

Paso del Norte Air Quality Report | February 16, 2023

Dr. Carlos Rincon, US EPA Region 6



*Overview

- Current air monitoring networks
- January - December 2022 data by pollutant with design values for each country
- Open discussion

Paso del Norte Air Monitoring Stations

El Paso del Norte Airshed Air Quality Monitors

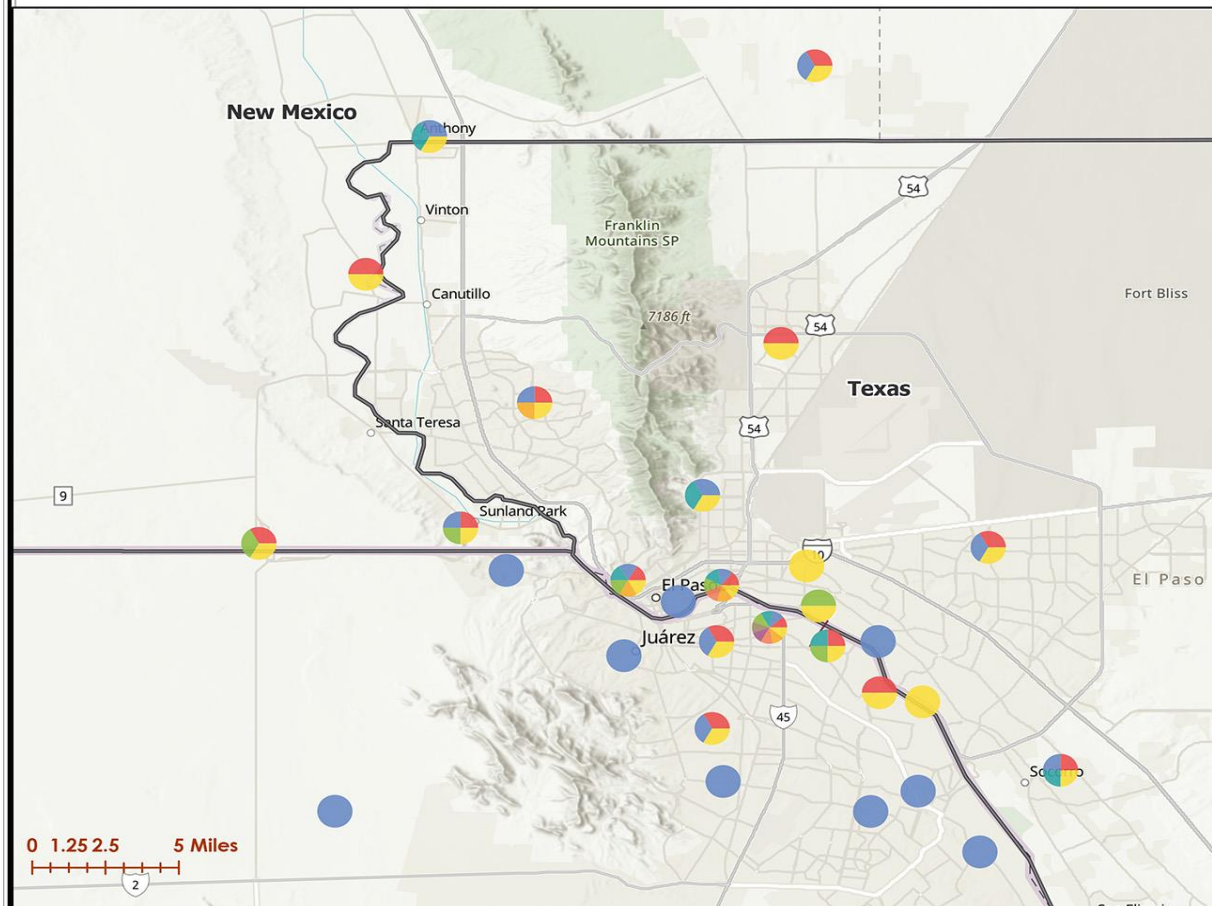
April 2021

Map Requested by TCEQ Office of Air



Protecting Texas by
Reducing and
Preventing Pollution

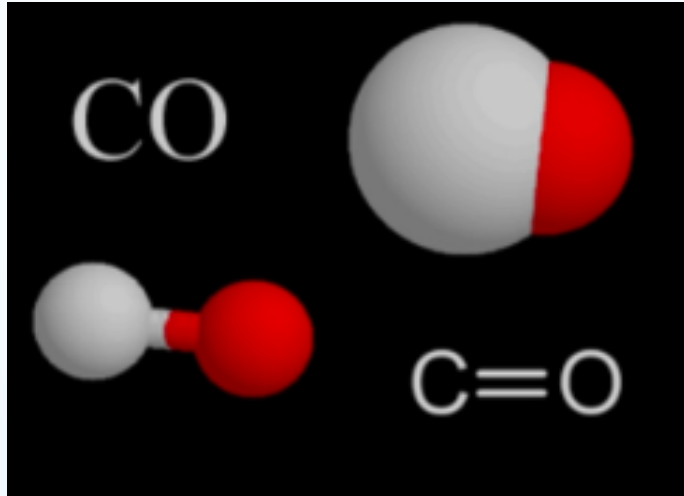
Texas Commission on Environmental Quality
GIS Team (Mail Code 197)
P.O. Box 13087
Austin, Texas 78711-3087
Date: 6/24/2022
CRF: 0073203
Cartographer: CHoddePi



- Ozone
- PM 10
- PM 2.5
- NO₂
- NO_x
- NO
- SO₂
- CO
- Met

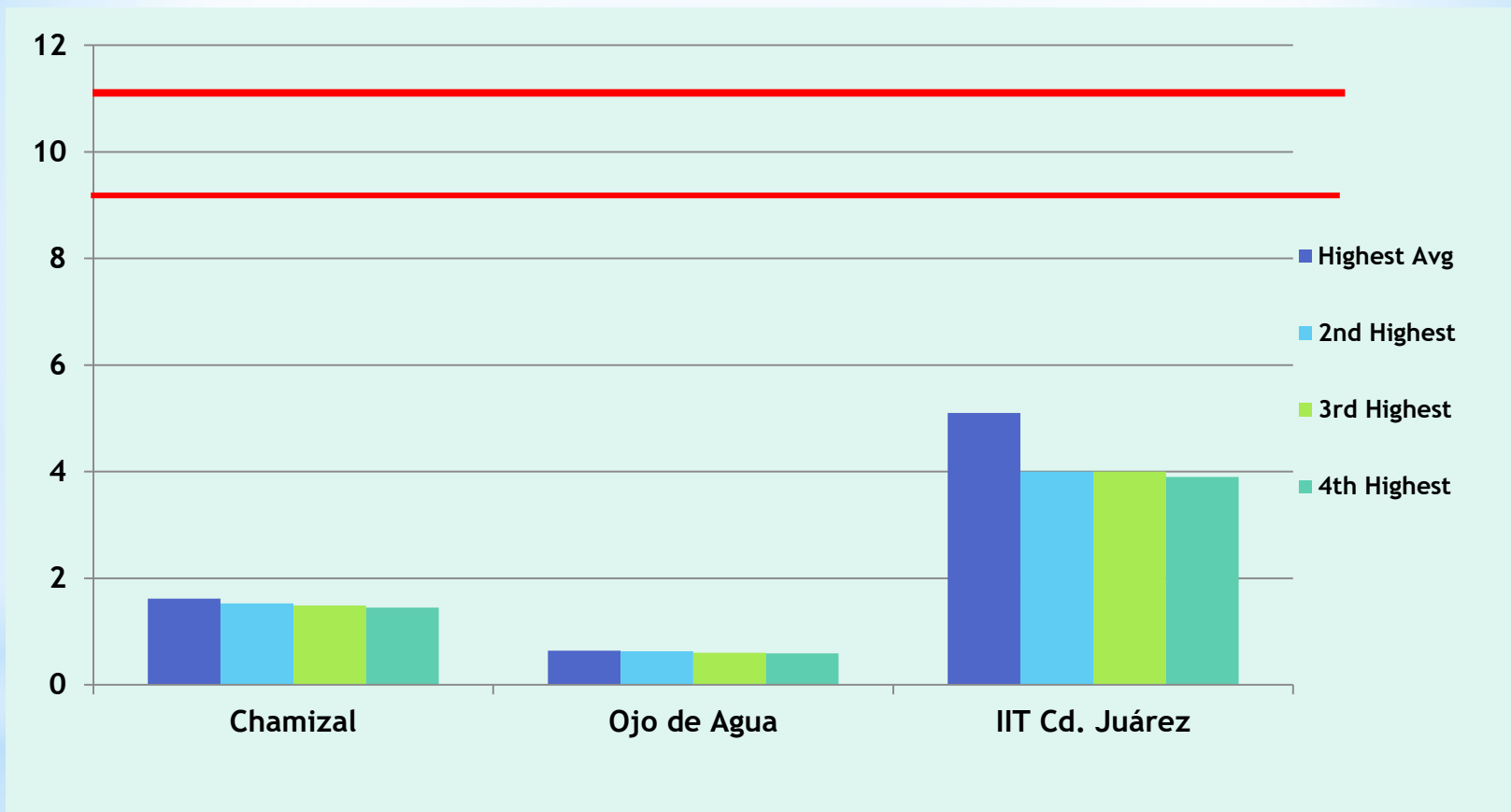
Source: The location of the facility was provided by the TCEQ Office of Air.

