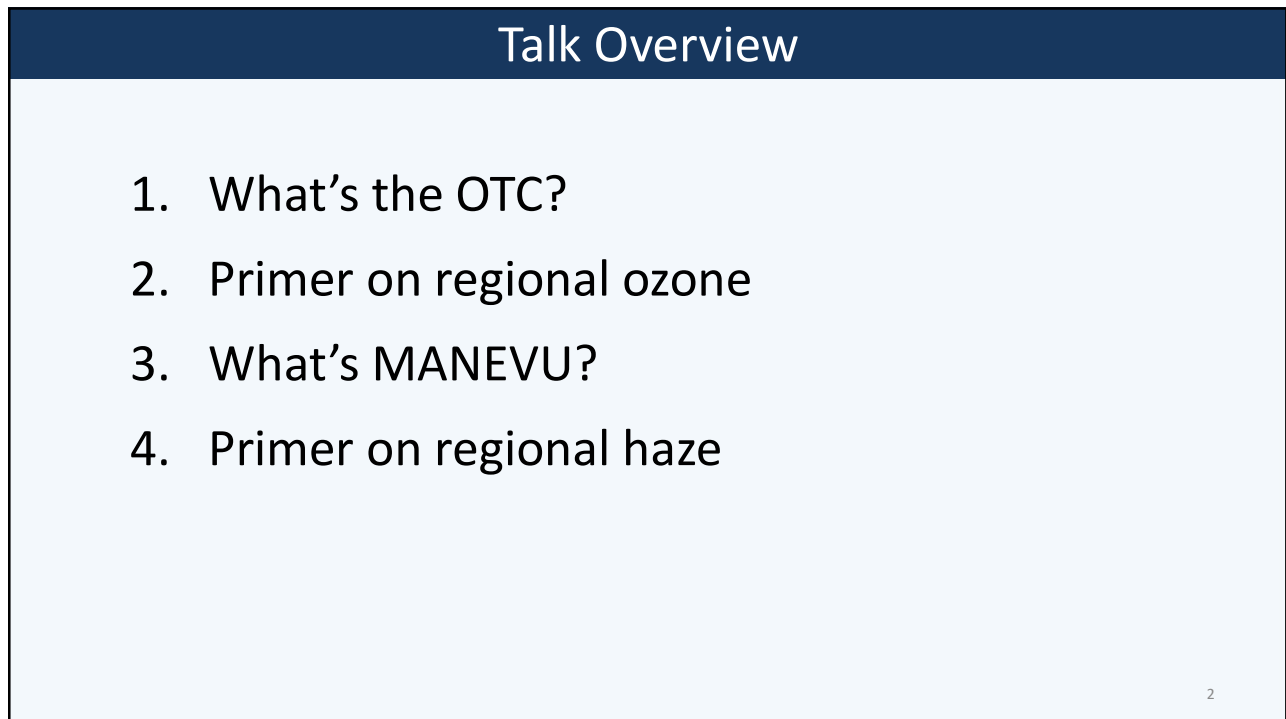




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## What's the OTC?

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## First, a Little History...

During 1980s, scientific understanding began recognizing urban smog problems, especially in eastern U.S., were a regional problem and not specific to urban areas only.

Traditional smog control strategies focused on urban areas weren't working.

