



Improvements in Air Quality in NC

Mike Abraczinskas, Director, NC Division of Air Quality

2019 Western NC Air Quality Forum

March 29, 2019

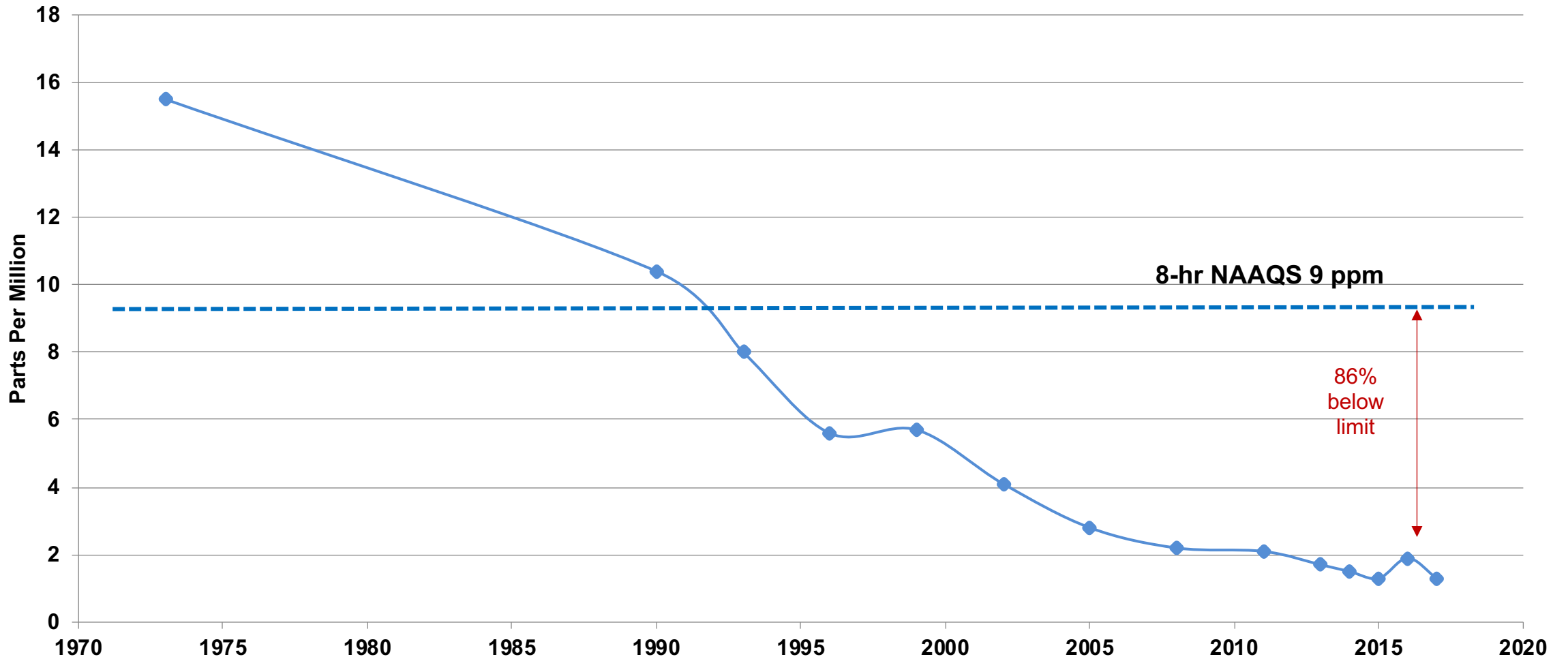
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Topics to be covered...

- **Trends – Pollutant Reductions in NC**
 - ❖ **Ambient Air Quality Trends (1970's – current)**
 - ❖ **Statewide**
 - ❖ **Western NC**
 - ❖ **Improvements you can see!**
 - ❖ **Hazardous and Toxic Air Pollutant Trends**
- **Crystal Ball ?**
- **What can you do to help further improve air quality?**
- **Update on VW Environmental Mitigation Trust**
- **Emerging Compounds – new Statewide monitoring of PFAS**

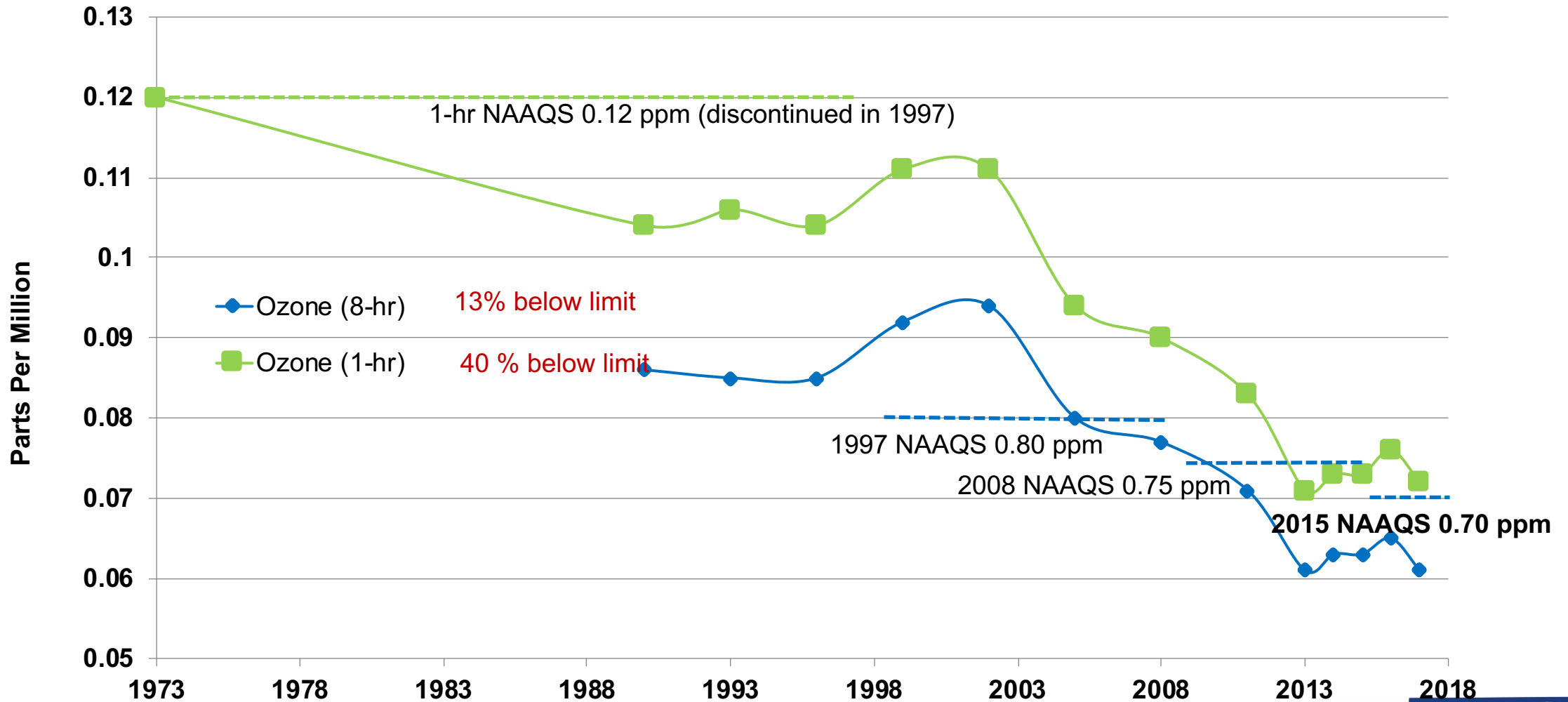
Statewide 8-Hour Carbon Monoxide (CO) Concentrations



