

**Western Regional Air Partnership
2003 Work Plan**

**Adopted by the WRAP Board
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EXECUTIVE SUMMARY

The WRAP is reaching a turning point in 2003. Most major technical and policy products needed for Section 309 SIPs have been completed, products for Section 308 SIPs must now be more directly addressed, and these products must complement the longer term (i.e., 2008) needs for Section 309 SIP revisions. As the WRAP turns its attention to longer term and Section 308 requirements, its planning process is made more complicated by the recent decision of the U.S. Court of Appeals for the District of Columbia Circuit in the case of the American Corn Growers Association versus the U.S. Environmental Protection Agency. This decision creates more uncertainty as to how states will determine which BART-eligible sources should be subject to BART and how the visibility benefits of BART should be determined. It also raises uncertainty about when §308 SIPs will be due, which may be earlier than originally planned by some states. Finally, the state of Alaska has joined the WRAP, which adds considerable complexity through additional data and analytical requirements and the consideration of another 200 tribes. A map of the WRAP region and its members is shown in **Figure 1**.

All major WRAP products needed for §309 SIPs should be completed by the end of 2002. Many of these products, the efforts behind them, and the knowledge garnered from them will also benefit the §308 SIP development process. A summary of the major §309 products is shown in **Table 1**. Activities and projects planned for 2003 fall into three categories: (1) miscellaneous products needed to complete the §309 SIPs but not necessarily critical to making decisions on §309 SIP submittals or the strategies therein; (2) new projects and extensions of existing projects intended to support §308 SIPs and the longer-term needs of §309 SIPs; and (3) efforts needed to evaluate haze and develop a SIP for Alaska. Major activities in each of these categories are summarized in **Tables 2, 3, and 4**. A list of all the activities to be funded by the grant for this work plan is provided in the budget in **Table 5**. (Note, many activities conducted by the WRAP do not appear as line items but are included within staff salaries or provided in-kind through member participation.)

A long-term conceptual schedule for WRAP activities is shown in **Table 6**. The schedule assumes that §308 SIPs would be due by the end of 2007. This end date is based on recent indications by EPA intended to promulgate health-based PM_{2.5} SIPs as soon as possible while providing the maximum opportunity to harmonize their development with regional haze SIPs.

Some organizational changes within the WRAP since the last work plan update include the addition of Alaska, the addition of a Dust Emissions Joint Forum, the transition of the Mobile Sources Joint Forum to the Mobile Sources Forum (now a policy forum under the Initiatives Oversight Committee), and the transition of the Northern Air Managers Committee to the Air Managers Committee (which now includes state and tribal air directors from the entire WRAP region). Finally, a work group has been formed under the Air Managers Committee called the STIP-II Work Group comprised of SIP writers to update the state and tribal implementation plan templates and perform other work needed to ensure that WRAP products and services are as helpful as possible to the process of adopting §309 SIPs and TIPS. Many of these changes are shown in the organizational chart in **Figure 2**.

Four full time staff members have been added to facilitate WRAP activities. The first position assists the state caucus of the Air Managers Committee, the second assists the tribal caucus of the Air Managers Committee, the third assists the Technical Oversight Committee and its associated forums, and the fourth assists the Initiatives Oversight Committee and its associated forums.

Finally, the WRAP Web site is being updated to accommodate the growing number of WRAP products and interested parties, including the general public. The new Web site will be more consistent with modern-day design standards and will make it easier to find people and documents and to track WRAP activities. The new Web site should be on line by 2003.

Long-Term Planning

In its FY02 grant guidance to Regional Planning Organizations (RPOs), the EPA asks that the work plan be coupled with an updated description of what is anticipated to be the general work plan for several years. The description should provide an indication of the RPOs' course of action, including its vision of the direction for the planning process, how it will develop partnerships and jointly determine this direction, how it will assess data needs, what tools it will need, and how it will work with other RPOs.

Much of the information requested above is provided in Sections III, IV, and IV of this document. The WRAP will work with other RPOs through the technical discussion groups facilitated by EPA, through regular participation in director-level calls and meetings, and as necessary on other issues (e.g., emission inventories and control strategies in border regions). The WRAP's needs for new and improved data and tools are generally assessed within its forums and is refined through the annual work plan development process. Participation in inter-RPO discussion groups provides further opportunity to identify and refine these needs. Some specific long-term needs are identified in the preliminary long-term budget in Appendix B. This budget and the activities therein will be the subject of a WRAP work group to convene early next year to flesh out a more detailed technical work plan for §308 SIPs. An outline of this work plan was presented and discussed at the WESTAR technical conference in September 2002.

On a more general level, the WRAP's planning process must accommodate a unique landscape of environmental, social, economic, and political issues. The WRAP region includes the vast majority of Class I areas, half the land mass of the United States (not including Alaska), a very large portion of publicly-owned lands, and numerous tribal jurisdictions (many with large land areas). It also emits a minority of total U.S. emissions, borders both Canada and Mexico, and receives pollution from Asia. Most WRAP members will not have to contend with ongoing ozone and particulate matter nonattainment issues, which simplifies air quality planning to some extent, but many WRAP members are faced with rapid population growth and other challenges to preventing deterioration of air quality. Moreover, the WRAP must be sensitive to other regionally-important environmental issues, such as fire, drought, and endangered species. This presents a unique and challenging environment for long-term planning which is best addressed through a single, well-funded and well-organized institution at the appropriate political level. The WRAP, with the appropriate EPA financial support, provides such an institution, especially given its co-management structure shared between the Western Governors' Association and the

National Tribal Environmental Council. For example, WRAP uses the WGA-developed environmental management principles known as Enlibra (<http://www.westgov.org/wga/initiatives/enlibra>). Use of the Enlibra principles has helped garner support from western governors and other stakeholders as an example of how environmental issues should be addressed in the region. Such coordination is key to regional haze planning in the west.

The WRAP's long-term planning process must be prepared to deal with relevant events beyond its control, such as multi-pollutant legislation and the ramifications of legal challenges to the regional haze rule and other regulations. One way the WRAP can contend with these events is to have sufficient staffing to track the issues and to promote a constructive dialogue among its members.

In the long-term, the WRAP will continue to examine and develop innovative market-based approaches to achieving emission reductions. Examples include the possible expansion of the SO₂ market trading program (to include additional states and/or tribes, and possibly additional pollutants and source sectors) and the creation of a market for trading renewable energy certificates. Finally, the WRAP must continue its outreach activities and its efforts to incorporate new science as it becomes available.

**Table 1. Major WRAP Products For Section 309 SIPs,
To Be Completed By The End of 2002.**

- *Projections of visibility improvements for all Class I areas in the contiguous WRAP region resulting from §309 strategies.*
- *A definition and policy on clean air corridors.*
- *A model rule, draft MOU, and SO₂ emission monitoring protocols for non-utility sources needed to implement the backstop emission trading program.*
- *A demonstration that the backstop emissions trading program for SO₂ will achieve greater reasonable progress than source-specific BART for the other Class I areas, as defined in §309(g).*
- *A final report on the WRAP mobile source inventory.*
- *Determination of any areas in which mobile source emissions or road dust emissions significantly contribute to visibility impairment in any of the 16 Class I areas.*
- *A final report on the WRAP fire emissions inventory.*
- *An enhanced smoke management program.*
- *Fire emission goals and tracking system.*
- *A final report on recommended pollution prevention measures and emission and economic impacts*
- *1996 and 2018 base case air quality simulations.*

**Table 2. Miscellaneous WRAP Products For Section 309 SIPs,
To Be Completed in 2003.**

- *A regional technical support document for implementation plans.*
- *Stationary source NO_x and PM report.*
- *Specifications for an emission and allowance tracking system for the SO₂ backstop emission trading program.*
- *Facilitation of allowance allocation formulas and a policy on geographic enhancements.*
- *Support for documenting the implementation status of regional and local mobile source control strategies recommended in the GCVTC final report.*
- *Support for identifying and documenting state-specific pollution prevention goals and programs.*
- *Support for documenting the implementation status of other recommendations in the GCVTC final report.*

**Table 3. New Projects And Extensions Of Existing Projects
Intended To Support §308 SIPs And The Longer-Term Needs Of §309 SIPs.**

- *Identification of BART-eligible sources.*
- *Updated emissions inventories mobile sources.*
- *Updated and new emissions inventories for fire.*
- *Development of representative communities for emission inventories in rural areas.*
- *A “Tribal Emissions Inventory Software Solution” tool for use by tribes (and others), to facilitate development of accurate and consistent emissions inventories using a geographic information system as the framework*
- *Creation of an emissions data management system to support tracking requirements for clean air corridors, the SO₂ emission backstop trading program, fire emissions, and other programs as necessary.*
- *Significant new work on the definition of dust (geogenic material) observed on IMPROVE PM₁₀ filters, classification of natural and anthropogenic dust emissions, and technical investigations to better define the physical characteristics of dust aerosols.*
- *Characterization of emission sources near Class I areas.*
- *Outreach and development of emission management plans for gateway communities.*
- *Support for demonstration projects addressing existing non-road mobile sources.*
- *Building regional capacity to develop and trade renewable energy credits.*
- *Development of a common economic analysis framework and an efficient in-house assessment capacity.*
- *A major effort to characterize the “Causes of Haze” at each Class I area in the WRAP region using IMPROVE monitoring and associated meteorological data to derive source category impacts, seasonal variations, trends, contribution of natural sources, et cetera.*
- *Extensive expansion of air quality modeling capabilities, including testing of new codes, development of emission and meteorological files for 2002, further model*

evaluation, improvements to the ammonia inventory, nesting of model grids, testing of plume-in-grid modules, implementation of process analysis techniques, and development of standardized post-processing tools.

- *Development of a WRAP-wide technical quality assurance management plan.*

Table 4. Projects To Evaluate Haze And Develop A SIP For Alaska.

- *Representative community emissions inventories are planned for Alaskan villages, which have distinctly different activity patterns for visibility-impairing emissions.*
- *Develop a meteorological model to cover a large portion of the land area of the state for simulating the effect of emissions regulated by the State of Alaska at 2 of the state's 4 Class I areas; the areal extent of the meteorological model would capture most of the (human) population and a representative mix of emissions sources.*
- *Emissions inventory work for fire, area, and stationary sources.*

Table 5. WRAP Budget for CY03.

Projects	CY03
	Proposed
Market Trading Forum	
Analysis of NOx and PM for Section 309 and 308	65,000
ATS/ETS Specifications	50,000
Identify BART-Eligible Sources	30,000
Fire Emissions Joint Forum	
Wildland Emission Trade-Offs Review (Fire Emissions Tradeoff Model)	30,000
Model Assessment/Sensitivity Runs	50,000
Prepare SIP/TIP Technical Support Document Fire Emissions chapter	10,000
Expand Ag Alternatives Report - more involvement of stakeholders	100,000
Technical Guidance on ERT Use (supports annual emissions goal reporting)	40,000
2002 Inventory of Wx, Rx, and WFU for wildland, rangeland, ag	125,000
2018 Projections of Wx, Rx, and WFU for wildland, rangeland, ag	50,000
Modeling to Assess de minimus Tracking Levels	100,000
Addtl. Guidance on <i>Policy for Categorizing Fire Emissions</i>	40,000
WRAP policy to coordinate regional ESMP implementation including workshop	60,000
Guidance to support implementation of the <i>Fire Tracking System (FTS) Policy</i>	25,000
Co-Sponsor National Fire Conference	30,000
Air Pollution Prevention Forum	
Tracking and Reporting RE and EE Implementation and Impacts of Legislation	40,000
Develop Market Guidelines and Verification Protocols for Regional Credit Trading	80,000
Technical Assistance to States/Tribes for SIPs/TIPs	50,000
Energy Efficiency Screening Tool for State-Specific Impacts	50,000
Mobile Sources Joint Forum	
Draft Guidance for Promoting Non-Road Demonstration Projects	20,000
Support Non-Road Demonstration Projects	50,000
VMT/Energy Reduction Demonstration Projects and Guidance	25,000
Sources In and Near Class I Areas Forum	
Gateway Community Demonstration Project	60,000
Economic Analysis Forum	
Development of In-House Modeling Capabilities	85,000
Air Quality Modeling Forum	
Regional Technical Center (UCR)	600,000
Alaska Modeling	200,000
Emissions Forum	
Improvements for NH3	45,000
Emission Inventory Data Base System - Development / User Access Capability	122,400
Update On-Road and Non-Road Inventories with New Emissions Models	40,000
Develop Representative Community EI's (Phase 1) - (incl. Alaska)	175,000

Research & Development Forum / Dust Tasks	
Followup Secondary Org Aerosols Analysis Work	10,000
Stacked Filter Unit and Module D Data Analysis	31,000
Ambient Monitoring and Reporting Forum	
Establish and Maintain VIEWS Database (CSU)	249,724
Establish and Maintain VIEWS Database -- CENRAP's 04 contribution	50,000
Causes of Haze Report (DRI) -- 3 years	225,000
Tech-Wide Projects	
Quality Management Plan	25,000
Geographic Data Display	25,000
Air Managers Committee	
State/Tribal Caucus Staff Support (WESTAR) -- Includes Travel	117,400
STIP II Contractor Assistance / Program Enhancement	111,476
Alaska Tribal Coordinator	50,000
Communications Committee	
Web Site Administration (B. Bissey)	30,000
Retool Web Site	15,000
WRAP Sheet and Handout Material	7,000
Presentation Material on WRAP	8,000
Speaker's Bureau	9,000
Support Forums and Committees	5,500
Partner with Other Agencies/Programs to Widen Audience	3,500
Travel and Project Management	
Travel Reimbursed by WGA	180,000
Conference Calls	40,000
Meeting Expenses	50,000
Other Expenses	20,000
WGA Salaries and Benefits	370,000
WGA Overhead	240,000
Subtotals	
Subtotal for Contractor Assistance	3,420,000
Subtotal for Travel and Project Management	900,000
Subtotal for NTEC	305,000
GRAND TOTAL	4,625,000

Table 6. Long-Term Conceptual Schedule For WRAP Activities.*

Target Date	Technical Activity	Policy Activity	Target Date
2002	Emissions inventory base year	Scoping workgroup on WRAP long-term work plan and activities	late 2002 – early 2003
January 2003 to September 2004 (21 months)	1) Model upgrades/evaluation/testing new tool development (see Modeling Forum activity list for the RMC) 2) EI improvement work (see EF list)	Policy Forums begin to identify all likely control strategy options and regulatory framework for Regional Haze SIPs/TIPs	mid-2004 (18 months)
June 2004	2002 WRAP emissions inventories complete		
October 2004	Placeholder – EPA releases 2002 NEI (with one state review incorporated – WRAP to use as a filler)		
March 2005 (9 months)	WRAP RMC completes emissions processing quality assurance, model input formatting, met modeling and provides updated base and projection year emissions files	Policy Forums sort control strategy options into regional and state/tribe, ranking the list for each of the 2 strategy groupings	end of 2005 (18 months)
September 2005 (6 months)	Base year and 2018 modeling completed – identifying source apportionment by jurisdiction for source categories	States and tribes prepare and submit SIPs/TIPs	11-12/2007 (16 months)
July 2006 (9 months)	2018 regional control strategies' modeling completed		
early 2007	Regional Technical Support Document complete		

* Assumes harmonized RH/PM_{2.5} SIP due date of 11-12/07, based on changes during the TEA-21 Congressional reauthorization by 9/03, and designations of PM_{2.5} attainment and nonattainment areas in late 2004.