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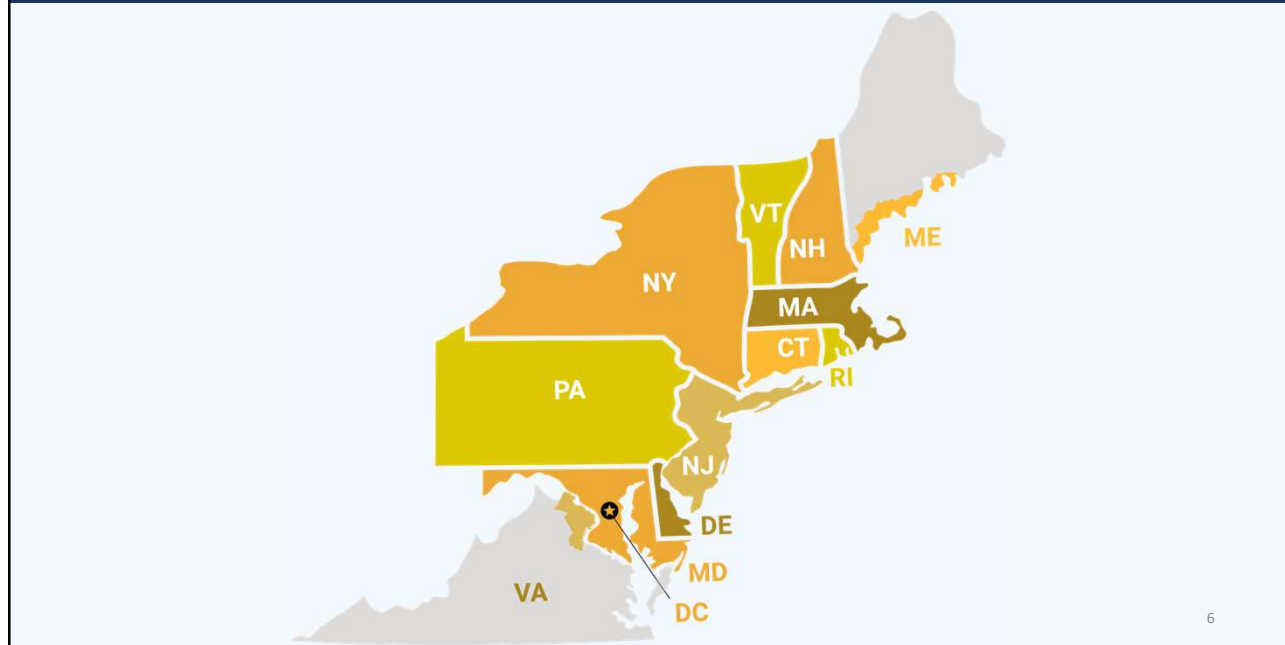
## Congress Created the OTC in 1990

- Specifically created in Section 184(a) of 1990 CAA Amendments to address regional ozone
- 13 jurisdictions: CT, DE, DC, ME, MD, MA, NH, NJ, NY, PA, RI, VT, VA
- 2 voting members per jurisdiction (excepting when making sec. 184(c) recommendations to EPA – 1 vote per jurisdiction):
  - Governor/DC mayor or their designees
  - Designated air pollution control official
- Non-voting OTC members:
  - EPA Administrator
  - EPA Regional Administrators in Regions 1, 2, 3

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## Current Ozone Transport Region (OTR)



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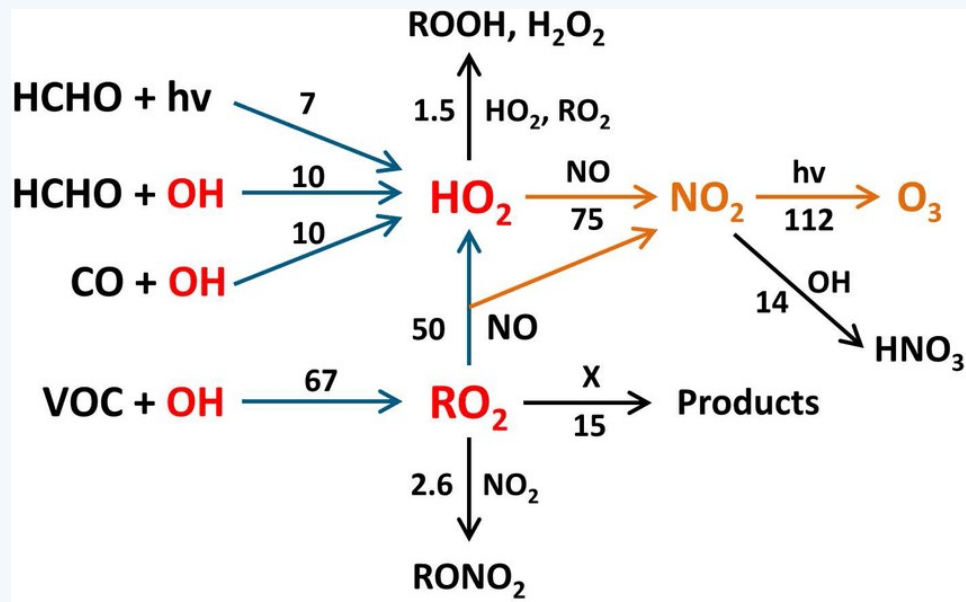
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## Primer on Ground-level Ozone