This map was generated by the Information Resources Division of the Texas Commission on Environmental Quality. This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries. For more information concerning this map, contact the Information Resource Division at (512) 239-0800.



* Carbon monoxide (CO)
Monóxido de carbono

CO 8 Hr. Averages Four Highest Values in (ppm) El Paso and Ciudad Juárez (January - December 2022)



The **U.S. federal standard, 9.0 ppm**, is violated when more than one reading at the same monitor in one calendar year is at or above that value.

The **Mexico federal standard** is a highest allowable limit of **11 ppm**.

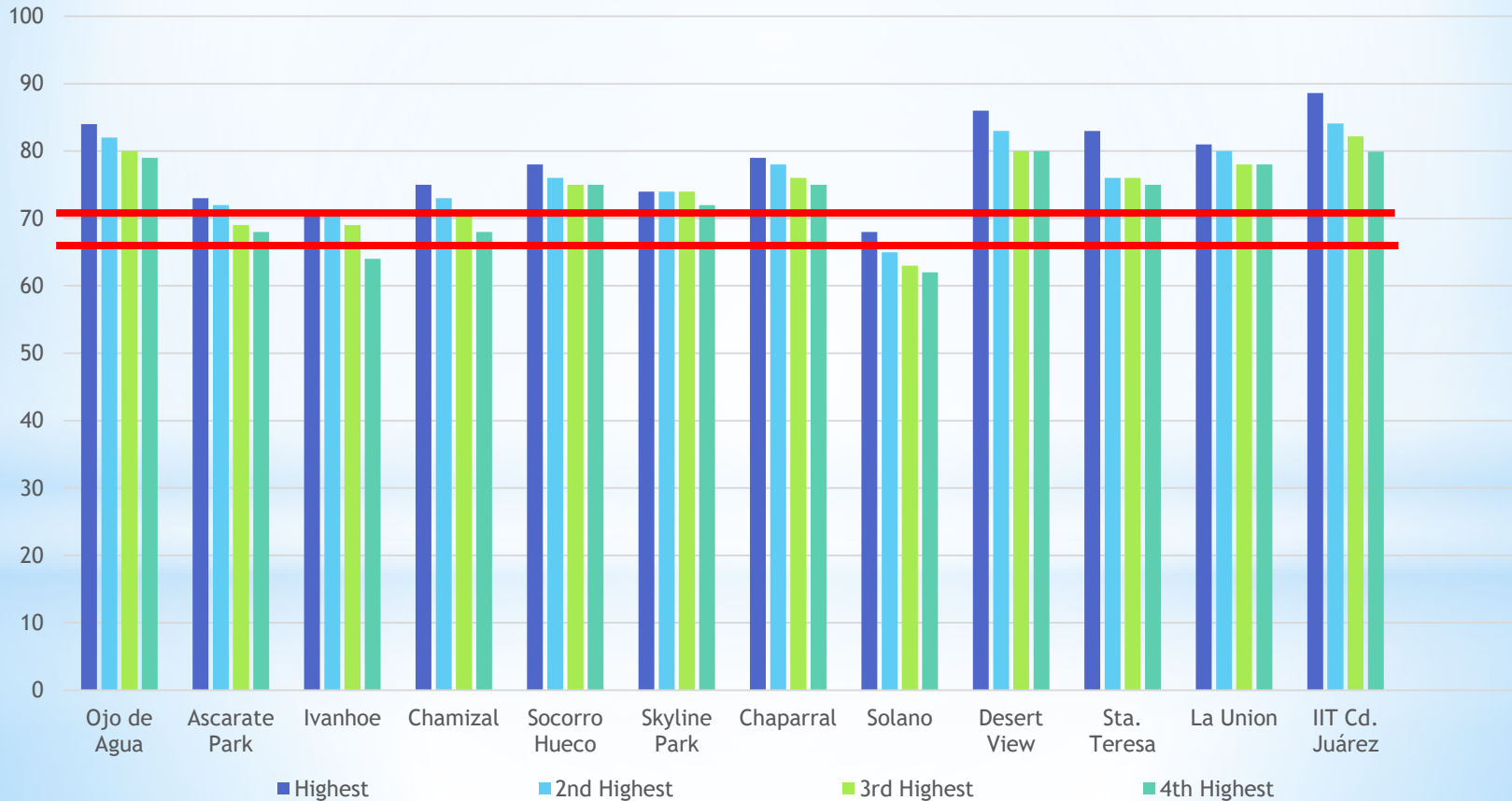


* Ozone (O_3)
Ozono

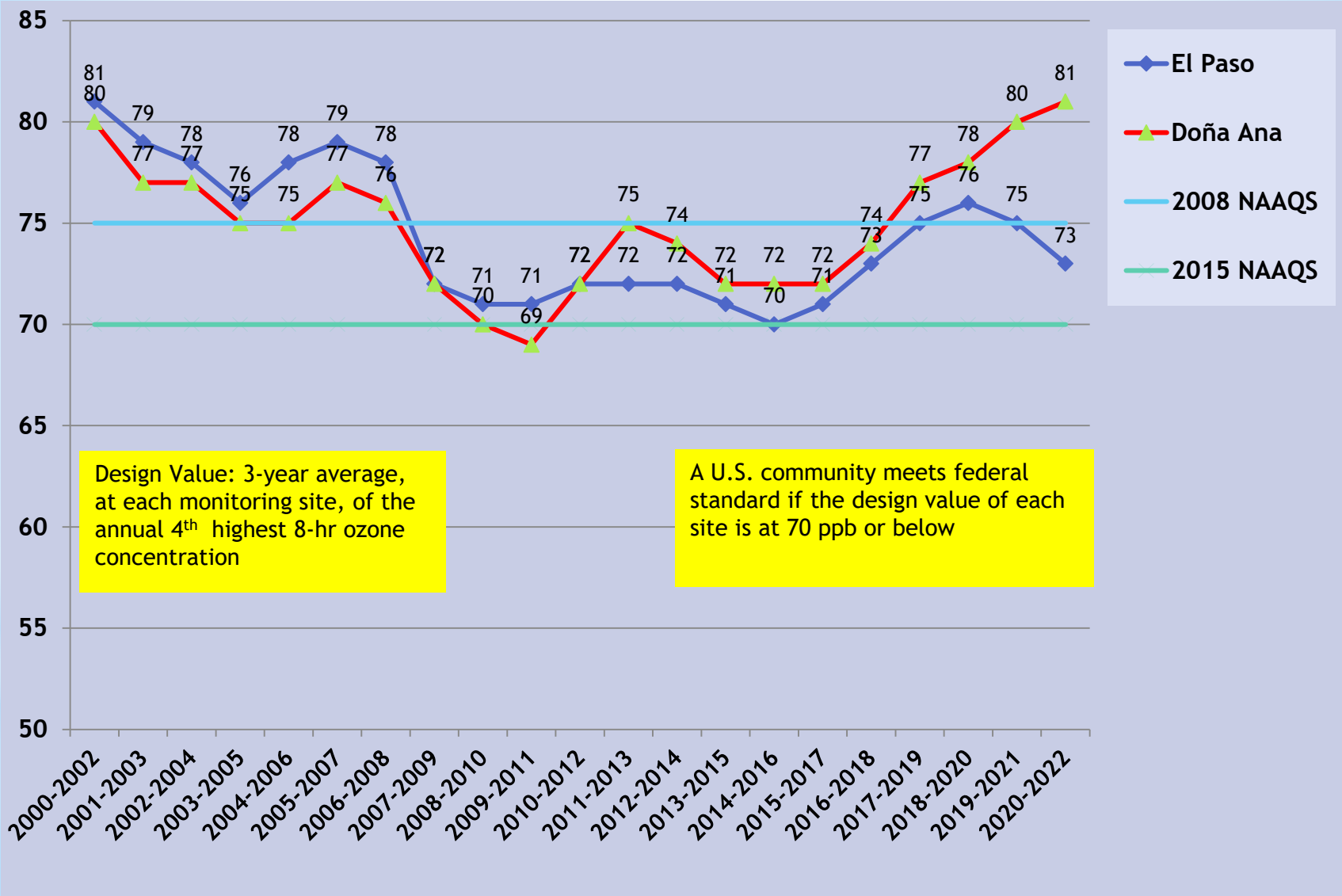
*Ozone 8-Hour Averages Highest Values at Monitors in the Paso del Norte (January - December 2022)

