



**Western Regional Air Partnership
2005 Work Plan**

December 7, 2004

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I. INTRODUCTION

This work plan summarizes activities and expenditures planned by the Western Regional Air Partnership (WRAP) for calendar year 2005, including activities initiated in earlier years and new activities.

The WRAP is funded through annual grants from the U.S. EPA. This work plan will be submitted to EPA as part of the WRAP's grant application for the federal FY04 funds (\$3.08 million) awarded to the WRAP to support ongoing technical and policy work related to the development of state and tribal regional haze plans for the West.

Table 2 (pages 6 to 8) provides a list of the projects that will be funded in calendar year 2005 by the WRAP's federal FY04 grant. The funding levels for these projects are shown in the last column of the table, titled "2005 Request".

Table 2 also lists projects funded through previous years' grants which are currently underway (column titled "Projects Underway") or which are pending initiation in 2005 (column titled "Projects Pending"). For those projects underway, the table lists actual "Expenses to Date" as of August 31, 2004.

The completion in December of 2003 of Section 309 regional haze plans by five WRAP states and the city of Albuquerque represented a significant accomplishment of the WRAP. The WRAP's principal effort in 2005 will be to build on the work completed through the Section 309 plans in order to support state and tribal demonstrations of reasonable progress to improve visibility at the more than one hundred Class I areas in the WRAP region.

Recognizing this challenge, the WRAP completed a long-term strategic plan in 2003.¹ Figure 1 on pages 9 and 10 shows the strategic plan time line and major project milestones. The time line and major milestones from the strategic plan provide the overall schedule and objectives for this work plan. The Strategic Plan also serves as an instrument of coordination and provides the direction and transparency needed to foster stakeholder participation and consensus-based decision making, which are key features of the WRAP process. The strategic plan also provides guidance to the individual plans of WRAP forums and committees which are included in this work plan.

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 116 (or 75 percent) of the nation's 156 mandatory federal 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

¹ See <http://www.wrapair.org/forums/sp/docs.html>

WRAP must be sensitive to other regionally-important environmental issues, such as fire and drought. 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.

Finally, the WRAP's long-term planning process must be prepared to deal with relevant events beyond its control, such as federal multi-pollutant initiatives and the ramifications of legal challenges to the RHR. One way the WRAP contends with these events is to have sufficient staffing to track the issues and to foster a constructive dialogue among its members.

Table 1: Overview of WRAP 2004 - 2005 Key Deliverables

Time Frame	Responsible Group/Subject	Deliverable (completion target month)
2004 Q4	Emissions Forum	<ul style="list-style-type: none"> ▪ Operational version of Emissions Data Management System (EDMS) with actual 2002 EI for WRAP region. (December) ▪ NH₃ inventory improvement project complete (October)
	Fire Forum (Phase 2 EI project)	Final 2002 complete fire EI – actual 2002 emissions, stored in EDMS. (December)
	Monitoring Forum (CoHA project)	<ul style="list-style-type: none"> ▪ Source apportionment of each state’s major emissions source category impacts at Class I areas in AoH report. (December) ▪ Descriptive analyses of 2002 monitored impact at Class I areas in AoH report. (December)
	Modeling Forum (TSSA project)	<ul style="list-style-type: none"> ▪ Source apportionment of each state’s major emissions source category impacts at Class I areas in AoH report. (December) ▪ Source apportionment of each state’s natural and manmade emissions at Class I areas in AoH report. (December) ▪ Boundary conditions and new emissions estimates from WRAP Fire Forum, other RPOs, Canada, and Mexico updated. (September-October)
	Attribution of Haze WG	<ul style="list-style-type: none"> ▪ AoH 2004 Draft Report <i>draft</i> complete – Integrated “weight of evidence” source attribution for each state’s emissions source category impacts at Class I areas, from TSSA and CoHA projects, based on 2002 “interim” (not EDMS) EIs. (December)
	Tribal Data Development WG	<ul style="list-style-type: none"> ▪ Tribal monitoring data analysis from CoHA project for tribal Class I areas in AoH report. (December)
	Stationary Sources Forum	<ul style="list-style-type: none"> ▪ List of BART-eligible sources (December) ▪ Begin work on oil/gas and point source EI projections.
	Dust Emissions Forum	<ul style="list-style-type: none"> ▪ Phase 2 windblown dust emissions inventory model completed, evaluated, and EI included in subsequent modeling analyses. (October) ▪ Causes of Dust analysis products from CoHA project. (December) ▪ Fugitive dust handbook and website. (December)
	Economic Analysis Forum	<ul style="list-style-type: none"> ▪ Complete pilot study / demonstration of economic analysis framework. (December)

2005 Q1	Emissions Forum	<ul style="list-style-type: none"> ▪ EDMS updated with 2018 base case EI for WRAP region. (April, pending SSJF/TDDWG projects below)
	Fire Forum (Phase 3 EI project)	<ul style="list-style-type: none"> ▪ 2000-04 baseline period fire EI – for planning purposes, stored in EDMS. (March)
	Monitoring Forum (CoHA project)	<ul style="list-style-type: none"> ▪ Continuing development of conceptual models and processing of additional data. (March)
	Modeling Forum (2002 base case modeling project)	<ul style="list-style-type: none"> ▪ Modeling performance evaluation using actual 2002 emissions from EDMS, and compared to monitoring data. (March)
	Attribution of Haze WG	<ul style="list-style-type: none"> • AoH 2004 Final Report complete – see draft description above in 2004 Q4. (January)
	Tribal Data Development WG	<ul style="list-style-type: none"> • Tribal monitoring needs report from CoHA project for tribal Class I areas. (March) ▪ Review, improve, project emissions inventories of point and oil/gas sources on tribal lands. (March)
	Stationary Sources Forum	<ul style="list-style-type: none"> ▪ Review and improve the 2002 point and area source inventory. (February) ▪ Begin work on oil/gas and point/area source EI projections. (January)
	Mobile Sources Forum	<ul style="list-style-type: none"> ▪ Workshop to initiate offroad retrofit program. (January)
	Dust Emissions Forum	<ul style="list-style-type: none"> ▪ Establish a preliminary definition of dust and release for public review.
	In and Near Forum	<ul style="list-style-type: none"> • Summarize PM₁₀ SIPs for local sources and their transferability to Class I areas.
2005 Q2	Emissions Forum	<ul style="list-style-type: none"> ▪ Prepare scenarios' specifications and EIs for 2018 control strategy projections for WRAP region, stored in EDMS. (June)
	Fire Emissions Forum (Phase 4 EI project)	<ul style="list-style-type: none"> ▪ 2018 projection year fire EIs consisting of 2 to 3 scenarios, stored in EDMS. (May)
	Monitoring Forum (CoHA)	<ul style="list-style-type: none"> ▪ Continuing development of conceptual models and processing of additional data. (June)
	Modeling Forum (2018 base case modeling project)	<ul style="list-style-type: none"> ▪ Modeling performance evaluation using 2018 base case emissions from EDMS. (June)
	Stationary Sources Forum	<ul style="list-style-type: none"> ▪ Complete work on oil/gas and point source EI projection scenarios. (June)
	Dust Emissions Forum	<ul style="list-style-type: none"> ▪ Host dust control measures workshop ▪ Complete enhanced ambient data analysis ▪ Establish appropriate size distribution of fine versus coarse dust emissions.

2005 Q3	Emissions Forum	<ul style="list-style-type: none"> ▪ Continuing emissions analyses for 2018 control strategy scenarios. (September)
	Monitoring Forum (CoHA project)	<ul style="list-style-type: none"> ▪ Begin to define work products for reasonable progress tracking for second AoH report. (August) ▪ Define analyses and work products for second AoH report. (August)
	Modeling Forum (2018 control strategy modeling project)	<ul style="list-style-type: none"> ▪ Start source apportionment of each state's 2018 major emissions source category impacts at Class I areas, associated with control strategy scenarios for second AoH report. (September)
	Attribution of Haze WG	<ul style="list-style-type: none"> ▪ Start second AoH project - integrated "weight of evidence" source attribution for each Class I area's control strategies, to be complete early 2006. (July)
	Stationary Sources Forum	<ul style="list-style-type: none"> ▪ Continue work on control technology analysis and program development
	Dust Emissions Forum	<ul style="list-style-type: none"> ▪ Complete definition of dust
2005 Q4	Emissions Forum	<ul style="list-style-type: none"> ▪ Continuing emissions analyses for 2018 control strategy scenarios. (November)
	Monitoring Forum (CoHA)	<ul style="list-style-type: none"> ▪ Work products to support AoH report. (December)
	Modeling Forum (2018 control strategy modeling project)	<ul style="list-style-type: none"> ▪ Continuing source apportionment of each state's 2018 major emissions source category impacts at Class I areas, associated with control strategy scenarios. (December) ▪ Source apportionment of each state's natural and manmade emissions at Class I areas. (December)
	Attribution of Haze WG	<ul style="list-style-type: none"> ▪ Continue work on second AoH project analysis - integrated "weight of evidence" source attribution for each Class I area's control strategies, to be complete early 2006. (December)
	Stationary Sources Forum	<ul style="list-style-type: none"> ▪ Continue work on control technology analysis and program development
	Dust Emissions Forum	<ul style="list-style-type: none"> ▪ Complete analysis of sources and control options in high-dust areas

Table 2. August 31, 2004 Status Report and 2005 Budget.

