



Technical Information Meeting

Dallas-Fort Worth

Eight-Hour Ozone Design Values and more

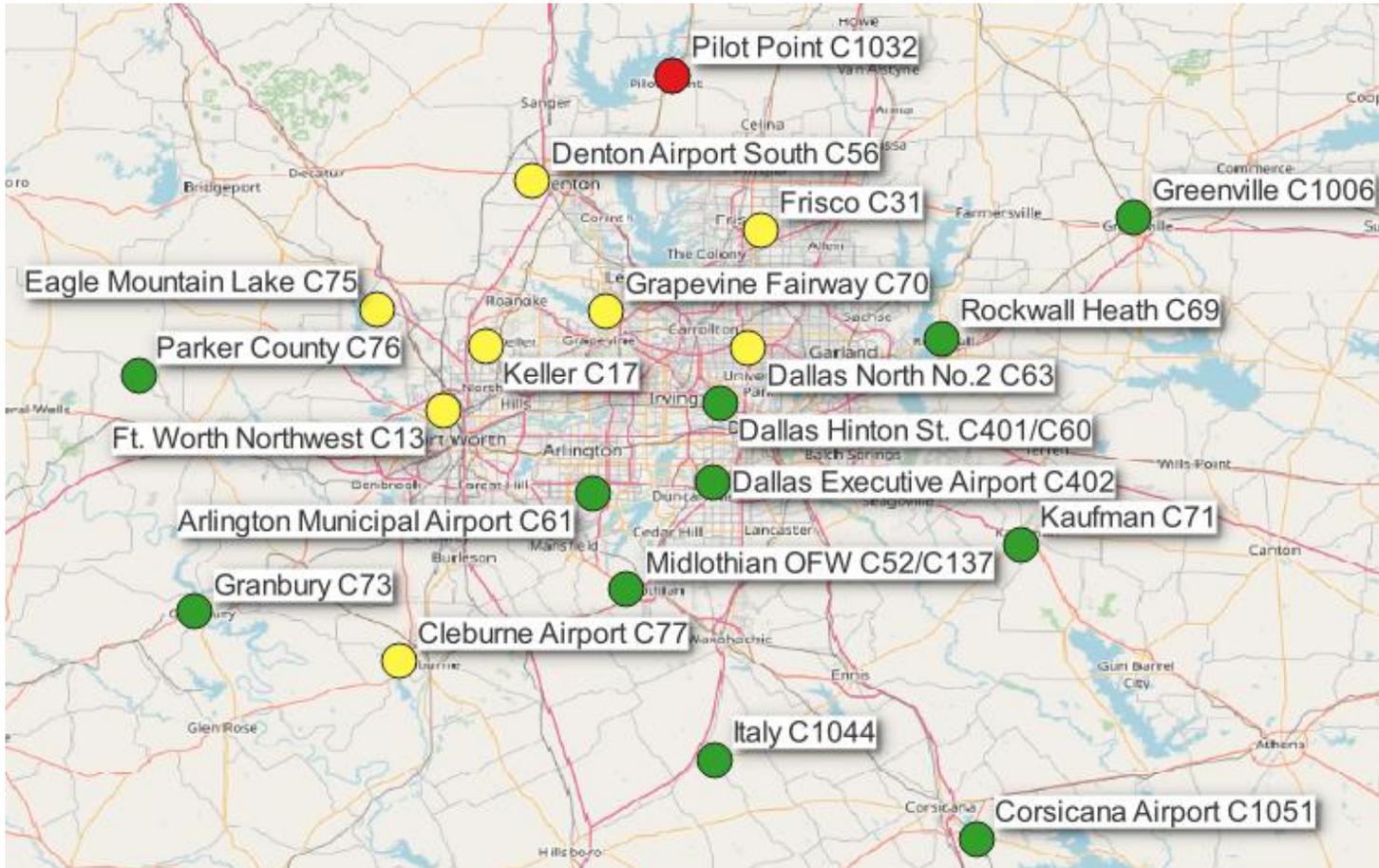
Dave Westenbarger

Outline

Eight-Hour Ozone trends over the most recent decade with complete years of verified data (2012-2021), DFW-area at large and at individual monitors.

