Four Corners Area O_3 Monitoring Trends Analyses

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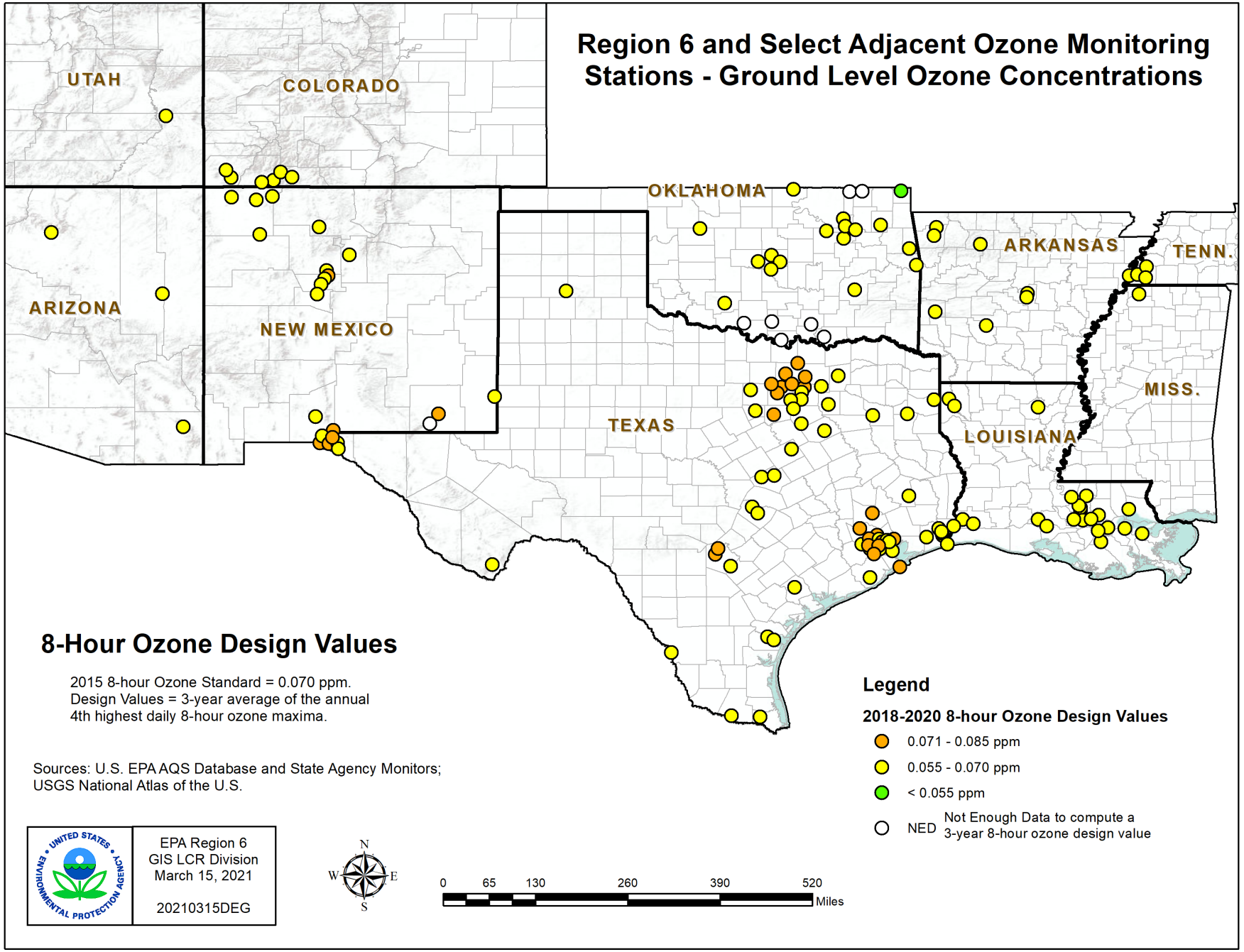
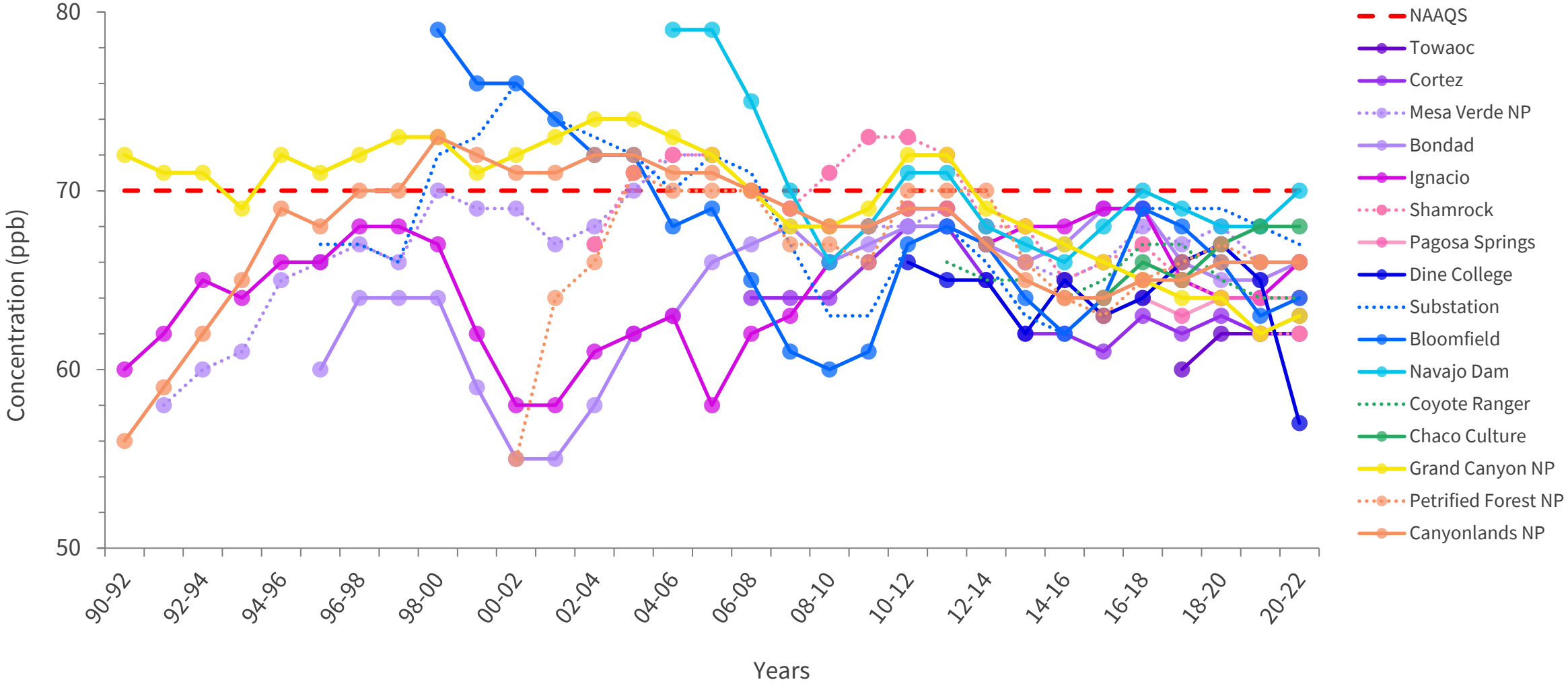

