

Mid-Atlantic/Northeast Visibility Union

MANE-VU



MANE-VU
STAKEHOLDERS
WEBINAR

APRIL 13, 2021

MANE-VU Technical Support Committee

Co-Chairs Sharon Davis, NJDEP and David Healy, NHDES

Overview

- 2020 TSC charge and progress to date
- COVID-19 impact on IMPROVE monitors
- Review of metrics & speciation through 2019
- Sulfate and nitrate data through 2019
- Moving forward

MANE-VU Class I Areas



Maine

- Acadia National Park
- Moosehorn Wilderness Area

New Hampshire

- Great Gulf Wilderness Area
- Presidential Range - Dry River Wilderness Area

Vermont

- Lye Brook Wilderness Area

New Jersey

- Brigantine Wilderness Area

New Brunswick Canada

- Roosevelt Campobello International Park

Content may not reflect National Geographic's current map policy. Sources: National Geographic, Esri, DeLorme, HERE, UNEF, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iNaturalist Corp.

2020 TSC Charge 1

1. Coordinate among MANE-VU states & tribes and Federal partners

- Monthly MANE-VU TSC Calls
 - Participants include:
 - ✓ MANE-VU member agencies
 - ✓ EPA Regional Offices and HQ
 - ✓ National Park Service
 - ✓ Forest Service
 - ✓ Fish & Wildlife
- Ad Hoc Calls as needed
 - MANE-VU members share and discuss:
 - ✓ SIP drafts
 - ✓ Comments received
- MANE-VU organizational support from OTC, MARAMA and NESCAUM

2020 TSC Charge 2 and 3

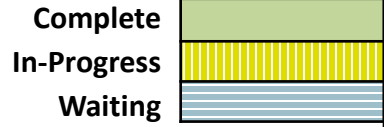
2. Monitor visibility trends for 5-year progress reports (due in 2025)

- Most recent 5-year average recently adjusted for 2019 data

3. Track MANE-VU & upwind state SIP submittals and proposed EPA SIP actions & approvals

- MANE-VU RH SIP Tracker (next slide)
- Comments submitted on TX RH SIP proposal
Response to TN DEC comment letter
(<https://otcair.org/manevu/document.asp?fview=Correspondence>)
- OH and WI in 60-day FLM review of RH SIP proposals

MANE-VU RH SIP Tracker (as of 3/22/21)



	IMPROVE Data Analysis	Inventory Development & Analysis	Modeling	Consultation with contributing states	State 4-factor analyses completed	Response to MANE-VU Ask Developed	Long-term strategy developed	Initial draft of SIP developed	State rules drafted (as appropriate)	FLM/EPA consultation	Draft SIP Submittal 60-day Clock Started	Public Hearing/Comment	Final SIP Submittal	At EPA	SIP Approved
CT	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	In-Progress	Complete	Complete	Complete
DC	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Waiting	Complete
DE	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	In-Progress	Complete	Complete	Complete	Complete
MA	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	In-Progress	Complete	Complete	Complete
MD	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	In-Progress	Complete	Complete	Complete	Complete	Complete
ME	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	In-Progress	Complete	Complete	Complete	Complete
NH	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	In-Progress	Complete	In-Progress	Complete	Complete	Complete	Complete
NJ	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Waiting	Complete
NY	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Waiting	Complete
PA	Complete	Complete	Complete	Complete	In-Progress	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete
RI	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete
VT	Complete	Complete	Complete	Complete	In-Progress	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete

2020 TSC Charge 4 - 7

4. Coordinate with other Regional Planning Organizations as needed
 - No new update
 - Coordinate with VISTAS and LADCO, as needed
 - Some MANE-VU states currently interacting with VISTAS regarding their SIP drafts
5. Review & comment on EPA Regional Haze documents & guidance
 - No new update
6. Training
 - TSC planning for IMPROVE training
7. Assess impacts of changing atmospheric chemistry on effectiveness of future haze measures
 - Ongoing

2020 TSC Charge 8 and 9

8. Examine winter wood combustion contributions to haze
 - Analysis on-going

9. Cooperatively leverage resources and activities with OTC to:
 - a. support efforts to reduce emissions of NO_x from on-road trucks
 - b. provide multi-pollutant perspective of co-benefits from regional haze measures

