

## Fire Emissions Joint Forum

The FEJF projects identified in the existing 2004 WRAP Workplan, and the proposed FEJF projects for the 2005 WRAP Workplan, fall into two main categories:

- 1) The first category provides analyses of technical and policy information needed for further Policy Refinement and Implementation of existing fire policies and programs applicable to the needs of §309 and §308 states.
- 2) The second category addresses existing and future Technical Needs, specifically emissions inventory development and related modeling analyses, fire tracking and emissions data management system, and emission reduction techniques.

The allocation of funding for the 2004 and 2005 FEJF projects is presented below at the end of the FEJF workplan. No additional 2005 funding requested as funding has been reprogrammed from funds allocated to FEJF in the 2004 WRAP Workplan.

### Policy Refinement and Implementation

- FF1 Wildland Fire Effects Trade-Off Model Review - This project was funded and started in 2004. As fire management programs evolve, and as directed by the GCVTC, the applicability of the Wildland Fire Emissions Trade-off Model (FETM) will be reviewed for use in applying existing WRAP policies and guidance pertaining to smoke management of fire. Recommendations from this assessment have possible linkage to both the Enhanced Smoke Management Program and the Annual Emissions Goal policies, both §309 requirements and potentially useful approaches for §308. FETM may also be useful in the development of scenarios for future fire emissions inventories.
- FF"E" Fire Emissions Categorization Guidance: Restoration / Maintenance Difference – This project was funded in 2003 and started in 2004. Develop further user guidance to support the existing WRAP *Policy for Categorizing Fire Emissions*, to refine differences between restoration and maintenance prescribed burns in terms of vegetation structure, fuel loading, fuel size classes, ecosystem function and fire resilience. This project directly supports the “anthropogenic” / “natural” apportionment for implementation of the FTS requirement in §309 as well as similar implementation issues for §308. These categorizations will help support natural and anthropogenic differentiation needed for upcoming WRAP source apportionment efforts.
- FF9 Regional Coordination of Smoke Management Programs – This project was funded in 2003 and will be started in 2005. Regional Coordination is a required element within the ESMP Policy as coordination of burning activity (ranging from passive to active) is critical to avoiding cumulative smoke impacts within and across source types in mandatory Class I areas. Methods for this inter-jurisdictional and regional coordination will need to be developed for wildland and agricultural prescribed fire smoke management programs, information sharing, and public notification. Proposed options

will be developed, and then presented and reviewed at a facilitated conference, to be held in 2005. This project directly supports the implementation of the ESMP requirement in §309 as well as similar implementation issues for §308.

- FF12 Smoke Management Technical and Policy Workshop – Three-day workshop in 2005 to assess technical work to date, §309 policy and SIP implementation and refinement of policy options under §308. This effort will build on the two FEJF workshops held in 2004 to ensure that the needed technical and policy tools are in place for SIP/TIP development under §308. Reprogramming 2004 funding funded this project.

### Technical Needs

- FF“C” 2002 Inventory of Wildfire and Prescribed Fire: Phase I & Phase II - This project was funded and started in 2003 and will continue into late 2004. The 2002 base year inventories will be prepared for the contiguous WRAP region for wildfire, prescribed fire, and wildland fire use on wildland and rangeland. Agricultural burning is also included. Alaska fire emissions may follow the lower states in deliverable schedule due to a different modeling plan as compared to the other WRAP jurisdictions. Phase I developed an initial emission inventory to allow the RMC to initialize the 2002 modeling efforts. Phase II involves further refinement of the Phase I inventory with greater QA/QC and state/tribal review of the fire activity estimates. Data collection to support estimates of private rangeland burning and augmentation of agricultural burning will occur in Phase II.

The use of remote sensing in both the QA/QC and augmentation steps of Phase II will be assessed and is now included with reprogrammed 2004 funding. This remote sensing approach may also allow for new approaches to the Phase III Baseline inventory. The 2002 emission inventory will include “anthropogenic” / “natural” apportionment to support the Attribution of Haze initial report. These projects directly support the modeling for the §308 SIPs/TIPs and should allow for assessment of remote sensing for future inventory development.

At the request of WRAP states, statewide CERR Reports for US EPA will be developed for the Phase II inventory for all fire sources. This will allow WRAP states to submit to US EPA reports, which will partially fulfill the states’ emissions inventory reporting requirements. This portion of the project was funded by reprogramming 2004 funding and will be started in 2004.

- FF6/3 Phase III and Phase IV Inventories & Preliminary Assessment of Apportionment Methods - This project was funded and will be started in 2004. Phase III is for the Baseline Planning Apportionment and create a 2000-2004 representative emissions inventory. Phase IV is for the 2018 Planning Apportionment and will be a 2018 representative inventory. The 2018 inventory may include a range of potential control scenarios and possible ranges of emissions to reflect the high degree of uncertainty in this type of forecast. The inventories will be prepared for the contiguous WRAP region for wildfire, prescribed fire, and wildland fire use on wildland and rangeland. Agricultural

burning is also included. Alaska fire emissions may follow the lower states in deliverable schedule due to a different modeling plan as compared to the other WRAP jurisdictions. This effort also includes categorization of “natural” and “anthropogenic” fire sources. The Attribution of Haze project will be supported by the FEJF through development of technical approaches to apportioning the impact of fire emissions between natural and anthropogenic source categories. These projects directly support the modeling for the §308 SIPs/TIPs.

