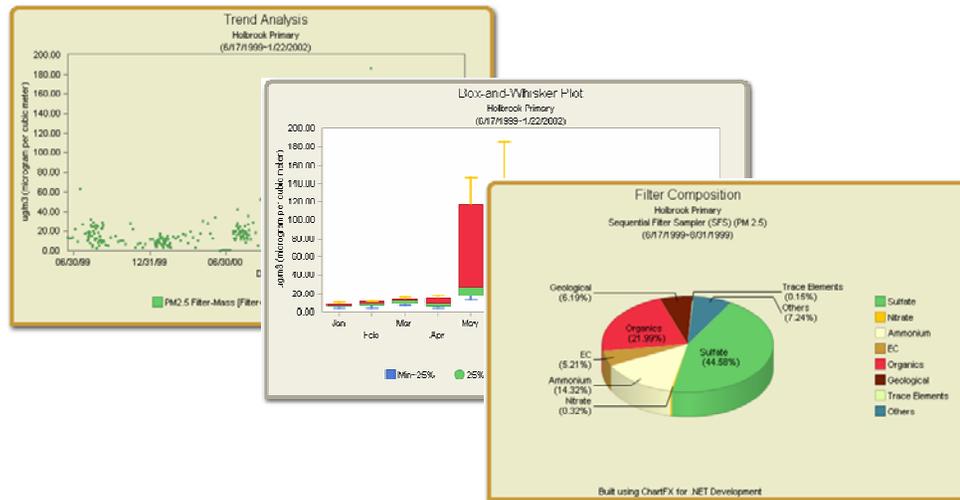


Fine Particulate Research: Online Database and Analysis Tools Application



OHIO
UNIVERSITY



TEXAS A&M
UNIVERSITY
KINGSVILLE

Stakeholder Website

PM 2.5 Ambient Fine Particulate Research Stakeholder's Website - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Refresh Print Mail New Tab

Address http://localhost/stakeholder/ Go Links Customize Links Free Hotmail

Google Search Web Site popups allowed AutoFill Options

PM_{2.5} Ambient Fine Particulate Research

Air Quality Database

Home Login Logoff Register

WEBSITE OVERVIEW

- Overview
- Monitoring Programs
- Project Sponsors
- Publications

QUERY BUILDER

- Overview
- Build A Query
- Data Inventory

DATA ANALYSIS

- Overview

OFFLINE DATA

- Overview
- DATA INVENTORY

CONTACT US

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PMData

Ambient Fine Particulate Research

The Air Quality Analysis System website provides access to the data of the multi-year effort of meteorological and PM10/PM2.5 air quality monitoring effort from multiple DOE-funded regional air sampling projects.

This Website is an ongoing development effort featuring several analytical tools. Also incorporated are GIS and Sequential Query Wizards.

[...Read More In The NETL Techline Article](#)

Features

Analysis Tools

Advanced Analysis tools like the Box Whisker, Time Series, Meteorological Influence, Trajectory Analysis will be available soon.

Standard Query Wizard

The Standard Query Wizard provides an initial interface for querying data from the database. This tool is linked to the analysis tools.

ANNOUNCEMENTS

January 18th, 2003:
New Template for Stakeholder Website Released. Website Features New Advanced Query System.

June 18th, 2003:
Presentation at Mid Atlantic - North East Visibility Union (MANE-VU) Workshop

Sept 25th, 2002:
Presentation at DOE-NETL Kick-off Meeting

SPONSORS:



PARTICIPATING MONITORING PROGRAMS:

Pittsburgh Air Quality Study (PAQS)

Upper Ohio River Valley Project (UORVP)

Steubenville

Local intranet

Project Team



Advanced Technology Systems
- Pittsburgh, PA



Ohio University
- Athens, OH



Texas A&M University-Kingsville
- Kingsville, TX

Project Sponsors



US Department of Energy



National Energy Technology
Laboratory (NETL)

