

Flagging Data in AQS for Exceptional Events

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Air Quality System (AQS) Overview

- AQS contains ambient air quality data collected by the EPA, state, local, and Tribal agencies from regulatory monitors.
- The EPA uses these data for regulatory purposes, such as area designations, and for various air quality assessments, modeling for permit reviews, preparing reports, and exceptional events demonstrations and tools.
 - For example, the EPA used “flagged” data in AQS when analyzing and developing tiering thresholds presented in the draft *PM_{2.5} Wildland Fire Exceptional Events Tiering Tool and Document*.
- Flagging potential event-influenced data in AQS is part of the initial notification process for exceptional events.

AQS Requirements and Capabilities

- Under the Exceptional Events Rule (40 CFR 50.14)
 - Data associated with causing an exceedance or violation of a national ambient air quality standard (NAAQS) must be flagged to be considered for exclusion under the Exceptional Events Rule.
 - When EPA concurs with the air agency's request for data exclusion under the Exceptional Events Rule, EPA places "concurrency" flags in AQS.
 - Data with concurrency flags are excluded from the data set used to calculate design values used for regulatory decisions.
- The Exceptional Events Rule Preamble
 - Requires a Unique Event Name.
 - Requires an Initial Event Description.
 - Allows agencies to flag a single data point with multiple events.
 - Allows the inclusion of include geographic, temporal, and additional metadata.
 - Allows the association of multiple events with an individual sample data measurement.
 - Recognizes NAAQS violations caused by multiple events.
 - For PM Data: flagging any hour of a day will automatically flag the entire day.

Qualifying (“Flagging”) Data in AQS

- “Flag” is the common terminology for a data qualifier code in the EPA’s AQS.
- To create a new event within AQS:
 - Enter an “initial event description” that contains a qualifier code and qualifier description
 - Enter a brief description of the event
 - Enter the event dates
 - Enter additional comments (optional)
- AQS allows air agencies to associate affected monitors and specific measurements with a given event.

Creating an Event in AQS: Maintain Event Form

Maintain Exceptional Events (National Air Data Group)

Define Event Associate Raw Data with Event

Screen Grp Name Colorado

Qualifier Code	Qualifier Description	Event Begin Date	Event End Date
RJ	High Winds		

Event Description High winds/blowing dust event on 20091005 under investigation by APCD

Comment On October 5, 2009, a strong surface low in southeastern Colorado and strong winds aloft combined to produce sustained southwesterly winds of 30 to 35 mph and gusts as high as 52 mph at Alamosa, Colorado. Abnormally dry to severe drought conditions prevailed across southwest Colorado and the Four-Corners area of Arizona, Utah, and New Mexico on October 5, 2009. NOAA GOES Aerosol and Smoke Product (GASP) imagery for this day suggests that there was widespread blowing dust in the San Luis Valley.

Url

Creating an Event in AQS: Event Association Form

Maintain Exceptional Events (National Air Data Group)

Define Event Associate Raw Data with Event

Event Description
High winds/blowing dust event on 20091005 under investigation by APCD

Screen Grp Name Qualifier Code Qualifier Description Event Begin Date Event End Date
Colorado RJ High Winds

State Code County Code Site ID Parameter POC
Query Affected Monitors

Query By Date Range Associate All Disassociate All Reset Actions

Monitor Key	Begin Date	End Date	# Associated	# Unassociated	Action
08-003-0001-81102-1	20060428	20160405	1	8	No Action
08-003-0001-85101-1	20130531	20130531	0	1	No Action
08-003-0003-81102-1	20020521	20160405	0	8	No Action
08-003-0003-85101-1	20130531	20130531	0	1	No Action
08-007-0001-81102-3	20060215	20130408	0	2	No Action
08-029-0004-81102-1	20090425	20090425	0	1	No Action
08-043-0001-81102-1	19990331	19990331	0	1	No Action

Types of Qualifier (“Flags”) Codes in AQS

- Within AQS, air agencies may use two types of data qualifier codes: Request Exclusion flags (“r”) or Informational Only flags (“i”).
 - Air agencies are encouraged to use “i” series flags to initially identify values they believe may have been affected by an event, but for which they do not yet know if they will request exclusion or develop a demonstration.
 - Air agencies should enter “r” flags in AQS for data requested for exclusion, as part of the initial notification process. The EPA is not able to act on exceptional events demonstrations for event-related data in AQS that air agencies have not assigned an “r” flag.
- Using “r” (request exclusion) flags may trigger mitigation plan requirements. The use of “i” (informational) flags will not trigger mitigation plan requirements.
- If an exceptional events demonstration is concurred on, the EPA will flag the data with concurrence (“R”) flags.

Qualifier Codes ("Flags") for Fire-Related Events

Qualifier Code	Qualifier Description	Qualifier Type	Qualifier Type Code
if	Fire – Canadian	Informational Only	INFORM
rf	Fire - Canadian	Request Exclusion	REQEXC
ig	Fire – Mexico/Central America	Informational Only	INFORM
rg	Fire – Mexico/Central America	Request Exclusion	REQEXC
im	Prescribed Fire	Informational Only	INFORM
rm	Prescribed Fire	Request Exclusion	REQEXC
ip	Structural Fire	Informational Only	INFORM
rp	Structural Fire	Request Exclusion	REQEXC
it	Wildfire – U.S.	Informational Only	INFORM
rt	Wildfire – U.S.	Request Exclusion	REQEXC

Questions?
