

# AirNow & AirNow-Tech

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Sonoma Technology, Inc.  
Petaluma, CA

for

Primary Quality Assurance Organization Training  
Pomona, CA

January 25, 2017



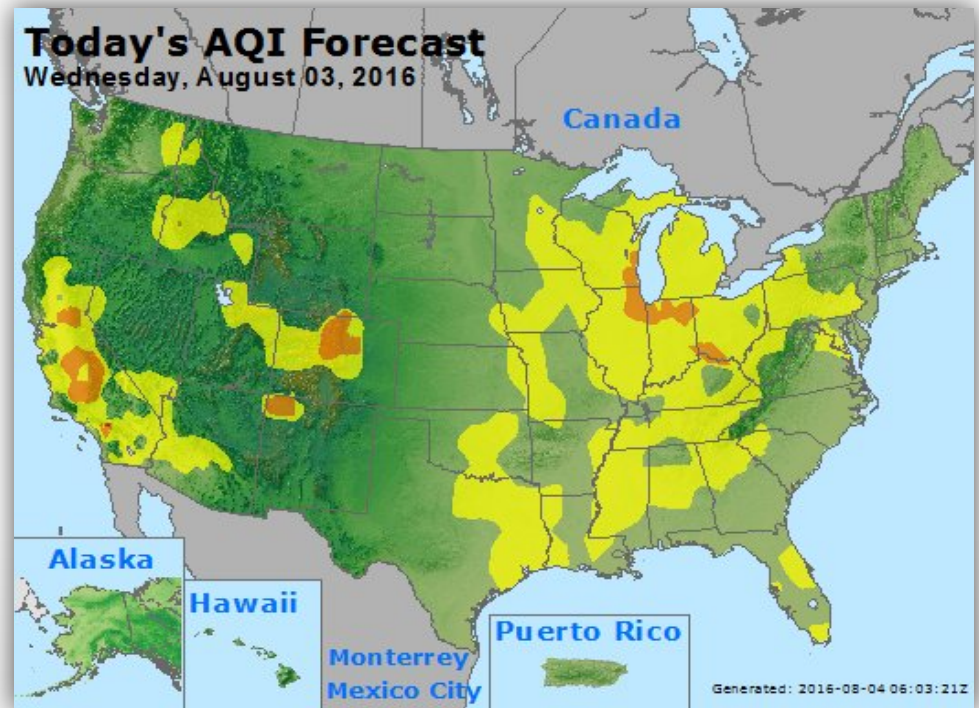
# Outline

- History of AirNow
- Journey of Data Through AirNow
  - Data transmission
  - QC checks
  - Viewing and editing data
  - Data display on public websites
- AirNow and AirNow-Tech Help Options
- Future of AirNow-Tech
  - Updated website



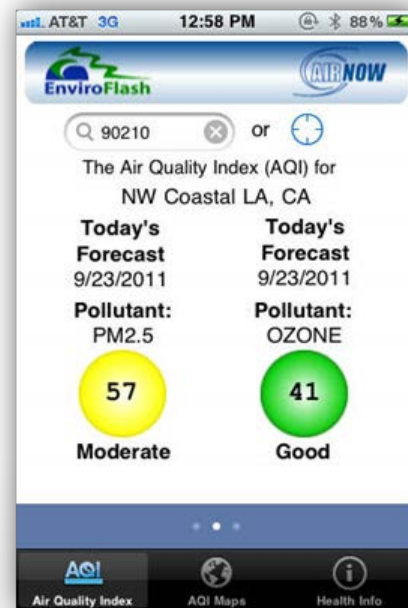
# History of AirNow

- Started in 1997 with 14 states
- Over 650 cities/regions
- Year-round real-time data for over 2500 monitoring sites around the world
- Information about the Air Quality Index (AQI), health effects, and education for the public and media

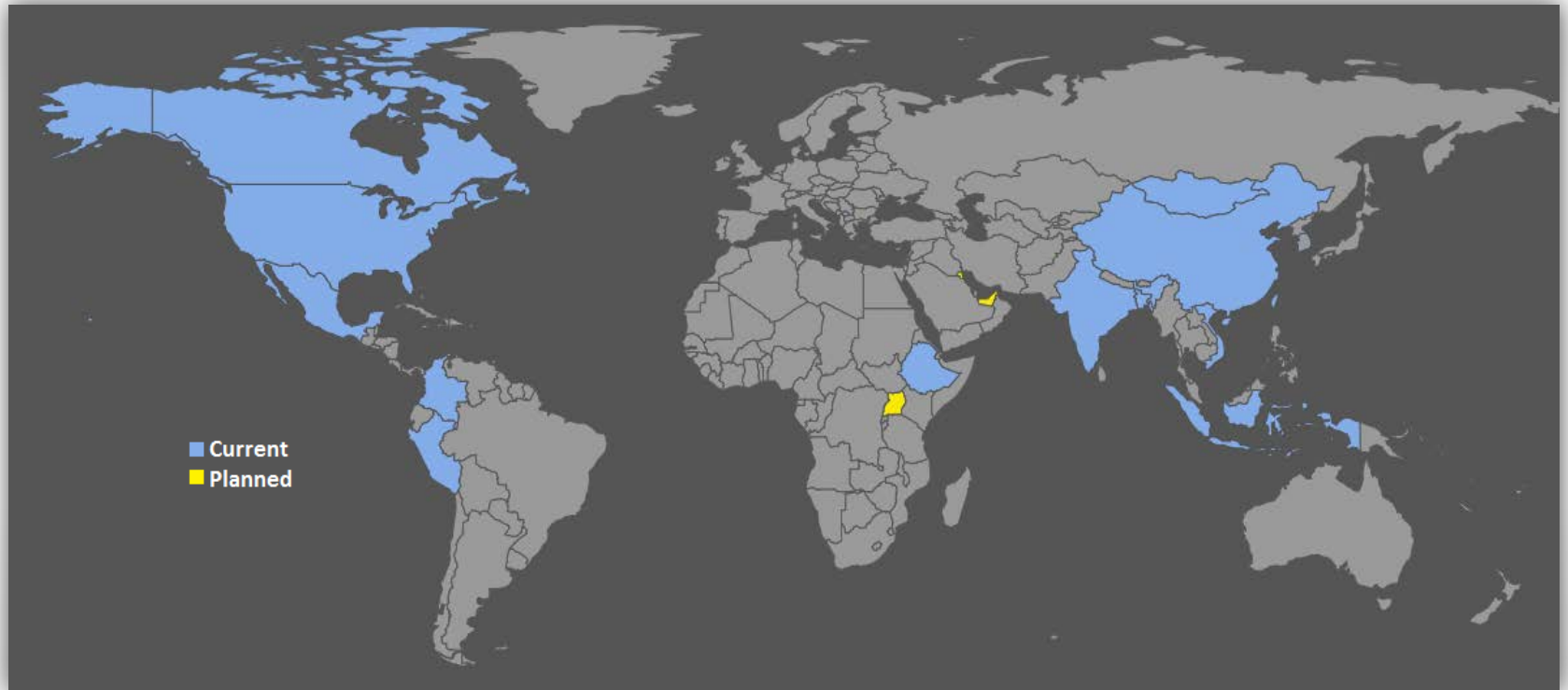


# What Makes AirNow Different

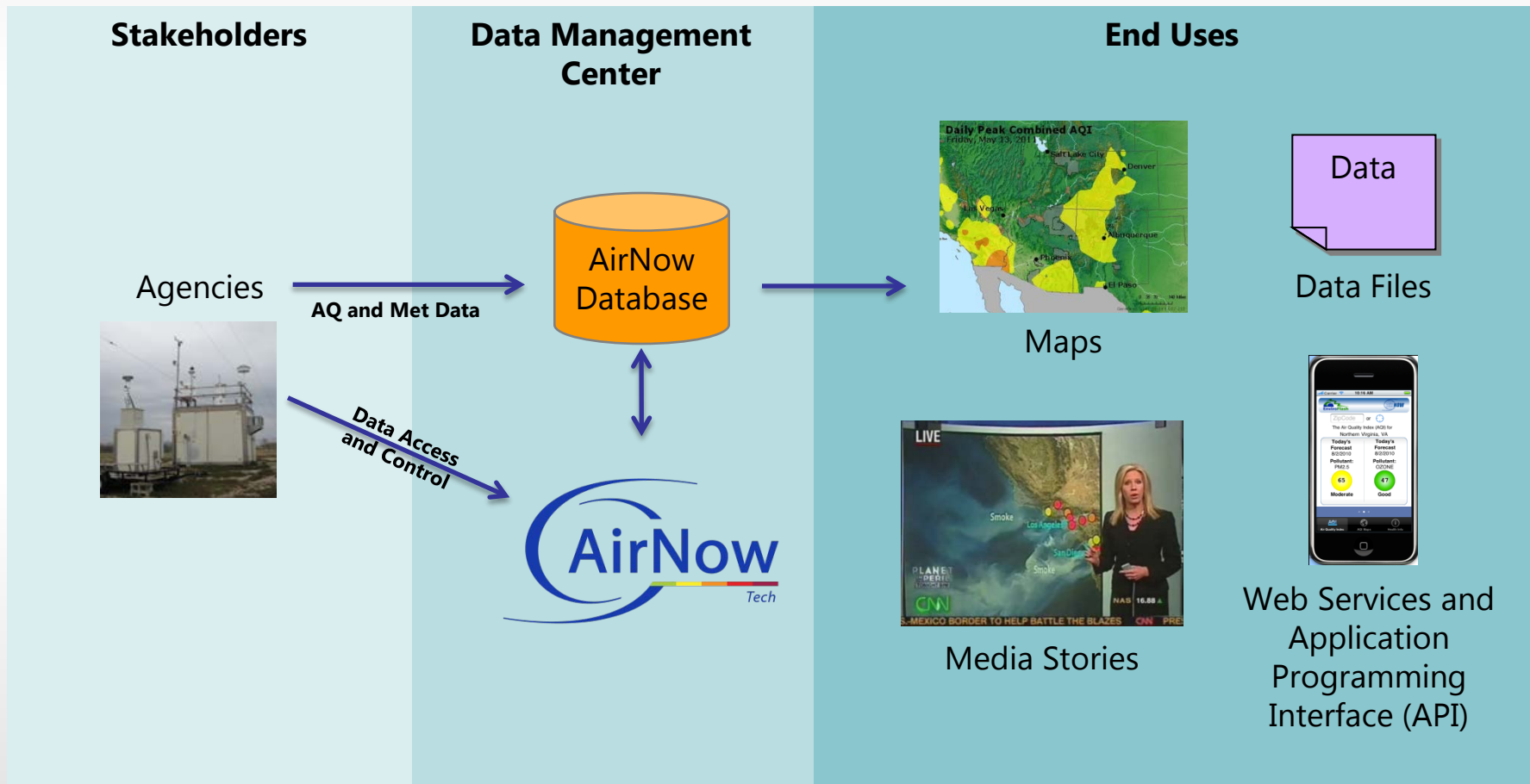
- Real-time data on a public-facing website using the Air Quality Index (AQI)
  - AirNow App
  - Email notifications through EnviroFlash
- Information sharing among agencies
  - Data
  - Forecasts
- AirNow API
  - Allows for easy access to air quality data by software developers
- Meteorological Data
  - Hourly ingest of NOAA Meteorological Assimilation Data Ingest System (MADIS) data (> 3000 sites)



