



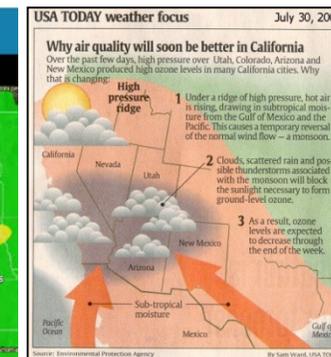
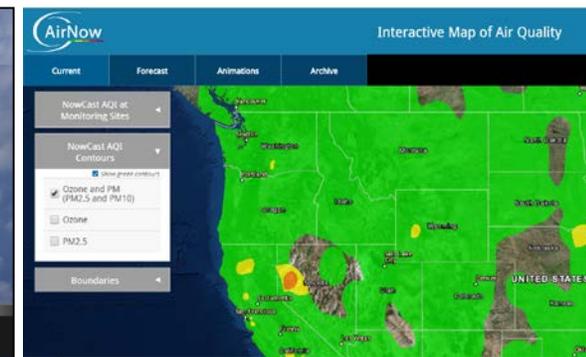
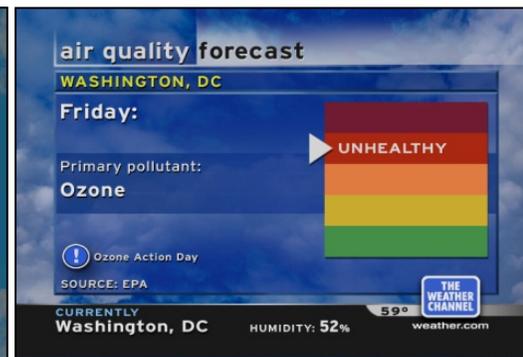
**September 26, 2018**

**Clean Air Act Advisory Committee**

**By Phil Dickerson, EPA Office of Air Quality Planning and Standards**

# AirNow System Basics

- Year Round 24/7 coverage/delivers real-time data (ozone & particles) for 50 States, 6 Canadian Provinces and 24 U.S. National Parks
- Next-day AQI forecasts for nearly 500 cities
- Smartphone-responsive web site
- State-of-the-science information about air pollution health effects for the public, media and stakeholders
- Public/private partnerships with The Weather Channel, USA Today, CNN, weather service providers, NOAA National Weather Service



# Audiences

## Public

- **Website: Averages 6 million views each year (California wildfires during week of August 19, 2018 saw an all-time weekly high of 1.6 million)**

## State/local/tribal agencies

- **280,000 EnviroFlash email alert subscribers**
- **210 million people in areas that have AQI forecasts**

## Emergency response

- **Public and states used AirNow to convey info about wildfires and hurricanes**

