



## Technical Status Report

**June 2007** (Updates & changes to sections of this report from earlier status reports are noted in *bold italics*.)

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### Background

The purpose of this ongoing series of status reports is to periodically describe what and when technical work products from WRAP Forums and Workgroups or other sources will be available for use in the regional haze planning process through 2007 *and into 2008 for the haze plan implementation process*. The regional technical analysis for haze planning was largely completed on schedule in late 2006. Results of these analyses are available on the TSS. Progress on regional haze planning work to date indicates that some WRAP technical activities to support the 2007 plan development process will need to continue during 2007, and that technical support will need to continue after 2007. Those activities through 2007 are reflected in updates to Sections A and B of this document. Descriptions of the individual projects are in the WRAP workplan, and methods and details about the data (how and why the work was done) are also available from contractor reports or websites, or from the Technical Coordinator. *This update covers work accomplished through May 2007, and describes plans for future technical analyses.*

The status report is organized as follows:

- **Section A** - Access and content of existing data nodes;
- **Section B** - Progress updates for key existing and planned work product deliverables from Forums and Workgroups, summarized from the project descriptions of the most current WRAP Workplan posted at: [http://wrapair.org/WRAP/meetings/060913m/10\\_WRAP\\_2007\\_Work\\_Plan.pdf](http://wrapair.org/WRAP/meetings/060913m/10_WRAP_2007_Work_Plan.pdf);
- **Section C** - The *2007 Technical Analysis Plan – June 1<sup>st</sup> update*; and
- **Section D** - Highlights and brief descriptions of selected specific analyses and projects related to regional haze planning accomplished in the past few months.

### **A) Existing Data Support Nodes (June 2007)**

**Visibility Information Exchange Web System (VIEWS)** - <http://vista.cira.colostate.edu/views/> – this system provides ongoing access to IMPROVE and other visibility monitoring data, research results, and special studies related to the Regional Haze Rule. Downloads of the IMPROVE data, custom displays of spatial, chemical, and temporal patterns, as well as information about applying monitoring data for regional haze planning are available. This system was originally sponsored by the Ambient Monitoring & Reporting Forum, and currently has national coverage through sponsorship by all 5 RPOs through September 2006. The complete preliminary dataset from Regional Haze Rule Baseline Period (2000-04) as measured by the IMPROVE monitoring network has been posted, and Class I area-specific data are available for review, including 5-year averages of the Best and Worst 20% visibility days and glide paths from baseline period averages to EPA default natural conditions. The IMPROVE Steering Committee has approved a revised light extinction equation, and VIEWS staff have implemented that option for calculating deciviews and other haze metrics using either the old/existing equation (circa 1988) or the revised (circa December 2005) light extinction equation. In addition, the default EPA natural conditions estimates have been supplemented with alternative natural conditions estimates, incorporating the revised IMPROVE light extinction equation and improved statistical analyses, to cover the greater number of IMPROVE monitoring sites and the associated increase in the available data. The effort by the VIEWS staff is largely on maintenance of the website at this point. The VIEWS project will be managed by the new Technical

Analysis Forum beginning January 2007. *Additional FFY07 EPA grant funds were directed by WRAP and other RPOs to cover VIEWS operation at a reduced level through 2008.*

**Causes of Haze Assessment project (CoHA)** - <http://coha.dri.edu/index.html> - this ongoing project of the Ambient Monitoring & Reporting Forum project is completing detailed analyses of IMPROVE and meteorological monitoring data in the WRAP region. Work to date includes multi-year back trajectory wind plots for each monitored Class I area, trajectory regression analyses' results used in the Phase I AoH project, and extensive descriptive information about the monitoring data and each Class I area. Work completed in 2006 includes trend analyses and receptor modeling using the Positive Matrix Factorization (PMF) technique to relate source types and regions to the 2000-04 baseline period monitoring data. Analyses of the long-term trends in the IMPROVE visibility data for monitoring sites with 8 to 16 years of record are available at: <http://coha.dri.edu/>. The CoHA project team has completed the 5-year (2000-04) back trajectory analyses for each IMPROVE site for various air quality conditions (worst/best visibility days, worst sulfate days, et cetera), expanding the 3-year trajectories already complete at: <http://coha.dri.edu/web/general/trajgallery/trajmapgallery.html>. CoHA has also completed an analysis of "was 2002 a typical/representative meteorological year"; that analysis and the 5-year trajectories will be used in the AoH Phase II project. The CoHA team has applied the PMF receptor modeling technique to 2000-04 IMPROVE data in the WRAP region, with the goal of identifying source types at the Class I areas, and specifically separating and determining the amount of smoke from fire emissions versus urban carbon emissions. The CoHA project is in maintenance status for 2007-08; the Tribal Data Development Workgroup is sponsoring additional CoHA work on the representativeness of IMPROVE monitors for air quality impacts on tribal lands. The CoHA project will be managed by the new Technical Analysis Forum beginning January 2007.

**Emissions Data Management System (EDMS)** - [http://wrapedms.org/default\\_login.asp](http://wrapedms.org/default_login.asp) - this ongoing project of the Emissions Forum is an emission inventory data warehouse and web-based GIS application that provides a consistent, complete, and regional approach to emissions data tracking to meet the requirements for SIP and TIP development, periodic progress reviews, and data updates. The EDMS serves as a central regional emissions inventory database for all types of emissions, and uses associated software to facilitate the data collection efforts for regional modeling, emissions tracking and associated data analyses. Baseline and future years' emissions data will be stored and accessed here. Use of the EDMS is based on user registration and periodic listserv updates, requires a password for ad-hoc data queries, but is open to all interested users. The EDMS has been updated with 2002 point, area, mobile, and fire emissions, and EDMS will continue to have additional inventory data added. Testing of the EDMS for functionality and operational performance was completed by the end of 2005. During 2006, the EDMS was revised by the contractor, EH Pechan, to address concerns and problems found in the testing. The 2018 emissions inventories will be loaded into EDMS in early 2007. The Emissions Forum has completed a competitive bid process for operations and maintenance of the EDMS through 2007, and has selected a new contractor team – Air Resource Specialists and Air Sciences.

