The EPA AIRNow Program

Current air quality data and forecasts for the public and federal agencies

Earth Science Data and Information Networks for Public Health and Air Quality Session

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Outline

- **Background on EPA AIRNow Program**
- **About AIRNow-Tech**
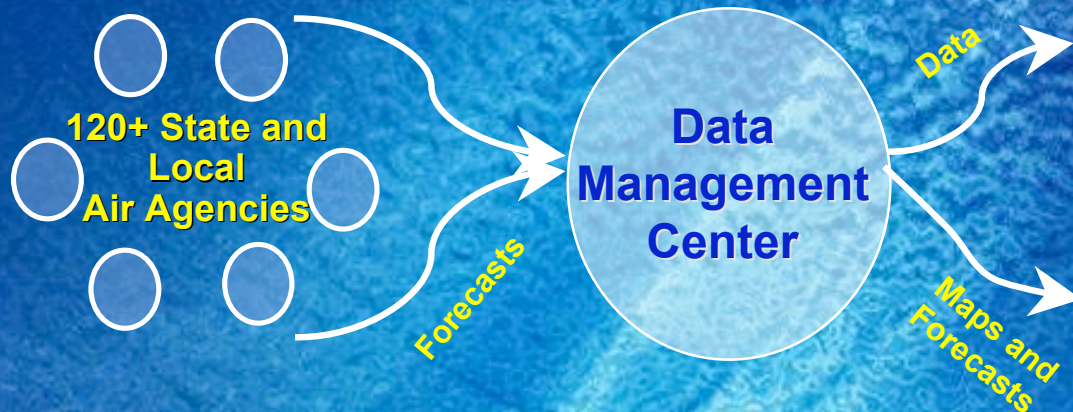- **Current Activity at EPA AIRNow**
- **The Future…**

AIRNow Overview

- **AIRNow**
  - **Centralized, nationwide system**
  - **Main purpose – to provide real-time data to public (AQI)**
  - **120+ federal, state, provincial, tribal, and local air agencies participate**
 - **Real-time products (maps, data feeds, forecasts)**
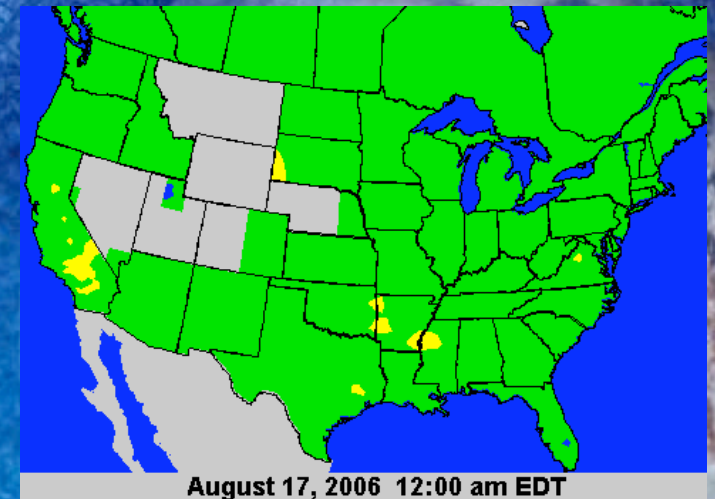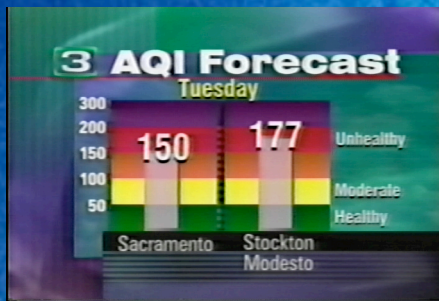
AIRNow Overview

- **Serves as a conduit for communications and support between EPA and Federal, State, local, tribal, and international agencies**
- **An air quality resource for…**
  - Public
  - Media
  - Researchers
  - Universities