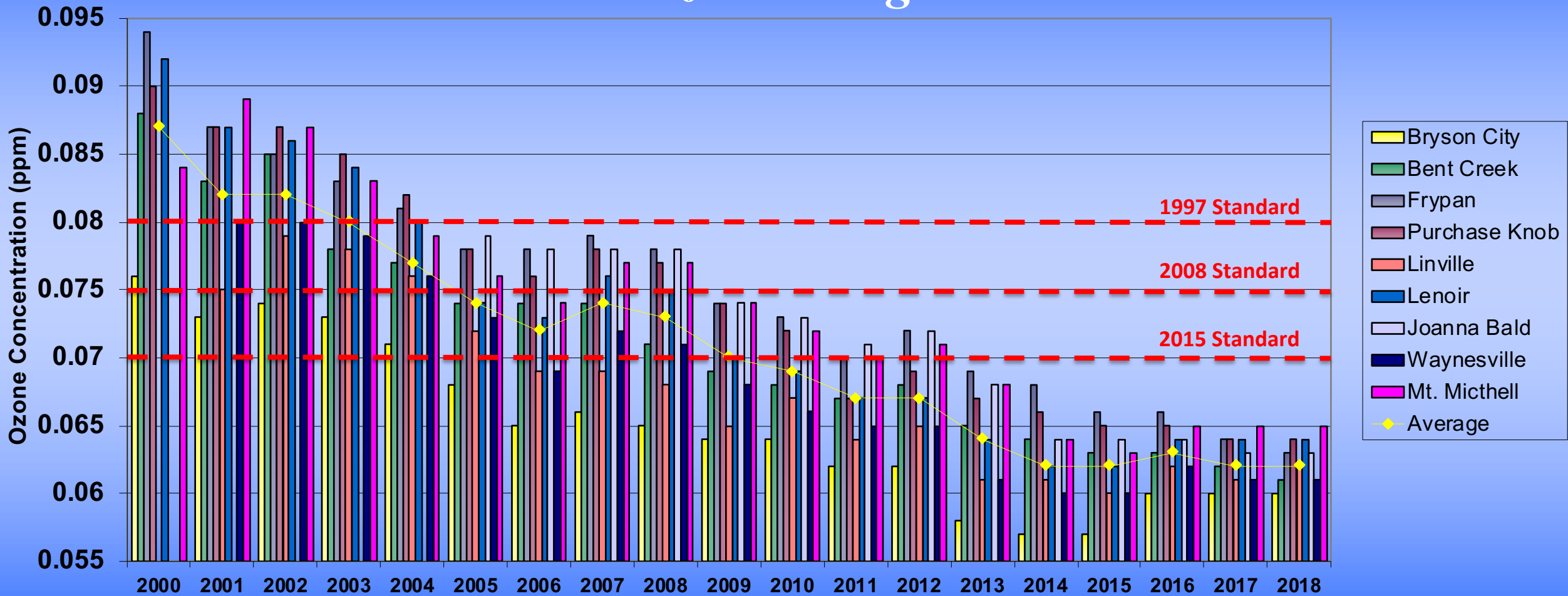
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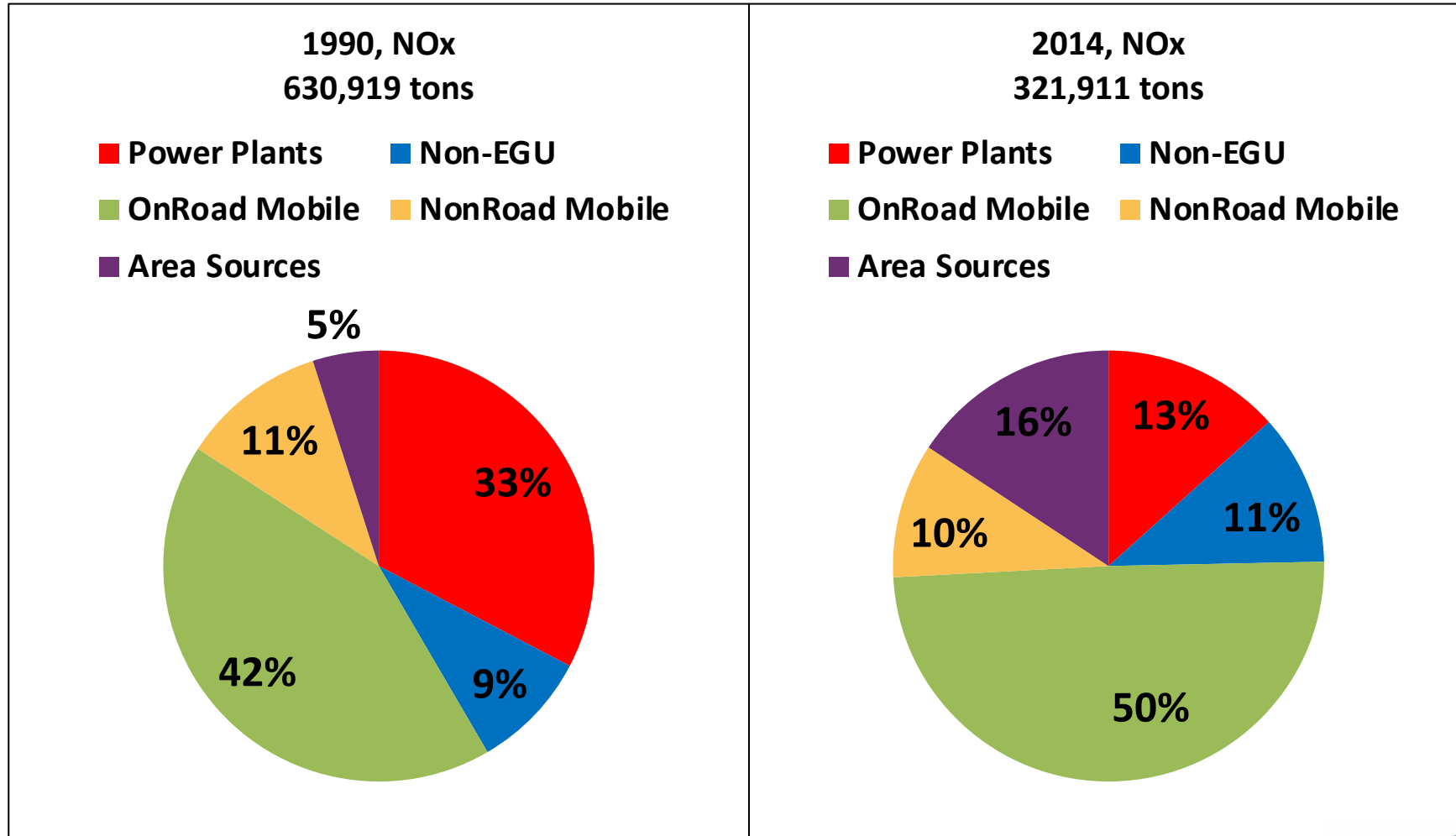
Statewide Ozone (O₃) Concentrations