*The EDMS source code, functionality, and data content have been evaluated during Spring 2007, and a number of improvements have been made, continuing during Summer 2007. For more information, see: [http://www.wrapair.org/forums/ef/EDMSop/EDMS\\_CritFuncReportFinal.pdf](http://www.wrapair.org/forums/ef/EDMSop/EDMS_CritFuncReportFinal.pdf). The EDMS will begin processing and displaying 2005 EI data from states and tribes in Summer 2007.*

**Regional Modeling Center (RMC)** - <http://pah.cert.ucr.edu/aqm/308/> - the objective of this ongoing project of the Air Quality Modeling Forum is to provide the necessary technical and policy tools needed by states and tribes for the Regional Haze Rule. The substantial effort by the RMC is intended to support State and Tribal agencies in conducting regional haze analyses in the western United States. This analysis is being performed by operating regional scale, three-dimensional regulatory air quality models that simulate the emissions, chemical transformations, and transport of criteria pollutants and fine PM and consequent effects on visibility in Class I areas in the WRAP region and across North America. Responsibilities of the RMC include: 1) Emissions processing and modeling; 2) Air quality and visibility modeling simulations; 3) Analysis, display, and reporting of modeling results, and 4) Storage/quality assurance of the modeling input and output files. The RMC offers periodic listserv updates, provides data and technology transfer support, and uses monthly conference calls to

review work products. A complete status report on RMC activities for the March 2005 through September 2006 period was completed in November, see:

[http://pah.cert.ucr.edu/aqm/308/reports/final/2006/WRAP-RMC\\_2006\\_report\\_FINAL.pdf](http://pah.cert.ucr.edu/aqm/308/reports/final/2006/WRAP-RMC_2006_report_FINAL.pdf).

The RMC will be managed by the new Technical Analysis Forum beginning January 2007. *The former contract for the RMC which began in 2000 has been closed out, and a new contract with a more limited scope was awarded beginning April 1, 2007, to the same RMC project team. The new contract currently runs through 2007, to complete needed additional regional modeling work and support the BART modeling needs of the states, and will be extended through 2008 and onward as needed. The RMC is completing regional emissions and air quality modeling for the "2018 Preliminary Reasonable Progress" (PRP18) analysis in June 2007.* They have also completed "subject-to-BART" screening modeling for 6 WRAP states and EPA Region 8 (for MT sources). See the "BART CalPuff Modeling" tab at:

<http://pah.cert.ucr.edu/aqm/308/bart.shtml> for input files and results. The RMC continues to support and track technology transfer of data and modeling tools through the "Data Transfer" tab at:

[http://pah.cert.ucr.edu/aqm/308/data\\_transfer.shtml](http://pah.cert.ucr.edu/aqm/308/data_transfer.shtml).

**Technical Support System (TSS)** - [http://vista.cira.colostate.edu/wrap\\_tss/](http://vista.cira.colostate.edu/wrap_tss/) - the TSS is now operational, developed as a project of the Attribution of Haze Workgroup (<http://wrapair.org/forums/aoh/TSS/index.html>) to provide a single portal to support regional haze planning using the regional technical data, analytical results, and tools prepared by the WRAP's [Forums and Workgroups](#). The TSS project will be managed by the new Technical Analysis Forum beginning January 2007. The key data and summary results displayed on the TSS are intended to support the air quality planning needs of western state and tribes, and will be maintained and updated to support both the implementation of regional haze plans and other Western air quality analysis and management needs. The primary initial and ongoing purpose of the TSS is to be the one-stop shop for access, visualization, analysis, and retrieval of the technical data and regional analytical results prepared by WRAP Forums and Workgroups in support of regional haze planning in the West. The TSS specifically summarizes results and consolidates information about air quality monitoring, meteorological and receptor modeling data analyses, emissions inventories and models, and gridded air quality/visibility regional modeling simulations. These copious and diverse data are integrated for application to air quality planning purposes by prioritizing and refining key information and results into explanatory tools. Finally, a major goal of the TSS is to make the standard and user-specified maps, charts, tables, and graphs easily available for export, while maintaining the original source data available for verification and subsequent analysis through the TSS.

There is active collaboration with the Implementation Workgroup and all the WRAP Forums and Workgroups as to the content, format, and level of information detail on the TSS. *A second TSS web-based training session was completed April 13<sup>th</sup>, and a training and orientation session for tribes is scheduled for June 6<sup>th</sup>.* The TSS is built upon the foundation and uses tools and techniques developed for the VIEWS system described above; the WRAP plans to fund the TSS on an ongoing basis and maintain support of VIEWS functions through the TSS. *The PRP18 emissions and modeling analysis results will be presented at the June 19-20, 2007 TSS Orientation & Review Workshop; these results will serve as the basis of the regional haze plans, until BART control limits are determined and a Final Reasonable Progress analysis completed for the entire WRAP region in early 2008. The TSS Workshop will include detailed training on using the TSS for haze planning and tracking.*