Project Purpose

- Provide centralized data storage for multiple DOE-NETL Sponsored Data Collection Projects
- Provide Researchers with State-of-the-Art, Robust and Scalable Web Application to View, Retrieve and Analyze PM Data (Stakeholder Site)
- Provide Public Access to PM Data and Scaled-down Toolset (Public Site)

Query Builder Tools

- Tabular (Text-based) Site Selection Tool

The interface consists of three selection panels at the top, each with a 'Select All' and 'Clear All' option:

- Select States (Select All<-> Clear All)**: Lists PENNSYLVANIA, WEST VIRGINIA, and OHIO. A red arrow labeled 'filtered' points from this panel to the counties panel.
- Select Counties (Select All<-> Clear All)**: Lists (PA) GREENE CO, (PA) ALLEGHENY CO, (WV) MONONGALIA CO, (OH) CUYAHOGA CO, (OH) FRANKLIN CO, (OH) HAMILTON CO, and (OH) STARK CO. A red arrow labeled 'filtered' points from this panel to the networks panel.
- Select Networks (Select All<-> Clear All)**: Lists UORVP and EPA. A red arrow labeled 'filtered' points from this panel to the available sites list.

Available Collection Sites

- Holbrook Primary(UOR:PA- GREENE CO)
- Lawrenceville Primary(UOR:PA- ALLEGHENY CO)** (highlighted)
- Morgantown Satellite(UOR:WV- MONONGALIA CO)
- EPAOH390350060(EPA:OH- CUYAHOGA CO)
- EPAOH390490028(EPA:OH- FRANKLIN CO)
- EPAOH390490029(EPA:OH- FRANKLIN CO)
- EPAOH390610040(EPA:OH- HAMILTON CO)
- EPAOH391510020(EPA:OH- STARK CO)

Add Selected Sites

Query Builder Tools

- GIS (Map-based) Site Selection Tool

Tools

Zoom In	Zoom Out	Recenter	Zoom to Selected	Full Extent
Select	Unselect			

Available Layers

Vis	Act	Name
<input checked="" type="checkbox"/>		Detailed Roads
<input checked="" type="checkbox"/>		Major Roads
<input checked="" type="checkbox"/>		Interstate Highways
<input checked="" type="checkbox"/>		Power Plants
<input checked="" type="checkbox"/>	<input type="checkbox"/>	EPA Sites
<input type="checkbox"/>		Major Cities
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Satellite Sites
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Primary Sites

The map displays a geographic area with county boundaries (Beaver, Allegheny, Lawrenceville, Westmoreland, Washington, Armstrong) and major roads (Interstates 76, 279, 79, 376, 70). Several sites are marked with green triangles, and two are highlighted with red stars: 'Lawrenceville' and 'NETL Supersite'. The map is framed by a blue border with directional arrows (NORTH, SOUTH, WEST, EAST).

Selected Sites

Remove	Site
Remove	Lawrenceville
Remove	Primary(UOR:PA-ALLEGHENY CO)

Layers

Map

Results

Query Builder Tools

- Dynamic, Flexible and Data-Aware Controls (Self-Filtering)

Dynamic – Selections and Data Availability Control Choices

Filter Mass & Speciation Speciation

Select Particle Size

PM 2.5 PM 10 TSP All

Instrumentation: (Select All <-> Clear All)

Sequential Filter Sampler (SFS)
Federal Reference Method (FRM)
Sequential Gas Sampler (SGS)

Select Filter Mass And Species:

Filter Mass

Select All Species

Trace Elements: (Select All <-> Clear All)

Silver
Aluminum
Arsenic
Gold
Barium
Bromine
Calcium
Cadmium
Cobalt
Chromium
Copper
Iron

IONIC: (Select All <-> Clear All)

Chloride
Potassium
Sodium

EC
 OC

Others: (Select All <-> Clear All)