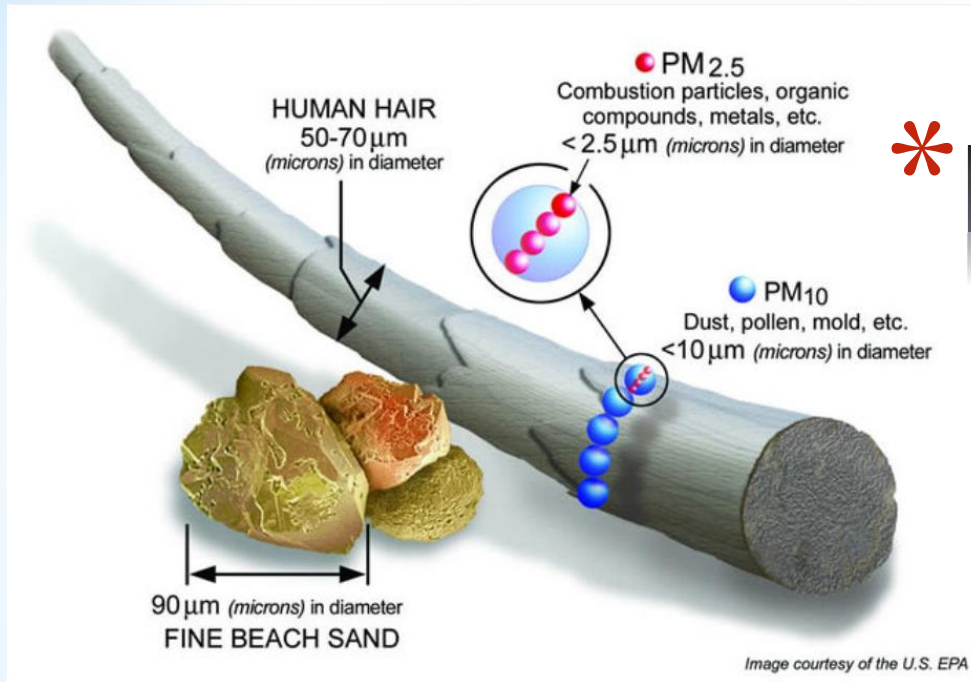
El Limite máximo permisible en México para Ozono es de 65ppb en promedio móvil de 8 horas

U.S. federal standard: 70 ppb for the 3-year average of the 4th highest value



Ozone 8-Hr. Design Values | El Paso and Doña Ana County (highest value of all sites in each area, 20002 - 2022)



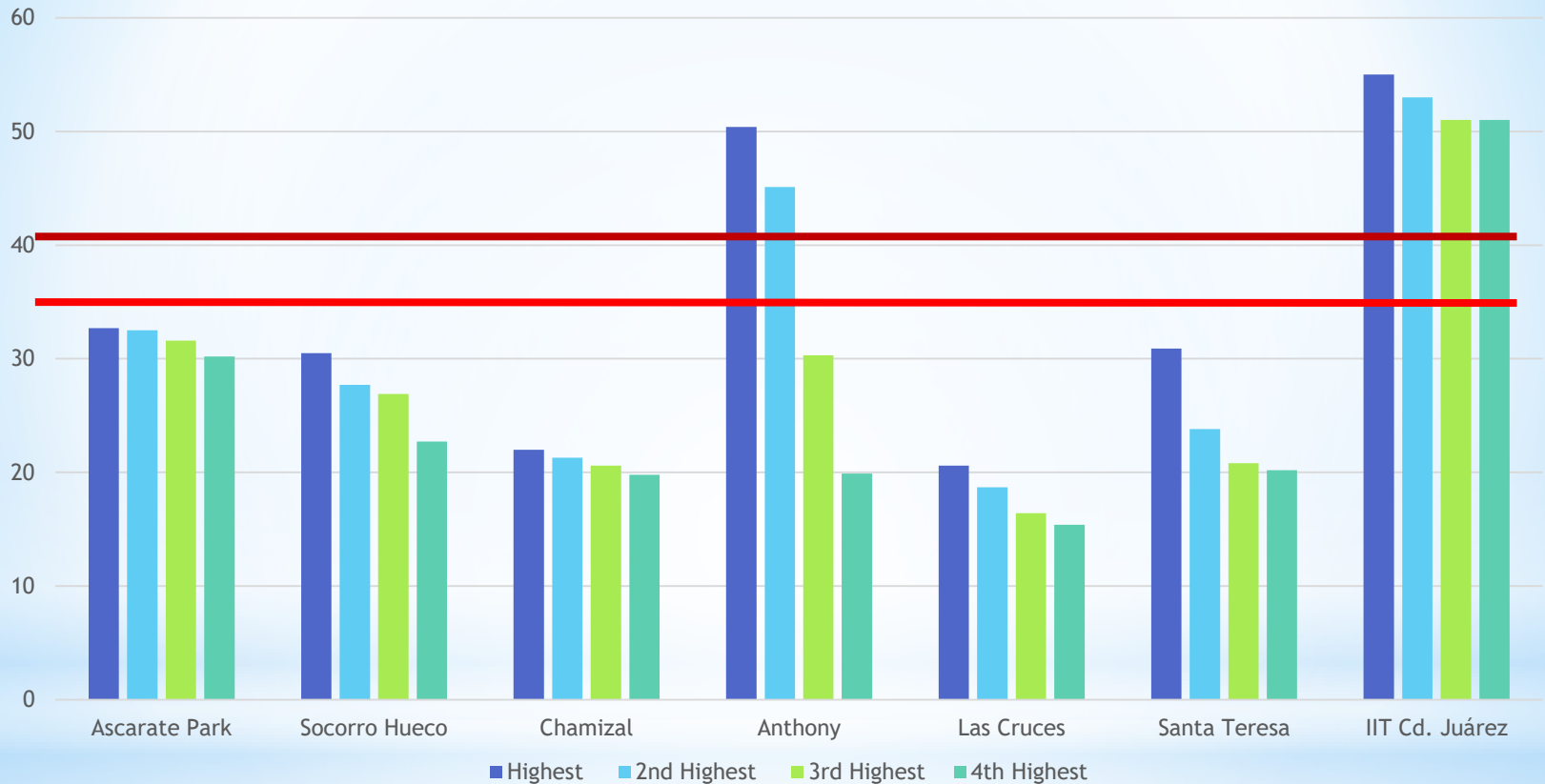


* PM 2.5

* PM 10

* Particulate Matter (pm) material particulado

*** PM_{2.5} 24-Hour Averages (µg/m³) Four Highest
El Paso, Doña Ana County, and Ciudad Juárez
January - December 2022**



U. S. federal standards:
The standard for 24-hr averages, 35 ug/m3, is violated if it is exceeded by the average over any three-year period, of the annual 98th percentile

The highest allowable limit in Mexico for PM2.5 is 41 ug/m3 in 24-hour averages.

