



# Emissions Inventories: Integration, Analysis and Communications

## *Geospatial Data Access Project*

16<sup>th</sup> Annual International Emissions Inventory  
Conference  
May 15th, 2007



# What is the Download Service All About?

- Why is EPA doing it?
- Overall View of the Geospatial Data Access Project
- Explanation of the Data Files
- Uses
- Questions and Answers





# How We Started

-  approached OSWER
  - Asked for Superfund NPL sites (latitude/longitudes) for Google Earth
- OSWER approached Office of Environmental Information (OEI)
  - Asking for EPA Enterprise-wide strategy
- OEI explored the project with Offices/Regions



# Types of questions asked of EPA

- Where are sites that impact health/safety?
- What types of sites are they?
- What controls are in place to protect human health and the environment?
- Information to support transactions
  - Real Estate, Insurance, Financial, etc.



# Access @ EPA.gov

- EPA has made data available
  - EPA.Gov, Envirofacts, ECHO, WME, TRI Explorer, etc
- Many mapping services (Commercial, Federal and States) have free Internet mapping
- Companies individually contact EPA about data availability
  - Opportunity to leverage current investments to increase public accessibility to EPA data



# Project Design

- Created geospatial data file
  - hosted on Envirofacts ([www.epa.gov/enviro](http://www.epa.gov/enviro))
  - Now available in XML, Shapefiles, and Feature Classes
- Anyone can download the file
  - they host the data on their infrastructure
- Offers “Links” back to EPA information resources
  - to “encourage” traffic to EPA resources
    - “Profile Page” for multi-interest facility
      - provided link to information on the EPA Website:  
**“Cleanups in My Community”, Envirofacts/FRS, ECHO, and other Program resources**



# Project Schedule

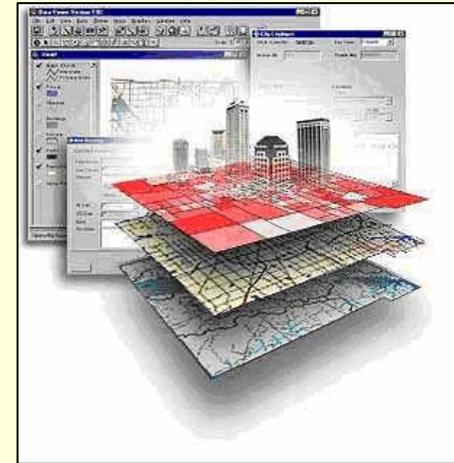
- Data will be posted on a regular basis
  - a new file release projected ever 6 weeks
  - OEI will maintain
    - **the download file and Web site**
    - **the “profile page” for facilities working with Programs**
  - Programs provide web applications which detail facilities/sites
- EPA (OEI) will issue e-mails that customers’ sign up for
  - available thru the Envirofacts download page
- EPA (OEI) will post announcements to the Web site
  - as the download file is updated
  - new data is added
  - circumstances warrant



# What's in the Data File?

The Files contains:

- Header area with Metadata
  - Title, Creator, Date, etc
- Facility area
  - Name, Address, Lat/Long & MAD, URL for information on the facility
  - Program area
    - Program Name, Description, Program ID, Environmental Interest, URL for program focused information





