

NATIONAL AMBIENT AIR MONITORING CONFERENCE

Ambient Air Monitors :Our National Sentinel

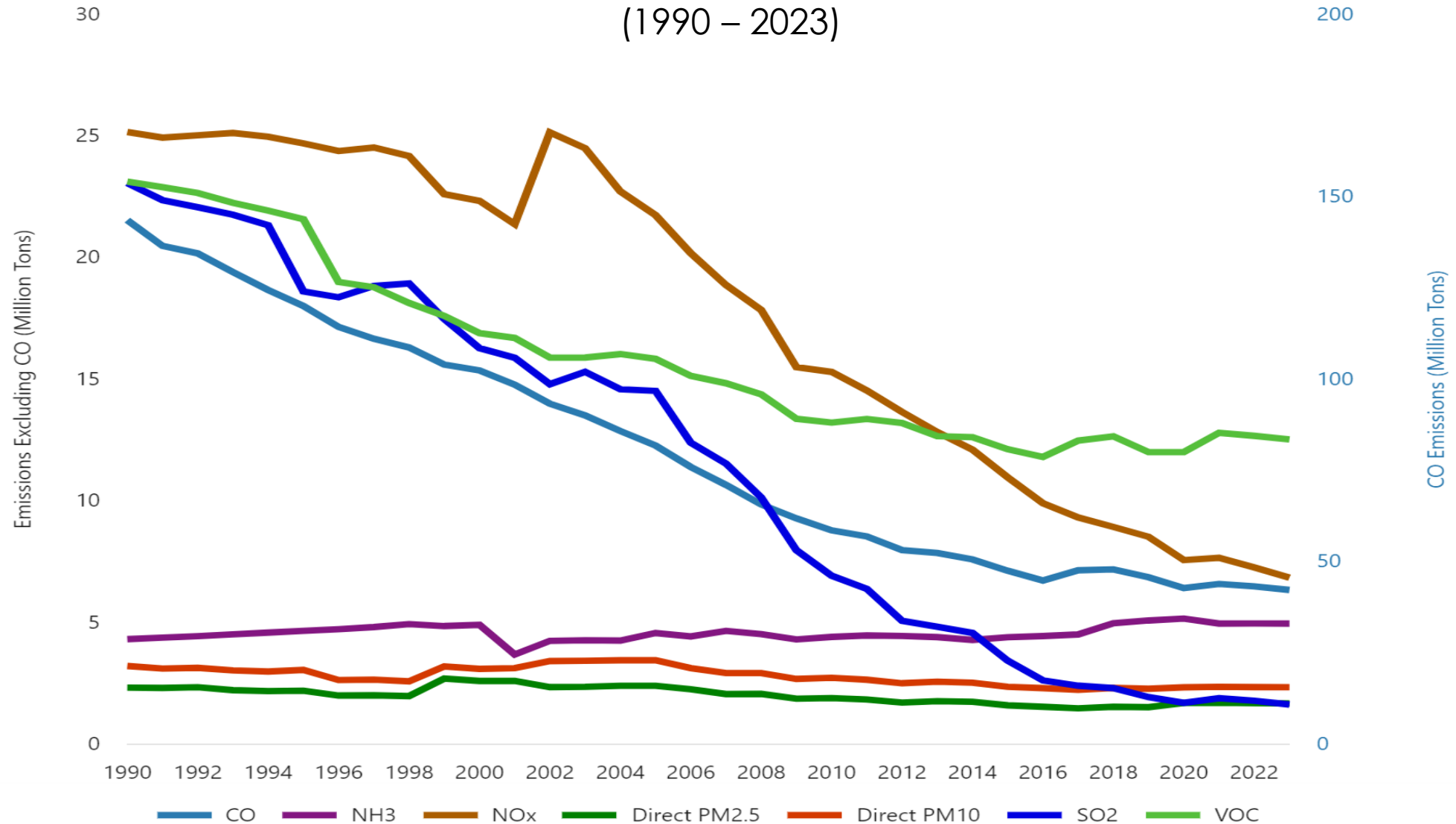
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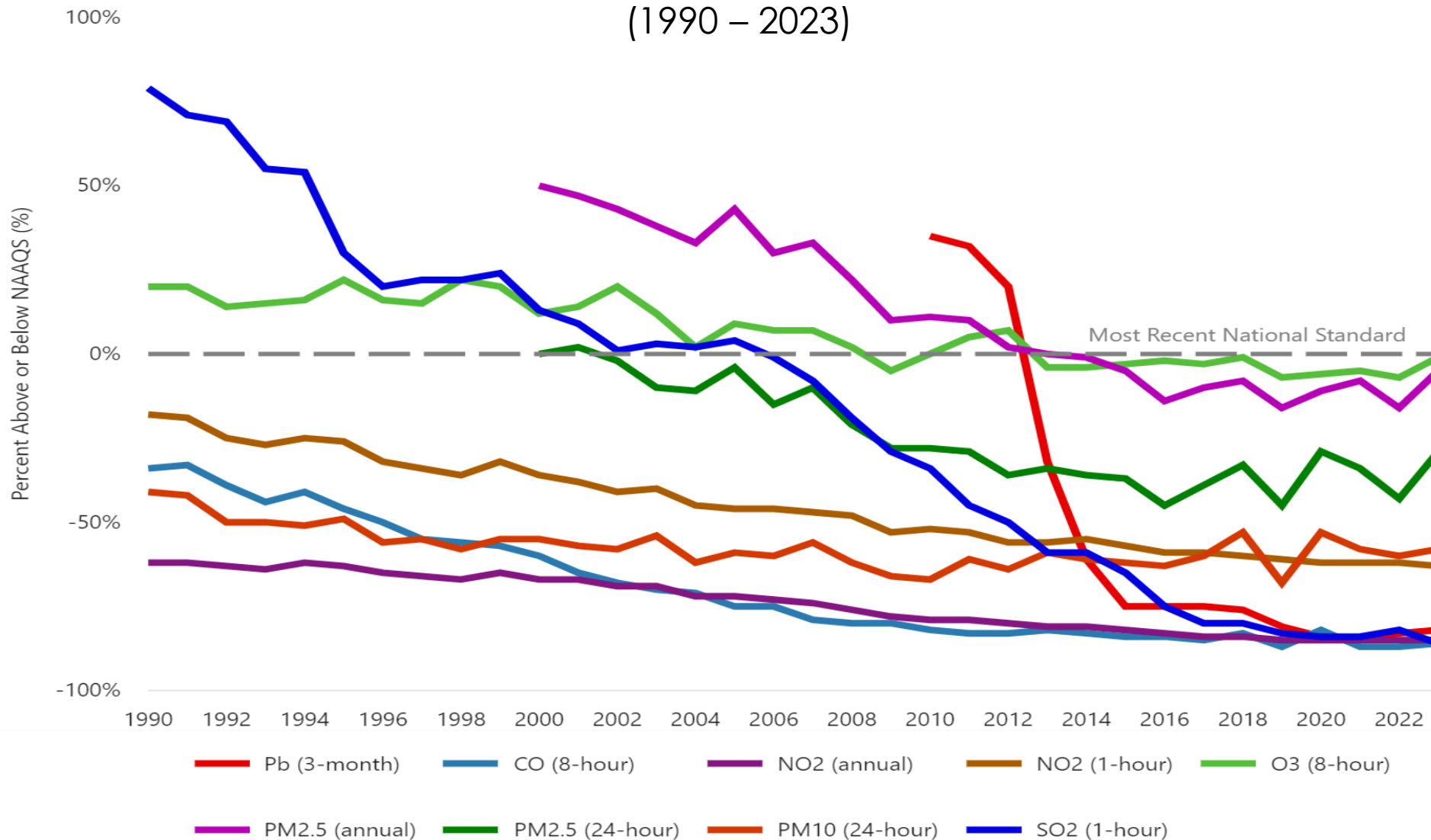
1990 Clean Air Act Amendments Success

