



Inter-RPO Emissions Inventory Warehouse System Update

**Megan Schuster, MARAMA
RPO Technical Meeting
June 10, 2005**



Technical Oversight Committee

- WRAP – Tom Moore
- CENRAP – Kathy Pendleton,
Annette Sharp
- VISTAS – Pat Brewer, Greg Stella
- MRPO – Mark Janssen
- MANE-VU – Megan Schuster, Jung-
Hun Woo, Serpil Kayin



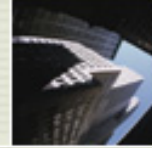
Outline

- Introduction
- Web-based solution
- Solution requirements
- Design of warehouse solution to meet RPO needs



Introduction and Background

- **Inventory Development/Sharing**
 - Source types: point, area, nonroad, onroad, and biogenic sources
 - RPOs have developed 2002 Baseline Photochemical Modeling Inventory
 - PM2.5, Regional Haze and Ozone State Implementation Plans (SIPs)
 - RPOs also developing future year and typical year inventories



Challenge

- Inventories are continually updated
 - Each RPO has several versions of each inventory
- Making the most up-to-date, quality assured inventory available to large user community is difficult



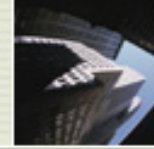
Warehouse Solution

- **Inter-RPO Emissions Inventory Warehouse**
 - Web-based application to store and share inventory and associated data



Warehouse Requirements

- Easy and accessible data upload and download
 - Allow for several acceptable formats
- Versioning - Track versions of inventories
- Security - Secure Data Storage and Transmittal
- Maintenance - Low system operating and maintenance costs
- Database Storage
- Supporting Data
- Listserv
- Reports



Required Data Formats and Files

- NIF Records (all sources)
- RPO Data Exchange Protocol Files
 - Mobile emissions files
 - Continuous emissions monitoring (CEM) files
 - Temporal allocation and profile assignment files
 - Spatial surrogate files
 - Chemical speciation files
 - Growth and control factor files