# Schema

```
http://www.epa.gov/enviro/html/frs_demo/EPA_GEODATA_v1.0.xsd - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Forward Stop Home Search Favorites
Address http://www.epa.gov/enviro/html/frs_demo/EPA_GEODATA_v1.0.xsd Go Links Google G Settings
<?xml version="1.0" encoding="utf-8" ?>
- <xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema" elementFormDefault="unqualified" attributeFormDefault="unqualified"
  version="1.0">
- <xsd:annotation>
  <xsd:documentation>Schema Name : EPA_GEODATA_v1.0.xsd Current Version Available At : Description : This schema is
  used to produce a data set with the locations of EPA Regulated Facilities for use by commercial mapping services and
  others in industry. Application : EPA Geospatial Data Public File Developed by : Environmental Protection Agency Point of
  Contact : Environmental Protection Agency</xsd:documentation>
</xsd:annotation>
- <xsd:element name="Document">
- <xsd:complexType>
  - <xsd:sequence>
    <xsd:element name="Header" type="HeaderType" />
    <xsd:element name="FacilitySite" type="FacilitySiteType" minOccurs="0" maxOccurs="unbounded" />
  </xsd:sequence>
</xsd:complexType>
</xsd:element>
- <xsd:complexType name="HeaderType">
- <xsd:sequence>
  <xsd:element name="Title" type="xsd:string" minOccurs="0" />
  <xsd:element name="Creator" type="xsd:string" minOccurs="0" />
  <xsd:element name="Subject" type="xsd:string" minOccurs="0" />
  <xsd:element name="Description" type="xsd:string" minOccurs="0" />
  <xsd:element name="Date" type="xsd:date" minOccurs="0" />
</xsd:sequence>
</xsd:complexType>
<!-- each record contains information for one facility site i.e one registryId -->
- <xsd:complexType name="FacilitySiteType">
- <xsd:sequence>
  <xsd:element name="FacilitySiteName" type="xsd:string" />
  <xsd:element name="LocationAddressText" type="xsd:string" minOccurs="0" />
  <xsd:element name="LocalityName" type="xsd:string" minOccurs="0" />
  <xsd:element name="LocationAddressStateCode" type="StateCodeDataType" minOccurs="0" />
  <xsd:element name="LocationZIPCode" type="xsd:string" minOccurs="0" />
</xsd:sequence>
</xsd:complexType>
```



# Schema Definitions

epa\_geodata.pdf (application/pdf Object) - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

US EPA http://www.epa.gov/enviro/html/frs\_demo/geospatial\_data/epa\_geodata.pdf Go 1984 indian policy

Free Hotmail Facility Registry Hom...

MSN Hotmail - Inbox Gmail - Inbox (43) Stooges Snubbed Again | The Onion - Amer... US EPA epa\_geodata.pdf (application/pdf Ob...

Save a Copy Search Select 118% Create an Adobe PDF from your desktop

<SourceMapScaleNumeric>	The number that represents the proportional distance on the ground for one unit of measure on the map or photo.
<ElectronicAddressText>	A resource address, usually consisting of the access protocol, the domain name, and optionally, the path to a file or location.
<ElectronicAddressTypeName>	The name that describes the electronic address type.
<ProgramCommonName>	The common name for a program.
<ProgramAcronymName>	The Acronym Name for a program.
<ProgramIdentifier>	The Identifier for a program facility.
<ProgramInterestType>	The environmental interest type for a program facility.
<ProgramFullName>	The full name for a program.
<ProgramDescription>	The description for a program.

Done

start Alexander Kl... epa\_geodat... PARS EPA F... Microsoft Po... Desktop 3:45 PM



# Types of information linked to the Download File

- The URL in the file can link to:
  - Documents, chemicals, activity and contact information on the site
  - Chemical information
  - Alternative names
  - Information from EPA programs (e.g., enforcement, compliance, RCRA, Brownfields) that pertain to individual sites
  - Regional &/or State Information



# Viewed from Google Earth

The screenshot shows the Google Earth interface with a map of Washington, DC. A popup window is open over the US Washington Navy Yard. The popup contains the following information:

- US WASHINGTON NAVY YARD**
- Posted by: [MTRI](#)
- [Click here for the post](#)
- Address:** 7TH AND M STREETS SOUTHWEST WASHINGTON, DC 20007
- Electronic Address:** [http://oaspub.epa.gov/cleanups/cleanup\\_master\\_identify?regid=110006181719](http://oaspub.epa.gov/cleanups/cleanup_master_identify?regid=110006181719)
- Program Name:** Superfund
- Program Acronym:** CERCLA
- Program ID:** DC9170024310
- Interest Type:** SUPERFUND NPL
- Full Name:** The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)
- Directions: [To here](#) - [From here](#)

The map shows the Potomac River, the Anacostia River, and various streets including Independence Ave SE, M St SE & 7th St SE, and S Capitol St SE. The interface includes a search bar, a search results list, and a layers panel.