**B) Overview of WRAP 2005-07 Key Technical Deliverables (June 2007 update, gray cells complete)**

Time Frame	Responsible Group/Subject	Deliverable (completion target month)
2005 Q2	Emissions Forum	<ul style="list-style-type: none"> <li>▪ Operational version of Emissions Data Management System (EDMS) with actual 2002 EI for WRAP region. (done in September)</li> </ul>
	Fire Forum (Phase 2 EI project)	Final 2002 complete fire EI – actual 2002 emissions, stored in EDMS. (completed July)
	Monitoring Forum (CoHA project)	<ul style="list-style-type: none"> <li>▪ Source apportionment of each state’s major emissions source category impacts at Class I areas in AoH report. (done)</li> <li>▪ Descriptive analyses of 2002 monitored impact at Class I areas in AoH report. (done)</li> </ul>
	Modeling Forum (source apportionment project)	<ul style="list-style-type: none"> <li>▪ Source apportionment of each state’s major emissions source category impacts at Class I areas in AoH report. (done)</li> <li>▪ Initial source apportionment of each state’s natural and manmade emissions at Class I areas in AoH report. (done)</li> </ul>
	Attribution of Haze WG	<ul style="list-style-type: none"> <li>▪ AoH Phase I Report 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. (done)</li> </ul>
	Tribal Data Development WG	<ul style="list-style-type: none"> <li>▪ Tribal monitoring data analysis from CoHA project for tribal Class I areas in AoH report. (done)</li> </ul>
	Stationary Sources Forum	<ul style="list-style-type: none"> <li>▪ List of BART-eligible sources (done)</li> <li>▪ Emission Inventory and Control Technology Technical Support project underway (scheduled work completed)</li> </ul>
	Dust Emissions Forum	<ul style="list-style-type: none"> <li>▪ Phase 2 windblown dust emissions inventory model completed, evaluated, and EI included in subsequent modeling analyses. (done)</li> <li>▪ Host dust control measures workshop (done)</li> </ul>

<b>2005 Q3</b>	Emissions Forum	<ul style="list-style-type: none"> <li>Onroad, off-road, and road dust 2002, 08, 13, and 18 EI updates complete (completed October).</li> <li>2002 and 2018 offshore shipping, locomotives, and planes' EIs complete (complete in early November)</li> <li>Complete second round of testing on EDMS performance (to be completed in December)</li> </ul>
	Fire Forum (Phase 3 EI project)	<ul style="list-style-type: none"> <li>2000-04 baseline period fire EI based on modifying 2002 actual emissions developed for haze planning purposes. (modeling files and summary data delivered mid-October, final report Spring 2006)</li> </ul>
	Monitoring Forum (CoHA project)	<ul style="list-style-type: none"> <li>Continuing development of conceptual models and processing of additional IMPROVE data as inputs for the AoH Phase II project. (ongoing)</li> </ul>
	Modeling Forum (2002 base case and source apportionment modeling projects)	<ul style="list-style-type: none"> <li>Modeling performance evaluation using final actual 2002 emissions from SSJF/EF projects, and compared to monitoring data, as inputs to AoH Phase II. (completed November)</li> <li>Boundary conditions and new emissions estimates from WRAP Fire Forum, other RPOs, Canada, and Mexico updated. (completed September)</li> <li>Source apportionment underway, will not be complete until 2006, when a "final" 2002 actual emissions are run for Regional Haze Plans (mid-2006)</li> </ul>
	Attribution of Haze WG	AoH Phase II/Technical Support System = process 2002 source attribution report. (to be completed October 2006)
	Tribal Data Development WG	<ul style="list-style-type: none"> <li>Tribal monitoring needs draft report from CoHA project for tribal Class I areas. (done)</li> <li>Review, improve, project emissions inventories of point and oil/gas sources on tribal lands. (done)</li> </ul>
	Stationary Sources Forum	<ul style="list-style-type: none"> <li>Complete review and QA of the 2002 point and area source inventory. (done)</li> </ul>
	Mobile Sources Forum	<ul style="list-style-type: none"> <li>Continuing work on off-road retrofit program.</li> </ul>
	Dust Emissions Forum	<ul style="list-style-type: none"> <li>Establish a preliminary definition of dust and release for public review.</li> <li>Recommendations on appropriate size distribution of fine versus coarse dust emissions.</li> </ul>
	In and Near Forum	Summarize PM <sub>10</sub> SIPs for local sources and their transferability to Class I areas. (done)
<b>2005 Q4</b>	Emissions Forum	<ul style="list-style-type: none"> <li>Evaluate EDMS testing results and develop action plan for ongoing management.</li> <li>Supervise contractor operation and needed improvements to EDMS.</li> </ul>
	Fire Emissions Forum (Phase 4 EI project)	<ul style="list-style-type: none"> <li>Identify inputs and scope out 2018 fire EI scenarios for haze planning purposes - 2018 fire EIs will consist of 3 scenarios, using as inputs: ag burning rules on the books, applying Emissions Reduction Techniques for prescribed fire, and forecasts for wildfire/wildland fire use/prescribed fire from Federal Land Managers. (to be completed Spring 2006)</li> </ul>
	Monitoring Forum (CoHA)	<ul style="list-style-type: none"> <li>PMF analyses and processing of additional data as inputs to AoH Phase II. (to be complete mid-2006)</li> </ul>
	Modeling Forum (2018 base case modeling project)	<ul style="list-style-type: none"> <li>Modeling evaluations (version A) using 2004-04 baseline period emissions as input to AoH Phase II (December)</li> <li>Modeling evaluations (version A) using 2018 base case emissions as inputs to AoH Phase II (January)</li> </ul>