120+ State and Local Air Agencies

Forecasts

Data Management Center

Data

Maps and Forecasts

About Air Quality Forecasts

- **Distributed network of agencies**
  - 80 forecasting agencies in U.S.
  - AIRNow provides centralized organization
- **Air quality forecasts**
  - 300 cities forecasting for ozone
  - 150 cities forecasting for $PM_{2.5}$
  - Air quality action days
- **Various forecasting methods**
  - Criteria (rule of thumb)
  - Statistical
  - Photochemical models
  - Experience
  - Numerical (example - NOAA model)
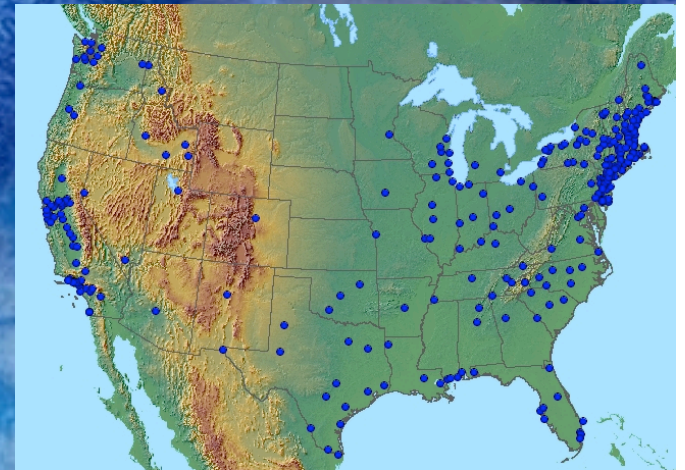
AIRNow also provides…

- **Air quality news stories and graphics**
- **Data to private weather companies and media**
- **Consultation about air quality**
- **Event coverage (wildfire and national outlooks)**
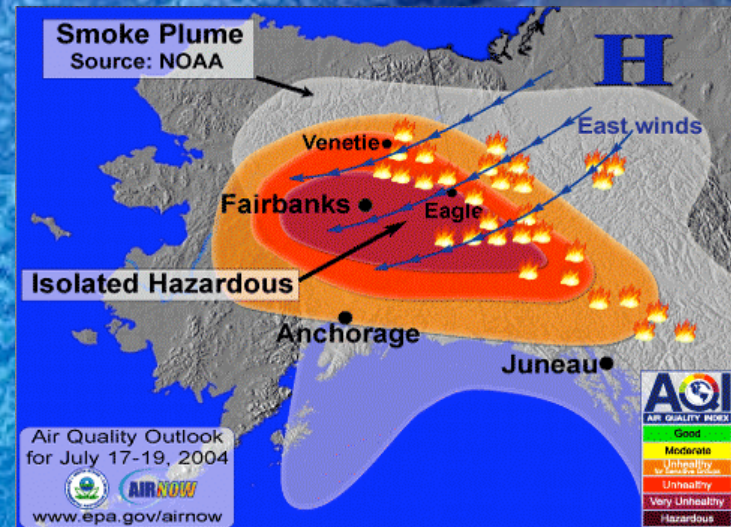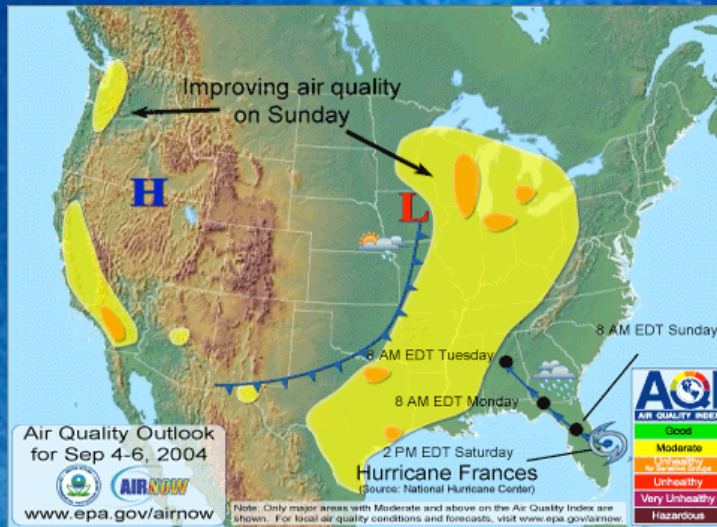
AIRNow - Product Distribution