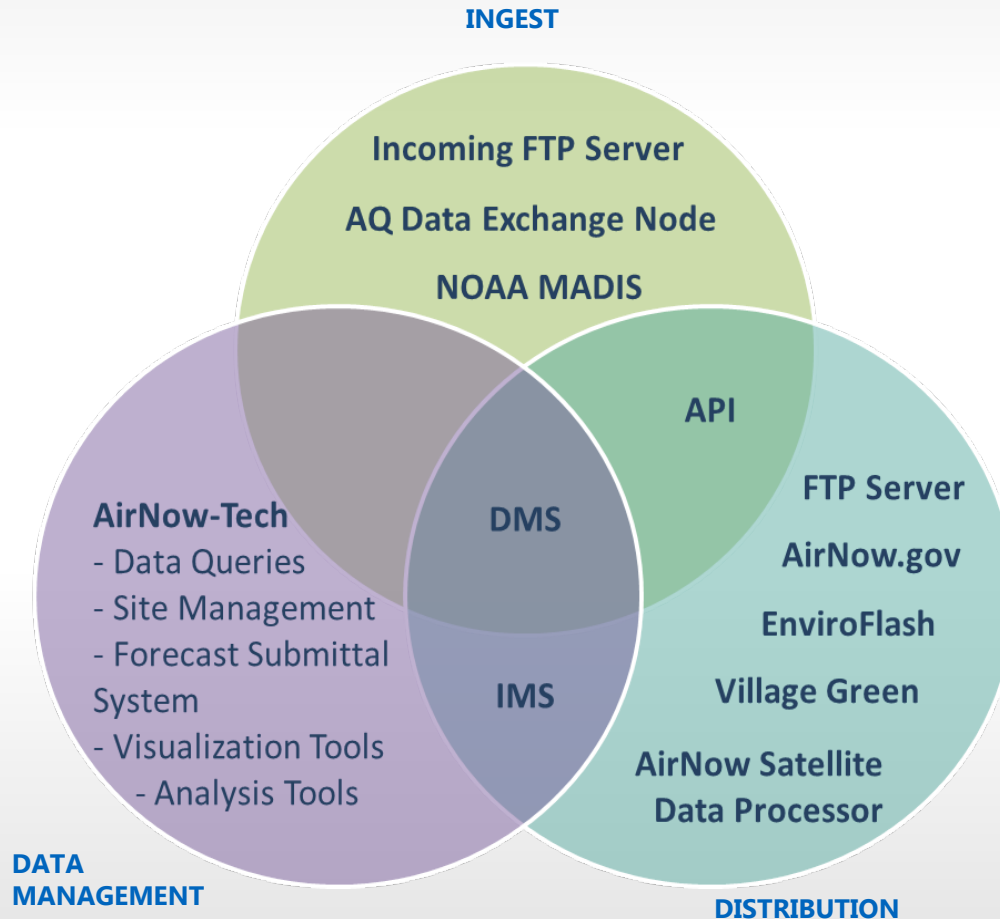
# AirNow Community



# Journey of Data Through AirNow



# Major Functions



# Submitting Data

1. Request an AirNow-Tech account at <https://www.airnowtech.org/requestAccnt.cfm>
2. Files are sent via FTP server using AQCSV file format
  - Test directory available
  - Hourly files to be sent by 20 minutes past each hour
  - Contact [AirNowInfo@sonomatech.com](mailto:AirNowInfo@sonomatech.com) for FTP server information



# AQCSV File Format

- The AQCSV file format supports
  - AQS Standards (parameter codes, parameter occurrence codes [POC])
  - Speciated/lab data
  - Mobile monitor data
  - Sub-hourly data
- Allows for
  - Backfill of AQS data into AirNow when available
  - Easy encoding and parsing of data
  - Support of international data exchange

Sample line from an AQCSV file

```
840060670011,0,0,20161122T1200-0800,42601,60,,1,008,0,1,38.302591,-121.420838,WGS84,6,074,....
```

Site (AQS)  
Code

Date &  
Time

Parameter  
Code

Duration  
(minutes)

Value

QC  
Code

POC

Lat/  
Long

Elevation

Method Code

# What happens when the AirNow DMC receives a data file?

- New sites or parameters are created in the database
- Run automated QC checks (customizable)
- Calculation of aggregates and AQI
  - NowCast concentrations
  - Running 8-hour (ozone) and 24-hour averages (PM<sub>2.5</sub>)

Event Log							
Search:	<input type="text"/>	Previous	1	2	3	4	Next
	2017-01-09 12:16 AM	IMPORT	201701090015_840.CA1	<a href="#">more info</a>			
	2017-01-09 09:16 AM	IMPORT	201701090915_840.CA1	<a href="#">more info</a>			
	2017-01-09 08:16 AM	IMPORT	201701090815_840.CA1	<a href="#">more info</a>			
	2017-01-09 07:17 AM	IMPORT	201701090715_840.CA1	<a href="#">more info</a>			
	2017-01-09 06:16 AM	IMPORT	201701090615_840.CA1	<a href="#">more info</a>			

# Automated QC Checks (1)

- Three ways QC codes can be changed
  - In the AQCSV data files by the agency
  - During **Automated QC Checks**
  - Manually in AirNow-Tech
- QC checks are customizable by value and hour

QC Code	Cell Border
0 - Valid	White
1 - Adjusted	LightBlue
2 - Averaged	LightGreen
3 - Interpolated	Orange
4 - Estimated	Yellow
5 - Suspect	Magenta
6 - Suspect (audit failure)	Purple
7 - Insufficient Data	Blue
8 - Missing	Gray
9 - Invalid	Red

# Automated QC Checks (2)

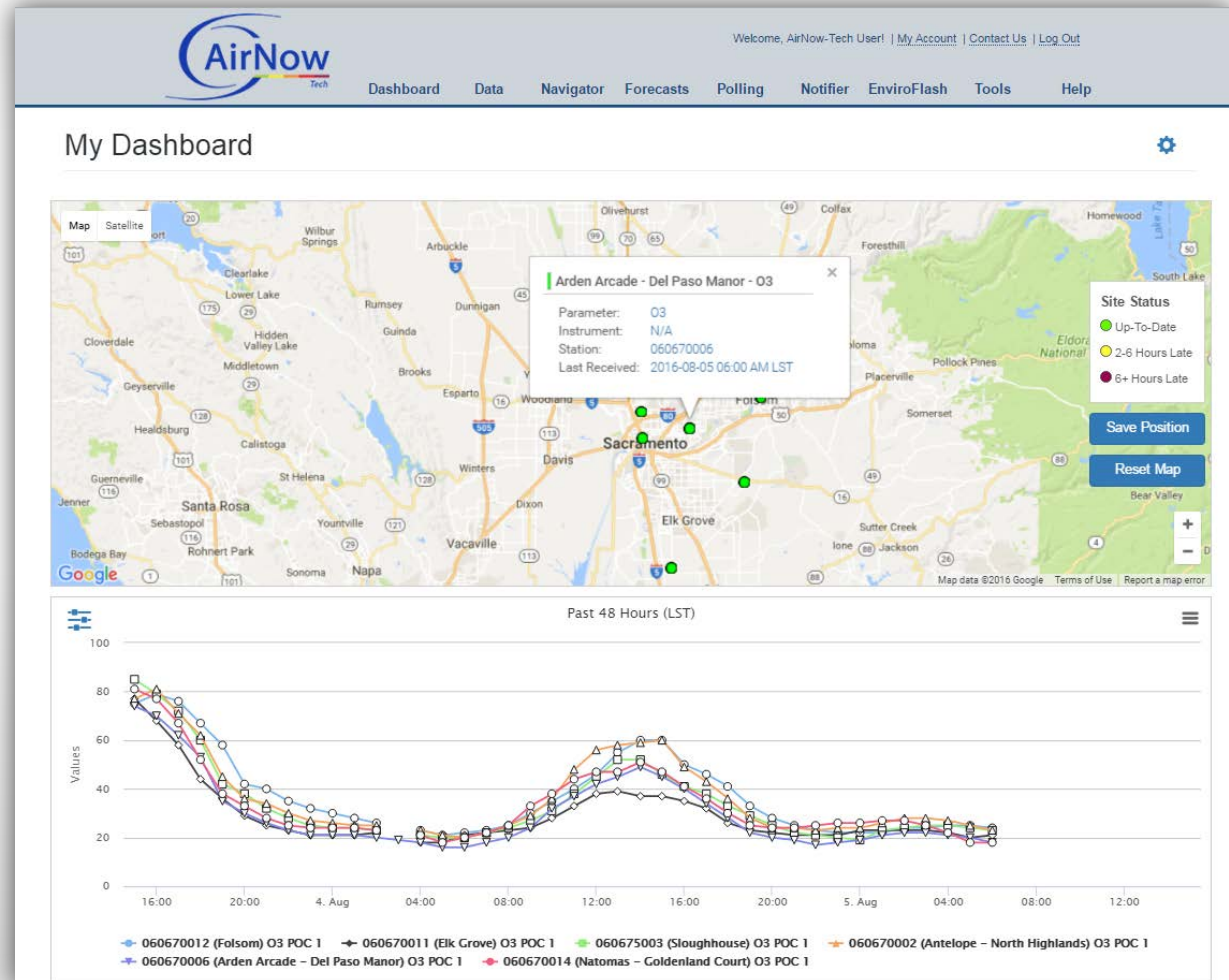
- Range
  - Data values above or below a certain threshold
    - Minimum drift
    - Maximum suspect
    - Maximum severe
- Rate of Change
  - Difference in data values between two consecutive hours

# Automated QC Checks (3)

- Sticking
  - Checks for data values “stuck” at the same value for a specified number of hours
  - “Sticking value”: minimum value for which data will be checked
- Buddy Check
  - Uses separate “Target” and “Test” sites
  - If the absolute difference in concentrations differs by a defined threshold, invalidate the “Target” site data

# Dashboard (1)

- At-a-glance display shows data delivery status
- Stay up-to-date with the latest hourly readings
- Important for AQI reporting and alerts



