERENCE CALLS. DMR TO INITIATE CONFERENCE CALL TO BUILD SURVEY WITHIN TWO WEEKS.**

#### Emission Inventories Deliverables

1992 Episodic Inventory for model calibration.

- Cull our wildfire incidents from 1992 (all available data).
- Squeeze specifics out of modeling (include in letter to modeling forum)
- Prescribed fires
- Agriculture

#### Workshop Objectives

Develop basic parameters (minimum requests) for estimating emissions – use as default.

#### Baseline Inventory (1996/1999)

##### Regional –

- NETS data from Emissions Forum – revise as necessary by 11/98
- Alter Lahm's 1995 inventory (prescribed fire only) into 1996 inventory

##### Ag – Direct survey of states.

- NETS Data
- Run inventory to Ag Air Quality Task Force
- Integrate methodology derived in May workshop.

##### Wildfire –

- WAG on the emission factor side.
- Good data on the activity side
- Vegetation variable data quality