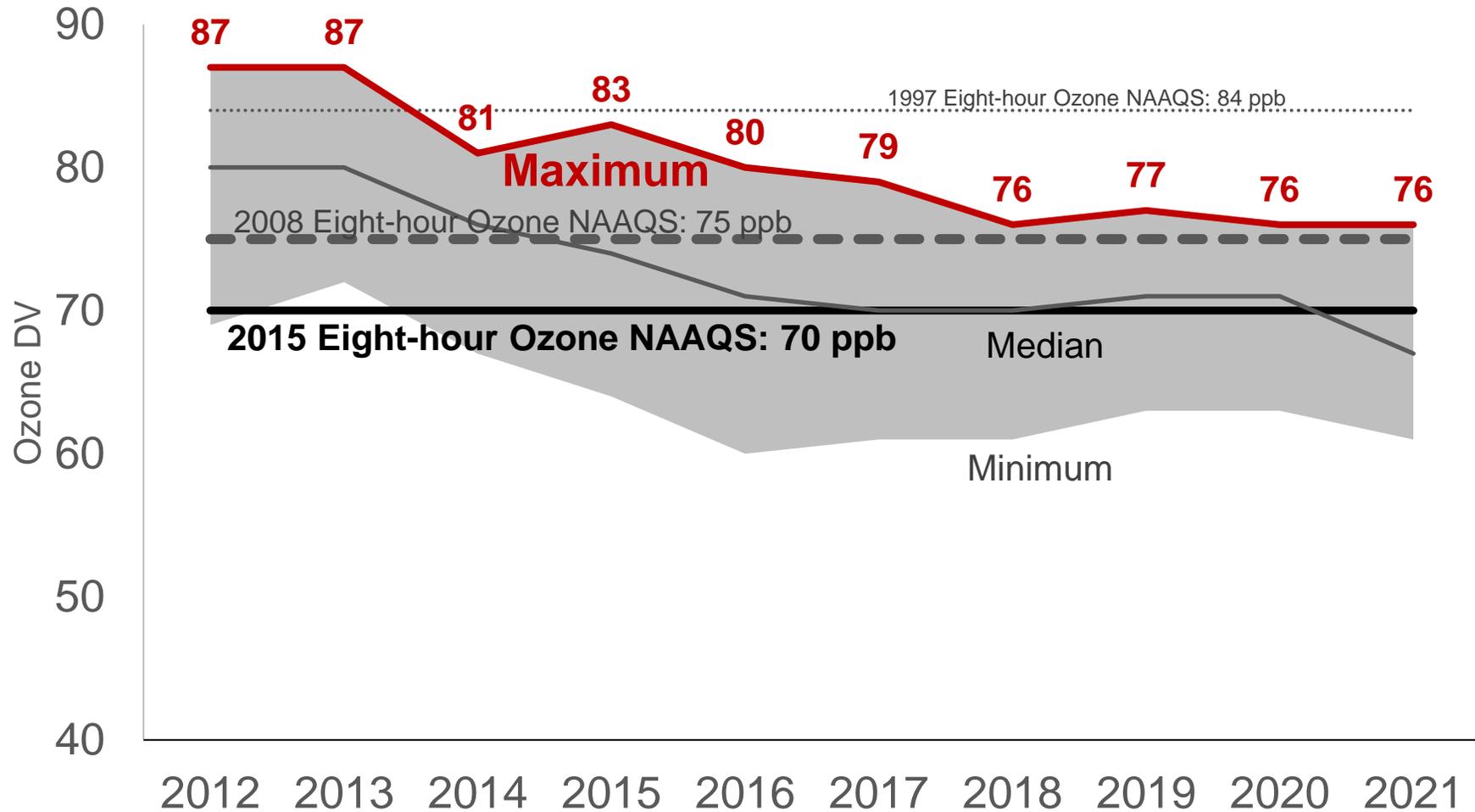
1. Design Values
2. Exceedance Days
3. Annual 4th Highest Eight-Hour Ozone Values
4. Background Ozone Estimates

