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Healthy People. Healthy Communities.

Bureau of Air Quality Update

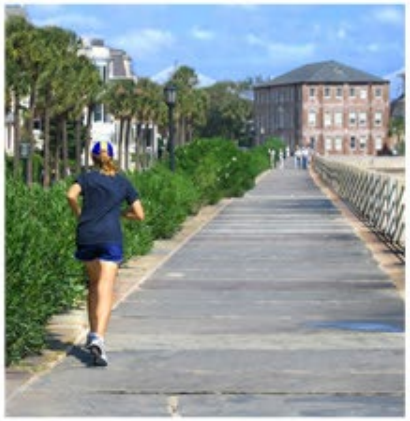
Rhonda B. Thompson, PE, Chief

Environmental Assistance Conference

November 19, 2019











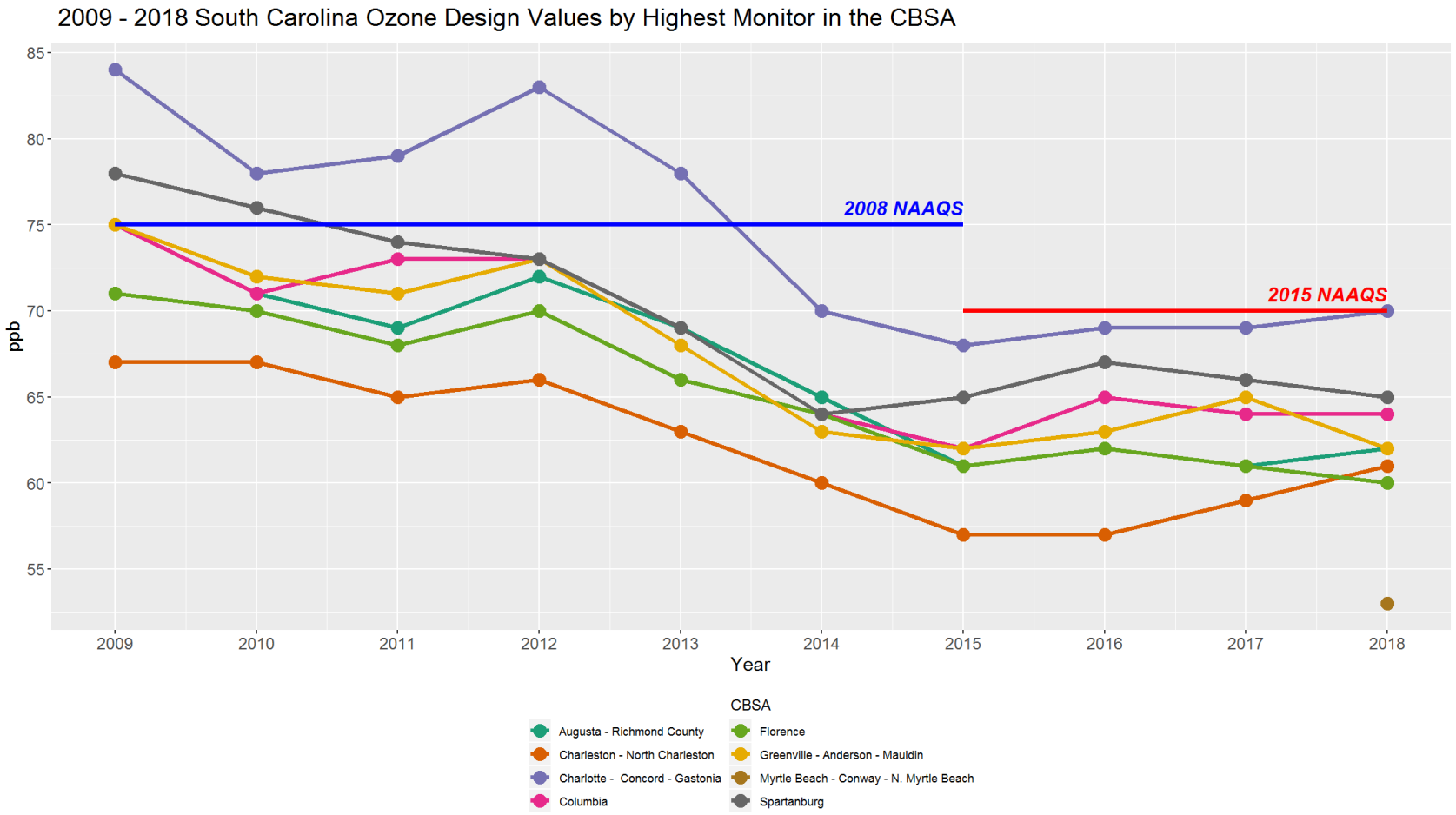
Presentation Overview

- Ozone NAAQS Update
- State Regulations Update
- Emerging Air Toxic - Ethylene Oxide (EtO)

