

Exceptional Event Documentation

ADEQ Streamlining Efforts & Rule Discussion

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55+ Demonstrations

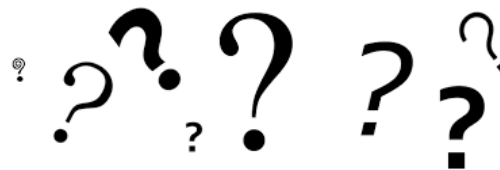


17 Approved



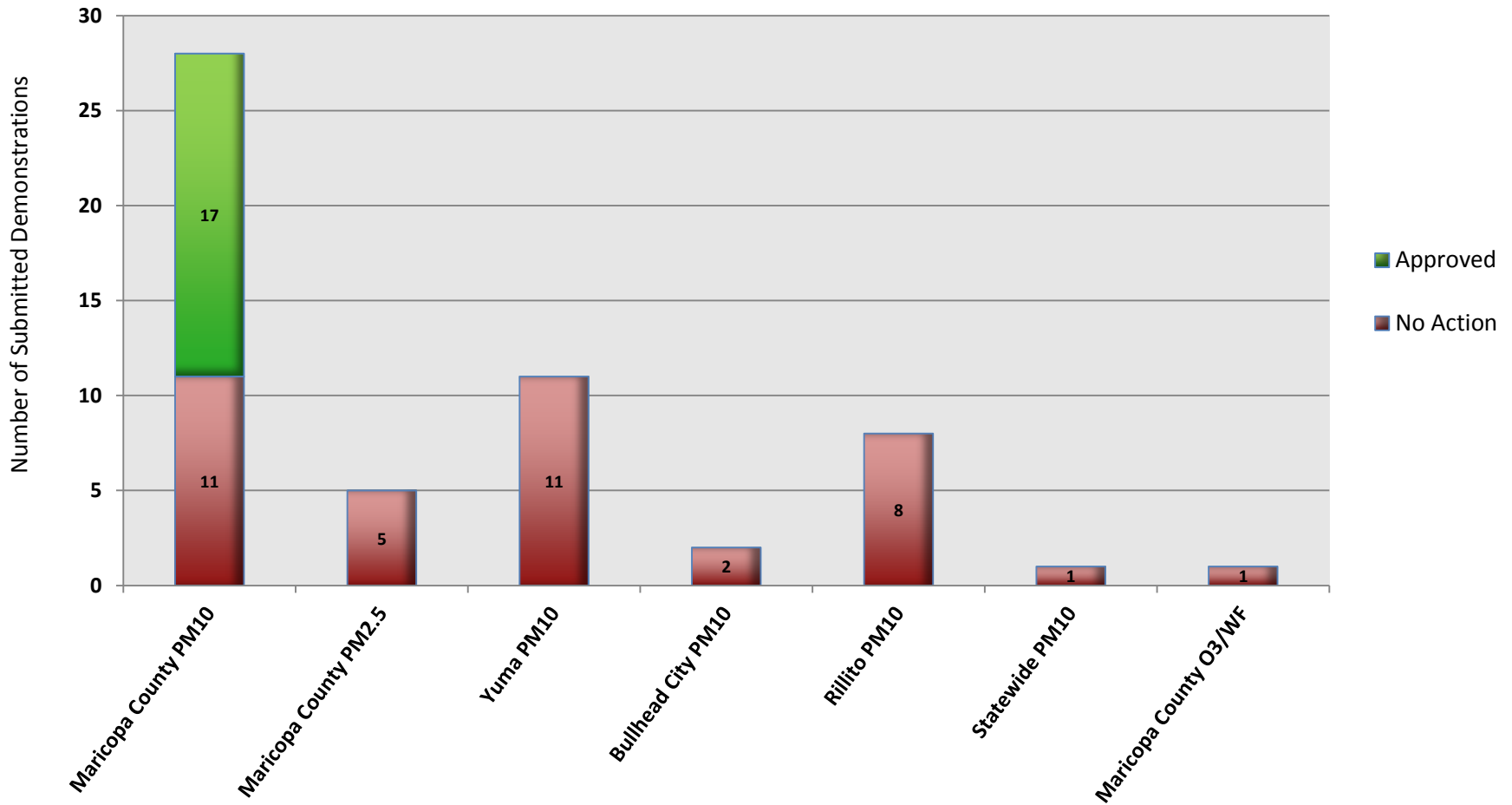
0 Disapproved

The Rest



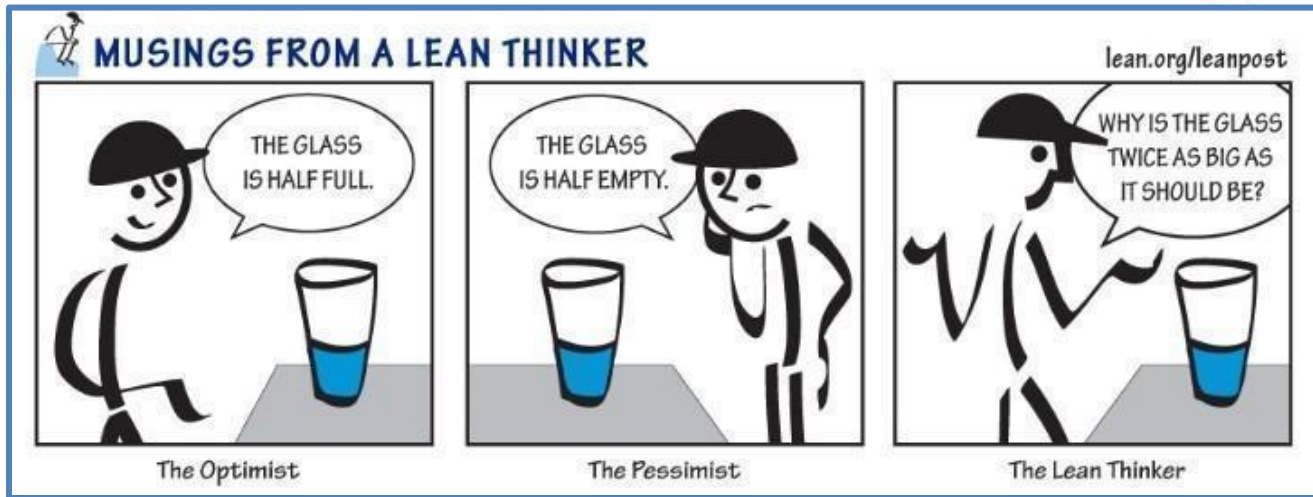
Exceptional Event Demonstration Stats

ADEQ Exceptional Event Demonstration Submittals and Approvals



Reduce Waste

Minimize Delays



Standardization & Templates

Save Time
Reduce Costs

Eliminate Redundancies

ADEQ Exceptional Event Swimlane Process Map



Initial Notification

Provide Agency and EPA
Walk-Thru of Event
Demonstration Prior to
Public Comment Period

Hold Conference Calls Before
and During Preparation



Highlight
“Unique Content”

