

Flagging Data to Identify Event Impacts

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WESTAR Exceptional Events Workshop

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Topics

The Importance of Tracking Evidence of Events in Real Time

What Flag To Use and When: The Difference Between I/r/R Flags

Exceptional Event Demonstrations and Agency Responsibilities

Maintaining Events in AQS: Define and Associate with Data

Considerations for Flagging

- Recommendations
 - Use descriptive qualifier or informational flags
 - Be consistent with your flagging
- Rationale for flags should be supported by the appropriate documentation
 - Satellite Imagery, Measured Wind Speeds, Regional Impact Concentrations, etc.

Real Time Event Tracking

Surveillance and Enforcement

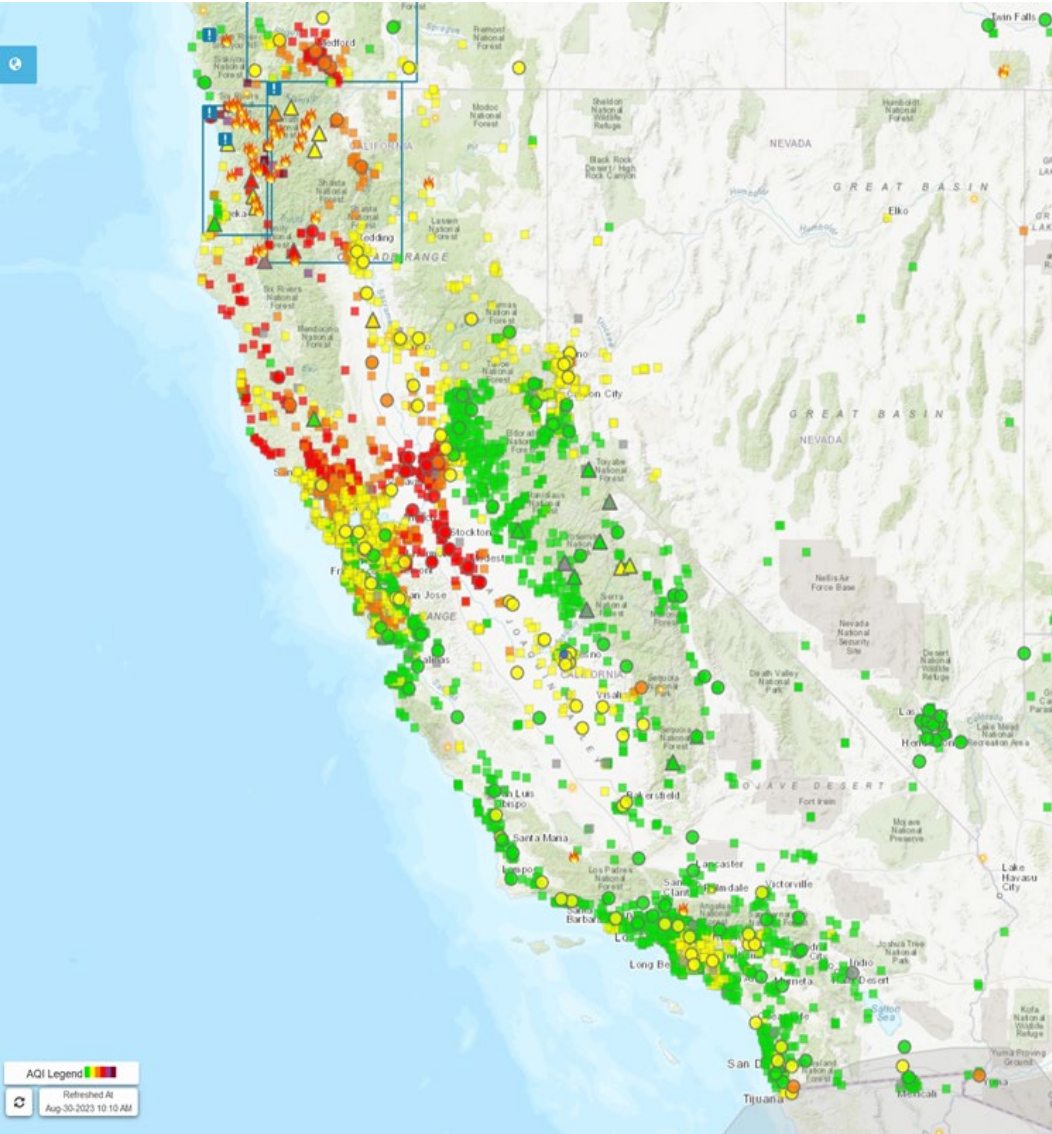
- Inspectors and air monitoring operators are looking for activity around the area