	Attribution of Haze WG	<ul style="list-style-type: none"> <li>▪ Publish preliminary IMPROVE monitoring data from 2000-04 for glide path. (November)</li> <li>▪ Publish proposed Weight of Evidence source attribution method for assessing Reasonable Progress, using technical monitoring, emissions, and modeling data</li> </ul>
	Stationary Sources Forum	<ul style="list-style-type: none"> <li>▪ Complete work on first version of oil/gas and point/area source 2018 base case EI projection scenarios. (October/November)</li> </ul>
2006 Q1	Emissions Forum	<ul style="list-style-type: none"> <li>▪ Complete continuing needed improvements to EDMS.</li> <li>▪ Supervise contractor operation and needed improvements to EDMS.</li> </ul>
	Fire Emissions Forum	<ul style="list-style-type: none"> <li>▪ Phase 4 EI project - 2018 fire EI scenarios for haze planning purposes - 2018 fire EIs will consist of 3 scenarios, using as inputs: ag burning rules on the books, applying Emissions Reduction Techniques for prescribed fire, and forecasts for wildfire/wildland fire use/prescribed fire from Federal Land Managers. (to be completed Spring 2006) - <b>to be complete 2007 Q1</b></li> <li>▪ Fire Tracking System development – scoping study to determine best existing system in use now, and needed modifications. (March) - <b>completed October 2006</b></li> </ul>
	Monitoring Forum (CoHA project)	<ul style="list-style-type: none"> <li>▪ Continue work on products for AoH Phase II report.</li> <li>▪ Work on analysis of 2002 meteorology representativeness - <b>to be complete 2007 Q1</b></li> </ul>
	Modeling Forum	<ul style="list-style-type: none"> <li>▪ Modeling evaluations (version B) using 2004-04 baseline period emissions as input to AoH Phase II (April) – completed May 2006</li> <li>▪ Source apportionment (PSAT modeling) of each state’s 2000-04 major emissions source category impacts at Class I areas for AoH Phase II report. (to be complete in July)</li> <li>▪ Modeling evaluations (version B) using 2018 base case emissions as inputs to AoH Phase II (May)</li> <li>▪ Source apportionment (PSAT modeling) of each state’s 2018 base case B major emissions source category impacts at Class I areas for AoH Phase II report. (to be complete in July)</li> <li>▪ Develop 2006-07 work plan - <b>to be complete 2007 Q1</b></li> <li>▪ Begin preparation of documentation for BART CalPuff modeling support – <b>completed August 2006</b></li> <li>▪ Continue emissions processing to correct 2018 base case and develop 2018 control strategy EIs.</li> </ul>
	Attribution of Haze WG	<ul style="list-style-type: none"> <li>▪ AoH Phase II – continue development of integrated Weight of Evidence source attribution method example graphics. (March)</li> <li>▪ TSS alpha version roll-out. (January)</li> </ul>
	Stationary Sources Forum	<ul style="list-style-type: none"> <li>▪ Determine interest in evaluating regional backstop or active cap and trade program for point sources.</li> <li>▪ Continue work on BART analysis coordination, control strategy development and evaluation.</li> </ul>
	Dust Emissions Forum	<ul style="list-style-type: none"> <li>▪ Complete definition of dust – <b>completed January 2007</b></li> <li>▪ Begin PM10 Dust Regional Haze Pilot SIP project for Salt Creek Wilderness in SE New Mexico – <b>completed October 2006</b></li> </ul>

2006 Q2	Emissions Forum	<ul style="list-style-type: none"> <li>Complete continuing needed improvements to EDMS.</li> <li>Supervise contractor operation and needed improvements to EDMS.</li> <li>EDMS updated with 2018 base case EI data. (May-June) – <b>underway 2007 Q1</b></li> </ul>
	Fire Emissions Forum	<ul style="list-style-type: none"> <li>Complete Phase 4 EI project - <b>to be complete March 2007</b></li> <li>Fire Tracking System development – <b>started January 2007</b></li> </ul>
	Monitoring Forum (CoHA)	<ul style="list-style-type: none"> <li>PMF results and other work products to support AoH report.</li> </ul>
	Modeling Forum (RMC)	<ul style="list-style-type: none"> <li>Continuing source apportionment of each state’s 2018 major emissions source category impacts at Class I areas, associated with control strategy scenarios.</li> <li>Source apportionment of each state’s natural and manmade emissions at Class I areas.</li> <li>Conduct sensitivity modeling results from applying BART EGU presumptive limits for WRAP region, and other similar modeling studies.</li> </ul>
	Attribution of Haze WG	<ul style="list-style-type: none"> <li>Continue work on AoH Phase II/TSS projects.</li> <li>TSS training/orientation session. (April 27<sup>th</sup>)</li> </ul>
	Stationary Sources Forum	<ul style="list-style-type: none"> <li>Determine interest in evaluating regional backstop or active cap and trade program for point sources.</li> <li>Begin work on refining Oil &amp; Gas emissions inventories – <b>started December 2006</b></li> <li>Continuing emissions analyses for 2018 control strategy scenarios.</li> </ul>
	Dust Emissions Forum	<ul style="list-style-type: none"> <li>Continue work on PM10 Dust Regional Haze Pilot SIP project for Salt Creek Wilderness in SE New Mexico, incorporating Dust Definition project methodology – <b>completed October 2006</b></li> </ul>
2006 Q3	Emissions Forum	<ul style="list-style-type: none"> <li>Supervise contractor operation and needed improvements to EDMS.</li> </ul>
	Fire Emissions Forum	<ul style="list-style-type: none"> <li>Fire Tracking System development – <b>started January 2007</b></li> </ul>
	Monitoring Forum (CoHA)	<ul style="list-style-type: none"> <li>Complete work products to support AoH report.</li> </ul>
	Modeling Forum (2018 control strategy modeling project)	<ul style="list-style-type: none"> <li>Continue control strategy modeling analyses of sources’ and each state’s 2018 major emissions source category at Class I areas, associated with control strategy scenarios. - <b>deferred to mid-2007</b></li> <li>Complete source apportionment of each state’s natural and manmade emissions at Class I areas.</li> </ul>
	Attribution of Haze WG	<ul style="list-style-type: none"> <li>Complete work on AoH Phase II projects, integrating work products from EF, MF, AMRF, SSJF, FEJF, TDDWG, &amp; DEJF for IWG use through the TSS. (September-October) <b>completed late October</b></li> </ul>
	Stationary Sources Forum	<ul style="list-style-type: none"> <li>BART coordination</li> </ul>
	Dust Emissions Forum	<ul style="list-style-type: none"> <li>Complete work on PM10 Dust Regional Haze Pilot SIP project for Salt Creek Wilderness in SE New Mexico, incorporating Dust Definition methodology, incorporate results on TSS. – <b>planned for 2007</b></li> </ul>
2006 Q4	Emissions Forum	<ul style="list-style-type: none"> <li>Supervise contractor operation and needed improvements to EDMS – <b>hired new contractor from competitive bid November 2006</b></li> </ul>
	Fire Emissions Forum	<ul style="list-style-type: none"> <li>Fire Tracking System development - <b>started January 2007</b></li> </ul>