Allow Region Early Review
During Preparation

Combine Demos for
Regional & Multi-Day
Events



8 Point Scale

0-2 = Stop

3-5 = Caution

6-8 = Go

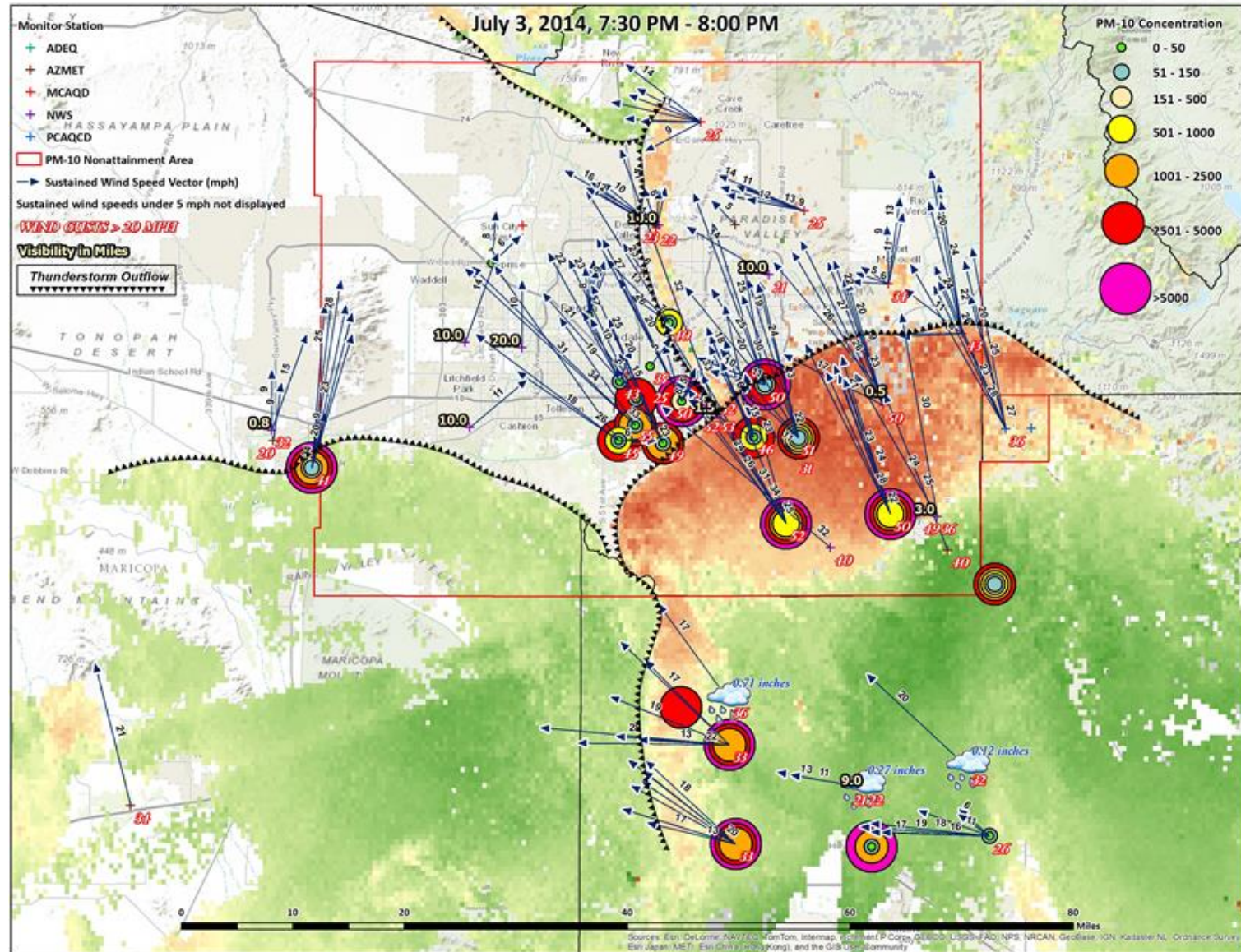
- Pursuit not recommended.
- Proceed with caution...
- Pursuit recommended.
Event highly exceptional.

Criteria Used

1. Event Historically Unusual - > 95th Percentile?
2. Monitor Winds & Gusts > 15mph?
3. NWS Winds & Gusts > 25 mph?
4. Weather Observations Related to Event?
5. NWS Statements about Event?
6. ADEQ Health Watch or High Pollution Advisory?
7. Multiple Area Monitors Experiencing Event?
8. Previously Concurred with Event Setup?