Air Pollution Monitoring Network

- Real-time concentrations for a variety of pollutants

Wildfire Impacts: August 30, 2023

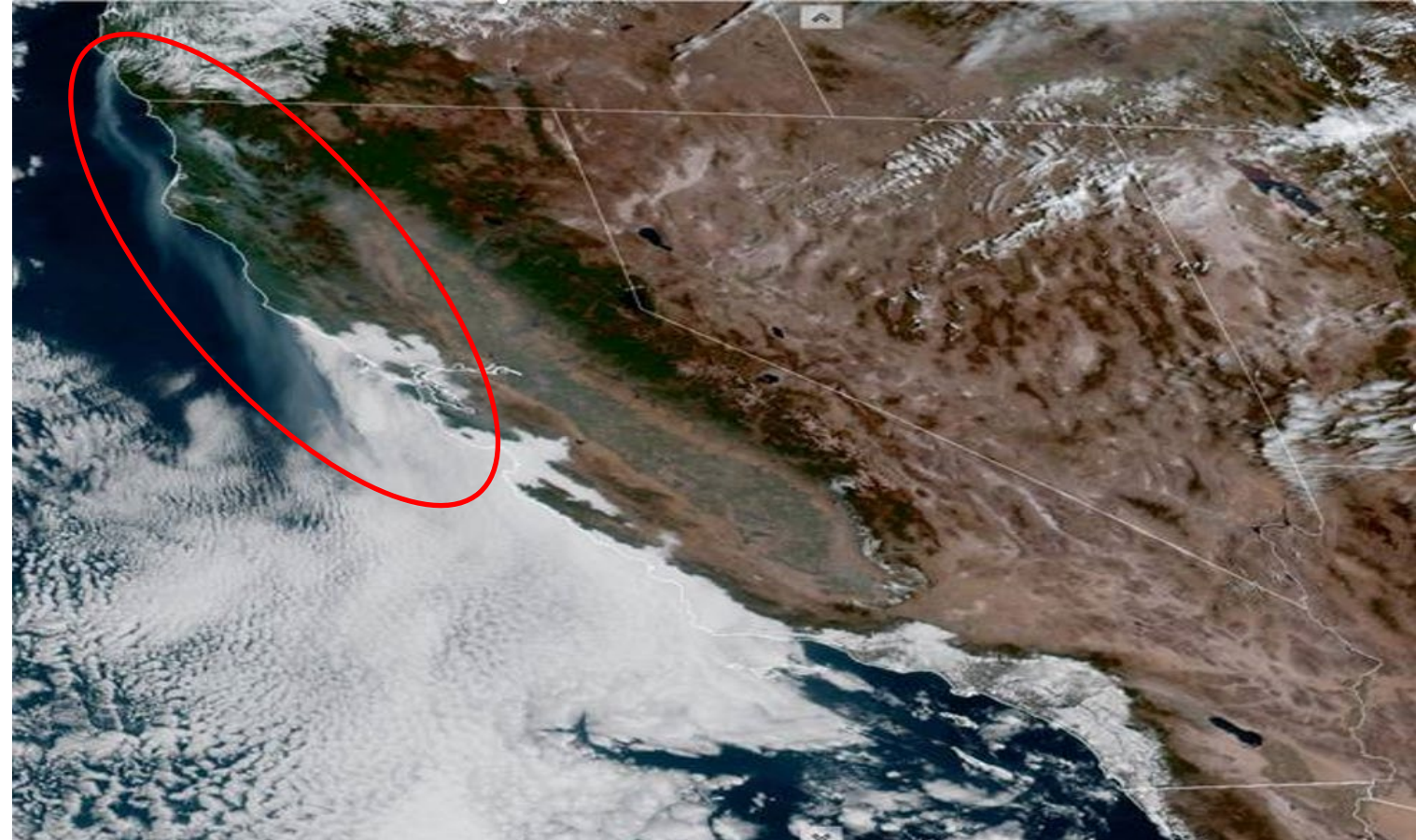
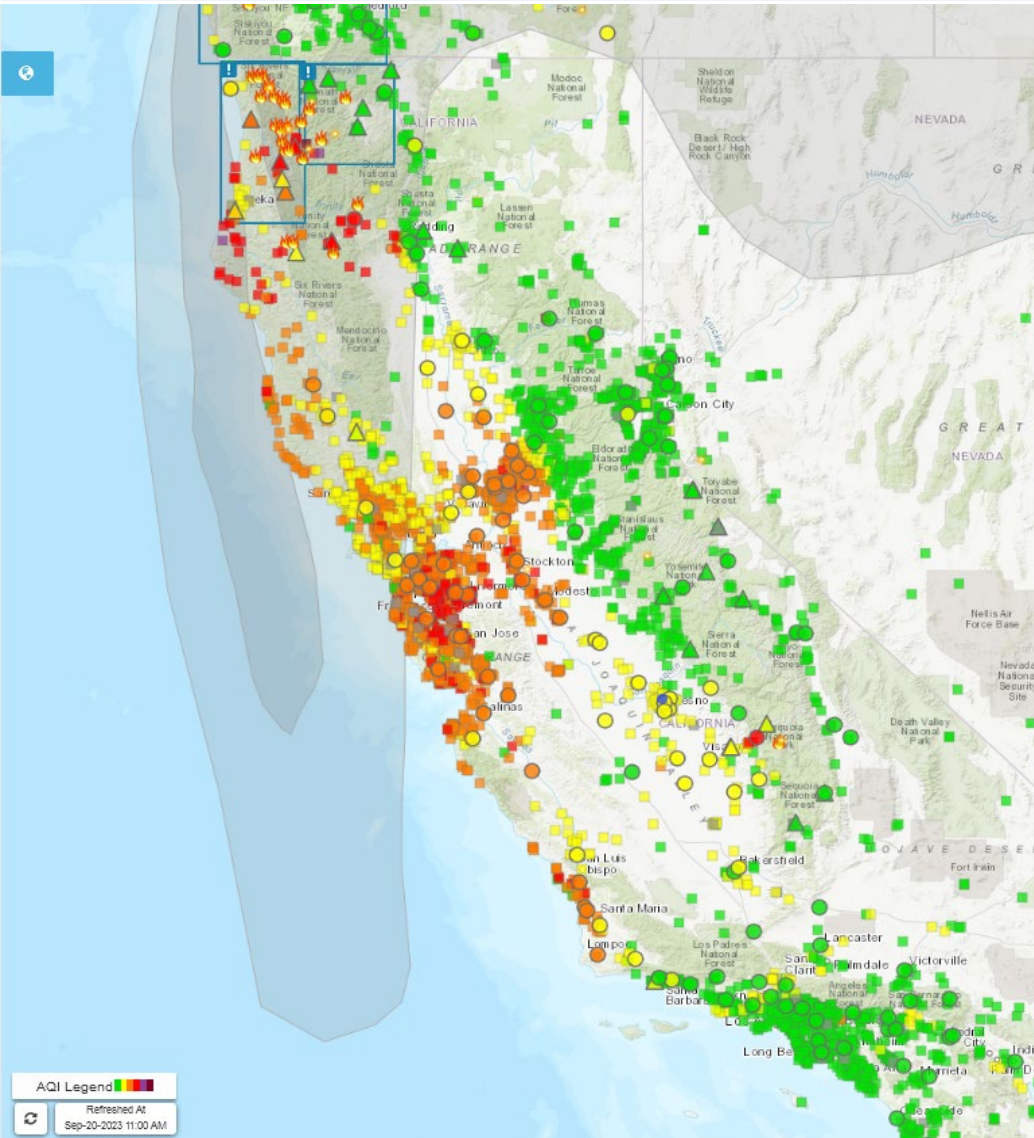
Observations as of August 30, 2023 at 10:10 AM PDT:



Name of Fire	County
<u>Bedrock Fire</u>	Willamette NF - Oregon
<u>2023 SRF Lightning Complex and Redwood Lightning Complex</u>	Humboldt
<u>Lost Fire</u>	Del Norte
<u>Deep Fire</u>	Shasta
<u>2023 Happy Camp Complex</u>	Siskiyou
<u>Smith River Complex</u>	Del Norte
<u>South Fork Complex</u>	Redding
<u>Redwood Fire</u>	Tulare

Wildfire Impacts: September 20, 2023

Observations as of September 20, 2023 at 11:00 AM PDT:



Name of Fire	County
<u>2023 SRF Lightning Complex and Redwood Lightning Complex</u>	Humboldt
<u>2023 Happy Camp Complex</u>	Siskiyou
<u>Smith River Complex</u>	Del Norte
<u>Redwood Fire</u>	Tulare


10.0m Wind Speed mph	10.0m Wind Gust mph	10.0m Wind Direction
36.8	49.5	NW
34.5	46.0	NNW
34.5	49.5	NW
33.4	43.7	NW
31.1	43.7	NNW
36.8	46.0	NW
32.2	40.3	NW
38.0	46.0	NW
33.4	46.0	NW
35.7	43.7	NW
32.2	43.7	NW
38.0	44.9	NW
34.5	42.6	NW
32.2	44.9	NW
41.4	48.3	NW
36.8	47.2	NW
36.8	47.2	NNW
39.1	44.9	NNW
33.4	42.6	NNW
29.9	42.6	NNW

Wind-Blown Dust




23-May-2023 12:20:01 PM 65.717636 N:119.71625 W

Public Notification of Events

 **Valley Air District**
@ValleyAir Follow

Ongoing wildfires in northern California and Oregon and the Redwood Fire in Tulare County are again generating smoke that is impacting the San Joaquin Valley. The District has issued an Air Quality Alert with the National Weather Service. Learn more at ow.ly/IEE250PO4JI