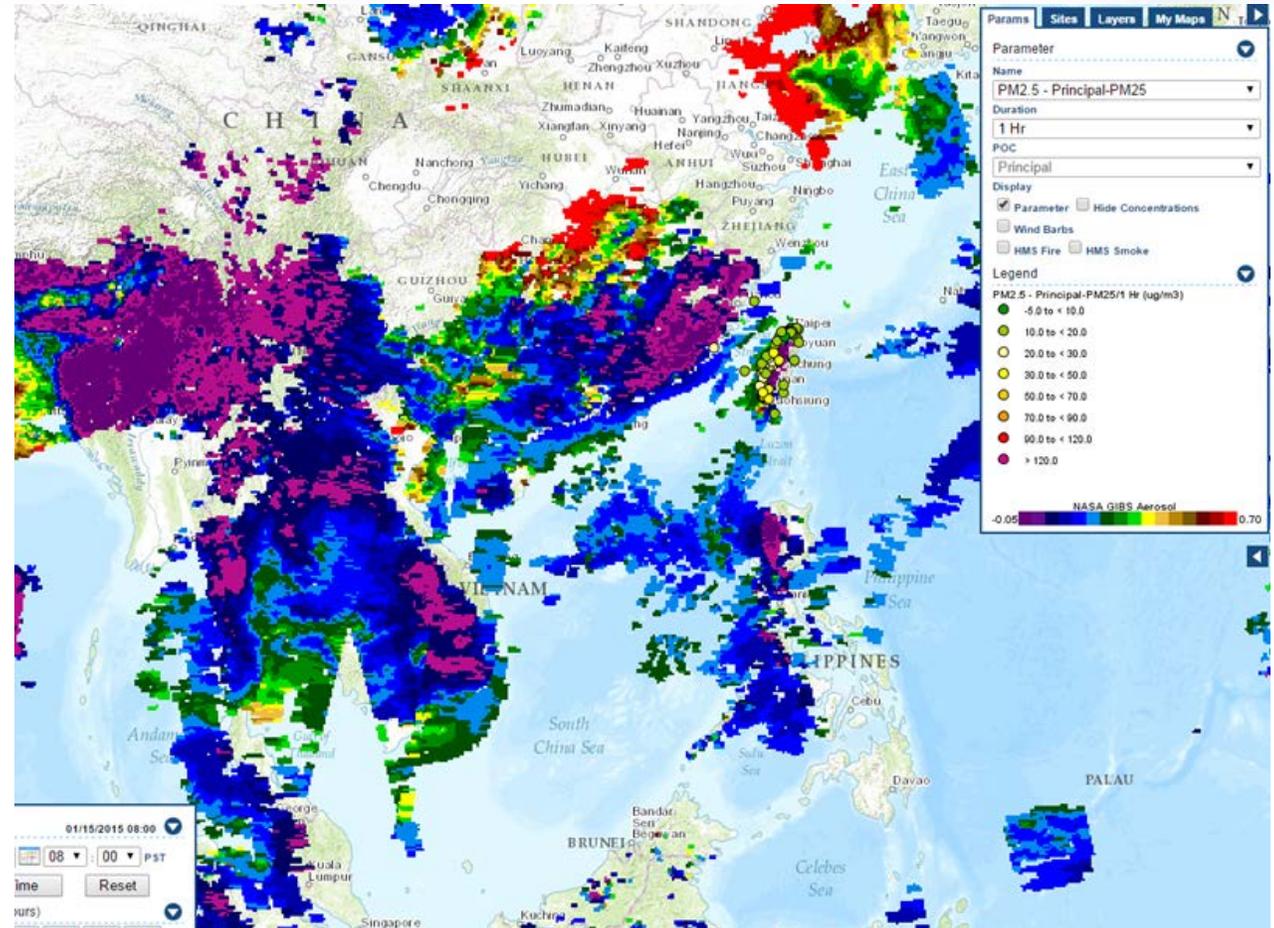
## Others

- **Epidemiological studies, researchers, other federal agencies**



# AirNow-Tech

- Decision Support System – management and analysis tool for the AirNow and AirNow-I Program
- GIS functions – HYSPLIT trajectory tool, satellite, and smoke products
- Data queries, personalized tools, preferences, and services
- Ability to view meteorological and air quality data
- Worldwide satellite data
- Password-protected user accounts



