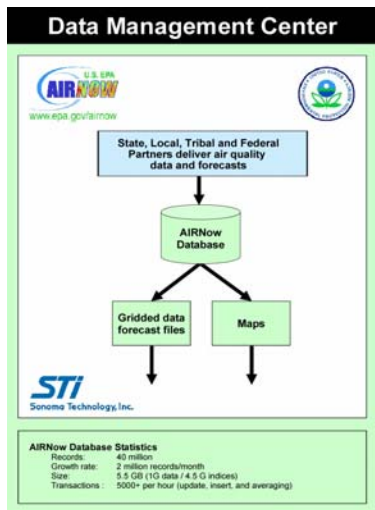


# The AQI and AIRNow: Providing Knowledge, Protecting Health

EPA Science Forum

Healthy Communities and Ecosystems



## Researchers

**U.S. EPA and NOAA-National Weather Service partnership** uses AIRNow data to compare model predictions to actual observations.

**BAMS** (Baron Advanced Meteorological Systems) uses AIRNow data to initialize its photochemical model and verify ozone predictions.

**NOAA's Forecast Systems Laboratory** ingests AIRNow data for display in their FXNet weather workstation software.

**NASA's measurements** of satellite-derived Aerosol Optical Depth are compared in real-time to surface particulate matter concentration data supplied by AIRNow.

## National Media

**CNN** meteorologists watch forecasts on the AIRNow web site daily. During summer 2003, CNN broadcast air quality forecast maps on 25 days with poor air quality.

**USA TODAY** publishes air quality forecasts for 36 cities daily. The weather page is the second most popular page for their 2.3 million readers. Special Weather Focus graphics educate readers about air quality concepts.

**The Weather Channel** disseminates AIRNow data through radio, the Internet, television, and cellular phones. Air quality forecasts are televised on The Weather Channel 19 times a day, airing more frequently during poor air episodes. These forecasts reach over 21 million homes daily. Localized air quality forecasts appear 4 to 16 times an hour on WeatherScan (a local digital cable feed reaching nearly 7 million homes) and 48 times a day on "Local on the 8s" segments.

AIRNow is the public's web resource for real-time air quality data and forecasts. This web site received over 20 million visits from May 1 to end-of-year 2003.

## Public

**AQI**  
AIR QUALITY INDEX

Pollutant: Particles  
 Today's Forecast: 160  
 Quality: Unhealthy

People with heart or lung disease, older adults, and children should avoid prolonged or heavy exertion. Everyone else should reduce prolonged or heavy exertion.

## Re-distributors

**WEATHERBANK, INC.**  
Five-thousand clients have access to the custom air quality forecast maps that WeatherBank produces using AIRNow data.

**ACCU WEATHER**  
AccuWeather creates air quality graphics for its web site and distributes AIRNow data to 400+ newspapers—each with an average circulation of 100,000.

**WeatherBug**  
WeatherBug's desktop current conditions, forecasts, and action day alerts based on AIRNow data to 3.5 million people each day.

**AIRNow ozone maps** are distributed hourly by Weather Services International (WSI) to 300 television stations via satellite broadcast.

**Meteorologix** creates custom air quality map graphics using AIRNow data and distributes those maps to their 100 media clients.

**WeatherUnderground** estimates that three-quarters of a million web site users may read or notice air quality forecasts and maps each day. AIRNow data are also redistributed to the Tribune News Service and eight newspapers.

**WeatherCentral** disseminates ozone maps and forecast data from AIRNow to subscribers via satellite broadcast.

## Stakeholder Applications

**AIRNow-Tech** provides local, state and federal stakeholder agencies with access to real-time and historical air quality and forecast data.

**Fast Aerosol Sensing Tools for Natural Event Tracking (FASTNET)**, a GIS application to diagnose and track large aerosol events, incorporates particulate matter data from AIRNow.

**AirShare**, the air quality communicator's homepage, shows prior day, current, and forecasted air quality data from AIRNow.

Information current as of February 2004.

| Air Quality Index Levels of Health Concern | Numerical Value | Meaning  |
|--|-----------------|--|
| Good                                       | 0-50            | Air quality is considered satisfactory, and air pollution poses little or no risk.   |
| Moderate                                   | 51-100          | Air quality is acceptable; however, for some pollutants there may be a moderate health concern for a very small number of people who are unusually sensitive to air pollution. |
| Unhealthy for Sensitive Groups             | 101-150         | Members of sensitive groups may experience health effects. The general public is not likely to be affected.  |
| Unhealthy                                  | 151-200         | Everyone may begin to experience health effects; members of sensitive groups may experience more serious health effects.   |
| Very Unhealthy                             | 201-300         | Health alert: everyone may experience more serious health effects.   |