Region 6 and Select Adjacent Ozone Monitoring Stations - Ground Level Ozone Concentrations
UTAH
COLORADO
ARIZONA
NEW MEXICO
OKLAHOMA
TEXAS
ARKANSAS
LOUISIANA
MISS.
TENN.
8-Hour Ozone Design Values
2015 8-hour Ozone Standard = 0.070 ppm.
Design Values = 3-year average of the annual 4th highest daily 8-hour ozone maxima.
Sources: U.S. EPA AQS Database and State Agency Monitors; USGS National Atlas of the U.S.
Legend
2018-2020 8-hour Ozone Design Values
0.071 - 0.085 ppm
0.055 - 0.070 ppm
< 0.055 ppm
NED Not Enough Data to compute a 3-year 8-hour ozone design value
EPA Region 6
GIS LCR Division
March 15, 2021
20210315DEG
N
W
E
S
0 65 130 260 390 520
Miles

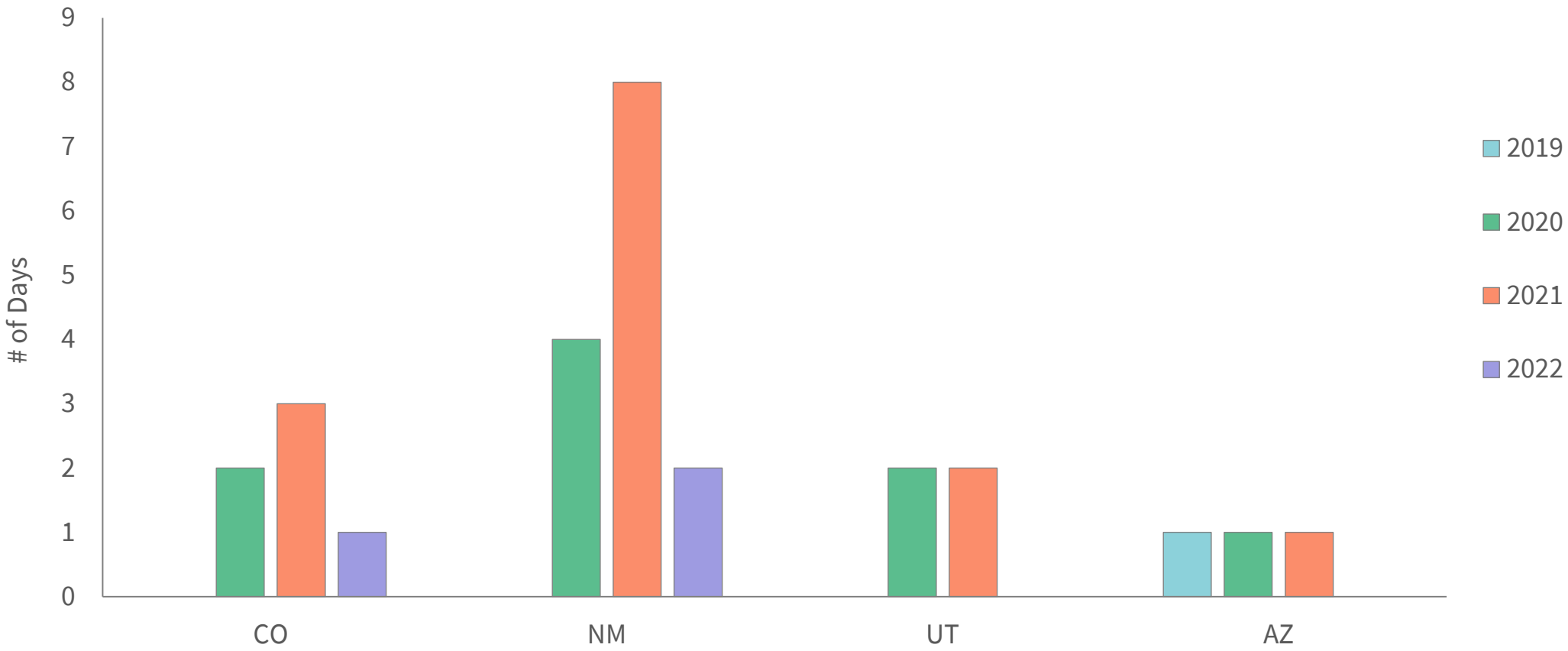
