

PHASE 3/4 TECHNICAL WORKSHOP #2 - 11/01-02/2005

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On November 1-2, 2005 in San Diego, CA, the Phase 3/4 Task Team (Task Team) will host a 1-½ day technical workshop as a critical piece of the project to build the Phase 4 (2018 projection year) planning emission inventories for the Fire Emissions Joint Forum (FEJF) and the WRAP. The workshop will be tailored to state and tribal smoke program managers. This memorandum presents a Purpose Statement for the workshop, a preliminary agenda for the workshop, and proposes a candidate list for participation at the workshop. While in-person participation at the workshop is preferred, participation through telephone conferencing will be available.

All participants in the technical workshop will be expected to remain dedicated to the development of the WRAP's 2018 projection inventories for fire. While participants may work during the technical workshop to incorporate known or anticipated land- or smoke-management objectives into the projection inventories, the technical workshop is not the appropriate forum to advance these objectives as policy statements for an agency, state, Tribe, or the WRAP region as a whole.

Purpose Statement.

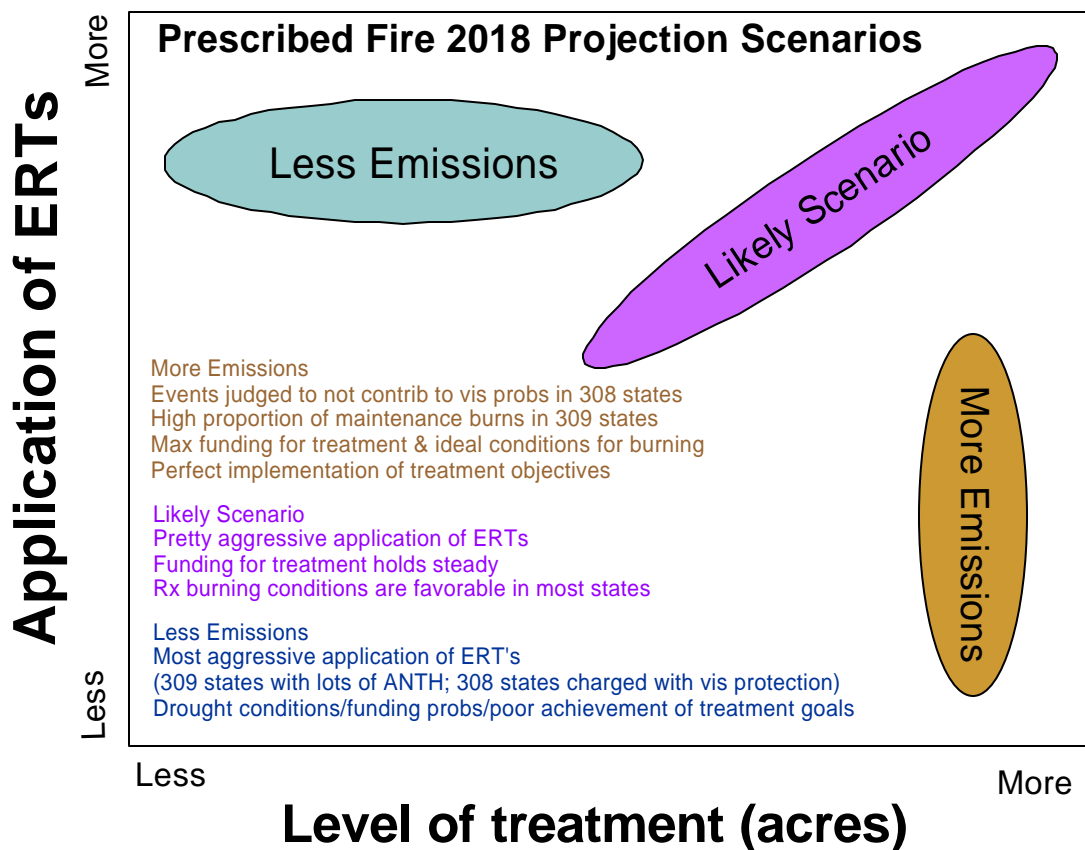
The 1.5-day technical workshop will have three primary objectives, all related to the development of the projection year (2018) emission inventories for fire:

1. Present results of the Quality Control Binder [QC Binder] review process and discuss actions to accommodate feedback on the QC Binders.
2. Arrive at technical methods to accommodate emission reduction techniques (ERTs) in the projection inventories;
3. Roll out the Beta Version of the fire calculation tool, designed to facilitate relatively expedient production of event-based fire emission inventories based on Smoke Management Program-defined fire projection scenarios.