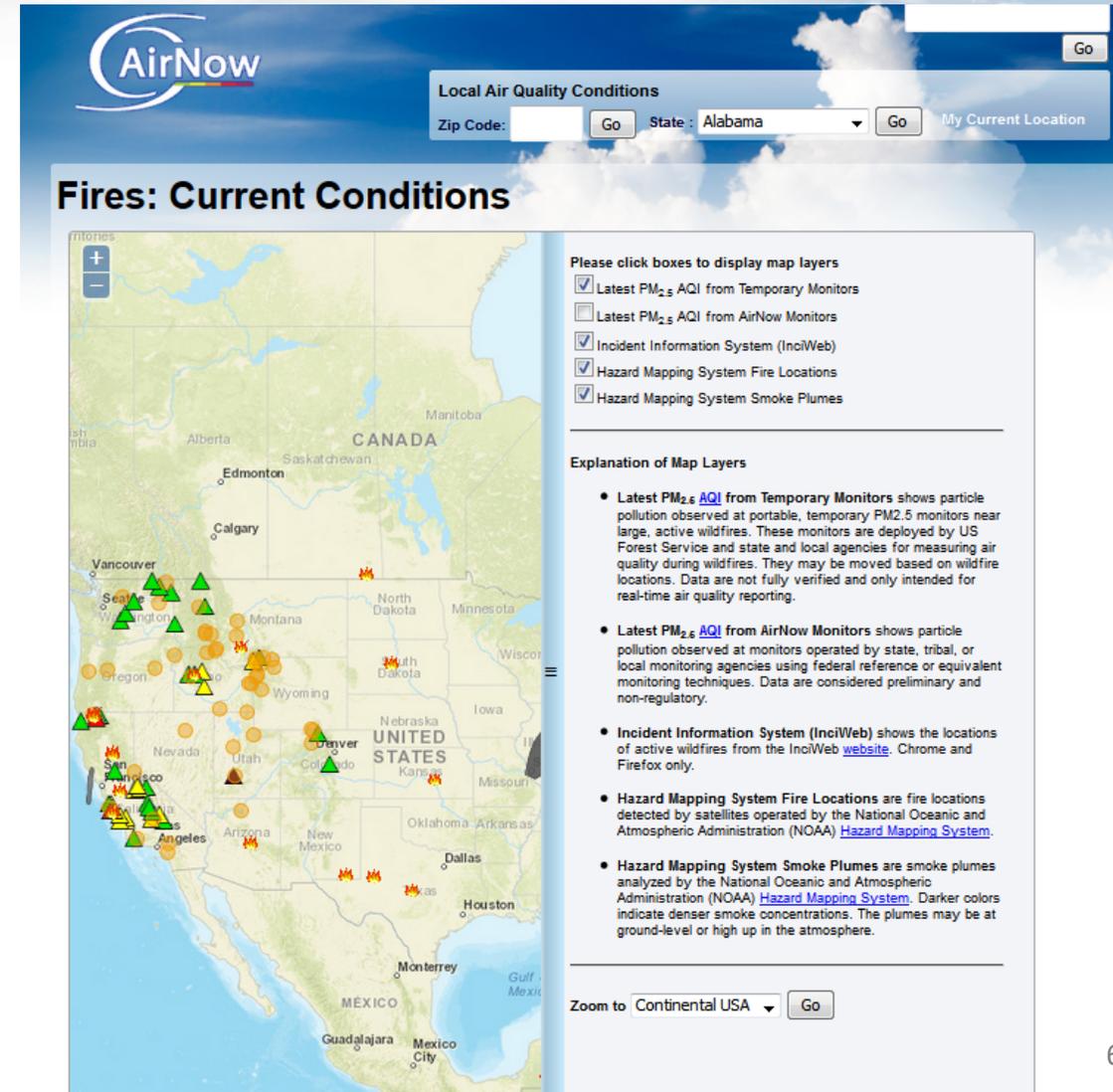
# Data Flow to AirNow Tech

- International partners
  - Format data in AirNow AQCSV format
  - Validate file format
  - Push data to AirNow FTP site
- Participating
  - Taiwan (2014)
  - Thailand (Feb 2018); Japan (this month)
  - Possible: Vietnam, Jakarta



# Smoke and Wildfire Map

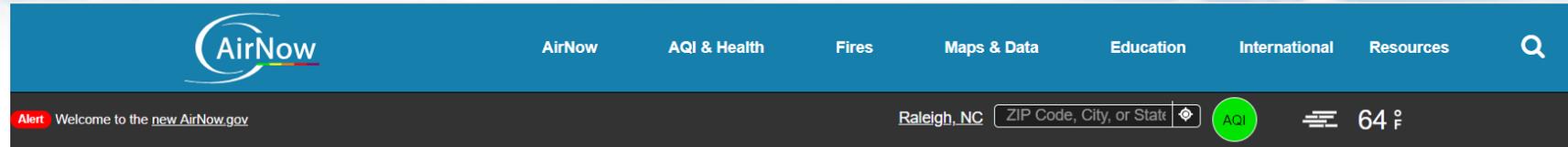
- USFS data flowing into AirNow
- They are delivering real-time data for all USFS currently deployed emergency monitors.
- Incredible traffic the week of August 19 – AirNow visits up 1000% from same week last year





# Department of State Monitoring

- Agreement between USEPA and DoS
- DoS has 29 monitors around the world, added several ozone sites this year



# Village Green benches report to AirNow



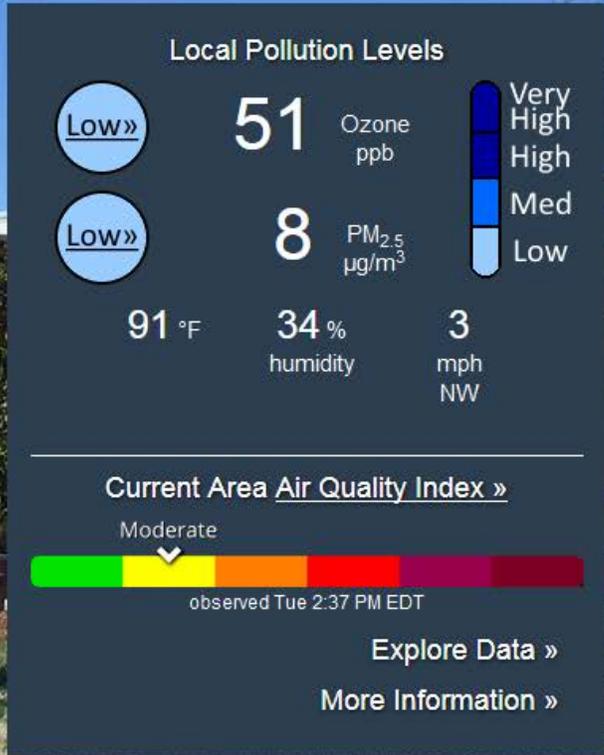
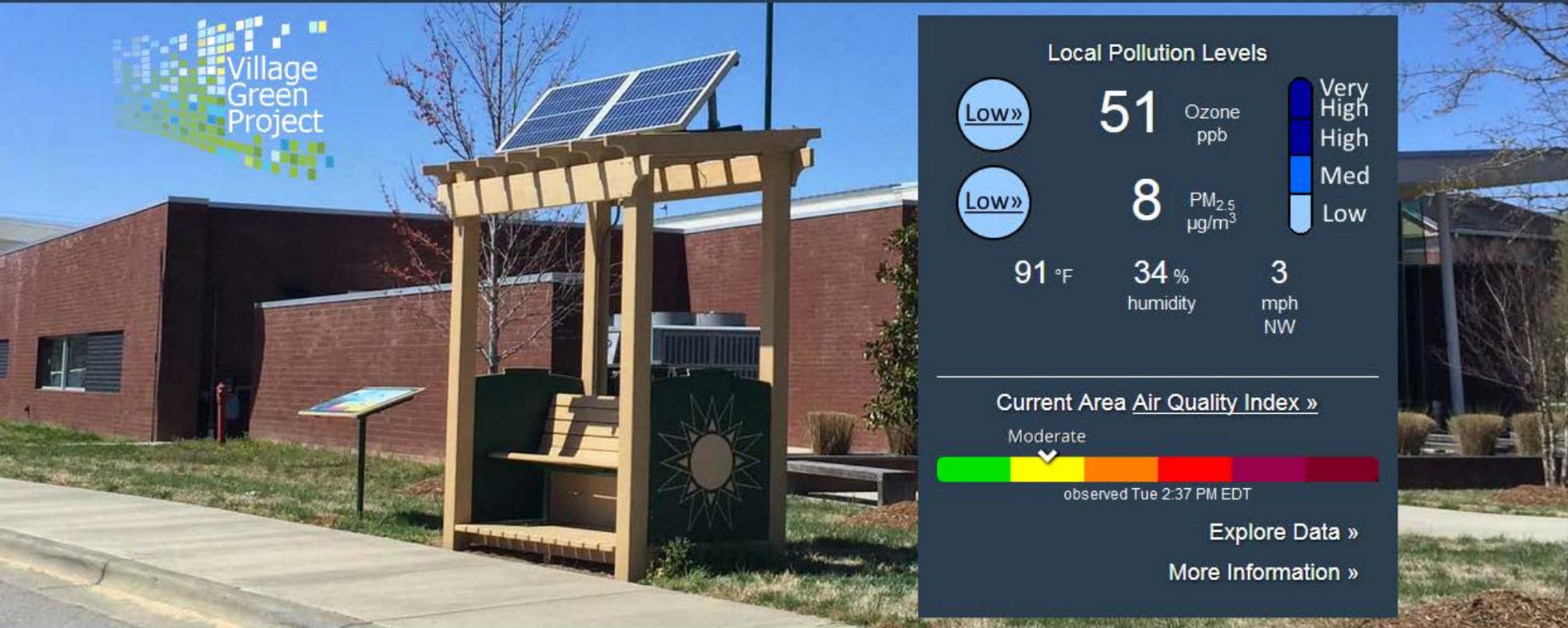
## Park Benches