Tools – Event Screening

			Unusual and in Excess of Normal Historical Fluctuations	Not Reasonably Controllable or Preventable	Not Reasonably Controllable or Preventable	Not Reasonably Controllable or Preventable	Not Reasonably Controllable or Preventable	Not Reasonably Controllable or Preventable	Causal Relationship	Conceptual Model	
Date	Strength (1-8)	Site	Historically Unusual (≥95th Percentile)	Monitor Wind Speed AND Gusts	NWS Wind Speed AND Gusts (≥ 25)	Significant Weather Observation	NWS Statements	Elevated Risk/HW/HP A	Multiple Sites in NAA w/EE or ≥1 hr. Above	Previously Concurred Meteorological	Comments
4/3/2012	0-1	West Chandler	n/a	n	n	n	n	n	n	n	Appears to be localized and not weather driven. High winds (sustained or gusts of at least 25 were not observed by our monitoring network or NWS stations on these days. Phoenix forecast air quality discussion on 4-3-2012 indicated that the highest concentrations were isolated at the West Chandler site and observed during the late evening on 4-3-2012 and carried over into early 4-4-2012, causing a consecutive exceedance on 4-4-2012. Pursuit as
4/4/2012	0-1	West Chandler	n/a	n	n	n	n	n	n	n	Appears to be localized and not weather driven. High winds (sustained or gusts of at least 25 were not observed by our monitoring network or NWS stations on these days. Phoenix forecast air quality discussion on 4-3-2012 indicated that the highest concentrations were isolated at the West Chandler site and observed during the late evening on 4-3-2012 and carried over into early 4-4-2012, causing a consecutive exceedance on 4-4-2012. Pursuit as
6/18/2012	4-5	West 43rd	n/a	n	y	y	n	n	y	y	The exceedance value on this day was likely weather caused. Winds did not meet the 25 mph threshold at the monitoring site, but NWS stations all reported extended elevated sustained wind speeds in the low 20s and gusts near 30 mph during the afternoon and early evening hours. Even "dust" and "blowing dust" was noted at the Phoenix-Mesa Gateway airport. Although no specific wind related NWS statements were issued for the Phoenix NAA area a "Wind Advisory" was issued for southern California due to a passing trough of low-pressure, which is a previously EPA concurred with "Conceptual Model". The event ranks lower (i.e., 4 to 5) on screening due to no NWS statements and an elevated forecast risk not being issued. Even so, this was a classic thunderstorm downflow related dust event.
7/11/2012	5-6	Multiple	n/a	n	y	y	y	n	y	y	Thunderstorms over northern Pinal county sent strong winds and a dust storm into the Phoenix NAA by late evening (as can be verified by radar). Phoenix Sky Harbor was appeared to be the NWS station hardest hit observing reduced visibility below 2 miles and gusty winds in excess of 30 mph. Other stations also reported a reduction in visibility and "Haze". Wind speeds, however, at the exceeding monitors remained below the 25 mph threshold. The NWS did issue a "Blowing Dust Advisory" and "Significant Weather Advisory" for the PHX NAA area. This event should be considered an easily identifiable EE. Note: this was an already EPA concurred demonstration. Buckeye was not included as an exceeding monitor since preliminary data



Tools – Visibility Cameras / Video Loops

The screenshot displays the ADEQ Phoenix Web Cameras website. At the top, there is a navigation bar with the ADEQ logo, the text 'Arizona Department of Environmental Quality', and the 'AZ.GOV' logo. Below the navigation bar, there are links for 'ADEQ Home', 'Phoenix Web Cameras', and 'FAQs'. The main content area is divided into two columns. The left column is a sidebar with the heading 'All Sites' and a list of locations: 'Most recent images and movies', 'South Mountain', 'Estrella Mountains', 'White Tank Mountains', 'Camelback Mountain', and 'Superstition Mountains'. The right column is titled 'All Sites' and contains a grid of camera feeds. The top row shows a still image of 'South Mountain' with a timestamp of '8/14/2014 2:00:00 PM' and a video player for '08/14/2014 12:00 AM'. The bottom row shows a still image of 'White Tank Mountains' with a timestamp of '8/14/2014 2:00:00 PM' and a video player for '08/14/2014 12:00 AM'. The video players include a play button, a progress bar, and volume controls.

http://www.phoenixvis.net/tlapse_camera.aspx

Air Quality | **Waste Programs** | **Water Quality**

ADEQ
Arizona Department
of Environmental Quality

AZ.GOV
Arizona's Official Web Site

[ADEQ Home](#) | [Phoenix Web Cameras](#) | [FAQs](#)

All Sites

- Most recent images and movies
- South Mountain**
- Estrella Mountains
- White Tank Mountains
- Camelback Mountain
- Superstition Mountains