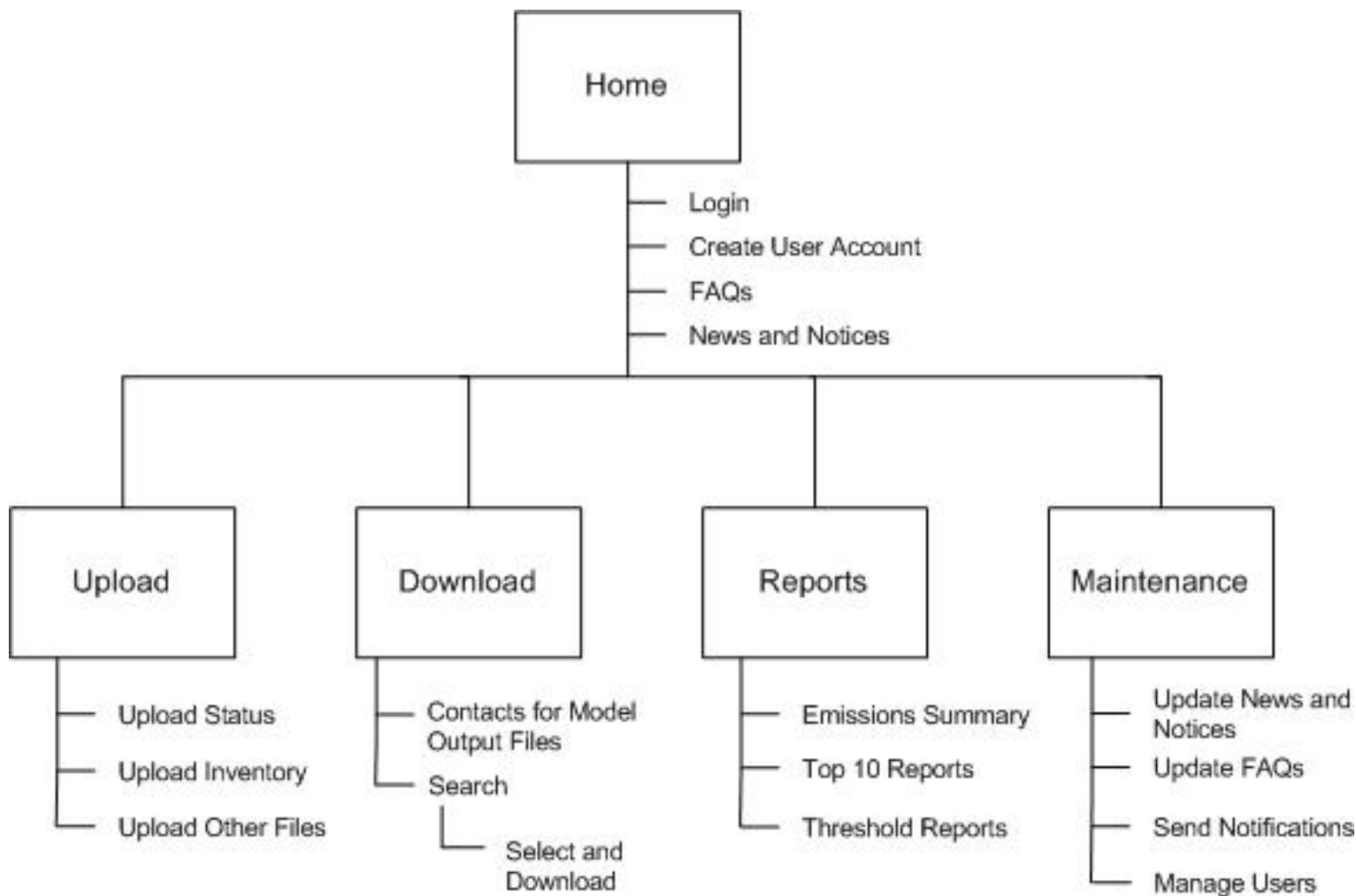


Required Data Formats and Files

- Nonroad model inputs
- MOBILE6 model inputs
- NMIM inputs



Web Site Map



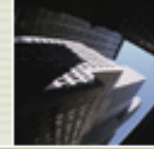


Web Site Functionality

Four Main Components of Site

1. Importing Data

- RPO assigned importer responsible for:
 - Verifying the content of the files
 - Determining if and when higher quality data are available and should replace
 - Designating which files and info are associated with a specific version of the inventory
 - Determining when a set of inventory files is complete and of sufficient quality to share with the public
 - Follow naming convention for inventory files to be parsed into the database
 - Required by EPA Content and Format Checker



Web Site Functionality

2. Downloading Data

- Public users can search for and download files stored and managed in the system



Web Site Functionality

3. Reporting

- Public users
- Summarize and retrieve inventory data stored in the database
- Reports include
 - Emissions summaries
 - Top 10 sources
 - Threshold Reports: sources that exceed pollutant and stack thresholds.
 - Mobile VMT and speed data reports
- Reports can be generate for a subset of an inventory based on source type, geographic location, SCC level 1 or SCC level 2, pollutant, and stack parameters



Web Site Functionality

4. Maintenance

- Manage users and modify limited portions of the site content



Web Site Functionality

- Three databases will be supported
 - Working database – inventories actively being worked on by RPOs
 - Public Database – publicly accessible data
 - Archive Database – store older versions



Welcome to the Inter-RPO Emissions Inventory Warehouse

News & Notices:

[Baseline RPO Inventory available](#)

[MARAMA Inventory Version 2 now available](#)

[Call for 2009 Projection data submissions](#)

Development and maintenance of this site is funded by CENRAP, LADCO, MANEVU, MARAMA, MRPO, VISTAS, and WRAP.