Data Update  
 Contact Us  
 Customer Satisfaction



# Environmental Interest Profile for this Location



To improve public health and the environment, the EPA collects information about facilities or sites subject to environmental regulation. This summary lists the environmental interests which pertain to the selected geographic location. Where available, this information is presented below in a dynamic report via the "Launch Report" button. When viewing these reports, if you find erroneous data, please click on the "Report an Error" button to notify the EPA of data errors.

**US WASHINGTON NAVY YARD**  
 7TH & M STREETS SOUTHWEST  
 WASHINGTON, DC 11001

Environmental Interest information **with reports** for this Location. Please click on the "Launch Report" button to see a detailed report.

<a href="#">Aerometric Information Retrieval System (AIRS) Facility Subsystem (AFS)</a>	Interest Type: AIR MAJOR	ID: 1100100013	<a href="#">Launch Report</a>
<a href="#">Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS)</a>	Interest Type: SUPERFUND NPL	ID: DC9170024310	<a href="#">Launch Report</a>
<a href="#">Permit Compliance System (PCS)</a>	Interest Type: NPDES NON-MAJOR	ID: DC0000159	<a href="#">Launch Report</a>
<a href="#">Resource Conservation and Recovery Act Information (RCRAInfo)</a>	Interest Type: NOT IN A UNIVERSE	ID: DC6170000925	<a href="#">Launch Report</a>
	Interest Type: LQG	ID: DC9170024310	<a href="#">Launch Report</a>
	HAZARDOUS WASTE BIENNIAL REPORTER		

Other sources of EPA Environmental Information for this Location. Please click on the "Launch Report" button to see more details.



# Advantages for EPA: Programs and Users

- Facility names and locations hosted by the service provider
  - reduced impact on EPA machines
- Detailed information on facilities will be available from EPA
  - **most up-to-date information always if used**
  - **Email notification to user community on updates**
  - **Centrally managed**
    - Programs have a POC with OEI
    - All documentation is already developed
    - OEI will manage Web site and download file
    - Programs have to maintain their applications



# New Modeling Opportunities

- Improved access to data will drive environmental modeling
  - Non Government entities can run their own models
    - Think Tanks, Environmentalists, Industry and Universities
  - Competing models will be able to use same base data for comparison



# Project Highlights

- **Launched in January**
  - New York Times Article in January
  - San Francisco Chronicle Article in April
- **Data files ready now!**
  - NPLs, RCRA TSD's, TRI 2004/05, NEPT and PCS Majors
  - More Program facility universes as the year progresses
- **More than 200 registered email users!**
  - Hundreds of downloads per month
- **More Data Formats being supported**
  - XML, Shapefiles, Feature Classes



# Efforts in 2007

A candidate set of additional data (based on the data's availability in FRS and latitude/longitude coordinates being available) to be included in FY 2007 is presented below:

- RCRAInfo – TSD ( Now Available)
- TRIS – 2004/5 Reporters ( Now Available)
- National Environmental Performance Track ( Now Available)
- PCS/ICIS – Majors ( Now Available)
- RCRAInfo - LQG
- NEI 2002
- AFS – Majors
- Brownfields - ACRES



# Getting Involved

To get involved or for more information  
please contact:

## Geodata Service

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Pat Garvey, OIC, 202-566-1687

[Garvey.pat@epa.gov](mailto:Garvey.pat@epa.gov)



# Questions and Answers

[www.epa.gov/enviro/geo\\_data.html](http://www.epa.gov/enviro/geo_data.html)