July 2014

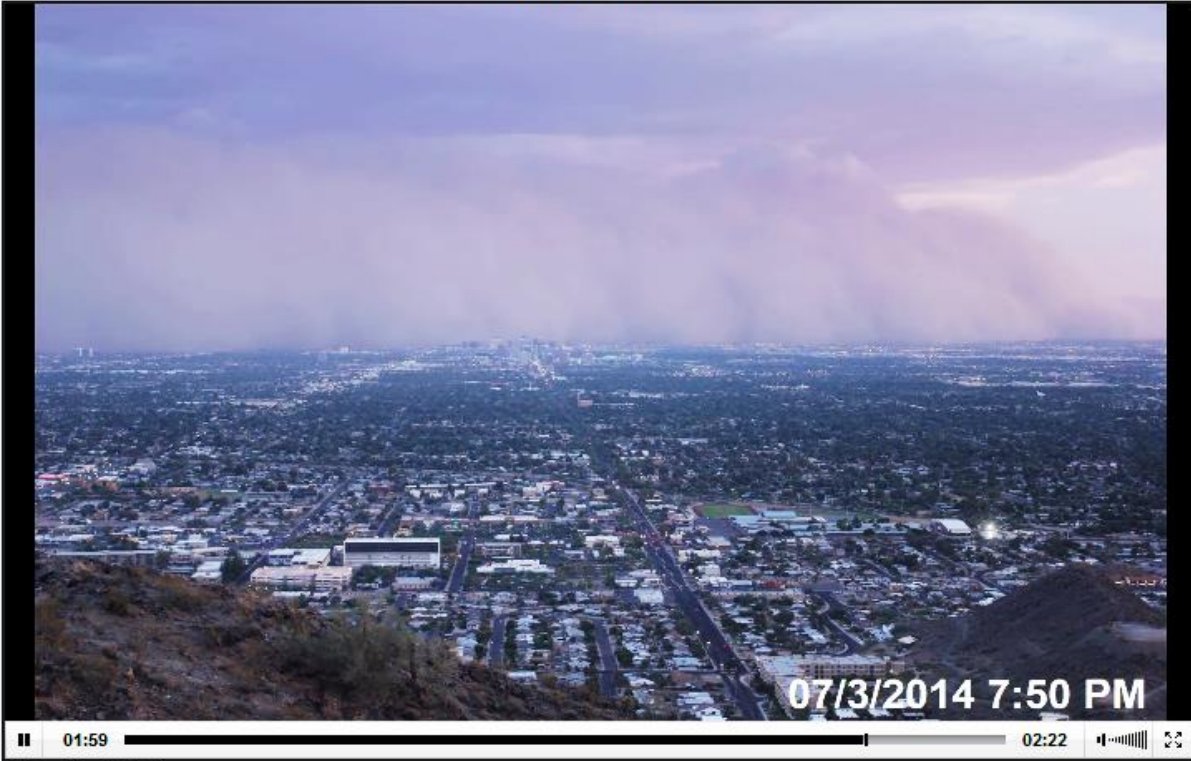
S	M	T	W	T	F	S
29	30	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31	1	2

- 12:00 AM - 05:59 AM
- 06:00 AM - 11:59 AM
- 12:00 PM - 05:59 PM
- 06:00 PM - 11:59 PM

[Show Images](#)

[Show Movie](#)