3:02 PM · 20 Sep 23 · 4,939 Views

 **Valley Air District**
@ValleyAir Follow

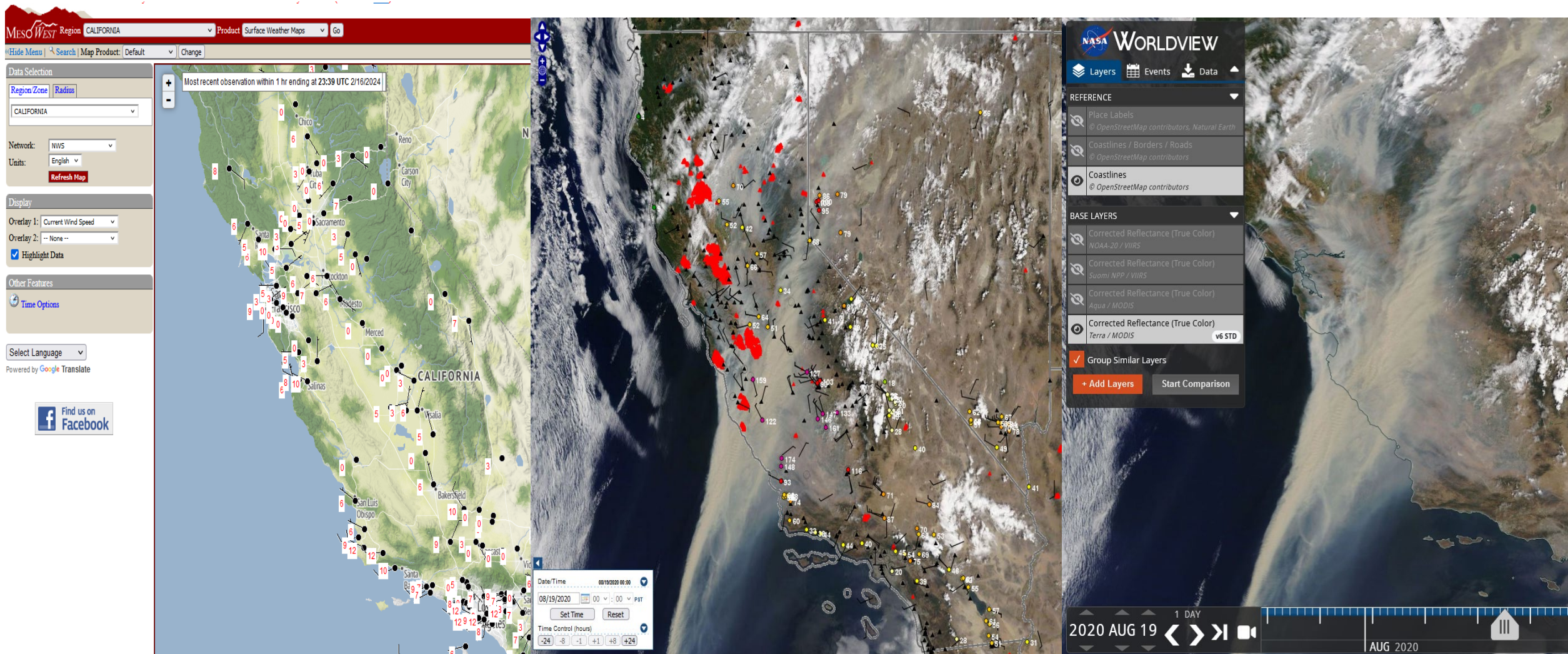
Ongoing wildfires in Northern California & Oregon and the Redwood Fire are sending smoke over San Joaquin Valley. An air quality alert has been issued— if impacted, stay indoors with windows and doors shut. Track smoke impacts at fire.airnow.gov



2:30 PM · 30 Aug 23 · 6,222 Views

- News releases are issued before known and expected high pollution days
- District posts updates to social media sites like Facebook, Twitter, and Nextdoor