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## Ozone Formation Made Simple...



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## The Real Basics of Ozone Formation

1. Ozone not directly emitted; it's formed from precursor emissions
  - NO<sub>x</sub> = nitrogen oxides (NO<sub>2</sub> + NO)
  - VOCs = volatile organic compounds
2. NO<sub>x</sub> + VOCs + sunlight = ozone

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## OTC's Big Existential Question

Should ozone reduction strategies target NO<sub>x</sub> or VOCs?

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## OTC's Big Existential Question

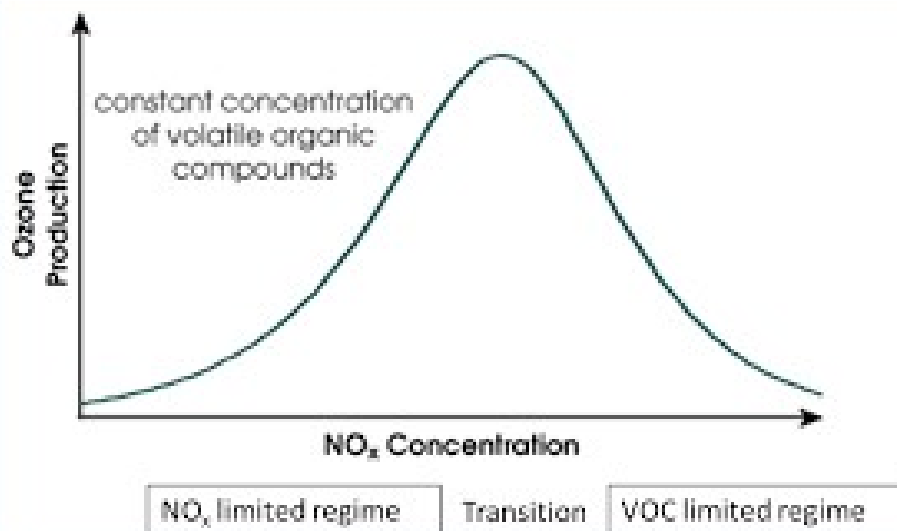
Should ozone reduction strategies target NO<sub>x</sub> or VOCs?

Answer: Yes

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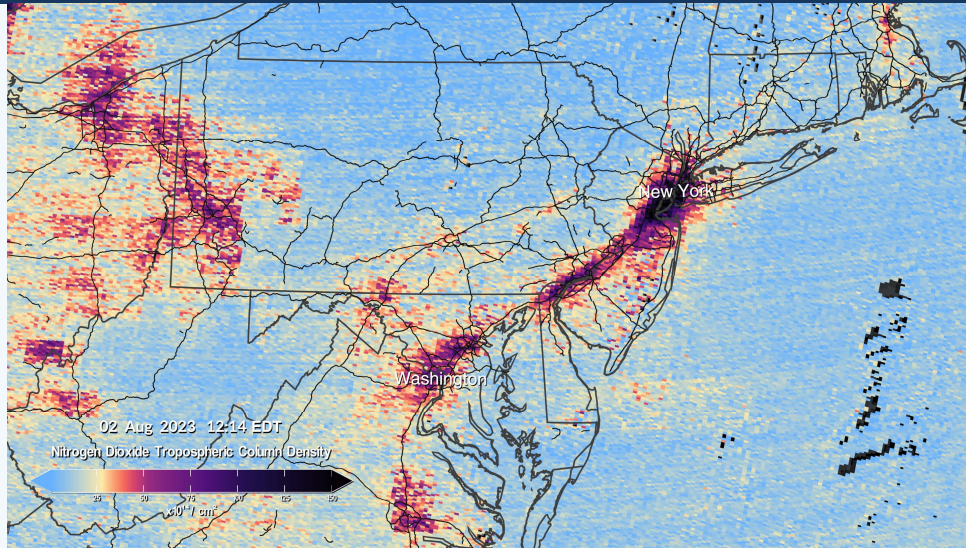
## NO<sub>x</sub> vs. VOCs Depends on Which Side of the Hill You Live On