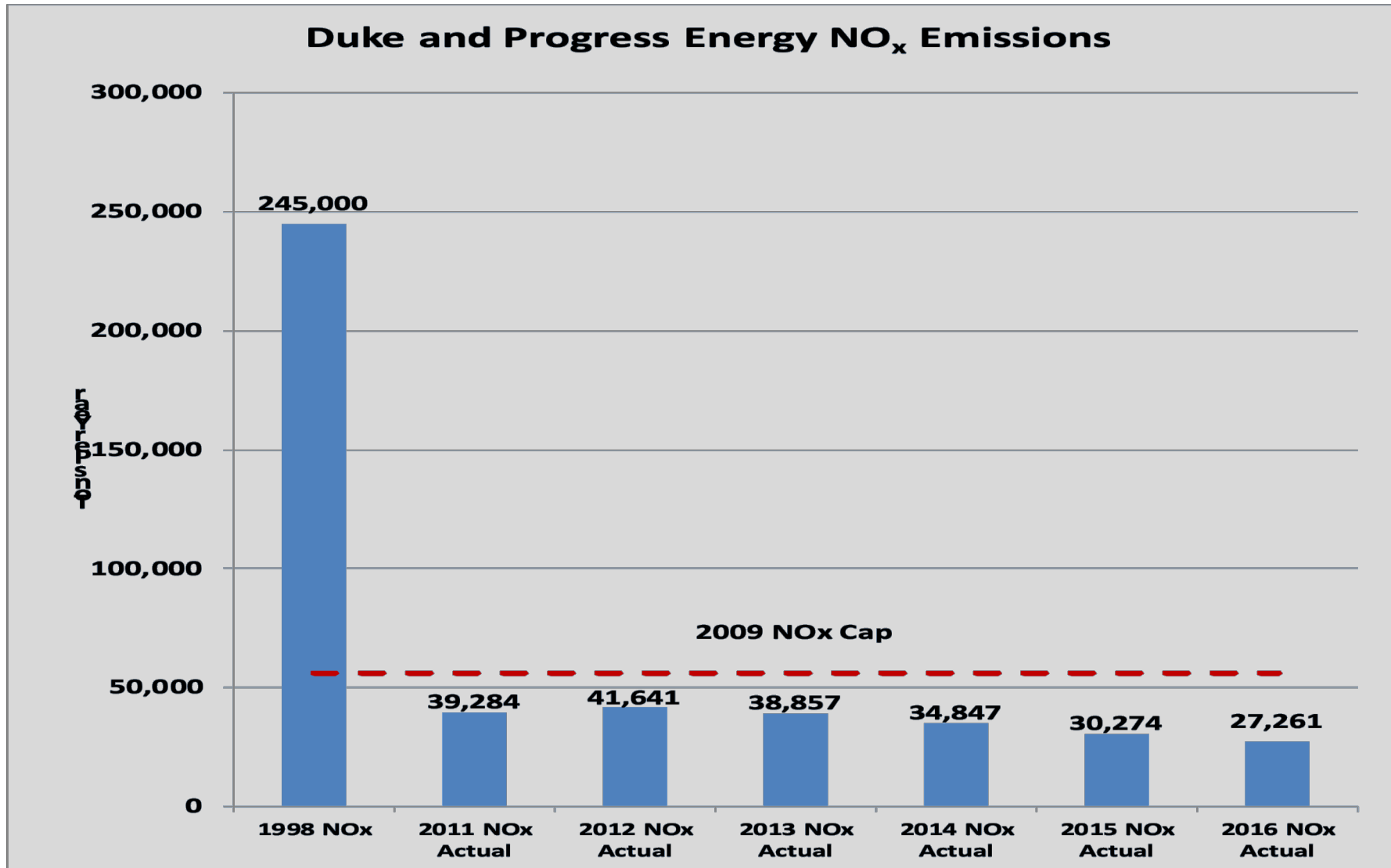
WNC Ozone Design Values



NOx Emissions Profile



Clean Smokestacks Act Emissions Reductions

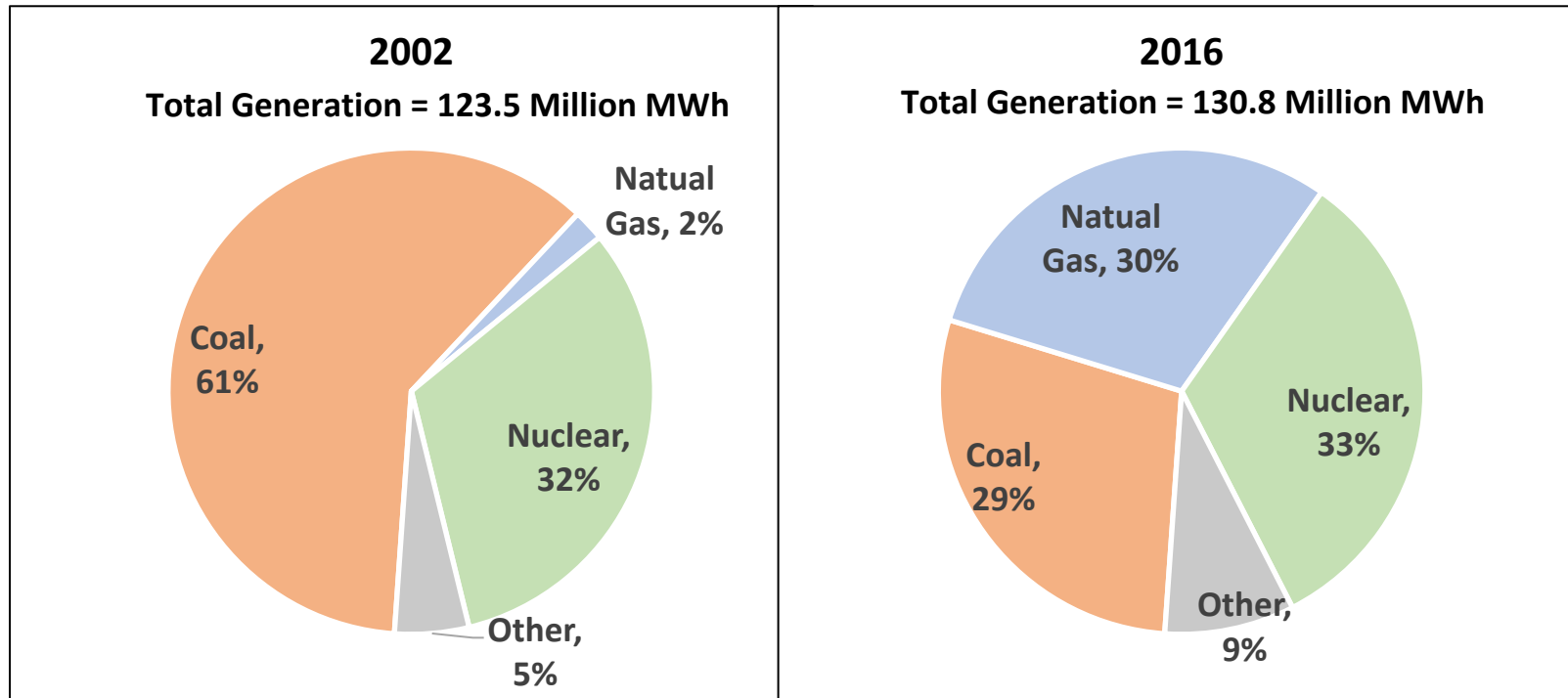


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Changes in NC Power Plant Net Generation

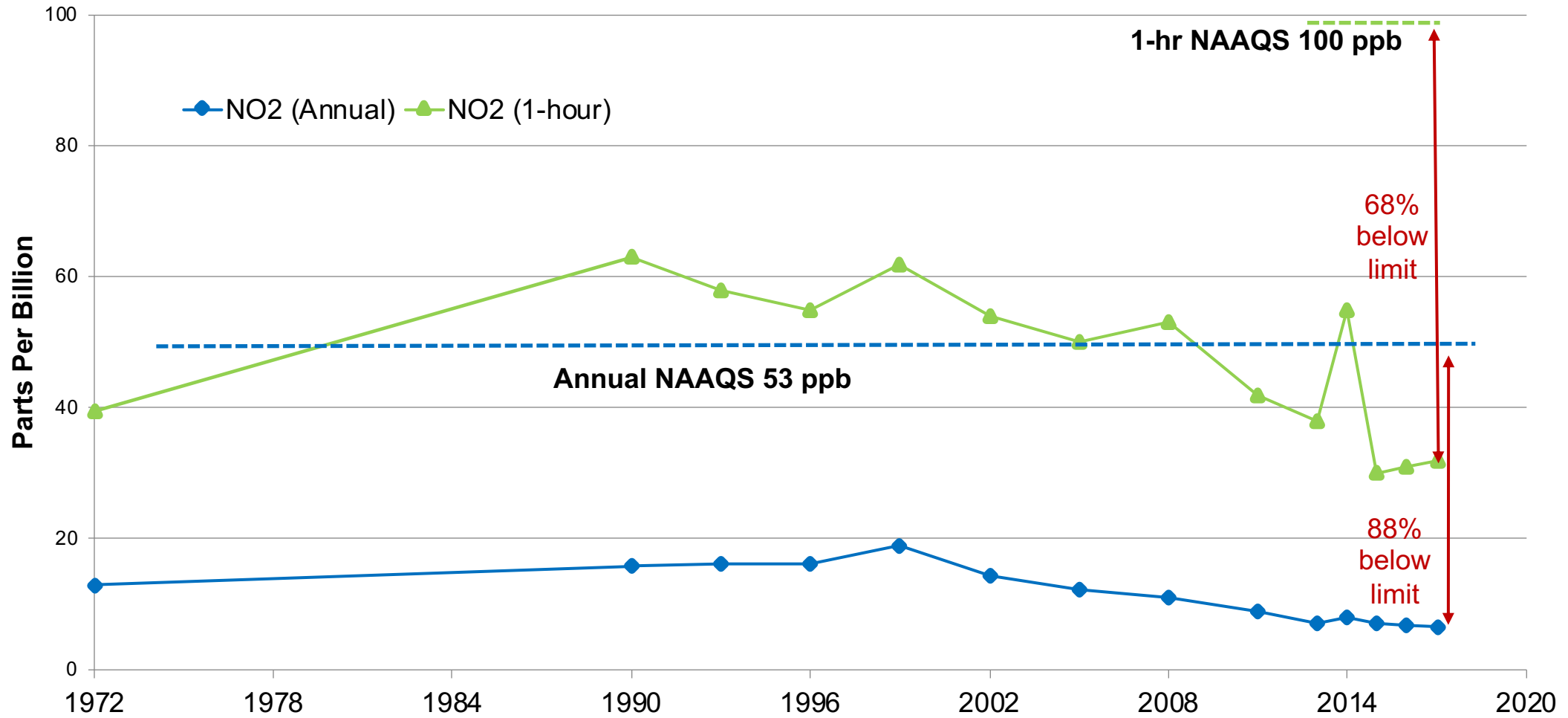
Net Generation has Increased by 5.6% from 2002 - 2016