Ozone NAAQS

- 2015 Ozone Standard: 70 ppb
- All SC monitors currently attaining the standard
- 2019 exceedances in York/Charlotte area
  - NC had 12 exceedances between June 29 – October 3
  - SC had 11 exceedances between June 3 – September 12
  - Meeting with NC staff soon to review data and discuss possible reduction strategies

Ozone NAAQS (2009-2018)



2018 End Of Year Revisions

- Finalized August 23, 2019
- Incorporated revisions to federal regulations (NSPS and NESHAP) from calendar year 2018
- Revised 61-62.60, Subparts Cf and DDDD, Emission Guidelines for Municipal Solid Waste Landfills and Commercial and Industrial Solid Waste Incineration (CISWI) Units
  - Clarified applicability/scope of EPA emission guidelines

2020 Future Regulatory Actions

- 2019 End of Year Revisions
  - Incorporate revisions to federal regulations (NSPS and NESHAP) from calendar year 2019

- Affordable Clean Energy (ACE) Rule
  - Replaced Clean Power Plan (CPP) for greenhouse gas (GHG) emissions
  - Only applies to coal-fired power plants (large EGUs)
  - Propose state regulation by summer 2020
  - Final regulation to Board by December 2020

Fee Regulation Development

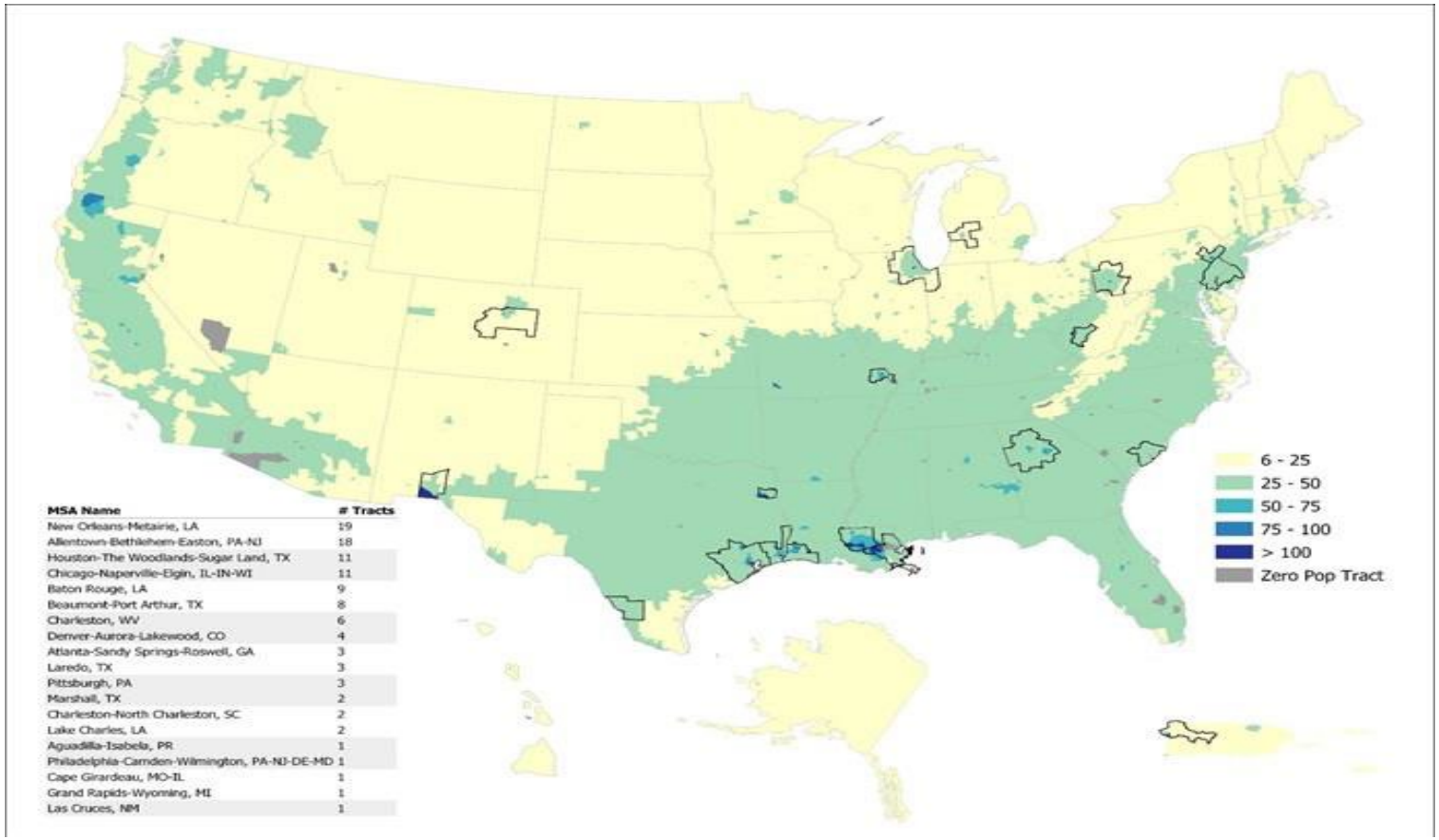
- Notice of Drafting (NOD) for Air and NPDES Fees
  - Published in *State Register* on July 26, 2019
  - 30-day pubic comment period (July 26 – August 26)
  - Written comments received from 2 industry groups
- Not going forward with fee increases this year
  - Original plan: propose increases in October; finalize in December; and send to General Assembly in January
  - Continue dialogue with stakeholders
  - Requesting additional state appropriations to cover a portion of projected shortfall