# Dashboard (2)

- Event Log
  - Automatically updates every few minutes
  - Is AirNow receiving files? Are they being imported successfully?
- Instruments not reporting

Event Log

Type **SUCCESS**

Date (LST)  
2016-08-05 12:17 AM

Source  
IMPORT

Message  
File ingested: (201608042315\_840.CA1) (AQCSV) Records: 67; Inserted: 58; Updated: 0; Aggregated: 6; Mirrored: 5; QCed: 118

File Info

fileName	201608042315_840.CA1
imported	67
inserted	58
updated	0
aggregated	6
qcled	118

Event Log

Search:

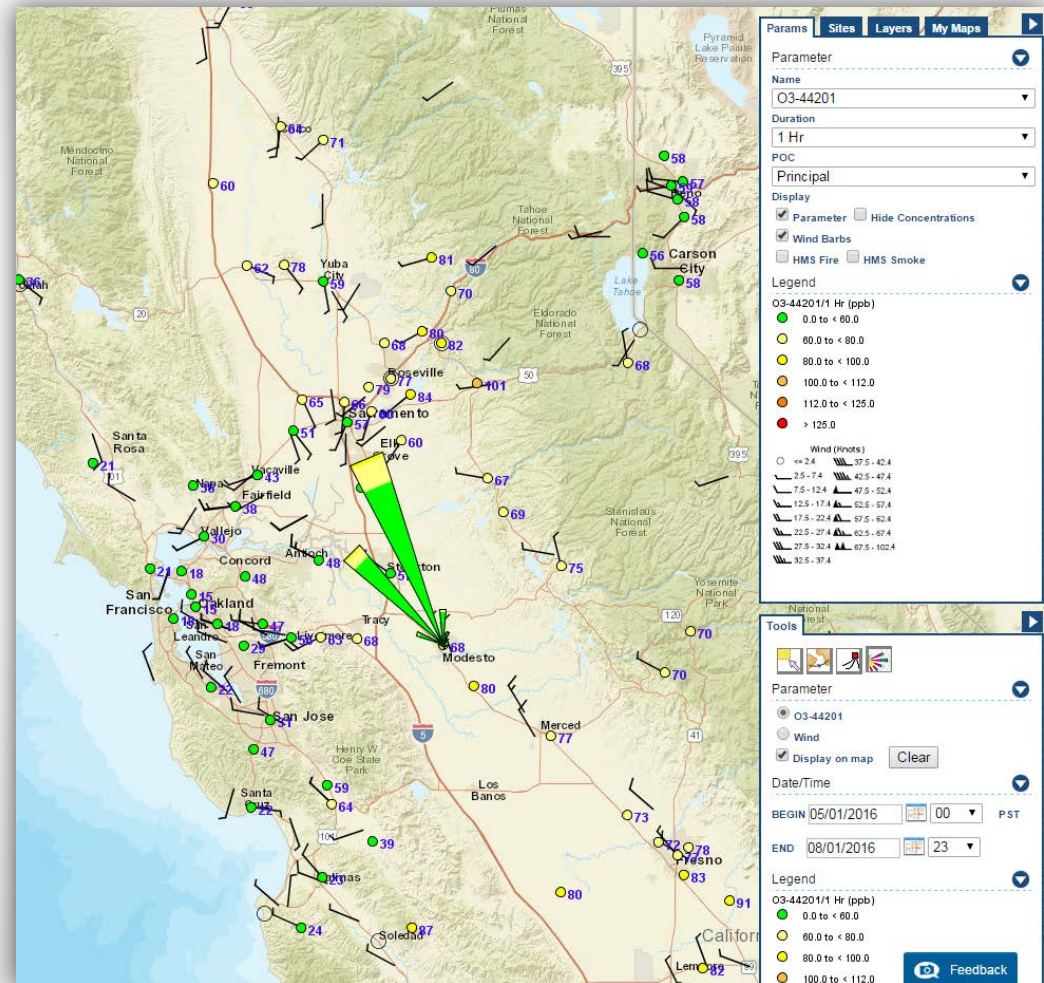
✓	2016-08-05 12:17 AM	IMPORT	201608042315_840.CA1	<a href="#">more info</a>
✓	2016-08-05 08:17 AM	IMPORT	201608050715_840.CA1	<a href="#">more info</a>
✓	2016-08-05 07:16 AM	IMPORT	201608050615_840.CA1	<a href="#">more info</a>
✓	2016-08-05 06:16 AM	IMPORT	201608050515_840.CA1	<a href="#">more info</a>
✓	2016-08-05 05:17 AM	IMPORT	201608050415_840.CA1	<a href="#">more info</a>

All Instruments Are Up to date

😊

# Navigator (1)

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

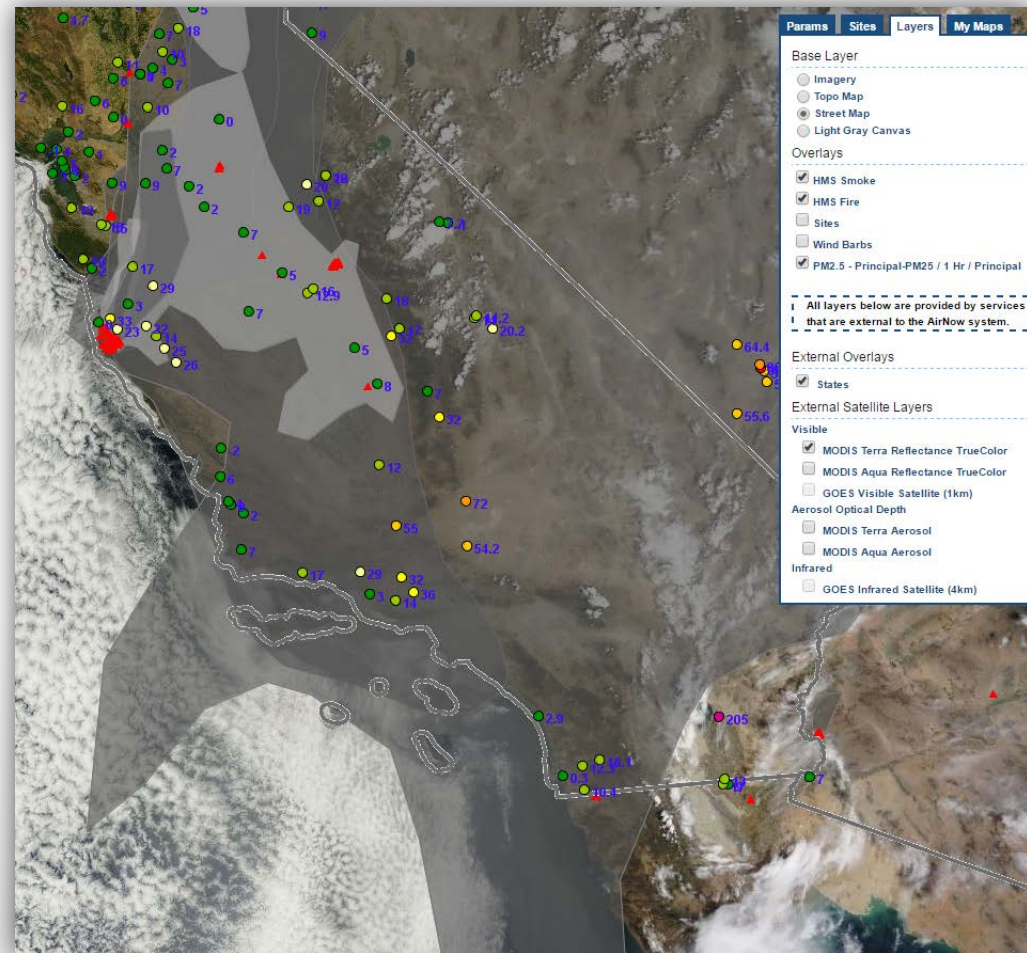


August 13, 2016, at 18:00 PDT: 1-hour ozone (ppb) with wind barbs and a pollution rose. Source: AirNow-Tech.



# Navigator (2)

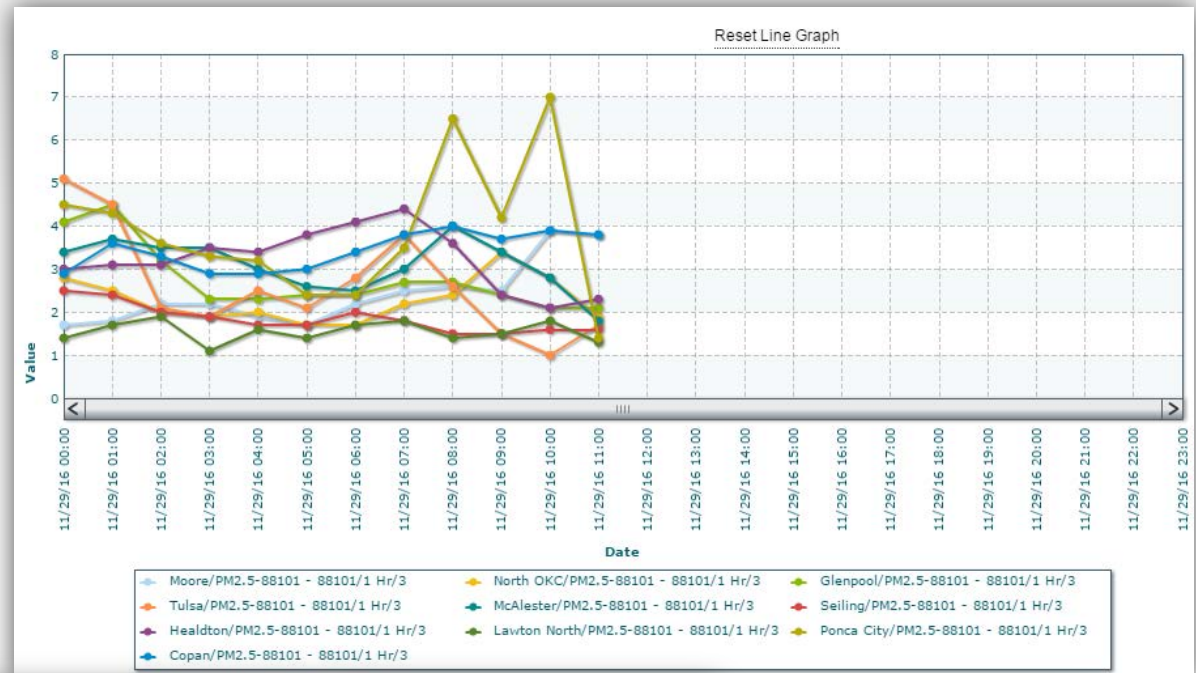
- External Layers
  - Moderate Resolution Imaging Spectroradiometer (MODIS) satellite imagery
  - MODIS Aerosol Optical Depth (AOD)
  - Hazard Mapping System (HMS) smoke and fire detections
  - Geostationary Operational Environmental Satellite (GOES) 1 km visible imagery