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# NO<sub>2</sub> from TEMPO “First Light,” Aug. 2, 2023

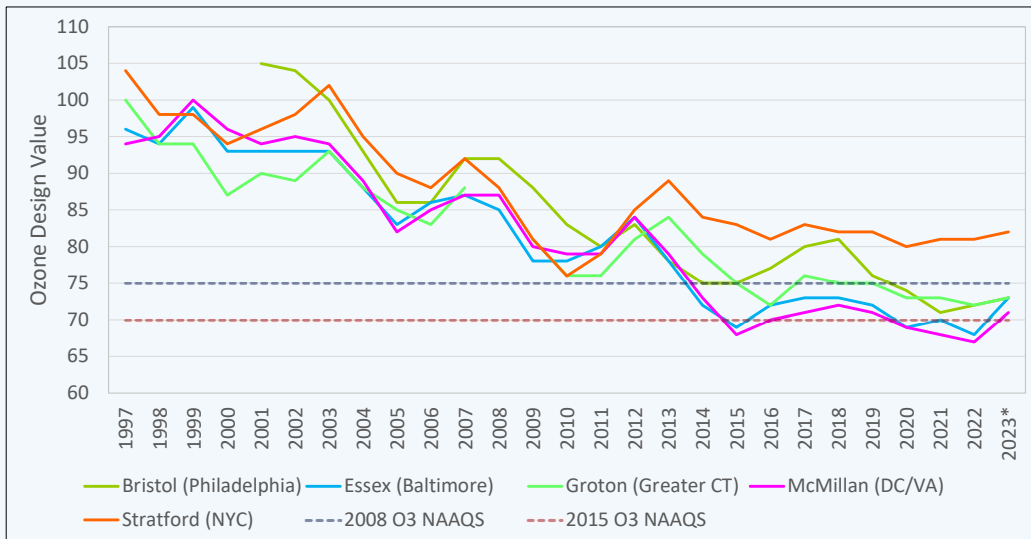


Credits: Kel Elkins, Trent Schindler, and Cindy Starr/NASA's Scientific Visualization Studio

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# Flattening Ozone Trends



\*2023 DVs subject to change due to exceptional events demonstrations

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## What's MANEVU?