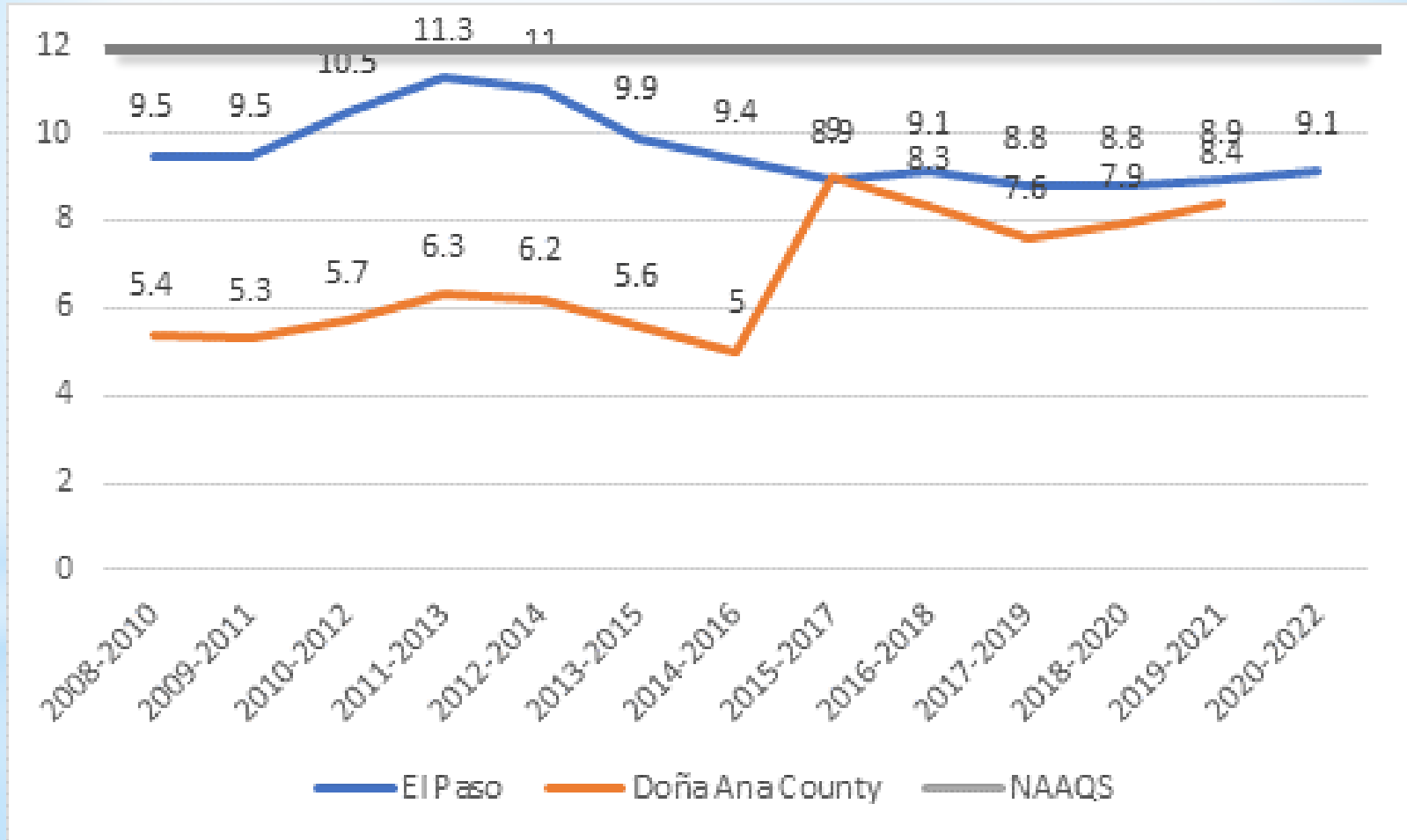
*** Special Purpose Monitors-Non-validated Data**

Note: El Paso County (Azcarate Park and Socorro Huevo) data are Federal Reference Methods (FRM) monitors while DAC are Federal Equivalent Method (FEM).

PM_{2.5} Compliance with U.S. Federal Standard El Paso and Doña Ana Counties

Annual Design Value

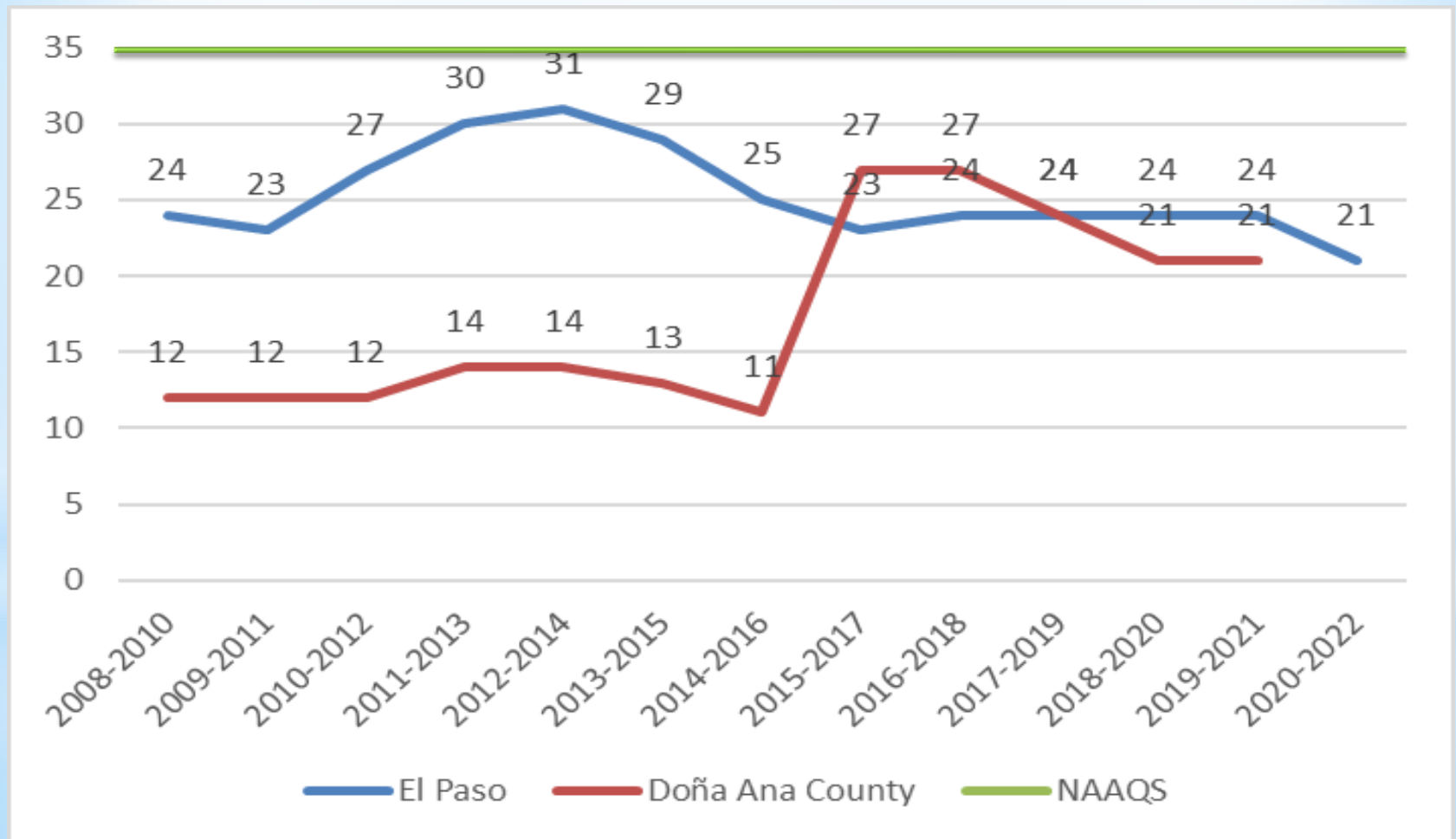
U.S. Standard: **12 $\mu\text{g}/\text{m}^3$**