Figure 1. Map Of The WRAP Region.

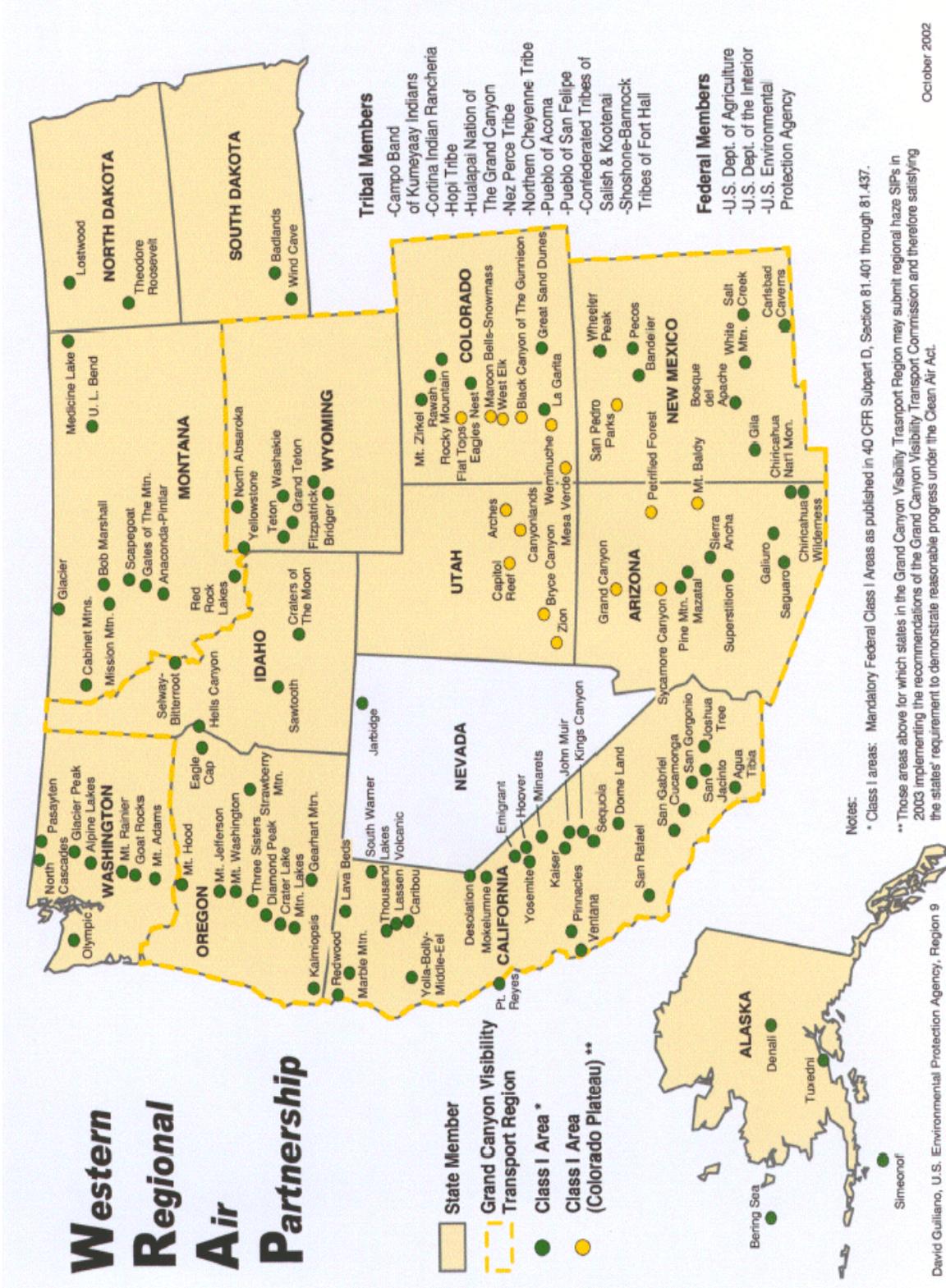
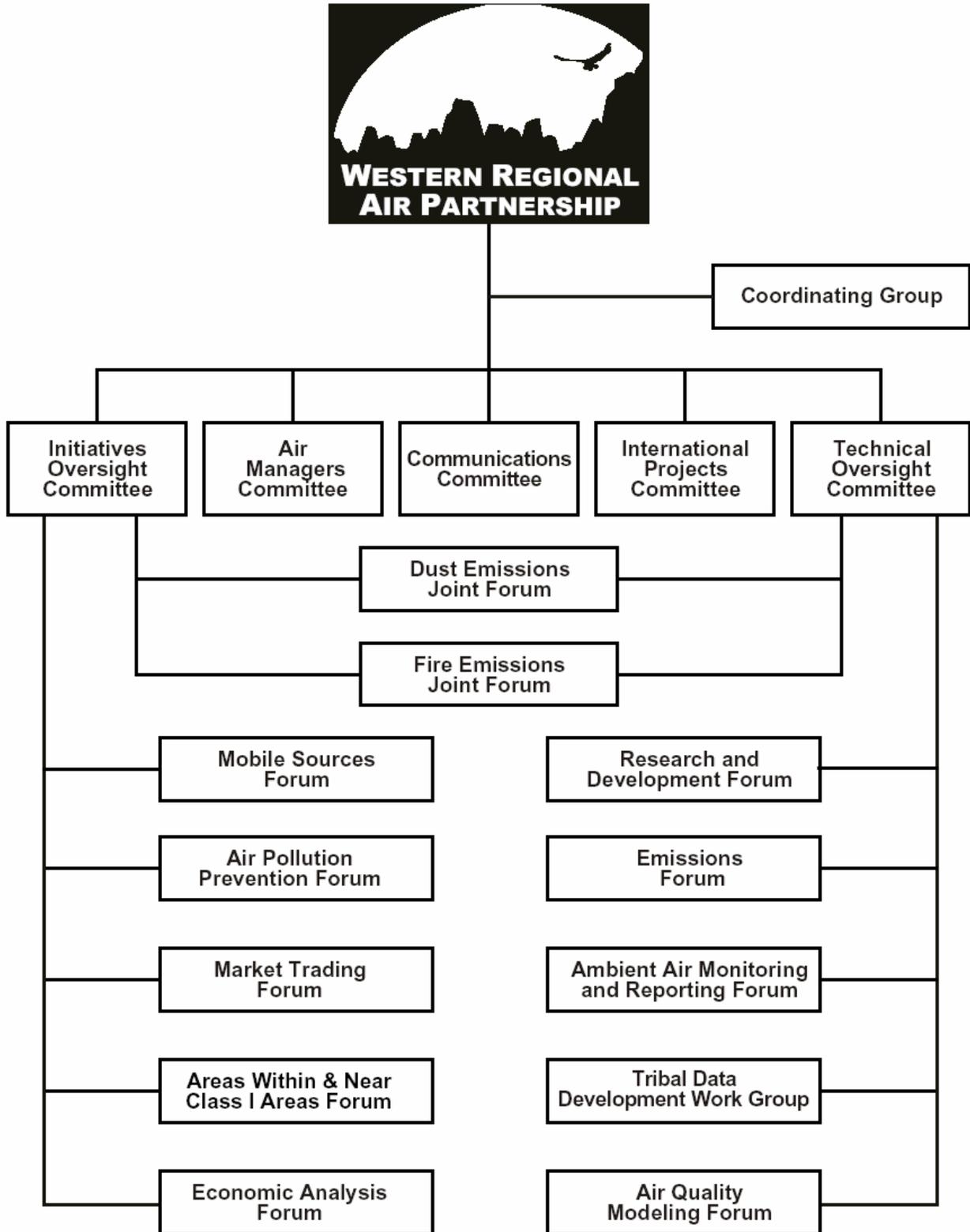


Figure 2. WRAP Organizational Chart.



I. Overview

This work plan describes the Western Regional Air Partnership (WRAP) activities currently in progress or planned to meet the requirements of the Regional Haze Rule. This work plan includes steps leading to state and tribal implementation plans that are required to address regional haze visibility impairment under a national program (40 CFR 51.308) or an optional regional program for states and tribes in the Grand Canyon Visibility Transport Commission's (GCVTC) transport region (40 CFR 51.309). This plan addresses specific requirements of the regional haze rule and identifies the work products needed by each of the members to meet those requirements. This is an update and revision to the WRAP's work plan October 31, 2001.

II. Background

The 1990 Amendments to the Clean Air Act established the GCVTC, which in June of 1996 completed its original mission to recommend strategies for improving visibility in the Grand Canyon and other Class I areas on the Colorado Plateau. Recognizing the need for a process to monitor and coordinate the implementation of its final recommendations, the GCVTC members created the WRAP. The WRAP includes participants from industry, environmental groups and other affected parties and operates in conjunction with regional organizations such as WESTAR, the Western Governors' Association, and the National Tribal Environmental Council. The work products of the WRAP are used by states and tribes in the preparation of their individual implementation plans to meet the requirements of the federal regional haze rule promulgated by the U.S. Environmental Protection Agency (EPA) in 1999.

While the initial focus of the WRAP was to implement the recommendations of the GCVTC in conjunction with federal visibility rules, the requirements of these rules also highlighted the need to implement other regional planning processes to improve visibility in all western Class I areas. In March 1999, the WRAP expanded its charter to address all regional air quality issues.

Section 308 of the regional haze rule contains a general requirement for states to submit an implementation plan on a schedule dependent on the attainment status of the fine particulate standard and participation in regional planning groups. Section 309 of the rule allows a state that is in the GCVTC transport region to submit an implementation plan conforming to the recommendations of the GCVTC if the state elects to submit the plan by December 2003. Such plans would satisfy the state's obligation for planning for the 16 Class I areas in the jurisdiction of the GCVTC. The states would then be allowed to defer submittal of implementation plans for their other Class I areas until 2008. As described further below, tribes have the option of submitting implementation plans at their discretion and containing provisions they deem most appropriate. For the purpose of this planning document CFR 51.308 will be referred to as the National Rule or §308, and CFR 51.309 will be referred to as the GCVTC Rule or §309.

In preparing this plan, the WRAP assumes that several of its members will elect to submit implementation plans by the end of 2003 consistent with the requirements of §309. Periodically thereafter, states and tribes will submit implementation plans under §308 or update plans under §309 on a schedule consistent with regulatory requirements and their administrative capabilities. This work plan has been established to accommodate this anticipated staggered schedule, and

work will evolve as WRAP members establish specific dates for the submission of their implementation plans. The WRAP forums will develop and deliver technical analyses and control strategy components to address the major source categories identified in the regional haze rule in order to meet the regional haze planning needs of western states and tribes.

III. Tribal Options for Implementation Plan Development

Under the regulatory framework provided by the Tribal Authority Rule (TAR) (40 CFR 49.1–49.11) and the regional haze rule, tribal implementation of visibility programs through Tribal Implementation Plans (TIPs) is optional. The TAR authorizes but does not require tribes to receive delegation of authority to implement any program, or “reasonably severable elements” of a program, under the Clean Air Act. The preamble to the regional haze rule explains that “a tribal visibility program is not dependent on strategies selected by the State or States in which the tribe is located.” (64 Fed. Reg. 35714, 35756, July 1, 1999). The net result is that any tribe in the GCVTC transport region may apply for implementation of §308 or §309 in whole or in part.

The policy and technical work of the WRAP to assist states will simultaneously be designed to assist the tribes in the same way. Tribal concerns are being addressed at every level within the WRAP process. Tribal and state implementation plan needs may be different. As these differences are identified, project tasks and work plans will be updated to reflect the improved understanding of tribal needs.

To ensure that tribal needs are addressed, the active participation of tribal representatives on all forums has been and will continue to be sought and encouraged. The National Tribal Environmental Council (NTEC) is responsible for coordinating tribal participation in the WRAP and receives funds from EPA for this purpose. Since some tribes do not have the resources or expertise to participate in the WRAP, NTEC provides tribes with analyses and synopses of issues emanating from the WRAP forums and work groups and from sources outside the WRAP. NTEC also facilitates consensus building within the tribal caucus. The Institute for Tribal Environmental Professionals (ITEP) at Northern Arizona University also provides assistance and staff through the Tribal Data Development Working Group to address a key tribal need – the acquisition of data necessary to make informed policy decisions.

Finally, it should be noted that the WRAP organizational structure provides several checkpoints for tribal input. First and foremost, the WRAP has established equal representation for tribes and states within its management structure, including a tribal Co-Chair of the WRAP. Key positions are also reserved for tribal representatives on all standing committees, forums, and work groups. Public workshops for WRAP work products and travel support from the WRAP \ ensure that the broader tribal community has an opportunity for input prior to WRAP action.

IV. WRAP Organization and Structure

In September 1997 the WRAP was formed with a membership including states and tribes both within and outside of the GCVTC region. The WRAP established oversight committees and forums charged with developing work plans to implement the GCVTC recommendations.

A. Membership

The WRAP membership currently includes the Governor or his/her designee from 13 states and 10 tribes, two U.S. Cabinet Secretaries and the Administrator of the EPA or their designees:

<u>States</u>	<u>Tribes</u>
Alaska	Campo Band of Kumeyaay Indians
Arizona	Cortina Indian Rancheria
California	Hopi Tribe
Colorado	Hualapai Nation of the Grand Canyon
Idaho	Nez Perce Tribe
Montana	Northern Cheyenne Tribe
New Mexico	Pueblo of Acoma
North Dakota	Pueblo of San Felipe
Oregon	Confederated Tribes of Salish and Kootenai
South Dakota	Shoshone-Bannock Tribes of Fort Hall
Utah	
Washington	<u>Federal Agencies</u>
Wyoming	Department of the Interior
	Department of Agriculture
	Environmental Protection Agency

B. Charter and Bylaws

The WRAP Charter and Bylaws set forth the basic operating goals, principles and operating procedures and are posted on the WRAP website at <http://www.wrapair.org>.