Volume Flow
Sulfuric Acid
Total Organic Carbon

Data Analysis Tools

- **Calculator**

Interpolates values of different duration/intervals into common framework

- **Currently Calculates:**

1-hr maximum values

8-hr average values

24-hr average values

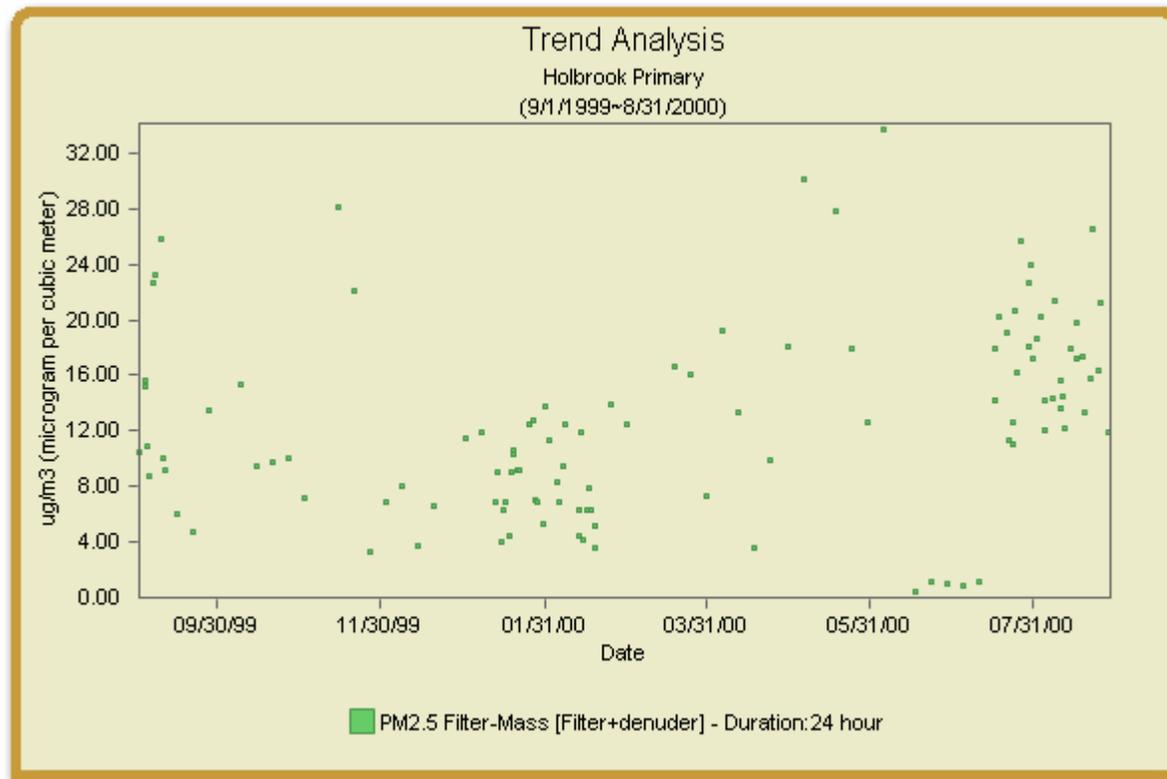
Monthly average values



The screenshot shows a 'Data Options' dialog box with a blue title bar. It contains three sections: 'Select Site' with a dropdown menu showing 'Lawrenceville Primary'; 'Select Parameter' with a dropdown menu showing 'PM2.5 Filter-Mass [Filter+denuder] - Duration:24 hour'; and 'Calculation Type' with four radio button options: '1-hr Max', '8-hr Average', '24-hr Average' (which is selected), and 'Monthly Average'.