PM2.5 Compliance with U.S. Federal Standard El Paso and Doña Ana Counties

24-Hour Design Value

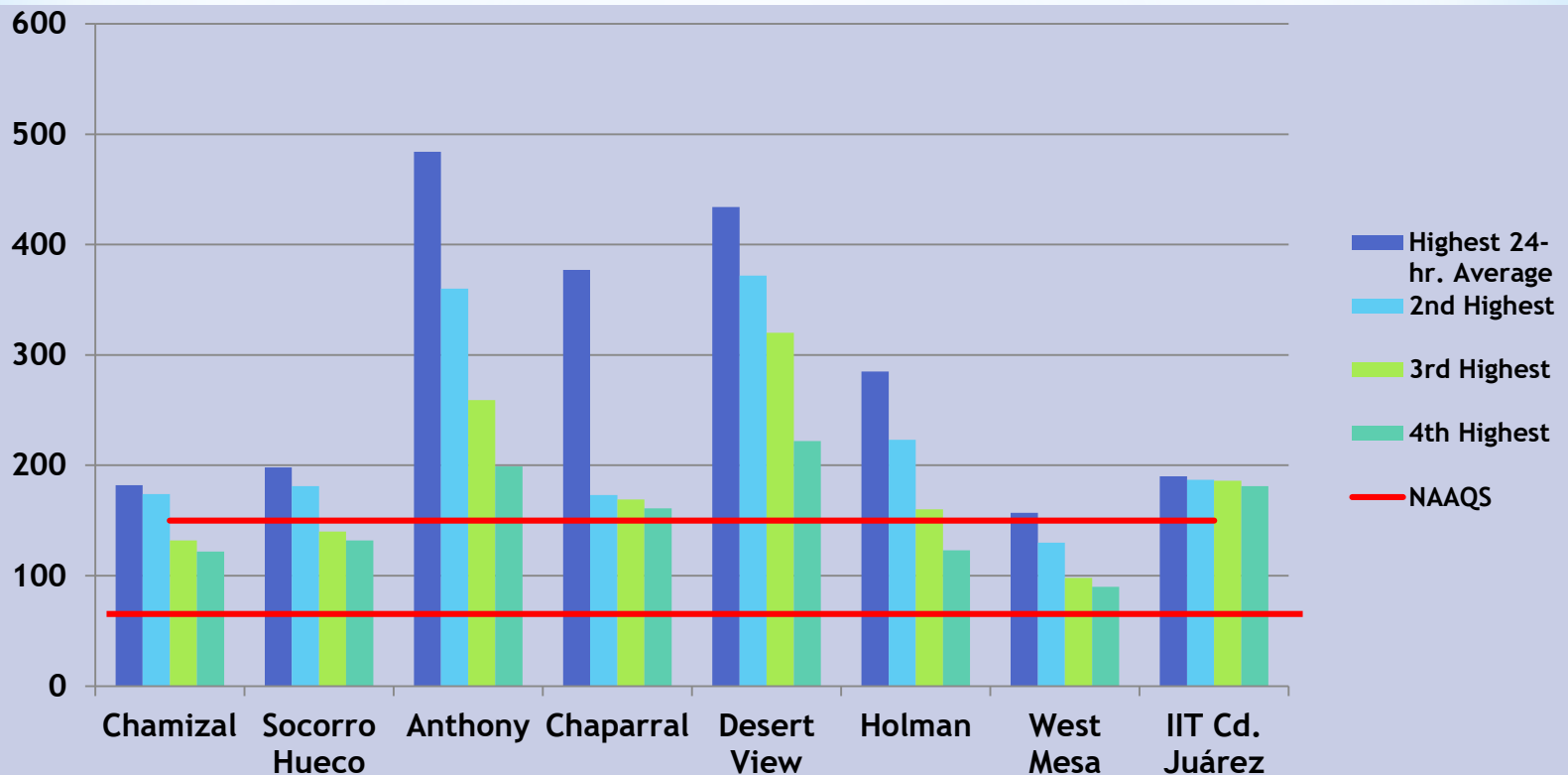
U.S. Standard **35 $\mu\text{g}/\text{m}^3$**



PM10 24-Hour Averages ($\mu\text{g}/\text{m}^3$) Four Highest El Paso, Doña Ana County, and Ciudad Juárez January - December 2022

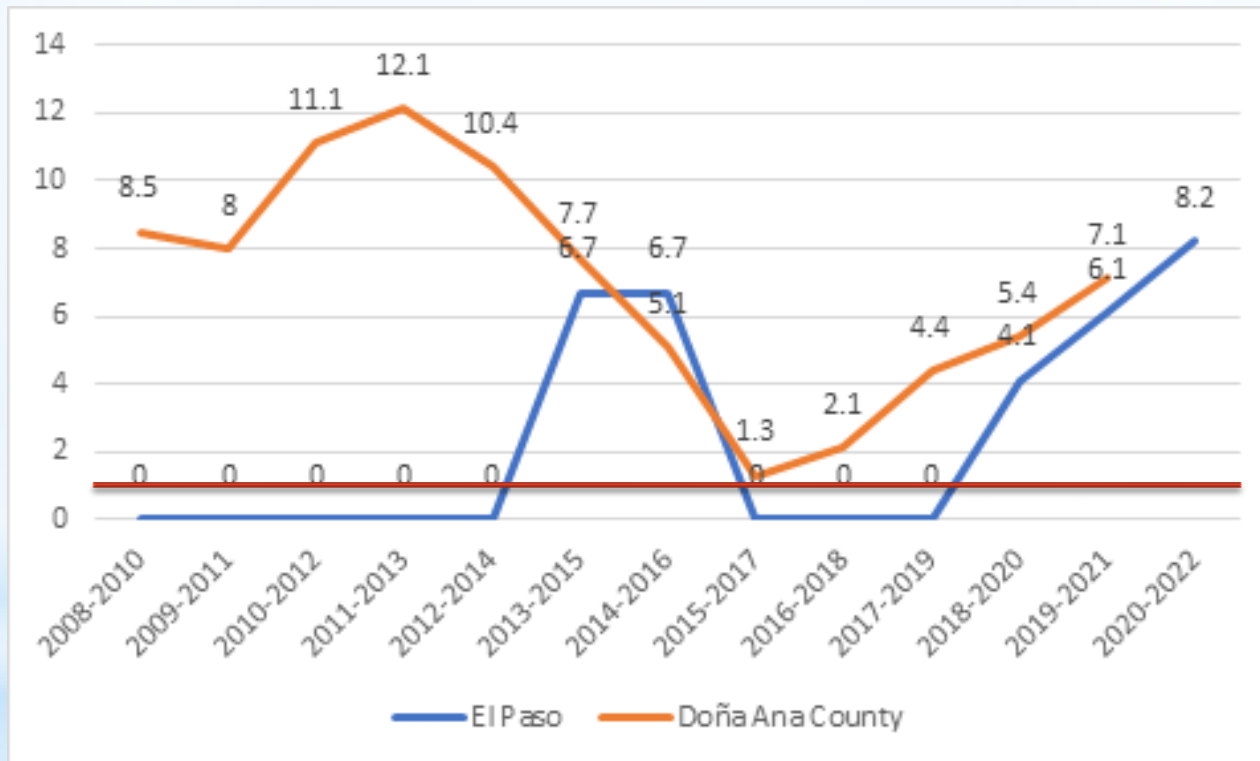
El Limite máximo permisible en México para PM10 es de $70 \mu\text{g}/\text{m}^3$ en promedio de 24 horas

U.S. federal standard: $150 \mu\text{g}/\text{m}^3$ not to be exceeded more than once per year on average over three years at any one monitor.



*PM10 24-Hour Design Values El Paso and Doña Ana County | 2012 - 2022

Estimated Number of Exceedances



Exceptional Events | Doña Ana County

High-Wind Blowing Dust PM₁₀ Exceedances of NAAQS

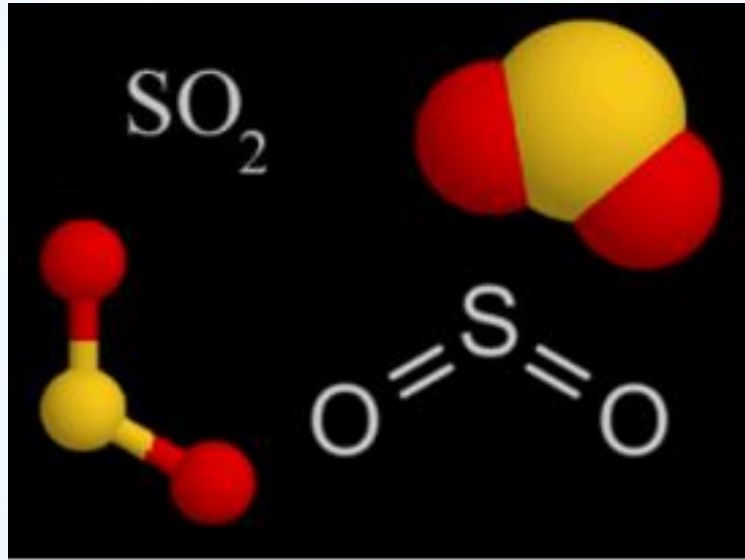
Year	Events	Observed Exceedances	Concentrations (µg/m ³)	EPA Review Process
2022	15	30	157 - 879	Internal QA/QC
2021	15	31	157 - 769	Submitted
2020	8	13	157- 504	Concurrence
2019	8	25	156-734	Concurrence
2018	7	18	158-326	Concurrence
2017	11	27	157-721	Concurrence
2016	11	28	162-689	Concurrence

Cumplimiento con los límites de exposición crónica | Media aritmética anual 2022

Compliance with exposure limits | Annual arithmetic mean 2022

Parámetro Parameter	Límite de exposición crónica anual Annual exposure limit	Promedio trimestral Quarterly mean
PM _{2.5}	10 µg m ³	39.9*
PM ₁₀	36 µg m ³	122*

*Dentro de esta información se consideran los eventos de tolvaneras



* Dióxido de azufre
Sulfur Dioxide SO_2

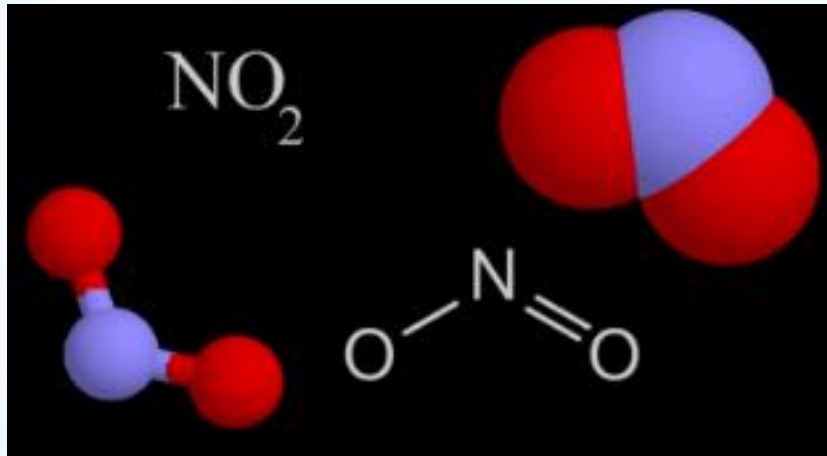
SO₂ 1-Hour Averages | Four Highest

El Paso and Ciudad Juárez | January - December 2022



U.S. federal standard:
76 ppb 99th percentile of 1-hour daily maximum concentrations, averaged over 3 years

The highest allowable limit in Mexico for SO₂ is **75 ppb** in 1-hour average.