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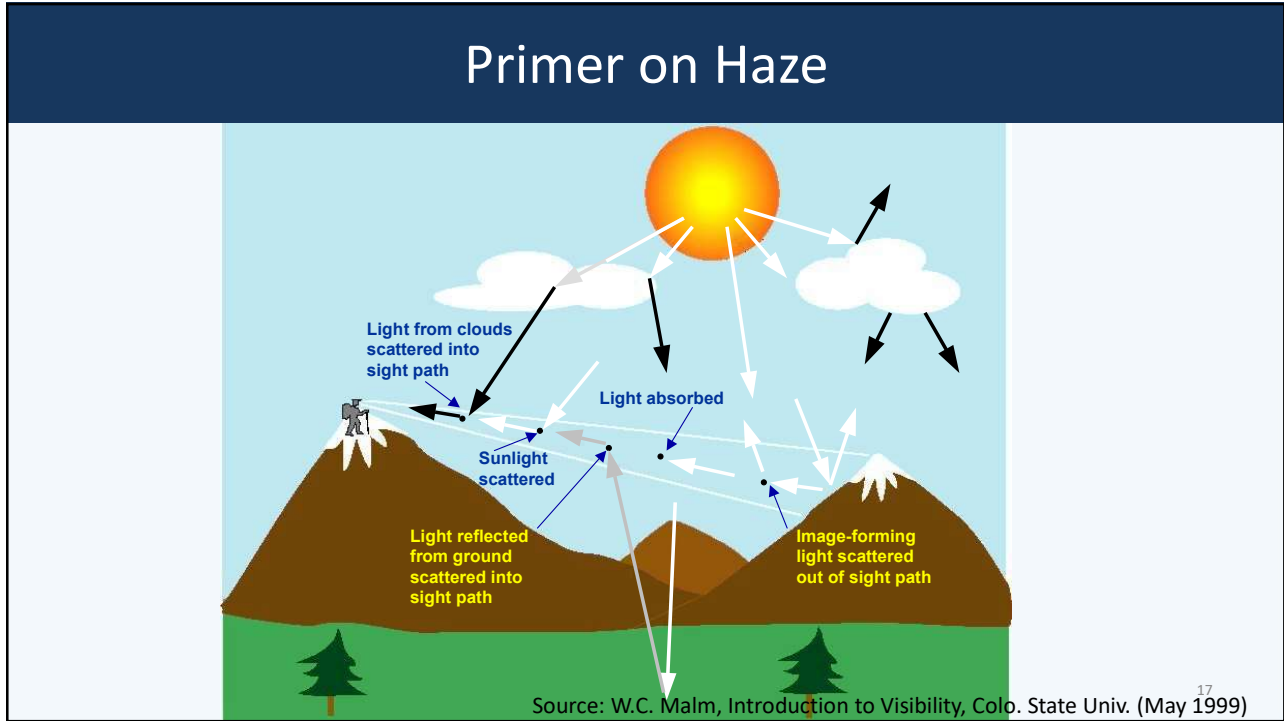
## Mid-Atlantic/Northeast Visibility Union (MANEVU)

- Formed by 2001 OTC resolution *sans* Virginia
- Also includes Penobscot Nation and St. Regis Mohawk Tribe
- Regional planning organization supporting state/DC regional haze SIPs