- Meteorological Instruments
- Solar and wind powered

## Components Stored Behind Bench

- Air Sensors (PM & Ozone)
- Communications Component
- Power System



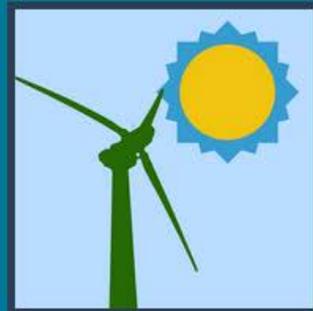


## Welcome to the Village Green Project

a research effort to discover new ways of measuring air quality and weather conditions in community environments.



Measuring and communicating on-the-spot air quality and weather conditions for research and awareness



Developing small and rugged data collection systems that can be powered by the wind and sun



Partnering with communities to pilot test the new technology in outdoor community spaces.

# Redesigned AirNow.Gov released!

- Site went live at 11am EDT on Wednesday, September 12
- Represents a “re-imagining” of the entire AirNow site
  - Used 11 personas to represent our user base
  - Consulted Google Analytics to see how the former site was used
  - “Started from scratch” rather than tweaking existing interfaces
- The redesign process
  - Internal brainstorming sessions late last year
  - Virtual and in-person user testing of prototypes
  - In-person testing at the National Air Quality Conference, January 2018
  - AirNow state, local, tribal, and federal partners beta test in May 2018



# A live demo of our new site!

The screenshot displays the AirNow website interface. At the top, a blue navigation bar contains the AirNow logo and menu items: AirNow, AQI & Health, Fires, Maps & Data, Education, International, Resources, and a search icon. Below the navigation bar, a dark grey header features an alert message: "Alert Welcome to the new AirNow.gov" and a weather icon showing a sun and clouds with the temperature "64 °F".

The main content area is dominated by a large circular gauge for "Current Air Quality". The gauge has a color-coded scale from 0 to 300, with the needle pointing to a green section labeled "Good". Below the gauge, it reads "Current Air Quality" and "8:00 AM EDT". To the right of the gauge, the "NowCast AQI" is displayed as "29 | OZONE".

Below the gauge, there is an "Air Quality Forecast" section with two columns: "Today" and "Tomorrow". Both columns show a green semi-circle and the word "Good". A button labeled "Air Quality Forecast Details" is located below this section.

On the right side of the main content area, there is a search input field labeled "ZIP Code, City, or State" with a location pin icon. Below it, the location "Arlington, VA" is displayed. Two buttons are present: "Air Quality Monitors Near Me" and "More Cities in Virginia".

At the bottom right of the page, there is a "Data courtesy of" section listing the following organizations: District of Columbia - Department of Energy and Environment, EPA Office of Atmospheric Programs, Maryland Department of the Environment, and Virginia Dept. of Environmental Quality.