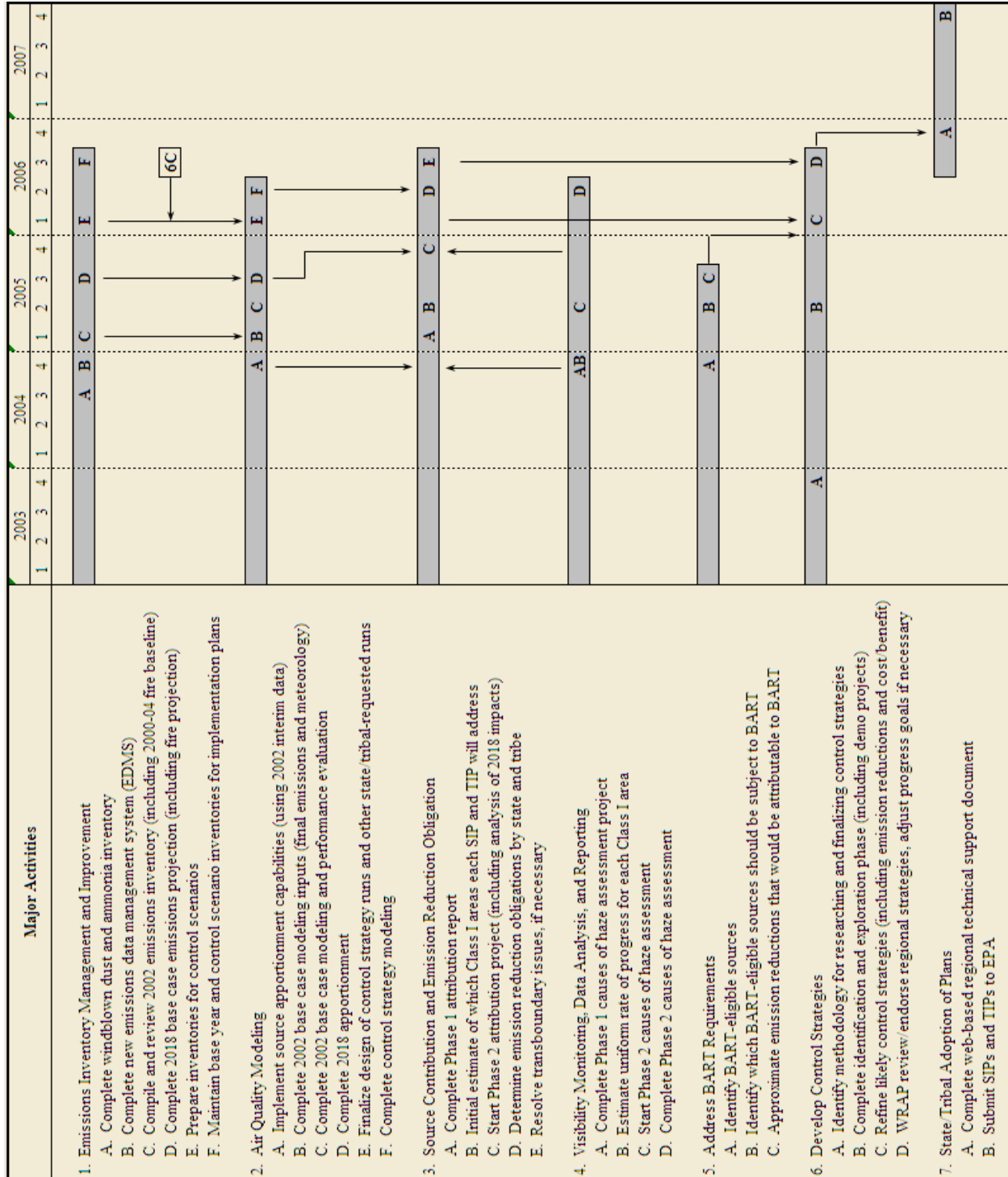
Project Code	Project Title	Projects Underway	Expenses to Date	Projects Pending	2005 Request
Stationary Sources Joint Forum					
SS1	Identification of BART-Eligible Sources (ERG)	125,811	78,997		
SS4	Technical Support for Emissions and Control Technology Analysis			149,000	25,000
SS5	Regional Stationary Source Strategy Development				150,000
Fire Emissions Joint Forum					
FF "C" + 1	2002 Inventory (Phase I) and Wildland Fire Emissions Tradeoff Model Review (Air Sciences)	157,464	92,877		
FF7	2002 National Wildfire EI (<i>inter-RPO project - Air Sciences</i>)	100,000		26,500	
FF"C"	2002 Inventory - Phase II (Air Sciences)			167,000	
FF"D"	Sensitivity Runs Phase II: Regional and Mesoscale			100,000	
FF"E"	Fire Emissions Categorization Guidance - Restoration / Maintenance Difference			10,000	
FF4	Regional Modeling Center Support			25,000	
FF5	Fire Tracking System / EDMS			40,000	
FF6+3	Phase III & IV Inventories & Preliminary Assessment of Apportionment Methods			170,000	
FF8	Methods for Calculating Benefits of ERTs to Support AEG Policy			75,000	
FF9	Regional Coordination of Smoke Management Programs			25,000	
FF12	Smoke Mgmt Technical and Policy Workshop			25,000	
Air Pollution Prevention Forum					
PP2	Renewable Energy Tracking and Certificates (CEC)	80,000			
PP2	Renewable Energy Tracking and Certificates			100,000	
PP5	Displaced Emissions Analysis			15,000	
PP6	WGA Clean Energy Initiative	100,000			
Mobile Sources Forum					
MS1	Coordinator to Support Non-Road Demonstration Projects - (Emissions Advantage)	144,544			100,000
Sources In and Near Class I Areas Forum					
IN2	In/Near Strategies for Reasonable Progress (Review PM-10 SIPs)			50,000	25,000
Economic Analysis Forum					
EA1	Framework Application Test (BBC)	89,980	42,760		
EA1	Mobile Sources (Emissions Advantage)	15,000	11,266		
EA2	Development of Baseline Economic Data			55,000	30,000
EA3	Enhancement of Cost and Benefit Unit Values			80,000	
EA4	Screening Tool			40,000	
EA6	Economic Assessment Capability				50,000
Air Quality Modeling Forum					
MF1	Regional Modeling Center (UCR)	2,640,599	1,925,935	70,000	430,000

Project Code	Project Title	Projects Underway	Expenses to Date	Projects Pending	2005 Request
	2004 subtotal = \$556,832 plus subtasks below for a total of \$884,942				
	<i>Fire Sensitivity Runs - 42,650</i>				
	<i>Training and Outreach Activities- 65,000</i>				
	<i>MM5 Runs - 20,000</i>				
	<i>Wind Blown Dust - 51,283</i>				
MF2	<i>Alaska Modeling- 200,460</i>				
Tech-Wide Projects (TOC)					
	Co-sponsor March 2004 Organic Aerosols Workshop (FLC)	10,000	9,936		
	Geographic Data Display (Pangea)	24,919	22,427		
Emissions Forum					
EF1	EDMS (Pechan)	560,278	432,748		
EF1	2004 EDMS Testing - Phase I (ERG)	25,000			
EF1	2004 EDMS Testing - Phase II			25,000	
EF1	2005 EDMS Hosting / Operation				180,000
EF1	2018 Base Case and Control Strategy Point and Area Source EI Projections			91,000	
EF1	Fire Module Improvements			105,000	
EF2	Representative Community EIs - Rural Alaska (Sierra Research)	139,888	4,239		
EF3	Update On-road & Non-road Input Data & Generate EIs for 2002, 08, 13, 18			125,000	
EF7	Alaska Aviation Inventory (RFP)	49,998			
Tribal Data Development Work Group					
	Tribal Inventory Gathering and Analysis (ITEP/NAU) - Phase III	316,000	0		
TW1	Emissions Data Development Support				103,000
TW5	Continue Emissions Inventory & TEISS Technical Support				98,000
Dust Emissions Joint Forum					
DF1	Common Definition of Dust and Dust Types			45,000	
DF2	Enhanced Ambient Data Analysis			50,000	
DF3	Fine Fraction of Dust EFs			120,000	
DF4	Wind Blown Dust Inventory Improvement (Environ)	182,324	156,642		
DF5	Fugitive Dust Handbook, Website (Countess/MRI)	71,327	29,963	20,000	
DF7	Dust Control Measures Workshop				10,000
Ambient Monitoring and Reporting Forum					
AMR1	IEWS Data Base	499,724	406,676		
AMR2	Causes of Haze Report, including \$50 K for Dust (DF2) & \$85 K for Tribal Areas (DRI)	550,000	382,235		225,000
AMR3	<i>Natural Haze Levels Analysis (from OAQPS, national project) (Tombach)</i>	85,000	0		

Project Code	Project Title	Projects Underway	Expenses to Date	Projects Pending	2005 Request
Attribution of Haze Work Group					
	Report on 2002-04 Organic Aerosols Workshop series (T. Richard)	5,000			
AoH1	Contractor Support for Attribution of Haze (ARS)	88,520			75,000
AoH2	WIGIMS Implementation			60,000	107,000
309 Coordinating Committee					
309a	Annex Implementation - 2003 Emissions Report (Perrin Quarles)	21,855	988		
Air Managers Committee					
AMC1	State Caucus Staff Support (WESTAR)	347,434	283,036		120,000
AMC2	AK Tribal Outreach Coordinator (NTEC)	75,000	0		
AMC3	Health and Environmental Assessment of Haze-Related Improvements			45,000	
AMC4	Traditional Tribal Practices and Regional Haze			35,000	
AMC5	308 Implementation Work Group Support (WESTAR)	18,000	5,394	20,000	38,000
AMC6	Workshops on Effective Collaboration			20,000	
	Contractor Assistance			103,580	
Communications Committee					
	Outreach Assistance (Pat Murdo)	54,700	35,469		
	Retool Web Site (Cobalt)	28,269	23,977		
CC1	Web Site Maintenance (B. Bissey)	125,000	97,201	23,500	
CC6	Graphics for Children's Handout	8,600			
CC2-5	Public Outreach and Communication			41,400	
Subtotal for Contractor Assistance		6,740,234	4,042,764	2,151,980	1,766,000

Travel and Project Management				2005 Request
WGA				
Travel Reimbursements				172,245
Conference Calls				26,024
Meeting Expenses				53,679
Direct Salaries and Benefits				313,490
Overhead & Other Expenses				239,663
Subtotal				805,101
NTEC				
Direct Salaries and Benefits				361,140
Travel Reimbursements				115,400
Overhead & Other Expenses				78,800
2002-2003 Remaining funds for Carryover				(45,200)
Subtotal				510,140
Contractor Assistance				1,766,000
Total				3,081,241

Figure 1. Strategic Plan Timeline (Updated October 13, 2004).



	2003				2004				2005				2006				2007			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Tribal-Only Activities																				
8. Refine Framework for Tribal Federal Implementation on Tribal Lands A. Develop policy to determine when federal implementation is appropriate B. Develop guidance on what elements of a TIP may be "reasonably severable"																				
309 Activities																				
9. Emissions Tracking A. SO2 emissions for comparison to milestones B. Fire emissions C. Clean air corridor and mobile source emissions	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
10. Renewable Energy and Energy Efficiency A. Report on programs and progress B. Provide technical assistance for SIPs/TIPs (continuous) C. Facilitate 10/20 goals through regional credit market development (continuous)	A																			
11. Compliance with all 308 requirements (except SO ₂ BART) for areas outside the Colorado Plateau																				

II. PROJECT SUMMARIES

The following sections provide project summaries for each of the WRAP's forums, committees and work groups. These projects were developed by the forums consistent with the direction provided in the strategic plan and by the oversight committees (Initiatives Oversight Committee and Technical Oversight Committee). The WRAP Planning Team (oversight committee members and forum, committee, and work group co-chairs) finalized the list of projects, and funding levels, ultimately included in this work plan and approved by the WRAP Board.

Initiatives Oversight Committee

The IOC provides overall direction and review to the forums evaluating potential emissions control strategies for regional haze in the West. The IOC has identified two general areas of investigation related to how the work of the individual forums might be aggregated into regional haze plans.