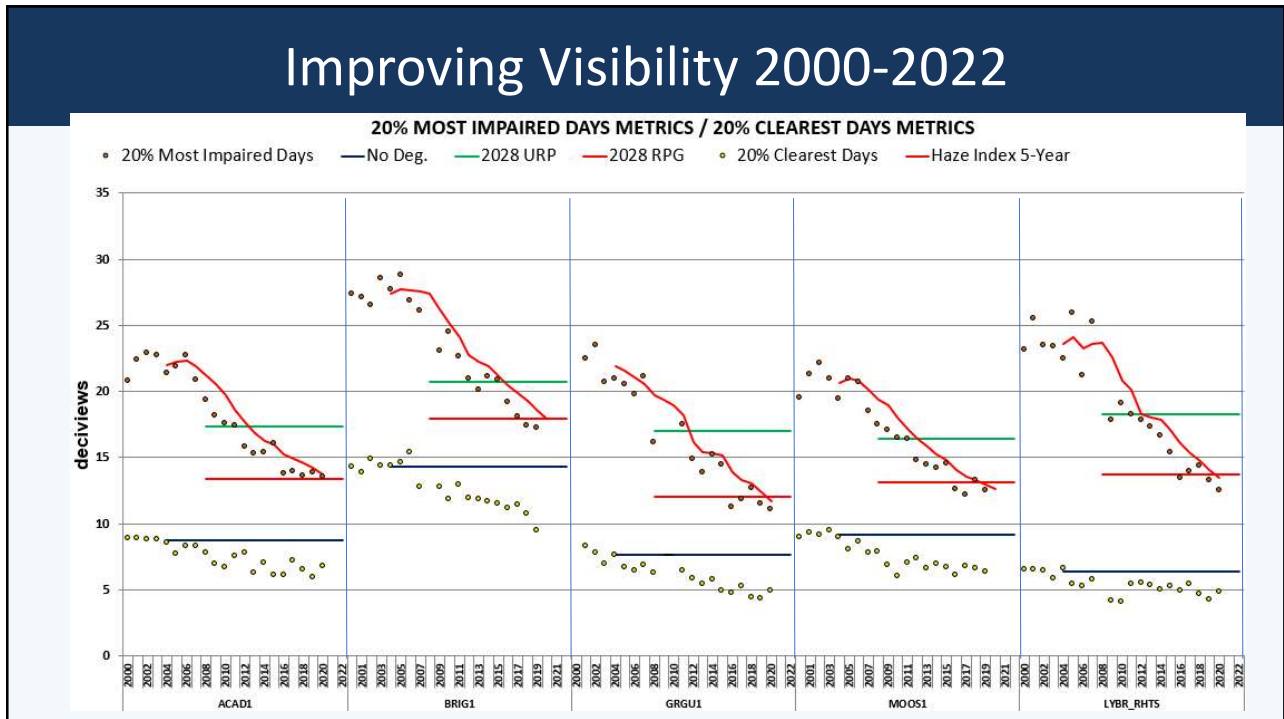
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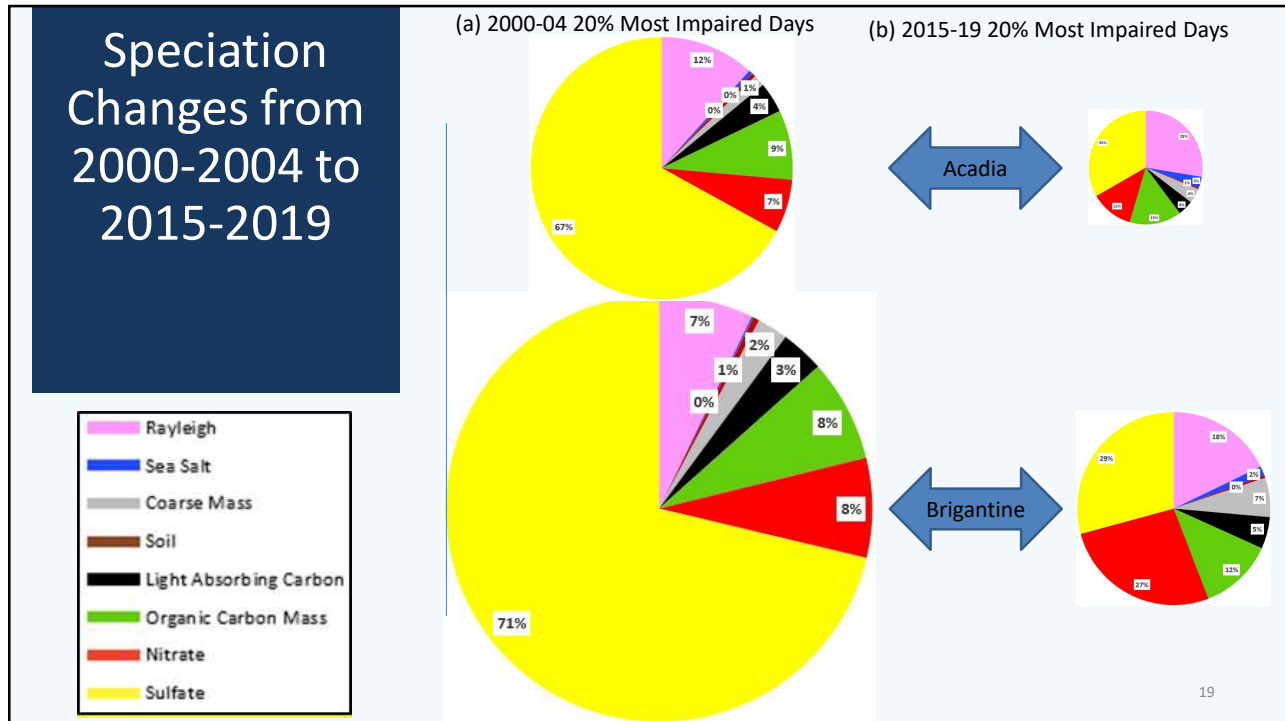




