



REGIONAL HAZE RULE REQUIREMENTS AND THE FIRE EMISSIONS TRACKING SYSTEM

PREPARED FOR: Rita Trujillo, NM Air Quality Bureau; Tom Moore, WRAP

PREPARED BY: Dave Randall/Matt Mavko

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Background

EPA's Regional Haze Rule (EPA, 1999) requires states to develop implementation plans (SIPs) for addressing regional haze in the Nation's 156 mandatory Class I areas.

Additionally, the Rule requires effective management of fire sources. The Rule provides two pathways for western states to follow as they implement the requirements of the Rule: 1) develop their regional haze implementation plans per the nationally applicable provisions of §51.308 (Section 308), or 2) Transport Region States may choose to incorporate the Grand Canyon Visibility Transport Commission Recommendations (GCVTC, 1996) into their regional haze implementation plans under §51.309 (Section 309) of the Rule.

Specific provisions of Section 309 and broader provisions in Section 308 call for tracking and developing emission inventories for fire activity as a part of each states' smoke management program. It is the position of the WRAP that it is necessary to track fire activity information in the WRAP region using a regional fire tracking system; this policy is outlined in *WRAP Policy: Fire Tracking Systems* (FEJF, 2003) and addresses requirements of both Section 308 and Section 309 to be met or aided by a regional fire tracking system.

The WRAP Fire Emissions Tracking System (FETS) has been developed according to FTS policy guidelines. This paper outlines specific SIP requirements for both 308 and 309 states that are met by the FETS.

Requirements Pertaining to All States

§51.308(g)(4) and §51.309(d)(10)(i)(D) call for:

An analysis tracking the change over the past 5 years in emissions of pollutants contributing to visibility impairment from all sources and activities within the State. Emissions changes should be identified by type of source or activity. The analysis must be based on the most recent updated emissions inventory, with estimates projected forward as necessary and appropriate, to account for emissions changes during the applicable 5-year period.

Starting in calendar year 2008, the FETS will give states and Tribes access to annual fire emissions information for all fire source types in the WRAP region. Annual emission inventories may be developed directly using reporting services in the FETS. In addition, the FETS database will be seamlessly linked to the detailed reporting, graphing, and charting tools available from the WRAP's Technical Support System (vista.cira.colostate.edu/tss). FETS users will have the ability to upload baseline and projection inventory data in order to analyze and track changes during a given 5-year period.

Requirements Specific to Section 309

§51.309(d)(6) Fire Planning Requirements. The plan must provide for:

(ii) A statewide inventory and emissions tracking system (spatial and temporal) of VOC, NO_x, elemental and organic carbon, and fine particle emissions from fire. In reporting and tracking emissions from fire from within the State, States may use information from regional data-gathering and tracking initiatives.

The FETS is a repository for fire activity, storing location (latitude/longitude), date, and pollutant emissions – including VOC, NO_x, elemental and organic carbon, and fine particulate. Activity is tracked and emissions are calculated on a daily basis for all fire activity in the WRAP region for all fire types, including wildfire, prescribed fire, agricultural burning, and Non-Federal Rangeland burning. Activity data are accessible to all states and Tribes to facilitate regional data-gathering and tracking, facilitating data sharing and streamlining regional coordination.

(iv) Enhanced smoke management programs for fire that consider visibility effects, not only health and nuisance objectives, and that are based on the criteria of efficiency, economics, law, emission reduction opportunities, land management objectives, and reduction of visibility impact.

The FETS is expected to aid in the implementation of these programs, as spatial and temporal fire activity information accumulates over time. All fire activity in the FETS is categorized as 'Natural' or 'Anthropogenic,' and data pertaining to the application of Emission Reduction Techniques (ERTs) are stored. From these ERT data, the frequency of the application of ERTs and estimates of emissions averted due to the application of ERTs can be calculated. Programs may use this information when considering emission reduction opportunities and assessing progress over time in reducing visibility impacts.

