

# Air Quality and Air Monitoring in the Coachella Valley and Salton Sea Area



South Coast Air Quality Management District  
October 9<sup>th</sup>, 2014

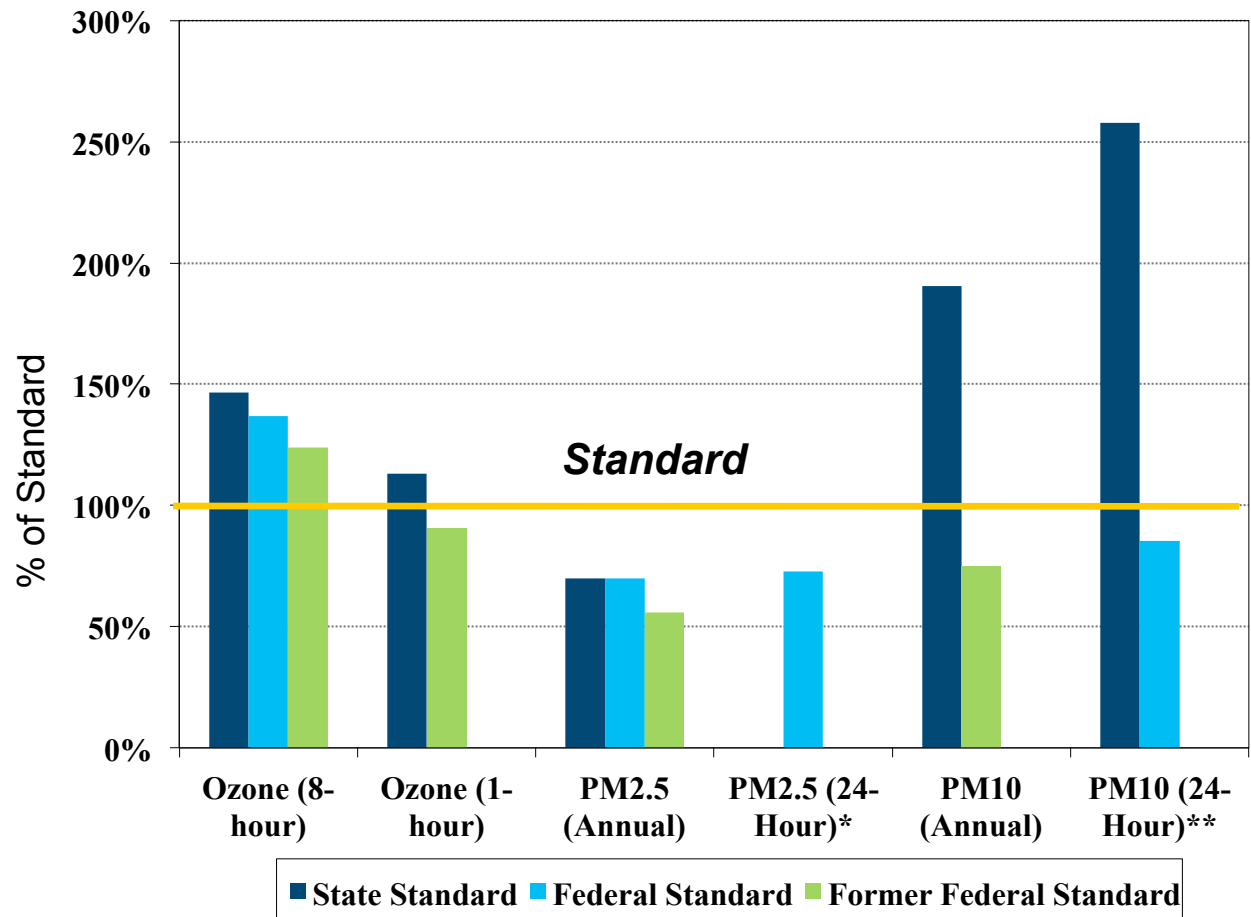
# Air Monitoring Stations in Coachella Valley Area



# Air Quality in the Coachella Valley

- ▶ Currently designated as nonattainment – serious for federal 24-hour PM<sub>10</sub> standard (150 µg/m<sup>3</sup>)
- ▶ U.S EPA has postponed a decision on redesignating the Coachella Valley as attainment for the PM<sub>10</sub> standard. Additional monitoring has been requested in the agricultural portion of the southeastern Coachella Valley.