2021 Eight-Hour Design Value Trends by Monitor

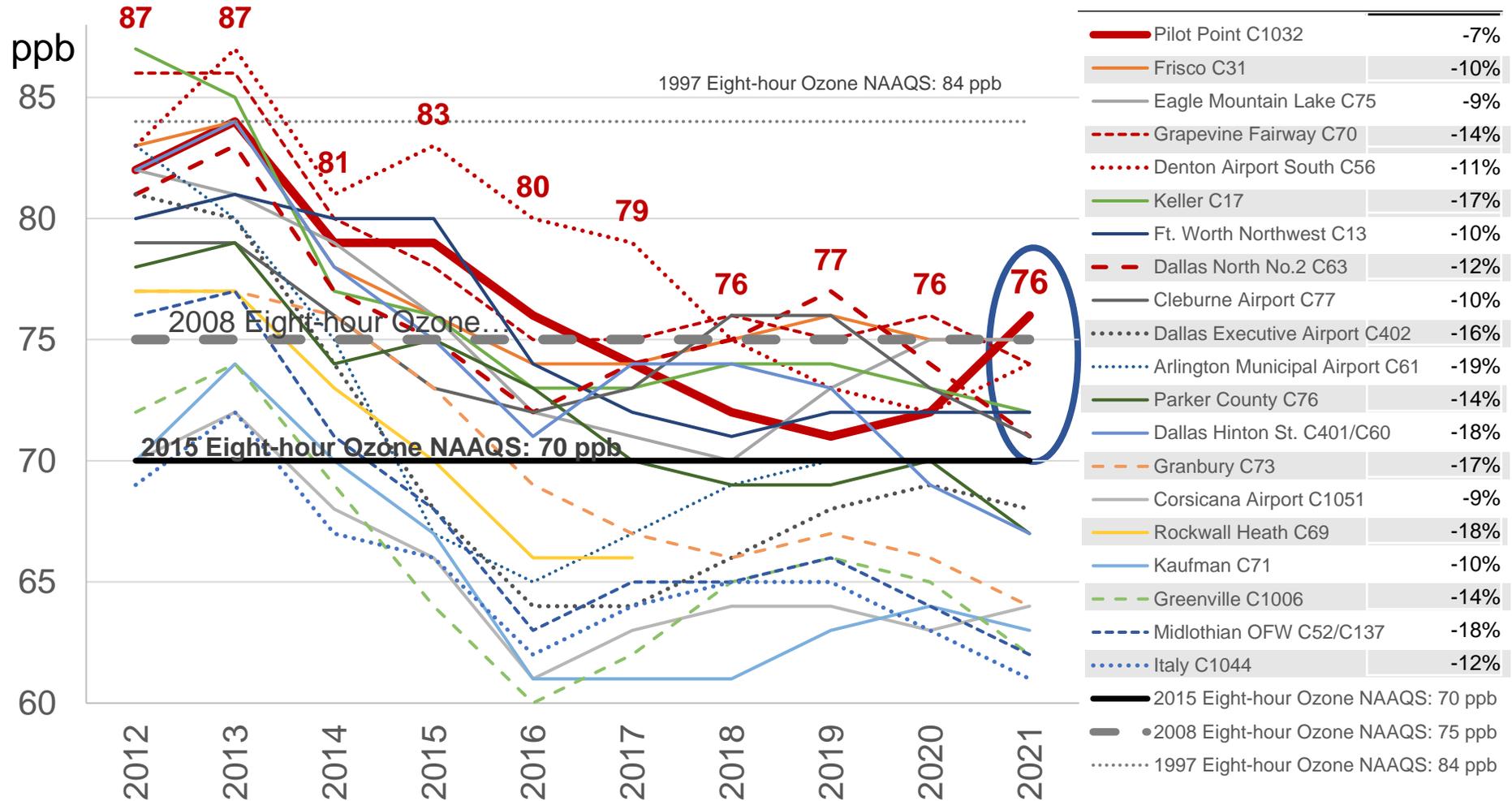


NAAQS Exceedances	Number of Monitors	Percentage of Monitors
Exceeds 2008 NAAQS 75 ppb	1	5%
Exceeds 2015 NAAQS 70 ppb	8	40%
Attains all NAAQS 70 ppb	11	55%