- IO1 Reasonable Progress Criteria – The regional haze rule requires states, when establishing reasonable progress goals, to consider the following statutory factors: the cost of compliance, the time necessary for compliance, the energy and nonair quality environmental impacts of compliance, and the remaining useful life of any potentially affected source. Furthermore, states must include a demonstration in their SIPs showing how these factors were taken into consideration in selecting each goal. The purpose of this task is to explore these factors (e.g., how they have been used or interpreted in other environmental programs) and to provide further definition and guidance with respect to using them in a regional haze SIP demonstration.
- IO2 Process for Identifying Control Strategies – The WRAP strategic plan identifies a “navigational challenge” identifying and selecting emission control strategies among the large number of those potentially available. It also provides some general ideas on how to “narrow the field.” The purpose of this task is to develop a process by which the most effective control strategies will be identified and refined.

Stationary Sources Joint Forum

This work plan assumes that most BART activities will be undertaken by those jurisdictions which choose to implement BART under Section 308(e)(1) of the Regional Haze Rule. Hence, the focus of this work plan is on the development of alternative programs (e.g., emission trading programs) for SO₂ and NO_x. Other activities by the SSJF will include working with EPA to finalize the proposed BART guidelines and to address any potential expansion of the Clean Air Interstate Rule (CAIR) to the West. In the course of its work, the SSJF will assume that the five-state SO₂ milestone and backstop emissions trading program will remain in effect and must be preserved in any regional strategy. Finally, NO_x and PM emissions must be addressed in such a way as to satisfy the SIP revision requirements under Section 309 of the Regional Haze Rule, as well as Section 308.

SS4 Technical Support for Emissions and Control Technology Analysis – The purpose of this project is to support WRAP activities to address emissions from point and area sources by providing WRAP work groups and forums with data, information, and assessments to support the development of programs to address the contribution of Western point and area sources to regional haze at mandatory Class 1 federal areas. The emissions inventory work will include inventory analysis, inventory improvements, and future year projections of point and area sources. The control technology analysis will address issues such as costs, control efficiencies, and other impacts on the source and environment. For SO₂, consideration will be given to expansion of the Annex. For NO_x, consideration will be given to both EGU and non-EGU sources. Other pollutants will be addressed as necessary.

There are several uncertainties that must be factored into the work of the WRAP. These include the possibility of federal multi-pollutant initiatives for electric utilities, the final federal rule for Best Available Retrofit Technology (BART) due by April 2005, and the extent to which WRAP states and tribes choose to implement source-specific BART as opposed to an alternative program (i.e., regional emissions trading). As a result, there is a need to maintain flexibility in program design and to assess new information as it becomes available, including information from ongoing WRAP technical studies which will provide more information on the contribution of various sources to regional haze in the West. A single contractor or team of contractors will be sought for consistency over the course of the project, as developing a point and area source program will likely be an iterative process and may require revisiting analyses as assumptions change or new data become available.

SS5 Regional Stationary Source Strategy Development – This project will include activities which are needed to (1) further implement alternative programs to BART or (2) address sources and/or pollutants which are not included in the alternative programs. Such activities may include providing a forum for coordinating the implementation of BART, estimating the likely emission reductions from the application of BART, demonstrating that an alternative program is better than BART, and addressing trading program design issues, such as 2018 and interim milestones; geographic, new source, and tribal considerations; monitoring and reporting requirements; enforcement provisions; economic impact assessments; and a general method for allowance allocation.

Fire Emissions Joint Forum

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

- 1) The first category provides analyses of technical and policy information needed for further Policy Refinement and Implementation of existing fire policies and programs applicable to the needs of §309 and §308 states.

- 2) The second category addresses existing and future Technical Needs, specifically emissions inventory development and related modeling analyses, fire tracking and emissions data management system, and emission reduction techniques.

No additional 2005 funding is requested as funding has been reprogrammed from funds allocated to FEJF in the 2004 WRAP Work Plan.

FEJF Policy Refinement and Implementation

- FF1 Wildland Fire Effects Trade-Off Model Review – This project was funded and started in 2004. As fire management programs evolve, and as directed by the GCVTC, the applicability of the Wildland Fire Emissions Trade-off Model (FETM) will be reviewed for use in applying existing WRAP policies and guidance pertaining to smoke management of fire. Recommendations from this assessment have possible linkage to both the Enhanced Smoke Management Program and the Annual Emissions Goal policies, both §309 requirements and potentially useful approaches for §308. FETM may also be useful in the development of scenarios for future fire emissions inventories.
- FF”E” Fire Emissions Categorization Guidance: Restoration / Maintenance Difference – This project was funded in 2003 and started in 2004. Develop further user guidance to support the existing WRAP *Policy for Categorizing Fire Emissions*, to refine differences between restoration and maintenance prescribed burns in terms of vegetation structure, fuel loading, fuel size classes, ecosystem function and fire resilience. This project directly supports the “anthropogenic” / “natural” apportionment for implementation of the FTS requirement in §309 as well as similar implementation issues for §308. These categorizations will help support natural and anthropogenic differentiation needed for upcoming WRAP source apportionment efforts.
- FF9 Regional Coordination of Smoke Management Programs – This project was funded in 2003 and will be started in 2005. Regional Coordination is a required element within the ESMP Policy as coordination of burning activity (ranging from passive to active) is critical to avoiding cumulative smoke impacts within and across source types in mandatory Class I areas. Methods for this inter-jurisdictional and regional coordination will need to be developed for wildland and agricultural prescribed fire smoke management programs, information sharing, and public notification. Proposed options will be developed, and then presented and reviewed at a facilitated conference, to be held in 2005. This project directly supports the implementation of the ESMP requirement in §309 as well as similar implementation issues for §308.
- FF12 Smoke Management Technical and Policy Workshop – Three-day workshop in 2005 to assess technical work to date, §309 policy and SIP implementation and refinement of policy options under §308. This effort will build on the two FEJF workshops held in 2004 to ensure that the needed technical and policy tools are in place for SIP/TIP development under §308. Reprogramming 2004 funding funded this project.

FEJF Technical Projects

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

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

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

FF6+3 Phase III & IV Inventories & Preliminary Assessment of Apportionment Methods – This project was funded and will be started in 2004. Phase III is for the Baseline Planning Apportionment and create a 2000-2004 representative emissions inventory. Phase IV is for the 2018 Planning Apportionment and will be a 2018 representative inventory. The 2018 inventory may include a range of potential control scenarios and possible ranges of emissions to reflect the high degree of uncertainty in this type of forecast. The inventories will be prepared for the contiguous WRAP region for wildfire, prescribed fire, and wildland fire use on wildland and rangeland. Agricultural burning is also included. Alaska fire emissions may follow the lower states in deliverable schedule due to a different modeling plan as compared to the other WRAP jurisdictions. This effort also includes categorization of “natural” and “anthropogenic” fire sources. The Attribution of Haze project will be supported by the FEJF through development of technical approaches to apportioning the impact of fire emissions between natural and anthropogenic source categories. These projects directly support the modeling for the §308 SIPs/TIPs.

FF7 2002 National Wildfire Emissions Inventory (includes separate \$100,000 contributed from OAQPS, national project, WRAP has lead RPO responsibility) – This project was funded and will be started in 2004. The 2002 emissions inventory for wildfire will be

developed through an inter-RPO effort funded by EPA, based on a scope of work discussed amongst the RPOs. The FEJF has lead RPO responsibilities for this project. These projects directly support the modeling for the §308 SIPs/TIPs.

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

- FF4 Regional Modeling Center Support – This project was funded in 2004 and will be utilized as the need arises. Provide support to the Regional Modeling Center to assess the impact of various fire emissions scenarios, using modeling runs conducted by the RMC. Support may also be required for fire emissions QA and troubleshooting, which has historically been absorbed by other FEJF projects. This project directly supports the model assessment / sensitivity runs resulting in refinement of the modeling for the §308 SIPs/TIPs.
- FF”B” Model Assessment / Sensitivity Runs – This project was funded in 2003 and will be started in 2004. Independent assessment of fire emissions sensitivity runs to be conducted by the RMC. The assessment will address emissions inventory issues, pollutant speciation, plume height approach, variations in total net emissions, and other key assumed parameters in the context of the regional model results. This project directly supports refinement of the modeling for the §308 SIPs/TIPs.
- FF”D” Sensitivity Runs Phase II: Regional & Mesoscale – This project was funded in 2003 and will be started after completion of the initial Model Assessment / Sensitivity Runs are complete. Conduct an air quality source/impact analysis with two scales of modeling: regional and mesoscale. The regional-scale modeling features chemistry capacity with regional and longer temporal scales. The mesoscale modeling features complex terrain capacity with smaller geographic and temporal scales. Together, these two approaches will provide a comprehensive analysis of potential de minimus levels to assist states and tribes with maximizing efficiency for fire tracking, public notification and regional coordination. This project directly supports the implementation of the FTS and ESMP requirements in §309 as well as similar implementation issues for §308.
- FF5 Fire Tracking System / Emissions Data Management System – Portions of this project were funded prior to 2002 and in 2004 with additional 2004 funding being reprogrammed to this project and will be started in 2005. Evaluation of existing fire emissions inventory systems to develop a Fire Tracking System within, or bridged to, the WRAP EDMS as identified in the Fire Tracking System policy to calculate emissions from fire activity data. Develop user guidance to support the FTS policy identifying a specific format for the EDMS, parameters, defaults, structure and methods of emission calculation for

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

- FF8 Quantitative Methods for Calculating Emissions Benefits of Emissions Reduction Techniques to Support Implementation of the AEG Policy – This project was funded and started in 2003 with the completion of an annotated bibliography on emission reduction techniques completed in 2004. This project will continue in 2004 and 2005. Develop technical guidance on ERTs applicable for wildland, rangeland, and agricultural burning for use in the establishment and support of AEGs. The guidance will include applicability criteria and calculation techniques by vegetation/crop type, emission factors, economics, and emissions averted including identification of new ERTs. Develop user guidance to support the tracking of ERTs (specific format, parameters, structure), which is an optional FTS Policy element. These projects directly support the Annual Emissions Goal reporting requirement in §309 as well as similar implementation issues for §308.

Air Pollution Prevention Forum

The AP2 Forum’s work plan is based largely on the renewable energy and energy efficiency policy adopted by the WRAP Board² and on its subsequent management directive to the IOC and AP2 Forum.³

- PP2 Renewable Energy Tracking and Certificates Project – Under this task, the Forum will work with the Western Governors’ Association to convene a regional meeting of stakeholders to collaboratively develop a “blue print” that will define the critical features needed to:
- Conduct a needs assessment and develop a single set of functional requirements for a certificates-based renewable generation tracking and accounting system in the Western Interconnect;
 - Develop a standard set of market design and operating guidelines for trading RECs within the Western Interconnection to support establishment of a single institution in the West responsible for registering, issuing, tracking, and verifying renewable energy certificates; and
 - Create of an independent, regional generation tracking system to provide data necessary to substantiate the number of megawatt hours generated from renewable energy sources and to support verification, tracking, and trading of RECs.
- PP5 Displaced Emissions Analysis and Time-Specific Marginal Emissions Rates – The Forum will host a series of meetings with experts to identify renewable energy and energy efficiency data collection and measurement protocols in western states and evaluate available emissions displacement tools that could be used by states to help energy offices and air quality managers develop credible, state-specific estimates of emissions displaced by adopting different renewable energy programs and energy efficiency best practices

² WRAP Policy: Renewable Energy and Energy Efficiency As Pollution Prevention Strategies For Regional Haze; April 2003; pg. 1-2.

