AirNow-Tech

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for

National Air Quality Conference
Austin, TX

January 24, 2018
What Is AirNow-Tech?

- Interactive Web-based data management, analysis, and decision-support tool supporting the AirNow program
- Password-protected
  - Access mainly limited to federal, state, tribal, and local air quality organizations
- Submit and analyze air quality data in real time
- Hub for AirNow air quality forecasting
  - EnviroFlash administration

https://www.AirNowTech.org
Major Functions

- Data Analysis Tools
- Data Visualization Tools
- Site/Data Management
- Forecast Submittal System
Journey of Data Through AirNow

Stakeholders
- Agencies
  - AQ and Met Data

Data Management Center
- AirNow Database
  - Data Access and Control

End Uses
- Data Files
- Maps
- Media Stories
- Web Services and Application Programming Interface (API)
Data Queries & Reports

Data view

- View hourly, daily, and 8-hour concentration averages and AQI
- Create line graphs, bar graphs, and scatter plots
- Edit values and QC codes with data editor rights
- Export to CSV
Data Queries & Reports

Data view

- View hourly, daily, and 8-hour concentration averages and AQI
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Data view

- View concentrations for each parameter from every agency
- MADIS weather data from NOAA (temperature, wind, etc.)
- HYSPLIT trajectories
- Wind and pollution roses

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August 13, 2016, at 18:00 PDT: 1-hour ozone (ppb) with wind barbs and a pollution rose. Source: AirNow-Tech.
Navigator (2)

External Layers

• Visible satellite imagery
• MODIS Aerosol Optical Depth (AOD)
• Hazard Mapping System (HMS) smoke and fire detections

July 30, 2016, at 14:00 PDT: 1-hour PM$_{2.5}$ ($\mu$g/m$^3$), HMS smoke and fire detections, and MODIS satellite image. Source: AirNow-Tech.
Submitting Forecasts in AirNow-Tech

- Forecast for ozone, PM$_{2.5}$, PM$_{10}$, NO$_2$, and SO$_2$, and/or CO
- Forecasts can be issued in concentrations or AQI units
- Forecasts are for the EPA standard for each pollutant (e.g., 24-hr average for PM$_{2.5}$)
Forecast Dissemination

EnviroFlash Emails

AirNow.gov

Forecast for Youngstown, OH

Today and Tomorrow’s Forecast

Monday, Nov 28: 53 AQI Moderate Yellow Particle Pollution (2.5 microns)
Tuesday, Nov 29: 38 AQI Good Green Particle Pollution (2.5 microns)

Air Quality Forecast

<table>
<thead>
<tr>
<th>Today's High</th>
<th>Tomorrow's High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air Quality Index (AQI)</td>
<td>Air Quality Index (AQI)</td>
</tr>
<tr>
<td>38 Good</td>
<td>50 Good</td>
</tr>
<tr>
<td>Health Message: None</td>
<td>Health Message: None</td>
</tr>
</tbody>
</table>

AQI - Pollutant Details

<table>
<thead>
<tr>
<th>Particles (PM2.5)</th>
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Forecast Discussion: Tuesday, November 29: An upper-level trough of low pressure will move through northeastern Ohio, enhancing mixing in the atmosphere. In addition, moderate and gusty southerly winds at the surface will disperse pollutants. As a result, AQI levels will be Good. Wednesday, November 30: Light southeasterly winds during the morning hours will gradually bring regional pollutants and moisture into the Mahoning Valley, increasing particle production. However, a cold front will move through Ohio in the afternoon, generating moderate westerly winds. These winds will bring a cleaner air mass into the region and keep AQI levels Good. Thursday through Saturday, light to moderate westerly to southwesterly winds will aid pollutant dispersion and continue to bring clean air into Youngstown-Warren. As a result, AQI levels will be Good on all three days. Sunday, a surface high pressure system will move over the Ohio River Valley, producing light southerly winds in the Youngstown area. These conditions will limit pollutant dispersion. However, low pollutant carryover from previous days will keep AQI levels Good.

API Web Services and File Products

Forecasts

By Zip code
Get current or historical forecasted AQI values and categories for a reporting area by Zip code.

Documentation Query Tool

By latitude/longitude
Get current or historical forecasted AQI values and categories for a reporting area by latitude and longitude.

Documentation Query Tool
Data Analysis and Reporting Tool (DART)

- Upload user data sets or request AQS data
- Plot, review, and analyze data, perform manual and automated quality control checks
- Export data and statistics in .csv and AQS file formats
- Chemical Speciation Network (CSN) data validation
- Photochemical Assessment Monitoring Stations (PAMS) data analysis
AirNow and AirNow-Tech Help

- Email questions to AirNowInfo@sonomatech.com
- Review Resources page in AirNow-Tech
- Use the Feedback Tool in AirNow-Tech to send your comments and questions directly to the AirNow Data Management Center (DMC)
  - Located at the bottom right of each page in AirNow-Tech
AirNow Discussion Forum

- Ask questions, get answers
- Information on a variety of AirNow topics
- Forum.airnowtech.org
Requesting an AirNow-Tech Account

Click “Register for an AirNow-Tech Account” on the home page

• Fill out information and choose your Agency from the dropdown

• Other rights (Data editor, Forecaster, EnviroFlash) can be requested in the Comment section
AirNow API

Available for public use

- Web Services (e.g., Observations by Monitoring Site, Forecasts by Zip Code, etc.)
- RSS Feeds
- Hundreds of hourly and daily file products

https://www.airnowapi.org
New AirNow-Tech!
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