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

# Data Queries

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



Site/Site AQS/Param/POC	Date	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Copan/401470217/PM2.5-88101/3	11/29/16	2.9	3.6	3.3	2.9	2.9	3	3.4	3.8	4	3.7	3.9	3.8				
Glenpool/401430174/PM2.5-88101/3	11/29/16	4.1	4.5	3.2	2.3	2.3	2.4	2.4	2.7	2.7	2.4	2.1	2.1				
Healdton/400190297/PM2.5-88101/3	11/29/16	3	3.1	3.1	3.5	3.4	3.8	4.1	4.4	3.6	2.4	2.1	2.3				
Lawton North/400310651/PM2.5-88101/3	11/29/16	1.4	1.7	1.9	1.1	1.6	1.4	1.7	1.8	1.4	1.5	1.8	1.3				
McAlester/401210415/PM2.5-88101/3	11/29/16	3.4	3.7	3.5	3.5	3	2.6	2.5	3	4	3.4	2.8	1.8				
Moore/400270049/PM2.5-88101/3	11/29/16	1.7	1.8	2.2	2.2	1.9	1.7	2.2	2.5	2.6	2.5	3.9	3.8				
North OKC/401091037/PM2.5-88101/3	11/29/16	2.8	2.5	2	1.9	2	1.7	1.7	2.2	2.4	3.4	2.8	1.9				
Ponca City/400710604/PM2.5-88101/3	11/29/16	4.5	4.3	3.6	3.3	3.2	2.4	2.4	3.5	6.5	4.2	7	1.4				
Seiling/400430860/PM2.5-88101/3	11/29/16	2.5	2.4	2	1.9	1.7	1.7	2	1.8	1.5	1.5	1.6	1.6				
Tulsa/401431127/PM2.5-88101/3	11/29/16	5.1	4.5	2.1	1.9	2.5	2.1	2.8	3.8	2.6	1.5	1	1.7				

Editing Site:

Date:

Parameter:

QC Code:

9 - Invalid

Value:

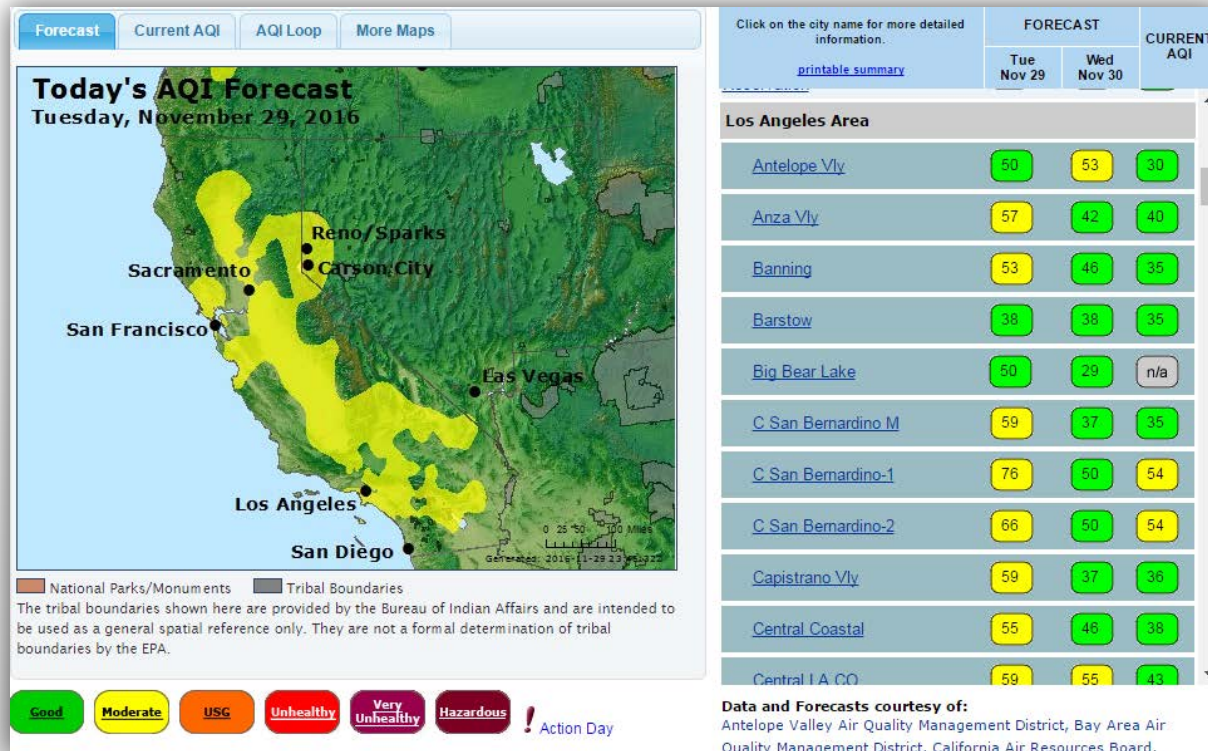
7

Save

Cancel

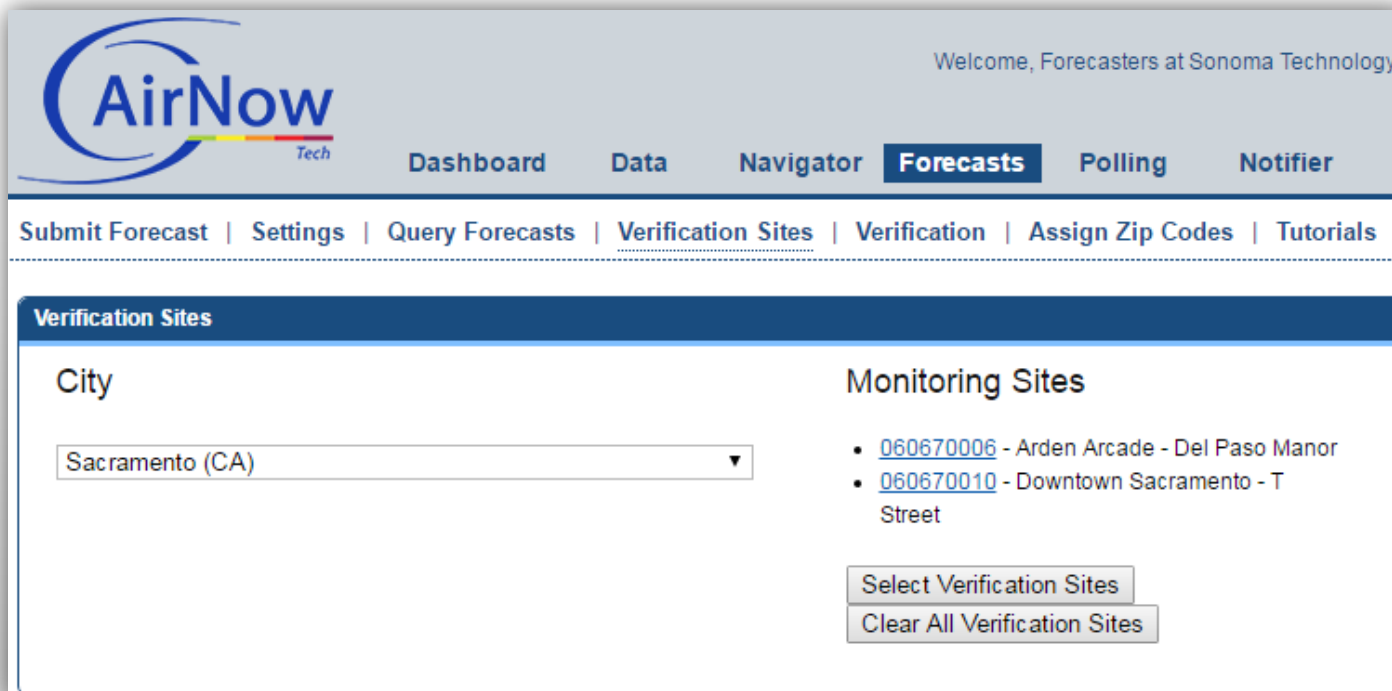
# How are current data displayed?

- Reporting areas (forecast cities)
  - How observations and forecasts are disseminated and displayed on AirNow.gov
  - Individual monitoring sites are assigned to each reporting area
  - Maximum NowCast AQI from sites in a reporting area will show as the “Current AQI”





# Configuring Settings in AirNow-Tech

- Verification sites
  - Can be added to or removed from reporting areas via the Verification Sites page
  - Any number of verification sites can be assigned to a reporting area



The screenshot shows the AirNow-Tech web interface. The top navigation bar includes the AirNow logo, a welcome message "Welcome, Forecasters at Sonoma Technology!", and menu items: Dashboard, Data, Navigator, Forecasts (highlighted), Polling, and Notifier. Below this is a secondary navigation bar with links: Submit Forecast, Settings, Query Forecasts, Verification Sites (underlined), Verification, Assign Zip Codes, and Tutorials. The main content area is titled "Verification Sites" and features a "City" dropdown menu currently set to "Sacramento (CA)". To the right, under "Monitoring Sites", there is a list of two sites: "060670006 - Arden Arcade - Del Paso Manor" and "060670010 - Downtown Sacramento - T Street". At the bottom of this section are two buttons: "Select Verification Sites" and "Clear All Verification Sites".

# Configuring Settings in AirNow-Tech

- Principal Parameter 
  - The parameter/POC combination to be used as the data set for AirNow products
- Public Parameter 
  - Required before data are included in publicly available products


Welcome, Forecasters

Dashboard
Data
Navigator
Forecasts
Polling
Notifier

---

[Agencies](#) » [Site List](#) » Edit Sites

AQS Code\* :

Site Name\* :

Agency ID:

State:

County:

CBSA:

GMT Offset\* :

Status\* :

Elevation:  ft. or  m.