³ Ibid.; pg 3.

found in the AP2 reports. The Forum's analysis, to date, has focused only on regional-scale impacts. Emissions displacement tools similar to those developed by OTAG for NOx could help individual states establish reporting, monitoring, evaluation, and modeling protocols that would enable them to meet potentially higher verification standards required by EPA for Section 308 SIPs and other types of SIPs

- PP6 Clean Energy Initiative Consistent with the WRAP's definitions and policies related to renewable energy and energy efficiency, the WRAP will provide partial support to the Western Governors' Association (WGA) Clean Energy Initiative. The WGA Clean Energy Initiative is described in a WGA policy resolution approved on June 22, 2004. The initiative includes a goal of achieving 30,000 megawatts of clean energy from sources such as wind, solar, geothermal, biomass, clean coal, and advanced gas technologies by 2015. It also includes a goal of increasing energy efficiency by 20 percent by 2020. These goals will help achieve the WRAP's renewable energy and energy efficiency goals for the Section 309 plans and support the potential expansion of renewable energy and energy efficiency strategies through state and tribal Section 308 regional haze plans.

Mobile Sources Forum

- MS1 WRAP Offroad Retrofit Program – This project was formerly named “Support of Nonroad Demonstration Project” and has been expanded in concept. Initiated in the summer of 2004, the goal of the retrofit program is to promote voluntary emission reductions from existing offroad vehicles and equipment in the WRAP region. In 2005, the MSF, with contractor support, will continue to provide WRAP members and vehicle/equipment owners with written guidance, technical support, outreach services, identification of incentives and public policy options, and examples of successful efforts and reduction opportunities.
- MS2 Offroad Retrofit Credits – The MSF will work with the EPA and other stakeholders to develop and implement, if appropriate, a program that uses retrofits of existing offroad sources to generate credits for compliance with new engine emission standards under the Tier IV nonroad diesel regulations. EPA has indicated an interest in working with stakeholders during 2004 – 2005 to examine the feasibility of this compliance option and implement it if appropriate. Other uses of offroad retrofit credits (e.g., for use in SIPs and TIPs) will be addressed by the Forum as needed.
- MS3 Review of EPA Analyses and Proposals – The MSF will review and where appropriate recommend WRAP comments on EPA technical analyses (e.g., for small nonroad diesel engines) and regulatory proposals (e.g., for ocean-going vessels and locomotives).

Sources In and Near Class I Areas Forum

- IN1 Update Near Inventory and Displays – The goal of this project is to replace the 1996 maps and data currently on the In/Near website with 2002 maps and data, and to add some additional features. Originally, this was scheduled to occur in the fourth quarter of 2004, but will have to occur in early 2005, after the EDMS is operational and other priorities are addressed by the Emissions Forum and EDMS contractor. Furthermore, the in/near maps and data will be a product of the EDMS, as opposed to a stand-alone, static website, as is currently the case. The Forum will work with the Emissions Forum, EDMS contractor, and as necessary ENVIRON (the developer of the 1996 maps and data) to transfer the emission estimation procedures and display methods carefully developed for the 1996 data into the EDMS.
- IN2 In/Near Strategies for Reasonable Progress – The scope of this project is being expanded from what was described in the 2004 work plan. In addition to addressing how in/near strategies might be included in a reasonable progress demonstration – given that some of these strategies may be voluntary, episodic, seasonal, or of such size that would not be properly characterized by a regional-scale model – this project will also identify which control strategies may be most effective at addressing local sources of visibility impairment. As a first step, the Forum will hire a contractor to identify all the PM₁₀ SIPs, maintenance plans, and natural events action plans in the West focused primarily on local, primary sources of PM. Many of the existing plans rely on one or two control strategies for the bulk of emission reductions. A subset of these plans will be selected for further review. The plans selected, in total, will cover a variety of control strategy types. They will also be selected on the basis of their historical record – that is, they should provide a sufficient history of ambient data and implementation and enforcement experience to offer lessons and insights to groups involved in Class I area visibility protection (federal land managers, state and local officials, environmental groups, etc.). The result of this project will be a report summarizing the approach, success, and limitations of the most common PM₁₀ control measures; their applicability and transferability to Class I areas; and a list of contacts for more information. It will include ambient PM₁₀ data for the areas studies and summaries of interviews with officials who implemented and enforce the strategies.

Economic Analysis Forum

- EA2 Development of Baseline Economic Data for States and Tribes – Baseline economic and demographic data (2002 and 2018) are required by the WRAP, selected Forums, and the states and tribes to assess the potential economic impacts of proposed haze reduction strategies on the states, tribes and other stakeholders. These data need to be collected for each state, sub-state regions, and tribes. A particular challenge within this task will be the continued collection and development of tribal baseline data. The overall baseline effort will be conducted in close coordination with tribal partners and the Emissions Forum, since its emissions baseline should be predicated on similar, if not identical economic and demographic data as employed in economic assessments.

To date, baseline data have been collected for three states in the WRAP region at both the state and sub-state level as part of its Framework Test Application. The EAF will continue its management role in the overall effort to compile baseline data for the remaining WRAP states. Development of the baseline economic and demographic data would include careful documentation of both the process and sources employed. In addition, that documentation would include easily applied rule sets for both modifications (if needed) and deconfliction as new information becomes available over next 2-4 years. The EAF and its contractor would provide assistance to WRAP and its respective stakeholders in generating those required baseline data and projection updates as part of the overall analyses identified in the WRAP Strategic Plan.

In concert with the Emissions Forum, the EAF and its support contractor will work to ensure that consistency is maintained between the baseline projections and their subsequent use by the Air Quality Modeling Forum. The Tribal Data Development Work Group (TDDWG) is working toward a standard data “template” which is designed to formally and effectively develop the needed demographic and economic data and data sets required to support consistent economic impact and tradeoff analysis by tribes and other stakeholders. The tribal baseline work will implement that template as it works toward a complete picture of tribal conditions, and forecasts, in the WRAP region.

EA3 Enhancement of Cost and Benefit Unit Values Used in WRAP Economic Analysis – The net benefit calculated for any haze reduction strategy will depend heavily on both the unit cost values (e.g., \$/ton) and the unit benefit values (e.g., \$/deciview and \$/life saved) applied within an economic framework (whether full or a “lite” version”) for reductions attributable to that particular strategy. As was documented in the initial Economic Framework study, and is being borne out in its current application to the off-road strategy comparisons in AZ, MT and ND, these values are often available from only a limited number of existing studies – often due to the rather large expense of conducting the needed research and the tremendous uncertainty involved in evaluating “soft” effects. “Tailored” unit benefit values taken from previous studies for such areas as health, materials and ecological impacts can provide credible “default” or standard coefficients by use of all stakeholders in future economic analyses and regulatory strategy tradeoffs. We recognize, however, that tailored values will fall short of the broad set of values needed by the diverse set of stakeholders with WRAP. As with some of the other tasks, the Forum will actively seek partners to complete the effort of improving existing air quality unit cost and benefit values.

The Forum has yet to address the other side of the cost/benefit equation – that of control costs for the myriad of strategy and technology options that may (should) be considered over the next few years as both the 308 path comes to completion and the 309 path is evaluated for effectiveness. The Forum and its supporting contractor(s) will focus on re-establishing standard benchmark cost estimates, both for the current set of control technologies, and those technologies that may be available in the future. Existing values used are out-of-date. As with the unit benefit values, documentation will include rule sets for making good choices when alternative value (usually due to inherent uncertainties in

any forecast) selection and application need to be offered for both credibility and completeness. Care will be taken to include the “softer” technologies that may be more focused on operating options within production processes themselves as part of this cost side of the equation.

On the benefit side the three principal categories (outside of haze reduction itself) of health, materials damage and ecological quality will remain the focus. On the cost side, both technological options and changes in operating processes and practices will be included.

- EA4 Screening Tool – The current economic analysis framework (study application ongoing for off-road mobile source reduction strategies for the states of AZ, MT and ND and three tribes) employs a fairly comprehensive analysis. Along with the comprehensiveness of such analyses comes the commensurate costs – understanding, skills, dollar costs and time. These considerations make it highly likely that its next set of applications will be used only an occasional basis to assess “packages” of control strategies that have either been well defined and/or are nearing serious consideration by WRAP stakeholders

As a complement to the study framework ongoing application, the Forum is targeting completion of an initial screening tool based on the framework (e.g., a light-weight version of the framework) to be applied more routinely and cost-effectively by WRAP stakeholders for assessing and ranking a variety and number of individual potential control strategies. Two products from this task would be a template and a cookbook of screening various control strategies. After finishing the screening tool, the forum will run through a couple of test cases to see if the tool works and to ensure that the final tool is something useful and meaningful for WRAP. This screening tool has been explicitly identified as a needed capability within the WRAP Strategic Plan for 2003-2008.

- EA5 Coordination and Outreach – An ongoing and inherent task of the Forum will be the coordination with other Forums. As noted above, the Emissions Forum and Economic Analysis Forum would co-develop and share a common set of economic and demographic baseline data, both current conditions and future projections. In addition, because economic analysis is dependent upon results from air quality modeling, the EAF would work very closely with the Air Quality Modeling Forum to fully and in a timely manner capture results from their sets of runs. Also, the EAF and its supporting contractors will be making more extensive use of GIS data, and would be working closely with the Areas Within and Near Class I Areas Forum. A critical area of coordination will be with tribal issues (e.g., baseline data, distributional impacts, and alternative values), with requires a close working relationship, if not partnership, with the Tribal Data Development Work Group. Finally, outreach to other WRAP Forums and stakeholders (including the public) is important to ensure proper use and understanding of economic principles and analytical results, especially since formal, comprehensive (e.g., both costs and benefits) economic analysis is not typically an everyday part of WRAP ember activities. To improve coordination and outreach, the EAF will take advantage of WRAP-wide meetings to host periodic workshops on the application of the tools and interpretation of results of the Forum’s analyses framework and supporting data sets.