Declining National Air Pollutant Emissions (1990 – 2023)



Verification!

Declining National Air Pollutant Concentration Averages (1990 – 2023)



- ▶ Recently promulgated PM_{2.5} NAAQS (Annual: 9 ug/m³, Daily: 35 ug/m³)
- ▶ Air Toxics (e.g., Ethylene Oxide)
- ▶ Environmental Justice & Community-based Monitoring
- ▶ Wildfires
- ▶ Satellites
- ▶ Data Fusion and AI
- ▶ Resources (\$'s and FTE)

ON THE HORIZON...

A decorative graphic consisting of several parallel white lines of varying lengths, slanted upwards from left to right, located in the bottom right corner of the slide.

- ▶ Ambient Monitoring (FRM, FEM) is the gold standard
 - ▶ Basis for measuring our progress
 - ▶ Basis for determining compliance with air quality standards
 - ▶ Basis for validating all other air quality data sources
 - ▶ Essential to local, state, tribal and federal air quality management programs

THE SENTINEL...



- ▶ Air quality problems are becoming more complex, more localized
- ▶ Resource constraints prohibit regulatory monitoring everywhere
- ▶ Supplemental data sources growing
 - ▶ Low-cost sensors
 - ▶ Satellites
 - ▶ Air quality modeling
- ▶ How does our traditional thinking sync with new challenges and new data sources

THE CHALLENGES/CHALLENGERS...



- ▶ Traditional FRM/FEM monitoring is more critical today than ever before
- ▶ Quality Assurance / Quality Control is essential
- ▶ Mobile monitoring capabilities are essential
- ▶ Adequate resources are essential
- ▶ Understanding the role and value of traditional monitoring is essential
 - ▶ If we are going address increasing localized air quality issues
 - ▶ If we are going to effectively address environmental justice concerns
 - ▶ If we are going to continue to have the success we have seen for over 40 years

THE GOLD STANDARD...

- ▶ May be the most challenging time in history to be in the monitoring field
- ▶ Data coming from everywhere from non-FEM/FRM monitors
- ▶ ... but it all validates from our traditional FRM/FEM monitoring
- ▶ ... and you are the standard bearers for that monitoring
- ▶ **What you do every day is essential and absolutely critical to the continued success of air quality programs across the country!**

THE STANDARD BEARERS...

“The ultimate test of a man’s conscience may be his willingness to sacrifice something today for future generations whose words of thanks will not be heard.”

- Gaylord Nelson
Earth Day Founder