	Monitoring Forum (CoHA)	<ul style="list-style-type: none"> <li>CoHA operating at maintenance level.</li> </ul>
	Modeling Forum (RMC)	<ul style="list-style-type: none"> <li>Continue control strategy modeling analyses of sources' and each state's 2018 major emissions source category at Class I areas, associated with control strategy scenarios - deferred to mid-2007</li> <li>3/05 through 9/06 report completed</li> </ul>
	Attribution of Haze WG	<ul style="list-style-type: none"> <li>Release version 1 of fully operational TSS and data results (October)</li> <li>Routine operation of TSS (ongoing, with periodic data and version updates).</li> </ul>
	Stationary Sources Forum	<ul style="list-style-type: none"> <li>BART coordination</li> <li>Develop SoW for Oil and Gas Phase II EI project.</li> </ul>
	Dust Emissions Forum	<ul style="list-style-type: none"> <li>Complete definition of dust – <b>completed January 2007</b></li> </ul>
2007 Q1	Emissions Forum	<ul style="list-style-type: none"> <li>Supervise contractor operation and needed improvements to EDMS.</li> </ul>
	Fire Emissions Forum	<ul style="list-style-type: none"> <li>Fire Tracking System - development to start January 2007</li> </ul>
	Technical Analysis Forum	<ul style="list-style-type: none"> <li>CoHA operating at maintenance level.</li> <li>Routine operation of TSS (ongoing, with periodic data and version updates).</li> <li>Regional modeling simulation of Preliminary Reasonable Progress to start March 2007.</li> </ul>
	Stationary Sources Forum	<ul style="list-style-type: none"> <li>BART coordination</li> <li>Complete Oil and Gas EI Phase II project – <b>to be complete June 2007.</b></li> </ul>
	Dust Emissions Forum	<ul style="list-style-type: none"> <li>Complete definition of dust feasibility project – completed January 2007</li> </ul>
	Tribal Data Development WG	<ul style="list-style-type: none"> <li>Begin work on IMPROVE site representativeness for tribal lands - Phase II</li> <li>Begin Pilot project for Tribal use of TSS</li> <li>Begin Tribal assistance project for review of Haze SIPs</li> </ul>
2007 Q2	Emissions Forum	<ul style="list-style-type: none"> <li>EDMS operations</li> <li>EDMS training – <b>scheduled for July 2007.</b></li> </ul>
	Fire Emissions Forum	<ul style="list-style-type: none"> <li>Fire Emissions Tracking System – <b>demonstration/training of FETS at TSS Workshop June 19-20</b></li> <li>Completed Phase 4 EI, FTS Evaluation, and Inter-RPO Wildfire EI projects - <b>May 2007</b></li> </ul>
	Technical Analysis Forum	<ul style="list-style-type: none"> <li>CoHA operating at maintenance level.</li> <li>Routine operation of TSS (ongoing, with periodic data and version updates).</li> <li>Regional modeling simulation of Preliminary Reasonable Progress to be completed June 2007.</li> <li>BART modeling support for states by RMC to be completed.</li> <li>TSS Workshop June 19-20</li> </ul>
	Stationary Sources Forum	<ul style="list-style-type: none"> <li>O&amp;G EI Phase II project report + data summary – <b>calls May 2007 and draft report June 2007</b></li> <li>BART coordination</li> </ul>
	Dust Emissions Forum	