Dec Deg

Latitude\* :

Longitude\* :

\*Required

**Parameters Measured:**

Parameter - AQS Code/POC		
<a href="#">BARPR - 64101/1</a>	★	
<a href="#">NO - 42601/1</a>	★	
<a href="#">NO2 - 42602/1</a>	★	
<a href="#">NOX - 42603/1</a>	★	
<a href="#">O3 - 44201/1</a>	★	
<a href="#">PM2.5 - 88501/3</a>	★	
<a href="#">PM2.5 - 88502/1</a>		
<a href="#">PM2.5 - 88502/3</a>		
<a href="#">PRECIP - 65102/1</a>	★	
<a href="#">RHUM - 62201/1</a>	★	
<a href="#">RWD - 61104/1</a>		
<a href="#">RWS - 61103/1</a>		
<a href="#">SRAD - 63301/1</a>	★	
<a href="#">TEMP - 62101/1</a>	★	
<a href="#">TNMOC - 43102/1</a>		
<a href="#">WD - 61102/1</a>	★	
<a href="#">WS - 61101/1</a>	★	

# Configuring Settings in AirNow-Tech

- Editing Principal and Public Parameters
  - Click Enable Editing
  - Select parameter from list
  - Check boxes and save

Agencies » Site List » Edit Sites

AQS Code\*: 060670011 Status\*: Active

Site Name\*: Elk Grove Elevation: 21 ft. or 6.4008 m.

Agency ID: CA1 Dec Deg

State: CA Latitude\*: 38.302591

County: SACRAMENTO Longitude\*: -121.420838

CBSA: Sacramento--Arden-Arcad

GMT Offset\*: -8.00

Parameters Measured:

Parameter - AQS Code/POC	
<a href="#">BARPR - 64101/1</a>	★ 👤
<a href="#">NO - 42601/1</a>	★ 👤
<a href="#">NO2 - 42602/1</a>	★ 👤
<a href="#">NOX - 42603/1</a>	★ 👤
<a href="#">O3 - 44201/1</a>	★ 👤
<a href="#">PM2.5 - 88501/3</a>	★ 👤
<a href="#">PM2.5 - 88502/1</a>	
<a href="#">PM2.5 - 88502/3</a>	👤
<a href="#">PRECIP - 65102/1</a>	★
<a href="#">RHUM - 62201/1</a>	★ 👤
<a href="#">RWD - 61104/1</a>	
<a href="#">RWS - 61103/1</a>	
<a href="#">SRAD - 63301/1</a>	★ 👤
<a href="#">TEMP - 62101/1</a>	★ 👤
<a href="#">TNMOC - 43102/1</a>	
<a href="#">WD - 61102/1</a>	★ 👤
<a href="#">WS - 61101/1</a>	★ 👤

Disable Editing View QC Criteria Save

\*Required

Parameter Specification for [Elk Grove](#)

PM2.5 - 88501/3 (UG/M3)

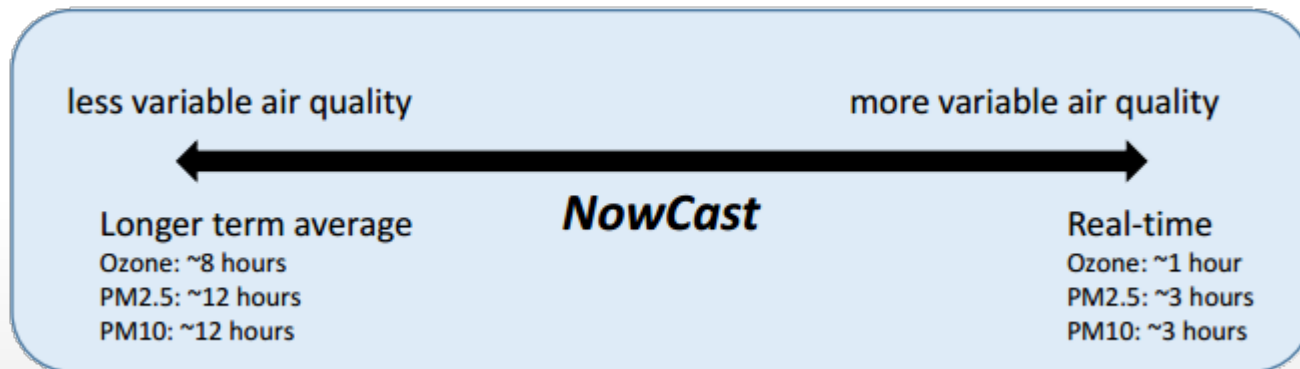
Set as Principal  ★

Approved for Public  👤

Disable Editing Save

# NowCast

- A way to express real-time air quality in the context of the AQI
- Aligns closely with what people are seeing or experiencing
- Calculation uses longer averages during periods of stable air quality and shorter averages when air quality is changing rapidly



Good  
0 - 50


Moderate  
51 - 100

Unhealthy for  
Sensitive Groups  
101 - 150

Unhealthy  
151 - 200

Very Unhealthy  
201 - 300

# Where is the NowCast used?




## Air Quality Notifications

**Current Air Quality for Your City , State**  
Friday, July 15 - 02:00 PM

The most recent hourly estimate of PM2.5 reached 108 (Unhealthy for Sensitive Groups)

**Orange**

We are sending you this alert because your local air quality may be changing. Take action appropriate for your health conditions -- and please monitor the latest conditions at [www.airnow.gov](http://www.airnow.gov).

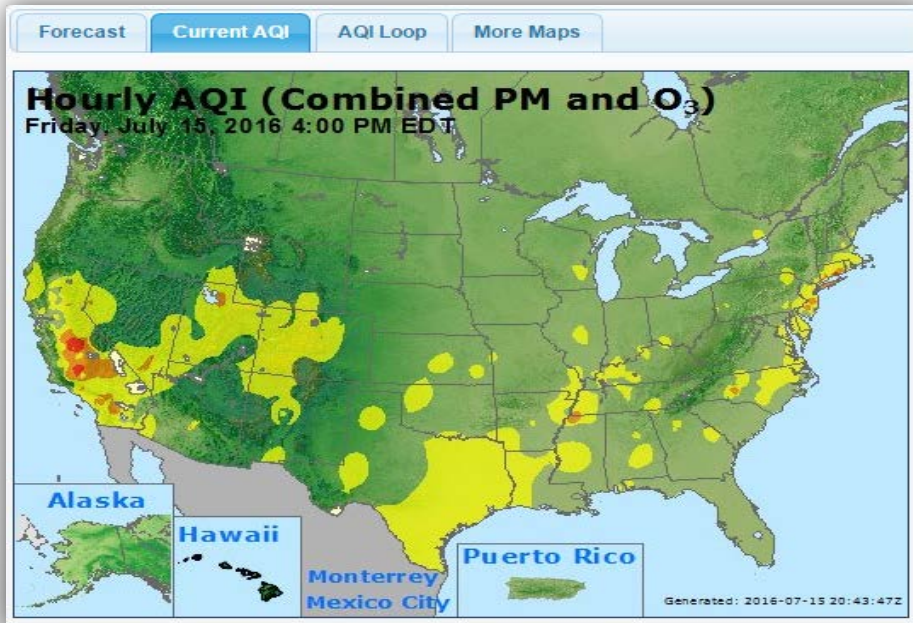


63341 or

The Air Quality Index (AQI) for Saint Louis, MO

<b>Current</b> 7/15/2016 3:00 PM CST	<b>Current</b> 7/15/2016 3:00 PM CST
<b>Pollutant:</b> PM2.5	<b>Pollutant:</b> OZONE
<b>20</b>	<b>44</b>
<b>Good</b>	<b>Good</b>

AQI Air Quality Index    AQI Maps    Health Info

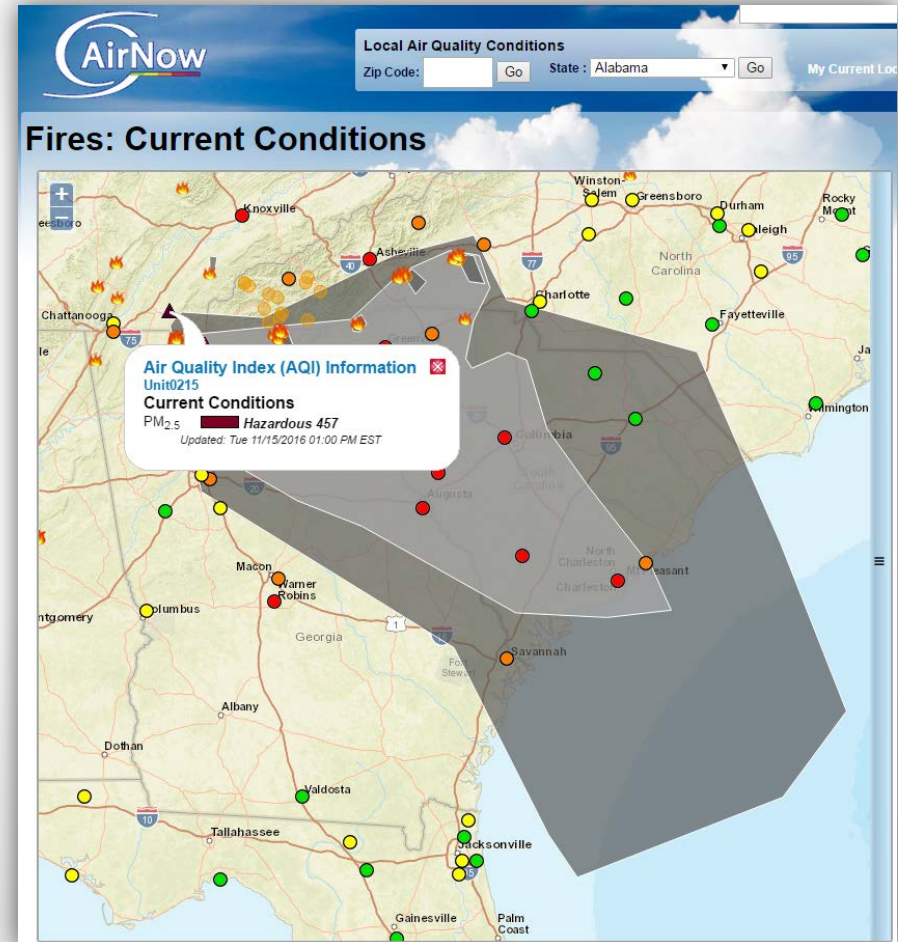
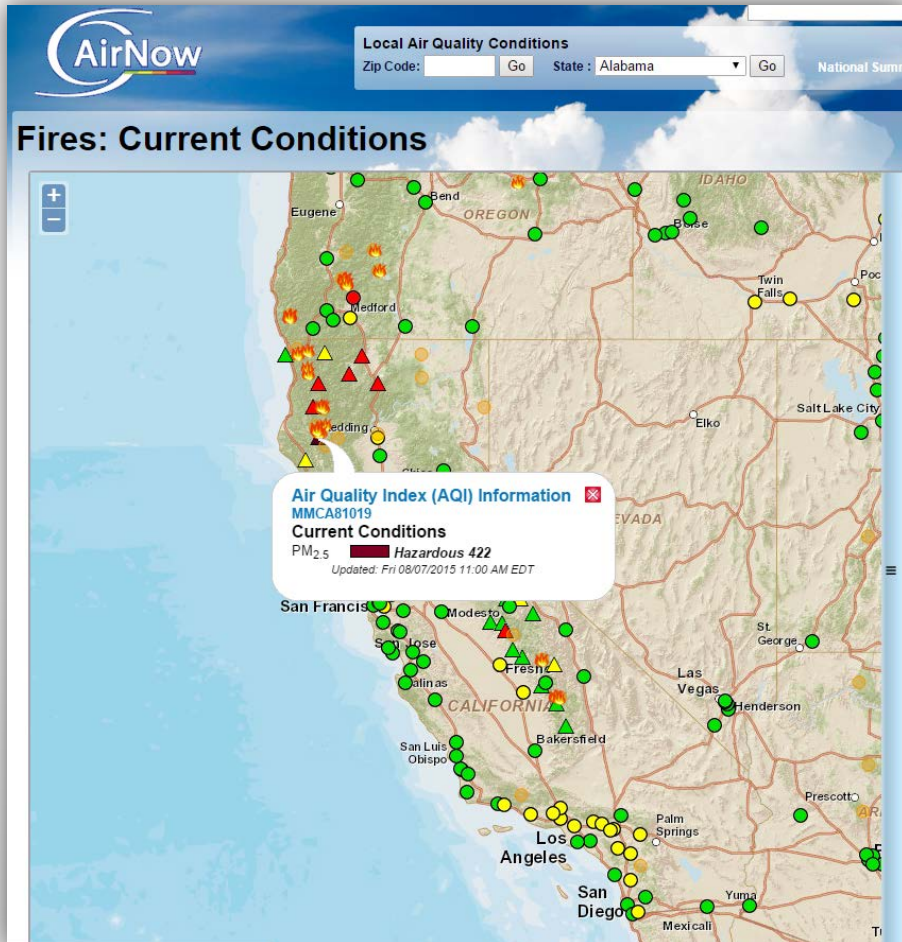