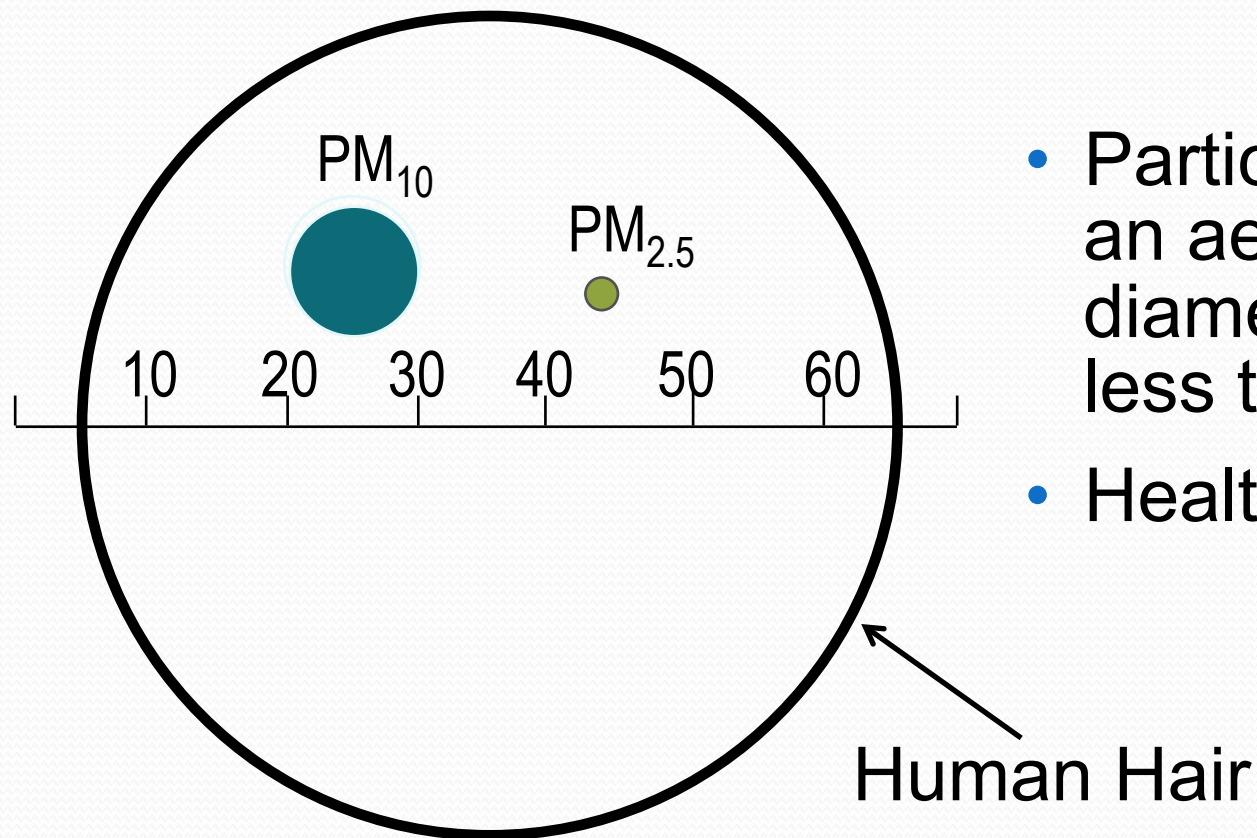
**Highest Measured Concentrations as Percentage of Air Quality Standards**



\*Excluding high PM<sub>2.5</sub> at Palm Springs (73.6 µg/m<sup>3</sup>) recorded on 8/8/2013.

\*\*Excluding high PM<sub>10</sub> at Indio (159 µg/m<sup>3</sup>) recorded on 8/23/2013.

# What is PM10?



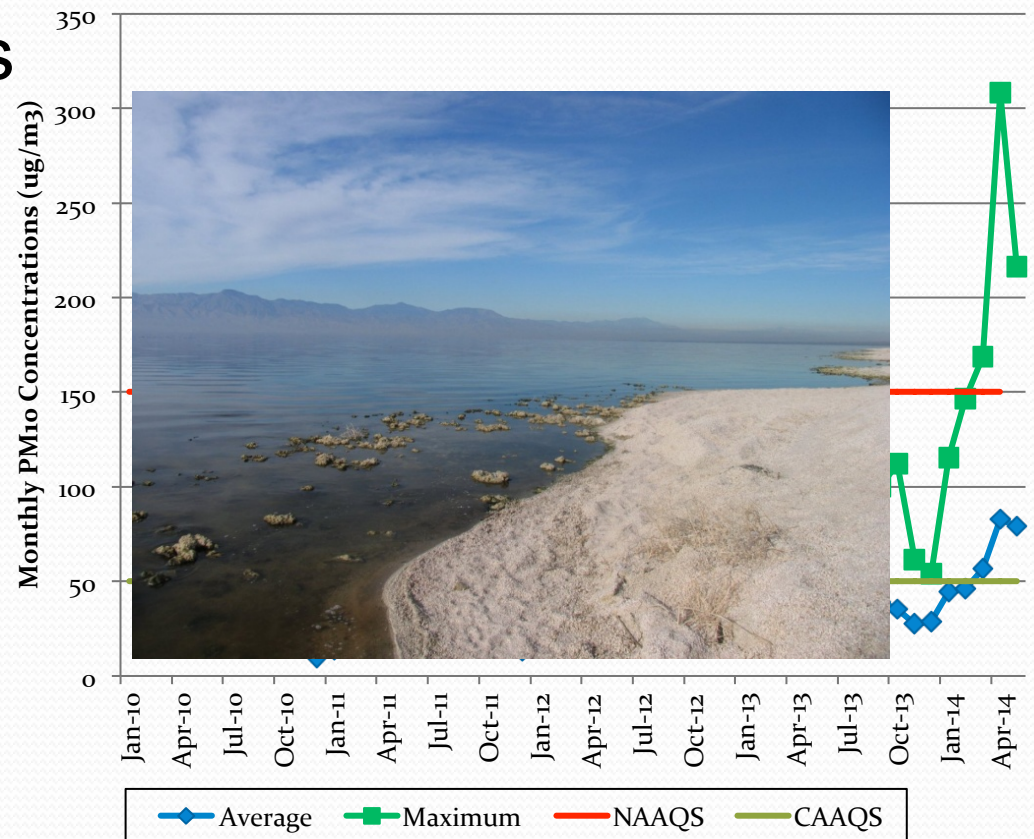
- Particulate Matter with an aerodynamic diameter equal to or less than 10 microns
- Health Effects