	Tribal Data Development WG	<ul style="list-style-type: none"> <li>▪ Work continues on IMPROVE site representativeness for tribal lands – Phase II</li> <li>▪ Pilot project for Tribal use of TSS</li> <li>▪ Tribal assistance project for review of Haze SIPs</li> </ul>
<b>2007 Q3</b>	Emissions Forum	<ul style="list-style-type: none"> <li>▪ EDMS operations</li> <li>▪ EDMS training July 2007.</li> <li>▪ Regional Haze EIs – Lessons Learned Workshop mid-September</li> </ul>
	Fire Emissions Forum	<ul style="list-style-type: none"> <li>▪ Fire Tracking System on-line, training at September workshop</li> <li>▪ Regional Haze EIs – Lessons Learned Workshop in September</li> </ul>
	Technical Analysis Forum	<ul style="list-style-type: none"> <li>▪ CoHA operating at maintenance level.</li> <li>▪ Routine operation of TSS (ongoing, with periodic data and version updates).</li> <li>▪ Regional Haze EIs – Lessons Learned Workshop mid-September</li> </ul>
	Stationary Sources Forum	<ul style="list-style-type: none"> <li>▪ BART coordination</li> <li>▪ Regional Haze EIs – Lessons Learned Workshop mid-September</li> </ul>
	Dust Emissions Forum	<ul style="list-style-type: none"> <li>▪ Regional Haze EIs – Lessons Learned Workshop mid-September</li> </ul>
	Tribal Data Development WG	<ul style="list-style-type: none"> <li>▪ Work continues on IMPROVE site representativeness for tribal lands – Phase II</li> <li>▪ Pilot project for Tribal use of TSS</li> <li>▪ Tribal assistance project for review of Haze SIPs</li> </ul>
<b>2007 Q4</b>	Emissions Forum	<ul style="list-style-type: none"> <li>▪ EDMS operations</li> </ul>
	Fire Emissions Forum	<ul style="list-style-type: none"> <li>▪ Fire Tracking System on-line</li> </ul>
	Technical Analysis Forum	<ul style="list-style-type: none"> <li>▪ CoHA operating at maintenance level.</li> <li>▪ RMC operations - regional modeling simulations as needed</li> <li>▪ Routine operation of TSS (ongoing, with periodic data and version updates)</li> </ul>
	Stationary Sources Forum	<ul style="list-style-type: none"> <li>▪ BART coordination</li> </ul>
	Dust Emissions Forum	
	Tribal Data Development WG	<ul style="list-style-type: none"> <li>▪ Work continues on IMPROVE site representativeness for tribal lands – Phase II</li> <li>▪ Pilot project for Tribal use of TSS</li> <li>▪ Tribal assistance project for review of Haze SIPs</li> </ul>
<b>2008 Q1</b>	Emissions Forum	<ul style="list-style-type: none"> <li>▪ EDMS operations</li> </ul>
	Fire Emissions Forum	<ul style="list-style-type: none"> <li>▪ Fire Tracking System on-line</li> </ul>
	Technical Analysis Forum	<ul style="list-style-type: none"> <li>▪ CoHA operating at maintenance level.</li> <li>▪ RMC operations - regional modeling simulations as needed</li> <li>▪ Routine operation of TSS (ongoing, with periodic data and version updates)</li> </ul>

	Stationary Sources Forum	<ul style="list-style-type: none"> <li>▪ BART coordination</li> </ul>
	Dust Emissions Forum	
	Tribal Data Development WG	<ul style="list-style-type: none"> <li>▪ Work continues on IMPROVE site representativeness for tribal lands – Phase II</li> <li>▪ Pilot project for Tribal use of TSS</li> <li>▪ Tribal assistance project for review of Haze SIPs</li> </ul>

C) 2007 Technical Analysis Plan (June 2007 update)

Table 1. All technical activities of WRAP in 2007 (periodic updates will occur)

Month	Activities	Forums/Workgroups
January	Visibility Projections/Monitoring Metrics method review <a href="http://www.wrapair.org/forums/taf/meetings/070108c/Applying_Monitoring_Metrics_for_Regional_Haze_Planning_%201_5_2007%20final%20draft.pdf">http://www.wrapair.org/forums/taf/meetings/070108c/Applying_Monitoring_Metrics_for_Regional_Haze_Planning_%201_5_2007%20final%20draft.pdf</a>	TAF
	IMPROVE data substitutions complete <a href="http://wrapair.org/forums/aoh/meetings/061102m/WRAP_data_substitution_methods_draft_110206.pdf">http://wrapair.org/forums/aoh/meetings/061102m/WRAP_data_substitution_methods_draft_110206.pdf</a>	TAF
	TSS, CoHA, RMC operations <a href="http://vista.cira.colostate.edu/tss/">http://vista.cira.colostate.edu/tss/</a> <a href="http://www.coha.dri.edu/">http://www.coha.dri.edu/</a> <a href="http://pah.cert.ucr.edu/aqm/308/">http://pah.cert.ucr.edu/aqm/308/</a>	TAF
	Fire Tracking System development	FEJF
	EDMS operations <a href="http://www.wrapedms.org/default_login.asp">http://www.wrapedms.org/default_login.asp</a>	EF
	O&G EI Phase II project <a href="http://wrapair.org/forums/ssjf/documents/eictts/oilgas.html">http://wrapair.org/forums/ssjf/documents/eictts/oilgas.html</a>	SSJF
	Tribal WG projects	TDDWG + WRAP staff
February	TSS, CoHA, RMC operations <a href="http://vista.cira.colostate.edu/tss/">http://vista.cira.colostate.edu/tss/</a> <a href="http://www.coha.dri.edu/">http://www.coha.dri.edu/</a> <a href="http://pah.cert.ucr.edu/aqm/308/">http://pah.cert.ucr.edu/aqm/308/</a>	TAF
	Review and approval of RMC 2007 Workplan <a href="http://wrapair.org/forums/taf/meetings/070226c/RMC_2007_workplan_final.pdf">http://wrapair.org/forums/taf/meetings/070226c/RMC_2007_workplan_final.pdf</a>	TAF
	Visibility Projections/Monitoring Metrics method final review draft <a href="http://wrapair.org/forums/taf/meetings/070226c/Applying_Monitoring_Metrics_for_Regional_Haze_Planning_%20February_23_2007_finalreviewdraft.pdf">http://wrapair.org/forums/taf/meetings/070226c/Applying_Monitoring_Metrics_for_Regional_Haze_Planning_%20February_23_2007_finalreviewdraft.pdf</a>	TAF
	Implement IMPROVE data substitutions and visibility projections tool <a href="http://vista.cira.colostate.edu/TSS/Tools/ModelingResults.aspx">http://vista.cira.colostate.edu/TSS/Tools/ModelingResults.aspx</a> , select “Modeling Projections (Scaled by RRFs)” tab	TAF
	Fire Tracking System development <a href="http://wrapair.org/forums/fejf/meetings/070222m/FEJF_20070223_130p.pdf">http://wrapair.org/forums/fejf/meetings/070222m/FEJF_20070223_130p.pdf</a>	FEJF
	EDMS operations - Review and approve EDMS Critical Functionality Analysis and schedule for work	EF
	O&G EI Phase II project <a href="http://wrapair.org/forums/ssjf/documents/eictts/oilgas.html">http://wrapair.org/forums/ssjf/documents/eictts/oilgas.html</a>	SSJF
Preliminary Reasonable Progress 2018 EI updates	WRAP staff + states	
Tribal WG projects	TDDWG + WRAP staff	