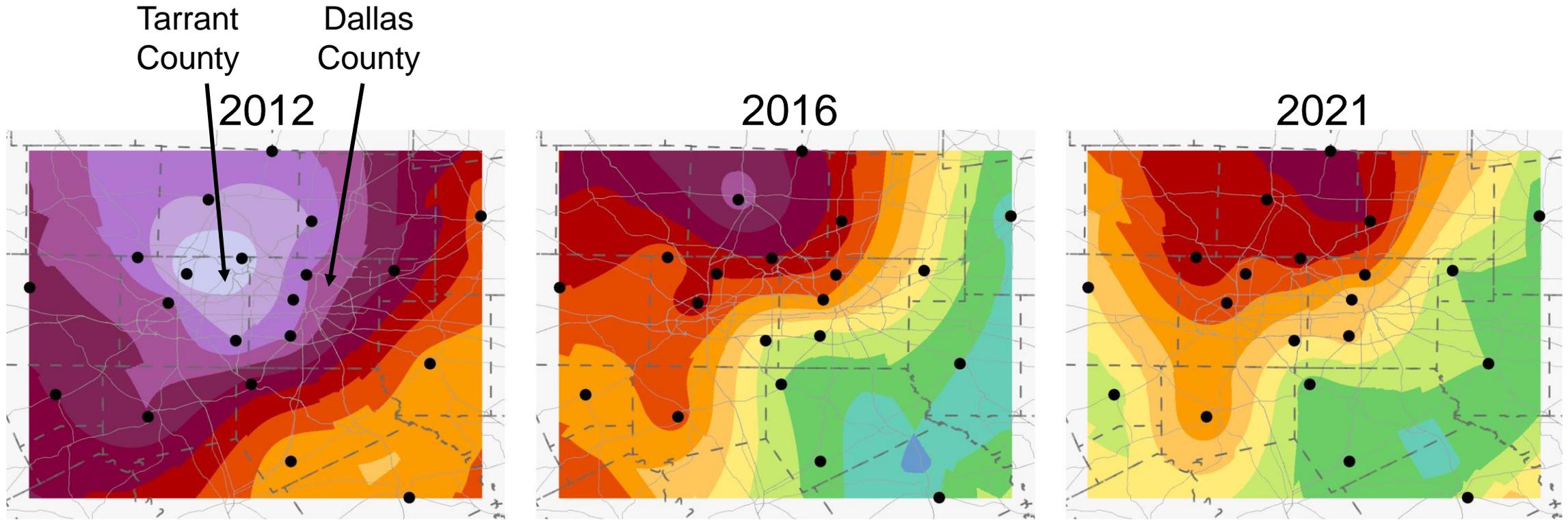
Eight-Hour Design Value Trends



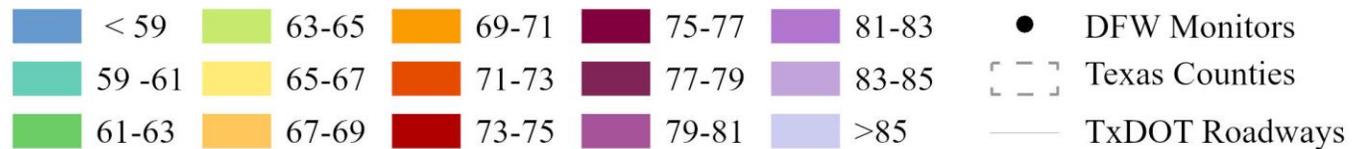
Eight-Hour Ozone DV Trends at Monitors