# PM Effects in Children

- Acute respiratory hospital admissions
- School and kindergarten absences
- Decreased peak lung air flow rates
- Increase medication use in asthmatics
- Suppressed lung growth

# Salton Sea and Air Quality

- ▶ Salton Sea water levels declining
- ▶ Potential for increased PM10
  - Prediction for increased windblown dust due to increased shore exposure
  - Construction activity may increase short term air pollution



# Salton Sea: September 2012



# Compiled Hydrogen Sulfide Results (September 2012)

<b>Location</b>	<b>H<sub>2</sub>S Concentration (parts per billion)</b>
<b>Mecca South</b>	<b>149</b>
<b>Mecca West</b>	<b>101</b>
<b>Sea West (West of Salton Sea)</b>	<b>53</b>
<b>Desert Shores (West of Salton Sea)</b>	<b>35</b>
<b>Thermal</b>	<b>33</b>
<b>Indio</b>	<b>35</b>
<b>Riverside</b>	<b>11</b>
<b>Redlands</b>	<b>13</b>
<b>Cherry Valley</b>	<b>14</b>
<b>Beaumont</b>	<b>Less than 2</b>

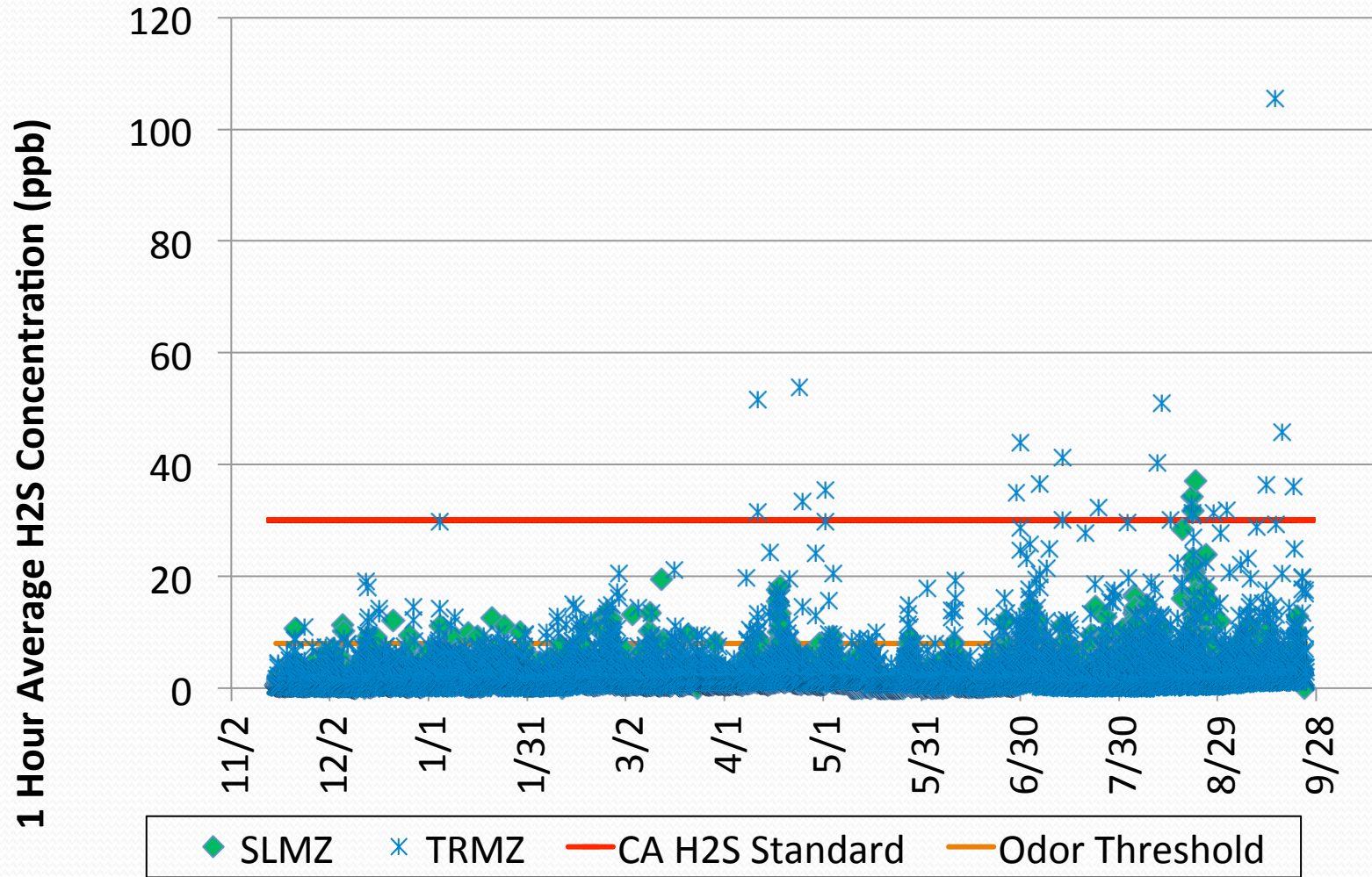


# H2S Network



# Time Series

(11/15/13 to 09/24/14)

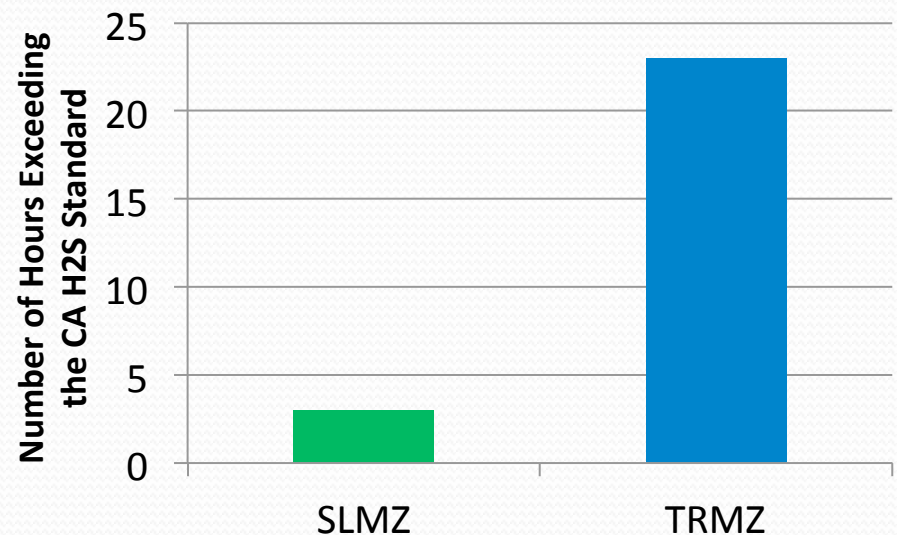


# Site Comparisons Relative to CA Standard (11/15/13 to 09/24/14)

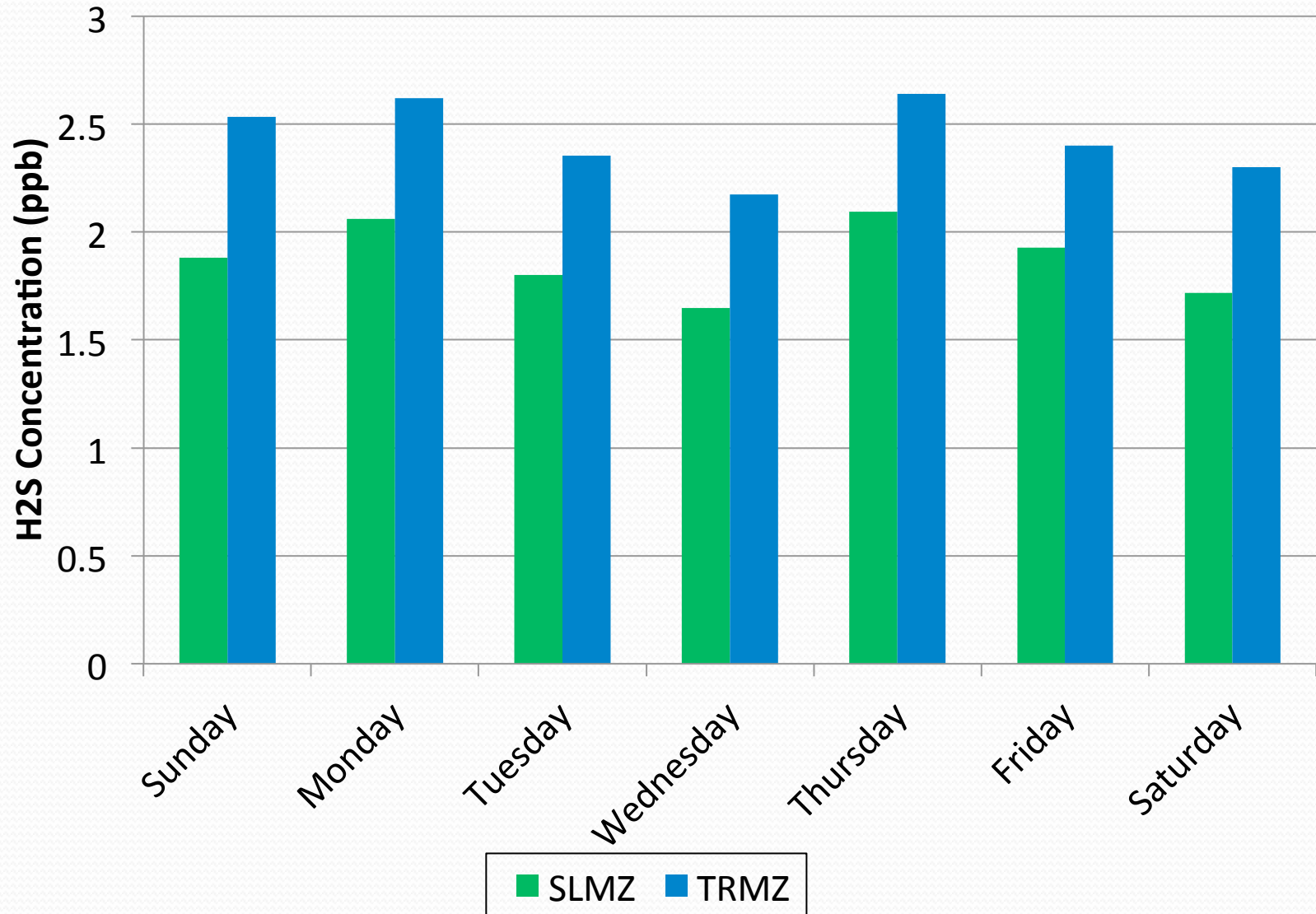
- CA H<sub>2</sub>S Standard is 30 ppb for a one hour time period
- TRMZ site observes higher frequency of exceedences and at higher levels