8-Hour Ozone Trends

Four Corners Area; 3-Year Running Design Values



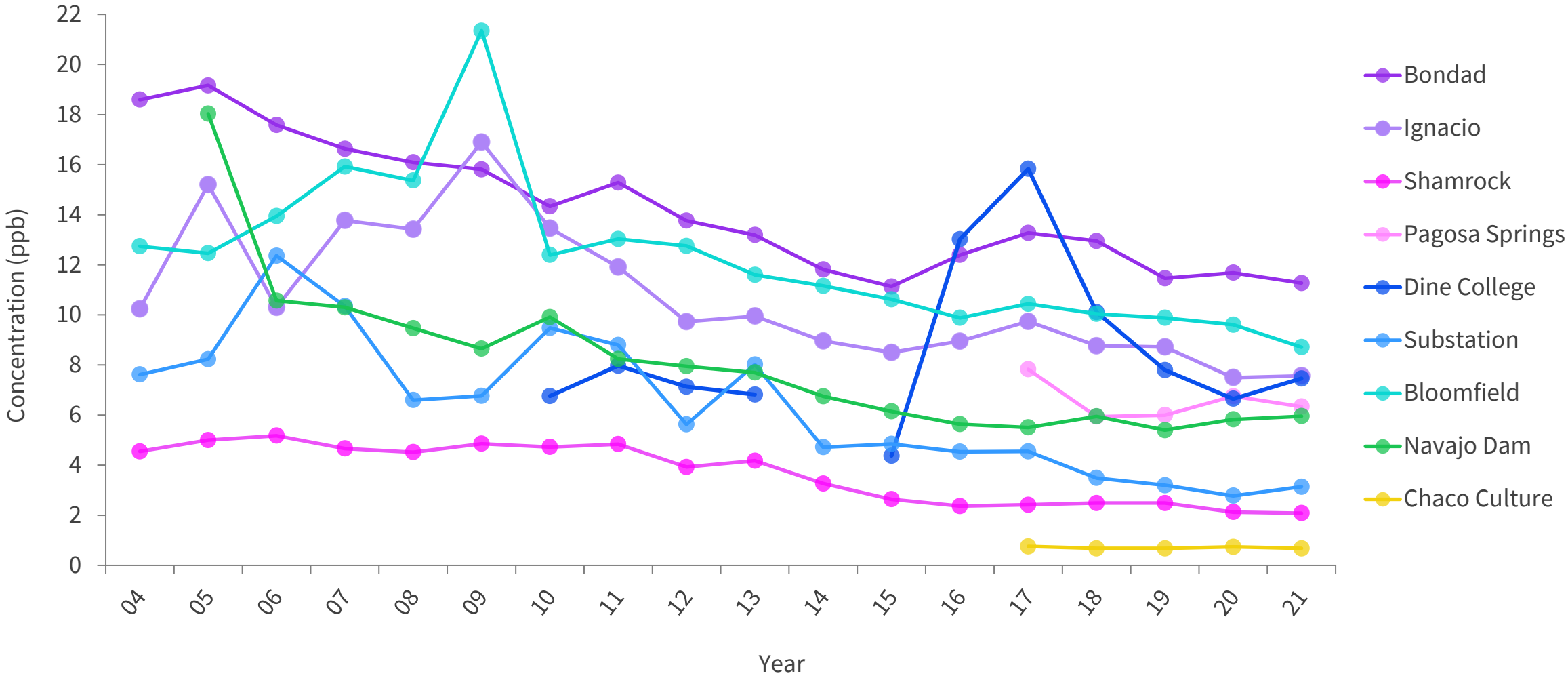
8-Hour Ozone Exceedances

Four Corners Area



Annual Mean NO_2 Concentrations

Four Corners Area



Main Takeaway:

"…more in-depth understanding of how weather conditions affect O_3 levels in the U.S."

ELSEVIER

Atmospheric Environment

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Improved estimation of trends in U.S. ozone concentrations adjusted for interannual variability in meteorological conditions

Benjamin Wells [a], Pat Dolwick [a], Brian Eder [a], Mark Evangelista [a], Kristen Foley [a], Elizabeth Mannshardt [a], Chris Misenis [a], Anthony Weishampel [b]