Eight-Hour Ozone Design Value Heat Maps

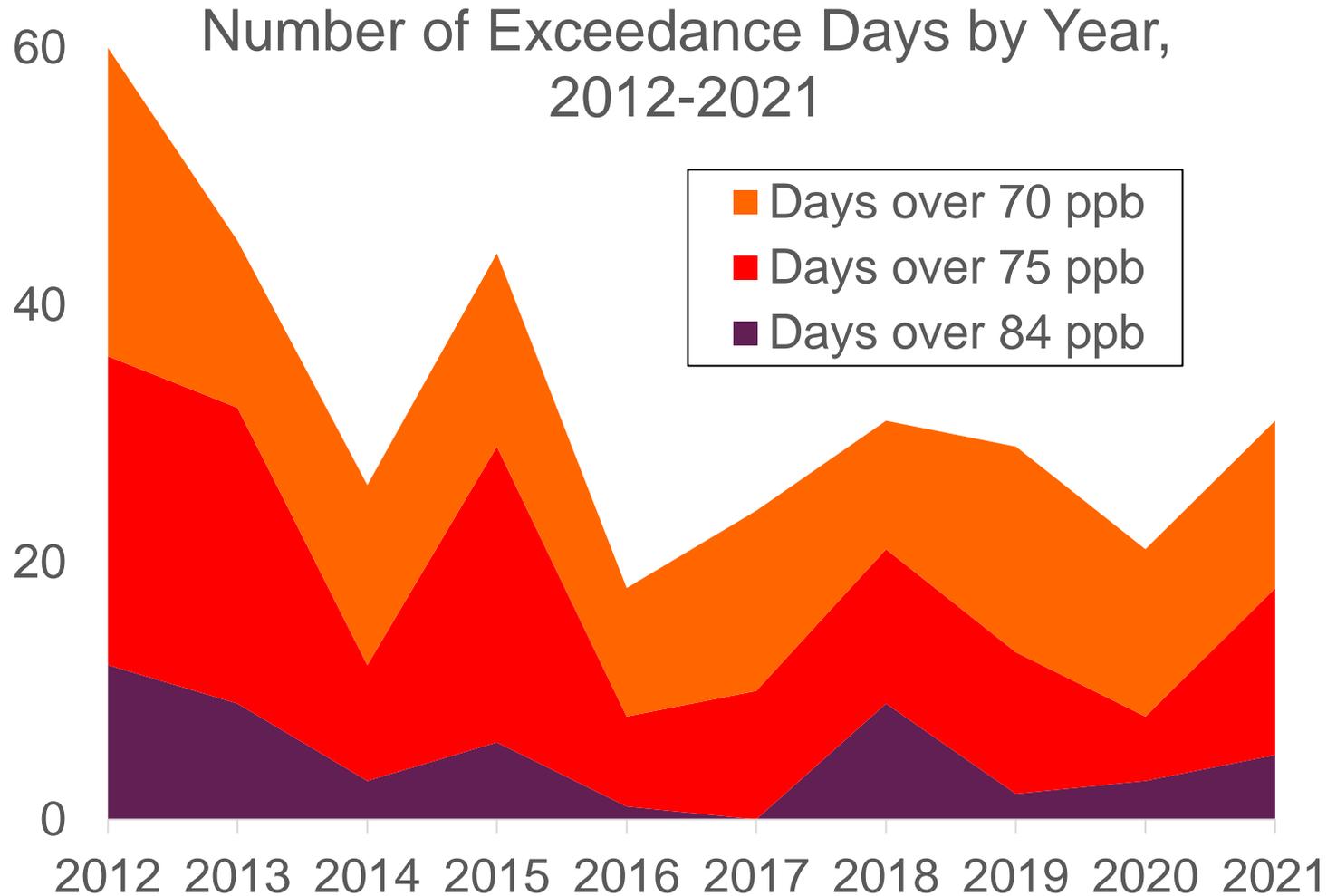


Eight-Hour Ozone
Design Value (ppb)



