DECISION SUPPORT SYSTEM UPDATE – TSS

September 30, 2008

STATUS

KEY FUNCTIONS

- Provide key summary analytical results for preparing implementation plans as required by the Regional Haze Rule
- Provide comprehensive summary documentation for regional haze analysis work in the WRAP region
- Integrate key results from WRAP data nodes, including the VIEWS, CoHA, EDMS, FETS, and RMC websites

http://vista.cira.colostate.edu/tss/

Ongoing support and development for the TSS is provided by Air Resource Specialists, CIRA, ENVIRON, and Air Sciences, under the direction of WRAP's Technical Analysis Forum. The TSS was designed as a single web portal for retrieval and visualization of WRAP's technical data and regional analyses. Work on the TSS to date has been carefully focused on regional haze issues directly related to state and federal haze implementation plans.

REGIONAL HAZE PLAN SUPPORT

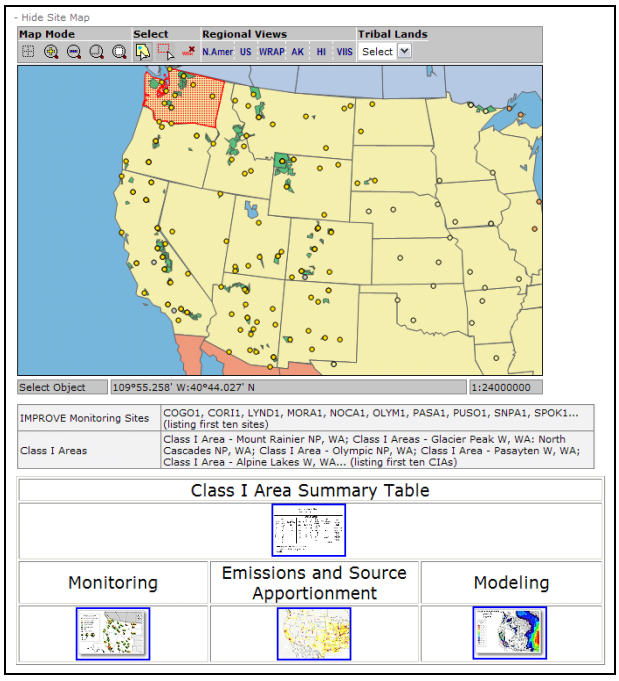
The TSS utilizes a website and relational database to deliver monitoring, emissions, modeling, and source attribution data through user-designed graphics, with documentation, required as technical support for state and federal regional haze implementation plans for the 100+ WRAP region Class I areas. WRAP states are using the TSS as the basis to support review, approval, implementation, and reasonable progress tracking for the Class I areas in their haze plans. Future data will be added to assist in the ongoing implementation analysis required for regional haze.

System Users	WRAP Association	Nature of Use
Haze Planners and Analysts	IWG, TAF, EF, FEJF, Public	SIPs; Emissions analysis; Haze planning
FLMs	TAF, FEJF	SIP review
EPA	TAF, FEJF	SIP review and implementation

WORK COMPLETED IN THE LAST 12 MONTHS

Development work on the TSS is ongoing. Major milestones of the past year include:

- Addition of RMC emissions modeling data and development of the "Emissions Review Tool"
- Development of the dynamic "Class I Area Summary Table"
- Upload of the results for the Preliminary Reasonable Progress (PRP2018) emissions and modeling runs
- Upload of 2005 and 2006 IMPROVE data
- Upload of a newly revised Help document
- Regular communication with and individual assistance for state and federal regional haze planners
- Ongoing clean-up, bug fixes, and behind-the-scenes structural development



Haze Planning Web Page on the TSS

Current Processes

Regional Haze Planning → **Regional Haze Plan Approval** → **Regional Haze Implementation**