(v) Establishment of annual emission goals for fire, excluding wildfire, that will minimize emission increases from fire to the maximum extent feasible and that are established in cooperation with States, tribes, Federal land management agencies, and private entities."

The WRAP Policy on Annual Emission Goals for Fire (FEJF, 2003) emphasizes the use of Emission Reduction Techniques (ERTs) as the basis of annual emission goals. To this end, the FETS has the capability to store information about the application of ERTs to planned fire events, such as the specific technique used and the percent emissions reduction achieved. Data providers have the opportunity to provide ERT information on every (daily) planned fire event. The data stored in the FETS pertaining to ERTs will enable states and Tribes to calculate the frequency of application of ERTs and to estimate emissions averted due to the application of ERTs.

Requirements Specific to Section 308

§51.308 (d) (4) (v) calls for:

A statewide inventory of emissions of pollutants that are reasonably anticipated to cause or contribute to visibility impairment in any mandatory Class I area. The inventory must include emissions for a baseline year, emissions for the most recent year for which data are available, and estimates of future projected emissions. The State must also include a commitment to update the inventory periodically.

The FETS will provide users the capability of developing complete annual emission inventories for fire beginning in calendar year 2008. In addition, baseline year and projection year inventory data may be uploaded to the FETS by users. (Fire emissions data from the WRAP's baseline (Phase III) and projection (Phase IV) inventories are available for upload to the FETS.)

§51.308 (d) (3):

(iii) The State must document the technical basis, including modeling, monitoring and emissions information, on which the State is relying to determine its apportionment of emission reduction

*obligations necessary for achieving reasonable progress in each mandatory Class I Federal area it affects.*¹⁶

The FETS will be integrated into the WRAP's Technical Support System, making fire emissions available alongside emissions from other sources in the technical tools available in the TSS. Technical tools in the TSS are specifically designed to help states and Tribes assemble the technical analyses called for in §51.308 (d) (3). The FETS will include features to export annual emission inventories for fire and its reporting features will enable states and Tribes to compare each year to baseline and projection inventories uploaded to the FETS. For technical support, detailed technical documentation on the methods employed by the FETS for data gathering, emissions calculations, and quality control are available on the Resources and Methods pages of the FETS website (wrapfets.org).

(iv) The State must identify all anthropogenic sources of visibility impairment considered by the State in developing its long-term strategy [for regional haze]. The State should consider major and minor stationary sources, mobile sources, and area sources.

The FETS tracks all fire activity by category, assigning each fire as 'Natural' or 'Anthropogenic' following the WRAP's *Guidance for Categorizing Natural vs Anthropogenic Fire Emissions* (FEJF, 2005) including allowing data providers to enter the 'natural' or 'anthropogenic' classification for each planned fire event. Reporting Services are available in the FETS to spatially (by state, tribe, or county) and temporally (by year or month) review fire events by natural and anthropogenic classifications.

References

Regional Haze Regulations; Final Rule. U.S. Environmental Protection Agency, July 1, 1999.

http://www.epa.gov/ttn/oarpg/t1/fr_notices/rhfedreg.pdf

Recommendations for Improving Views. Grand Canyon Visibility Transport Commission.

June 10, 1996. <http://www.wrapair.org/WRAP/reports/GCVTCFinal.PDF>

WRAP Policy: Fire Tracking Systems Fire Emissions Joint Forum, April 2, 2003.

<http://wrapair.org/forums/fejf/documents/fts/WRAPFTSPolicy.pdf>

WRAP Policy on Annual Emission Goals for Fire. Fire Emissions Joint Forum, April 2, 2003.

<http://wrapair.org/forums/fejf/documents/aeg/WRAPAEGPolicy1.pdf>

Guidance for Categorizing Natural vs Anthropogenic Fire Emissions. Fire Emissions Joint Forum, November 30, 2005.

<http://www.wrapair.org/forums/fejf/documents/nbtt/WRAPFEJFNAGuidance.pdf>