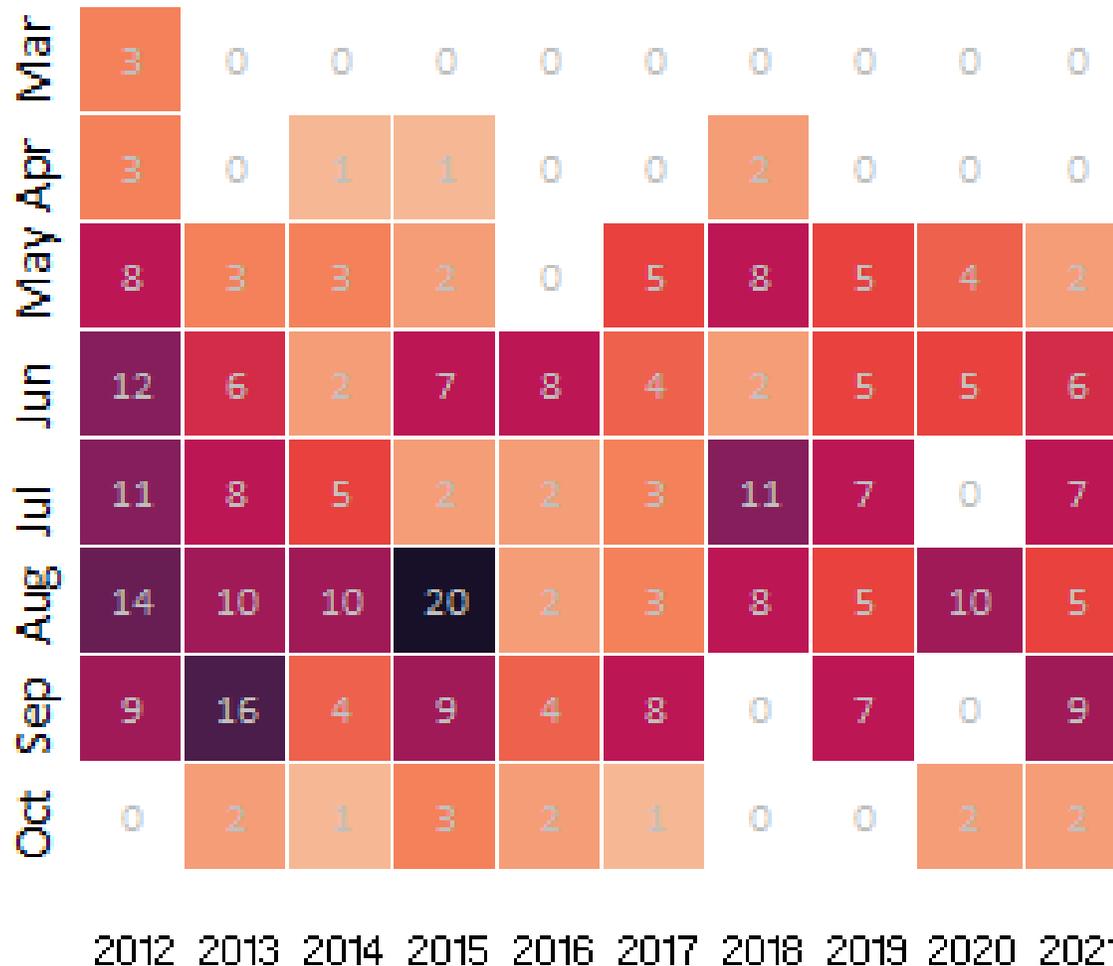
Service Layer Credits: Baylor University, Texas Parks & Wildlife, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA, NPS

Ozone Season Eight-Hour Ozone Exceedance Days

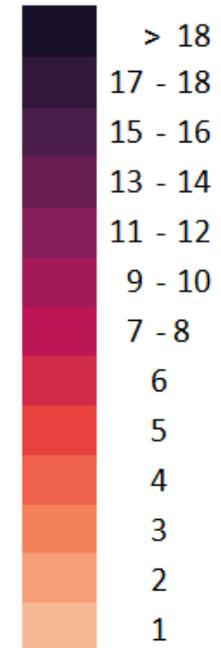


NAAQS Standard	Percent Change 2012-2021
Days > 70	- 46%
Days > 75	- 46%
Days > 84	- 58%