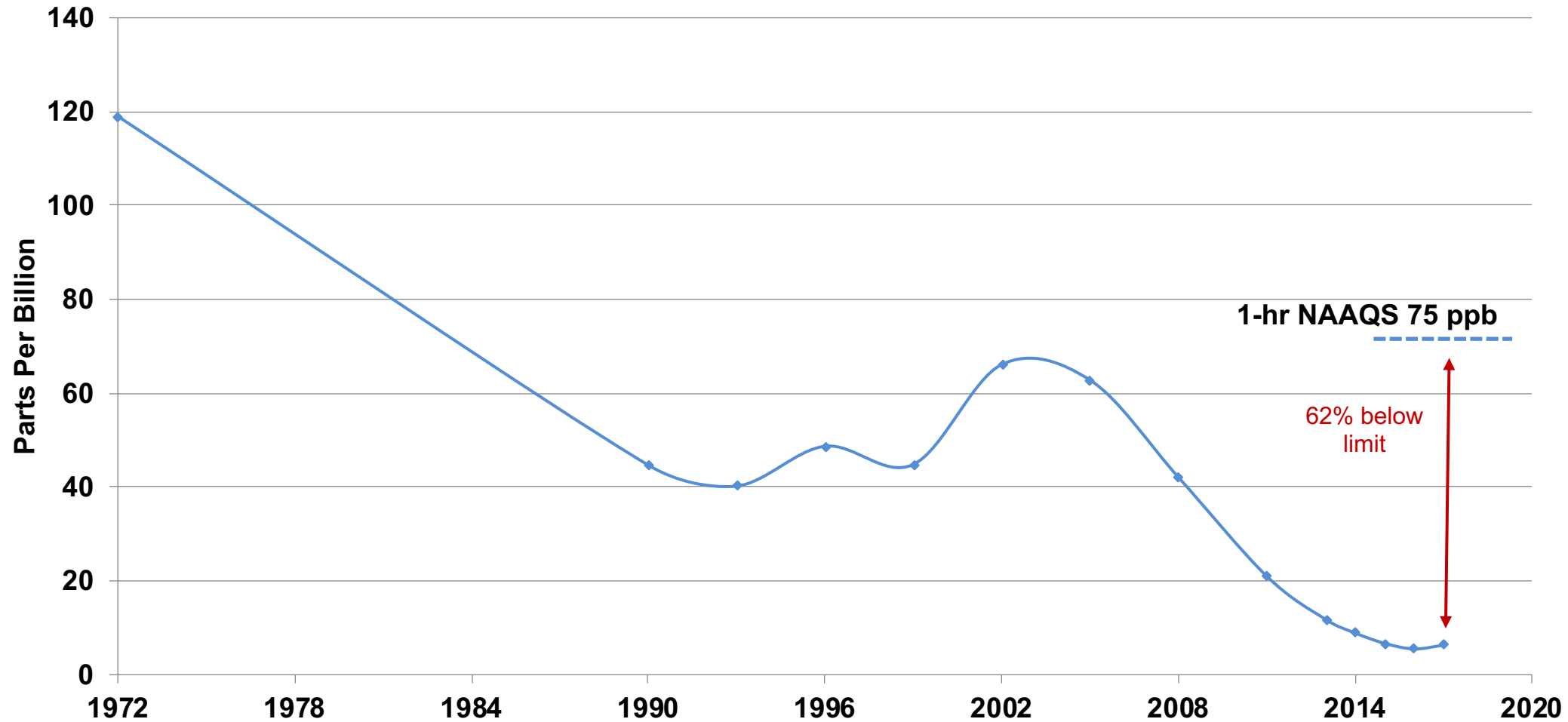
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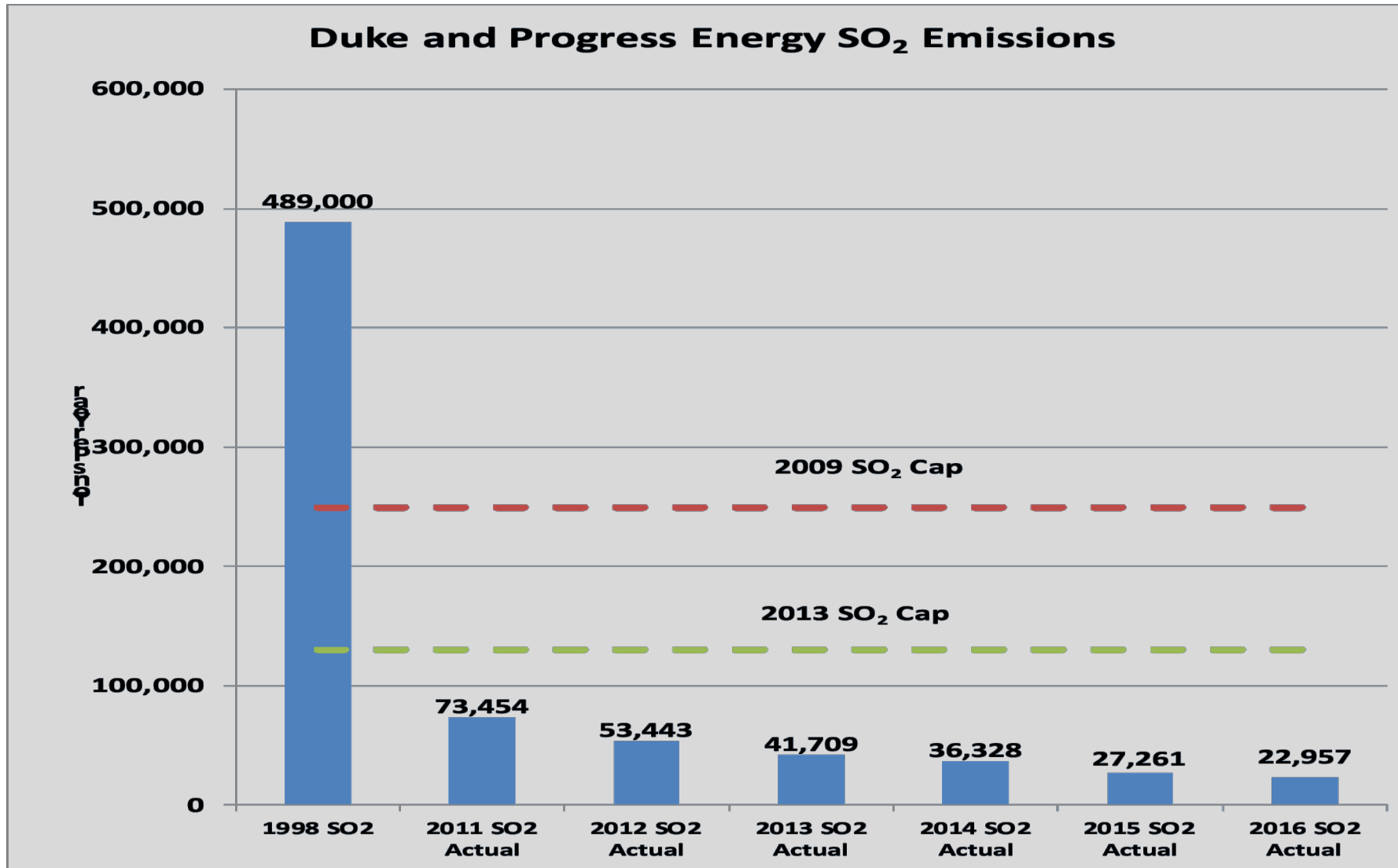
Statewide Nitrogen Dioxide (NO₂) Concentrations