EA6 Economic Assessment Capability – The Forum, and its supporting contractor(s) will provide WRAP and its stakeholders with some level of on-going economic assessment capability, depending (in part) on what stakeholders need and the varying role of economic analyses to be conducted for the 308 submittals and 309 reviews. We envision three alternative levels of that support capability -- each with a differing funding requirement: (1) The simplest role would be that of consultation, answering questions, and guiding the use of various economic models including both the full WRAP Economic Framework and its “lite” version (\$25-50 K). (2) The mid-level, or ‘partner’ role would involve partnering with the various stakeholders (principally the states and tribes who are ultimately responsible for 308 and 309 SIP preparation) in the actual conductance of their respective varying economic analyses (\$40-150K). (3) A third level, or role would be for the EAF and its supporting contractors to perform most, if not almost all of the ensuing economic analyses conducted within WRAP, both for WRAP as a whole and for each of its constituent members. Under all three levels, the Forum would house one or more economic models, such as IMPLAN or REMI for both total impact and distributional analysis, to assist in the comprehensive economic analyses conducted within WRAP.

Air Quality Modeling Forum

MF1 Regional Modeling Center – The Modeling Forum plans to continue operation of the Regional Modeling Center (RMC) with the same team of contractors as their single major project, including modeling of Alaska regional haze. The RMC will continue to provide documentation of their ongoing analysis work (including support of the Attribution of Haze Workgroup), protocols and technical support documents for the various analyses and work products, and disseminating this information through biweekly Modeling Forum conference calls, the RMC E-Mail listserv, and periodic meetings.

The proposed 2005 work plan for the RMC will primarily focus on completing emissions processing and air quality modeling evaluations of revised and final 2002 emissions and 2018 emissions projections. The RMC will prepare a specific 2005 cost proposal and work plan for Modeling Forum review and approval in late 2004, and the RMC contract will be amended to reflect this work plan in January 2005. Below, in no particular order of priority, is a list of RMC activities for the 2005 calendar year contract. These tasks continue work begun in 2004, and are identified in the WRAP Strategic Plan.

- Process revised 2002 emissions and 2018 emissions projections
- Update new model codes for SMOKE, MCIP, and CMAQ as needed
- Continue to update post-production displays
- Run CMAQ model with 2002 and 2018 inputs
- Conduct source apportionment/sensitivity model runs
- QA/QC:
 - Implement version control mechanism
 - EI data file to SMOKE outputs analysis & reports
 - Model performance evaluation
- April 2005 - 2002 final base case modeling results report

- June 2005 - 2018 final base case modeling results report
- August 2005 - 2018 base case final source apportionment modeling results report
- Fall 2005 - Three to five [3-5] 2018 control strategy sensitivity modeling results reports

MF2 Alaska Region Modeling – This portion of the RMC work is aimed at providing a 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. During 2004, the RMC is completing two tasks: 1) Develop appropriate methods for running MM5 over central Alaska, including Cook Inlet, the Alaska Range, to north of Fairbanks, and 2) Run MM5 for this region for several time periods representing different seasonal and meteorological conditions and evaluate the meteorological model results. During the Spring of 2005, RMC staff will present the results of their work to date at a technical meeting in Alaska. Pending more specific direction after that meeting, the 2005 Alaska modeling tasks will focus on:

- Assuming the MM5 model test period runs are credible, run the MM5 model for all of 2002.
- Then run a Lagrangian model, such as CALPUFF, for the largest point sources in the region (up to about 10) - provide a modeling results report.
- Run the Lagrangian model [chosen previously] to evaluate the potential for impacts from the urban areas of Anchorage and Fairbanks - provide a modeling results report.

Emissions Forum

The Emissions Forum is planning to continue a major project, and several specific supplementary projects during 2005. The Emissions Data Management System (EDMS) is the major project of the Forum, as an ongoing data center and repository. During 2005, an EDMS operation and maintenance task is planned, and a related enhancement task for the Fire Module of the EDMS is planned, referred to as EDMS Phase 2. The Forum also plans specific projects addressing independent testing of the EDMS functions as it becomes operational in Winter 2004-05, projecting 2018 emissions of point and areas sources for base and control scenarios in coordination with the SSJF and TDDWG, as well as preparing updated regional base and 2018 projection years' on-road and non-road mobile source emissions that fully account for state, tribal, local, and federal mobile source control programs.

EF1 EDMS Hosting / Operation – This project supports ongoing operation, maintenance, standard software and hardware upgrades, and computer system hosting for the EDMS during 2005. E.H. Pechan, the WRAP EDMS contractor has proposed a budget of \$60,000 for hosting and hardware support by their computer systems subcontractor, Carolina Environmental Programs. Pechan has proposed a budget of \$120,000 for operation and administration of the EDMS, including data analysis products, data provider/user assistance, and general oversight.

EF1 EDMS Phase 2 Work Plan - Fire Module Improvements – Up to five (5) EDMS fire module subtasks, presented next in priority order as identified FEJF EDMS Steering Committee representatives, are planned for completion during 2005. Brief task descriptions and costs for each are shown separately.

- 1) With review and approval by the Fire Emissions Forum and the EDMS Steering Committee, implement a daily Smoke Management activity data protocol for data providers to transmit, view, and track on the EDMS. Work with the Fire Emissions Forum and the EDMS Steering Committee to determine the frequency of data upload and display updates. This subtask supports the regional coordination element of the Enhanced Smoke Management Program policy adopted by WRAP.
- 2) With review and approval by the EDMS Steering Committee, specify and implement an EDMS protocol to accept/use/display state/tribal-reported fire emissions data with supporting activity data. These data would be stored to satisfy the Fire Tracking System policy adopted by WRAP, and to support the fire emissions tracking elements in §309 smoke management programs committed to by OR, WY, UT, AZ, and NM. This subtask would create emissions inventories for regulatory tracking purposes, and would be separate from the fire emissions inventories provided to Pechan by the Fire Emissions Forum for regional modeling and analysis purposes.
- 3) With review and approval by the EDMS Steering Committee, incorporate an FEJF-specified fire emissions model into the EDMS, to ensure regionally-consistent emissions estimates from the data reported in #4 below, including recently available improved base data layers. This subtask entails determining the appropriate model (Consume, FOFEM, others) to incorporate into the EDMS, and applying the results of the analysis.
- 4) With review and approval by the Fire Emissions Forum and the EDMS Steering Committee, specify and implement EDMS fire activity data reporting format(s) based on inputs to FEJF-specified fire emissions model. This subtask would allow the creation of emissions inventories for regulatory tracking purposes, and would be separate from the fire emissions inventories provided to Pechan by the Fire Emissions Forum for regional modeling and analysis purposes.
- 5) With review and approval by the Fire Emissions Forum and the EDMS Steering Committee, develop and implement EDMS tools and procedures to use in estimating emissions changes from annual emissions goals and regional control strategy scenarios. This subtask would create emissions adjustment factors which smoke management program operators could use to modify their regulatory tracking emissions inventories (from #2 or #4, above) for planning purposes, as well as to separately modify the fire emissions inventories provided to Pechan by the Fire Emissions Forum for regional modeling and analysis purposes.

- EF1 Independent Review/Testing of the EDMS – Two (2) independent contractor tests of the EDMS functions, calculators, and displays are needed to verify proper operation at the time the EDMS comes on-line in late 2004. Two separate contracts would be awarded, with reports from each to list all problems encountered, non-functional tools, and suggestions for improved operation and ease of use. This task would be completed by January 2005, so that corrections could be implemented during the first half of 2005.
- EF1 2018 Base Case & Control Strategy Point & Area Source EI Projections – The project would fund the projection of 2018 emissions base case and control strategy scenarios based on 2002 emission inventories, for point and area sources. This project will be done in coordination with the SSJF and TDDWG, using recommendations from the Economic Analysis Forum about economic and demographic data inputs to standard point and area source emissions projection models and techniques in common use. These WRAP-designated economic and other data types and the associated models will be accessed by a contractor for the purpose of projecting changes in emissions in future years. The resulting emissions projection data will be stored in the EDMS, covering 5 to 10 combinations of numbers of years and inventory types. These data will be used for modeling purposes by the WRAP Regional Modeling Center. The Emissions Forum plans to apply the bulk of the funding for the contractor support needed for this project toward the SS4 project, reserving 10 to 15% to insure that the emissions projections data are successfully imported and displayed in the EDMS. The Emissions, Stationary Source, Economic Analysis, TDDWG, and other WRAP forums and committees will need to coordinate on this project, led by the SSJF.
- EF3 Mobile Source Base and Projection EI Update – This project was originally proposed in the 2004 work plan, but the scope and budget have been expanded in 2005. The purpose of this project is update on-road and non-road activity data as inputs to the EPA mobile emissions models with limited surveys, and then generate Emissions Inventories for 2002, 08, 13, and 18. With the bulk of expected mobile source (on-road and non-road) federal emissions reduction programs adopted in rule, to be implemented over the next 10 years, updates to the mobile emissions inventories are needed for the §309 plans revisions, so that proper credit can be taken in the §309 SIP updates as well as in the §308 plans. This project would use the input and default information from the §309 mobile source EI work as a starting point, and send those data to states, locals, and/or metropolitan planning organizations for verification and updating (i.e., with 2000 census data). The mobile source inventories would capture all regulations on the books as of September 2004 for use in preparing the emissions data. The Mobile6 and NONROAD2004 models would then be used to estimate mobile source emissions for the WRAP region, including Alaska. This project would be complete in early 2005.

Tribal Data Development Work Group

The TDDWG is completing projects near the end of 2004 to analyze tribal monitoring data through a subproject of the Causes of Haze Assessment project, as well as continuing training and support for TEISS implementation. Also, the TDDWG has reprogrammed resources from their 2004 budget to have ITEP facilitate development of actual 2002 emissions inventories for:

- SO_x and NO_x point sources on tribal lands with emissions greater than 50 tons/year; and
- Oil and gas production/distribution on tribal lands.

For 2005, the TDDWG plans the following projects.

TW1 Emissions Data Development Support – In 2005 the TDDWG is proposing to continue the contract with ITEP for the implementation and training on TEISS, and training on the software before making it available to the Tribes to compile their respective emissions inventory data. Also, training sessions will be offered for the Tribal Professional by ITEP. Some of the elements of this task will be done by the TDDWG.

- TEISS Software Support (software distribution to interested tribes, promotion, technical assistance by phone and E-Mail);
- Alaska tribal support (ITEP will work the state of Alaska, and interested Alaskan Native Corporations to distribute, and provide voice and electronic support, for the use of TEISS in Alaska);
- TEISS Software User Workshops (Two workshops, designed for both new [3.5 days] and experienced [2.5 days] TEISS users, will be developed and conducted at the Tribal Air Monitoring Support (TAMS) Center's training facility in Las Vegas, NV or at an EPA facility that can provide a computer lab free of cost for the training);
- Contractor support for tribal data needed by the Emissions Forum;
- Provide at least one TEISS training that piggybacks with another meeting and conference with tribes funding their own travel or using the travel funding from the travel funds available through WRAP; and
- ITEP offer 2 trainings during conferences or meetings where primary travel expenses are by the participant.