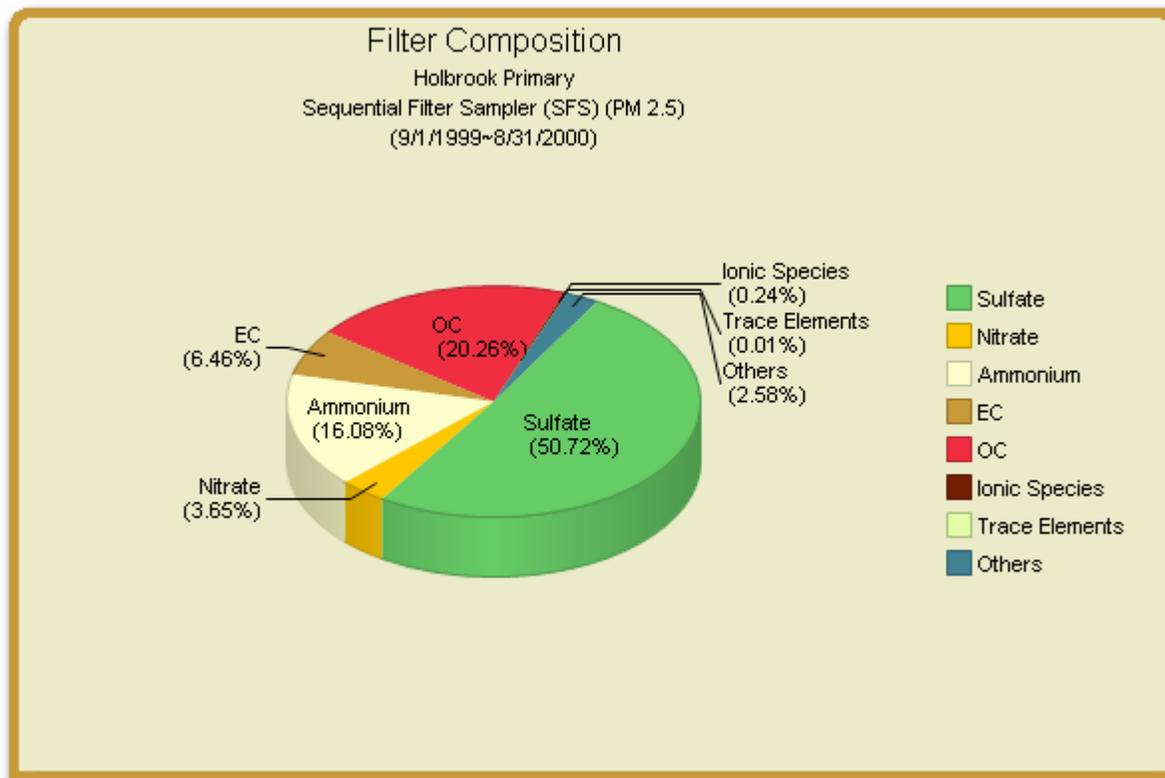
Data Analysis Tools

- Graphs - Time-Series



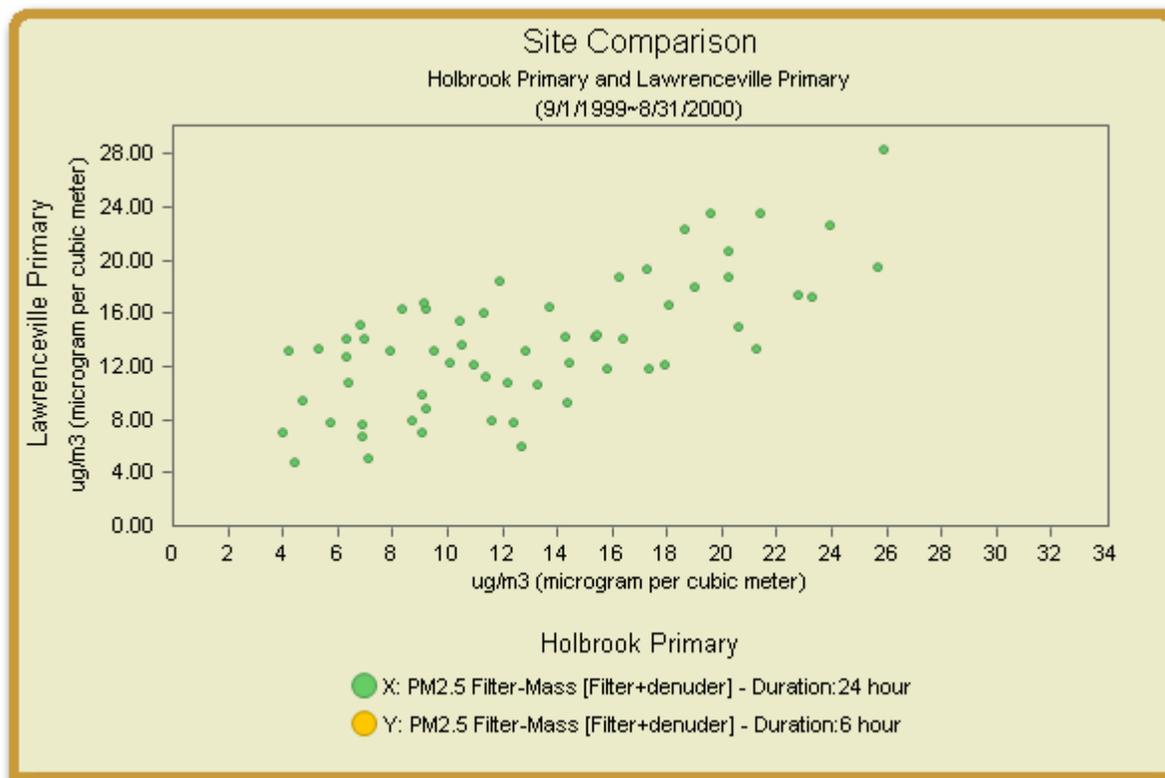
Data Analysis Tools