Statewide Sulfur Dioxide (SO₂) Concentrations



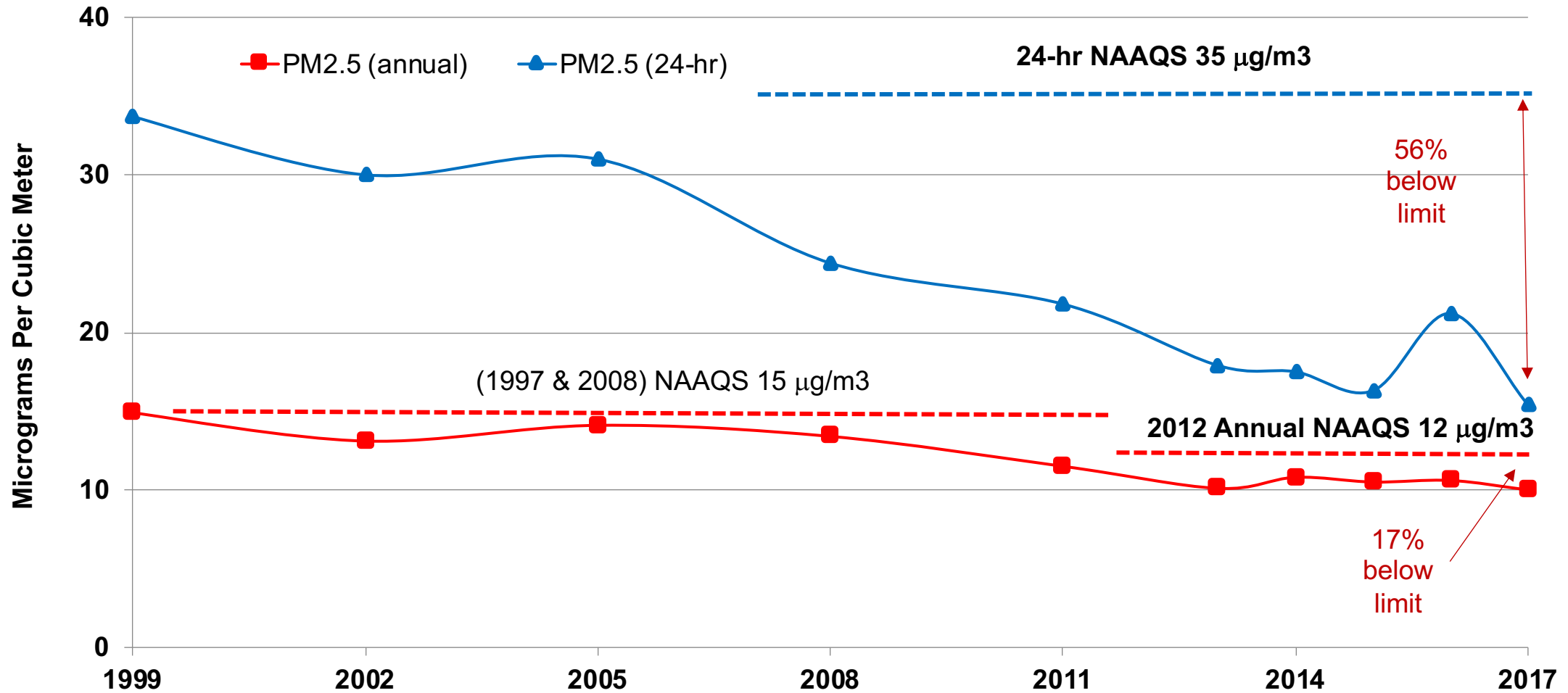
Clean Smokestacks Act Emissions Reductions



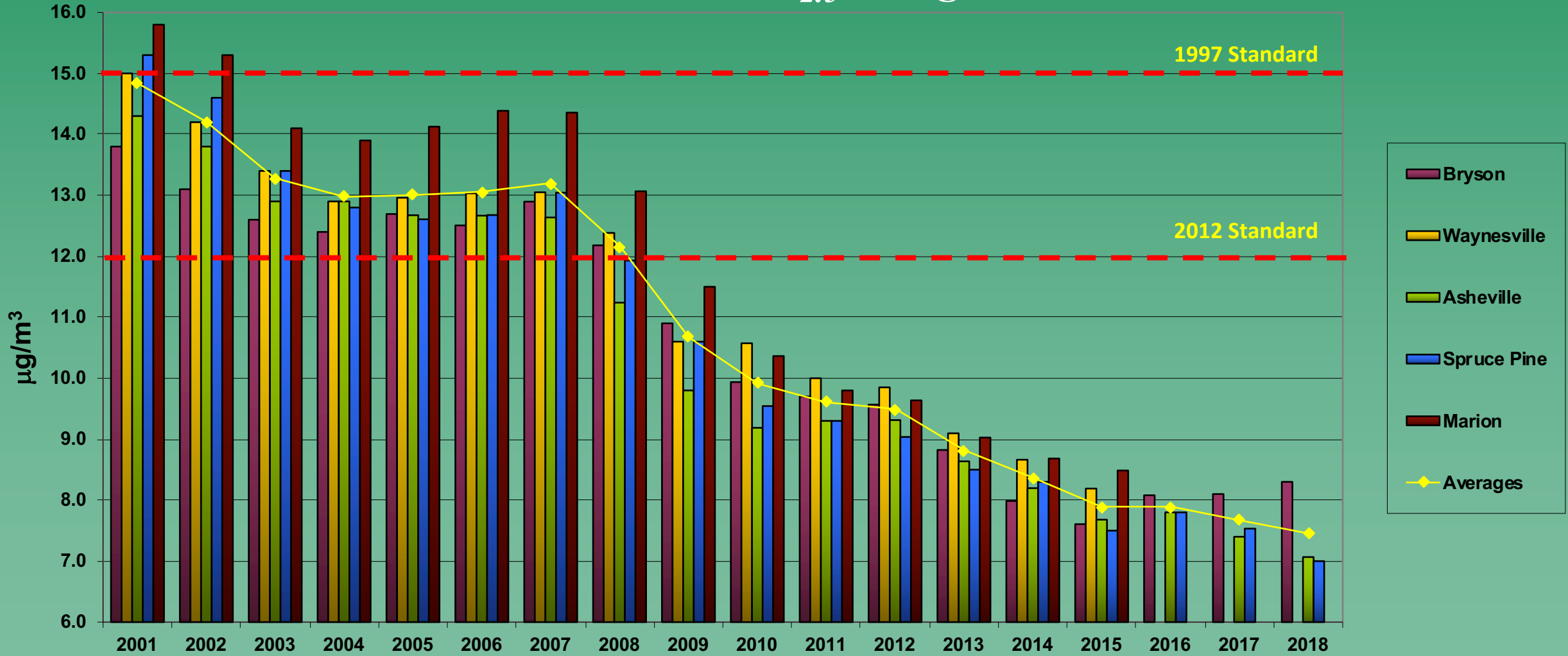
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Statewide PM2.5 Concentrations