TW5 Continue Emissions Inventory & TEISS Technical Support – ITEP will maintain a comprehensive website to provide information on the technical aspects of EI work that is unique to tribes. The information that will be easily accessible on this website will comprise sections covering:

- Summaries and URL links to EPA guidance documents and assistance;
- Steps, procedures and documentation requirements for constructing a tribal EI;
- Information about contractors who have worked with tribes on EI issues; and
- A tracking system for QA/QC concerns and issues derived from tribal experiences with the EI process.

ITEP's Tribal Environmental Resource Center will facilitate networking between tribes working on EIs through our *Tribal Air Mentor Network*. Tribes desiring specific kinds of assistance will be linked with ITEP's existing *Professional Exchange* program to get the training and knowledge they need, whether from another tribal air program or from EPA. ITEP staff will be available to provide technical assistance on a one-on-one basis on all aspects of EI work on tribal lands in the lower 48 United States. Due to the limited nature of this service, ITEP staff will consider each tribes request for one-on-one assistance in a formal process (to be developed with the TDDWG), and deliver this resource on a needs basis.

As part of this task ITEP staff will also be available to provide information and contact data on tribes for other forums and groups working with the WRAP. This service will be limited to providing focused contact lists in response to specific requests.

Funding to allow ITEP staff to travel to reservations and provide assistance on a one-on-one basis is requested. Due to travel related costs, requests for assistance from Alaskan tribes must be considered carefully and needs met in such a way that the maximum number of Alaskan tribal communities will be served. These needs could be met through mini-workshops in Alaska, with Alaskans providing their own travel funding to a central location in Alaska. ITEP would help facilitate the information distributed at these workshops – but no funding is requested in this proposal for ITEP staff or instructor travel to the state.

Funds are requested to allow those trained in the initial train-the-trainer workshop, or other tribal staff knowledgeable in EI techniques and methods, to travel to another tribe's reservation and provide assistance in planning EI work, collecting data, using TEISS, and completing and reporting EI results. These funds could also be used to fund travel for tribal trainers to assist with the TEISS workshops.

Funds will also be used as needed to maintain and provide information on tribal data and GIS coverages for use by other WRAP forums and committees. Time is requested for a GIS Specialist whose task would be to maintain the geographic information system (GIS) tribal coverage for the WRAP region. The GIS Specialist would continue the outreach to tribes and updating of the GIS coverage developed under the 2003 work plan, to ensure that the tribal boundaries used in all WRAP projects are correct. A Specialist would provide maps and geographic analysis related to tribes to WRAP forums and committees upon request.

- TW6 EI with of Point Sources on Tribal Lands (collaborative project with SSJF and EF) – A collaborative project with the Stationary Sources Joint Forum and the Emissions Forum is planned, to focus on developing a complete actual 2002 point source emissions inventory develop basic and intermediate modeling training that is tribal specific for WRAP Regional modeling.

Dust Emissions Joint Forum

The mission of the Dust Emissions Joint Forum (DEJF) is to (1) improve the WRAP's dust emissions inventory, including the magnitude and spatial, temporal, and particle size distribution of dust emissions; (2) coordinate interpretation of modeling and monitoring results with respect to dust, including the apportionment of haze to natural and anthropogenic sources of dust; and (3) identify the most appropriate strategies for reducing anthropogenic sources of dust affecting Class I areas. At its discretion, the DEJF may also develop a research agenda to guide and coordinate efforts within the air quality community and may evaluate the usefulness of existing monitoring and modeling techniques for quantifying the contribution of dust to haze in Class I areas.

- DF1 Establish a Common Definition of Dust and Dust Emission Types – The goal of this project is to develop a common definition of dust and to develop a policy for categorizing dust emissions as either natural or anthropogenic. The common definition and categorization policy could then be used to consistently track dust emissions and their contributions to regional haze. In 2004, the DEJF started the process of a consensus-based definition of dust. A draft definition and examples of natural and anthropogenic dust were reviewed by the DEJF and the Implementation Work Group (IWG) and will be further developed when vital information is available in early 2005 from other DEJF projects and other WRAP activities, such as those of the Attribution of Haze Work Group. The DEJF anticipates using a facilitator and one or two public workshops to finalize the definition and categorization policy.
- DF2 Enhanced Ambient Data Analysis – In 2004, the DEJF funded a project (DF2) to identify the 20 percent worst visibility days dominated by dust at all Western IMPROVE sites for the years 2000-2002, and to place these events into one of several categories (e.g., local, regional, Mexican, Asian, fire-related, uncertain, etc.). The purpose of this project (DF2) is to conduct further, “enhanced” analysis of ambient data to improve the categorization of any “uncertain events” and/or to address additional questions about the precise sources of dust (e.g., are local events highly localized, or on the scale of tens of miles? is the local dust associated with human activity? if so, what activities, where, and when? what are the trends in dust concentrations and are they related to trends in climate, land use, etc?). Given the more intensive types of analyses needed to answer these questions, the enhanced analysis will probably be limited to a subset of the IMPROVE sites (e.g., those with significant and/or variable dust sources). The selection of sites will be coordinated with project DF7 (analysis of sources and control options in high-dust areas). An additional reason for continuing ambient data analysis of dust is the uncertainty regarding the quality and usefulness of the 2002 windblown dust emissions inventory currently under development. It is therefore important to maintain an alternative (e.g., ambient) method for assessing the impacts and causes of windblown dust.
- DF5 Fugitive Dust Handbook and Website – The purpose of this project is to periodically update the handbook and website (originally developed in 2004) to keep them as relevant and useful as possible to WRAP members throughout the SIP development process (i.e., 2005-2007). New information will be included in the handbook and website as it

becomes available from other WRAP projects (e.g., the Dust Control Measure Workshop described below) and from other dust-related efforts (e.g., dust control programs in various western jurisdictions).

- DF6 Analysis of Sources and Control Options in High-Dust Areas – The purpose of this project is to test and demonstrate how the various products of the Forum can be integrated to address the contribution of dust to regional haze at one or a small group of Class I areas. This “pilot study” will use the results of the WRAP dust emissions inventory, ambient data analysis, air quality modeling, dust definitions, and fugitive dust handbook to identify reasonable dust control options, costs, and benefits in a real-world setting. Shortcomings of the process and/or WRAP products will be identified and refined to the extent possible prior to 2006, when most of the selection and design of emission control strategies is expected to occur. Selection of the Class I area(s) for use in the pilot study will be based on the significance of dust sources to the 20 percent worst visibility days and on the availability of data and (in kind) local expertise and support (e.g., from stakeholders and relevant government agencies). Participation will also be sought from EPA regional representatives to facilitate federal approval of any dust control measures included in the regional haze SIPs and TIPs. The pilot study will be a key topic at the workshop discussed below.
- DF7 Dust Control Measures Workshop – The purpose of this one or two-day workshop is to discuss the success and limitations of current dust control strategies and to share thoughts on new and improved strategies, especially as they may pertain to regional haze. Results will be presented from various DEJF and other dust-related WRAP projects. Other workshop topics may include how to identify dust control strategies appropriate for individual Class I areas, quantifying emission and control measure reductions, developing dust ordinances and regulations, enforcement issues, and the politics behind adopting dust control measures. Collaboration / co-sponsorship will be sought from the California Air Resources Board, which is in the process of identifying and characterizing best available PM control measures.

Ambient Monitoring and Reporting Forum

During 2004, the Ambient Monitoring & Reporting Forum continued to provide access to regional haze monitoring data through operation of the inter-RPO VIEWS website. The Forum is also completing the first phase of the comprehensive, multi-year Causes of Haze Assessment project, with deliverables to the Attribution of Haze project. Both the VIEWS and CoHA projects are ongoing. Also, the Forum has let a contract on behalf of all 5 RPOs to better understand the accuracy of the EPA’s estimates of natural conditions and their sensitivity to specific assumptions. Deliverables are expected from this project in late Spring 2005.

Funding is requested for two projects in 2005:

AMR1 VIEWS Data Base and Website 2005 Operations – The Visibility Information Exchange Web Site (VIEWS) began operation in 2002, building from the earlier WRAP Ambient Monitoring Database. To date, VIEWS has received joint, annual funding by all 5 RPOs, each contributing \$50,000, through a WGA contract. A Steering Committee composed of RPO representatives, EPA, and Federal Land Managers oversees the operation of the database and website, and tracks deliverables from the annual VIEWS work plan. The funding mechanism for VIEWS was transferred from the WGA contract into the IMPROVE grant from EPA during 2004, saving on overhead costs. 2005 will be the final year of RPO funding for VIEWS; the RPOs have asked EPA to fund the database and website directly at the same resource level to complement IMPROVE operations. IMPROVE and a wide variety of other visibility-related data are displayed and available for analysis and/or downloading at: <http://vista.cira.colostate.edu/views/>.

AMR2 Causes of Haze Assessment Project – The Causes of Haze Assessment project began in early 2003, and is designed to provide 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. Deliverables from the first phase of this analysis project will be completed in late 2004, directly supporting the Attribution of Haze project. The second phase of the CoHA project will begin in early 2005. This phase will include, but not be limited to the following:

- Meteorological analyses to determine the representativeness of 2002 relative to the 2000-2004 baseline period for each site; and
- Receptor modeling – e.g., using Positive Matrix Factorization (PMF) – to identify source impacts at Class I areas with an adequate monitoring record.

These analytical results will directly support Phase 2 of the Attribution of Haze project. After the CoHA analyses are completed in 2006, it is anticipated that the CoHA website will be maintained, with lesser ongoing efforts directed at continuing analyses of new monitoring data.

Attribution of Haze Work Group

In support of the activities described in the WRAP Strategic Plan, the Technical Oversight Committee (TOC) established an Attribution of Haze Workgroup in early 2004. This “Phase 1” Attribution analysis and report for all Class I areas in the WRAP region will be published in January 2005. This project report will be the first step in a process that will be complemented by 2005 analysis activities continuing by the Initiatives Oversight Committee (IOC), the TOC, and the various Forums and Workgroups. During the second half of 2005 and the first half of 2006, significant collaborative analyses and discussions among the TOC, IOC, the Air Managers Committee, all Forums and Workgroups, and the WRAP Board are planned. The AoH Workgroup plans a “Phase 2” project, anticipated to begin in mid-Summer 2005, to analyze improvements in haze between the final/revised 2002 emissions estimates available early in 2005, and the emissions estimates for the 2018 base and control strategy scenarios’ cases.

AoH1 Attribution of Haze – Phase 2 Contractor Support – The AoH Workgroup requests funding for contractor support to execute the Phase 2 AoH project described above. It is planned that the Technical Data Portal project listed next will accomplish most, if not all, of the reporting formats and capabilities needed in the Phase 2 project, but funds are requested to ensure that technical support and preparation work can be completed in a timely manner. If the Technical Data Portal project is moving ahead on schedule, then these funds may be redirected to that project, or not used by the AoH workgroup. If needed, similar to the Phase 1 AoH Technical Support project during 2004, the contractor will:

- Attend AoH Workgroup meetings and distill members’ opinions and results of discussions into a schedule and methodology to accomplish the Phase 2 tasks;
- Possibly subcontract with independent experts for analytical work;
- Gather and format the resulting information and data from WRAP Forums, independent experts, and other related air quality analyses, all for review by the Workgroup;
- Draft a “Phase 2 Attribution of Haze Report” for review and comment by the Workgroup; and
- Complete and publish a “Final Phase 2 Attribution of Haze Report”.