South Mountain



07/3/2014 7:50 PM

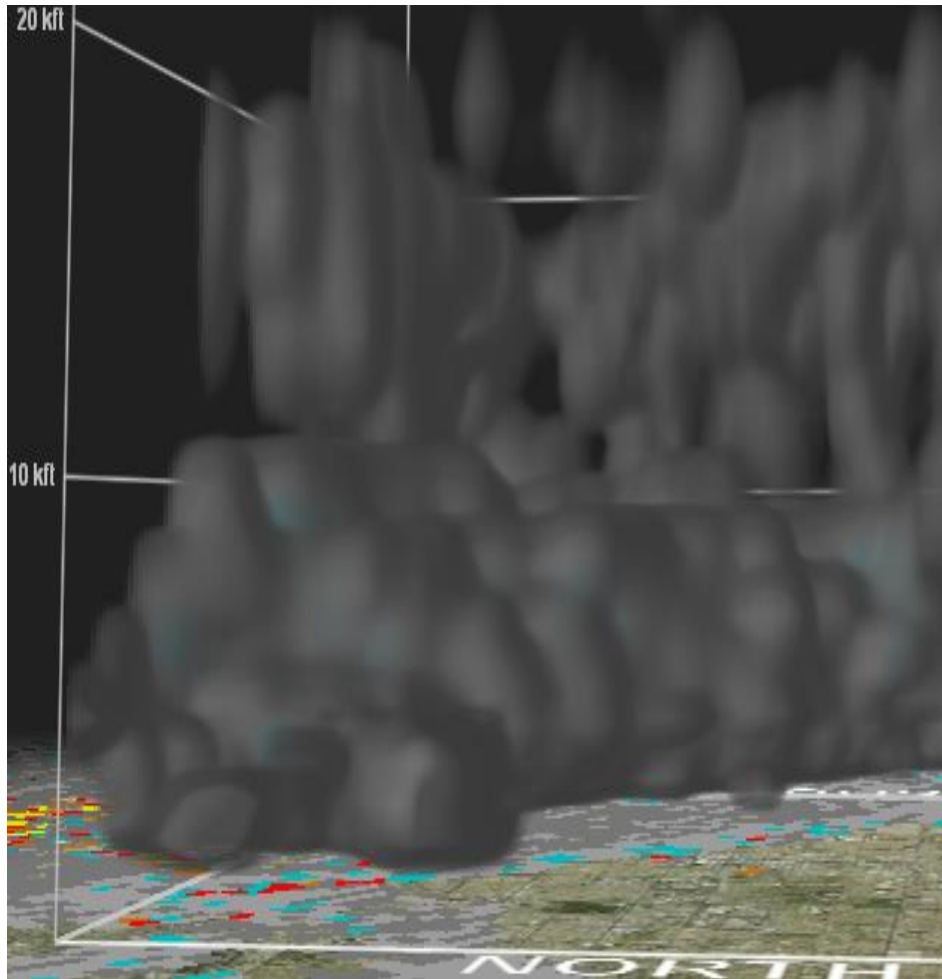
01:59 / 02:22

July 03, 2014

[Download large movie in Flash \(.flv\) format](#)

[Download large movie in MPEG4 \(.mp4\) format](#)

Cutting-Edge Tools – GR2Analyst 2.0



Mitigation Plan Concerns – A New Burdon





Seeks agreement between agency and EPA that an event is worth pursuing and has Regulatory Significance.

Could be a means to limit State efforts that may be wasted on pursuing events with unknown, limited, or no current Regulatory Significance.



Events may become significant over time with further exceedances or changing NAAQS.

It is easier and more efficient to gather data at time of event and pursue while an event is “fresh”.

States may wish to pursue events to lower Design Values or to avoid skewing future historical comparisons.

