Association of Air Pollution Control Agencies Background Ozone and International Transport September 18, 2018

Timothy Franquist Air Quality Director



Air Quality Division MISSION

Our Mission

To protect and enhance public health and the environment by ensuring that ambient air is healthy to breathe, visibility in national parks and forests is pristine, and air quality does not negatively impact environmental systems. AQD accomplishes that mission by controlling current and future sources of air pollution.

City of Yuma and Yuma County





County of Yuma Demographics



Median Household Income = \$40,743

Persons in Poverty = 21.1%

Unemployment Rate = 23.8%

(Source: US Census Bureau & US Bureau of Labor Statistics)

IndustryWAgriculture\$3Military\$9Tourism\$6

TO I AT STREAM

Worth \$3.3B \$900M \$664M

Ozone Design Values for Ozone (2016-2018)



| | Annual 4 th Highest Daily Max Eight-Hour Average | | | | Threshold for Attainment Change |
|------------|---|------|------|-----------------------------------|---|
| | 2016 | 2017 | 2018 | *Preliminary 2018 Design Value | Non-Attain. to Attain. / Attain. to Non-Attain. |
| Apache | | | | | |
| Cochise | 64 | 67 | 67 | 66 | 82 |
| Coconino | 64 | 66 | 67 | 65 | 83 |
| Gila | 70 | 76 | 77 | 74 | 66 |
| Graham | | | | | |
| Greenlee | | | | | |
| La Paz | 67 | 69 | 71 | 69 | 77 |
| Maricopa | 74 | 77 | 80 | 77 | 61 |
| Mohave | | | | | |
| Navajo | 63 | 65 | 69 | 65 | 85 |
| Pima | 69 | 73 | 71 | 71 | 71 |
| Pinal | 72 | 76 | 75 | 74 | 61 |
| Santa Cruz | | | | | |
| Yavapai | 64 | 73 | 66 | 67 | 77 |
| Yuma | 67 | 74 | 74 | 71 | 71 |

*2008 Ozone Standard is 75 ppb and 2015 is 70 ppb

Yuma County Emissions Inventory





Air Quality Trends





International Monitoring Sites

Ciudad



Dome

95

Ligur



ADEQ Ozone Monitor in San Luis, Mexico





San Luis vs Yuma O3 PPM 24hr 5/11/17 - 8/30/18



Ozone at Yuma and SLRC in Summer, 2017





Note:

- The average hourly ozone concentrations were 31.5 ppb at SLRC and 36.3 ppb at Yuma. The r-squared (r^2) value was 0.72 between those two sites. The distance between Yuma and SLRC is 29 km.

- In 2017, there were 8 exceedances of the standard in Yuma and 7 exceedances in SLRC. However, only 4 exceedances occurred at both monitoring sites on the same day.

Ozone at Yuma and Mexico - Summer 2017





During exceedance days, the predominant wind direction was south in Yuma (43% SW, 31% S, 6% SE), while winds were from the south and west in SLRC.

NO₂ Column Density from OMI









Additional International Monitoring – O3 & Pre-cursors





2008 & 2015 Ozone NAAQS - Arizona's Strategy





Questions?

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