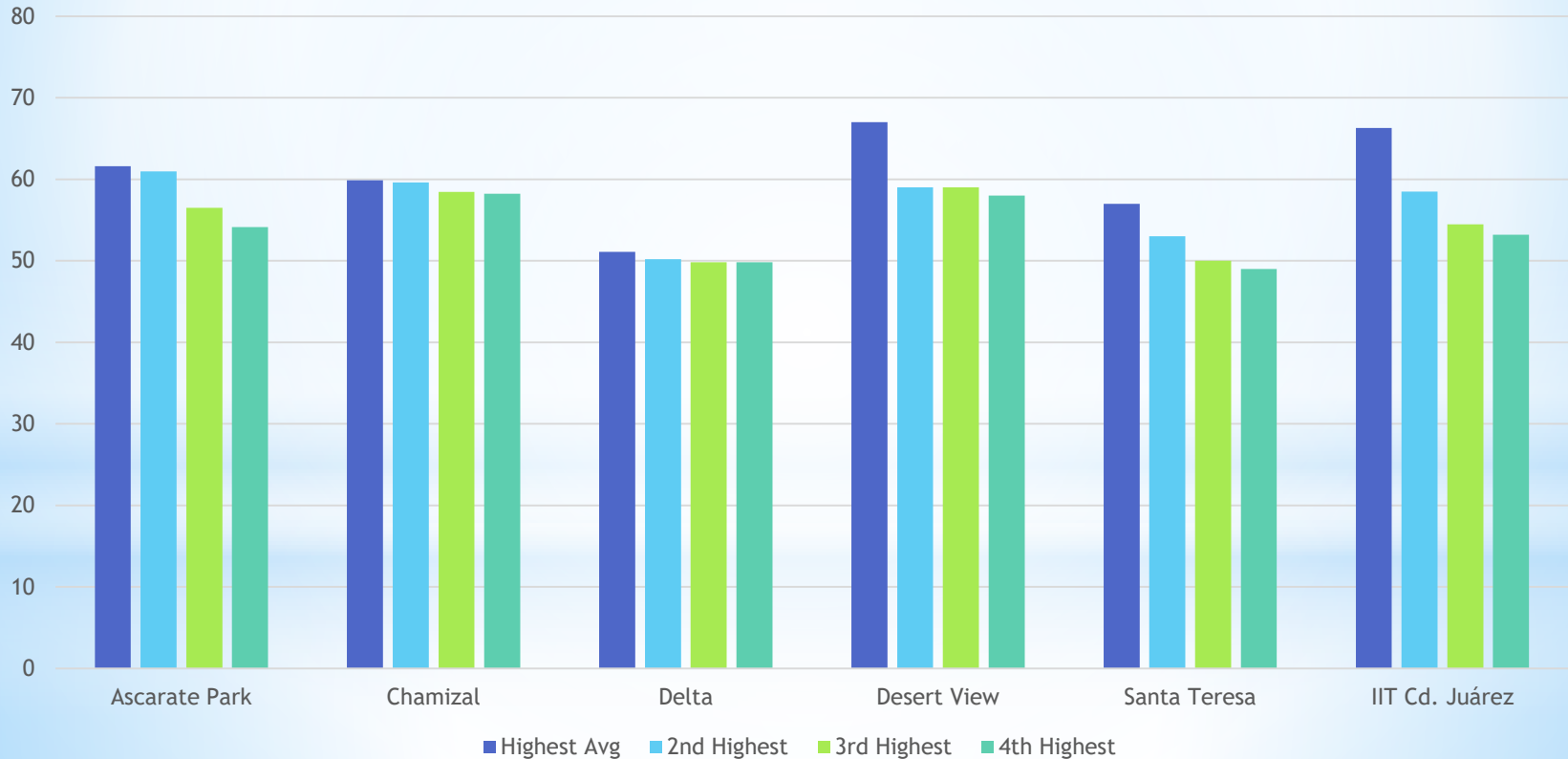


* Dióxido de nitrógeno
Nitrogen Dioxide NO₂

* **NO₂ 1-Hour Averages (ppb) Four Highest**
El Paso del Norte
January - December 2022

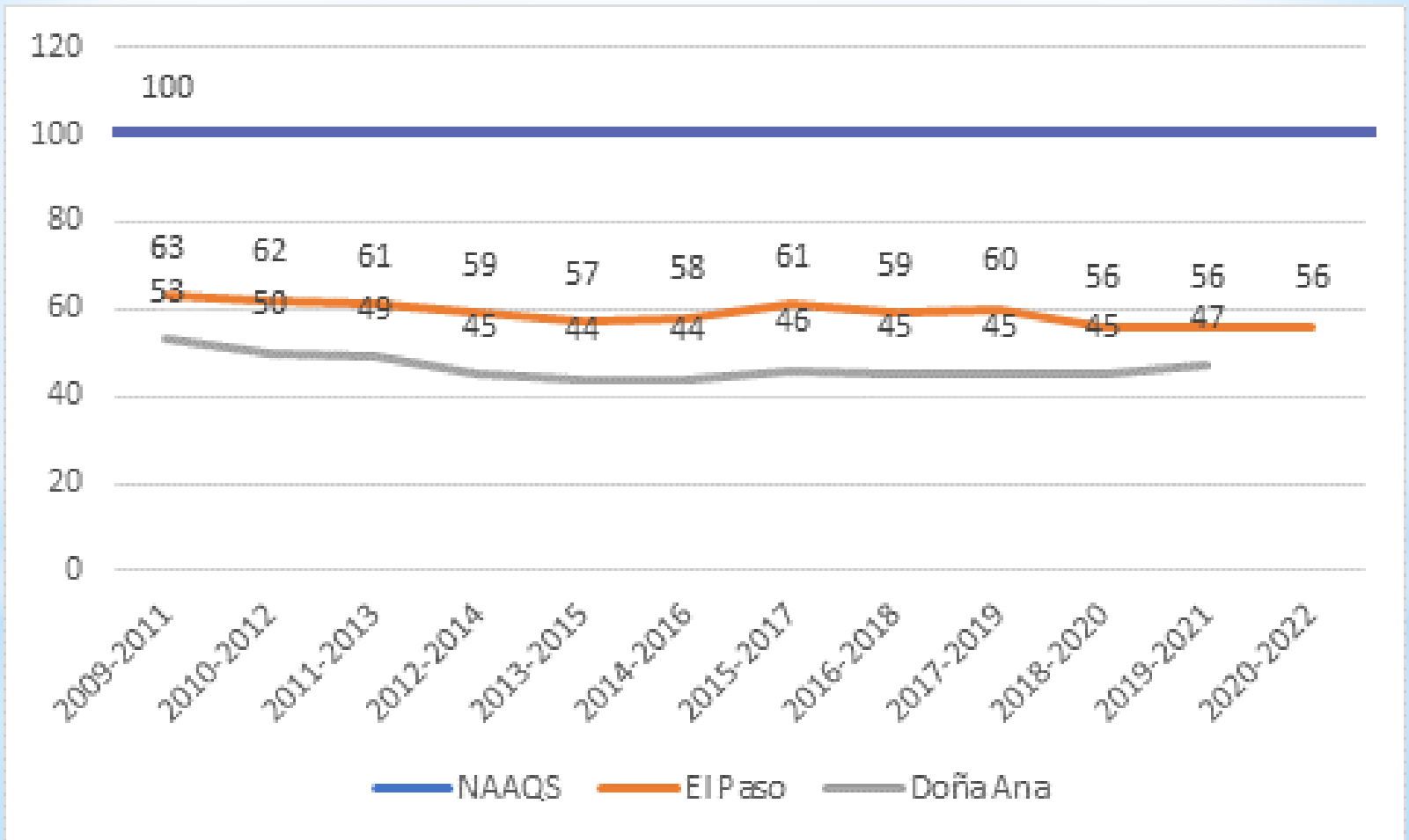
U.S. federal standard:
100 ppb 98th percentile of 1-hour daily maximum concentrations, averaged over 3 years

The highest allowable limit in Mexico for NO₂ is **106 ppb** in hourly averages.