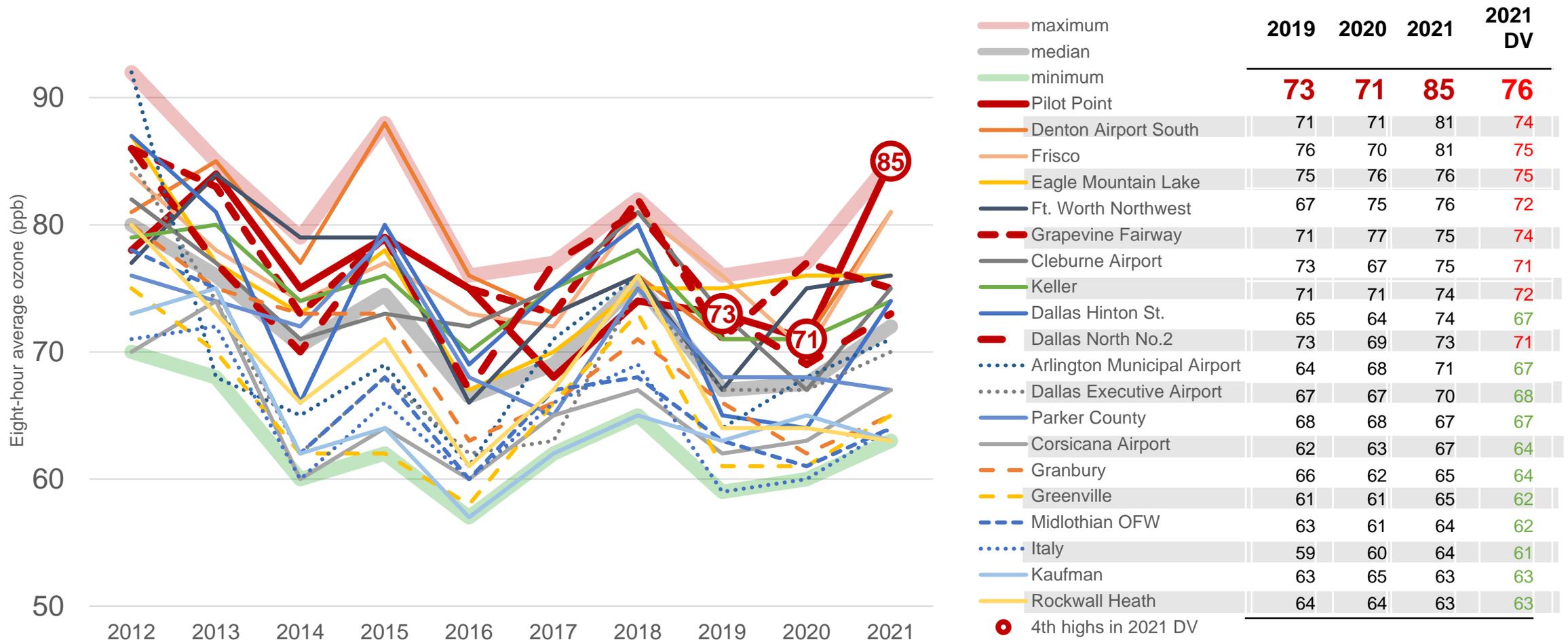
Ozone Season Eight-Hour Ozone Exceedance Heatmap Calendar



Number of days with an exceedance of the 2015 NAAQS (70 ppb)