Available Air Quality Tools for Evidence Collection



Daily Tracking of Events Affecting Air Quality

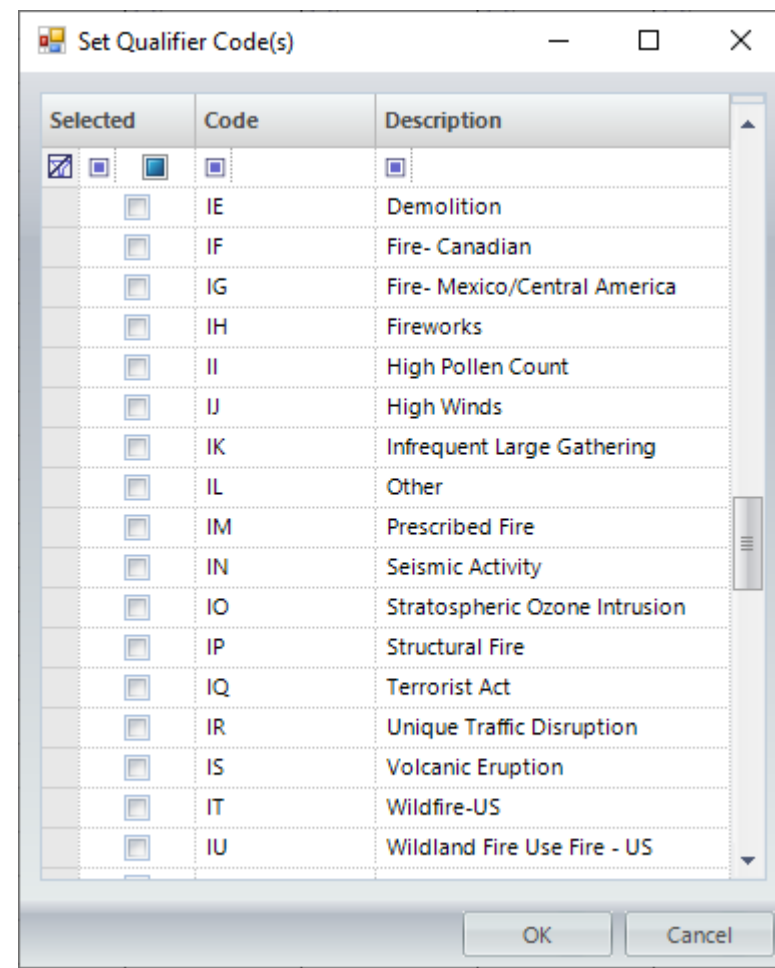
Date	Event Type	Event Name (if applicable)	Parameter to be flagged PM2.5 - PM10 - Ozone - None	Field Obs Received? y / n	County location of impacts (mark an "x" where applicable)							
					San Joaquin	Stanislaus	Merced	Madera	Fresno	Kings	Tulare	Kern
8/23/2020	Wildfire	Lake/SCU Lightning Complex/Hill/River/and many other fires (over 300 new fires overnight)	PM2.5	y	x	x	x	x	x	x	x	x
8/24/2020	Wildfire	Lake/SCU Lightning Complex/Hill/River/and many other fires (over 300 new fires overnight)	PM2.5	y	x	x	x	x	x	x	x	x
8/25/2020	Wildfire	Lake/SCU Lightning Complex/Hill/River/and many other fires (over 300 new fires overnight)	PM2.5	y	x	x	x	x	x	x	x	x
8/26/2020	Wildfire	Lake/SCU Lightning Complex/Hill/River/and many other fires (over 300 new fires overnight)	PM2.5	y	x	x	x	x	x	x	x	x
8/27/2020	Wildfire	SCU/CZU/LNU Lightning Complexes/River/SQF/Dolan/Carmel and many other fires caused impacts throughout the Valley.	PM2.5	y	x	x	x	x	x	x	x	x
8/28/2020	Wildfire	SCU/CZU/LNU Lightning Complexes/River/SQF/Dolan/Carmel and many other fires caused impacts throughout the Valley.	PM2.5	y	x	x	x	x	x	x	x	x
8/29/2020	Wildfire	SCU/CZU/LNU Lightning Complexes/River/SQF/Dolan/Carmel and many other fires caused impacts throughout the Valley.	PM2.5	y	x	x	x	x	x	x	x	x
8/30/2020	Wildfire	SCU/CZU/LNU Lightning Complexes/SQF/Dolan and many other fires caused impacts throughout the Valley.	PM2.5	y	x	x	x	x	x	x	x	x

Types of Flags

- Informational Flags (“I” series)
 - Related to external environmental conditions
 - During data review, before data certification
 - IT: Wildfire
 - IJ: High Winds
- Request for Exclusion Flags (“r/R” series”)
 - Formal request for data exclusion under the Exceptional Event Rule
 - Exceptional Event documentation, before final submittal
 - rt: Wildfire
 - rj: High Winds

Informational Flagging

- Air agencies use “I” series flags to initially identify values that may have been affected by an event
 - Not yet known whether agency will request exclusion or develop a demonstration
- Identify data that will not be requested exclusion or develop a demonstration
 - Document that the values were potentially influenced by an event
- Occurs during Level III data review, before data is certified