- Graphs – Filter Composition



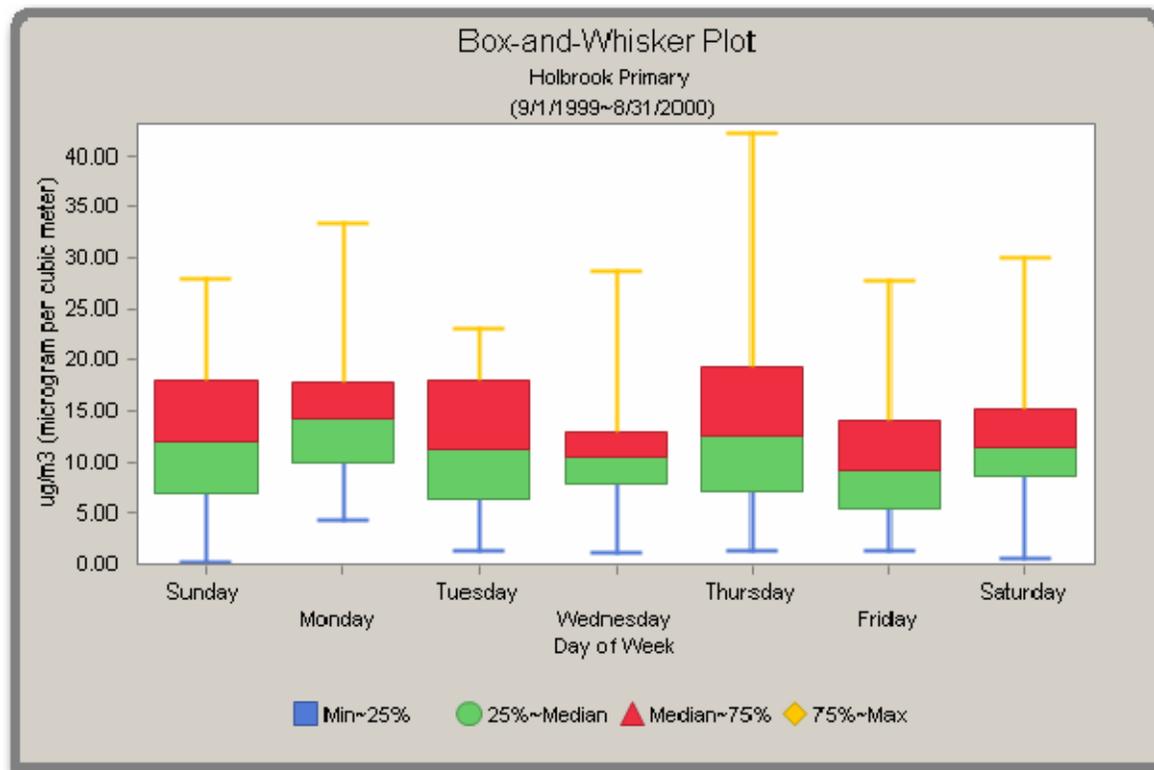
Data Analysis Tools

- Graphs – Site Comparison