C. WRAP Organization

The WRAP is composed of several forums, committees and work groups, all of which include participation from the WRAP membership (states, tribes and federal agencies) and interested stakeholders (industry, environmental groups, etc.).

D. Coordinating Group

The Coordinating Group is made up of the co-chairs of the IOC, TOC, International Projects Committee, Communications Committee, and the Air Managers Committee. The WRAP may adjust membership of the Group to ensure balanced representation. The Group oversees development and coordination of the strategic work plans of the WRAP, promotes collaborative work relationships among committees and forums to avoid duplication and maximize productivity, makes interim appointments to committees between WRAP meetings, provides administrative leadership to carry out the activities of the work plan, helps identify process problems, budget needs and financial planning, and may make recommendations to the WRAP.

E. Initiatives Oversight Committee (IOC) and Technical Oversight Committee (TOC)

The IOC provides general oversight for the coordination and development of air quality strategies necessary to promote the implementation of federal visibility rules. The TOC provides general oversight of the technical activities of the WRAP. IOC and TOC members are appointed by the WRAP Board, which strives to manage a balance among tribes, states, federal agencies, the environmental community and the industrial community. In turn, the IOC and TOC establish forums and work groups and appoint their co-chairs to conduct the specific work of the WRAP.

Presently, there are 11 forums and work groups. The IOC oversees the Air Pollution Prevention Forum, Market Trading Forum, Economic Analysis Forum, and Sources In and Near Class I Areas Forum. The TOC oversees the Emissions Forum, Air Quality Modeling Forum, Ambient Monitoring and Reporting Forum, and Tribal Data Development Work Group. The Fire Emissions Joint Forum and the Dust Emissions Joint Forum are overseen by both the IOC and the TOC, as they address both technical and policy issues.

F. Communications Committee

The Communications Committee addresses communication among the members and groups of the WRAP as well as outreach and education of the public and interested groups on air quality issues.

G. Stakeholder Involvement

The WRAP includes participation from industry, environmental groups and other affected parties. The following categories of representatives are regularly considered for membership in committees, forums, and work groups:

- Industry
- Mobile Sources
- Tribal Governments
- Local Governments
- General Public
- Small Business (including “green industry”)
- Federal Government
- State Governments
- Academia
- Environmental Groups

Committee and forum members are expected to represent and communicate with their agencies and constituents. Forum and committee members are responsible for establishing mechanisms that will ensure this communication occurs. These mechanisms may involve working through trade groups, state and tribal organizations such as the Western States Air Resource Council (WESTAR Council), the National Tribal Environmental Council (NTEC) and intra- and inter-agency forums.

V. Project Management

A. Setting Priorities

The WRAP members establish the strategic direction of the organization, setting overall priorities for action. Once the WRAP agrees on a direction, issues are further developed and priorities refined by the following process:

- The WRAP identifies issues and requests that one or more oversight committees address them, or asks that the oversight committees develop issues and work plans for review by the WRAP.
- Oversight committees examine the management and technical issues associated with the strategic direction and identify the major deliverables, skills required and stakeholders most affected.
- Based on this examination, oversight committees may refer issues to existing forums or work groups or create forums and work groups to generate the deliverables. Oversight committees appoint co-chairs of forums and work groups and work with the co-chairs to develop a written charge, including objectives, expectations, and time frames for deliverables.
- Co-chairs of forums and work groups appoint members, taking into consideration stakeholder balance and the charge from the oversight committee(s).
- Each forum and work group is responsible for developing a detailed work plan to meet the work product and process guidance from its oversight committee(s). They issue bi-monthly reports to their oversight committees, which should be posted on the Web site.
- Oversight committees review and approve detailed work plans to ensure that all WRAP time lines and process needs are addressed.
- Depending on the nature of the process, each forum and work group works with its oversight committee(s) to resolve deadline or budgetary conflicts that may arise in the plan development process.
- The Coordinating Group manages general work, ensures budgetary consistency and coordination among the different groups and the overall direction of the WRAP.

B. Reconciling Conflicts

If an issue arises on which a forum or work group can not reach consensus, the issue is referred to the oversight committee(s). If the oversight committee(s) can reach consensus on the issue, that decision is referred to the forum or work group for integration with the forum or work group's decisions on other issues. If the oversight committee(s) can not reach consensus, the

issue may be referred to the WRAP Board for resolution, or it may be referred back to the forum for further debate.

When conflicts over priorities and budgets can not be resolved by the individual forum, work group or committee, the Coordinating Group will recommended a resolution. The Coordinating Group's recommendation will be based on the policy direction from the WRAP, the work tasks required to accomplish that direction and consultation with the forums, work groups and committees. Where major changes in directions or deliverables are required, the Coordinating Group will seek the approval of the WRAP Board prior to directing such changes.

C. Outreach and Peer Review

The WRAP Communications Manual sets forth the process for reviewing work products and policy decisions. At each stage of review, relevant material will be posted on the WRAP Web site and comments will be solicited.

Work products must be presented to the appropriate oversight committees before being presented to the WRAP. The oversight committees may provide feedback to the forums or work groups; the forum or work group has the responsibility to decide whether or not to make changes. Changes the forums or work groups make to work products should be communicated to the oversight committees so recommendations from these groups to the WRAP can be fully informed.

Policy work products are subject to public review through workshops and formal public comment periods. Technical work products are reviewed by the Research and Development Forum, an independent contractor engaged to perform peer review, or by a specialty technical workshop on the work product. The forums and work groups are responsible for acknowledging public and peer reviewer feedback in the final presentation to the WRAP.

D. State and Tribal Coordination

In addition to the extensive and ongoing communication and coordination that occurs directly between the WRAP and its member states and tribes, the WRAP will work with the Western States Air Resources Council (WESTAR) and the National Tribal Environmental Council (NTEC) as important coordination points to ensure that state and tribal regional haze needs are clearly identified and addressed by the WRAP.

E. Administration and Staffing

Members of committees and forums perform much of the work of the WRAP. The oversight committees monitor forum and work group activities to ensure that work products are developed in a timely manner and that stakeholder participation remains representative, balanced, and fair. Contractors hired with EPA grant funds are relied upon to expand the resources of the WRAP. Committees and forums direct the work of contractors.

Support services to the line functions of the WRAP come from the Communications Committee, the National Tribal Environmental Council (NTEC) and the Western Governors' Association (WGA). The Communications Committee has developed a Communications Manual for the WRAP's internal and external communications and assists committees and forums with outreach strategies for specific products and activities.

WGA and NTEC staff provide overall project management for the WRAP. WGA provides much of the basic logistical support for the WRAP by preparing and managing grant applications, funds, requests for proposals (RFPs), contracts, travel reimbursements, meetings, conference calls, public and media inquiries, press releases, Web sites, requests to participate in the WRAP and report publications. Staff assistance includes providing a "sounding board" for stakeholders having concerns with the WRAP processes and relating concerns to forum co-chairs, oversight committees, committee co-chairs, facilitators, and the WRAP co-chairs.

During the period covered by the grant, WGA staff will be performing these activities. Additionally, WGA and NTEC staff routinely attend the meetings of the various committees and forums. WGA and NTEC jointly or separately perform tasks related to WRAP and serve as primary contact points by responding to media and public inquiries.

Under a separate EPA grant, NTEC assists tribal participation in the WRAP by arranging, facilitating and providing reimbursement for tribal caucus meetings; providing coordination among tribal representatives of various forums; performing legal and policy analyses on WRAP issues and securing contractor assistance for additional technical and policy analysis. This includes providing staff support to the tribal caucus within the WRAP.

This work plan identifies six staff support positions. The first two are the WRAP co-project managers. The co-project managers oversee other staff, share general management responsibilities, work with stakeholders to ensure the WRAP's processes are fair and equitable, and serve as the primary points of contact for EPA, the media, and the general public. Funding for one of the co-project managers is under the WGA line item, while funding for the other is under the NTEC line item. The third staff support position assists the state caucus of the Air Managers Committee. Funds for this position are identified in the Air Managers Committee budget and provided to the Western States Air Resources Council for management and oversight. The fourth position assists the tribal caucus of the Air Managers Committee. Funds for this position are identified in the NTEC line item. The fifth position assists the Technical Oversight Committee and its associated forums. And the sixth assists the Initiatives Oversight Committee and its associated forums. These two position are identified in the WGA line item.

Other staff support will be sought as needed. Options include (1) contracting with a WRAP state or tribe to dedicate staff support for a defined period of time; (2) hiring temporary staff at WGA, NTEC, or WESTAR; and/or (3) entering into an agreement with an independent contractor to provide the needed staff support.

F. Contract Management

WGA and forums jointly manage WRAP contracts. WGA, as the receiver of WRAP grants, retains the legal responsibility for signing and administering contracts and ensuring that work products are completed. These responsibilities are met with input from forums and work groups. Forums and work groups may create balanced subgroups for purposes of contract management.

It is the responsibility of the forums and work groups and their respective oversight committees to develop the scope of work for each contract. All contracts are to be developed in accordance with the work plans approved by the WRAP and submitted to the EPA. Once the scope of work has been properly developed, it is transmitted to WGA. WGA is responsible for developing an RFP or sole source justification. All RFPs are published in the Federal Business Opportunities publication, sent to appropriate contractors known to the WRAP, and posted on the WRAP Web site. Unless time is otherwise a constraint, bidders are provided 30 days to respond.

A review committee is established for the evaluation of RFPs. The review committee is responsible for scoring each RFP. Scoring is documented and retained by WGA to substantiate any selection. Once the committee has agreed upon selection of a potential contractor, a memorandum is transmitted to the WGA Executive Director along with any necessary supporting materials. The Executive Director makes the final contractor selection. The winning contractor and all losing bidders are notified in writing of Executive Director's decision.

Subsequent to contractor selection, WGA staff and the appropriate forum, work group or committee negotiates a final contract with the winning bidder. All contracting is done in accordance with established federal guidelines. The standard contract form includes provisions for record keeping and audit requirements in accordance with OMB Circular 110.

It is the responsibility of the forum, work group or committee to monitor the work of the contractor and to determine whether all work requirements are being met. When a bill is received, WGA will examine the invoice to match invoice items to requirements outlined in the contract. WGA requires documentation from the contractor regarding hours spent and expenses incurred. WGA also requires copies of any deliverables prior to rendering payment. If there is any question regarding whether the contractor has met the requirements in the scope of work, it is negotiated between the contractor, WGA, and the appropriate co-chairs. Once it has been agreed that all work has been completed in accordance with the requirements of the contract, payment is rendered by WGA.

WGA is responsible for maintaining all records and does so in accordance with all federal requirements. This includes submittal of quarterly status reports to EPA. As noted in the previous section, NTEC lets contracts for work done in support of tribal participation. These contracts are funded by a grant separate from the general WRAP grant, and are subject to the requirements of the single audit act and related compliance supplements.

VI. Regional Haze Work Plan

A. Market Trading Forum Summary (details in Appendix C, except where noted)

Background

Section 309 of the regional haze rule contains a requirement for states and tribes to develop emission milestones for SO₂ and a backstop regional cap-and-trade program for SO₂ that would be implemented if the milestones were not met through voluntary means. The regional haze rule divides the development of this program into two parts. The first requirement was the submittal of an Annex to the Grand Canyon Visibility Transport Commission's report to provide the detailed structure of the backstop program. The Annex was completed and submitted to the EPA on September 29, 2000. The Market Trading Forum (MTF) has now shifted its work to the second phase, which is to provide additional documentation so that states and tribes can include the backstop trading program into SIPs and TIPs that are due by December 31, 2003.

States and tribes also have the option to develop SIPs and TIPs under Section 308 of the regional haze rule using similar or different strategies to improve visibility in western Class I areas. Implementation Plans under section 308 of the rule will be due sometime between 2004 and 2008, depending on the circumstances in each area.

Work Plan

The tasks under development by the MTF fall into three main categories. The first provides information primarily intended for states and tribes to better understand the impact of implementing the SO₂ milestones and backstop trading program. Such information may help states decide whether to submit implementation plans under Section 308 or 309. Tribes will need to make a similar decision, but are not subject to the same deadlines as the states.

1. Critical Mass

This project uses economic modeling to estimate how the benefits of the backstop trading program may be affected by varying levels of state and tribal participation. Details are provided in the 2002 work plan. This project will be completed in 2002.

2. RA BART/Geographic Enhancements

This project is intended to better define geographic enhancements and develop a process guideline for determining reasonable attribution. The MTF also expects to finalize an MOU that addresses the circumstances under which FLMs will certify impairment. This project should be completed in 2002 or early 2003.

3. *Other Class I Areas*

This project will review the results air quality modeling results to determine whether “greater reasonable progress than BART” has been met for all Class I areas. This project should be completed in 2002.

4. *Allocations*

This project will finalize the allocation estimates for all source categories and provide examples of how the various pieces of the allocation methodology will work together. Details are provided in the 2002 work plan. This project should be completed in 2002.

5. *Tribal Set-Aside*

The process for distributing these 20,000 allowances among tribes needs to be defined. The MTF should provide support to the tribal caucus, as requested, when the tribal caucus addresses this issue.

6. *Tribal Issues and Capacity Development*

When requested, the MTF should lend support to overarching tribal issues which also relate to stationary sources, such as cultural considerations, economic impacts on specific tribal lands, and data gaps.

The second category of tasks provides documentation needed as soon as possible for Section 309 SIPs to be implemented by the deadline of December 31, 2003.

1. *Model Rule and MOU*

This project will revise the draft model rule and MOU submitted as part of the Annex to ensure that they are consistent with stakeholder agreements and work properly within the framework of existing state and tribal regulations. This project will be completed in early 2003.

2. *Monitoring Protocols*

This project will produce detailed monitoring protocols to ensure that all source categories subject to the Annex will have monitoring requirements comparable to 40 CFR 75 after the trading program is triggered. This project may also seek refinement of the reporting and record-keeping requirements currently in the Model Rule. This project will be completed in early 2003.

The final category of tasks provides additional documentation to be included in Section 309 SIPs and/or to help states and tribes develop plans under Section 308. Some of these tasks do not need to be started in 2003 but need to be included in the overall WRAP planning process. Other

tasks may require several years to complete and are therefore included in the near-term priorities of the MTF.