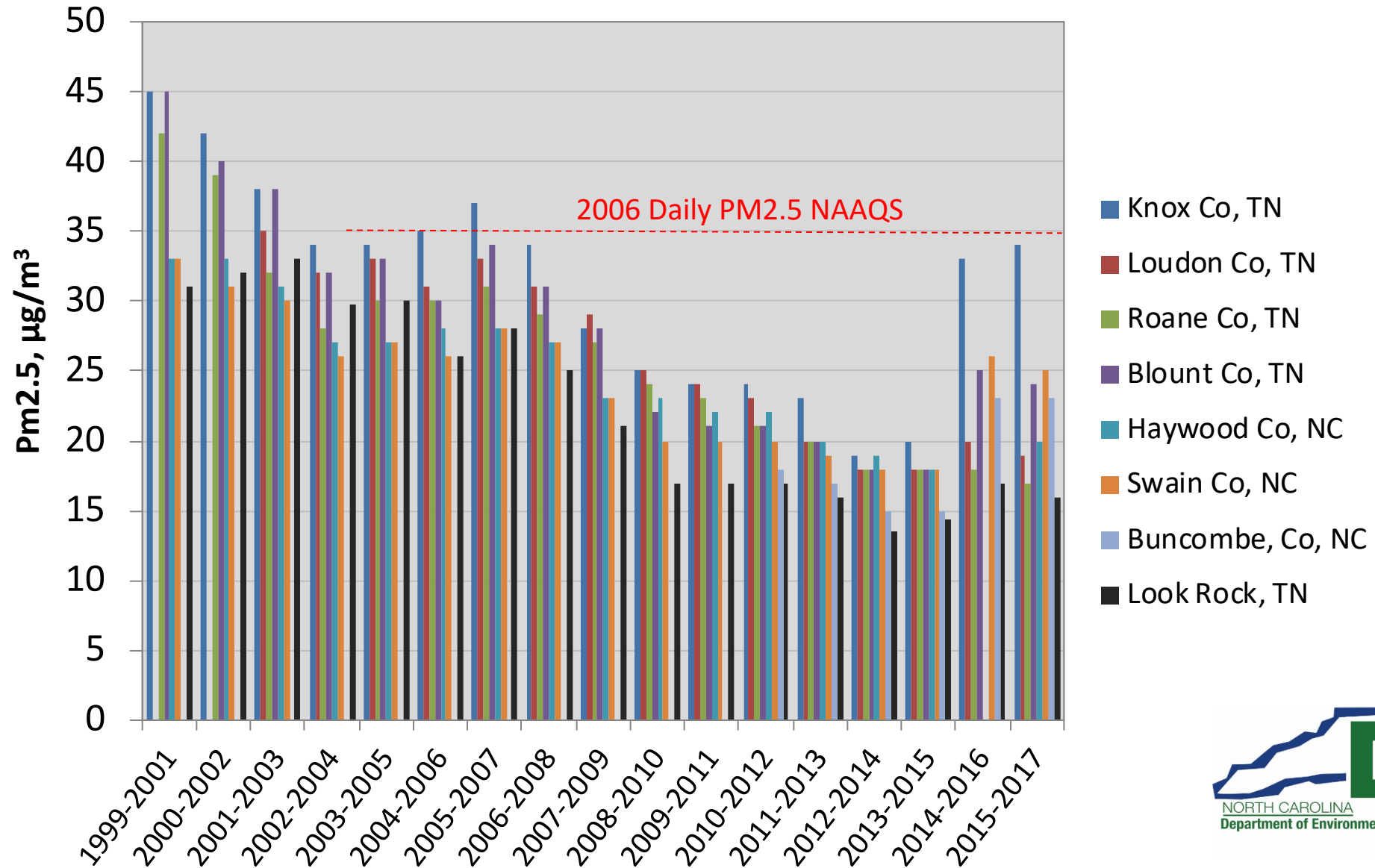


WNC PM_{2.5} Design Values



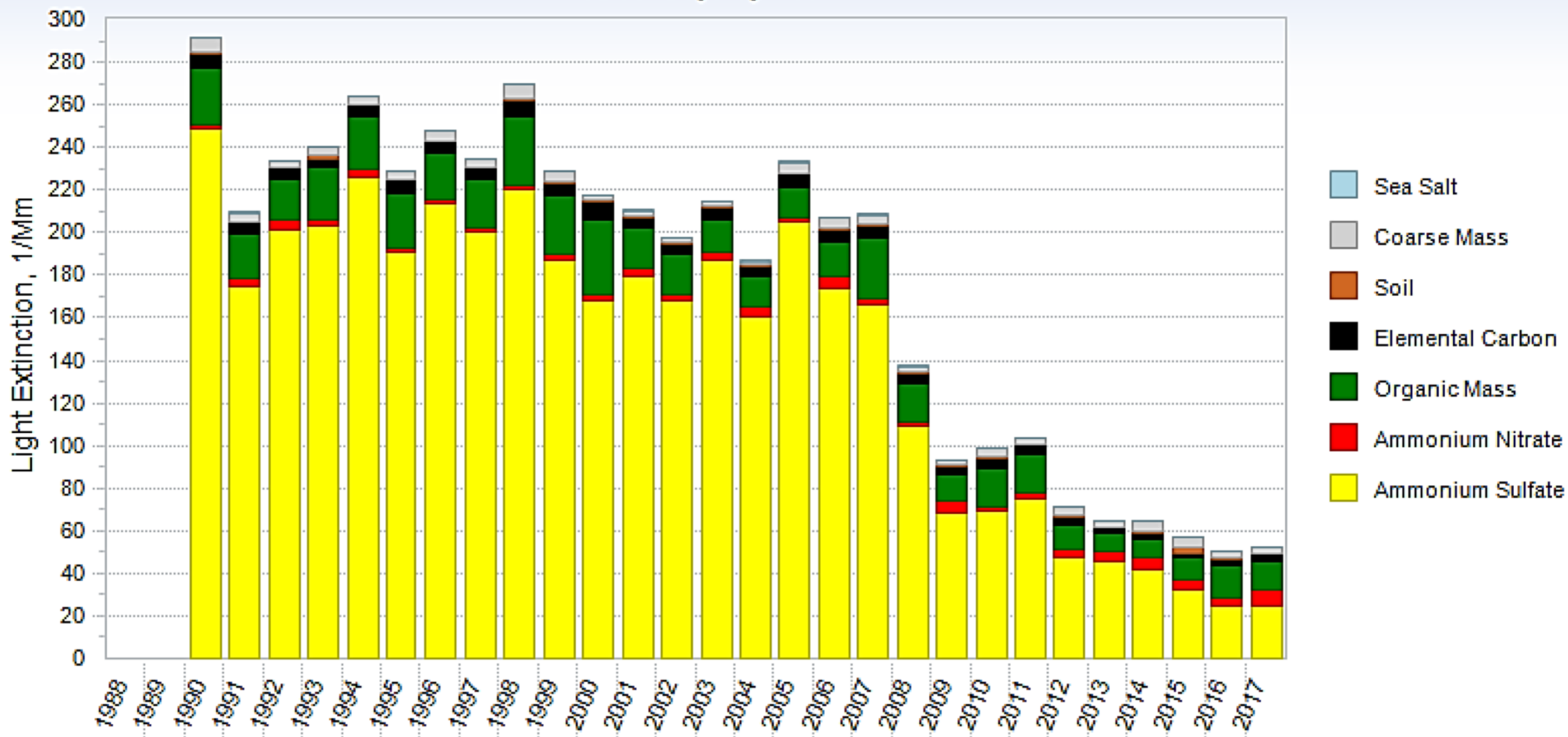
24-Hour PM2.5 Design Values for the GRSM Region