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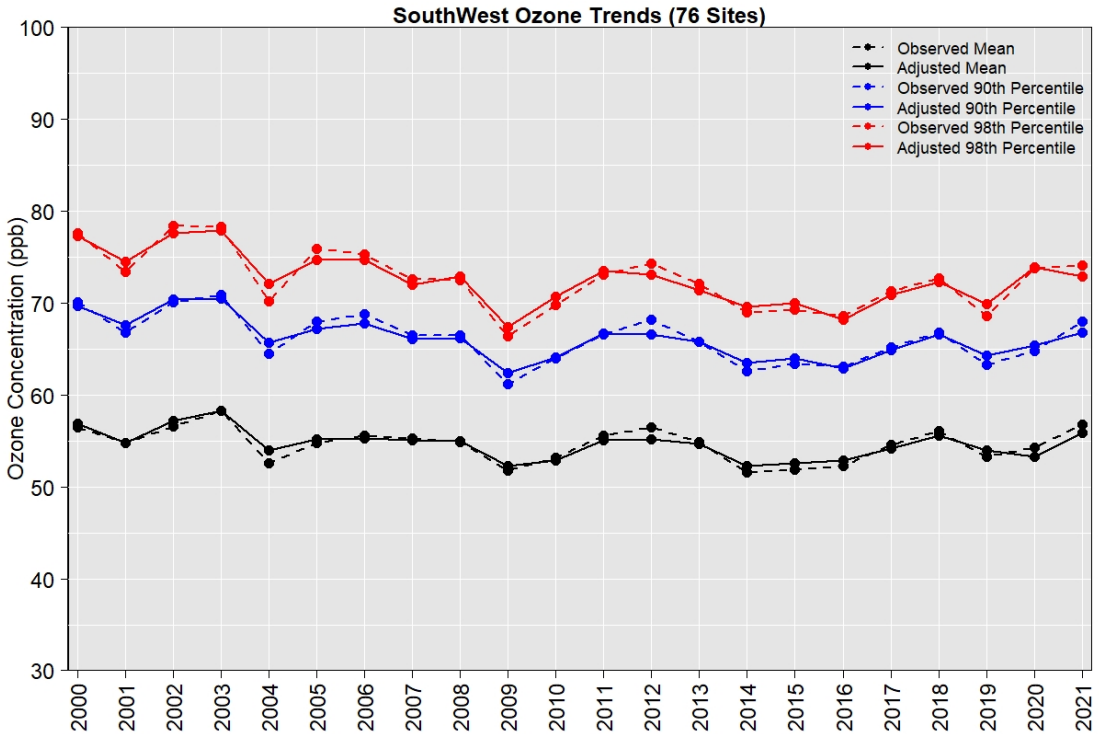
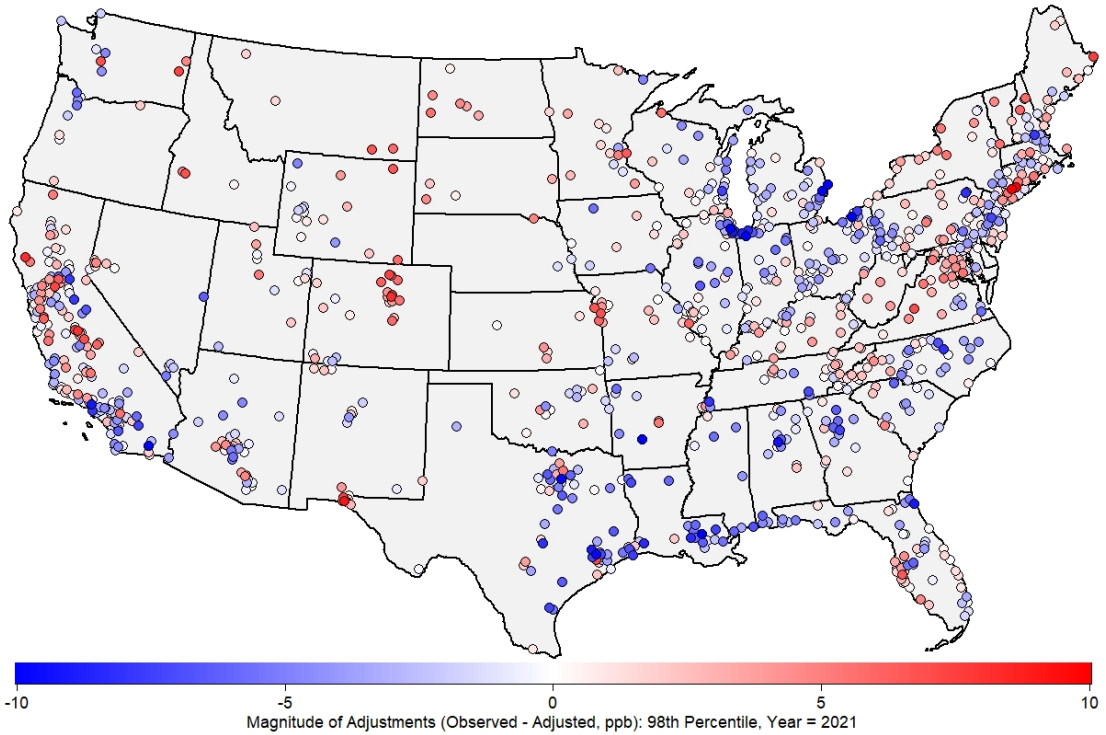
https://doi.org/10.1016/j.atmosenv.2021.118234

Highlights

- Improvements made to the U.S. EPA's method for adjusting ozone trends for weather
- Refinements include improvements to data sources and underlying statistical model
- Variable selection allows location-specific formulation of meteorological effects
- Develops ability to adjust trends in peak concentrations using quantile regression
- Results have the potential to better inform air quality policy and decision-making



Above average temperatures and below average humidity in the Southwest U.S. contributed to increased ozone formation.



Locations where weather conditions were more favorable than usual for ozone formation are shaded in red.