AoH2 Technical Data Portal Project – At the direction of the TOC during 2004, Pangaea Information Technologies prepared a series of 3 white papers comprising the WRAP Integrated Geospatial Information Management Strategy (WIGIMS) report: (http://wrapair.org/forums/toc/documents/wigims/WIGIMS_Strategy_Report-final.pdf). These papers document a progression from a needs assessment to a resource inventory and a final strategy document. The strategy document lays out a range of options and a recommended approach to create a structure for data and information management of monitoring data/analyses, emissions information, air quality modeling simulation results, and ancillary data. The concept is to allow WRAP users and interested parties to access these data through a single web-based technical data portal (TDP) using web-based Geographic Information System[s] (GIS) tools to view and analyze the data used in WRAP regional haze planning work. Implementing the WIGIMS recommendations and strategies through a WRAP TDP project will incorporate suggestions and recommendations from the Pangaea strategy document into a phased approach, resulting in a scope of work for contractor support to build and operate a technical data portal for the WRAP region.

While still under development, the scope of work for this approach to the WRAP TDP project would likely consist of three components and provide access to data that could be used for a wide variety of analyses. At a minimum, this RFP would need to list:

1. Examples of the specific analytical products and “canned” regional technical documentation and displays needed for the §308 regional haze implementation plans (SIPs and TIPS);

2. A description of a structure(s) for a flexible data access structure for more detailed analyses needed for individual SIPs and TIPs (borrowing options from the Pangaea reports); and
3. Flexibility for ad hoc storage, and subsequent data query and analysis for interested parties, so “weight of evidence” demonstrations used in individual SIPs and TIPs can be reviewed.

The ability to combine air quality observations/analyses, modeling results, emission inventory estimates, and any ancillary GIS data makes preparing the “weight of evidence” analyses described in #2 and #3 possible.

309 Coordinating Committee

The purpose of this committee is to coordinate the post-submittal implementation of Section 309 SIPs and TIPs, if applicable. This includes tracking emissions for the backstop SO₂ trading program and addressing issues related to that program (e.g., expansion to other states under Section 308). After the SIPs are submitted (by December 31, 2003), the EPA expects to conduct a six-month completeness review, followed by an 18-month process to review the substance of the SIPs, propose approval, take public comment, and take final action. This process may require interactions between the EPA and the 309 states, potential revisions/updates to certain SIP elements, and coordination among the 309 states themselves. All these activities would be conducted under the purview of the 309 Coordinating Committee. Committee members will be comprised primarily of states submitting Section 309 SIPs and tribes interested in submitting Section 309 TIPs.

- 309a Annex Implementation – The Committee will be responsible for (a) the annual regional emissions report (for comparison to the milestones) and periodic audits of emissions tracking, (b) addressing any remaining or new issues related to the backstop trading program (e.g., tracking and supporting state rule adoptions, consideration of allowance price disclosure, etc.), and (c) addressing issues related to other states or tribes interested in opting into the program.
- 309b 309 Follow-Up – As the EPA reviews and takes action on submitted SIPs, issues are likely to arise that will require some ongoing effort by the WRAP to help resolve in a coordinated fashion.

Air Managers Committee

2005 will be the second year of the current strategic plan. It is the year in which we transition from “phase I,” to “phase II.” The Attribution of Haze report will be out and serious discussions will be had about what pollutants are causing haze in which Class I area, where the pollutants originate, and what each state and tribe should do to take care of its share of the problem.

AMC1 Staff Support for the State and Tribal Caucuses – Two coordinators, one for each caucus, are positions under the Air Manager’s Committee. The State Caucus Coordinator position is filled through a services contract between WGA and WESTAR. The Tribal Caucus Coordinator position is funded directly through NTEC, and is included in the NTEC line item of the WRAP budget. The staff support provides the tribal and state air directors with continual tracking and reporting of WRAP activities, issue identification and communication among the WRAP partners, recruitment of WRAP participants from states and tribes, facilitation of issue resolution.

AMC2 Alaska Tribal Outreach Coordinator Position – An individual will be hired to conduct a variety of outreach activities for the 229 tribes located in Alaska. A number of activities, in addition to those typically associated with employee recruitment, will be conducted as part of this hiring process to assure long-term success of the position. First, an assessment tool (e.g., questionnaire) will be sent to Alaskan Natives and to determine what role the Coordinator should be playing. For example, there are jurisdictional issues that are of concern to Alaskan Natives due to the Alaskan Native Settlement Claims Act (1971) and the Alaska National Interest Lands Conservation Act (1980). Because of such issues, not all Alaskan Natives are sure of what areas that they have jurisdiction over. Second, collaboration will be sought with Alaskan Native organizations to build a pool of individuals who can advise and participate in the hiring and management process of the Coordinator. Third, Native Village visits will be important to give a firsthand look at the issues facing Alaskan Natives.

AMC3 Health-Based Effects of Regional Haze – Within the WRAP, little attention has been given to the health effects of air pollutants associated with haze, yet information on the health consequences of haze pollution and the health benefits of haze controls could be gleaned from on-going WRAP activities, such as those related to air quality modeling, ambient monitoring, and socioeconomic analysis. Distilling health-related information from WRAP activities will provide added value to WRAP members and may generate further interest from individuals and organizations that may not otherwise be compelled to participate, such as some public interest groups, tribes, and members of the general public.

The AMC will attempt to boost the health-relevance of the WRAP’s haze-related activities by first recruiting an expert in the area of air quality and health to draft a report which (a) summarizes what the available literature implies about the health significance of various PM constituents and PM precursors which may pose a health risk in the West (b) identifies WRAP data that can be used to assess health effects, (c) identifies data gaps in the WRAP region (particularly on tribal lands) which could provide significantly more health-related information, and (d) recommends ways in which the WRAP can use its current and forthcoming data (including filled data gaps) to estimate the health effects of haze and the health benefits of haze controls. Next, WRAP staff will conduct a workshop to disseminate the information in the report – a group of speakers will be on hand to offer their own interpretation of the material in addition to providing some additional insights – and discuss next steps for the WRAP with respect to regional haze and health.

AMC4 Traditional Tribal Practices and Regional Haze – Tribal traditional practices (e.g., ceremonial, cultural, religious) are regularly affected by regional haze or the policies intended to curb such haze. On the one hand, tribes are concerned with protecting their traditional practices from the air pollutants that obscure visibility. For instance, some tribal members have noted the importance of being able to see nearby icons for religious purposes. On the other hand, tribes engage in traditional practices that involve such activities as burning. In some cases, the WRAP has acknowledged these practices and exempted them from policies adopted by the organization (see, for example, “Enhanced Smoke Management Plan” policy document produced by the Fire Emissions Joint Forum and adopted by the WRAP Board).

No comprehensive documents currently exist that address the traditional practices of Indian tribes throughout the WRAP region and how these practices interact with regional haze and the policies adopted to address such haze. Documents that address these issues will serve to meet the needs and concerns of the tribes within the WRAP region and also help the organization develop effective policies on regional haze.

The first document will describe why tribes need to be concerned with regional haze and how their involvement in the WRAP serves to reduce the haze that interferes with their traditional practices. This document, among other things, will highlight some of the traditional tribal practices that are affected by visibility in the west.

The second document will discern what some of the traditional tribal practices are that utilize fire and other activities which may contribute to regional haze. This document will help WRAP participants to understand these traditional practices and their importance to tribes. In understanding the importance of such practices, WRAP participants will be better equipped to draft policies that meet the need and concerns of all involved with the process of addressing regional haze.

Both documents will serve as educational tools for WRAP participants (and members of other regional planning organizations) who regularly work with and/or live near tribal lands. These documents will be a compilation of published and unpublished information about tribal practices and cultural values. Inclusion of unpublished information in the documents will necessitate tribal review and approval. In addition to the two documents, there could be additional versions, directed at specific audiences, such as other tribes and non-tribal audiences. It is anticipated that the documents will be professionally developed into a bound document for distribution to WRAP participants and others in the WRAP region.

AMC5 Implementation Work Group (308 Template Development) – In 2004, the AMC formed the Implementation Work Group (IWG) of state, tribal and federal planners to develop one or more “templates” or “roadmaps” to assist states and tribes in writing their 308 and 309(g) plans. Tribes are not subject to specific deadlines to submit TIPs, but it is expected that the work of the Implementation Work Group will include developing parallel material for 308 TIPs. In addition further work is needed to complete the template for the 309 TIPs. Closely related to this, the IWG will maintain ongoing

communication with the other forums as needed, prompting timely information from states and tribes, and in turn providing feedback to the forums to ensure they are focused on the critical planning questions. WESTAR provides direct staff assistance under a services contract with WGA. This staff support brings to bear the WESTAR experience of preparing templates and model rules the states and tribes can fit to their own formats as appropriate. The State of New Mexico provided contract staff to complete the 309 work in 2004 and has agreed to provide contract staff to address the specific planning needs of tribes for 308 in 2005.

AMC6 Workshops on Effective Collaboration – In the last year, during discussions among states and among tribes, reference has been made several times, along the lines, “The Tribes won’t talk to us.” or “State (agency) is making assumptions we don’t agree with.” Although there are examples of collaboration among states and tribes on specific projects, states in general have more mature air programs than most tribes and they must meet certain deadlines. Tribes are not subject to these deadlines. There is strong opinion among some of the tribes that they are included in WRAP work when it is convenient or in name only. Some states have little to no working relationship with tribes in their respective states. Tribal emissions and air quality data are almost non-existent. A number of tribes are reluctant to release tribal information because they are distrustful of state and federal regulators.

This task would begin to strengthen working relationships between states and tribes that is essential in order to fulfill the requirements of the regional haze planning process and the Regional Haze Rule. EPA’s Regional Haze Rule explicitly addresses state-tribal relationships and directs them to work collaboratively with each other and in “partnership with other interested stakeholders,” but provides little guidance in this regard. The goal of these workshops is to facilitate improvements in working relationships within WRAP and among individual states, tribes and federal agencies, by enhancing the understandings of leadership and staffs of these entities about how each of them functions within their organizations, their various operational protocols and traditions.

In general, the form of this project is a series of sub-regional workshops at selected locations within the WRAP region to instruct state and tribal WRAP partners in tribal/state protocols. Tribal and state leaders would address in turn their procedures and expectations of consultation, their governing structures, environmental priorities and their efforts toward collaboration. The focus would include identification of barriers to collaboration and ways to overcome them. Interested stakeholders would be invited to give insight into their organizational structures and collaborative efforts.