March	TSS, CoHA, RMC operations Begin RMC Emissions Modeling for PRP analysis Fire Tracking System workplan EDMS operations O&G EI Phase II project Preliminary Reasonable Progress 2018 EI updates Tribal WG projects	TAF TAF FEJF EF SSJF WRAP staff + states TDDWG + WRAP staff
April	TSS, CoHA, RMC operations TSS training on Reasonable Progress Weight of Evidence tool for IWG Complete RMC Emissions Modeling for PRP analysis Fire Tracking System development O&G EI Phase II project Preliminary Reasonable Progress 2018 EI report + data summary Tribal WG projects	TAF TAF TAF FEJF SSJF WRAP staff + states TDDWG + WRAP staff
May	TSS, CoHA, RMC operations RMC Air Quality Modeling for PRP analysis Fire Tracking System development O&G EI Phase II project calls Emissions Inventory (May 8 <sup>th</sup> ) <a href="http://www.wrapair.org/cal/calendar.php?op=view&amp;id=680">http://www.wrapair.org/cal/calendar.php?op=view&amp;id=680</a> Control technologies (May 30 <sup>th</sup> ) <a href="http://www.wrapair.org/cal/calendar.php?op=view&amp;id=681">http://www.wrapair.org/cal/calendar.php?op=view&amp;id=681</a> EDMS operations TSS display of Preliminary Reasonable Progress 2018 EI data summary Tribal WG projects	TAF TAF FEJF SSJF  EF TAF TDDWG + WRAP staff
June	TSS, CoHA, RMC operations Output RMC Air Quality Modeling PRP analysis results to TSS TSS Workshop Fire Tracking System version 1 online with training at TSS Workshop O&G EI Phase II draft project report EDMS operations Tribal WG projects	TAF TAF TAF FEJF SSJF EF TDDWG + WRAP staff
July	TSS, CoHA, RMC operations EDMS operations (training to be scheduled on June EDMS Status call) Tribal WG projects Other activities TBD	TAF EF TDDWG + WRAP staff
August	IWG meeting on Haze Plans TSS, CoHA, RMC operations EDMS operations Tribal WG projects Other activities TBD	IWG TAF EF TDDWG + WRAP staff

September	Regional Haze EIs – Lessons Learned Workshop TSS, CoHA, RMC operations EDMS operations Tribal WG projects Other activities TBD	SSJF, EF, FEJF, DEJF TAF EF TDDWG + WRAP staff
October	TAF meeting to review States’ technical analyses for Haze Plans TSS, CoHA, RMC operations EDMS operations (training to be scheduled on June EDMS Status call) Tribal WG projects Other activities TBD	TAF TAF EF TDDWG + WRAP staff

**Table 2. WRAP technical activities specific to completion of Preliminary Reasonable Progress Analysis (June, periodic updates will occur)**

<b>Month</b>	<b>Responsible Group</b>	<b>Activity/Deliverable</b>
<b>January 2007</b>	Implementation WG	1) Began work on RP analysis dry run for at least one Class I area in each state 2) Reviewed SoW for Point/Area PRP EI analysis
	Technical Analysis Forum	Reviewed visibility projections and monitoring metrics recommendations
	Emissions Forum	Reviewed SoW for Point/Area PRP EI analysis
	Dust Emissions Forum	Completed Definition of Dust Project
	Fire Forum	Began review of final work products on Phase III/IV EIs, FTS evaluation, and RPO Wildfire EI
	Stationary Sources Forum	1) Reviewed SoW for Point/Area PRP EI analysis 2) O&G EI Update Project – gathered input from producers
	WRAP Staff	Scoped out any needed update to 2018 mobile source EI projections
<b>February</b>	Implementation WG	1) Continued work on RP analysis dry run for at least one Class I area in each state 2) “How to drive” TSS training – February 15 <sup>th</sup> 3) Began review of “WRAP Reasonable Progress Demonstration Method”
	Technical Analysis Forum	1) Completed data substitutions for baseline values 2) Finalized RMC modeling workplan
	Emissions Forum	
	Dust Emissions Forum	
	Fire Forum	1) Reviewed & approved workplan outline for Fire Emissions Tracking System inside TSS 2) Discuss/approve task for technical memo about preparing/using fire emissions for haze planning
	Stationary Sources Forum	Continuing work on BART analyses
<b>March</b>	Implementation WG	1) Coordinate state staff review of contractor results for Point/Area PRP EI analysis 2) Continue review and discussion of “WRAP Reasonable Progress Demonstration Method”
	Technical Analysis Forum	RMC begins receiving and processing modeling input files from EI updates
	Emissions Forum	Completed EDMS Critical Functionality Report
	Dust Emissions Forum	
	Fire Forum	Continue work on Fire Emissions Tracking System inside TSS
	Stationary Sources Forum	Continuing work on BART analyses
	WRAP Staff	Complete needed updates to 2018 mobile source EI projections