1. *Stationary Source NO_x and PM*

This project will satisfy the reporting requirement of Section 309(d)(4)(v). The report will assess potential emission control strategies, their environmental, economic and tribal impact, the need to establish milestones for NO_x and PM, and future integration into multi-pollutant and multi-source programs. The report should include all WRAP states and should also address NO_x and PM BART requirements in Section 308 and 309. This project should be completed in the spring of 2003.

2. *Allowance and Emissions Tracking System Specifications*

If the backstop trading program is triggered, an allowance and emissions tracking system will be needed to determine compliance with the program. The system will include the ability to track allowances in the tribal set-aside and to ensure a secure and seamless connection between the tribal set-aside tracking system and the main allowance tracking system. The system itself does not need to be created at this time, but specifications need to be included in SIPs and TIPs to ensure that a uniform, region-wide compliance system will be in place after the program is triggered. The ATS and ETS of EPA's Acid Rain Program could be used as the starting point for the system, or a new system could be designed to meet the needs of the WRAP. This project should be completed in the spring of 2003.

3. *Expansion of SO₂ Backstop Trading Program*

The MTF should evaluate the impacts of a possible expansion of the program to WRAP states and tribes that are outside of the Grand Canyon visibility transport region.

4. *Identification of BART-Eligible Sources for All Visibility-Impairing Pollutants*

This task is required by Section 308(e) and will support SIP revisions due in 2008 under Section 309.

5. *Stationary Sources Under Section 308*

The MTF should provide background information on stationary sources of all visibility-impairing pollutants for development of plans under Section 308.

6. *Tracking of SO₂ Sources*

The MTF should keep track of stationary SO₂ sources, including new and planned energy sources (e.g., utilities, refineries, and renewable energy sources), their SO₂ emissions, and potential impacts on milestone assumptions.

Funding

Funding is already available for developing SO₂ monitoring protocols and for partial analysis of stationary sources of NO_x and PM. Additional funds are needed for this analysis (\$50,000), for developing ATS/ETS specifications (\$50,000), and to help states and tribes identify BART-eligible sources (\$30,000).

B. Fire Emissions Joint Forum

The tasks under development by the FEJF fall into two main categories. The first category provides information primarily intended for states to better understand the WRAP Enhanced Smoke Management Program (ESMP) policy, the related fire emissions goals, and the fire emissions tracking policy, all needed under Section 309. Tribes will need to make a similar decision, but are not subject to the same deadlines as the states.

The FEJF plans to document Section 309 fire emissions inventory work in the regional Technical Support Document, reflecting fire technical input data (\$5,000). The FEJF also plans to independently assess the results of the up to 5 fire emissions sensitivity runs to be conducted in mid-2003 by the WRAP Regional Modeling Center. The assessment will address emissions inventory issues, pollutant speciation, plume height approach, variances in total net emissions, and other key assumed parameters in the context of the regional model results (\$50,000). Beyond the assessment of fire emissions inputs to the regional model, the FEJF also needs to assess de minimis levels for fire activity data tracking and the potential use of a smoke management program-level screening tool using source/receptor based model scenarios. This analysis is intended to develop recommendations on the level(s) of de minimis activity tracking for ESMP public notification and regional coordination (\$100,000).

The FEJF also plans to expand its existing Agricultural Alternatives Report to include quantitative examples of more crop types and regions, with greater involvement of agricultural stakeholder community (\$100,000). The FEJF plans to develop further user guidance to support its existing *Policy for Categorizing Fire Emissions*, to refine differences between Restoration and Maintenance prescribed burns in terms of vegetative structure, fuel loading, fuel size classes, ecosystem function and fire resilience (\$40,000). In support of completing another Section 309 requirement, the FEJF will develop user guidance to support its *Fire Tracking System Policy* (FTS) identifying a specific format, parameters, structure, and methods of emission calculation for required and optional FTS elements (\$25,000). As fire management programs evolve, the FEJF has identified the need to assess the applicability of the Fire Emissions Trade-off Model for use in WRAP policies and guidance pertaining to smoke management of fire. The recommendations from this assessment have possible linkage to both ESMP and AEG (\$15,000 carry-forward and \$30,000 new). The FEJF will also develop WRAP policy and guidance to support the ESMP Regional Coordination element, including dissemination to users through a workshop (\$60,000).

The second category of tasks are designed to provide technical and policy support for completing Section 309 work and moving into Section 308 work, building on the regional visibility management approach defined in the work products for Section 309 plans. The following technical and policy analysis work tasks will begin in 2003, and are to be completed in 2004.

In 2003, the FEJF plans to begin to build a 2002 base year fire emission inventory covering wildfire, prescribed fire, and wildland fire use on wildland, rangeland, and agricultural lands in the WRAP region, including Hawaii and Alaska (\$125,000 in 2003, \$125,000 in 2004). This inventory would be complete by mid-2004. Also in 2003, the FEJF plans to begin refining its

existing 2018 fire emissions projections for the contiguous WRAP region for wildfire, prescribed fire, and wildland fire use on wildland, rangeland, and agricultural lands across the WRAP region, including Alaska and Hawaii (\$50,000 in 2003, \$50,000 in 2004). This project would also be completed in mid-2004.

The FEJF has identified the need to host a fire technical conference in 2004, to include, but not be limited to: 1) Methods to assess plume rise characteristic; 2) Technical assessment of fire parameters used for regional modeling; 3) Methods to assess and track emission reduction techniques; 4) Use of technical tools to assist in tracking burning activity for emission inventory purpose, including remote sensing; 5) Treatment of fire sources in regional modeling (expectations vs. reality); and 6) Fire emissions structure for SMOKE processor (\$30,000 in 2003 for planning, \$30,000 in 2004 for conference expenses).

The FEJF needs to develop technical guidance on Emissions Reduction Techniques (ERTs) applicable for wildland, rangeland, and agricultural burning for use in the establishment and support of Annual Emission Goals. The guidance will include applicability criteria and calculation techniques by vegetation/crop type, emission factors, economics, and emissions averted including identification of new ERTs (\$40,000 in 2003, \$40,000 in 2004).

C. Air Pollution Prevention Forum

Background

Having completed all the regional analyses necessary for supporting Section 309 SIPs, the Forum, in accordance with interests expressed by the IOC and the WRAP, is shifting its long-term focus to the tracking and reporting requirements of Section 309 and to the implementation of its regional recommendations, primarily through encouragement of regional actions. In the short-term, the Forum has identified two additional projects: one to provide technical assistance developing Section 309 SIPs and one to provide a planning and assessment tool for all states with respect to energy efficiency measures.

Work Plan

1. *Tracking and Reporting (\$40,000)*

A tracking and reporting function would provide WRAP members with up-to-date information on the implementation status of the renewable energy and energy efficiency recommendations made by the Forum and endorsed by the WRAP Board. It would also track the success of incorporating such measures into SIPs/TIPs and ensure that the recommendations remain relevant given changing external circumstances. The Forum would meet at least once a year to consider needed changes in the tracking and reporting function and potential advice to the WRAP on how to best enable renewable energy and energy efficiency to contribute to achieving air quality goals. Specifically, the Forum would:

- Provide to the WRAP web site updated information on actions that have been taken to implement the Forum's recommendations,
- Monitor and report developments that impact the Forum's recommendations (e.g., federal Renewable Portfolio Standard and carbon constraints), and
- Hold a meeting of the Forum at least once per year.

2. *Develop Market Guidelines and Verification Protocols for Regional Credit Trading (\$80,000)*

The Forum believes there are renewable energy policies that are more efficient and effective at increasing development of renewable energy generation if adopted at the regional level. Creating a single institution in the West that will issue, track, and oversee trading of Renewable Energy Certificates is a regional policy both the Forum and the Western Governors Association endorse.

The Forum and western governors recognize that renewable energy has environmental attributes that can be sold separately from the electricity generated as Renewable Energy Credits (RECs). Markets for RECs provide a strategy to overcome transmission barriers and provide consumers access to the most economical renewable energy resources. RECs lower the costs of renewable energy and, in combination with other public policies, can accelerate the development of the West's most promising renewable resources, further improving air quality in the west.

This task will allow the Forum to work with the Western Governor’s Association and other stakeholders to develop a blueprint for:

- A single institution in the West to issue RECs and track and oversee their trading;
- A standard set of market design and operating guidelines for trading RECs within the Western Interconnection; and
- An independent, regional generation tracking system to provide data necessary to substantiate the number of megawatt hours generated from renewable energy sources and support verification, tracking, and trading of RECs.

(A detailed scope of work is available upon request.)

3. *Technical Assistance to States/Tribes for SIPs/TIPs (\$50,000)*

This task will provide states and tribes who submit Section 309 plans with information and expertise needed to fully develop, customize, and adopt the pollution prevention portions of their SIPs and TIPs. Specifically, funding for this task will help states and tribes develop:

- Inventories of existing and planned renewable energy generation capacity, assessments of the most cost-effective renewable energy opportunities, and documentation of programs relied on to achieve the GCVTC 10/20 goal.
- Program descriptions of existing and planned energy conservation and efficiency programs states will rely on to reduce emissions;
- Methodologies for applying results of the Forum’s regional modeling to the state and tribal level. (The regional modeling provided information on the energy costs, emissions reductions, and economic impacts of adopting the Forum’s renewable energy recommendations and energy efficiency “best practices”.) This will allow states to comply with Section 309(d)(8)(v), which requires states to develop short and long term projections of emissions reductions, visibility improvements, energy cost savings, and secondary economic benefits associated with the GCVTC renewable energy goals and energy efficiency activities.

4. *Energy Efficiency Screening Tool for State-Specific Impacts (\$50,000)*

With funding for this project, the Forum will develop a simple screening tool (e.g., an interactive spreadsheet) to help state energy offices and air quality managers evaluate the state-specific impact of adopting different energy efficiency “best practice” options found in the Forum’s reports. The modeling that has been done focused on regional impacts. This screening tool would help states determine impacts (e.g. energy savings, emissions reduction) of each option based on state demographics and other variables, such as weather, electricity loads, and resource balances.

Funding

See amounts provided above.

D. Mobile Sources Forum

Background

The objective of the Mobile Sources Forum (MSF) is to provide technical support and policy direction, from stakeholder perspectives, to states and tribes for use in the mobile source portion of their regional haze SIPs and TIPs. The primary emphasis of the MSF has been to develop – with assistance from contractors, states, and metropolitan planning organizations – the most accurate and regionally consistent base and future year mobile source emission inventories (EI). This emphasis is shifting, however, to the evaluation of mobile source significance levels, the development of emissions control strategies for any areas found to be significant, and the promotion of non-road emission reductions, VMT reductions, and smart growth concepts.

Under the regional haze rule, states submitting Section 309 SIPs must (1) compile statewide inventories, (2) determine whether any areas of the state contribute significantly to visibility impairment in any of the 16 Class I Areas, (3) establish emission budgets and tracking systems for any such areas, and (4) provide interim reports to EPA and the public on the implementation status of the regional and local strategies recommended in the final report of the GCVTC. Items (1) and (4) are also pertinent to states submitting plans under Section 308, as is the Forum’s growing emphasis on non-road sources, VMT reductions, and smart growth concepts. The Forum should also investigate and propose, if appropriate, WRAP comments on any EPA proposed rule governing non-road mobile source emissions.

Status

Mobile source emission inventories have been completed for the years 1996, 2003, 2008, 2013, and 2018. The Forum has also identified proposed criteria for determining where mobile sources may be significant contributors to visibility impairment. The Forum is working with the Modeling Forum to determine whether any of the criteria are exceeded for any of the 16 Class I Areas and, as a result, may adjust the proposed criteria accordingly.

As the MSF takes on a more policy-based agenda, some of the more technical issues will be coordinated through other forums. Specifically, tribal mobile source data gathering efforts are being coordinated through the Tribal Data Development Work Group. Updates to the WRAP mobile source inventory using new versions of EPA emission factor models will be managed by the Emissions Forum. Finally, improving the accuracy of paved and unpaved road dust inventories is being coordinated through the Research and Development / Dust Forum. With respect to dust, data is poor for unpaved road vehicle miles traveled and silt content and moisture levels.

Work Plan

1. Develop Road Dust Control Measures, If Significant (\$0)

Section 309(d)(7) requires the first implementation plan for §309 states to “include an assessment of the impact of dust emissions from paved and unpaved roads on visibility

conditions in the 16 Class I Areas. If such dust emissions are determined to be a significant contributor to visibility impairment in the 16 Class I areas, the State must implement emissions management strategies to address the impact as necessary and appropriate.” Once better dust emission factors and inventories have been developed by the Research & Development/Dust Forum, modeling will be done to determine the significance of road dust based on the Mobile Source Forum’s significance criteria. If road dust from a §309 state or tribe is significant, model control strategies should be available for inclusion in the first §309 SIP.

2. *Status of Regional and Local Mobile Source Control Strategies (\$0)*

Section 309(d)(5)(iv) of the regional haze rule requires states to submit “interim reports to EPA and the public in years 2003, 2008, 2013, and 2018 on the implementation status of the regional and local strategies recommended by the Commission Report to address mobile source emissions.” WRAP staff will work with state staff to identify such strategies and describe them in such a way so as to be suitable for use in a report to be included in a 309 SIP. In the course of this process, strategies initially identified in the GCVTC may be identified for deletion or addition for the purpose of highlighting the most promising strategies and for establishing a more pertinent set of programs to be revisited when the next interim report is due in 2008.

3. *Develop Guidance for Supporting Emission Reduction Demonstration Projects for Existing Non-Road Mobile Sources (\$20,000)*

It is becoming increasingly apparent that non-road mobile sources will outweigh on-road sources as contributors to regional haze. By the end of the first regional haze planning period (2018), non-road mobile sources are expected to emit almost as much VOCs as on-road sources, twice as much NO_x as on-road sources, three times as much PM as on-road sources, and comprise 21% of the total SO₂ inventory. Moreover, non-road sources – which include among other things agricultural and mining equipment and locomotive engines – may be more dispersed than on-road sources, thereby having a more consistent, widespread impact on Class I Areas in the West.

Clearly, stricter standards for new non-road engines and their fuels are critical to minimizing emissions from this source category. However, given the many years required to implement new standards and to displace dirtier, in-use engines with cleaner ones, air quality benefits will only accrue over the very long term unless strategies are explored for reducing emissions from existing sources. Such strategies can be implemented at the local and regional level. Demonstration projects, in particular, can be an effective means for local and regional organizations to identify and support the most promising strategies. However, given the number and diversity of non-road categories and the various approaches to reducing their in-use emissions – e.g., cleaner fuels, exhaust retrofits, inspection programs, and economic incentives – potential demonstration projects should be carefully examined before receiving support from agencies with limited resources.