**Alert** Welcome to the [new AirNow.gov](#)

64 °F

AQI Legend



ZIP Code, City, or State

**Arlington, VA**

[Air Quality Monitors Near Me](#)

[More Cities in Virginia](#)

**Air Quality Forecast**

Today

Tomorrow



Good



Good

[Air Quality Forecast Details](#)

**Data courtesy of**

District of Columbia - Department of Energy and Environment  
EPA Office of Atmospheric Programs  
Maryland Department of the Environment  
Virginia Dept. of Environmental Quality

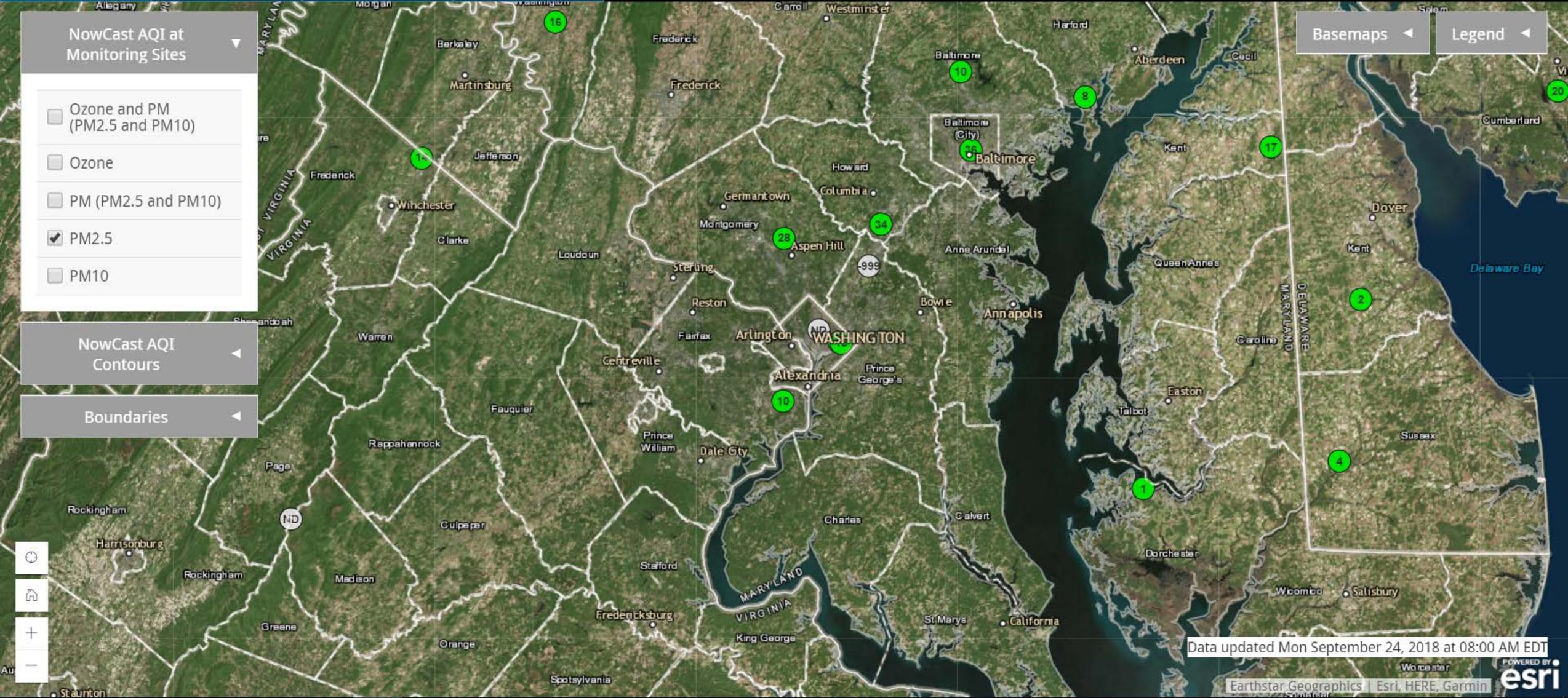
NowCast AQI at Monitoring Sites

- Ozone and PM (PM2.5 and PM10)
- Ozone
- PM (PM2.5 and PM10)
- PM2.5
- PM10

NowCast AQI Contours

Boundaries

Basemaps Legend



Map navigation controls: Home, Zoom In (+), Zoom Out (-)