Click on the city name for more detailed information. <a href="#">printable summary</a>	FORECAST		CURRENT AQI
	Fri Jul 15	Sat Jul 16	
<a href="#">Aiken-Augusta - SC/GA</a>	39	42	56
<a href="#">Atlanta</a>	Good	Good	64
<a href="#">Columbus-Phenix City - GA/AL</a>	Good	Good	43
<a href="#">Macon</a>	Good	Good	39

Note: Values above 500 are considered Beyond the AQI. Follow recommendations for the Hazardous category. Additional information on reducing exposure to extremely high levels of particle pollution is available [here](#).



# AirNow Fire Page



[https://airnow.gov/index.cfm?action=topics.smoke\\_wildfires](https://airnow.gov/index.cfm?action=topics.smoke_wildfires)

# AirNow Department of State Page

The screenshot displays the AirNow Department of State website interface. At the top left is the AirNow logo. To its right is a search bar with a 'Go' button. Below the logo is a navigation bar with the text 'AirNow Department of State' and a small U.S. Department of State seal. The main content area features a world map with various colored circles indicating Air Quality Index (AQI) values for different regions. The values are: 60 (South America), 101 (South America), 71 (Europe), 139 (Africa), 176 (Middle East), N/A (Middle East), 176 (Middle East), N/A (Middle East), 325 (Asia), 246 (Asia), 154 (Asia), 127 (Asia), 154 (Asia), and 189 (Asia). On the right side, there are two dropdown menus: 'Select a City' and 'Select a Parameter', both currently set to 'Select...'. Below these is a text box with the following content:

**Welcome to AirNow DOS**  
 AirNow DOS collects Air Quality Monitoring data from U.S. embassies and consulates around the world to inform U.S. personnel and citizens overseas.

Is your country interested in air quality monitoring? Check out AirNow International, the EPA's information package on how to set up a country-wide air quality monitoring program.

*AirNow DOS is powered by the U.S. Department of State in partnership with the U.S. EPA*

Note: Values above 500 are considered Beyond the AQI. Follow recommendations for the Hazardous category. Additional information on reducing exposure to extremely high levels of particle pollution is available here.

At the bottom of the page, there is a footer with several links: Privacy and Security, Accessibility, Contact Us, AirNow on Facebook, Subscribe to RSS, and Follow us on Twitter.

[https://www.airnow.gov/index.cfm?action=airnow.global\\_summary](https://www.airnow.gov/index.cfm?action=airnow.global_summary)

# Submitting Forecasts in AirNow-Tech

- Forecast for ozone, PM<sub>2.5</sub>, PM<sub>10</sub>, NO<sub>2</sub>, and SO<sub>2</sub>, and/or CO
- Forecasts issued in concentrations or AQI units for reporting areas
- Forecasts are for the EPA standard for each pollutant (e.g., 24-hr average for PM<sub>2.5</sub>)

**Youngstown**

Submitted: 11/29/2016 9:47 AM (PT) Apply to Group: None ▼ Save As Default

Pollutant	Yest. Obs Mon, 11/28	Today Tue, 11/29	Tomorrow Wed, 11/30	Day 2 Thu, 12/01	Day 3 Fri, 12/02	Day 4 Sat, 12/03	Day 5 Sun, 12/04	Delete Forecast
PM <sub>2.5</sub> Forecast (concentration)	12.5	9	12	8	6	7	11	<input type="checkbox"/>
<a href="#">Hide Guidance</a>								
AQMOS BlueSky Gateway 00Z		6	6					
BlueSky Gateway 00Z		8	5					
Action Day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

[Show Discussion](#)

# Forecast Dissemination

## EnviroFlash Emails



**Air Quality Notifications**

Forecast for Youngstown, OH  
Today and Tomorrow's Forecast

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

## 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](#)

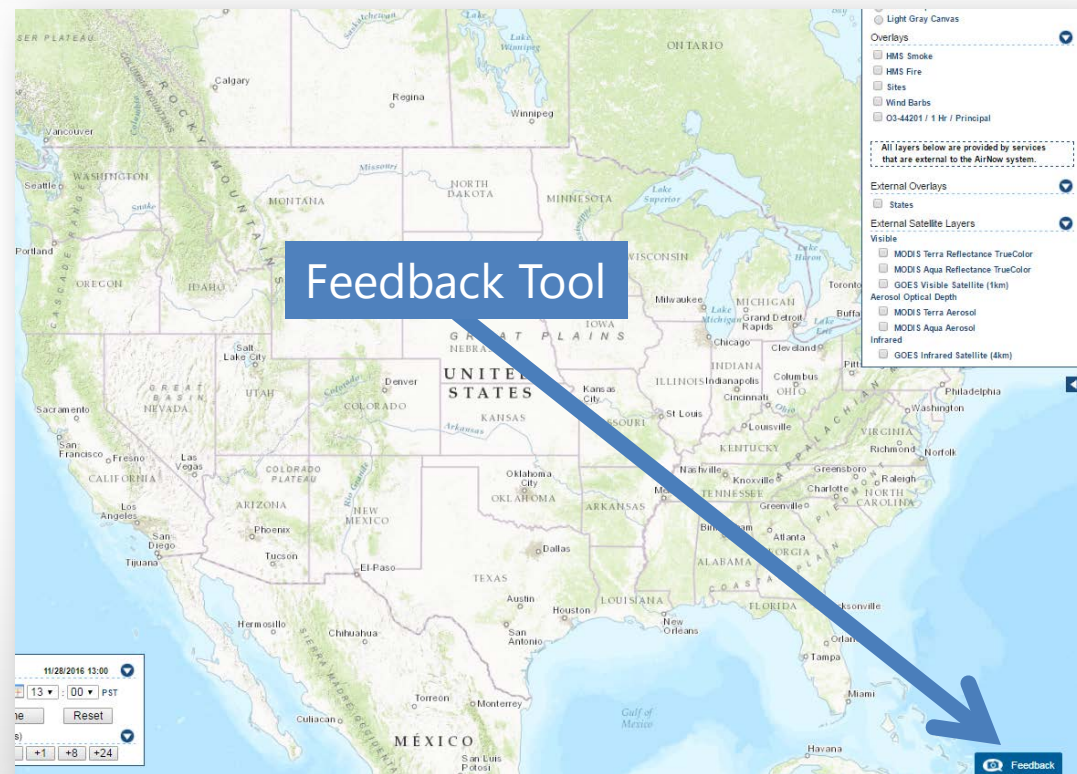
[Query Tool](#)

## AirNow.gov

Air Quality Forecast			
Today's High		Tomorrow's High	
Air Quality Index (AQI)		Air Quality Index (AQI)	
<b>38</b>	<b>Good</b>	<b>50</b>	<b>Good</b>
Health Message: None		Health Message: None	
AQI - Pollutant Details			
Particles (PM2.5)	<b>38</b>	<a href="#">Good</a>	Particles (PM2.5)
			<b>50</b>
			<a href="#">Good</a>
<p><b>Forecast Discussion:</b> 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.</p>			

# AirNow and AirNow-Tech Help

- Email questions to [AirNowInfo@sonomatech.com](mailto:AirNowInfo@sonomatech.com)
- Review resources page in AirNow-Tech
- The Feedback Tool on AirNow-Tech will 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



all categories ▾

**Categories**

Latest

New

Unread

Top

Category

Latest

## Announcements

Announcements about the AirNow Platform, usually pertaining to new features, bug fixes, and system downtime.

- System Maintenance 10 pm EDT on August 10
- AirNow.gov Website Maintenance July 1-5
- AirNow Updates to Ozone Real-time Reporting
- System Maintenance 7:30 pm EDT, 4/21, to 7:30 pm EDT, 4/22
- System Maintenance Thursday, February 4



## AQI Info

Ask questions or find answers regarding the Air Quality Index (AQI) for ozone, PM2.5, and PM10, including the NowCast and Daily AQI calculations.

- ★ AQI Calculations Overview- Ozone, PM2.5, and PM10
- The NowCast for Ozone and PM 21d
- Daily and Hourly AQI - PM2.5 and PM10 Jul 5
- Daily and Hourly AQI - Ozone Jul 5
- The AQI Equation Jul 5



## General AirNow-Tech

Ask questions or find answers for general AirNow-Tech website use, including account management, compatible browsers, and bug reporting. Select AirNow-Tech FAQ to see common questions that have already been answered.

- NOAA model forecasts not showing up [Resolved] Jun 30
- Managing saved Site lists (Data Queries and Reports) Jun 9
- Managing saved Parameter lists (Data Queries and Reports) Jun 9
- What do numbers following parameters mean (ex: PM10-85101), and why does the same pollutant have multiple numbers? Nov '15
- How do I manage the contact list for my agency? Jul '15

**AirNow-Tech FAQ**

## Daily and Hourly AQI - Ozone

**AQI Info**



mwhyton Marcus Hylton AirNow-Tech Guru

2 Jul 5

### Daily Ozone AQI

The daily ozone AQI is calculated by taking the maximum 8 hour concentration from 07:00-23:00 LST, and then converting to AQI. There are 17 8-hour averages considered in each day. Each 8-hour average requires 6 of 8 hours (75%) for a valid calculation. In addition, 75% or 13/17 of the 8-hour averages are needed for a valid daily ozone AQI calculation.