Frequently Asked Questions

About the RPO Emissions Inventory Warehouse System

Welcome to the Inter-RPO Emissions Inventory Warehouse. We developed this site to organize and share up-to-date and quality-assured emissions inventory files, model input files, and ancillary files. You can summarize and download emissions inventory data or download model input and other files associated with a specific version of an inventory.

Files may be available in RPO Data Exchange Protocol (DEP) or a variety of other formats.

Login to get started with emissions inventory reporting and file downloading.

Users Login Here:

Username:

Password:

Would you like to create an account?

Did you forget your username/ password?



Maintenance ▾

Download ▾

Upload ▾

Reports ▾

Logout



Welcome

Welcome to the Inter-RPO Emissions Inventory Warehouse. Click on one of the options above to get started.



Maintenance ▾

Download ▾

Upload ▾

Reports ▾

Logout



Upload Data and Files

← Upload Emissions Inventory Files

Upload files in the RPO DEP format that are consistent with NIF 3.0 format.

← Upload Related Inventory or Model Files

Upload other RPO DEP files, model input files, control strategy files, or other files associated with an inventory.

← File Upload Status

View the status of the files going through the uploaded process.

← Version Summary

View a listing of all files associated with an inventory version. Designate a version as ready for public release.



Upload Emissions Inventory Files

Select/Enter upload criteria (* required):

File Name: *

Source Type: *

File Type: *

File Format: *

ASCII Text: **MS Access:**

Compression Format:

Zip

Description: *

Year:

Geographic Location:

RPO:

Tribe:

State:

County:

Reference URL:

Inventory Version: *

New:

Update:

Description of Update: *



Maintenance ▾

Download ▾

Upload ▾

Reports ▾

Logout ▾



Download Files

Enter search criteria:

[Model Output File Contacts](#)

File Type: ▾

Source Type: ▾

File Name:

Description:

Year: ▾

Inventory Version: ▾

Enter one or more words
that might be in the description

Geographic Location: **RPO:** ▾

Tribe: ▾

State: ▾

County: ▾



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Reports

↶ Emissions Summary

Generate emissions summary reports by inventory, sector, geographic location, source classification code (SCC), pollutant, time period, unit of measure

↶ Top 10 Emission Sources

Generate a listing of Top 10 emissions sources by inventory, sector, geographic location, source classification code (SCC), pollutant, time period unit of measure

↶ Threshold Reports

Generate a report using pollutant thresholds for non-point sources, or a combination of pollutant and stack thresholds for point sources.

Report Exports:

[Baseline RPO Inventory - Final](#)

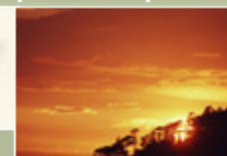
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[Threshold Report #1](#)

Saved 10/04/04 10:57 EST

[Baseline RPO Inventory - 2nd Draft](#)

Saved 9/14/04 3:30 EST



Emissions Summary Report

Select report criteria:

Inventory: ▾

Source Type: ▾

Version: ▾

Geographic Location: RPO: ▾

Tribe: ▾

State: ▾

County: ▾

SCC Level: **SCC Level 1:** ▾

SCC Level 2: ▾

Pollutant: ▾

Inventory Version: ▾



Web Site Architecture

Open Source Solution

- Database: PostgreSQL

www.postgresql.org

- Procedural Language: PL/pgSQL
- Web interface: Java Server Pages (JSP)
- Servers: Linux, Apache

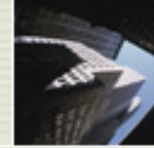


Status and Next Steps

- Draft Design document complete
- Final Design Document due June
- Require RPO TOC approval for implementation

- Begin Implementation June/July
- Testing in Fall

- Scheduled Final Implementation Date
 - January 2006



Project Website:

<http://www2.ergweb.com/projects/interrpo/rpo/index.htm>

user name: rpo

password: warehouse