3-Year Rolling Average of the 98th Percentile Values



Great Smoky Mountains NP

Haziest Days by Year



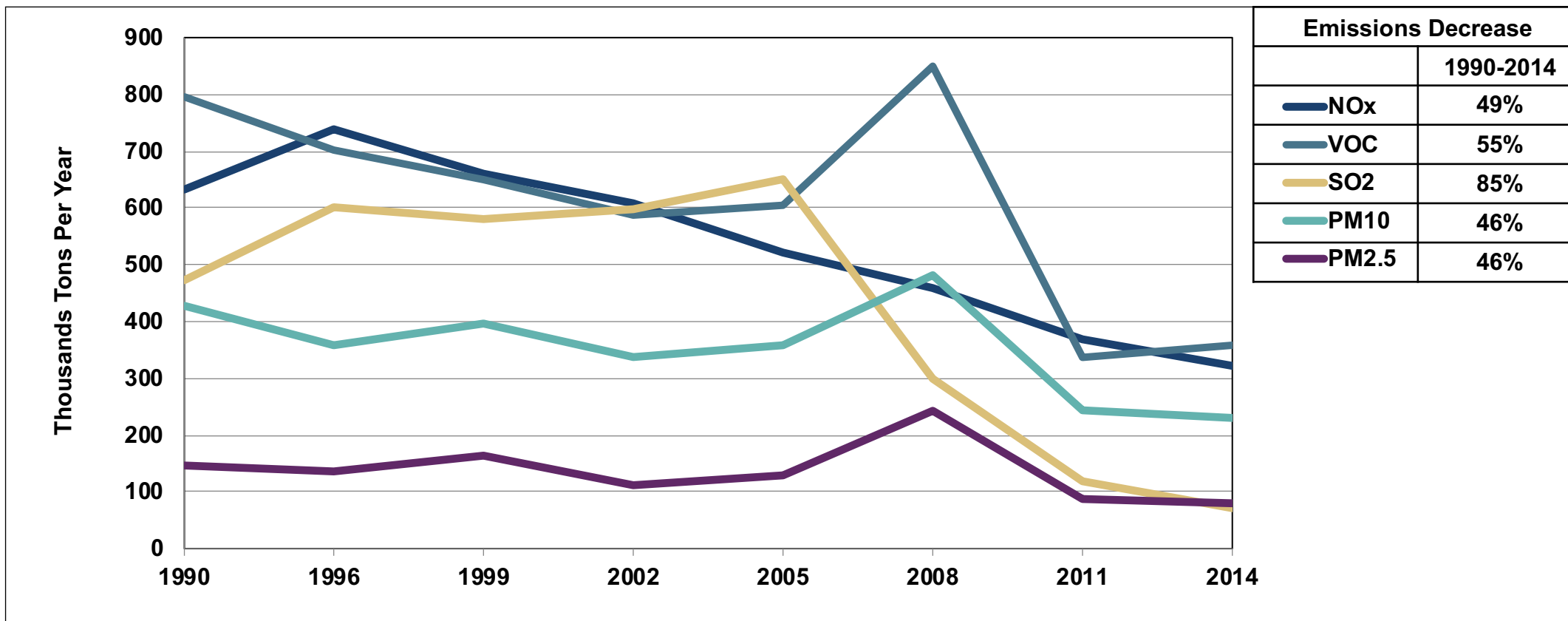
IMPROVE Monitor ID: GRSM1, TN

Thanks: Jim Renfro, NPS

Improvement in Haze on 20% Worst Days at Look Rock



Annual Statewide Emissions Trends, 1990 – 2014 (Criteria Air Pollutants)



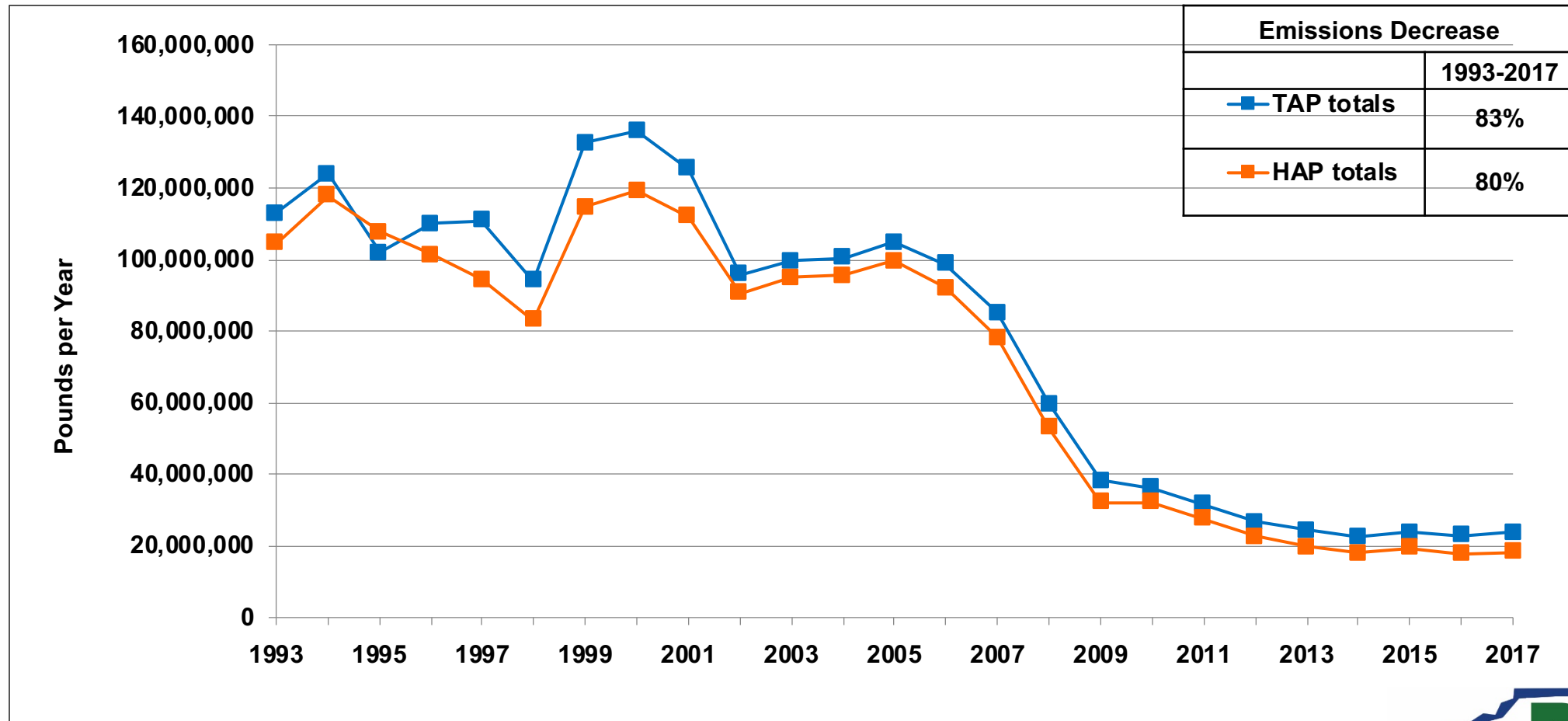
Source: US EPA National Emissions Inventory

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Annual Statewide Emissions Trends, 1993 – 2017

(Hazardous and Toxic Air Pollutants)



Source: NCDAQ DATA

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Crystal Ball ?

- **Future emissions trends?**
- **Growth? How is that accounted for?**
- **Impacts of EPA actions?**
 - **What's likely to change?**
 - **What won't**



Want to help reduce air pollution?

- **Share good information and educate!**
 - **Children...** (and adults)
- **Think about your choices when purchasing consumer goods and vehicles. Research it!**
- **Conserve electricity.**
- **Transportation choices.**
- **Smart growth initiatives.**



Air Quality Forecasting

- www.ncair.org
- **Ozone Forecasts**: March 1-October 31
- Issued daily at 3:00 pm
 - Forecast indicates tomorrow's color code
 - Issued for both ridgetops and valleys
- Forecasts generated for several areas in NC

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North Carolina Air Quality Forecast Center

Welcome to the Air Quality Forecast web page. Tomorrow's forecasts are posted each day by 3pm (EDT) and are updated at 10am the next morning, if necessary.