Data updated Mon September 24, 2018 at 08:00 AM EDT

Current

Forecast

Animations

Archive

Info

Find address or place

NowCast AQI at Monitoring Sites

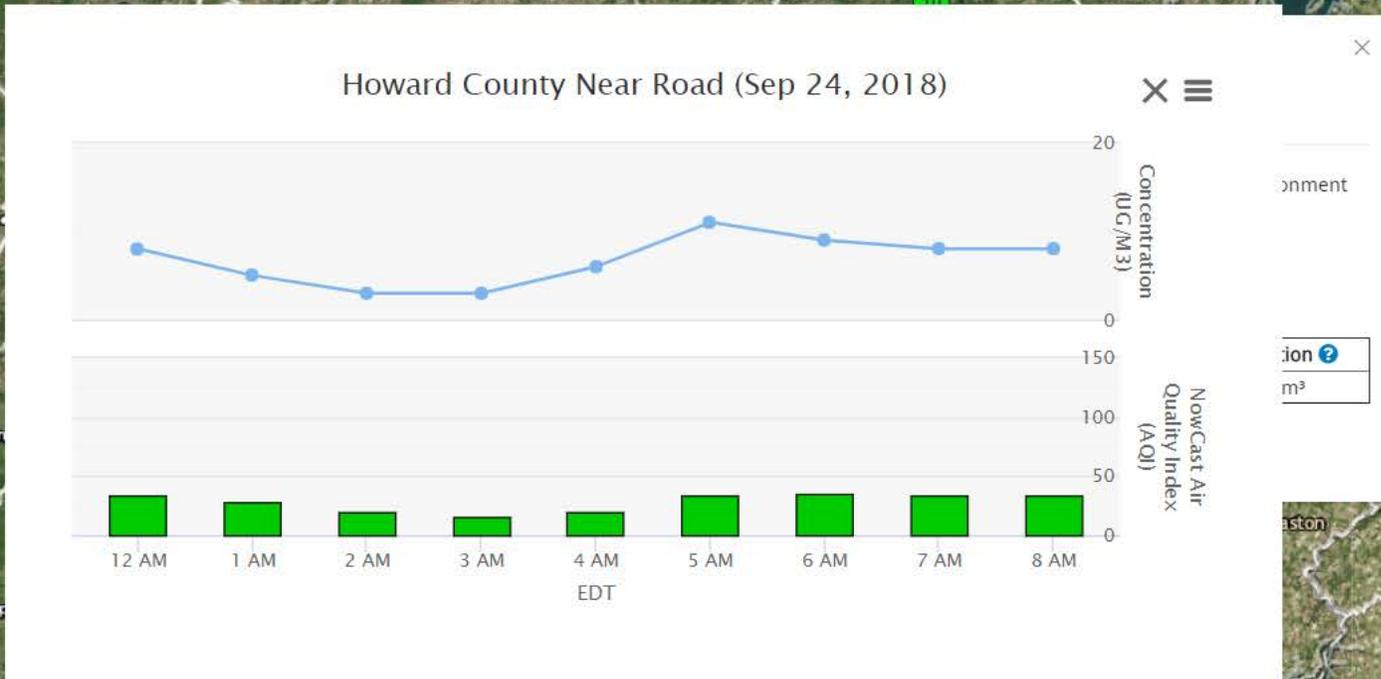
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Data updated Mon September 24, 2018 at 08:00 AM EDT

**Alert** Welcome to the new [AirNow.gov](#)

Arlington, VA

ZIP Code, City, or State

AQI



64 °F

# Current Air Quality

## Primary Pollutant

This pollutant currently has the highest AQI in the area.



OZONE

29

Good

## Steps to Take

Enjoy your outdoor activities.

## Other Pollutants



PM2.5

28

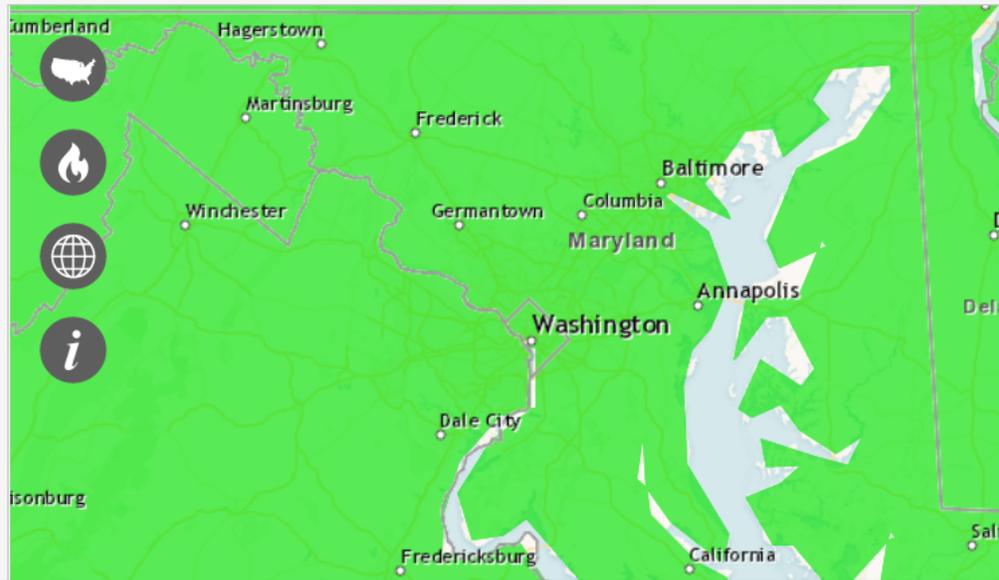
Good



PM10

3

Good

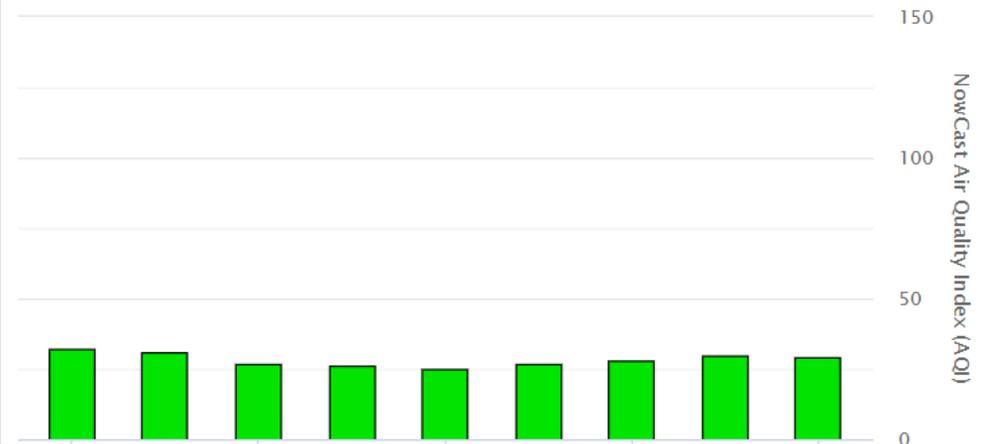


## Arlington, VA

Day

Week

Month



Map updated at 8:00 am, September 24th (EDT)