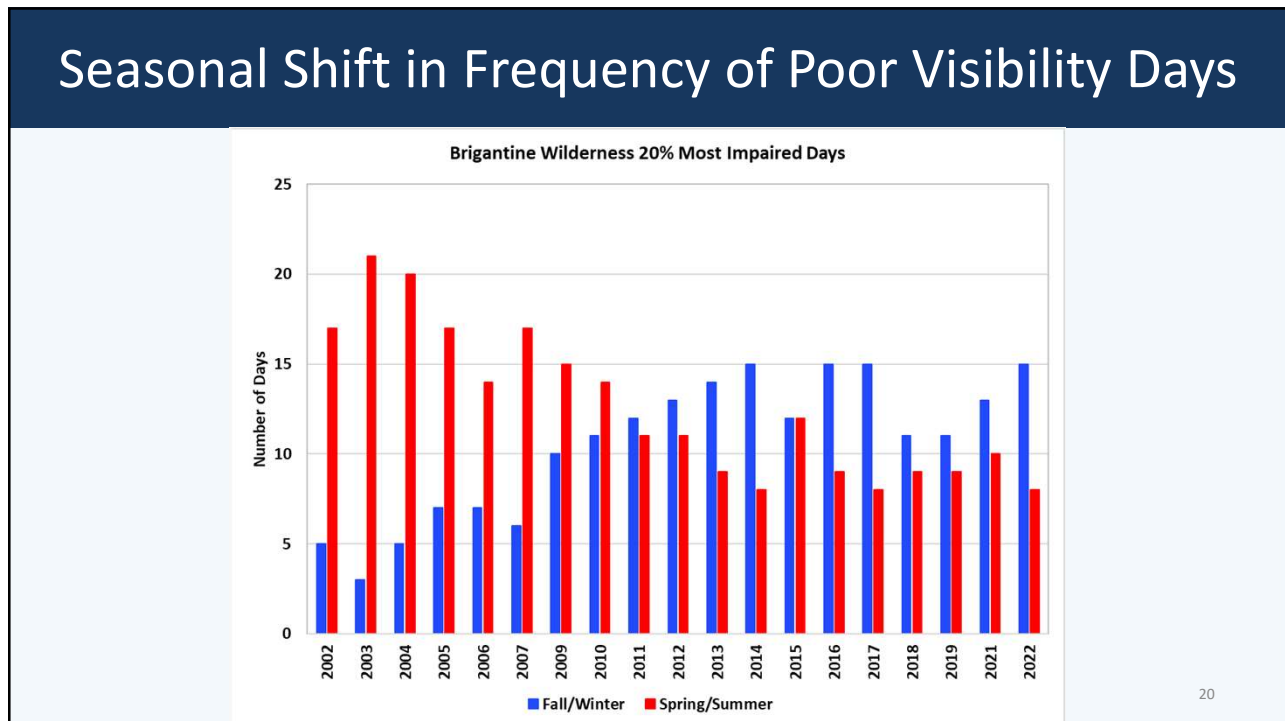
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## Summary

- For ozone
  - Progress made, but trend is now flat
  - NO<sub>x</sub> & VOCs both remain important
- For haze:
  - Visibility trends are improving
  - Relative impact of sulfate aerosols much less
  - Worst visibility days shifting from warmer to cooler seasons

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