

US EPA ARCHIVE DOCUMENT

Environmental Protection Agency (EPA) Open Government Plan 3.0 Outline with Candidate Flagship Project Description

The Environmental Protection Agency (EPA) has a rich legacy as an open organization, and the Administration's Open Government (OpenGov) initiative has been a catalyst to re-examine our open practices with the goal of bringing tangible benefits to the public. This document serves as an outline for the structure of the Agency's Open Government Plan 3.0, expected to be published later this summer, and has been updated to include an additional candidate (AirNOW) which is being considered as a flagship project.

The public is encouraged to comment on the Flagship projects at: [OpenGov 3.0 blog](#)

I. New and Expanded Initiatives

This section will describe EPA's current progress and plans in supporting the following initiatives:

- A. Open Data
- B. Proactive Disclosures
- C. Privacy
- D. Whistleblower Protection
- E. Websites

II. Ongoing Initiatives

- A. Participation in Transparency Initiatives
- B. Public Notice
- C. Records Management
- D. Freedom of Information Act (FOIA) Requests
- E. Congressional Requests
- F. Declassification
- G. Participation
- H. Collaboration

III. Candidate Flagship Initiatives

Two efforts are being considered as candidate flagships: Enforcement and Compliance History Online (ECHO) and AirNow.

Government Description



- Removing many of the limitations on the amount of data that can be downloaded and mapped
- Allowing the public to know when Clean Water Act violations happen 3-4 months sooner and allowing users to rank the highest dischargers in a watershed on a yearly basis
 - Earlier release of CWA violation data
 - Integration with and more frequent updating of the CWA DMR Pollutant Loading Tool
- Integrating environmental data with compliance and enforcement data
 - CWA receiving water data
 - CAA pollutant release data
- Expanding and improving ECHO data offerings on data.gov
- Integrating with EPA's GeoPlatform GIS initiative and enhanced mapping.

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2. Outreach - An explanation of how your agency engages or plans to engage the public and maintain dialogue with interested stakeholders who could contribute innovative ideas to the initiative.

Our primary contact with the public and stakeholders has been via our ECHO feedback form. We respond to all questions and comments received from the site, and we log all suggestions for consideration and implement many. Users can also register to receive information on website releases and alerts.

The modernization process gives EPA the opportunity to significantly expand citizen participation. EPA has offered a public webinar, which allows users to better understand the site and provide feedback, and plans to offer more.

Specific site goals include:

- Implementing user support software that provides users the ability to track their feedback online and see answers to common questions
- Expanding log-in feature to all users (currently government only) and offering customization options, such as:
 - Sign up for email or text alerts when certain data changes at facilities in a chosen location
 - Save favorite searches
- Implementing monitored peer-to-peer communication tool such as a community forum, blog, or wiki for open on-going dialogue.

While improvements are ongoing, we remain committed to responding to all user feedback received via ECHO's "Contact Us Form" and incorporating suggestions to the extent possible.

3. External Partners - If appropriate, identification of any external agency partners with whom you directly collaborate on the initiative.

Data on ECHO come from EPA systems populated by in large part by state, local, and tribal environment agencies. EPA works closely with its regulatory partners in data receipt and release.

4. Measures - An account of how your agency plans to measure improved transparency, participation, and/or collaboration through this initiative.

Improved transparency and participation features will be measured by:

- Number of high value data sets and tools published
- Site usage (EPA Google Analytics)
- Popularity of new participation features.

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5. An explanation of the steps your agency is taking to make the initiative sustainable and allow for continued improvement.

The modernization process has moved ECHO from a custom-coded mainframe system to a sustainable, scalable Oracle data mart and trimmed operation and maintenance costs. Building website reports from web services will help shift the focus from data presentation to emphasizing structured data and metadata--making these underlying data openly available for use within agencies, among agencies, in the private sector, and by citizens. Moving toward increased user participation will allow EPA to respond to customers' needs and make it easier for them to find and share information and accomplish tasks. ECHO modernization focuses on enhancing the quality and timeliness of data and informative content, simplifying transactions, and increasing accessibility, and timeliness as resources allow.

B. AirNow: Steps to Support Collection by Citizen Scientists

Background

EPA's AirNow program provides the public with real time air quality data and forecasts -- actionable information citizens use to protect their health. Collecting data from state, local, tribal, and federal agencies, AirNow is the only national repository of real time air quality data and forecasts. AirNow contains ambient measurements from thousands of monitoring stations around the US, Canada, and Mexico, as well as forecasts from over 400 U.S. cities.

Besides digital content -- the AirNow web site, free EnviroFlash email service, and smartphone apps -- AirNow reaches the public via traditional media by collaborating with weather and media companies. Partnering with Weather Service Providers (WSPs) and media companies that supply weather data to print, television, and Internet media outlets, widens the distribution of this important information. The AirNow system serves as a model for other nations as well. AirNow-International (ANI) was released in 2010 after a fruitful collaboration with the Shanghai Environmental Monitoring Center (SEMC). The ANI package currently runs in the US, Mexico, and China, while many other nations are interested in the system's track record of providing public information.

Benefits

Before the AirNow system began in 1997, the public had fragmented, if any, access to real time air quality data or forecasts. Some state or local agencies provided data, while many did not. AirNow's national repository changed all that. Now, the public has 24/7 access to air quality information, while partners have access to their own and neighboring states' data for in-depth analyses. Social media offers new public participation in AirNow via Facebook and Twitter presence. An Application Programming Interface (API) now allows easy access to data feeds, opening the system to outside developers who are free to develop innovative new applications. As a Federal program, AirNow leverages resources by working with many agencies, such as the USFS and CDC, as well as various state and local agencies, to develop a wildfire website that will inform the public and government

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organizations of current air quality and emergency monitoring of wildfire events. Working with NASA to integrate satellite measurements, AirNow has improved coverage where air quality monitors are sparse.

Future Projects

At present, AirNow receives data mostly from very expensive and semi-permanent regulatory monitors, with a time resolution of one hour. Collaborating with the Office of Research and Development (ORD), a pilot project is underway to allow AirNow to accept and process small sensor data, with a time resolution of one minute or less. As the Agency prepares for a new wave of citizen scientists, the AirNow program will provide critical infrastructure.

Adding small but robust web applications to AirNow's Data Management Center will equip government partners with more efficient tools for managing their air quality information. Further expansion of the API will lead to more engagement with developers and the public.

AirNow will soon collect emergency air quality data provided by state and local agencies, emergency responders, and the United States Forest Service (USFS) during wildfire and prescribed burning episodes. This new data stream will allow AirNow to inform the public about air quality effects during fires, while also providing a central data repository for EPA, USFS, and emergency response agencies. AirNow's work with NASA resulted in a data fusion engine, necessary to integrate satellite estimates with ground level observations, but flexible enough to incorporate small sensor data, modeled data, or any other type of gridded data with minimum development costs. A proposal is being developed to expand that satellite data fusion, possibly with small sensors as well, internationally.

Benefits of Future Initiatives

By expanding the network of sensors that feeds AirNow to include small sensors, as well as monitors deployed for fire events, the public and air quality professionals will have more data in more places. More data will lead to better characterization of air quality, especially in remote areas and during events such as wildfires.

Extending the API will facilitate outside application development, leading to community-contributed applications that serve wider audiences. International projects involving NASA satellite data will both build capacity abroad, while also providing important measurements for international transport. The AirNow system is robust, extensible, and backed by a community of air quality agencies at many levels of government. These future initiatives will serve to continue that tradition and make the system even more useful to its partners, stakeholders, and the public.