Thus, the MSF will draft a report summarizing recent demonstration projects from across the country and technologies and/or approaches that may be ripe for demonstration. This report may be used by agencies in the WRAP region to scope out the most promising demonstration projects

for their support. A contractor with expertise in this field will draft the report and help coordinate a workshop. The workshop will provide an opportunity to review the report, to educate WRAP members, for managers of successful non-road programs to share their experience, and possibly for certain technologies to be showcased.

4. *Co-Fund At Least One Non-Road Demonstration Project (\$50,000)*

Based on the guidance developed in Task 3, the MSF will co-fund a demonstration project in the WRAP region. This money will be used to leverage larger sums available from organizations such as the EPA. Results from this project will be communicated to WRAP members and stakeholders with assistance from the Communications Committee.

5. *VMT/Energy Reduction Demonstration Project (\$25,000)*

It is anticipated that this project will be jointly managed with the AP2 Forum in partnership with, and additional funding from, the Climate Neutral Network. (Please see www.climateneutral.com.) It is anticipated that a demonstration project will be developed to encourage VMT reductions or reductions in the rate of VMT growth that will address not only WRAP targeted pollutants but also greenhouse gases that are the subject of the Network's efforts. Potential topics discussed to date have been variable motor fuel taxes or vehicle registration fees adjusted to the miles driven and fuel consumption of the vehicle. Also, insurance premiums might be geared to a VMT basis. Other topics must be identified before one appropriate for a demonstration project is designed and implemented.

Funding

See amounts provided above.

E. Sources In and Near Class I Areas Forum

Background

The Grand Canyon Visibility Transportation Commission recommended that local, state, tribal, federal, and private parties cooperatively develop strategies, expand data collection, and improve modeling for reducing or preventing visibility impairment in areas within and adjacent to parks and wilderness areas on the Colorado Plateau. The purpose of the Emissions In and Near Class I Areas Forum of the WRAP is to help implement those recommendations throughout the WRAP region. To that end, the Forum has established two main objectives:

- Quantify emissions for selected parks in the WRAP region and gather information regarding pollution prevention and minimization activities in those parks; and
- Focus on one local gateway community to serve as a template as to how other gateway communities could deal with near-park issues, including a local emissions inventory to identify and quantify emission sources associated with a representative gateway community, and to identify local pollution prevention and minimization activities.

Status

The Forum is in the process of receiving from its contractor the final reports on emissions in eight Class I areas on the Colorado Plateau. These reports indicate that in-park emissions are only a small percent of those in surrounding counties. Emission control strategies within many parks, therefore, do not appear to be of critical, region-wide importance to restoring or protecting visibility in the West. However, the U.S. National Park Service would like to lead by example and minimize in-park emissions, thereby reducing visibility impacts of any in-park activities. A memo from the Forum summarizing this work will be provided to the WRAP in the near future.

Additional Class I area inventories are being developed separately by the U.S. National Park Service. The purpose of these studies, like the ones sponsored by the WRAP, is to verify the relative significance of emissions in Class I areas, determine regulatory compliance, and identify opportunities for emission reductions in order to maintain low or no level of impact from emissions in Class I areas.

Work Plan

Having completed most of its work on sources in Class I areas, the Forum is shifting focus to sources near Class I areas. A long-standing goal of the Forum has been to identify a “gateway community” potentially impacting a Class I area and to conduct a demonstration project involving that community. The demonstration project would identify the significant pollution sources and successful efforts at controlling those sources, engage and educate local communities and federal land managers, and encourage the development of local visibility protection plans.

The Forum has decided that such a demonstration project would be most successful if the Forum first studied the types, magnitudes, and trends of human activities near Class I areas throughout the West. Such a study would identify how many and which Class I areas are at greatest risk from nearby emissions and the types of human activities likely to be responsible. With such information, the Forum can determine if gateway communities pose the greatest type of nearby risk – relative, for example, to point sources, prescribed fires, and dispersed outdoor activities – and if so, which type of community (e.g., residential, commercial/tourist, and ski resort) and which community in particular would hold the most promise for a demonstration project, both in terms of reducing the community’s own impact and as providing an example for other gateway communities.

When this work is complete, the Forum will proceed with a gateway demonstration project, provided gateway communities are indeed a significant risk to western Class I areas. With the completion of the above study, information will be available to the WRAP that provides a clear landscape of human activities around Class I areas. Such information could be used to develop micro emission inventories to support local modeling studies or for general comparison to broader geographic regions and emission source categories.

Funding

The Forum expects the analysis of emissions near Class I areas and the gateway demonstration project to cost approximately \$135,000. Currently, the Forum has in its budget \$75,000 in uncommitted CY02 funds. The Forum therefore requests \$60,000 in CY03 funds to complete its work.

F. Economic Analysis Forum

Background

The Economic Analysis Forum's (EAF) primary objective is to assist western states and tribes with economic assessments of compliance strategies under EPA's Regional Haze Rule (RHR). The EAF will help educate states, tribes and other stakeholders regarding the economic considerations of relevant air quality strategies under the RHR. This will provide more complete information to support state and tribal decision making processes.

Tasks for 2003 include (1) an ongoing, informal refinement of the scoping process undertaken in 2002 to determine individual state and tribal economic analysis needs, (2) the ongoing development of a common economic analysis framework initiated in 2002 to guide the evaluation of air quality strategies, (3) assisting other WRAP forums with economic analyses, and (4) assisting states and tribes with economic analyses. These are described below.

Work Plan

1. Refine the Forum's Understanding of State and Tribal Needs for Economic Analysis

The EAF needs to assess economic analysis needs of individual WRAP states and tribes as they move forward with choosing compliance strategies under the RHR and related regulations. States need to decide whether to adopt SIPs under Section 308 or 309, and tribes may be faced with similar choices in their approach to developing regional haze plans. States and tribes also need to choose compliance strategies – within the context of their respective SIPs and TIPS – to meet RHR requirements.

State, tribal, and other stakeholder input will be sought on their needs for economic assessment. This will be done in-house by EAF members and WGA staff members using a standard set of questions. This process will be completed in 2002, but will be repeated as necessary to receive continual input from states and tribe regarding their economic assessment needs.

2. Continue Developing a Common Economic Analysis Framework

The EAF and its associated partners (e.g., an in-house contractor, member of academia, or private consultant) will develop – starting in 2002 – a common economic analysis framework to assist states, tribes, and other stakeholders in systematically and consistently evaluating different emission reduction strategies. This framework will provide, to the extent possible, standardized cost-benefit, distributional, and other relevant economic information, including a common set of assumptions. The framework must identify the appropriate analytical tools; the current availability of those tools to WRAP forums, states, tribes, and other stakeholders; and the relative strengths and weaknesses of those tools with respect to competing analytical approaches. To ensure the framework's ongoing utility to states and tribes, the EAF and its associated partners should continually review related economic analyses and their applicability to the regional haze planning process.

3. *Develop “in-house” Modeling Capabilities*

It is generally more expensive and less efficient to hire a large consulting firm each time a different economic issue requires attention. The EAF will therefore attempt to develop an in-house modeling capability to provide accessible, responsive, and cost-effective analyses of emission reduction strategies, including those for PM and NO_x. In addition, the EAF will explore a variety of models for this task, besides the ones that have already been used in the WRAP. A relatively simple, yet effective model would be one that EAF members might be able to understand themselves, and thus provide more direct support.

4. *Assist other WRAP Forums with Economic Analyses*

The EAF will lend economic expertise to other WRAP forums upon request. This will include interpretation of economic analyses and efforts to ensure they are accessible and useful to states and tribes.

5. *Assist States and Tribes with Economic Analyses and Strategy Choices*

The EAF will lend economic expertise to WRAP states and tribes upon request. The precise nature of the work under this task will be made more explicit as the RHR process progresses, and as economic needs of states and tribes become more apparent. It is possible that relatively simple extensions and/or interpretations of current analyses will be adequate for many SIP/TIP decision process. In some cases, however, additional effort will probably be needed. The in-house modeling capabilities described above will be particularly useful in these cases.

In addition to ad hoc support, the EAF is considering a comprehensive regional economic analysis for the entire WRAP, include an economic forecast. This analysis would provide information specific to western economies (e.g., utilities, tourism, and others) and include compliance costs and other economic issues, such as distributional impacts. This would probably be completed by early to mid 2004.

Funding

Most of the tasks above would be performed by EAF members and their partners and with funds already secured in 2002. However, \$85,000 is needed in 2003 to develop the in-house modeling capabilities.

G. Air Quality Modeling Forum

The Modeling Forum will undertake two major projects: one for the continued operation of the Regional Modeling Center and one for modeling of Alaska.

1. Regional Modeling Center

The regional modeling center will test and evaluate the modeling system to determine improvements to be made to the data and the modeling system. Meteorological fields will be developed for the new base year of 2002. Base model runs will be developed for 2002, incorporating the 2002 inventory when available. Setting up and testing of model nesting of higher-resolution sub-grids in areas where local influences of urban areas on Class I areas is important. Additional tasks are listed below:

- Test new model codes for SMOKE, MCIP, and CMAQ
- Update SMOKE for SAPRAQ chemical mechanism
- Develop and process 2002 meteorological fields
- Process 2002 emissions
- Test model with 2002 inputs
- Update NH₃ processing and inventory
- Test SAPRAQ chemical mechanism
- Test new aerosol mechanism
- Training
- Incorporate version control mechanism
- Test the Lambert Conformal version of REMSAD
- Develop/Process local emission inventory for model nesting
- Develop/Demonstrate model nesting
- Develop Training for model nesting
- Standardize post-production tools
- Investigate 2-way nesting in model
- Test plume-in-grid
- Make system more turn-key
- Conduct process analysis to better understand the model's performance

2. Development of Modeling for Alaska

Alaska poses some unique problems for WRAP modeling. It is geographically far enough removed from the rest of the WRAP region that including it in the regional modeling would not be efficient. Also, the relative sparsity of sources in much of the state would potentially dictate the application of different modeling techniques. The meteorology of Alaska also requires some special consideration. International transport from Eurasia is also a significant issue in the Class I areas of Alaska. There are 4 Class I areas in Alaska: Denali National Park and Preserve, Tuxedni Wilderness, Simeonof Wilderness, and Bering Sea Wilderness (see map below). The two largest cities in Alaska are Anchorage and Fairbanks. Each may impact Denali, whereas Anchorage may impact Tuxedni. Simeonof and Bering Sea are more isolated from the source

regions of Alaska. IMPROVE monitoring at the Bering Sea Wilderness is not occurring due to its isolation.

This project is aimed at providing an initial, credible evaluation of the potential contributions to regional haze in the Class I areas of Alaska that are more likely to be affected by in-state emissions, namely Tuxedni and Denali. This project is analyzing a situation that has not previously been analyzed. There is a need for some fundamental technique development and evaluation before the tools are ready for use in SIP development. The meteorological field development will be particularly complex in this region. The meteorology has to handle flows in complex terrain combined with maritime influences. The terrain varies from sea level to 20,000 feet. Therefore, the scope and cost is necessary to get credible results.

To date, no regional haze modeling analyses have been performed for Alaska. Further work in future years may be needed to make the system work, so work should be initiated now to prepare a SIP in time for a 2007 deadline.

Task 1: Develop appropriate methods for running MM5 over central Alaska, including Cook Inlet, the Alaska Range, to North of Fairbanks.

Task 2: Run MM5 for this region for several time periods representing different seasonal and meteorological conditions and evaluate the meteorological model results.

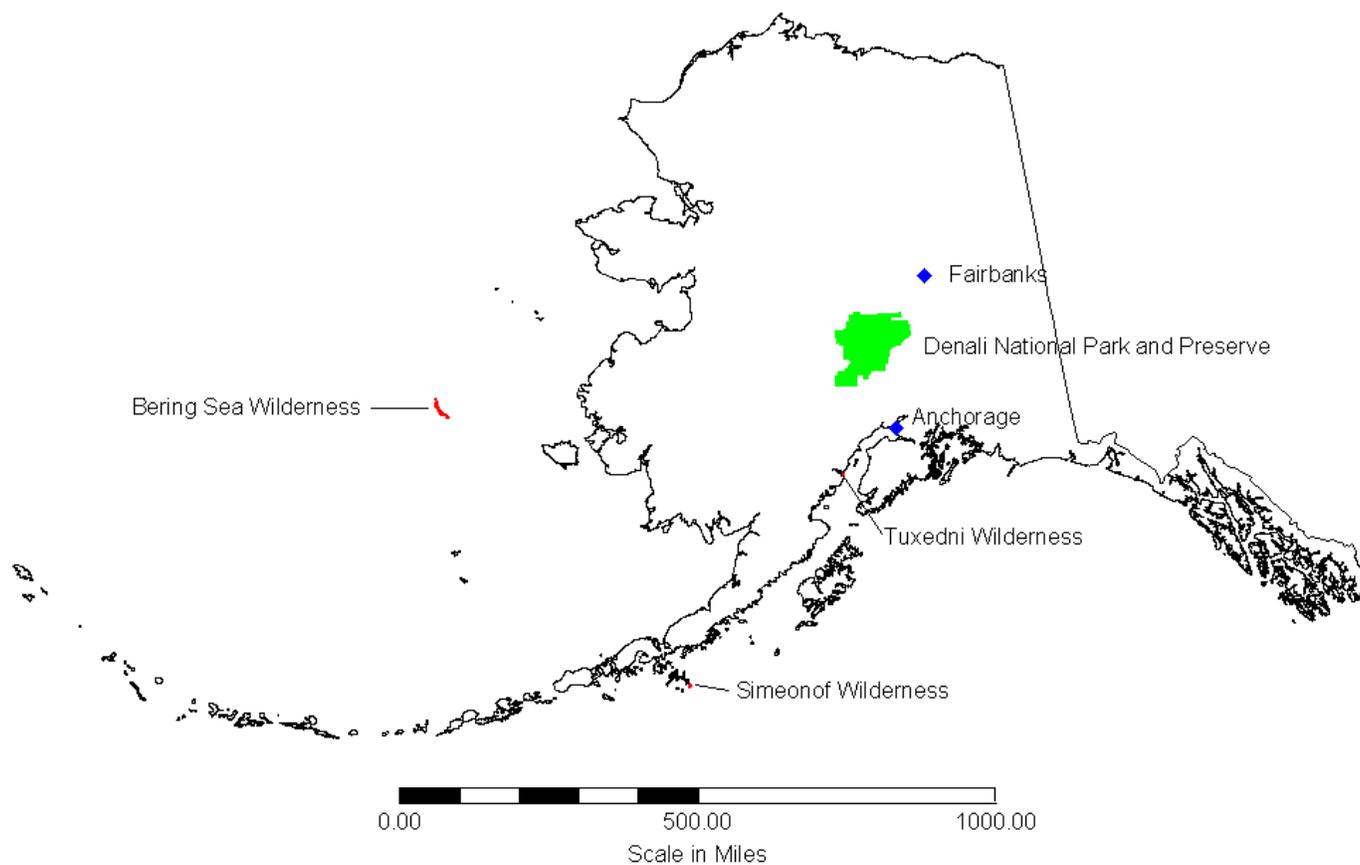
Task 3: If the model runs are credible, run the model for 2002.