**Alert** Welcome to the [new AirNow.gov](#)

Arlington, VA

ZIP Code, City, or State

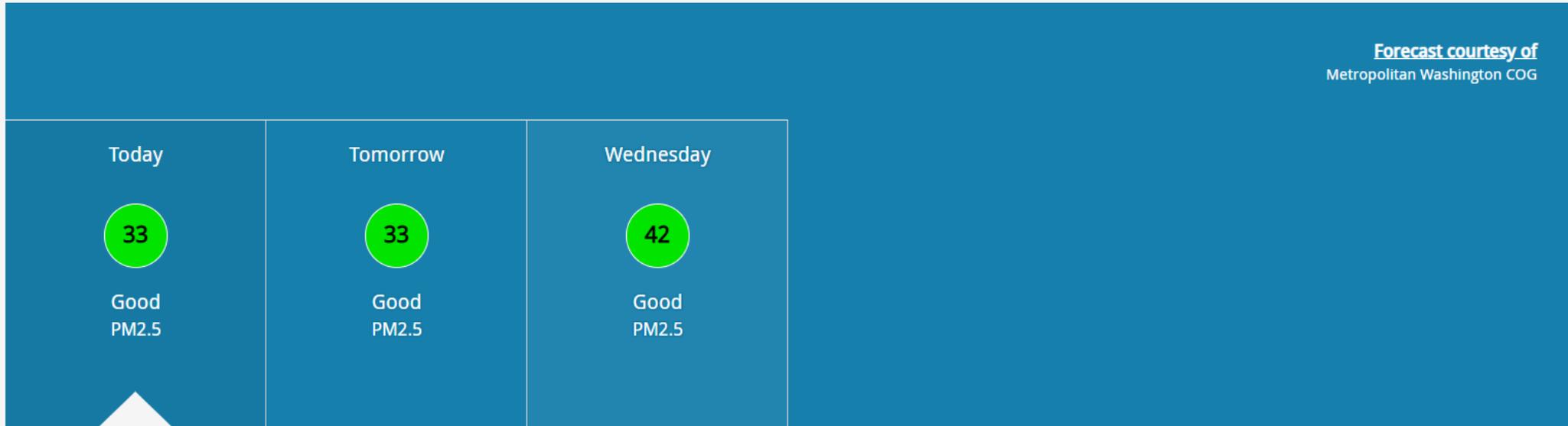


64 °F

# Air Quality Forecast

[Back to top](#)

Forecast courtesy of  
Metropolitan Washington COG



### Primary Pollutant

This pollutant currently has the highest forecasted AQI in the area.



PM2.5



Good

### Plan Your Day

Enjoy your outdoor activities.

### Other Pollutants



OZONE



Good

**Alert** Welcome to the [new AirNow.gov](#) S.

Arlington, VA

AQI



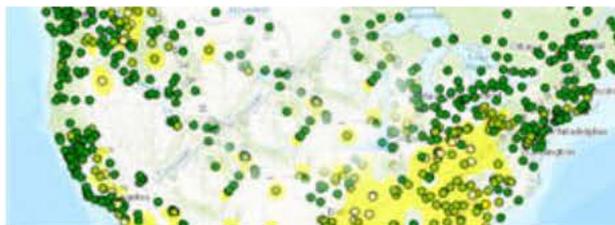
64 °F

AQI Legend



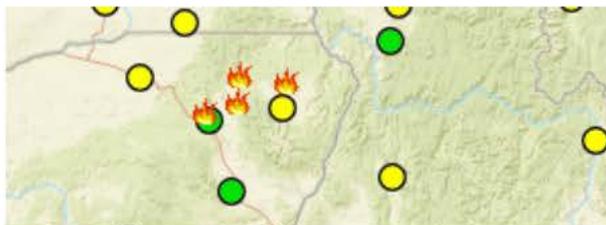
## Explore Maps & Data

[Back to top](#)



### Interactive Map

Display current and forecast air quality conditions across the U.S. Drill down to explore data at individual monitors.



### Fires

Explore current locations of wildfires, smoke plumes, and air quality monitors. Includes advisories and health information about wildfires.



### Embassies and Consulates

Explore data from air quality monitors at select U.S. embassies and consulates around the world.