H<sub>2</sub>S Quartile Concentrations (ppb)

	SLMZ	TRMZ
Max	37.0	105.5
75%	2.3	2.6
<b>Median</b>	<b>1.3</b>	<b>1.3</b>
25%	0.8	0.8

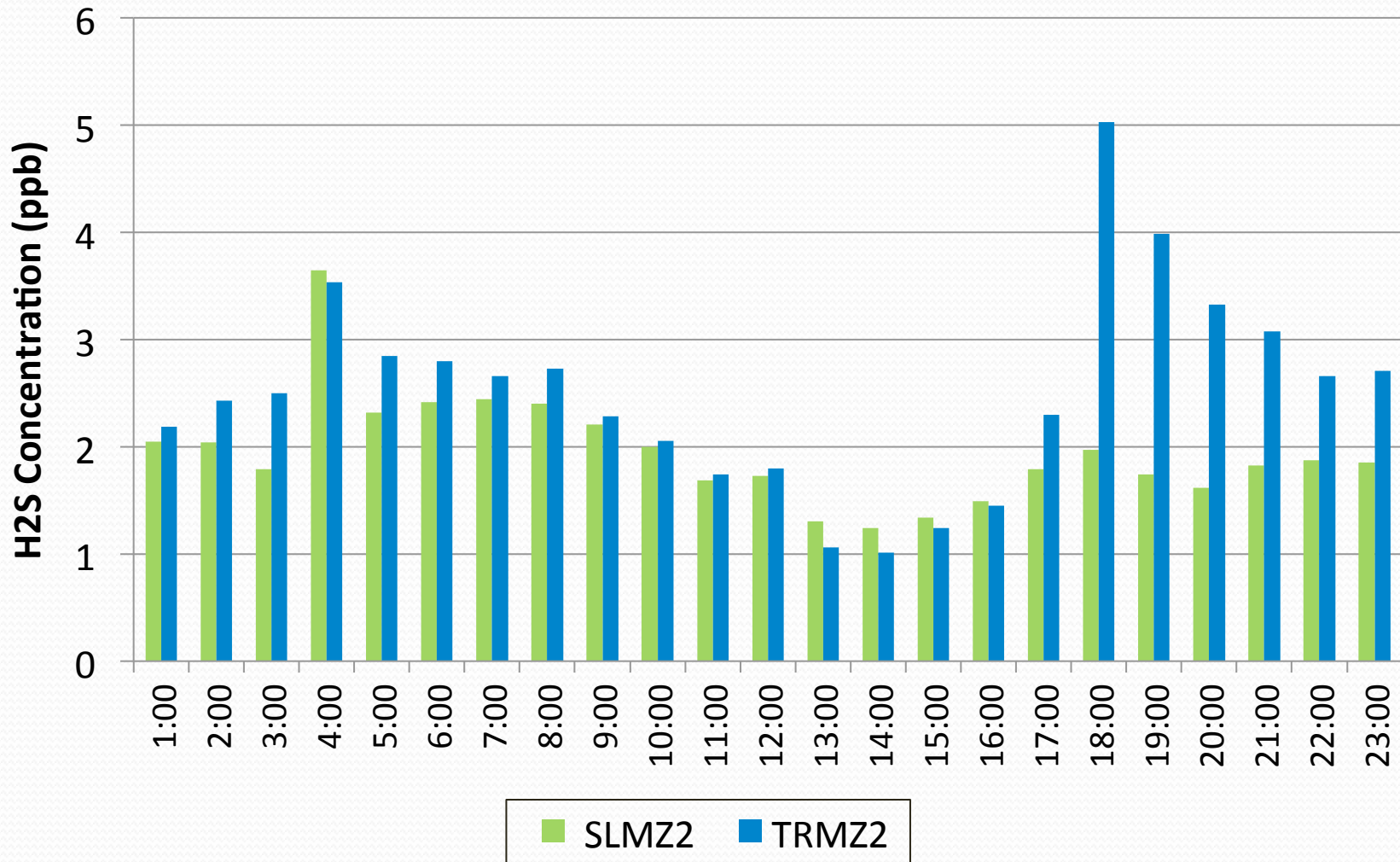


# Day of Week (11/15/13 to 09/24/14)

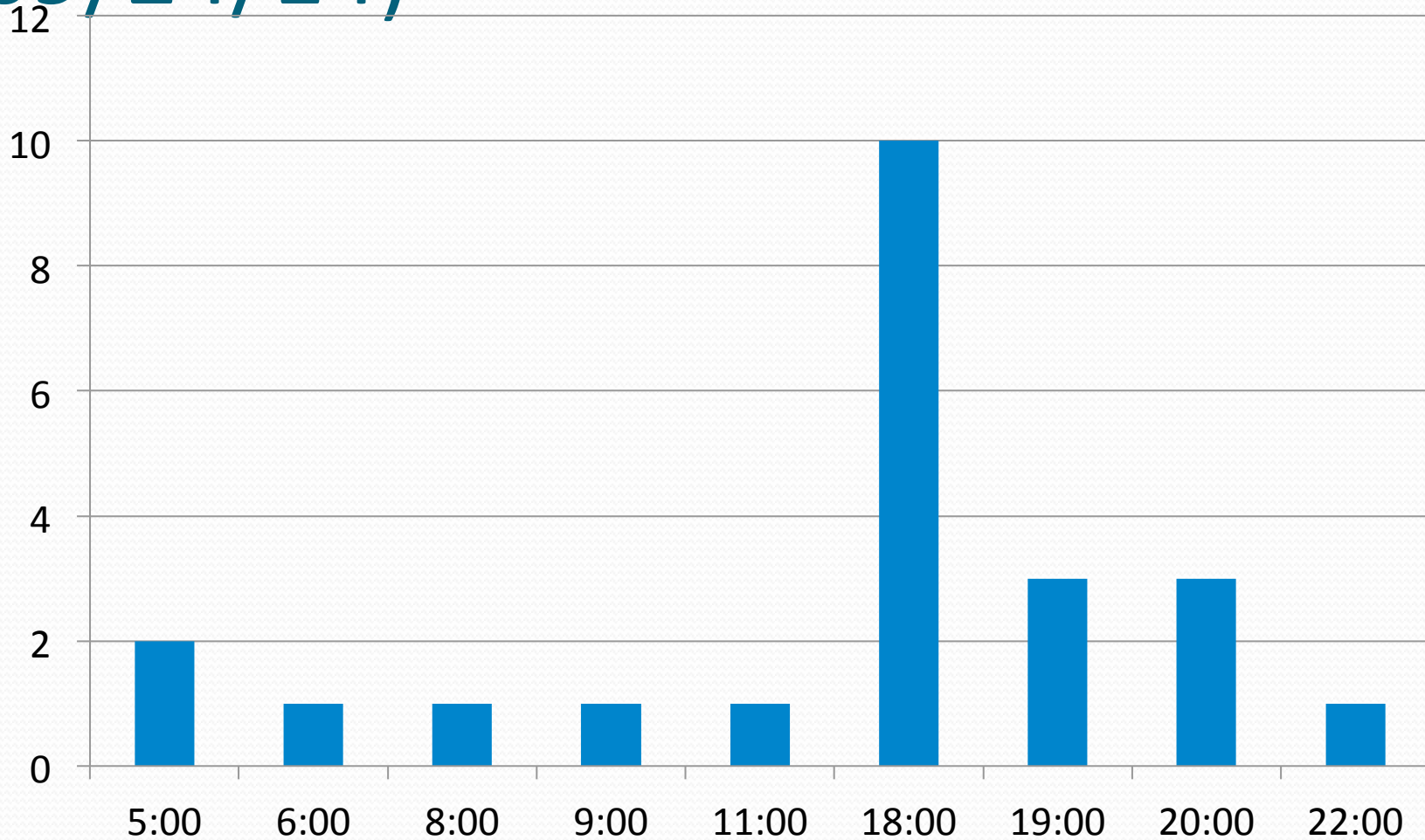


# Time of Day

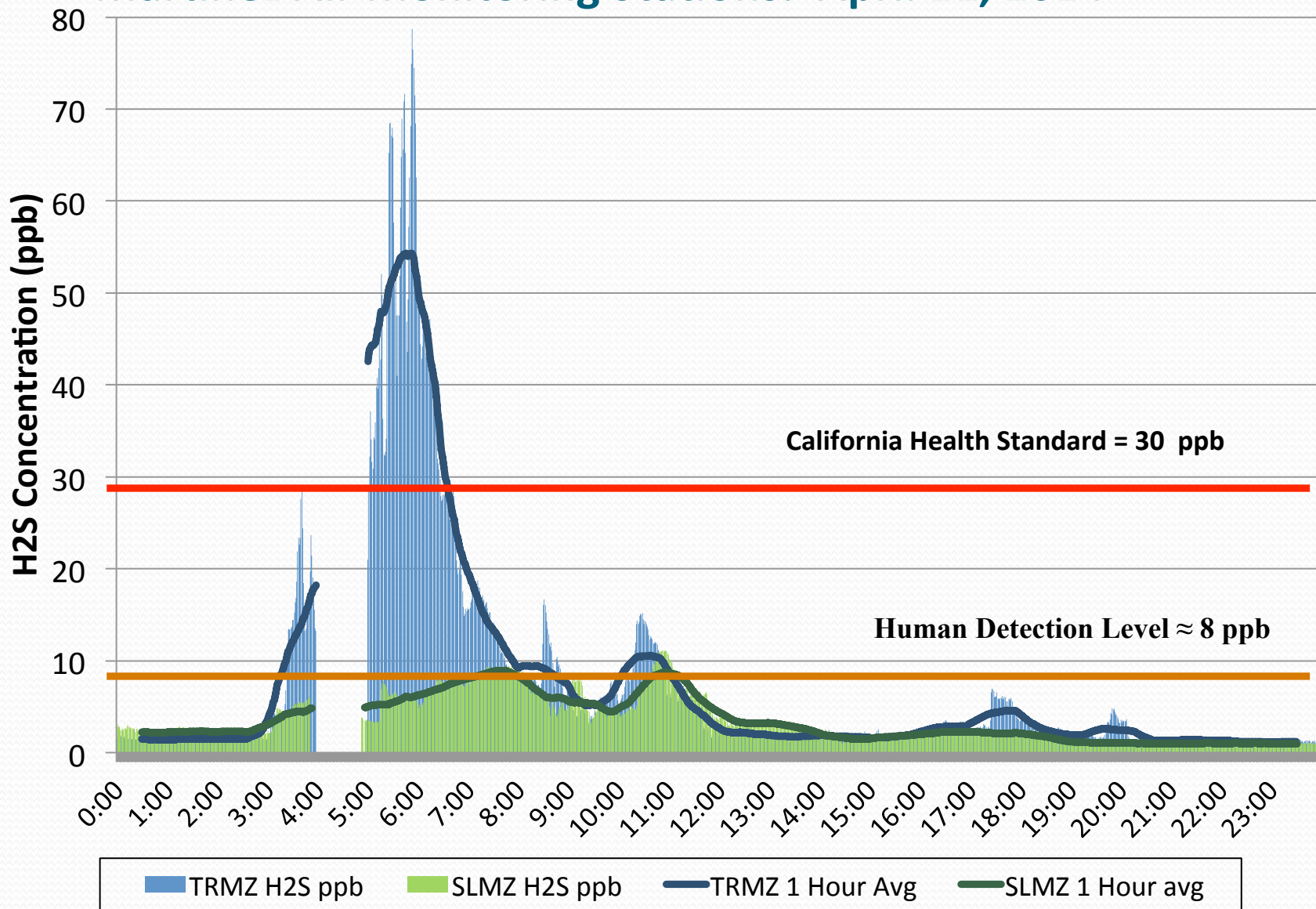
(11/15/13 to 09/24/14)



# TRMZ: Number of Hours Exceeded by Time of Day (11/15/13 to 09/24/14)



# Hydrogen Sulfide Measurements at Torres Martinez and Saul Martinez Air Monitoring Stations: April 11, 2014



## 'Mecca stink' a thing of the past

Barrett Newkirk, The Desert Sun 1:37 p.m. PDT April 10, 2014

*Recent monitoring efforts in the eastern Coachella Valley show few signs of the past problems of pollution and foul smells sweeping the region, the agency charged with monitoring local air quality says.*



(Photo: Jay Calderon/The Desert Sun)

 5     

THERMAL – Recent monitoring efforts in the eastern Coachella Valley show few signs of the past problems of pollution and foul smells sweeping the region, the agency charged with monitoring local air quality says.

A panel of representatives from the South Coast Air Quality Management District spoke on monitoring efforts during a discussion at Desert Mirage High School on Wednesday. Among the information shared was that complaints of bad odors originating in the Mecca area have dropped to almost nothing since 2011, the year the agency fielded 248 complaints about what became known as the "Mecca stink."

That's compared with no complaints in 2012 and five in 2013. Through April 1 of this year, the agency reported two odor complaints out of Mecca.

The AQMD is responsible for monitoring air quality and regulating emissions over a four-county region. In October, AQMD installed two air monitors near the Salton Sea to check for hydrogen sulfide, a compound notable for its rotten-egg smell.