<b>April</b>	Implementation WG	<ol style="list-style-type: none"> <li>1) Review completed Point/Area PRP EI analysis project, report and pivot tables</li> <li>2) Review and discussion of “WRAP Reasonable Progress Demonstration Method”</li> <li>3) Meeting April 17-19 to present RP “dry runs” and discuss related topics</li> <li>4) “Reasonable Progress Demonstration Analysis” TSS tool training – second week of April</li> </ol>
	Technical Analysis Forum	<ol style="list-style-type: none"> <li>1) Complete model input processing of PRP point/area EI data</li> <li>2) Provide “Reasonable Progress Demonstration Analysis” TSS tool training to IWG</li> </ol>
	Emissions Forum	
	Dust Emissions Forum	
	Fire Forum	
	Stationary Sources Forum	Continuing work on BART analyses
	WRAP Staff	Complete Point/Area PRP EI analysis project, report and pivot tables
<b>May</b>	Implementation WG	Finalize and publish “WRAP Reasonable Progress Demonstration Method”
	Technical Analysis Forum	
	Emissions Forum	SoW for Mobile Sources Lessons Learned White Paper for September Workshop
	Dust Emissions Forum	SoW for Dust Emissions Lessons Learned White Paper for September Workshop
	Fire Forum	SoW for Fire Emissions Lessons Learned White Paper for September Workshop
	Stationary Sources Forum	<ol style="list-style-type: none"> <li>1) Calls to review EI and control technology options for Phase II O&amp;G project</li> <li>2) Continuing work on BART analyses</li> </ol>
	WRAP Staff	
<b>June</b>	Implementation WG	
	Technical Analysis Forum	<ol style="list-style-type: none"> <li>1) TSS technical meeting June 19-20, Denver</li> <li>2) Execute and complete AQ modeling of PRP EI data</li> <li>3) Complete and publish visibility projections and monitoring metrics recommendations</li> <li>4) Complete display of PRP EI and modeling data into TSS</li> </ol>
	Emissions Forum	
	Dust Emissions Forum	
	Fire Forum	Initial version of Fire Emissions Tracking System on-line
	Stationary Sources Forum	
	WRAP Staff	
<b>July</b>	Technical Analysis Forum	Post and integrate PRP18 Point and Area source EI pivot tables in TSS tools
	Emissions Forum	<ol style="list-style-type: none"> <li>1) EDMS training</li> <li>2) Review draft of Mobile Sources Lessons Learned White Paper for September Workshop</li> </ol>
	Dust Emissions Forum	Review draft of Dust Emissions Lessons Learned White Paper for September Workshop
	Fire Forum	Review draft of Fire Emissions Lessons Learned White Paper for September Workshop
	Stationary Sources Forum	Review draft of Point and Areas Sources’ Emissions Lessons Learned White Paper for September Workshop
	WRAP Staff	

**D) Highlights of selected analyses and projects related to regional haze planning (June 2007)**

A draft workplan for the Fire Emissions Tracking System:

[http://www.wrapair.org/forums/fejfd/documents/fts/Workplan\\_DRAFT\\_%20FETS\\_20070323.pdf](http://www.wrapair.org/forums/fejfd/documents/fts/Workplan_DRAFT_%20FETS_20070323.pdf)

A draft Guidance Document for Regional Coordination of Smoke Management Programs:

<http://www.wrapair.org/forums/fejfd/documents/rctt/FEJFRegionalCoordinationGuidanceFinalDraft.pdf>

Stationary Sources Joint Forum Phase II oil and gas emissions project:

Emissions Inventory May 8<sup>th</sup> call: <http://www.wrapair.org/cal/calendar.php?op=view&id=680>

Control Technologies May 30<sup>th</sup> call: <http://www.wrapair.org/cal/calendar.php?op=view&id=681>

Regional Haze Planning 2018 “Preliminary Reasonable Progress” (PRP18) Emissions Inventory project:

<http://www.wrapair.org/forums/ssjfd/documents/eictts/projections.html> (text and links below)

The objective of this project is to provide the technical basis for making preliminary evaluations of reasonable progress toward individual Class I area visibility goals by the WRAP. This was done by updating the WRAP region 2018 point and area sources emission inventory projections from the 2018 Base Case version 1 project, completed by Eastern Research Group, Inc. (ERG) and ENVIRON in January 2006. The resulting emissions inventory is the WRAP region Preliminary Reasonable Progress emissions inventory for 2018 (PRP18).

The scope of this project was purposely limited and focused on the most significant point and area sources of 2018 emissions in order to complete the work in a timely and efficient manner for both the State and Local (S/L) agencies reviewing the data and providing comments, as well as for ERG, performing the analysis and making the updates.

This [FINAL technical memo](#) describes the project scope, explains the methodology used to compile data and prepare the WRAP 2018 PRP emissions inventory, and presents summary results for the WRAP region and detailed results for each jurisdiction [PDF](#)

WRAP staff telephoned each WRAP state in early May to discuss application of presumptive BART SO<sub>2</sub> emissions rates and review other changes noted in an earlier draft of the ERG technical memo.

This [spreadsheet](#) summarizes all comments received from the S/L agencies regarding the previous 2018b base case inventory, and the responses ERG took to address these comments. In addition the spreadsheet identifies those issues that were either not identified in time, or were judged to be more appropriately addressed in planned revisions to the baseline period (2000-04) and Final Reasonable Progress 2018 (FRP18) emission inventories targeted for late 2007 or early 2008 [XLS](#)

Implementation Workgroup April 17-19 meeting interactive agenda (contains reasonable progress analysis efforts by individual states): <http://www.wrapair.org/forums/iwg/meetings/070417m/index.html>