FF7 2002 National Wildfire Emissions Inventory (separate \$100,000 from OAQPS, national project, WRAP has lead RPO responsibility) - This project was funded and will be started in 2004. The 2002 emissions inventory for wildfire will be developed through an inter-RPO effort funded by EPA, based on a scope of work discussed amongst the RPOs. The FEJF has lead RPO responsibilities for this project. These projects directly support the modeling for the §308 SIPs/TIPs.

Included in the RFP was a list of optional tasks that may allow for inter-RPO collaboration such as 2002 Wildfire Inventory (Canada & Mexico), Representative Base Year Inventories (current conditions & 2018), Software Development for Location Conversion (STR to lat./long.), and 2002 Prescribed Fire Inventory. This list of optional projects that the FEJF may contribute to was funded by reprogramming 2004 funding and will be started in 2004. These projects directly support the modeling needs for the §308 SIPs/TIPs.

FF4 Regional Modeling Center Support - This project was funded in 2004 and will be utilized as the need arises. Provide support to the Regional Modeling Center to assess the impact of various fire emissions scenarios, using modeling runs conducted by the RMC. Support may also be required for fire emissions QA and troubleshooting, which has historically been absorbed by other FEJF projects. This project directly supports the model assessment / sensitivity runs resulting in refinement of the modeling for the §308 SIPs/TIPs.

FF“B” Model Assessment / Sensitivity Runs – This project was funded in 2003 and will be started in 2004. Independent assessment of fire emissions sensitivity runs to be conducted by the RMC. The assessment will address emissions inventory issues, pollutant speciation, plume height approach, variations in total net emissions, and other key assumed parameters in the context of the regional model results. This project directly supports refinement of the modeling for the §308 SIPs/TIPs.

FF“D” Sensitivity Runs Phase II: Regional & Mesoscale – This project was funded in 2003 and will be started after completion of the initial Model Assessment/Sensitivity Runs are complete. Conduct an air quality source/impact analysis with two scales of modeling: regional and mesoscale. The regional-scale modeling features chemistry capacity with regional and longer temporal scales. The meso-scale modeling features complex terrain capacity with smaller geographic and temporal scales. Together, these two approaches will provide a comprehensive analysis of potential de minimus levels to assist states and tribes with maximizing efficiency for fire tracking, public notification and regional

coordination. This project directly supports the implementation of the FTS and ESMP requirements in §309 as well as similar implementation issues for §308.

- FF5 Fire Tracking System / Emissions Data Management System – Portions of this project were funded prior to 2002 and in 2004 with additional 2004 funding being reprogrammed to this project and will be started in 2005. Evaluation of existing fire emissions inventory systems to develop a Fire Tracking System within, or bridged to, the WRAP EDMS as identified in the Fire Tracking System policy to calculate emissions from fire activity data. Develop user guidance to support the FTS policy identifying a specific format for the EDMS, parameters, defaults, structure and methods of emission calculation for required and optional FTS elements. This project directly supports the implementation of the FTS requirements in §309 as well as similar implementation issues for §308.
- FF8 Quantitative Methods for Calculating Emissions Benefits of Emissions Reduction Techniques to Support Implementation of the AEG Policy – This project was funded and started in 2003 with the completion of an annotated bibliography on emission reduction techniques completed in 2004. This project will continue in 2004 and 2005. Develop technical guidance on ERTs applicable for wildland, rangeland, and agricultural burning for use in the establishment and support of AEGs. The guidance will include applicability criteria and calculation techniques by vegetation/crop type, emission factors, economics, and emissions averted including identification of new ERTs. Develop user guidance to support the tracking of ERTs (specific format, parameters, structure), which is an optional FTS Policy element. These projects directly support the Annual Emissions Goal reporting requirement in §309 as well as similar implementation issues for §308.

Code	Project Title	Obligated	Funding*
<b><i>Policy Refinement &amp; Implementation</i></b>			
FF1	Wildland Fire Effects Trade-Off Model Review	15,000	
FF"E"	Fire Emissions Categorization Guidance: Restoration / Maintenance Difference		10,000
FF9	Regional Coordination of Smoke Management Programs		25,000
FF12	Smoke Management Technical and Policy Workshop		25,000
<b><i>Technical Needs</i></b>			
FF"C"	2002 Inventory of Wildfire and Prescribed Fire: Phase I & Phase II	142,464 (Phase I)	167,000 (Phase II)
FF6/3	Phase III & Phase IV Inventories & Preliminary Assessment of Apportionment Methods		170,000
FF7	2002 National Wildfire Emissions Inventory (Inter-RPO)	100,000	26,500
FF4	Regional Modeling Center Support		25,000
FF"B"	Model Assessment / Sensitivity Runs	42,650	
FF"D"	Sensitivity Runs Phase II: Regional & Mesoscale		100,000
FF5	Fire Tracking System / Emissions Data Management System		40,000
FF8	Quantitative Methods for Calculating Emissions Benefits of ERTs to Support Implementation of the AEG Policy		75,000

\*Funding reprogrammed from funds allocated to FEJF in 2004 Workplan. No additional 2005 funding requested.