Ethylene Oxide (EtO)

National Air Toxics Assessment (NATA)

- EPA's 2014 NATA released in August 2018
  - Based on 2014 National Emissions Inventory (NEI)
  - NATA estimates health (cancer/non-cancer) effects across US by census tract every so many years
  - **NATA is solely a screening tool**
- NATA showed many areas with estimated cancer risk exceeding 100 in 1 million – **mostly from ethylene oxide (EtO) emissions**
  - 100 in 1 million is not a standard or regulatory action level
  - 100 in 1 million is upper end of what EPA generally has considered acceptable risk in rulemaking
  - Tells EPA and states they need to take a closer look

NATA Map: > 100 in a million cancer risk



MSA Name	# Tracts
New Orleans-Metairie, LA	19
Allentown-Bethlehem-Easton, PA-NJ	18
Houston-The Woodlands-Sugar Land, TX	11
Chicago-Naperville-Elgin, IL-IN-WI	11
Baton Rouge, LA	9
Beaumont-Port Arthur, TX	8
Charleston, WV	6
Denver-Aurora-Lakewood, CO	4
Atlanta-Sandy Springs-Roswell, GA	3
Laredo, TX	3
Pittsburgh, PA	3
Marshall, TX	2
Charleston-North Charleston, SC	2
Lake Charles, LA	2
Aguadilla-Isabela, PR	1
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	1
Cape Girardeau, MO-IL	1
Grand Rapids-Wyoming, MI	1
Las Cruces, NM	1

Ethylene Oxide (EtO)

- CAA listed Hazardous Air Pollutant (HAP)
- Primarily used for medical equipment sterilization and in chemical manufacturing
- In 2016, the EPA updated the inhalation unit risk value
  - 30-fold increase in cancer potency for adults (60-fold increase for children)
  - Changed descriptor from “probably carcinogenic to humans” to “carcinogenic to humans”
  - Updated unit risk value was used for NATA released in 2018

Federal Rule Changes (MACT Standards)

- EPA required to re-evaluate technology standards every 8 years (also evaluate residual (remaining) risk)
- EPA released updated Miscellaneous Organic NESHAP (MON) rule on November 6
  - 45-day public comment period once published in *Federal Register*
  - March 2020 court-ordered deadline to finalize
- Commercial Sterilizers (MACT Standard)
  - Rule being re-evaluated again
  - Proposal expected in late 2019/early 2020

Background Levels of EtO

- Sampling results in nine other states show very high concentrations upwind (or far from) known EtO emitting sources
- EPA requiring EtO be measured at all National Air Toxics Trend Sites (NATTS) starting in 2020
  - Rural trend site in Chesterfield County, SC
- EtO Unknowns:
  - What are the sources of EtO being measured away from known sources? Mobile sources? Wastewater treatment? Other?
  - How long does EtO persist in the atmosphere? What's involved in the atmospheric chemistry and transport of EtO?
  - What are the best methods for measuring EtO? Detection level higher than level of concern (100 in1 million).
  - What are the next steps if the presence of EtO is determined to be everywhere?

SC Taking a Closer Look

- Collected background samples (Chesterfield NATTS and Cape Romain National Wildlife Refuge Class I area (near Charleston)) - awaiting results
- Collected samples near EtO emitting sources in North Charleston and Spartanburg area – awaiting results
- Community Engagement Activities
  - Community meeting (North Charleston)
  - More extensive community sampling of EtO
  - New NATA/EtO webpage available soon

Contact Us

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