[Previously Observed](#) **[Today's Forecast](#)** [Tomorrow's Forecast](#)

Air Quality Forecast for Wednesday, 03/27/2019

Last Updated: 03/27/2019 12:00 AM EDT

Good
 Moderate
 Unhealthy for Sensitive Groups
 Unhealthy
 Very Unhealthy

Forecast Area	Ozone AQI	PM2.5 AQI	Color Code	Notices
Charlotte	46	37		
Fayetteville	41	34		
Hickory	39	35		





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What's the latest?

- Request for Proposals – coming soon
 - Clean Diesel and School Bus program ~\$24.5M
 - EV Charging Infrastructure – DC Fast ~\$3.4M
 - EV Charging Infrastructure – Level 2 ~1.1M
- EV Corridor mapping
- Contract Administration software

Background PFAS Rainwater Network

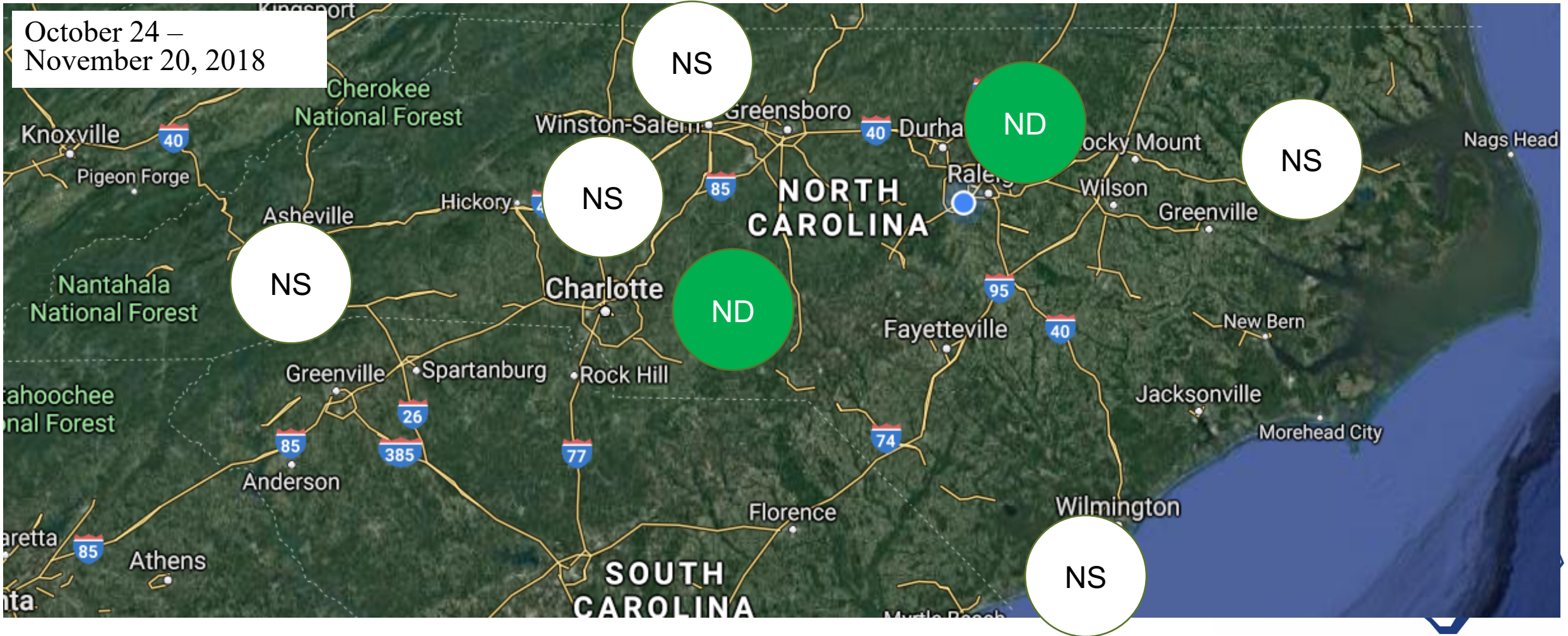
- Network of seven background sites generally oriented near our regional offices
 - Asheville – start 11/20/18
 - Fayetteville (Candor) – start 10/24/18
 - Mooresville – start 3/12/19
 - Raleigh – start 4/24/18
 - Washington – start 2/12/19
 - Wilmington – start 1/8/19
 - Winston Salem – start – 3/19/19
- One detection of Perfluoro-n-butanoic acid (PFBA) at 7.4 ng/L during the week of 5/29/18-6/5/18 at the Raleigh sampling location.
- All other samples for 28 analytes have been non detect.



*North Carolina: Background Rainwater PFAS Concentrations
Measured in ppt; ND = Not detected; NS = No sample for the time period*



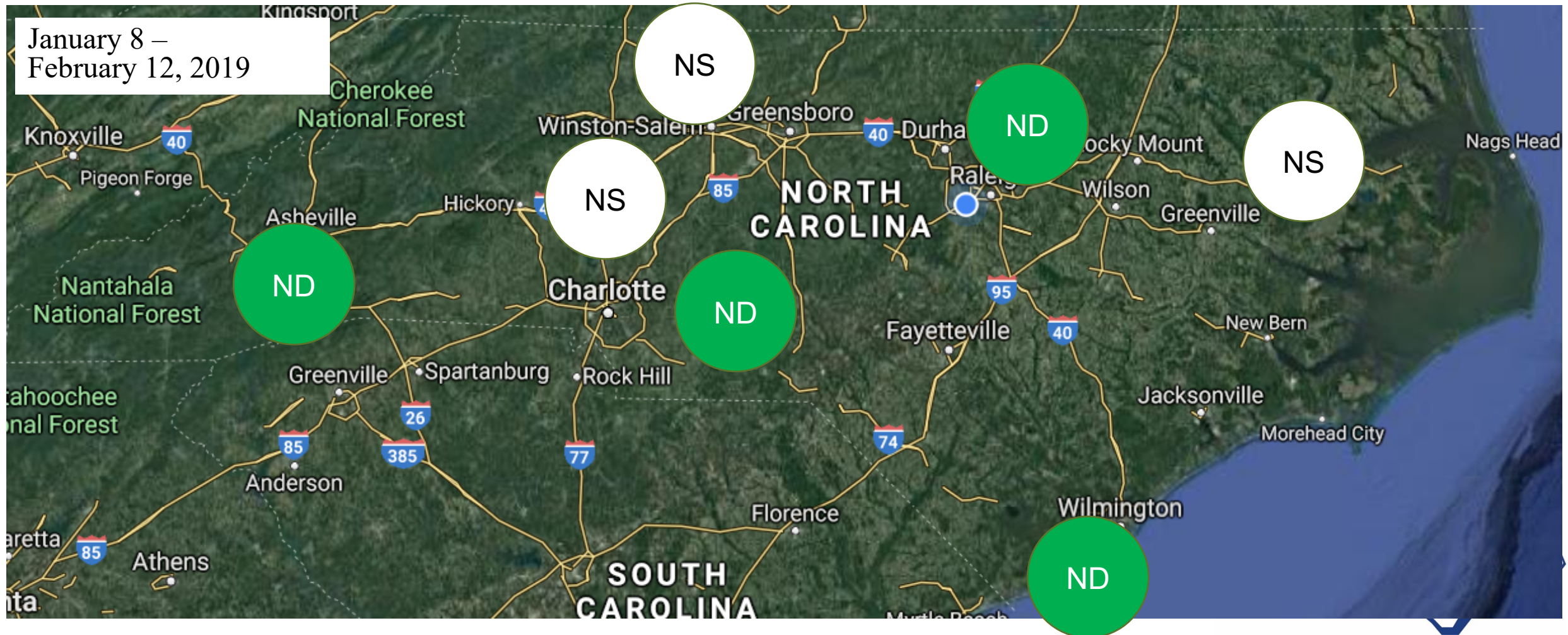
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Thanks!

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