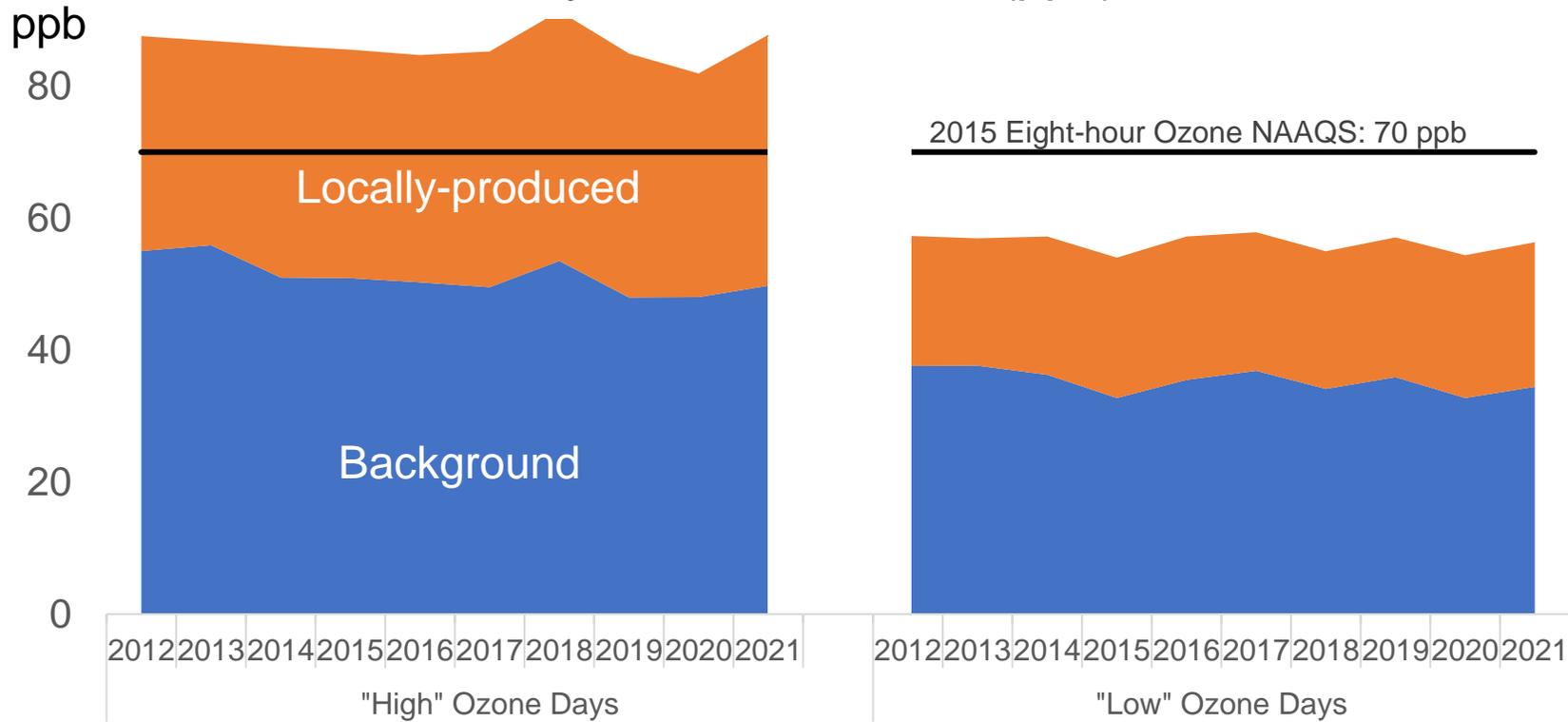


Eight-Hour Ozone 4th Highs



Background Ozone

Annual Average Background and Locally-Produced Ozone (ppb)



* Ozone season (March-October) only.

Summary

- Ozone design values in DFW have generally decreased from 2012-2021 at all monitors in the region. Decreases ranged from -7% at Pilot Point to -19% at Arlington Municipal Airport.
- Across all years, lower design values continued to be recorded in the east and southeast, higher values in the north and northwest. What is considered “higher” or “lower” is lower in recent years.
- The number of exceedance days dropped substantially over the decade: -46% in the case of the 2015 NAAQS.
- Background ozone is variable from year to year but is stable within a narrow range. Locally-produced ozone is roughly one-third of total ozone on “high” ozone days.

Questions?

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All data used to generate graphics for this presentation have been validated and were retrieved from the EPA Air Quality System in June 2022.

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