Communications Committee

- CC1 Web Site Maintenance - primary communications tool for the WRAP. Consider additional funding for transition to new Operations/Maintenance Contract for improved performance.
- CC2 Continue and Expand Publications – This work is intended for both internal and external audiences and includes the following:
- Collect inputs, draft and publish The WRAP Sheet on the Web site;
 - Print, mail, and/or fax hard copies of The WRAP Sheet to selected recipients; and
 - Produce brochures, fact sheets, and other handout materials for conferences, exhibits, and public meetings.
- CC3 Update Presentation Materials to Tell the WRAP Story:
- Tailor the WRAP 301A, 401 and Tribal version presentations to meet needs of various forums/committees; and
 - Convert presentations to various video formats (CD, VHS, 35mm, etc.) and make copies for multiple venues.
- CC4 Expand Speakers' Bureau – Assure exposure of WRAP story to state and tribal general audiences throughout the WRAP region. Tailor to individual audiences as appropriate:
- Develop and maintain data base of prospective audiences;
 - Work with state and tribal air directors/forum and committee chairs and follow up on contacts to schedule presentations; and
 - Coordinate presentation and support materials for all scheduled events.
- CC5 Support WRAP Forums and Committees in Conducting Public Meetings – Inform and obtain public input on WRAP products and related SIP/TIP development efforts:
- Assist with arrangements for meeting venues; and
 - Coordinate presentation and support materials for all scheduled events.
- CC6 Other Outreach Efforts to Reach Wider Audience - Investigate partnering with other agencies/programs with shared goals – e.g., Pollution Prevention Roundtable for AP2 presentation:
- Identify potential partnerships and follow up to develop cooperative ventures; and
 - Participate in joint ventures with mutual benefit.

Appendix A: Background

I. 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.

II. 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 implement §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 tribes in the same way. Tribal concerns are being addressed at every level within the WRAP. 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 WRAP 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 to participate in the WRAP process.

III. 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 and to facilitate development of implementation plans under the RHR.

A. Membership

The WRAP membership currently includes the Governor or his/her designee from 13 states and 11 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	Native Village of Shungnak
Montana	Nez Perce Tribe
New Mexico	Northern Cheyenne Tribe
North Dakota	Pueblo of Acoma
Oregon	Pueblo of San Felipe
South Dakota	Confederated Tribes of Salish and Kootenai
Utah	Shoshone-Bannock Tribes of Fort Hall
Washington	
Wyoming	<u>Federal Agencies</u>
	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/about/index.html>.

C. WRAP Organization

The WRAP is composed of several forums, committees, and work groups. These suborganizations and their relationships are shown in the organization chart in the Executive Summary. All the suborganizations include participation from the WRAP membership (states, tribes, and federal agencies) and interested stakeholders (industry, environmental groups, local governments, academia, etc.). Guidelines for forum procedures (creation, membership, processes, etc.) are posted on the WRAP Web site at <http://www.wrapair.org/about/forumguide.htm>.

D. 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 13 forums and work groups. The IOC oversees the Air Pollution Prevention Forum, Economic Analysis Forum, Mobile Sources 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, Dust Emissions Joint Forum, and Stationary Sources Joint Forum are overseen by both the IOC and the TOC, as they address both technical and policy issues.

E. 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.

F. 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.

IV. 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) and they should issue bi-monthly reports to their oversight committee(s).
- 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.

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 issue may be referred to the WRAP Board.

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.

Major work products are subject to public review through workshops and formal public comment periods. 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 WRAP participants, 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 provides 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.

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 and facilitating Tribal Caucus meetings; providing coordination among tribal representatives of various committees and forums; performing legal, policy and technical analyses on various WRAP issues; and securing contractor assistance for additional policy and technical analysis. This includes providing staff support to the Tribal Caucus within the WRAP.

Staff positions include the WRAP Co-Directors (WGA and NTEC) who 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-directors is under the WGA line item, while funding for the other is under the NTEC line item. There are state and tribal caucus coordinators hired through WESTAR and NTEC respectively.

WGA also employs a technical coordinator and policy analyst to support the oversight committees, forums, and work groups. NTEC employs a tribal communications specialist who works closely with the WRAP's Communications Committee and who is available to other committees and forums to ensure that communications with and for the tribes are properly being carried out. NTEC also employs a tribal policy analyst to address the unique circumstances of tribes with respect to the Clean Air Act and other related issues.

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 sent to appropriate contractors known to the WRAP, posted on the WRAP Web site, and published in the Federal Business Opportunities publication as appropriate. Unless time is otherwise a constraint, bidders are provided 30 days to respond.

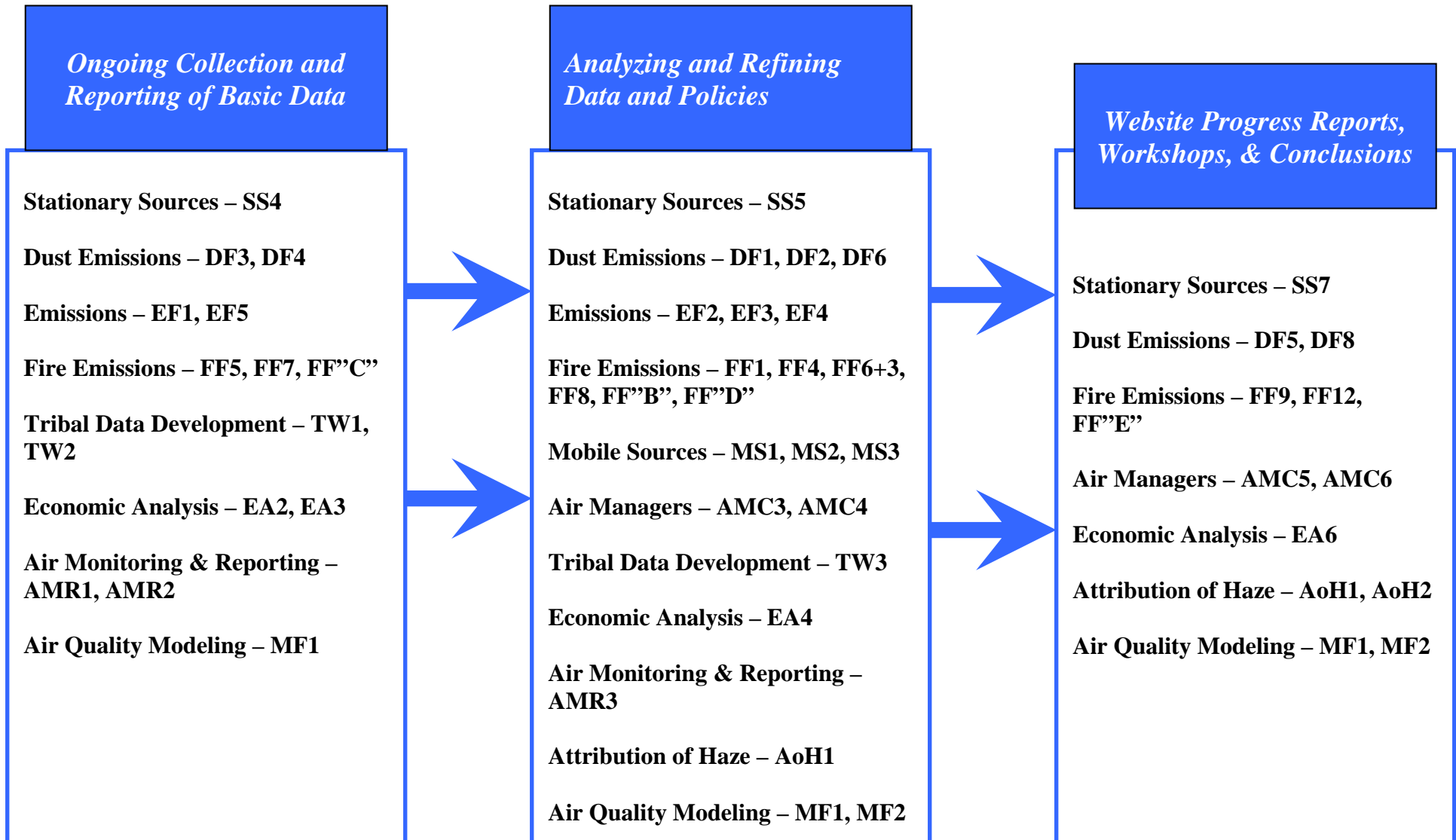
A review team is established for the evaluation of proposals. The review team is responsible for scoring each proposal. Scoring is documented and retained by WGA to substantiate any selection. Once the team has agreed upon selection of a potential contractor, a memorandum is transmitted to the WGA Executive 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.

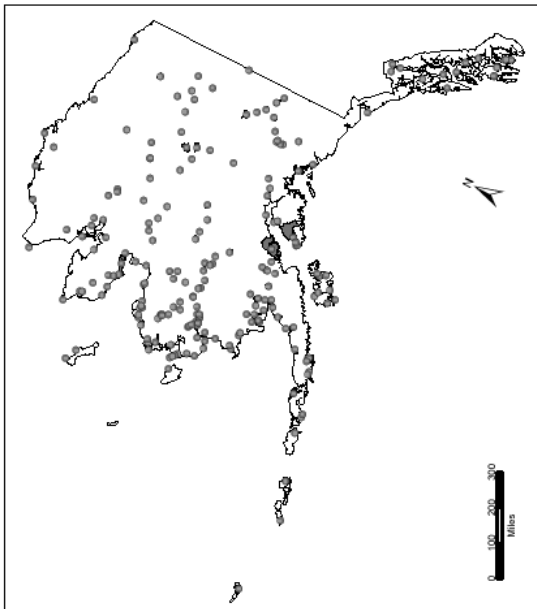
WGA is responsible for maintaining all records and does so in accordance with all federal requirements. This includes submittal of quarterly status reports to EPA. As noted in the previous section, NTEC lets contracts for work done in support of tribal participation. These contracts are funded by a grant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

APPENDIX B: Process Overview for 2005 WRAP Projects.






APPENDIX D: Map of Tribal Lands and Tribal Class I Areas in the WRAP Region

**Native American Tribes & Class 1
Areas of the WRAP Region**



Legend

-  Reservation / Alaskan Native Village
-  Tribal Class 1 Area (Labeled by Name)
-  Represents a tribe's land base when the actual polygon(s) is difficult to see at this scale.

Note: Figure only includes federally-recognized Indian tribes and Alaskan Native Villages.

Created by the Tribal Data Development Working Group of WRAP and the Institute for Tribal Environmental Professionals, June 2003. Data Sources: U.S. Bureau of Indian Affairs, U.S. Environmental Protection Agency, Inter-Tribal Environmental Council of Oklahoma, and ESRI.

The data on this figure were derived from databases of federal agencies, the TDDWG and ITEP cannot confirm their accuracy.

APPENDIX E: WRAP Organizational Chart.