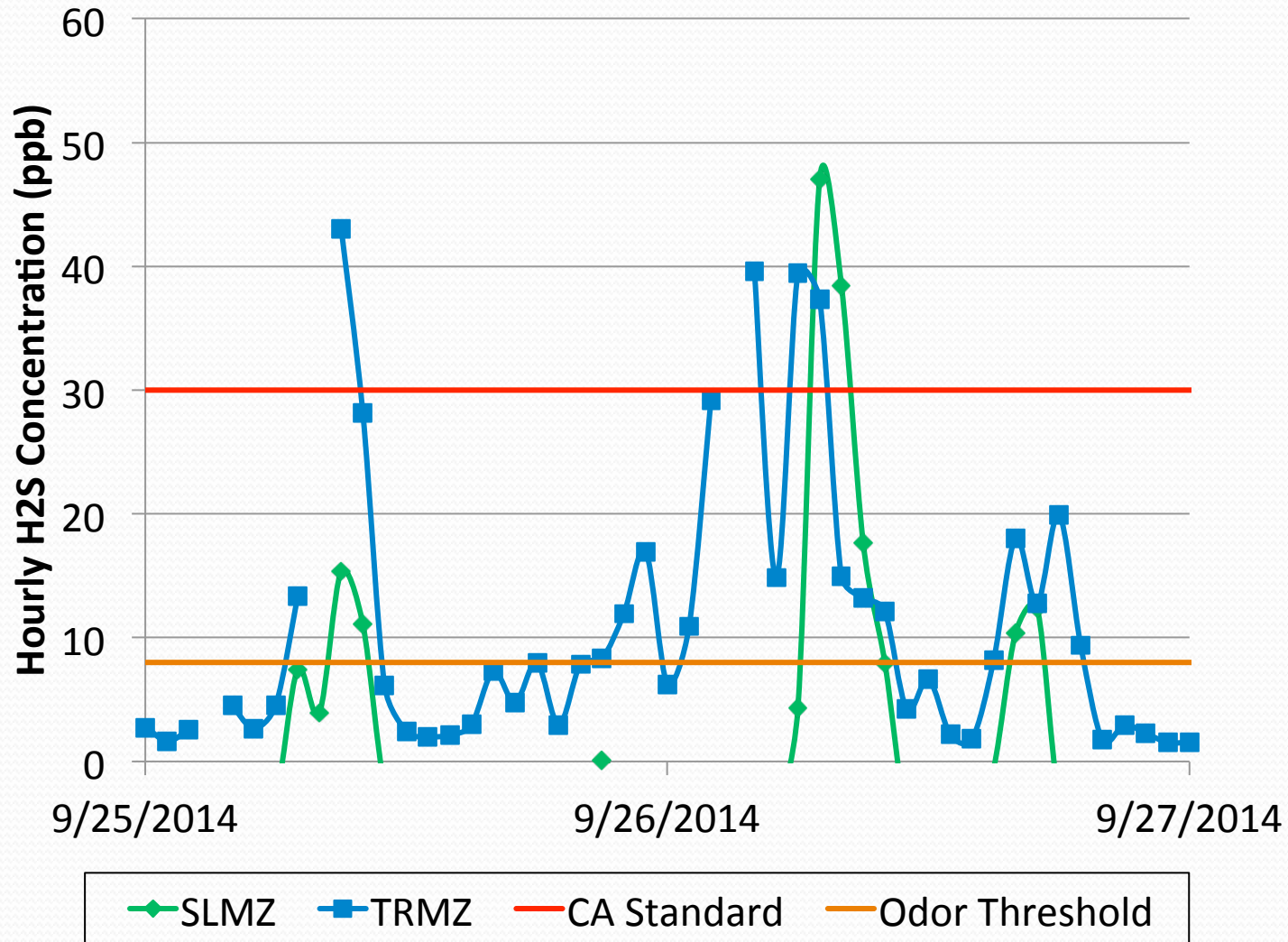
A thunderstorm in September 2012 stirred up the Salton Sea sending a strong smell of old eggs across 150 miles in Southern California.

The new monitors are at Saul Martinez Elementary School in Mecca and on the Torres Martinez Desert Cahuilla Indians' tribal land near the north shore of the Salton





# Hydrogen Sulfide Hourly Measurements at Torres Martinez and Saul Martinez Air Monitoring Stations: September 25-27, 2014





# Final Comments

- There are air quality concerns as the Salton Sea levels change
- Salton Sea mitigation strategies should implement measures to reduce air pollution during implementation
- H<sub>2</sub>S concentrations near the Salton Sea are periodically elevated

# Contact SCAQMD

- Phone: 1-800-CUT-SMOG (288-7664)
- Mobile “App”: *AQMD*
- Air Quality Alerts: <http://aqmd.enviroflash.info/>
- Web: [http://www.aqmd.gov/complain/reporting\\_aq\\_problems.html](http://www.aqmd.gov/complain/reporting_aq_problems.html)