	8-hour average							
Hour	0	1	2	3	4	5	6	7
Raw PPB	44	46	50	54	58	66	60	58
8-hr PPB	54							
Daily AQI	50							

Following 7 hours

Example 1: Valid

	Day 1														Day 2																
Hour	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6
Raw PPB	34	35	40	41	40	39	43	47	52	63	78	89	82	80	78	73	77	84	80	68	54	48	45	47	41	48	47	47	45	40	43
8-hr PPB	39	42	45	50	56	61	66	71	74	77	80	80	77	74	70	66	62	58	53	49	47	46	45	44							
Daily AQI	133																														

Example 2: Valid with Missing Data

	Day 1														Day 2																
Hour	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6
Raw PPB	46	45	43			26	26	32				69	76	77	77	76	75	72	65	51	43	36	31	31	29	27	27			26	26
8-hr PPB	36	34	31	28	38	45	56	66	75	74	73	71	67	61	56	50	44	39	34	32	30	28	27								
Daily AQI	115																														

Example 3: Insufficient Data

	Day 1														Day 2															
Raw PPB																														
8-hr PPB																														
Daily AQI																														

4 / year

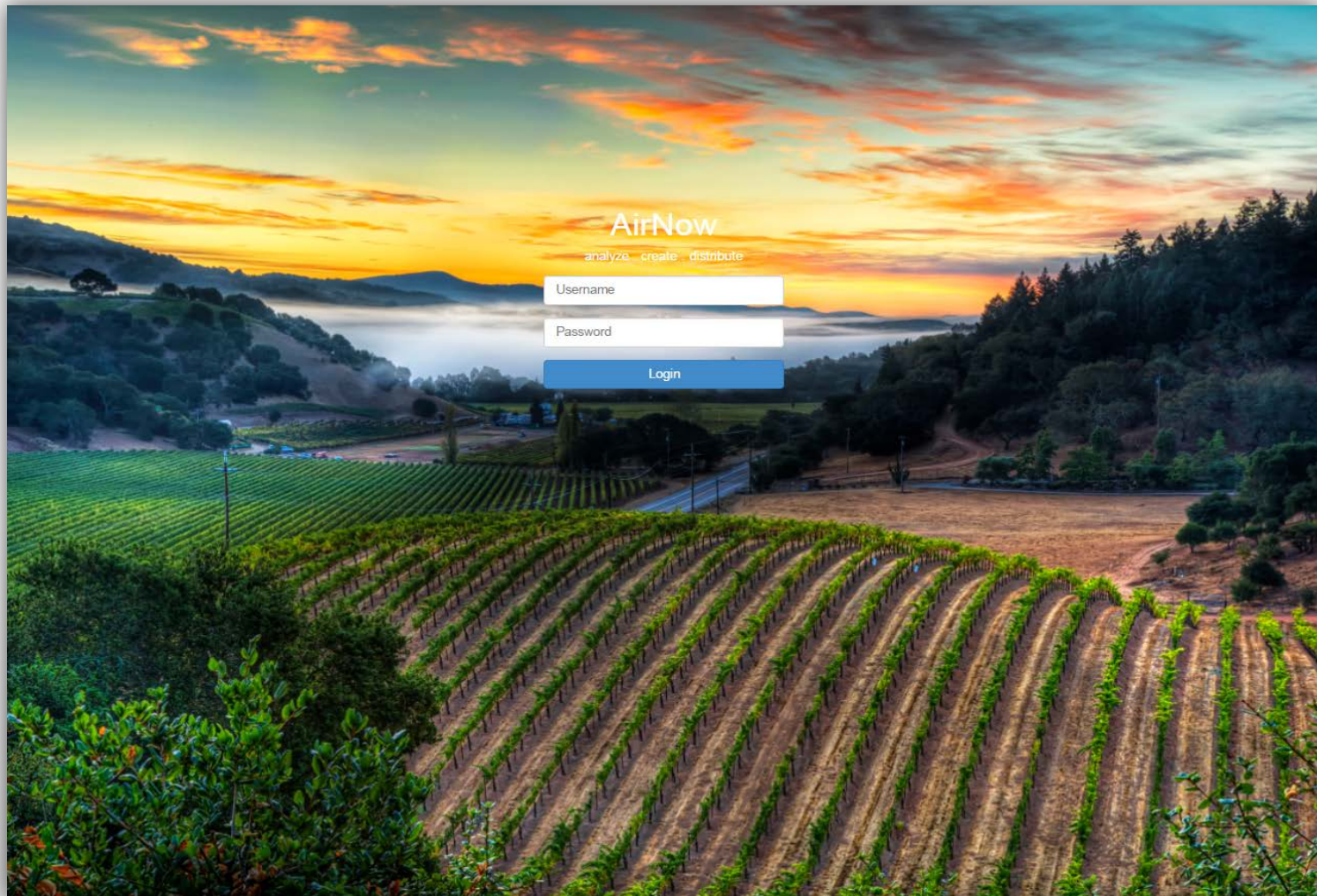
# New AirNow System

## Background – Needs, Growth, and Features

- Big data (e.g., low-cost sensors, sub-hourly data)
- Expansion to additional international users
- Ease of data management
- Improved usability
- New worldwide analysis tool (fire locations and trajectories)
- Completion in early 2017



# Homepage and Login Screen





# New Look

- Site/parameter management
- QC checks and Approval Mode

Sacramento Metro. AQMD Alan Chan

- Dashboard
- Data Analysis
- Network**
  - Sites
  - Instruments
  - Status
  - Quality Control
  - Notifications
  - Settings
  - System Administration
  - Forum

Station ID	State/County (Code)	AQS Code	Full AQS Code	Latitude	Longitude	UTC Offset	Elevation
060670002	Antelope - North Highlands	0002	060670002	38.71209	-121.38109	-8	90
060670006	Ardenwood - Del Paso	0006	060670006	38.613804	-121.368004	-8	83
060670007	Ardenwood - Watt	0007	060670007	38.610313	-121.38154	-8	60
060670011	Ardenwood - Ve	0011	060670011	38.30259	-121.42084	-8	21
060670012	Ardenwood	0012	060670012	38.683304	-121.16446	-8	333
060670015	Ardenwood	0015	060670015	38.593327	-121.50373	-8	0
060670014	Ardenwood - Goldenland Court	0014	060670014	38.650715	-121.50665	-8	13
060679991	Ardenwood - Seco	9991	060679991	38.34381	-121.10998	-8	223
060674001	Ardenwood - Stockton Blvd.	4001	060674001	38.556328	-121.458496	-8	27
060675003	Ardenwood - House	5003	060675003	38.494476	-121.21113	-8	194
060679999	Ardenwood	9999	060679999	32.15	-121.28	-8	0

Sacramento Metro. AQMD

Quality Control

Quality Control + Add QC Check

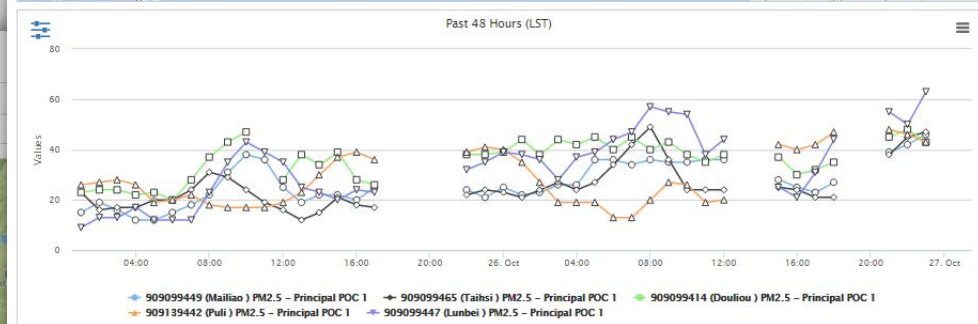
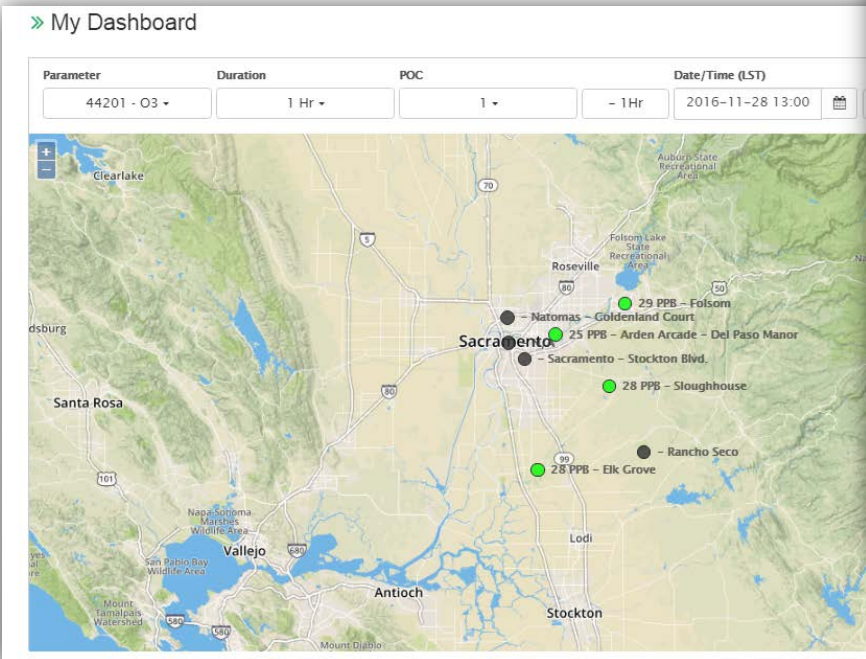
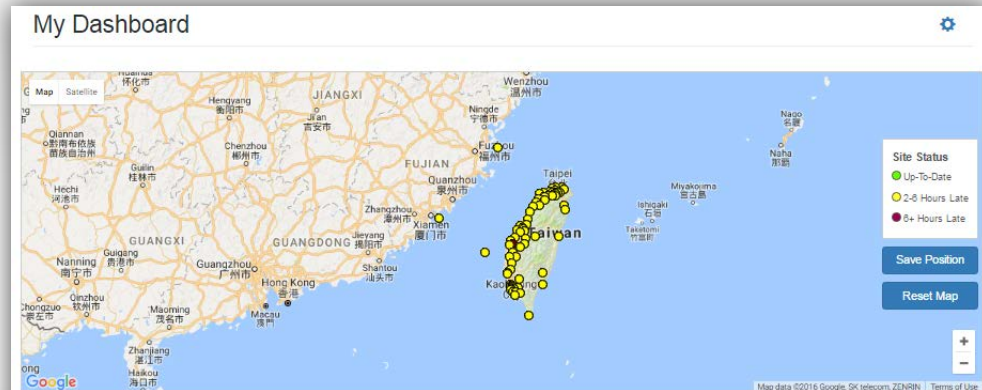
Standard Checks Advanced Checks