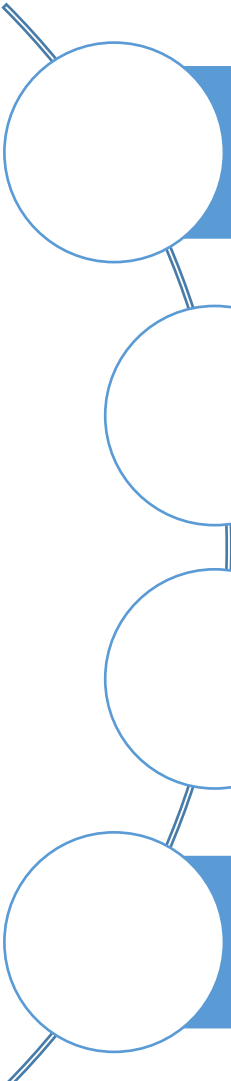
What is an Exceptional Event?

- Exceptional Event Rule (EER) finalized in 2016
- Core Statutory Requirements:
 - Event affected air quality in such a way that there exists a clear causal relationship between the specific event and the monitored exceedance or violation;
 - Event was not reasonably controllable or preventable; and
 - Event was a human activity that is unlikely to recur at a particular location or was a natural event

Exceptional Event Rule Processes

- Reporting Agency Responsibilities:
 - Flag sample measurements
 - Define events
 - Associate event with flagged measurements
 - Submit justification to EPA
 - Review flagged data status
- EPA Responsibilities:
 - Review and make a determination on submitted justification
 - Concur/Non-concur with exceptional event exclusion
 - Update AQS flagging as appropriate (r vs. R)

Exceptional Event Flagging Steps



Reporting agency investigates and determines that there is cause to suspect exceptional event influence on the sample measurement(s)

Reporting agency adds a Request Exclusion qualifier to the affected sample measurements in AQS to flag the data in AQS as suspected of being influenced by the exceptional event

Define event and associate with data. Reporting agency enters the initial Event description; AQS responds by creating the event record. Reporting agency accesses AQS to associate the appropriate flagged values with the Event.

EPA Concurrence Indicator Updated. Regional administrator accesses AQS to Concur or Deny with the exclusion request, with respect to the specific NAAQS.

Maintaining Events in AQS

The screenshot shows a software window titled "Maintain Exceptional Events (National Air Data Group)". It has two tabs: "Define Event" (selected) and "Associate Raw Data with Event". The form contains the following fields:

- Screen Grp Name: National Air Data Group
- Qualifier Code: A dropdown menu.
- Qualifier Description: A text input field.
- Event Begin Date: A date input field.
- Event End Date: A date input field.
- Event Description: A large text area with a dropdown arrow on the right.
- Comment: A large text area.
- Url: A text input field.

- Exceptional Events do not have a transaction type in AQS, therefore the Maintain Event form must be used to enter and update event information that will be used to apply for exclusions

Maintaining Event Information

- Maintain Event in AQS:
 - Query or Create events
 - Query affected monitors
 - Select specific date range
 - Associate the appropriate monitors with events

Input Information	Required	Recommended	Optional
<u>Qualifier Codes</u>	X		
<u>Event Description</u>	X		
<u>Begin Date</u>		X	
<u>End Date</u>		X	
<u>Text Comments</u>			X
<u>URL of Web Page Documents</u>			X

EPA Concurrence

- Decision regarding event concurrence is required within 12 months
- Upon EPA concurrence with an Exceptional Event Demonstration:
 - EPA responsible for updating all flags from “r” to “R”
 - EPA concurrence removes approved data from Design Value calculations for the appropriate NAAQS

what are other words for concurred?



agreed, accepted, coincided, approved, acquiesced, acceded, assented, collaborated, combined, consented



 Thesaurus.plus

Thank You!