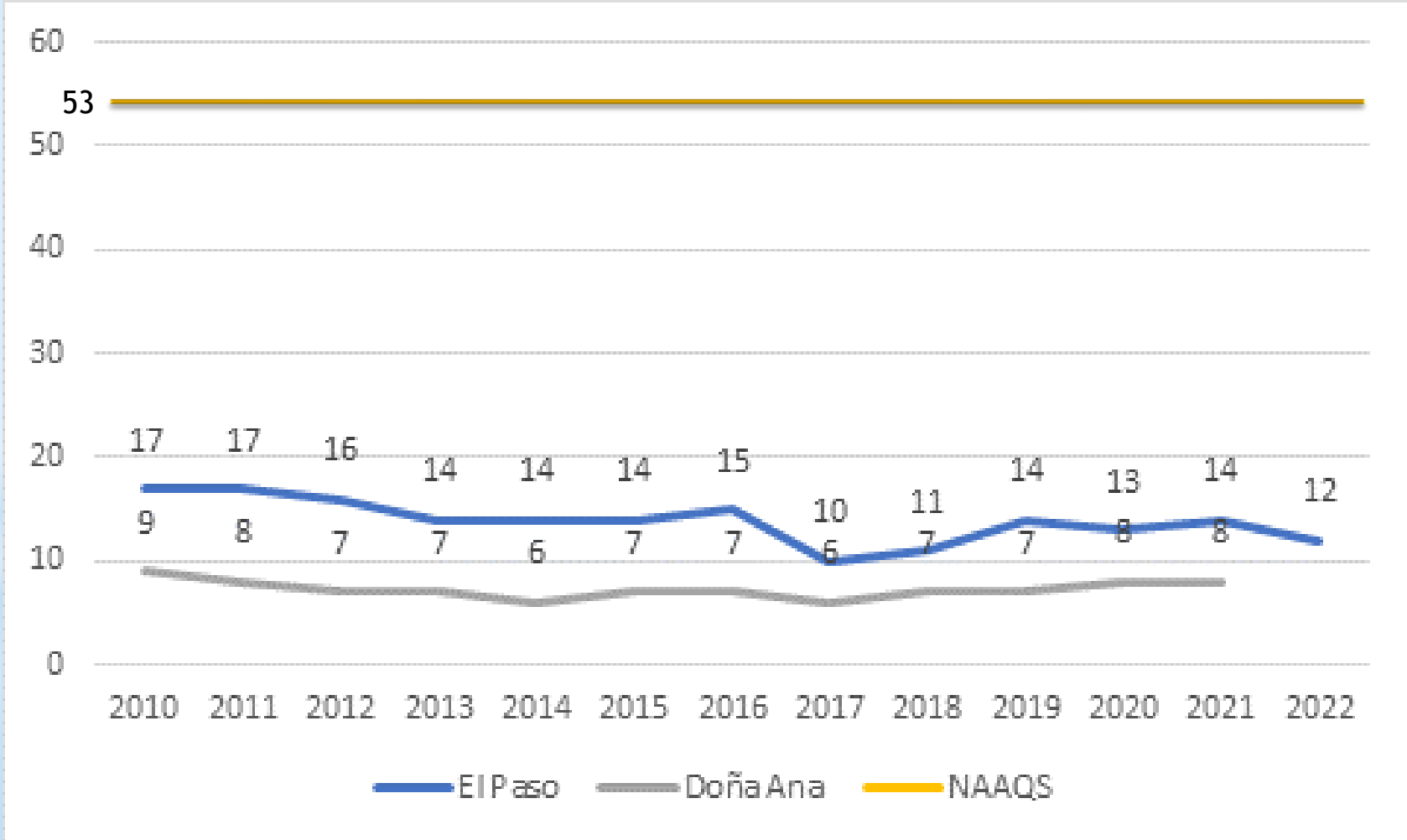
NO₂ Design Values 1-Hour Averages (ppb) El Paso & Doña Ana Counties

The 1-hour NO₂ NAAQS (100 ppb) is the 3-year average of the annual 98th percentile of the daily maximum 1-hour average concentrations.



NO₂ Design Values Annual Mean (ppb) El Paso & Doña Ana Counties

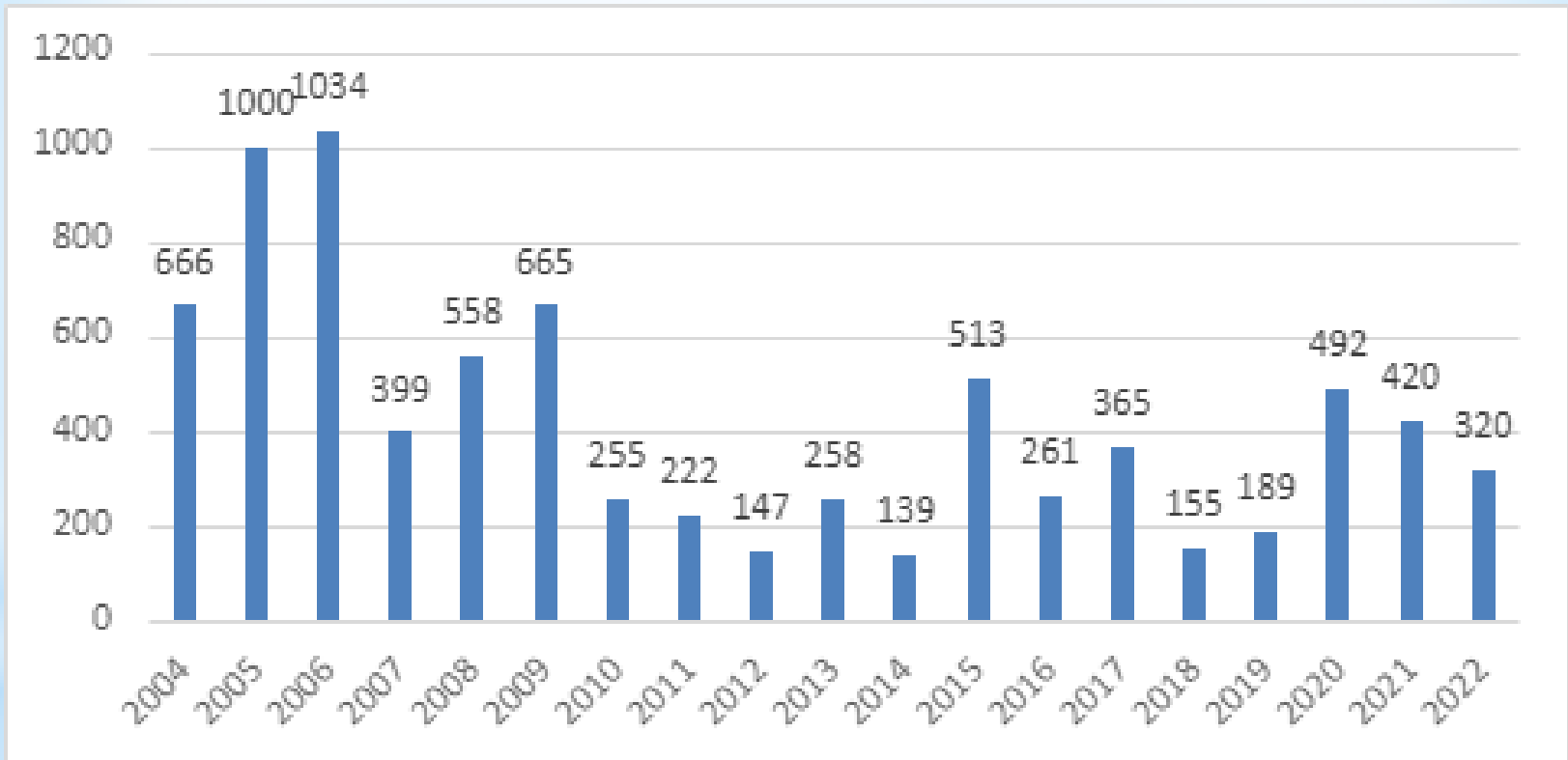
The annual NO₂ NAAQS (53 ppb) is the annual average concentration, averaged over three years.