WRAP tss

TSS is the Decision Support System for Haze Planning

NEXT STEPS

DEVELOP NEW TOOLS, REFINE EXISTING ONES

- Add satellite data in conjunction with NASA ROSES contract
- Add additional NAAQS data (ozone, for example) as well as global data
- Develop more tools that offer region- and locale-specific analyses
- Develop appropriate new functionality as web services
- Refine decision tools for making interpretations and recommendations
- Expand and refine guidance documentation
- Highlight case studies from the user community
- Allow users to upload and work with their own data
- Establish precedents for air quality decision support

INCREASE BENEFITS TO END USERS

Federal Land Managers:

- Better air quality evaluation
- More accurate source apportionment
- More meaningful impact assessment
- Informed review of permitting and regulation
- Improved air quality in ecosystems

States, Tribes, and Local Agencies:

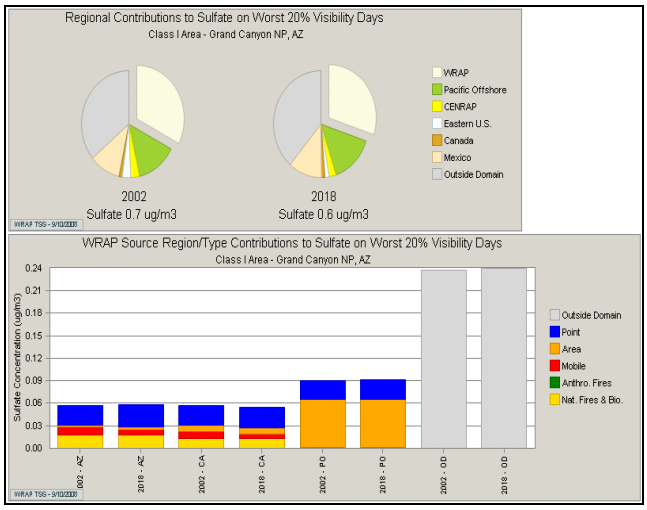
- Effective Implementation Plans + approval
- Defensible and achievable control strategies
- Demonstration of reasonable progress
- Better air quality in Class I Areas

EPA and RPOs:

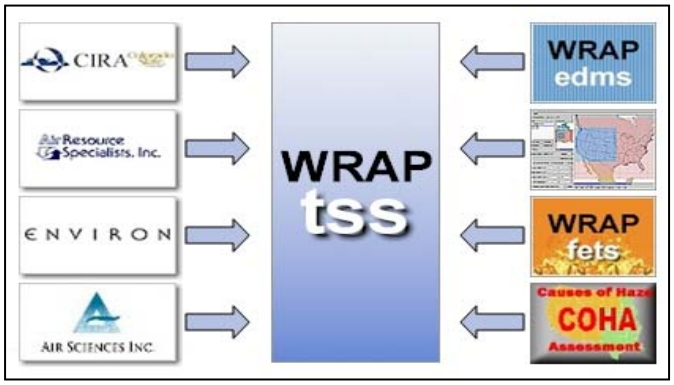
- Effective emissions control evaluation
- Practical and equitable standards
- Leveraging of existing efforts
- Improved synergy with States and Tribes
- Valuable case studies and precedents
- More effective application of resources

ADD NASA SATELLITE DATASETS

The TSS development team will be adding existing NASA satellite data such as: 1) aerosol optical depth products, 2) imagery from the Terra/Aqua (MODIS, AIRS) and Aura (OMI) satellites, 3) CALIPSO LIDAR, and 4) fire activity data from the NOAA GOES satellite. These datasets will provide a more complete picture of the aerosol concentrations and sources over the U.S. in conjunction with ground-based network data currently available in the TSS and the Visibility Information Exchange System (VIEWS).



Haze Planning: Sulfate Source Apportionment Analysis for Grand Canyon National Park, as shown by the TSS Haze Planning tool.



Integrated Decision Support: The TSS is the result of collaboration between several partners (shown on the left), and leverages the capabilities and resources of several component information management systems (shown on the right).

New tools: A new Network Browser tool implemented with Google Maps will allow users to more easily explore TSS datasets.

Future Processes

Building from RH Implementation → **Planning Support for Multiple Pollutants** → **Tracking and Implementation**

WRAP tss

TSS is the Decision Support System for Haze Planning