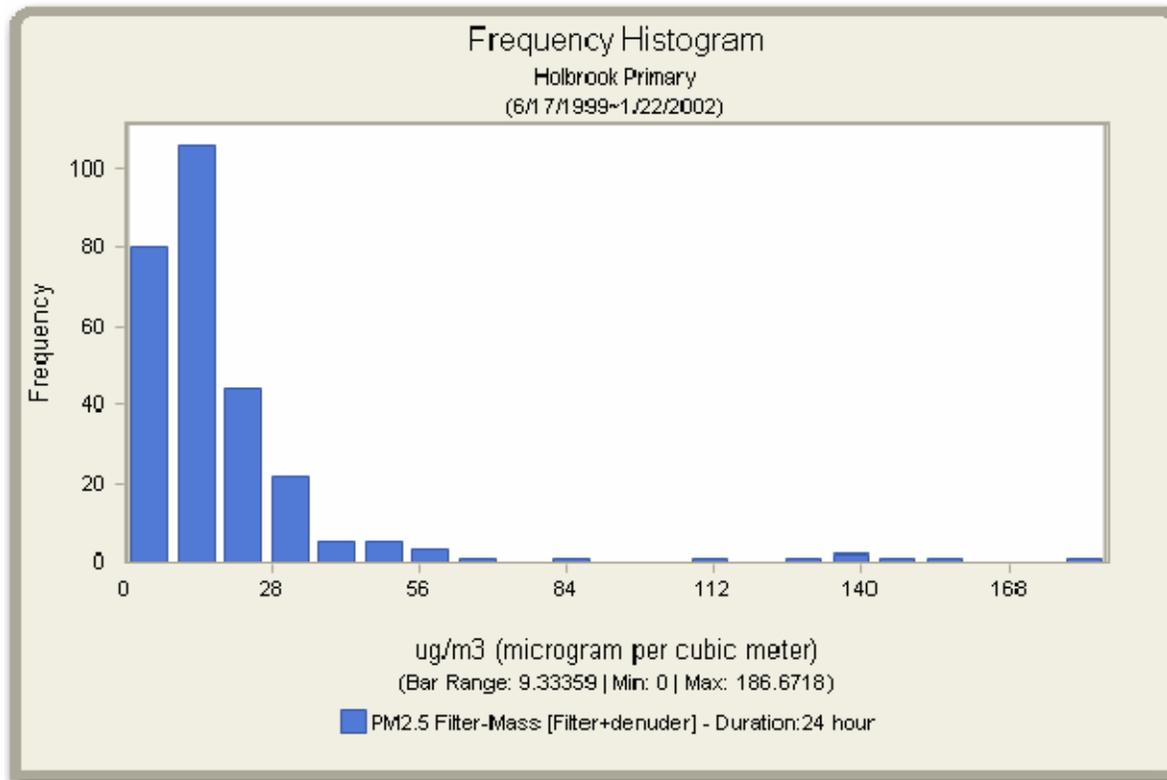
Data Analysis Tools

- Graphs – Box-Whisker



Data Analysis Tools

- Graphs – Histogram



Live Demonstration