Projection Rx Inventory

The baseline prescribed fire inventory will serve as the starting place for the prescribed fire projection inventories. The FEJF’s Phase 3/ 4 Task Team (Task Team) and the Project Team has worked through a process to develop the adjustment scalars and associated technical justifications to devise projected burning levels from baseline burning levels. Three projection scenarios will be developed (see Figure 1), the “Less Emissions,” “Likely,” and “More Emissions” scenarios.

Figure 1 – Prescribed Fire 2018 Projection Scenarios



Projected Fire Activity Rates. Per the decision made at the August 10-11, 2005 technical workshop and as a first cut to develop 2018 projections for prescribed fire (Rx) and Wildland Fire Use (WFU) , the Project Team prepared a PowerPoint presentation and associated EXCEL spreadsheet for the Interagency Fuels Committee to solicit federal agency-specific projection scalars (or projected activity rates). This information will be applied to fire activity rates for the baseline period (2000-2004) and the resulting fire projection estimates will be presented to appropriate agencies (e.g., state/Tribal smoke

management programs, state forestry personnel, federal land managers) in the form of a Quality Control Binder (QC Binder).

For the technical workshop, feedback from the review of the QC Binder will be compiled and presented to the workshop participants. Participants will be expected to agree to a method to accommodate QC Binder feedback (e.g., strict application of “global” rules, data/feedback hierarchy, case-by-case data integration). The Project Team will use this method to finalize the projected activity rates for Rx fire (broadcast and piles) and WFU.

ERT Application Rules. A critical aspect of the projection inventories will be quantitatively accounting for emission reduction effects associated with the implementation of Emission Reduction Techniques (ERT) to the controllable portion of anthropogenic fire events. Materials recently prepared by the ERT Task Team will be used by the Project Team to develop Strawman rules to apply to the projection inventories to quantitatively account for ERTs (and/or combinations of ERT’s) commonly applied to prescribed fire events in the Western U.S. The ERT application rules will need to rely on information available in the prescribed fire data (e.g., fuel arrangement [broadcast versus pile], NFDRS fuel model code, etc.). Participants in the technical workshop will be expected to consider the proposed ERT application rules and either accept the rules as proposed or propose specific revisions to the ERT application.

Fire Calculation Tool

The Fire Calculation Tool (Microsoft EXCEL 2003) will generate an event-level prescribed burning emission inventory given estimates of future levels of burning. The calculation tool will be designed for use by experts in fire and smoke management and be distributed to smoke management program managers of WRAP states and Tribes.

The Fire Calculation Tool will provide a straightforward method to input levels of prescribed burning by fuel class, to characterize the application of ERTs, and to estimate anthropogenic and controllable emissions due to fire sources in a particular smoke management program administrative unit.

The proposed tool will have two major components: emission calculation and event-level allocation. The prescribed fire emission calculator will be based on the current documented WRAP state-of-the-science and will have the following elements:

- The fundamental calculation formula as an extension to the WRAP 2002 Phase II method:
Area burned x Fuel loading x Percent reductions x Emission factor
- Fuel loading in ton per acre will be looked up (based on fuel model) from the existing Phase II prescribed fire, agricultural burning, and rangeland burning fuel loading look-up tables.

- Emission factors in pound per ton will be looked up (based on pile or broadcast burning) from the existing Phase II emission factor look-up tables. Emission factors will be VOC, NO_x, SO₂, PM₁₀, PM_{2.5}, EC, OC, CO, and NH₃.
- Non-burning technique information (if applicable to this emission calculation tool) as a percent of total area treated and fuel consumption as a percent of fuel loading may be input and will be applied to the corresponding activity value. If no value is included, a default of 0 percent reduction will be assumed.
- A look-up table of ERTs (percent emissions eliminated by application ERTs).

