Fact Sheet

Reporting Area File

Introduction

The U.S. Environmental Protection Agency's (EPA) nationwide, voluntary program, AirNow (www.airnow.gov), provides real-time air quality data and forecasts to protect public health across the United States, Canada, and parts of Mexico. AirNow receives real-time ozone and $PM_{2.5}$ data from over 2,000 monitors and collects air quality forecasts for more than 300 cities.

As part of the Global Earth Observation System of Systems (GEOSS) (www.epa.gov/geoss) program, the AirNow API system broadens access to AirNow data and data products. AirNow API produces data products in several standard data formats and makes them available via FTP and web services. This document describes the reporting area file formats.

All data provided by AirNow API are made possible by the efforts of more than 120 local, state, tribal, provincial, and federal government agencies (www.airnow.gov/index.cfm?action=airnow.partnerslist). These data are not fully verified or validated and should be considered preliminary and subject to change. Data and information reported to AirNow from federal, state, local and tribal agencies are for the express purpose of reporting and forecasting the Air Quality Index (AQI). As such, they should not be used to formulate or support regulation, trends, guidance, or any other government or public decision making. Official regulatory air quality data must be obtained from EPA's Air Quality System (AQS) (www.epa.gov/ttn/airs/airsaqs). See the AirNow Data Exchange Guidelines at http://airnowapi.org/docs/DataUseGuidelines.pdf.

About the Air Quality Index

The EPA developed the AQI, which reports levels of ozone, particle pollution, and other common air pollutants on the same scale. An AQI reading of 101 corresponds to a level that is above the national air quality standard—the higher the AQI rating, the greater the health impact.

The AQI is divided into color-coded categories, and each category is identified by a simple informative descriptor. The descriptors are intended to convey information to the public about how air quality within each category relates to public health. The table below defines the AQI categories.

AQI Numbers	AQI Category (Descriptor)	AQI Color	Color Formulas (RGB)	(CMYK)
0 - 50	Good	Green	0,228,0	224,0,224,30
51 - 100	Moderate	Yellow	255,255,0	0,0,255,0
101 - 150	Unhealthy for Sensitive Groups	Orange	255,126,0	0,132,255,0
151 - 200	Unhealthy	Red	255,0,0	0,255,255,0
201 - 300	Very Unhealthy	Purple	153,0,76	0,153,80,102
301 - 500	Hazardous	Maroon	76,0,38	0,76,38,179

File Format Specifications

Data are stored in an ASCII file that contains yesterday's observed maximum AQI level and the latest forecasts and observations for all reporting areas. Air quality agencies throughout the United States typically issue these forecasts once or twice a day. Agencies usually submit the forecasts in the late morning to early afternoon hours (local time), and all forecasts are completed by 1700 ET (2100 GMT) each day. Current observations are updated each hour. The data file is updated several times per hour. File specifications are as follows:

File name format:	**reportingarea.dat**
Update frequency:	**hourly**
Field delimiter:	**| (ASCII character 124)**
Field specifications:	**see table on the next page**

Location of File: The file is available at AirNow-API's FTP site (provided below). These data files can also be "pushed" to another FTP site (contact the AirNow DMC at AirNowDMC@sonomatech.com for details).

FTP site:

Address:	ftp.airnowapi.org
Directory:	ReportingArea
User ID:	sign up for account at www.airnowapi.org
Password:	sign up for account at www.airnowapi.org

Report Units: None.

Sample Record:

issue date|valid date|valid time|time zone|record sequence|data type|primary|reporting area|state code|latitude|longitude|pollutant|AQI value|AQI category|action day|discussion|forecast source

For Data Field Definitions, see the table on the next page.

Sample Records:

06/16/07|06/15/07||EDT|-1|Y|N|Adams - Mt. Greylock|MA|42.6367|-73.1686|PM2.5|27|Good|No|Massachusetts Dept. of Environmental Protection

06/16/07|06/16/07|15:00|EDT|0|O|Y|Cleveland-Akron-Lorain|OH|41.48|-81.679|PM2.5|73|Moderate|No|Northeast Ohio Areawide Coordinating Agency

06/12/07|06/16/07||CDT|4|F|N|Des Moines|IA|41.535|-93.66|CO||Good|No|Polk Co. Air Quality Division

06/13/07|06/16/07||PDT|3|F|Y|Folsom|CA|38.6767|-121.1461|OZONE||Unhealthy for Sensitive Groups|No|Today, an upper-level ridge of high pressure will strengthen over Sacramento, reducing mixing, producing sunny skies and hot temperatures, and strengthening the temperature inversion. However, surface high pressure over the Pacific Northwest will cause light to moderate northerly winds to develop in the valley, dispersing some pollutants. As a result, ozone levels will be low-end Unhealthy for Sensitive Groups in the foothills and Moderate in the valley. Tomorrow, the ridge will remain strong over northern California, keeping skies sunny and temperatures hot in Sacramento. In addition, light northerly winds in the morning will shift back to light onshore winds in the afternoon. These conditions will result in Unhealthy for Sensitive Groups ozone levels throughout the Sacramento region.|Sacramento Metro. AQMD.

Field Specifications

Field Name	Characters	Units/Format	Description	Example
Issue date	8	mm/dd/yy	Local date that forecast is issued. Note that for current and yesterday's observed AQI, this field is always today's date.	05/01/05
Valid date	8	mm/dd/yy	Local date for which forecast is valid or local date on which an observation is made.	05/01/05
Valid time	5	hh:mm	Time for which a record is valid. Note that for forecasts and yesterday's AQI, this field will be blank.	17:00
Time zone	3	Text	Time zone for report observations. Note that for forecasts and yesterday's AQI, this field will be blank.	EDT
Record sequence	3	Numeric	Indicates the day number of a forecast or whether it is an observation. For example, -1 – Yesterday's observed maximum AQI 0 – Same-day forecast or hourly AQI observation 1 – Next-day forecast This field does not always reference from zero for forecasts. Always refer to the "Valid date" field to determine when a forecast is valid.	-1
Data type	1	Text	F – Forecast Y – Yesterday's AQI O – Hourly AQI Observation	O
Primary	1	Text	Y – primary pollutant (i.e., highest AQI reading) N – not primary	N
Reporting area	45	Text	Name of the area for reported values and AQI.	Columbus
State code	2	Text	Name of the state where the reporting area is located.	OH
Latitude	7	Numeric	Latitude of the reporting area (decimal degrees).	39.9890
Longitude	9	Numeric	Longitude of the reporting area (decimal degrees).	-82.9870
Parameter name	10	Text	Name of the parameter reported in that record.	OZONE
AQI value	3	Numeric	0 to 500. AQI value for the reporting area for the day. This field is blank for cities with only AQI categorical forecasts.	33
AQI category	40	Text	Good (0-50 AQI) Moderate (51-100 AQI) Unhealthy for Sensitive Groups (101-150 AQI) Unhealthy (151-200 AQI) Very Unhealthy (201-300 AQI) Hazardous (>300 AQI)	Good
Action Day	3	Yes/No	This field indicates whether an air quality action day is issued.	Yes
Discussion	500	Text	Forecast discussion. Note that for hourly AQI observations and cities without forecast discussions, this field will be blank.	"An upper-level trough"
Forecast Source	100	Text	Name of agency submitting forecast.	MORPC

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