View QC Checks for Site:  and Parameter:

Type	Condition	QC Code Action	Data Time Range (LST)	Actions
Range	> 10 PPM	<span style="color: magenta;">●</span> Suspect	Anytime	
Range	> 111 PPM	<span style="color: magenta;">●</span> Suspect	Anytime	
Range	> 12 PPM	<span style="color: red;">●</span> Invalid	Anytime	
Rate of Change	> +/-5 PPM	<span style="color: red;">●</span> Invalid	Anytime	

# Dashboard Widgets

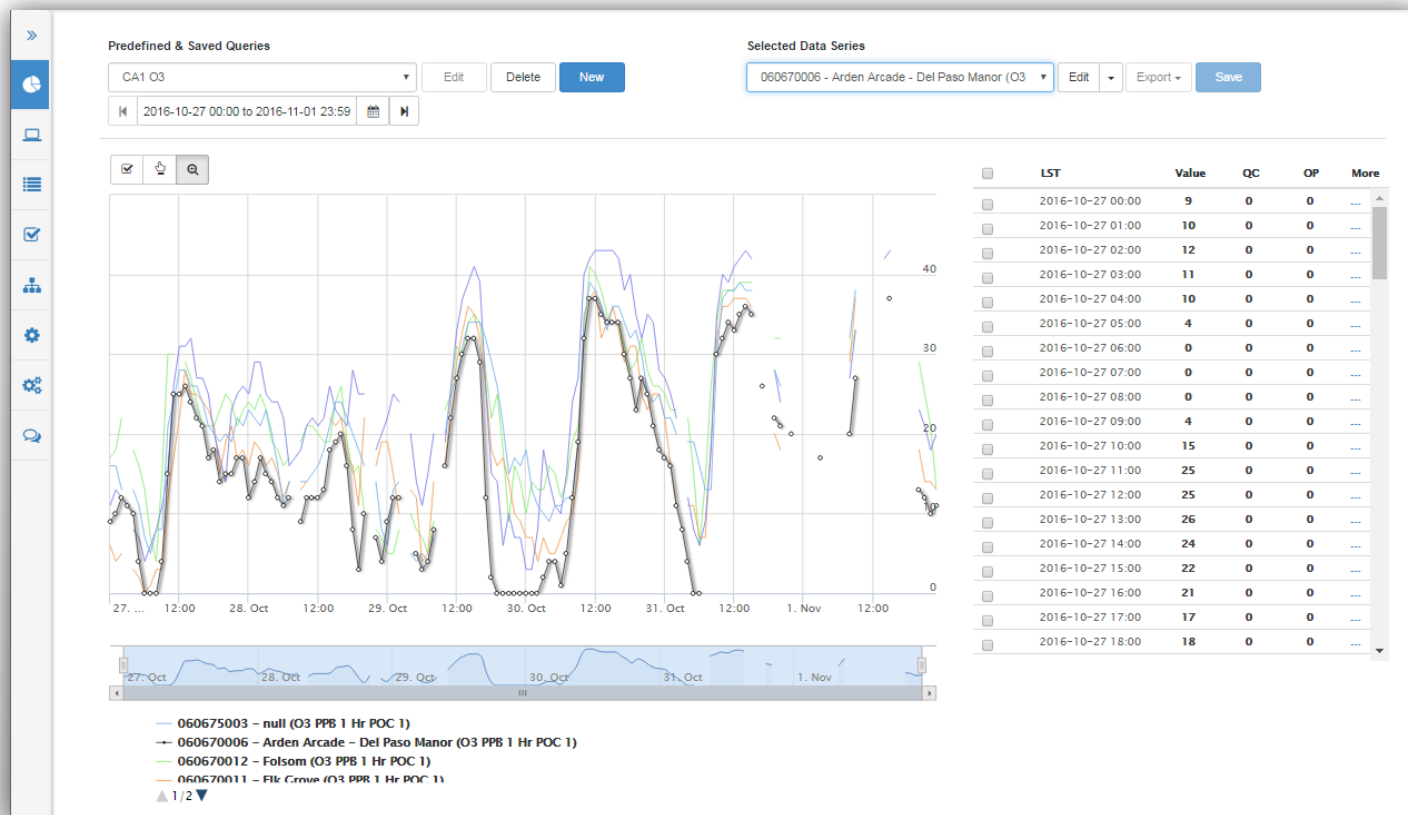
- New widgets
  - Recent Trend concentration map
- Users can add, remove, and rearrange widgets



Event Log		Instruments Not Reporting	
Search:	Previous 1 2 3 4 5 ... 18 Next	Lunbei	NO2 2016-10-26 04:00 PM
2016-10-26 12:46 AM	IMPORT taiwan_hourly_aq_20164...twn	Guanyin	PM10-85101 2016-10-26 11:00 PM
2016-10-26 12:43 AM	IMPORT taiwan_hourly_aq_20164...twn	Guanyin	PM2.5-88502 2016-10-26 11:00 PM
2016-10-26 12:31 AM	IMPORT taiwan_hourly_aq_20163...twn	Guanyin	WD 2016-10-26 11:00 PM
2016-10-26 12:23 AM	IMPORT taiwan_hourly_aq_20162...twn	Guanyin	WS 2016-10-26 11:00 PM
		Guanyin	SO2 2016-10-26 11:00 PM
		Guanyin	CO 2016-10-26 11:00 PM

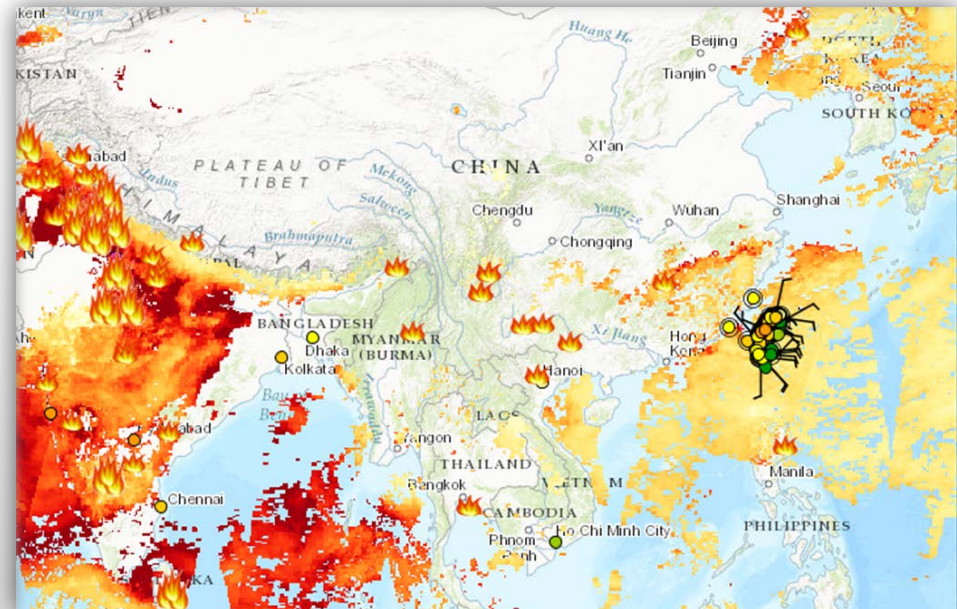
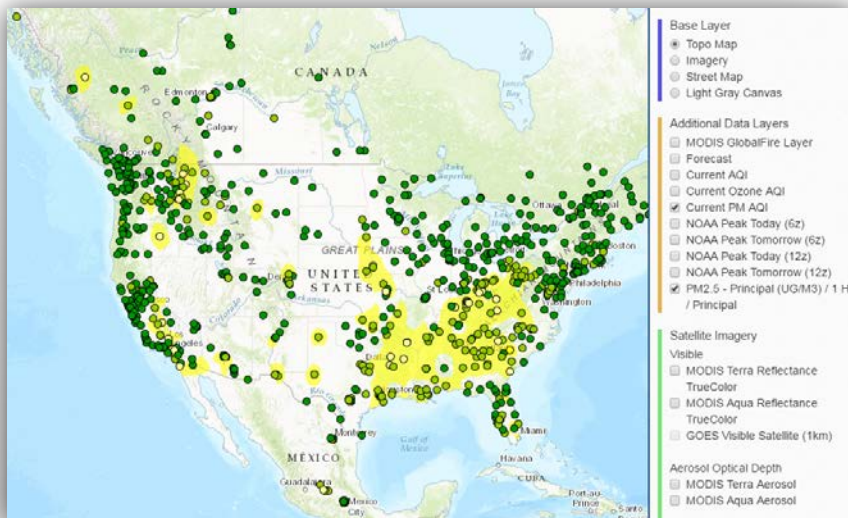
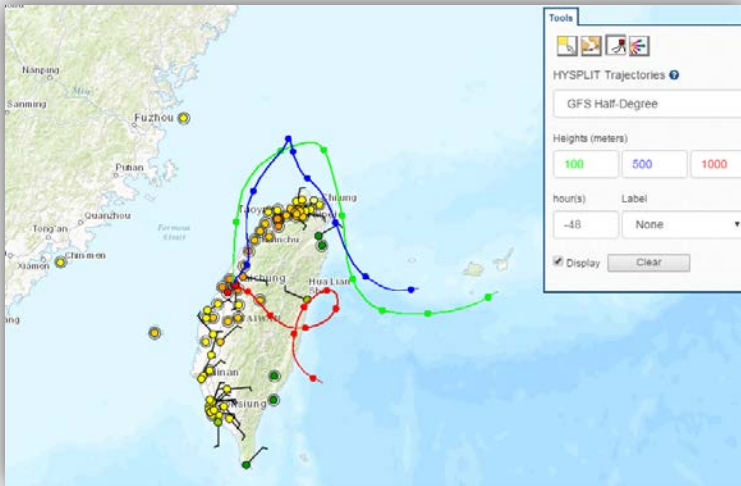
# Data Queries

- Interactive data validation and approval
- Data editing
- QC checks



# Navigator Enhancements

- Global point-and-click HYSPLIT trajectories
- Global fire layer



# Contact



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