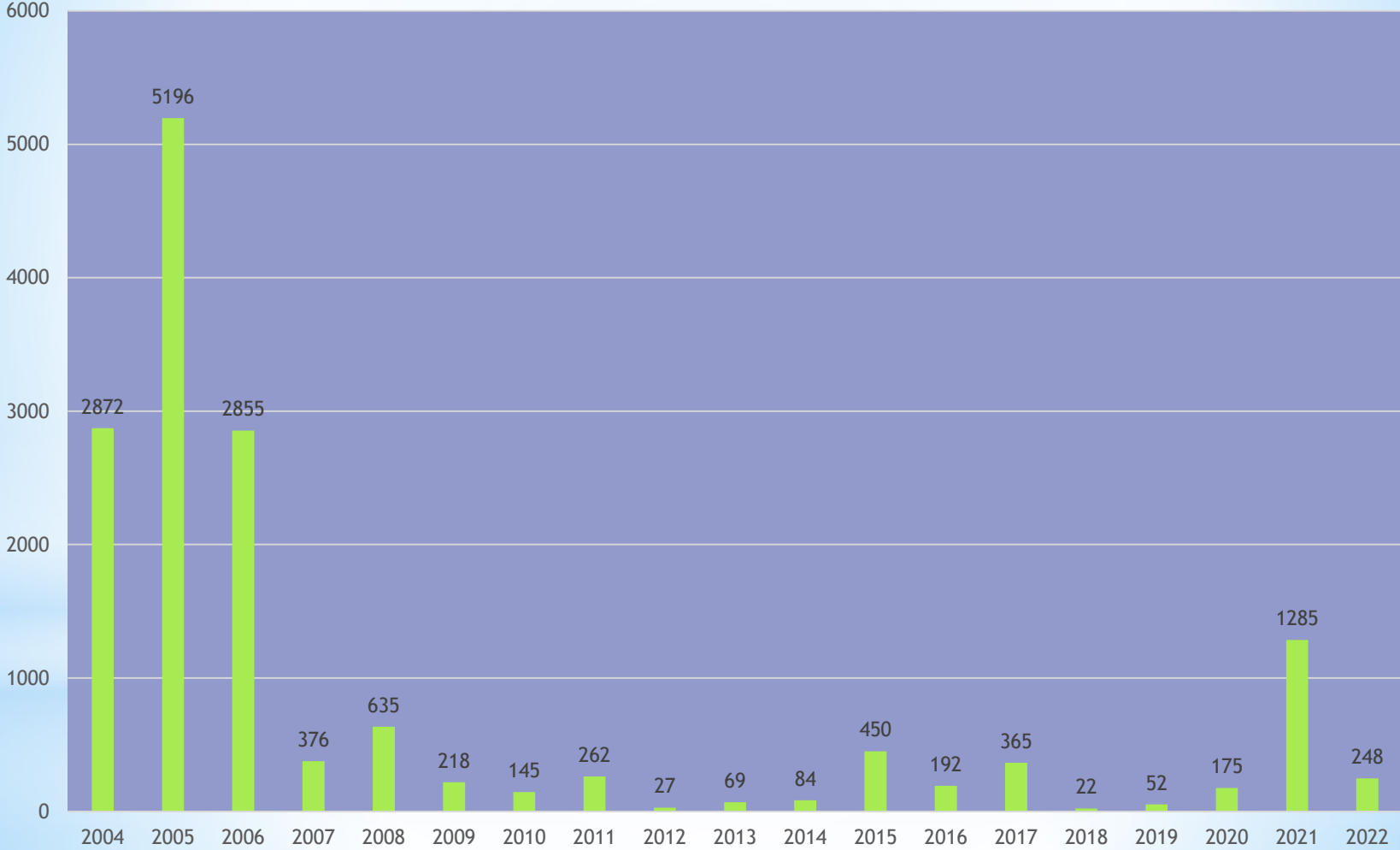


* Hydrogen Sulfide (H₂S)
Sulfuro de hidrógeno

Hydrogen Sulfide | 30-Minute Averages (ppb) Highest Value at “Lower Valley” Monitor 2004-2022

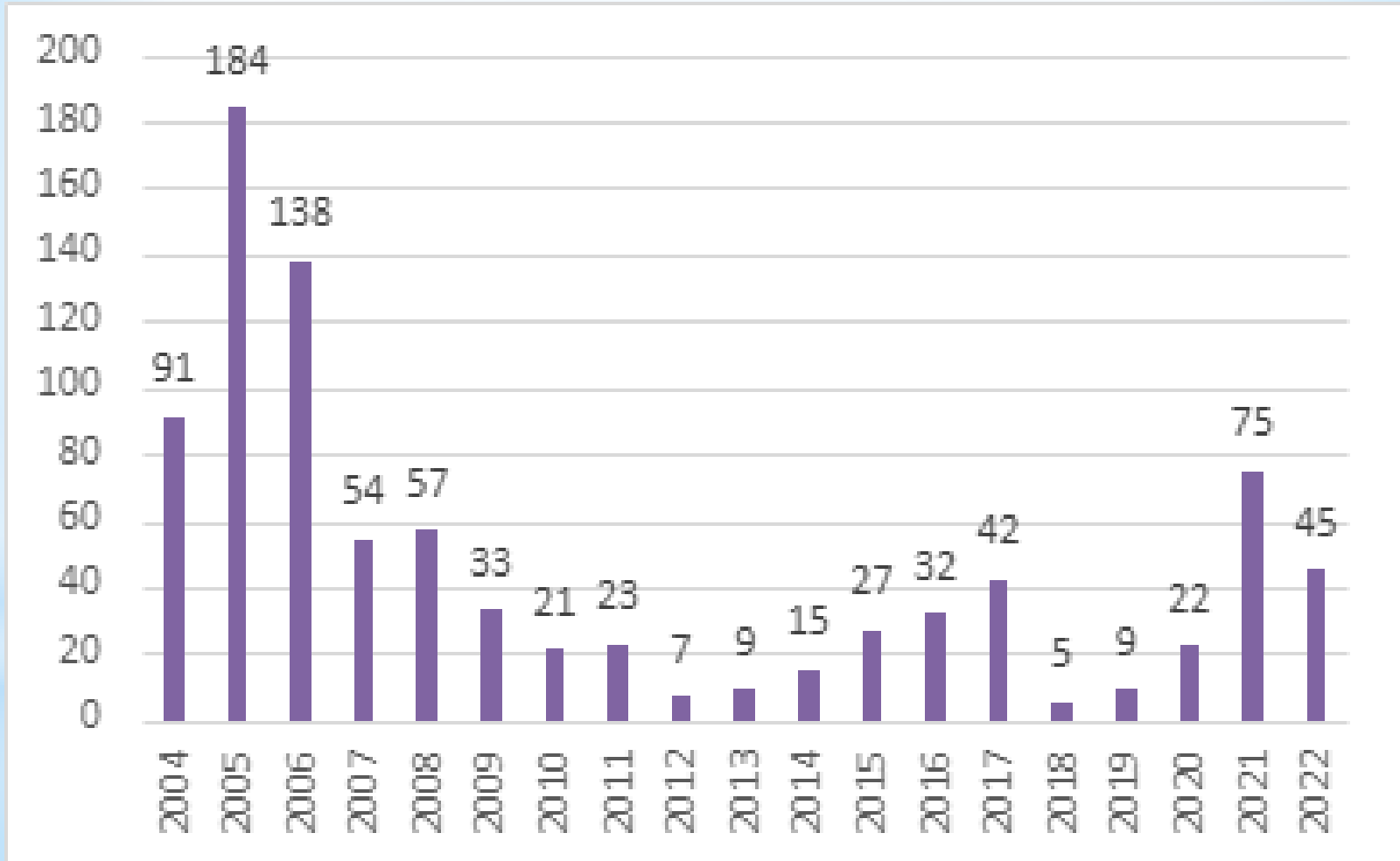


Hydrogen Sulfide | 30-Minute Averages (ppb) Number of Exceedances at “Lower Valley” Monitor 2004-2022



Hydrogen Sulfide | 30-Minute Averages

Number of Days with Exceedances at “Lower Valley” Monitor 2004-2022



NMED

Armando Paz

armando.paz@state.nm.us

TCEQ

Border Affairs

ba@tceq.texas.gov

Nos pueden contactar

en:

You can find us at:

■ fvazquez@uacj.mx

■ frida.toquinto@uacj.mx



* Questions?
¿Preguntas?



*Thank you!
Gracias!