The event-level allocation component of the tool will break the emission calculator output into events. The primary function of the tool will be to allocate estimates of levels of burning to nominally sized events, time them to reasonable times of the year, and distribute them to appropriate locations on the landscape.

The Project Team will present the key features and outputs of the Fire Calculation Tool and provide a “look and feel” demonstration.

Preliminary Agenda.

Table 2 (two pages) presents a preliminary agenda for the workshop.

--Table 2--
 WRAP PHASE 3/4 FIRE EMISSION INVENTORY
 TECHNICAL WORKSHOP #2
 San Diego, CA
 November 1-2, 2005

Day	Begin	End	Begin	End		
Day 1	800	815	Overview of Phase 3/4 Project Introductions & Confirm Dial-In Conferencing Discussion of Workshop Organization		800	815
	815	845	Present the context for the meeting: use of planning inventories (modeling and Regional Haze SIPs); how planning inventories fit into WRAP fire policies; desired outcome of the meeting.		815	845
	Projection (2018) Prescribed (Rx) Fire Inventory					
	845	945	Overview of methodology used to derive initial projection scalars and fire activity levels		845	945
	945	1000	----- Break -----		945	1000
	1000	1100	Present data distributed in Projection QC Binders.		1000	1100
	1100	1200	Present compiled feedback from review of Projection QC Binders		1100	1200
	1200	1300	----- Lunch -----		1200	1300
	Option - Breakout or Plenary					
	1300	1500	Group 1 - How to Incorporate QC Binder Feedback & Justifications	Group 2 - How to Incorporate QC Binder Feedback & Justifications	1300	1500
	Could break out based on geographic locations; agency/jurisdiction; other?					
	1500	1515	----- Break -----		1500	1515
	1515	1645	Prepare summary table/list of methods to incorporate QC Binder Feedback & Justifications		1515	1645
	1645	1700	Daily wrap up and prepare for Day 2		1645	1700

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 San Diego, CA
 November 1-2, 2005

Day	Begin	End		Begin	End
Day 2			Emission Reduction Technique (ERT) Application Rules		
	800	815	Introductions & confirm dial-in conferencing.	800	815
	815	1000	Present Strawman ERT Application Rules: background of ERT materials; purpose of ERT Application Rules; how rules will be implemented in database.	815	1000
	1000	1030	Break and Hotel Checkout	1000	1030
	1030	1200	Discuss and develop specific revisions (as necessary) to Strawman ERT Application Rules; prepare final ERT Application Rules.	1015	1200
	1200	1300	Lunch	1200	1300
			Roll-out of Fire Calculation Tool		
	1300	1400	Present key features and outputs of Fire Calculation Tool.	1300	1400
	1400	1430	Look and feel demonstration of Fire Calculation Tool	1400	1430
	1430	1500	Workshop WRAP Up and Next Steps	1430	1500
			Adjourn		

Candidate List of Participants.

The initial candidate list of participants for the Workshop is presented in Table 3.

Table 3 - Candidate List of Participants

State/Tribe/RPO	SMP Air Quality	SMP Wildland Manager	SMP Agriculture
Nevada	Chet Sergent		
Utah	Dave Strohm	Greg Zschaechner	David McNeill
Montana	Bob Habeck	David Grace	James Carlin
New Mexico	Rita Trujillo	Lisa Bye	
Arizona	Corky Martinkovic	Mark Fitch	Randy Sedlacek & Trevor Baggione
Colorado	Coleen Campbell	Marcus Schmidt	
Wyoming	Darla Potter		
Idaho	Dan Redline	David Grace	
Oregon	Brian Finneran	Mike Ziolko	Jeffrey Stocum
Washington	Mark Gray	Darrel Johnston	Karen Wood
North Dakota	Gene Nelson		
South Dakota	Rick Bodicker		
California	Neva Sotolongo	Suraj Ahuja	
Alaska	Joan Hardesty		
Rangeland		Pat Shaver	
Nez Perce			
Coeur d'Alene			
Spirit Lake			
Shoshone & Arapaho			
Mescalero Apache			
Yakama Nation			
Hualapai			
Confederated Salish & Kootenai			
Northern Ute			
White Mountain Apache			
Standing Rock Sioux Tribe			
WRAP		Tom Moore	
WRAP		Ken Cronin	
WRAP		Don Arkell	