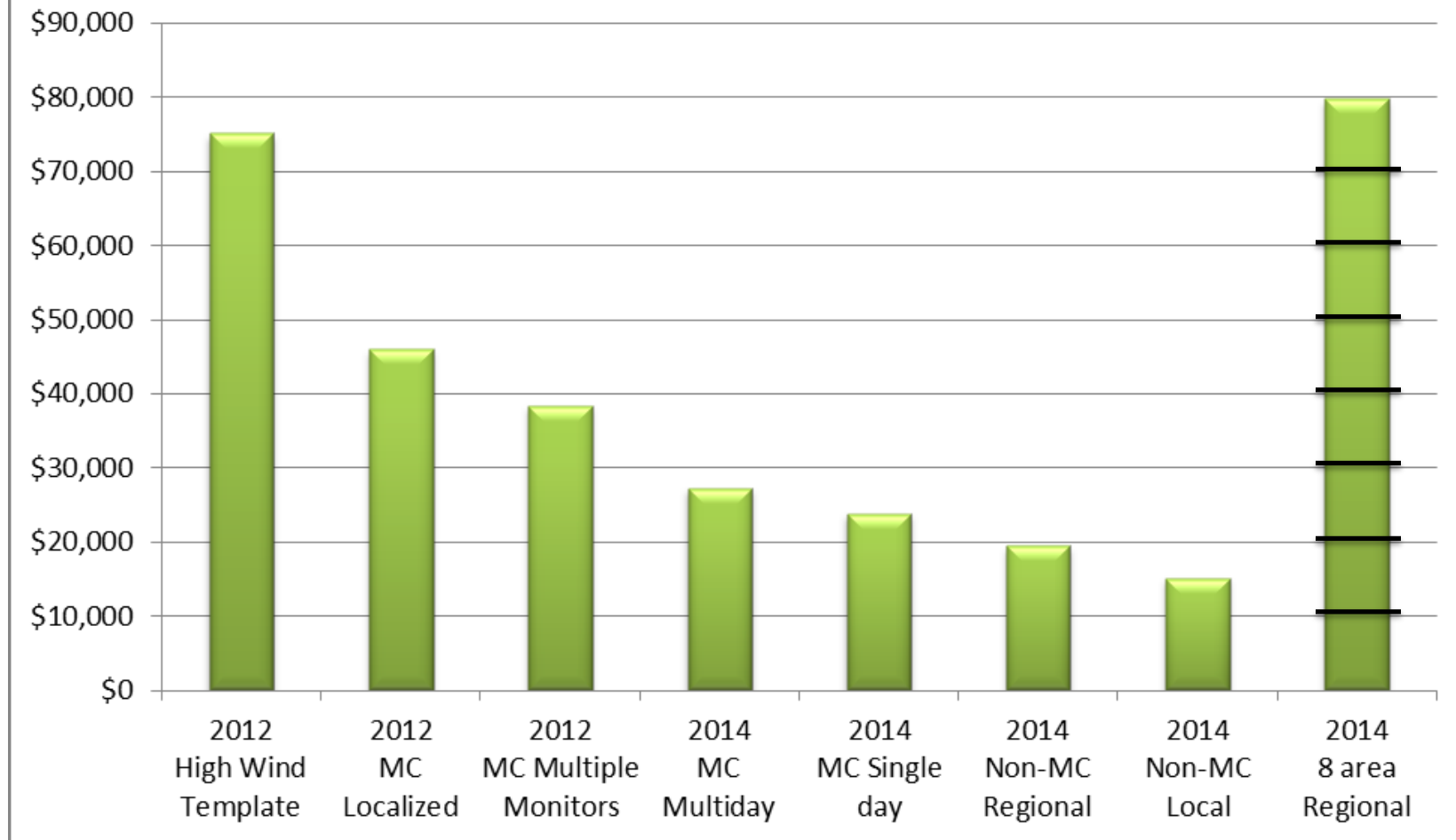
Case-specific approach to reasonableness of controls for high wind dust events that are:

- ✓ Remote
- ✓ Large-scale
- ✓ High-energy
- ✓ Sudden

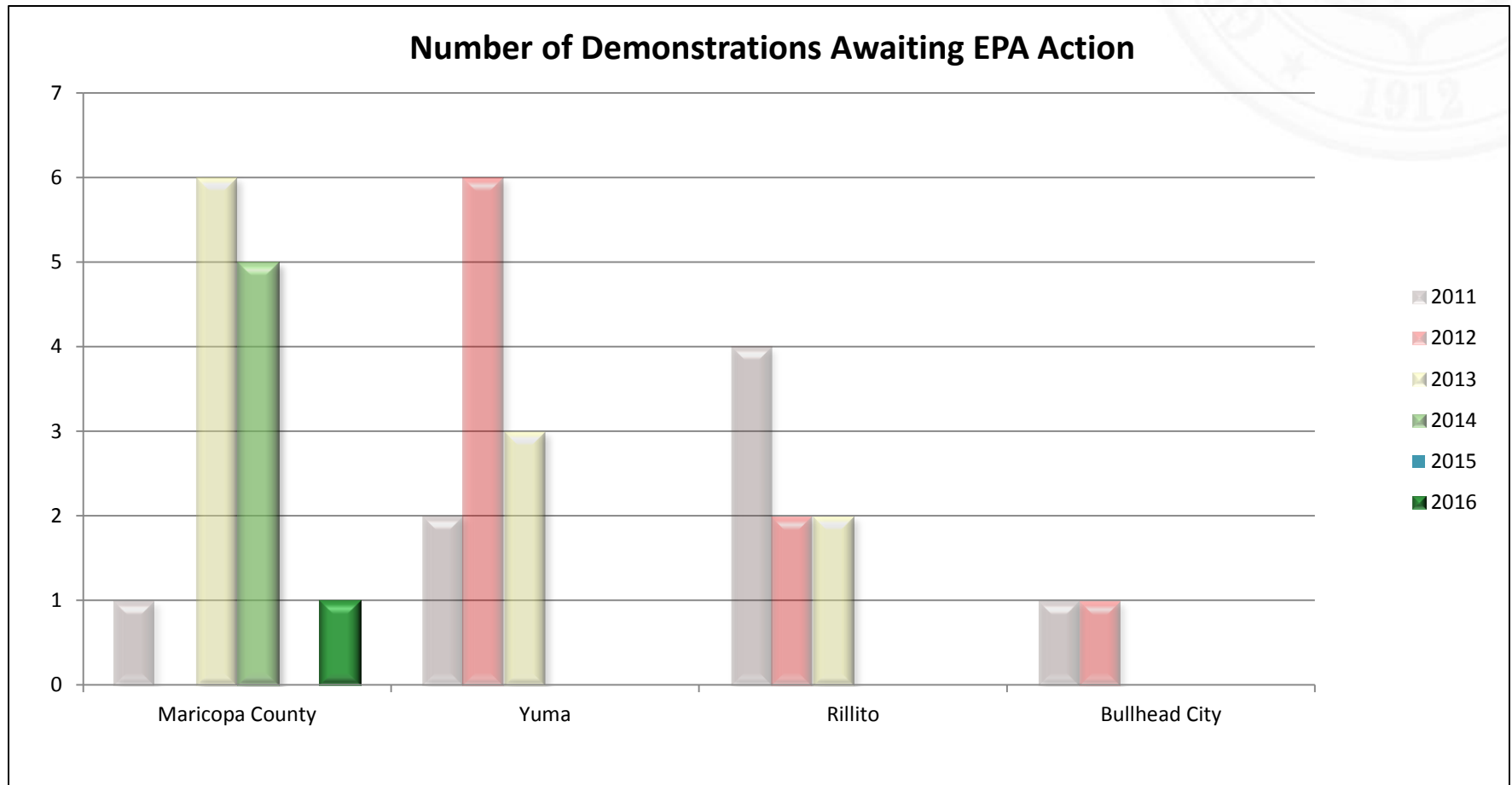


- ADEQ and EPA Region 9 **already implemented 50% streamlining** in preparation time (from 2011 to 2017).
- ADEQ spent over **\$800K** to prepare **50 EE** demonstrations for 2011-2012.
- It still costs about **\$20K per event** and requires on average about **150-200 hours** to research, prepare, review and submit each demonstration package.
- EPA has **approved** 17 of 55 demonstration packages (**~30%**).
- This means over **\$750K** and about **7,500 hrs** of effort **wait in inventory or have “rolled off”**.
- It is likely that more EE demonstrations will exceed their shelf-life.
- In the spirit of **Continuous Improvement**, what else can we do to further streamline both the creation and the review of Exceptional Event demonstrations?

Contractor's Costs per EE Demonstration Package



- Several submitted EE Demonstrations for 2011-2013 have “rolled off” due to the 3-year calendar



- Process Improvements, Streamlining, and Development of Supporting Evidence
 - Follow the **Revised Rule**
 - **Coordinate** with EPA early and often in the process
 - **Screen** Exceedance Events for Exceptional-ness
 - **Map** out your Exceptional Event **Process**
 - Develop Standard Language **Templates**
 - **Visualize** your event and your data
 - Utilize **GIS** Imagery whenever possible
 - Utilize **Visibility Cameras**

Questions



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