Task 4: Run a Lagrangian model, such as CALPUFF, for the largest point sources in the region (up to about 10).

Task 5: Run the model chosen in Task 4 to evaluate the potential for impacts from the urban areas of Anchorage and Fairbanks

Funding

For the Regional Modeling Center, a request is made for \$600,000 per year, continuing indefinitely. For Alaska modeling, a request of \$200,000 is made for CY03, and approximately \$100,000 for years thereafter.



H. Emissions Forum

Background

The objective of the Emissions Forum is to provide the WRAP with all emissions information necessary to implement applicable provisions of the Federal Regional Haze Rule. This includes compiling emission inventories for the point and area source emission sectors, for the WRAP states and adjacent areas within the WRAP modeling domain. The Emissions Forum will also collect emission inventory data from the Mobile Source Forum and the Fire Emissions Joint Forum, and combine that mobile and fire emissions information with point and area source data in order to provide a complete inventory of all emissions of visibility impairing pollutants necessary to analyze visibility impacts within the WRAP region. The Emissions Forum will work closely with the Tribal Data Development Workgroup to assure compatibility of information coming from Tribal sources, and to minimize duplication of effort between these similar data collection efforts.

The Emissions Forum will also provide forward (and backward) projections of any base year emissions data to look at potential visibility impacts at other times. The Emissions Forum will compile emission inventory information annually, to facilitate tracking of various emission-related commitments under the Regional Haze Rule, such as the Market Trading Stationary Source Milestones or Clean Air Corridors tracking. In order to store and retrieve this emissions information, and make it available to public and private users, the Emissions Forum will develop a central database storage system for the WRAP, and will select a location/institution to house this information. In order to assure the accuracy of any data stored in this central database, the Emissions Forum has begun quality assurance activities designed to identify and remove incorrect information from the compilations. Also to improve the quality of the WRAP emissions inventory information, the Emissions Forum will conduct investigations into the appropriateness of activity data and emission factors that are used in the calculation of these emission inventories, and provide guidance to state, local and tribal air quality agencies for the protocol to be used in preparation of proper data for submittal to the WRAP regional database. Specific work, schedules and budget needs are described below.

Status

Emissions inventories for point, area, mobile, and fire sources were completed for §309 analysis during 2002. Some monies for improving temporal and spatial accuracy, completing error checking and corrections for 1996 and 2018 inventories, and initiating the development of the Emission Inventory Database System remain unspent. These monies (~\$260k) are planned for use in completing those projects, as a transition to the starting new projects for §308 analyses identified in the next section.

Work Plan

1. *Emission Inventory Data System Development, Protocol and Training*

Development of a regional GIS-based emissions data system will be based upon a needs assessment to be performed in early 2003. The needs assessment will determine the needs of other forums, states, and tribes that are expected to use the database system. Development of the database will be completed in 2003. Starting in 2004, next steps include development of a protocol to ensure consistency in data methods and emissions factors. Training of state and tribal emission inventory staff that use the database or enter inventories is expected to begin in 2004. Protocol development and user training is expected to occur in 2004.

2. *Maintenance of an Emissions Inventory*

Once the database has been developed, it will be necessary to have a long-term maintenance agreement with an entity to ensure quality control, assistance to states and tribes and to answer database queries. States and tribes, through a web-based database, are expected to populate the database with inventory updates. For example, the data will be used:

- To allow 309 states to track SO₂ emissions against milestones;
- To allow emissions growth monitoring in the Clean Air Corridor;
- To allow 308 and 309 states to measure reasonable progress;
- To provide input for visibility modeling; and
- Other inventory, reporting, and tracking uses as necessary.

Annual costs to maintain the inventory system, perform quality checks, answer queries, and prepare special reports are currently estimated at \$100,000 per year. User access capability, consisting of a server and software will also be included as part of the development project in 2003.

3. *Emissions Inventory Improvements*

- A. *Chemical Speciation and Temporal Allocations.* The WRAP currently uses the SMOKE emissions processor to prepare emission inventories for photochemical models to assess regional haze impacts. SMOKE incorporates a default profile to allocate emissions into chemical speciation factors and temporally for each source category. It is known that errors exist in the source category codes assigned to many sources, which produces errors in temporal allocations and chemical speciation assignments. In addition, the allocation profiles are national defaults and may not be representative of western sources. Further, profiles for individual sources may differ significantly within the same source category. These errors and shortcomings can produce potentially significant errors in visibility modeling. Accurate modeling is essential for visibility management plans. Work that is required to investigate and correct source category code assignments and allocation profiles should be largely completed in mid-2003. However, it is anticipated that complete emissions inventory updates with corrected information and incorporation

of new profiles to SMOKE may not be completed until 2003. In addition, there may be need to assess the temporal and speciation profiles for individual sources to obtain accurate information for modeling purposes. At this time, it is expected that such work may not begin until 2004.

- B. *Data Gaps and Incorrect Data.* It is known that the current baseline emission inventory of 1996 contains errors and data gaps. These have been generally identified in a Quality Assurance check performed in 2002. Missing or incorrect data must be corrected in order to accurately model projected emissions and visibility impacts. Corrections to the 1996 data for sources larger than 100 tons per year will be made in 2002. Emission projections for 2018 will then be rerun in 2002. In addition, work on gaps in pollutant data such as ammonia must be completed in 2002 and 2003, followed by organics in 2004. In collaboration with the Modeling and Dust Emissions Forums, a project entitled "Determining Fugitive Dust Emissions from Windblown Dust" to provide PM₁₀ and PM_{2.5} windblown dust inventories, and an algorithm for calculating these inventories using the CMAQ model. Future work on windblown dust emission inventories, by updating land use, meteorological, and/or emissions factors may be necessary starting in 2004.

Funding

The Forum requests that the ~\$260k remaining in the EF CY02 budget be programmed as noted in the attached spreadsheet, to begin the tasks identified above. Further, the EF requests new funding in the amount of ~\$382k for CY03 as noted in the spreadsheet, to complete the tasks identified above. The EF will begin work on Alaska emissions inventory projects in CY03."

I. Tribal Data Development Workgroup

1. Software Training

It is anticipated that the final version of the tribal emission inventory software solution (TEISS) will be completed in June 2003. After completion, ITEP will begin distributing the software to tribes in the WRAP Region. ITEP will conduct a 4-day long workshop on the use of the EI software in the summer or fall of 2003. It is anticipated that the workshop will be conducted in Flagstaff, AZ for ten selected tribal air quality professionals. The workshop will provide a thorough understanding of the operation of TEISS, Quality Assurance/Quality Control on the tribal data input to TEISS, the generation of reports and a firm knowledge of the science behind the emissions estimations. After successful completion of the training, these professionals will be available to train other tribes in the use of the EI software and will also be available for telephone consultation.

ITEP will promote TEISS by attending four tribal environmental conferences to demonstrate it to tribal environmental professionals. The software would be demonstrated at the National Tribal Environmental Council's annual conference and at EPA regional tribal environmental conferences for regions eight, nine, and ten. Instruction on TEISS will be included in all future ITEP Emission Inventory Workshops. Demonstrations at these conferences will be conducted by ITEP staff or one of the TEISS trained tribal environmental professionals. ITEP will coordinate the efforts of the trained tribal air quality professionals in providing assistance to other tribes and demonstrating software.

2. Emission Inventory Seminar/Symposium

ITEP will host a 2-day advanced EI seminar to focus on more advanced aspects of EIs. Tribes who have completed EIs will give presentations on their work. ITEP will facilitate discussions and/or presentations of how emissions estimating techniques used by tribes can be improved, how tribal EIs can be improved in general, how the EI data can be used, how to address future emission concerns (development, new facilities, etc.), dealing with data sensitivity issues, participating in RPOs. Tribes, EPA and RPO representatives will be invited. The seminar would be conducted in the spring or summer of 2004. The dates for the seminar will be set in early 2004 to avoid conflicts with other workshops, meetings, or conferences. The location will be selected from among the WRAP states and tribes.

3. Emission Inventory Support

A full-time Technical Specialist will be employed by ITEP to provide training and assistance to tribes in the WRAP region who wish to complete EIs for their reservations. The technical specialist will develop data gathering methods and templates, where appropriate, to assist tribes in gathering data specific to their reservation for use in TEISS. Funds will be provided to allow the technical specialist to travel to four reservations over the year to provide on-site assistance to tribal environmental professionals conducting emission inventories. ITEP will maintain a website providing technical information specific to tribal emission inventories and RPO

participation. This website will be part of ITEP's website and will include links to NTEC, WRAP, EPA and other relevant websites to reinforce and advertise the use of those sites.

4. Tribal Data Support

At present, ITEP receives numerous calls from WRAP forums and contractors to the forums who need information on or from tribes to include in their decision-making processes. Under this task, ITEP will gather tribal data required by WRAP. The following bullets list data and work efforts to be delivered to TDDWG. TDDWG will provide direction over time to ensure that the data collected is responsive to the current and future needs of the WRAP.

- ITEP will continue its efforts to collect tribal emissions inventories (EIs) as they become available and approved by the tribes for release to the WRAP and the National Emission Inventory. This work will continue as needed. As tribes who choose to use TEISS will be able to submit to NEI on their own, it is expected that this service will be required less and less over the next five years.
- ITEP staff will attend WRAP forum meetings as necessary to remain up-to-date on data needs and to present data collected. Through attending these meetings, ITEP will be able to more easily assess tribal data needs.
- Tribal GIS data, relevant to WRAP, will be compiled and maps made easily available to tribal representatives and WRAP forums as appropriate. These maps could be used to determine tribal populations and lands affected by WRAP activities, identify tribes who may have a stake in certain WRAP processes, and other purposes as identified by the TDDWG.
- Under this task, ITEP will maintain and update databases of tribal information and provide maps and data analysis as requested by TDDWG.
- As a repository for tribal environmental data, ITEP will continue to gain informed release of data from participating tribes. All requests for tribal data, already released by tribes to ITEP and TDDWG, will be responded to in a timely manner. Tribes will be informed of the release of their data, including to whom and for what purpose their data was released, at the same time that the data is released. If ITEP suspects that there may be a conflict of interests over releasing data held in this repository, the tribe will be contacted prior to release of any data. Where potential conflicts exist, people requesting tribal data will be strongly encouraged to work directly with the tribe in question.

J. Research and Development / Dust Joint Forum

Background

For the purposes of preparing a CY03 work plan and budget, the activities of the Research & Development (R&D) Forum will be subsumed into the recently created Dust Emissions Forum, a joint technical and policy Forum. A limited number of R&D projects will continue, and/or be refocused on dust technical and policy work, to support both §309 and §308 of the Regional Haze Rule. The R&D Forum will be taking a hiatus as an active Forum, at least during CY03.

Dust Emissions Forum Rationale

Analysis of IMPROVE filter data collected in the WRAP domain have shown that fine soil and coarse particles are responsible for about 6 to 26% of the annual average reconstructed aerosol light extinction. Fine soil can account for about 10 to 30% of the fine particulate mass. Coarse material is generally equal to or greater than the total fine particle loading on the average. The contribution of fine soil to the aerosol extinction on the haziest days in the West is almost always below 10%, but can be as high as 40%. Coarse material generally contributes less than 20%, but is frequently higher, reaching as high as 90% of the aerosol extinction.

Windblown local and regional wind-generated aerosol (including natural organic material) and mechanically resuspended particles probably account for the bulk of the emissions of these categories, but global transport of wind-produced aerosol is also possible. Examples of some source categories include dust from disturbed soil (both local and global transport), construction activities, agricultural activities, vehicles traveling on paved and unpaved roads, smoke from burning vegetative material, material storage piles, mining activities, and sea salt.

Much uncertainty hampers apportionment of dust. For example,

- a. What fraction of the coarse material is attributable to windblown and mechanically resuspended particles?
- b. What are the transport and transformation characteristics of these particles? What are the “sinks?” Are they hygroscopic? What is their contribution to light extinction (scattering and absorption)?
- c. What fraction of these materials can be considered “natural?”
- d. What fraction of observed dust is local in origin and what fraction is due to emissions outside the United States?
- e. What is the adequacy of ambient monitoring capabilities?

Because of the relatively large contribution to visibility impairment of coarse material and possibly fine soil, it is important that WRAP be able to conduct an apportionment of sources of primary particulate matter in order to effectively assess the causes of visibility impairment and

identify appropriate control measures. For these reasons, the Dust Emissions Forum was established by the Technical and Initiatives Oversight Committees as a joint technical and policy Forum. Mark Scruggs, presently a Co-Chair of the R&D Forum, will serve as the Dust Emissions Co-Chair.

Status

The Dust Emissions Forum has outlined topics for work, and Mark Scruggs has drafted a Forum charge. Also, Mark has assembled a list of potential members, and is actively recruiting these individuals; some of the R&D Forum members may remain involved. The Dust Emissions Forum will likely have its first official meeting in Winter 2002-03. Formal adoption of the following proposed work plan by the Forum is expected at that time. Work on the projects not yet started will begin after the initial Forum meeting.

Work Plan

The Dust Emissions Forum has identified several projects to be completed with combinations of existing CY02 and proposed CY03 monies, as detailed in Appendix A:

1. A "Wind-Blown Dust Inventory Improvement" project, to create a methodology using land use and meteorology data to prepare a CMAQ model-ready inventory. This project is funded with \$125,000 of CY02 funds provided by the Emissions Forum, and reprogramming the \$29,795 in the "Road Dust EI" line under R&D/Dust on the attached spreadsheet. The RFP for this project has been advertised, responses are due September 6, 2002, and the project is scheduled for completion in April 2003.
2. A "Module D Speciation and Analysis" project, to perform chemical analyses on the particles collected on Module D filters, (representing the PM_{2.5} to PM₁₀, or coarse size fraction) measured by the IMPROVE samplers in the WRAP region. Data from this project will begin to answer the questions about the composition of Module D particles, and the adequacy of ambient monitoring capabilities. This project will use \$100,000 of reprogrammed CY02 R&D funds, and anticipates needing an additional \$10,000 in new CY03 funding.
3. An "Emissions/AQ Model Revisions and Testing" project, to revise and test emissions models for fugitive dust. This project will use \$50,000 of reprogrammed CY02 R&D funds.
4. A "Follow-up Secondary Organic Aerosols Analysis Work" project to begin in 2003, to build on the analytical recommendations of a March 2003 National Science Foundation-funded workshop on *Development of Research Strategies for Sampling and Analysis of Organic and Elemental Carbon Fractions in Atmospheric Aerosols*. The recommendations for analysis from this workshop are important to §308 control strategy evaluations, as organic material and light absorbing carbon are responsible for about 15 to 38% and about 5 to 15%, respectively, of the average reconstructed aerosol light extinction at Class I Areas in the WRAP region. An amount of \$10,000 in CY03 has been identified for this project, to be contributed to a larger analysis effort by academics, EPA, FLMs, and potentially other RPOs.