Local air agency websites

July 17, 2006
AIRNow web site

National Media

Cell phone and pagers

Data and Forecasts

October 23, 2003
USA TODAY weather focus
Newspaper

Local Media

Decision Makers and Public

Other Media Outlets

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AIRNow-Tech Background

- **AIRNow-Tech (www.airnowtech.org)**
  - **Allows web-based access to the AIRNow Data Management Center (DMC) for AIRNow stakeholders**
  - **Interactive data management and analysis tools**
  - **Password-protected with individual user accounts**
  - **Benefits**
    - **Integration with lots of air quality and meteorological data**
    - **Use several interactive data analysis and display tools**
    - **Download data from many sites**
  - **Undergoing enhancements right now**
    - **Better querying and graphing**

Features of AIRNow-Tech
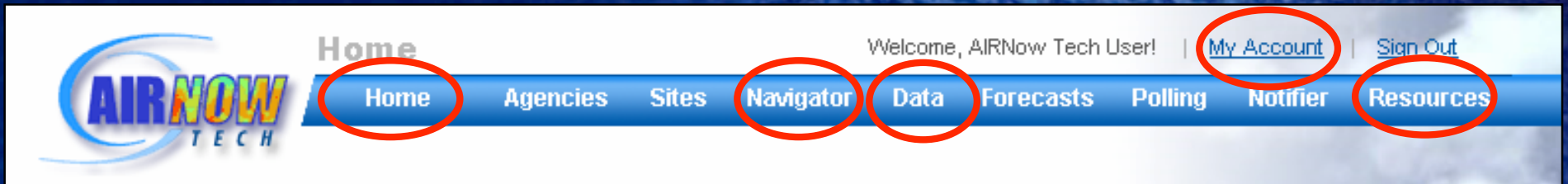
- **Home** – Relevant news, events, and snapshot of agency status

- **Navigator (GIS)** – Monitor maps, current and historical air quality and meteorological data display, HYSPLIT trajectory tool, numerous supporting GIS layers

- **Data** – Hourly, daily, and historical monitoring data queries

- **Resources** – General information for AIRNow program and the Data Management Center (DMC)

- **My Account** – Account management, customizable preferences, and tools
  - Email Reports

The EPA AIRNow Program

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Performing Data Queries

Data for 1993 to present

Enhanced data grouping and graphing

Useful for multi-year analysis

Limited to daily maximum 1-hr and 8-hr ozone averages

Performing Data Queries

Navigator GIS

Current Activity at EPA AIRNow

- **AIRNow Gateway**
- **Google Earth**
- **EnviroFlash**
- **Zip Codes**
- **Bluesky Rains – US Forest Service**
- **Air Quality Index Maps**
- **AirCompare web site**

Current Activity at EPA AIRNow

- **AIRNow Gateway**
  - **Will be the way to get large bulk data on a regular basis**
  - **Web services, FTP**
  - **Various formats and more information**
- **Google Earth**
  - **Current AIRNow data**
  - **Forecast information**
  - **Featured content this fall**

Current Activity at EPA AIRNow

- **EnviroFlash**
  - **EPA email/pager service for AQI forecasts**
- **Zip Codes**
  - **Trying to integrate zip codes with AIRNow forecasts and data**
- **BlueSky Rains**
  - **Working to get U.S. Forest Service PM data into AIRNow**
- **True AQI Maps**
  - **Working to map/integrate ozone and PM into an AQI map for airnow.gov and media**
- **AirCompare**
  - **New website for public**
  - **How does the air quality in my city compare with other cities? What time of year has the best air quality? Has the air quality in my city improved?**

The Future of AIRNow

- **AIRNow-Tech**
  - **Get satellite data for forecasters**
  - **Outside funding/help needed for this**
- **AIRNow Gateway**
  - **Enhancements as needed**
- **AIRNow-International**
  - **Better mapping software**
  - **Data standardization**
- **AQI Outreach**
  - **Enhance and market EnviroFlash**
  - **Identify other avenues**
  - **Medical community outreach**

Barriers We Face

- **Technical (measurements, inventories, data assimilation, modeling)**
  - Need to get air quality measurements/information as rich a network as weather
- **Resources – EPA a regulatory agency – voluntary programs sometimes slip through cracks**
- **Tools/models are great – but…**
  - Need to bring the tools to the forecasters
  - EPA not like NOAA – decentralized coordination of S/L agencies
  - Communicating the air quality/health message is overlooked