



Data Collection Worksheet

Please Note: The Data Collection Worksheet (DCW) is a tool to aid integration of a PhenX protocol into a study. The PhenX DCW is not designed to be a data collection instrument. Investigators will need to decide the best way to collect data for the PhenX protocol in their study. Variables captured in the DCW, along with variable names and unique PhenX variable identifiers, are included in the PhenX Data Dictionary (DD) files.

US Environmental Protection Agency Air Quality Index Report

The US Environmental Protection Agency Air Quality Index Report

(<https://www.epa.gov/outdoor-air-quality-data/about-air-data-reports#aqi>)

includes the annual summary of AQI values for counties or core based statistical areas (CBSA). The report includes the following columns.

Days with AQI

Number of days in the year having an Air Quality Index value. This is the number of days on which measurements from any monitoring site in the county or MSA were reported to the Air Quality System (AQS) database.

Days Good

Number of days in the year having an AQI value 0 through 50.

Days Moderate

Number of days in the year having an AQI value 51 through 100.

Days Unhealthy for Sensitive Groups

Number of days in the year having an AQI value 101 through 150.

Days Unhealthy

Number of days in the year having an AQI value 151 through 200.

Days Very Unhealthy

Number of days in the year having an AQI value 201 or higher. This includes the AQI categories very unhealthy and hazardous. Very few locations (about 0.3% of counties) have any days in the very unhealthy or hazardous categories.

AQI Max

The highest daily AQI value in the year.

AQI 90th %ile

90 percent of daily AQI values during the year were less than or equal to the 90th percentile value.

AQI Median

Half of daily AQI values during the year were less than or equal to the median value, and half equaled or exceeded it.

Days CO

Days NO2

Days O3

Days SO2

Days PM2.5

Days PM10

A daily index value is calculated for each air pollutant measured. The highest of those index values is the AQI value, and the pollutant responsible for the highest index value is the "Main Pollutant." These columns give the number of days each pollutant measured was the main pollutant. A blank column indicates a pollutant not measured in the county or CBSA.

US EPA Air Quality Index Ranges and Associated Categories

Range	Category
0-50	Good
51-100	Moderate
101-150	Unhealthy for Sensitive Groups
151-200	Unhealthy

201-300	Very Unhealthy
301-500	Hazardous

Protocol source: <https://www.phenxtoolkit.org/protocols/view/290101>