S	M	T	W	T	F	S
29	30	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19

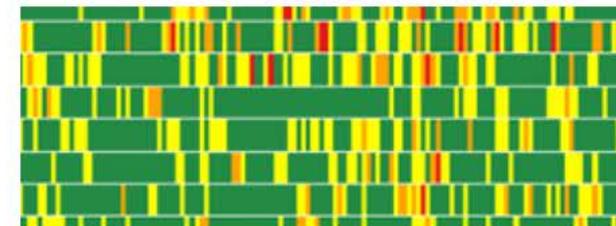
### Archives

Find air quality maps and data for yesterday, last month, or last year.



### AirCompare

Compare air quality by county to help with planning a vacation or relocating to a different city.



### EPA's Air Data

Access air quality data from U.S. air monitors dating back to 1980. Create graphical displays, technical reports, or data files.

Current

Forecast

Animations

Archive

Info

Find address or place



NowCast AQI at Monitoring Sites

NowCast AQI Contours

Show green contours

Ozone and PM (PM2.5 and PM10)

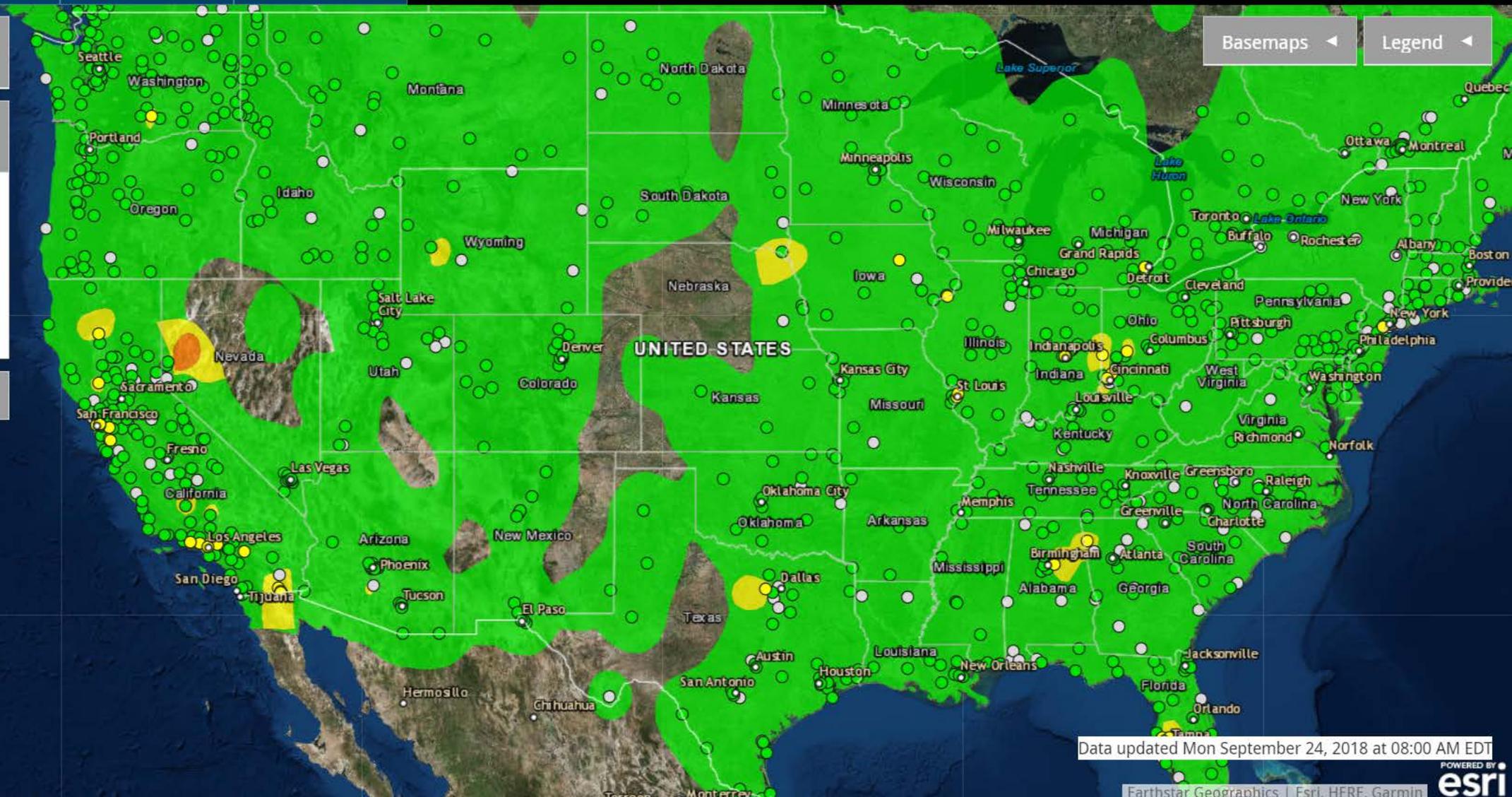
Ozone

PM2.5

Boundaries

Basemaps

Legend



Data updated Mon September 24, 2018 at 08:00 AM EDT

☁ 64

**Alert** Welcome to the new AirNow.gov

AQI Legend



ZIP Code, City, or State 📍

Air Quality Forecast

Today



Good

Tomorrow



Good

Daily Forecast More Cities in Virginia

