

# WRAP Emissions Data Management System Update

Regional Haze Emissions Inventories –  
Lessons Learned Workshop

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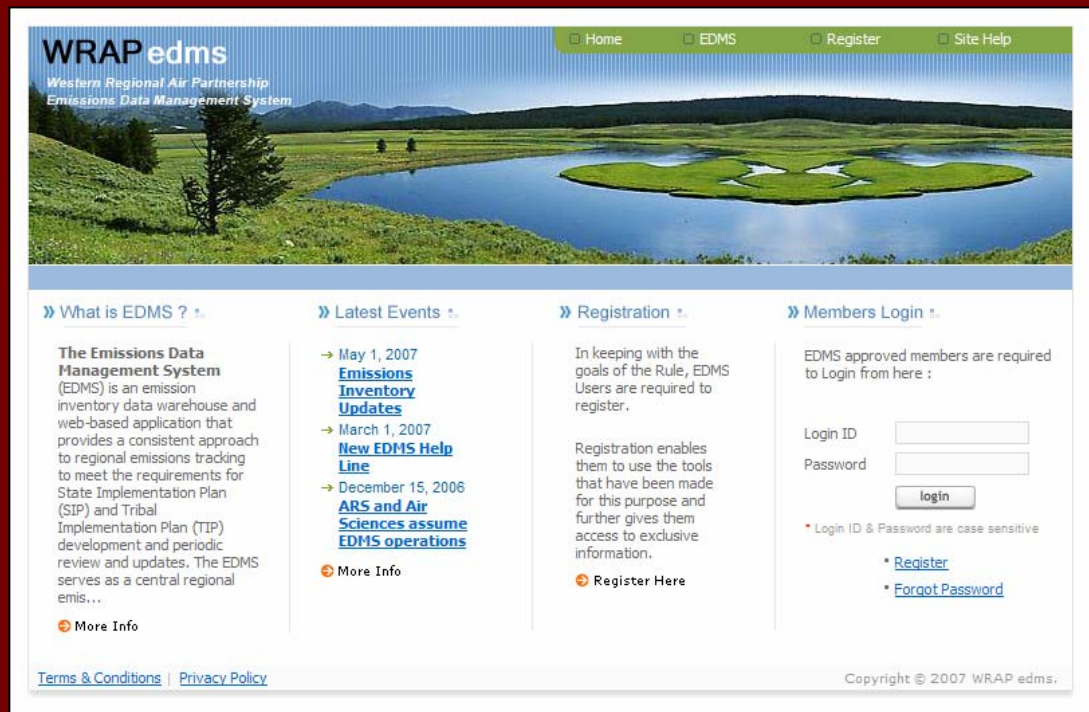
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# WRAP EDMS

<http://www.wrapedms.org>

- Emissions inventory data warehouse
  - “Raw” emissions data; not SMOKE outputs
  - Web-based access to reports and queries
  - Emissions tracking

- Who uses it outside WRAP?
  - Other RPO states
  - Canada, Mexico
  - India
  - Vietnam
  - Serbia



The screenshot shows the WRAP EDMS website homepage. At the top, there is a navigation bar with links for Home, EDMS, Register, and Site Help. Below the navigation bar is a large banner image of a green landscape with a blue lake. The main content area is divided into four columns: "What is EDMS?", "Latest Events", "Registration", and "Members Login".

**WRAP edms**  
Western Regional Air Partnership  
Emissions Data Management System

Home EDMS Register Site Help

» **What is EDMS ?**

The Emissions Data Management System (EDMS) is an emission inventory data warehouse and web-based application that provides a consistent approach to regional emissions tracking to meet the requirements for State Implementation Plan (SIP) and Tribal Implementation Plan (TIP) development and periodic review and updates. The EDMS serves as a central regional emis...

» **Latest Events**

- May 1, 2007 [Emissions Inventory Updates](#)
- March 1, 2007 [New EDMS Help Line](#)
- December 15, 2006 [ARS and Air Sciences assume EDMS operations](#)

» **Registration**

In keeping with the goals of the Rule, EDMS Users are required to register.

Registration enables them to use the tools that have been made for this purpose and further gives them access to exclusive information.