5. A “Stacked Filter Unit and Module D Data Analysis” project to begin in 2003, using the chemical composition data from SFUs operated in the 1970s and ‘80s, together with the IMPROVE Module D data from the 1980s and ‘90s, will look at historical trends in composition and source apportionment. This project will be coordinated with the Ambient Monitoring and Reporting Forum. \$21,000 is needed for this project in CY03.

In CY04, the Dust Emissions Forum has identified the need for a “Dust – Evaluation of Natural Background Emissions” project, in the amount of \$100,000. This project would analyze and classify dust emissions in a manner similar to the Fire Emissions Joint Forum’s *Recommended Policy for Categorizing Fire Emissions*, dated August 30, 2001.

Funding

See tasks above.

K. Ambient Monitoring and Reporting Forum

Background

The Ambient Monitoring and Reporting Forum's work plan for 2003, and continuing into 2004 and beyond, is presently focused on two projects: 1) Expanding the scope and utility of WRAP's web-based ambient monitoring database, including production of Annual Data Reports, and 2) Beginning a two-to-three year project to produce a major web-based report referred to as the "Causes of Haze" analysis. Completing the web database and preparing the first of the every-fifth-year "Causes of Haze" reports lays the groundwork for the AMRF to provide data and the necessary analytical interpretations relative to both §309 and §308 of the Regional Haze Rule.

Status

Ambient Monitoring Database

The existing WRAP ambient air monitoring database web site, operated by Colorado State University's Cooperative Institute for Research in the Atmosphere (CIRA), will receive a new name and begin providing a broader array of data and data analysis tools covering the entire country under an agreement between the nation's Regional Planning Organizations (RPOs). The new Visibility Information and Exchange Web Site (VIEWS) will replace WRAP's current ambient monitoring database and will incorporate other databases at <http://vista.cira.colostate.edu>. VIEWS will include all of the functions previously available in the WRAP database, but will also add data and data analysis tools for the rest of the country. The site's data analysis tools will allow users to customize reports that can be easily downloaded.

The WRAP Annual Ambient Data Report will be published electronically once per year and distributed through the WRAP (soon to be VIEWS) ambient database web site. It will feature data summaries for the previous calendar year as well as some simple trends to promote comparison of current year's data with that from previous years. The overall approach will be to develop a core set of analysis software that generates standard statistical and graphical summaries of the data for every year's annual report. Over the years the software that generates these material will be enhanced so that the scope of the reports will evolve over the years. Feedback from users of the report will be a primary source of information for the direction of this evolution. The report will consist primarily of the standard output from this software and will have only a modest amount of year-specific commentary describing some of the prominent features of these automated products.

Causes of Haze Report

The SOW for this project was prepared and the RFP advertised during Spring and Summer 2002; negotiations leading to selection of a contractor will be complete by summer's end. The effort envisioned for the Causes of Haze report could require more than 24 months to accomplish and may cost as much as half to three quarters of a million dollars per five-year report.

Work Plan

The report on the "Causes of Haze" will include as much as information as can be estimated using monitoring data concerning the aerosol species and source categories that contribute to haze. These reports will also document the use of spatial and meteorological analysis methods to estimate the impacts from within and outside the WRAP region. These assessments of monitoring data will be used in refining EPA default estimates of natural contributions to haze (i.e., natural visibility conditions for the §308 glide paths), and will be documented in this report.

Some of the methods required to conduct assessment used in the Causes of Haze report are non-standard and need to be refined and evaluated by a broad group of technical experts. These include methods to refine estimates of natural visibility conditions, more accurately calculate extinction from aerosol data, and better define the sub regions with similar haze characteristics.

Monitoring data should be used to test the reasonableness of our knowledge and understanding of the entire air quality system. The Causes of Haze report will attempt to illuminate answers to the following questions. For example, are the emission rates by pollutant species roughly consistent with the ambient aerosol species? Do the air quality models agree generally with the monitored aerosol species and visibility data? Is the measured and aerosol reconstructed extinction coefficient data similar? These types of closure assessments are important methods to either build confidence or identify problems that must be addressed.

Funding

The AMRF requests a total of \$275,000 for CY03 as detailed in the attached spreadsheet, \$50,000 for VIEWS and \$225,000 for the Causes of Haze project. Beginning in CY04, the AMRF anticipates the VIEWS amount will level out at \$50,000/year for the foreseeable future. To be completed in CY05, the Causes of Haze report will need another \$450,000.

L. Air Managers Committee

Background

The Air Managers Committee (AMC) was authorized in November 2001 by the WRAP board as a standing committee. AMC membership includes state and tribal air directors from within the WRAP region or their designated senior staff, and federal agencies involved in WRAP as ex-officio members. The purpose of the AMC is to inform air managers of WRAP processes and products; provide a forum for air managers to identify and discuss priority issues related to WRAP, and to forward issues to the appropriate forum(s) to address; and to direct resources to specific needs not addressed in the work plans of other forums and committees. The AMC also serves as a forum to discuss issues between states and tribes and to resolve such matters prior to elevating them to the WRAP board of directors. The main points of AMC contact with the rest of WRAP are through the other standing committees: IOC, TOC and Communications Committee. Organizationally, the AMC is made up of a state caucus and a tribal caucus, with a member of each caucus appointed as co-chair.

Work Plan

1. *Caucus Staff Support*

Each caucus has staff support - the Tribal Caucus through NTEC, with additional support directly from WRAP; The State Caucus through a WGA contract with WESTAR. The caucus staff positions are generally responsible for disseminating information between WRAP committees and forums and their respective caucuses, and to facilitate communication between the two caucuses and with AMC as a whole. They are also responsible for issue definition, outreach and coordination.

Some funding is also set-aside in this budget to provide for an Alaska tribal coordinator.

Part of the reason AMC was formed is because the air managers are unable themselves or through their agency staffs, to participate first-hand in every aspect of WRAP proceedings. This creates gaps in the each air manager's understanding of WRAP's work products and uncertainty about implications for their respective air programs. Thus it is important that the caucus staff members attend the most significant meetings, workshops and conference calls, and provide summaries to all the air directors. This may involve travel to as many as 20-25 meetings each year by each staff member, as well as the associated telephone, supplies and other items.

Caucus Staff Support Budget

State Caucus Staff support	
Personnel (incl. Indirect)	\$ 74,500
Travel (WESTAR)	22,500
Overhead @ 21%	20,400
Sub-Total	\$117,400

2. *AMC Program Enhancement*

Experience has shown that it is impossible to prepare a work plan for a complex project that addresses all contingencies. For example, unanticipated events, such as the recent D.C. Circuit Court Case, may create the need for supplemental technical work in addition to that contained in scheduled work plans. AMC proposes that the WRAP set aside an enhancement fund of \$150,000, to be initially placed in the AMC budget to address unanticipated needs. These funds may be used as needed to augment existing project budgets or to fund new priority projects sponsored either by the AMC directly or by other WRAP committees and forums.

Funding

Caucus staff support:	\$117,400*
<u>Program Enhancement:</u>	<u>\$150,000</u>
Total:	\$267,400

* There may be additional costs associated with the Alaska tribal coordinator

M. Communications Committee

1. *Update and maintain web site - primary communications tool for the WRAP*
 - A. Update/Redesign Web Site
 - B. Maintain Web Site
2. *Continue and expand publications for both internal and external audiences*
 - A. Collect inputs, draft and publish The WRAP Sheet on the Web Site
 - B. Translate The WRAP Sheet into Spanish and post on the Web Site
 - C. Print and mail hard copies of The WRAP Sheet to selected recipients
 - D. Produce brochures, fact sheets and other handout materials for conferences, exhibits and public meetings
3. *Update and develop alternate presentation materials to tell the WRAP story*
 - A. WRAP 301A, 401 and Tribal versions (tailor to meet needs of various forums/committees)
 - B. Convert to various video formats and make duplicate copies for multiple venues (CD, VHS, 35mm, etc.)
4. *Expand speakers' bureau activity to assure exposure of WRAP story to state and tribal general audiences throughout the WRAP region (tailor to individual audiences as appropriate)*
 - A. Develop and maintain data base of prospective audiences
 - B. Work with state and tribal air directors/forum and committee chairs and follow up on contacts to schedule presentations
 - C. Coordinate presentation and support materials for all scheduled events
5. *Support WRAP forums and committees in conducting public meetings to inform and obtain public input on WRAP work products and related state SIP/tribal TIP development efforts*
 - A. Assist with arrangements for meeting venues
 - B. Coordinate presentation and support materials for all scheduled events
6. *Consider other public outreach efforts to reach wider audience - investigate partnering with other agencies/programs with shared goals (i.e. Pollution Prevention Roundtable for AP2 presentation)*
 - A. Identify potential partnerships and follow up to develop cooperative ventures
 - B. Participate in joint ventures with mutual benefit

Appendix A

Preliminary Long-Term Budget

WRAP Preliminary Long-Term Budget

Projects	CY04 Proposed	CY05 Proposed	CY06 Proposed
Market Trading Forum			
Analysis of NOx and PM for Section 309 and 308	100,000	200,000	100,000
Determine Sources Subject to BART	100,000		
Fire Emissions Joint Forum			
Technical Guidance on ERT Use (supports annual emissions goal reporting)	40,000		
2002 Inventory of Wx, Rx, and WFU for wildland, rangeland, ag	125,000		
2018 Projections of Wx, Rx, and WFU for wildland, rangeland, ag	50,000		
Co-Sponsor National Fire Conference	30,000		
Tech guidance on natural/anthropogenic apportionment	50,000	100,000	
Investigate/summarize smoke management techniques to reduce RH impacts	60,000		
Develop feasibility criteria for use in <i>Categorizing Fire Emissions</i> and ESMP	20,000		
Develop credit policy for use of alternatives to burning for Annual Emissions Goal	30,000		
Develop Fire EI for "large" sources in Mexico and Canada (include remote sens.)	120,000		
Develop Fire EI for 2018 and 2064 sorted by natural and anthropogenic sources	112,500	112,500	
Policy/technical options to refine Annual Emissions Goal using FTS	25,000		
Assess use/develop guidance of Remote Sensing for Fire EI Development		75,000	
Develop bridge to transfer <i>FTS</i> data into Emissions Data System		10,000	
Establish workgroup to assess use of biomass for energy production		100,000	
Air Pollution Prevention Forum			
Tracking and Reporting RE and EE Implementation and Impacts of Legislation	50,000		
Develop Market Guidelines and Verification Protocols for Regional Credit Trading	40,000		
Technical Assistance to States/Tribes for SIPs/TIPs	50,000	50,000	
Mobile Sources Joint Forum			
Smart Growth Toolkit and Workshop	50,000		
Sources In and Near Class I Areas Forum			
Gateway Community Demonstration Project	50,000	50,000	50,000
Economic Analysis Forum			
Development of In-House Modeling Capabilities	75,000	75,000	75,000
Air Quality Modeling Forum			
Regional Technical Center (UCR)	600,000	600,000	600,000
Alaska Modeling - Placeholder until further review by AQMF	100,000	100,000	100,000
Emissions Forum			
Emission Inventory Data Base System - Home and Caretaker	100,000	100,000	100,000
Develop Representative Community EI's (Phase 2) - (incl. Alaska)	50,000		
Emission Inventory Data Base System - User Protocol	45,000		
Emission Inventory Data Base System - User Training	50,000		
Incorporate updated Canada and Mexico information	5,000		
Electronic Database Enhancement (incl. Alaska)	75,000		
Transfer Alaska EI to Established Grid	75,000		
Develop Alaska "Below Mixing Height" Aviation EI	50,000		
Develop Alaska "Cruising Height" Aviation EI	100,000		
Improvements for Organics	85,000		
Detailed Speciation for Significant Sources	unknown		
Tribal Data Development Work Group			
Tribal Inventory Gathering and Analysis (ITEP/NAU)	200,000	200,000	200,000
Research & Development Forum / Dust Tasks			
Dust - Evaluation of Natural Background	100,000	100,000	
Ambient Monitoring and Reporting Forum			
Establish and Maintain VIEWS Database (CSU)	50,000	50,000	50,000
Causes of Haze Report (DRI) -- 3 years	225,000	225,000	

Air Managers Committee			
State/Tribal Caucus Staff Support (WESTAR) -- Includes Travel	117,400	117,400	117,400
STIP II Contractor Assistance / Program Enhancement	150,000	150,000	150,000
Communications Committee			
Web Site Administration (B. Bissey)	30,000	30,000	30,000
Public Outreach and Communication on WRAP Issues	40,000	40,000	40,000
Travel and Project Management			
Travel Reimbursed by WGA	150,000	150,000	150,000
Conference Calls	35,000	35,000	35,000
Meeting Expenses	40,000	40,000	40,000
Other Expenses	15,000	15,000	15,000
WGA Salaries and Benefits	325,000	325,000	325,000
WGA Overhead	195,000	195,000	195,000
Subtotals			
Subtotal for Contractor Assistance	3,424,900	2,484,900	1,612,400
Subtotal for Travel and Project Management	760,000	760,000	760,000
Subtotal for NTEC	305,000	305,000	305,000
GRAND TOTAL	4,489,900	3,549,900	2,677,400

Appendix B

Market Trading Forum Work Plan



Market Trading Forum Charge And Work Plan for FY 2003

July 25, 2002

Mission

The Market Trading Forum (MTF) shall make recommendations to the Western Regional Air Partnership (WRAP) and related WRAP forums regarding emission control strategies for stationary sources, and the development of integrated, market-based programs that include other source categories, such as mobile and area sources. The MTF shall use the following broad guidelines.