» **Members Login**

EDMS approved members are required to Login from here :

Login ID

Password

\* Login ID & Password are case sensitive

- [Register](#)
- [Forgot Password](#)

» **More Info**

» **More Info**

» **Register Here**

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# User Support

- Two levels of user
  - Data Analyst: anyone – can retrieve any data
  - Data Owner: must be ok'd by WRAP – can submit data
- EDMS Help-Line
  - “Site Help/Report a Problem” menu selection
  - E-mail: [edms@air-resource.com](mailto:edms@air-resource.com)
  - Phone: 970-484-7941
  - Help-Line support may come from ARS or Air Sciences, depending on the nature of the question

# Application Hosting

- Hardware/software purchase & configuration
  - Database server + Oracle license
  - Web server
  - Resides at ARS in Fort Collins, CO
- Data transfer from previous contractor
  - Database export files
  - Application source code
  - System documentation (minimal)
  - Other
- Database import & test prior to domain registration
  - Some inventory problems discovered by ARS or Emissions Forum members; resolved by early 2007

# Ongoing Operations and Consulting Services – General

- Critical Functionality Report February/March 2007
  - Detailed review of system with recommendations
    - Database
    - Application code
    - Web interface
    - Data submittal process
    - Mapping tool
- Implementation of CFR recommendations
  - Many items are “behind the scenes”, structural and organizational
- Preparation of a database test environment
- Initiation of bug/enhancement tracking

## Severity levels

Critical

Major

Minor

# Ongoing Operations and Consulting Services – Data Updates

- Tribal EI clean-up; excellent help from ITEP
  - Upload of point and area emissions files
  - Correction of some facility names/locations
- State EI clean-up
  - Update of NEI code tables (FIPS, Pollutants)
  - Identification of obsolete or non-standard SCCs
  - Re-generation of all “Standard Reports”
- Uploaded most recent 2018 inventory (ERG, 8/07)
- Developed data submittal process
  - Refining data submittal/QA procedure, using Idaho 2005 inventory as a test case
  - Adding capability to upload data in XML-format

# Data Submittal and QA Procedure

- Data owners required to run the NEI Basic Format and Content checker and submit results
- Stage 1 – Critical Checks
  - Duplicate records, undefined codes, etc.
- Stage 2 – Non-critical Checks
  - Value range checks
- Stage 3 - Advanced
  - Data owner provided with Excel-format Rank Table reports for review
  - Potential for gap-filling or other advanced processing
- Stage 4 – Production
  - Data becomes available in the production database

# QA Rank Table Reports

- Rank Table reports for each pollutant and source category, designed to identify large errors
  1. Top 10 sources or SCCs in 2005
  2. Top 10 increases from 2002 to 2005
  3. Top 10 decreases from 2002 to 2005
  4. All sources that were reported as 0 in 2002 or 2005
- Ultimately automated, user selects "Top X" value

POINT(INDUSTRIAL SOURCE): Top 10 SO2 Emission Increases in 2005 (in tons)

RANK	FACILITY	COUNTY	EM2005	EM2002	INCREASE	PERCENTCHANGE
1	TASCO, Twin Falls	Twin Falls Co	1576	1018	558	55
2	Nu-West Industries	Caribou Co	676.42	364.19	312.23	86
3	Larsen Farms	Clark Co	204.86	0.88	203.98	23180
4	Idaho Supreme Potatoes	Bingham Co	214.57	18.41	196.16	1066
5	TASCO, Paul	Minidoka Co	415.63	249.06	166.57	67
6	Basic American Foods, Blackfoot	Bingham Co	166.86	8.48	158.38	1868
7	Idaho Fresh Pak, Lewisville	Jefferson Co	125.3	1.96	123.34	6293
8	JR Simplot Company - Food Group	Canyon Co	67.15	15.06	52.09	346
9	PG and E Gas Transmission Northwest Station No 4	Bonner Co	2.5	1.92	0.58	30
10	INL AMWTF	Butte Co	0.43	0.01	0.42	4200

# Future Work (highlights)

Work planned for Fall 2007 through 2008

## ■ Data submittals

- Work with states to submit 2005 EIs
- Work with tribes/ITEP to submit EIs as completed
- Address WRAP/state/tribal inventory issues as required

## ■ Linkage between EDMS and the TSS

- TSS database schema recently modified for emissions
- CIRA has samples of EDMS reports
- Need to define how best to retrieve/present data
  - Periodic update vs. real-time query
  - High-level or/and detailed data presentations

# Future Work (continued)

- Add BART/non-BART designation to point sources
- Revise inventory names/descriptions
  - Legacy inventory version names are confusing
  - Analyze content of each inventory version
  - Make detailed descriptions available
- Redesign “Standard Reports” page
  - Interface needs to be more intuitive, less cluttered
- Revise state/tribe selection functionality
  - Currently, states and tribes cannot be selected in a single query on the mapping tool
  - Some selections make no sense for tribal queries

# Future Work (concluded)

- Add fire data back into EDMS
  - Due to performance issues, fire EIs were removed from the database prior to Nov. 2006
  - Ongoing fixes to the database should allow upload of fire data
- Linkage between the EDMS and the FETS
  - Need to define how best to retrieve and store fire emissions data
    - Periodic update vs. real-time query
    - Which FETS parameters?
- EDMS documentation – badly needed!