1. Develop information and supporting documentation that will be needed by states and tribes to implement the provisions of the Annex in the state and tribal implementation plans (SIPs and TIPs) in 2003.
2. Where possible, use innovative, market-based strategies to achieve the emission goals for stationary sources. Consider the development of multi-pollutant, multi-source trading programs that will encourage the most cost-effective emission reductions to achieve visibility improvement goals.
3. Consider other regulatory requirements, such as new source review and the development of new SIPs and TIPs for PM_{2.5} to ensure that the scope and timing of emission control strategies are integrated with complementary programs.

Background

The Market Trading Forum began meeting in August 1997 to develop the details of the stationary source recommendations of the Grand Canyon Visibility Transport Commission (GCVTC), primarily the establishment of emission milestones for SO₂ and a backstop regional cap-and-trade program for SO₂ that would be implemented if the milestones were not met through voluntary means.

In July 1999, the EPA published a revision to 40 CFR Part 51, Subpart P, Protection of Visibility, that accepted the recommendations of the GCVTC recommendations and established requirements for western states and tribes to develop SIPs and TIPs by December 31, 2003,

based on these recommendations. States and tribes also have the option to develop SIPs and TIPS using different strategies to improve visibility at western Class I areas at a later date.

The WRAP submitted the Annex by October 1, 2000, as required by the rule, that established emission milestones and the details of a backstop cap-and-trade program. On May 6, 2002, EPA proposed amendments to section 309 of the regional haze rule to incorporate the provisions of the Annex. In order for a state to submit a SIP or TIP under Section 309, it must adopt the necessary provisions of the Annex into its SIP and submit the revision to EPA by December 31, 2003. Tribes may submit TIPS at a later date. A plan revision must then be submitted in 2008 to address additional stationary source provisions for NO_x and PM.

States and tribes also have the option to develop SIPs and TIPS using different strategies to improve visibility at western Class I areas. Implementation Plans that are not based on the Grand Canyon Commission strategies will be due sometime between 2004 and 2008, depending on the circumstances in each area.

Related References

Voluntary Emission Reduction Program for Major Industrial Sources of Sulfur Dioxide in Nine Western States and a Backstop Market Trading Program, an Annex to the Report of the Grand Canyon Visibility Transport Commission, Western Regional Air Partnership, September 29, 2000.

Recommendations for Improving Western Vistas, Report of the Grand Canyon Visibility Transport Commission to the United States Environmental Protection Agency, June 10, 1996.

40 CFR Part 51, Subpart P, Protection of Visibility

Voluntary Emissions Reduction Program for Major Industrial Sources of Sulfur Dioxide in Nine Western States and A Backstop Market Trading Program: An Annex to the Report of the Grand Canyon Visibility Transport Commission, and Appendices, Western Regional Air Partnership, September 29, 2002.

Additional background information, including meeting minutes, technical materials, and working draft documents can be found on the MTF page on the WRAP web site, located at www.wrapair.org.

Structure of the Forum

A number of critical tasks need to be completed to address the stationary source requirements for the regional haze rule, as well as the development of market based strategies to achieve the visibility improvement goals in the most cost effective manner. These tasks need to be coordinated to ensure that there is consistency with the recommendations of the GCVTC report and the Annex, however, the tasks will also require the input of a large number of stakeholders

and technical experts. The MTF relies on a number of targeted workgroups to address the specific tasks outlined in this work plan. These workgroups will develop specific recommendations under the broader policy guidance and supervision of the MTF. The remaining tasks in this work plan that do not require additional expertise will be addressed directly by the MTF. This discussion of the subject matter jurisdiction for these workgroups is intended to provide general guidance. Once the workgroups are formed, the MTF will work with the workgroups to refine their scope of work as appropriate.

Allocations Workgroup (Utility and Non-utility)

Finalize allocation estimates for all source categories, and provide examples of how the various pieces of the allocation methodology will work together.

Tracking and Record Keeping Workgroup

The Annex provides an overview of the tracking and record keeping requirements both prior to and after the backstop program has been triggered. Additional detail will be needed in the 309 SIPs and TIPS.

1. Monitoring Protocols. Detailed monitoring protocols should be developed for all source categories that are subject to the backstop trading program to ensure that the monitoring is equivalent to the requirements of 40 CFR 75. Reporting and record-keeping requirements are currently in the Model Rule but may be refined under this task.
2. Allowance and emissions tracking system (after program is triggered). If the backstop trading program is triggered, an allowance and emissions tracking system will be needed to determine compliance with the program. The system itself does not need to be created at this time, but a framework is needed that a contractor could then use to build a system in the future. The acid rain ATS and ETS could be used as the starting point for the system, or a new system could be designed to meet the needs of the WRAP.
3. New energy development impacts on milestone assumptions. Track the development of new and planned energy sources (utilities, refineries, renewable energy sources) Prepare a report to submit to the WRAP at their Spring 2003 meeting that describes the SO₂ emissions from these new energy sources, as well as SO₂ emission changes from existing energy production and other industrial sources.

MTF Tasks and Deliverables

1. RAVI/Geographic Enhancements. The SO₂ milestones were developed to meet the requirements for regional haze visibility impairment through a backstop trading program, in lieu of case-by-case BART determinations. Prior to 2018 when BART will be satisfied for all eligible BART sources participating in the 309 backstop regional trading program, there may be “hot spot” issues, where individual sources or a small group of sources uniquely affect visibility at a Class I area. The visibility rule addresses this issue through the application of BART due to reasonably attributable visibility impairment (RAVI). The interaction between these two

requirements in the context of a trading program in lieu of BART is referred to as geographic enhancements.

A. Finalize the draft MOU between the states, tribes, and the federal land managers to address the circumstances under which the FLMs would determine that reasonably attributable visibility impairment (RAVI) is occurring at a Class I area. This MOU will be submitted as part of the implementation plans in 2003.

B. Prepare a consensus document that describes how the RAVI/BART process will be implemented under the Annex. Discussions continue among interested stakeholders participating in the MTF to specify areas of concern to each affected interest and work toward agreement on how to resolve differences.

2. Tribal Set-Aside. The Annex contains a tribal set-aside of 20,000 tons of SO₂ allowances. The process for distributing these allowances among tribes needs to be defined. The WRAP comments on EPA's proposed approval of the Annex noted that the tribal set-aside distribution methodology was not needed in the short term, but should be completed no later than 1 year after the program has been triggered. The IOC does not anticipate that the program will be triggered in the near term. The MTF should provide support to the tribal caucus, as requested, when the tribal caucus addresses this issue.

3. Model Rule and MOU. The MTF should work with the Air Managers Committee to finalize the model rule and MOU for use in the section 309 SIPs and TIPs and to ensure that these documents are consistent with the Annex agreements.

A. Develop additional protocols and guidance documents for the backstop trading program, as identified by the Air Managers Committee in their review of the model rule and MOU, to ensure regional consistency.

B. Review, modify if necessary and adopt, as appropriate, the products of the AMC/WESTAR process on adapting the MOU and Model Rule for implementation into SIPs and TIPs.

4. Stationary Source NO_x and PM. The MTF should prepare a report, as outlined in 40 CFR 51.309(d)(4)(v), that addresses stationary source emissions of NO_x and PM. This report should be submitted to the WRAP for consideration by the spring of 2003 to allow states and tribes time to include the report in their SIP/TIP submittals in December 2003. The report should address the following items.

A. Assessment of emissions control strategies. Prepare a report, as outlined in 40 CFR 51.309(d)(4)(v) which assesses emission control strategies for stationary source NO_x and PM and the degree of visibility improvement that would result from such strategies.

B. Backstop Trading Program. Evaluate and discuss the need to establish milestones for NO_x and PM to avoid any net increase in these pollutants from stationary sources within the Grand Canyon visibility transport region, and to support future development and

implementation of a multi-pollutant, and possibly multi-source market-based program. backstop trading program for NO_x and PM.

(i) Evaluate the benefits and possible difficulties that would be encountered by allowing interpollutant trading for stationary sources to meet the visibility improvement goals for the region.

(ii) Evaluate the benefits and possible difficulties that would be encountered by expanding the backstop trading program to other source categories, such as area sources and mobile sources.

(iii) Develop a support document that proposes mechanisms and their feasibility for expanding the program to include non-GCVT Region states and tribes.

C. Impact on Tribal Lands. Identify potential effects that stationary source emission reduction strategies for NO_x and PM may have on tribal lands, including impacts on economic development. Identify any critical data gaps regarding stationary source emissions on tribal lands, and make recommendations for addressing these data gaps.

D. BART Requirements for section 309 SIPs. The 2003 SIP/TIP must provide for an implementation plan revision by December 31, 2008 that contains any long-term strategy and BART requirements for stationary source PM and NO_x. The report in 2003 should address the potential for emission reductions that will be achieved due to the establishment of milestones and a backstop trading program for SO₂.

(i) The report should also address whether the MTF should consider the establishment of milestones for NO_x and PM, as outlined in task 2, that will achieve greater reasonable progress than would be achieved through the installation and operation of source-specific BART.

(ii) If a trading program is not recommended, the report should identify options and supply background technical information to assist states and tribes in the development of case-by-case BART analyses for NO_x and PM.

E. BART Requirements for section 308 SIPs. The report should identify options and supply background technical information to assist states and tribes in the development of BART determinations for all visibility impairing pollutants, as required in 40 CFR 51.308(e).

5. Section 308 Stationary Sources.

A. The MTF should prepare a report that identifies stationary source categories in the region, projected emissions from these categories, emission control options including costs and expected benefits, and recommendations regarding the need for regional control strategies to address the visibility impact due to emissions from these sources. This report is intended to provide background information that states and tribes may use to

determine whether additional emission reduction strategies, beyond those required to meet the requirements for BART, are needed to meet the visibility improvement goals of section 308 of the regional haze rule.

- (i) Evaluate the use of innovative, market-based solutions to achieve emission reductions from stationary sources in the region, including trading programs, clean air investment funds, and emission fees.

B. Expansion of Backstop Trading Program to WRAP states and tribes outside of the Grand Canyon Transport Region. Make recommendations regarding the expansion of the regional SO₂ milestones and backstop trading program to WRAP states and tribes that are outside of the Grand Canyon visibility transport region.

- (i) Evaluate the effect of expansion on the demonstration that the SO₂ milestones achieve greater reasonable progress than BART.

- (ii) Identify any regulatory barriers that would prevent expansion of the program.

6. Tribal Issues and Capacity Development. Overarching issue that should be addressed by the MTF and each of the workgroups in regards to the individual tasks.

Note: The Tribal Caucus is currently evaluating the issue of data development, and the best way to provide tribal input into the various forums of the WRAP. This language is included as a placeholder, and will be revised as part of this broader tribal effort.

A. Identify tribal cultural considerations that may affect the control of stationary source emissions in the region. Identify potential regulatory burdens or other economic impacts that may affect tribal lands due to specific stationary source emission reduction strategies.

B. Identify data gaps, including emissions data for tribal stationary sources, as well as other technical limitations that need to be addressed before strategies can be developed for specific source categories or geographic regions. Make recommendations regarding ways to resolve these data gaps and improve the technical basis.

Collaborative Requirements

The MTF should coordinate with other forums to ensure that common issues are addressed and to ensure that there are not significant overlapping work products, or significant gaps that are not being addressed by any forums. In particular, the MTF should maintain on-going communication with the Emissions Forum, Modeling Forum and the Pollution Prevention Forum to ensure that overlapping issues are addressed.

Process Requirements

The Market Trading Forum should:

1. Follow the general guidelines developed by the WRAP for all forums.
2. Adhere to the objectives described above, and meet schedules for deliverables.
3. Provide meeting minutes to the IOC, as well as short quarterly reports that will be posted on the web.

Membership Criteria

The MTF should be comprised of a mixture of policy and technical experts. Experience with the development of the Annex is important to ensure that the overall goals of the Annex are maintained, however, additional expertise will be needed to complete the tasks outlined in this post-Annex work plan. The IOC recommends that the composition of the MTF be re-evaluated to ensure broad stakeholder representation. This evaluation will consider the current stakeholder categories and the number of participants for each category. Once the stakeholder categories and numbers are defined, the MTF will consider applications for membership. The MTF will give special consideration to the input of the stakeholder groups in identifying new and continuing members. At least 50% of the membership should have experience with developing the Annex to ensure that the broad goals and negotiated agreements of the Annex are maintained.

In addition, the MTF should establish workgroups, as needed, that are comprised of technical and policy experts to develop some of the specific work products as discussed above. Joint workgroups that are coordinated with the TOC may be needed in some cases. The MTF will designate individuals to participate in the workgroups, although the workgroups will be given the opportunity to add members in order to address specific technical or policy needs. As stated above, all work products developed by the workgroups must be reviewed by the MTF.

Appendix C

Preliminary 2004-05 Work Plan for the Fire Emissions Joint Forum

**Preliminary 2004-05 Work Plan
for the Fire Emission Joint Forum**

Develop technical guidance on apportionment of fire emissions data (Natural and Anthropogenic) with monitored IMPROVE data for purposes of determining baseline visibility conditions and reasonable further progress demonstration. (\$50,000 in 2004, \$100,000 in 2005)

Develop feasibility criteria for technical guidance and refinement for *Policy for Categorizing Fire Emissions* Program Management and Classification Criteria, as well as the elements of an ESMP. (\$20,000 in 2004)

Investigate and summarize smoke management techniques for fire sources that reduce regional haze impacts on Class I areas. Techniques that should be assessed include use of meteorological conditions, dispersion characteristics, burning of smaller units, etc. (\$60,000 in 2004)

Develop Emission Inventory for large fire sources from Mexico and Canada. Include assessment of use of remote sensed data for this purpose. (\$120,000 in 2004)

Develop Emission Inventory of 2018 and 2064 of fire sources apportioned by natural and anthropogenic categorization. (\$112,500 in 2004, \$112,500 in 2005)

Develop policy for credit for use of alternatives to burning. Assess examples (CA) and others for incorporation into Annual Emissions Goal/Reasonable Further Progress. (\$30,000 in 2004)
Develop policy and technical options that refine Annual Emissions Goal Policy to accommodate Fire Tracking System (Baseline emissions data, short-term fire projections, etc)(\$25,000 in 2004)

Development of the bridge for the transfer of FTS data into WRAP Centralized Emission and Inventory System. (\$10,000 in 2005)

Assess the potential use of remote sensing for fire emissions inventory development including consideration of cost, accuracy, and methods. Develop technical guidance for WRAP use of remote sensing for fire emissions inventories. (\$75,000 in 2005)

Establish a workgroup with Pollution Prevention Forum to assess use of biomass/vegetative material for energy production (material availability, energy content, barriers, technology, pollution trade-off). (\$100,000 in 2005)