 - Analysis on-going

Effects of COVID-19 on MV IMPROVE Monitors

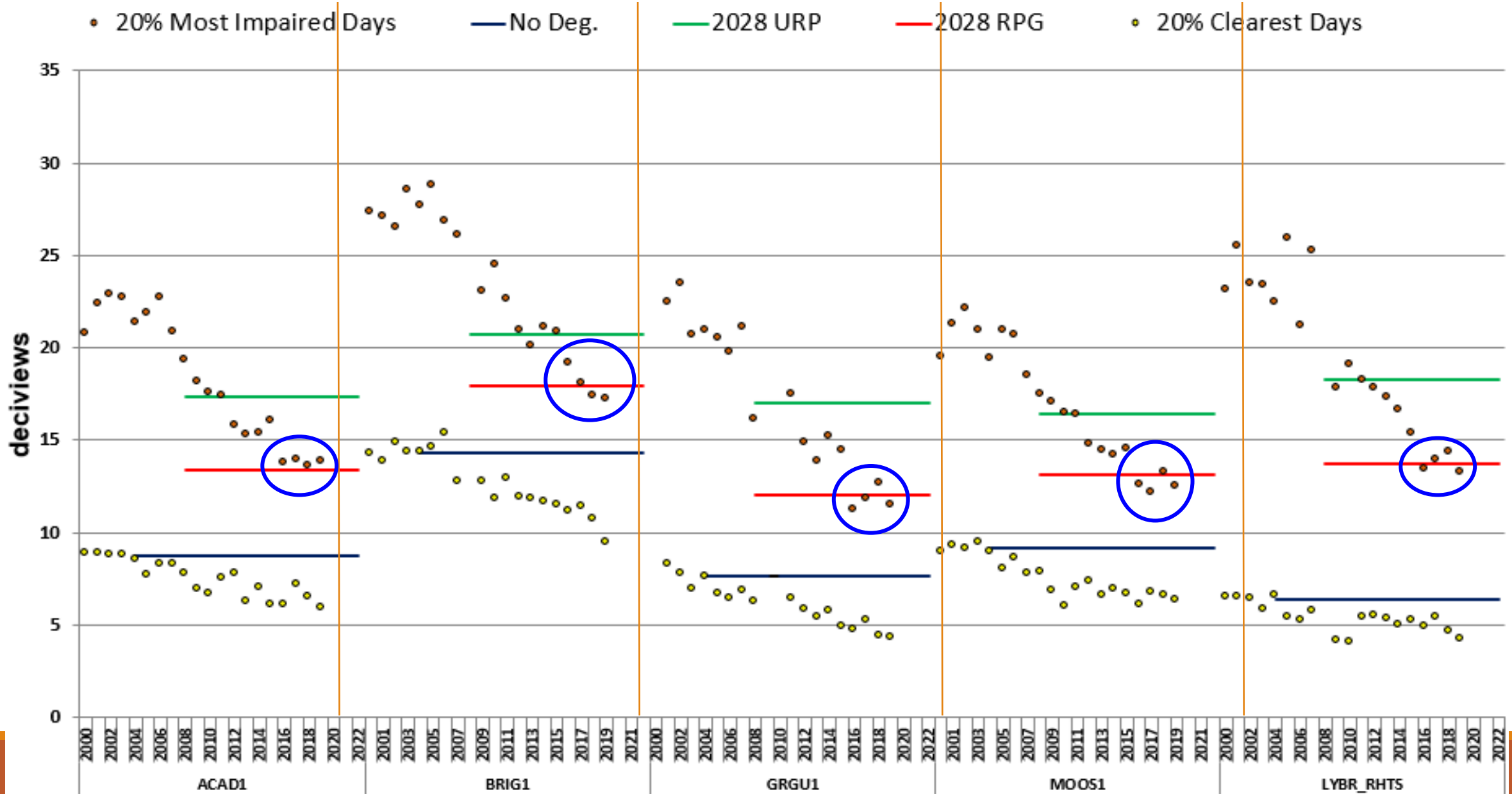
- Two MANE-VU sites will not have complete data for 2020
 - Brigantine (NJ) shut down between 3/22/20 and 6/30/20
 - Moosehorn (ME) shut down between 4/6/20 and 6/9/20
- Minimum of 3 years of data sufficient for calculating a 5-year average within each 5-year period

Mid-Atlantic/Northeast U.S.
Visibility Data
2004-2019
(2nd RH SIP Metrics)

<https://otcair.org/manevu/document.asp?fview=Reports>

Visibility is Improving – Current Levels are Near 2028 RPGs

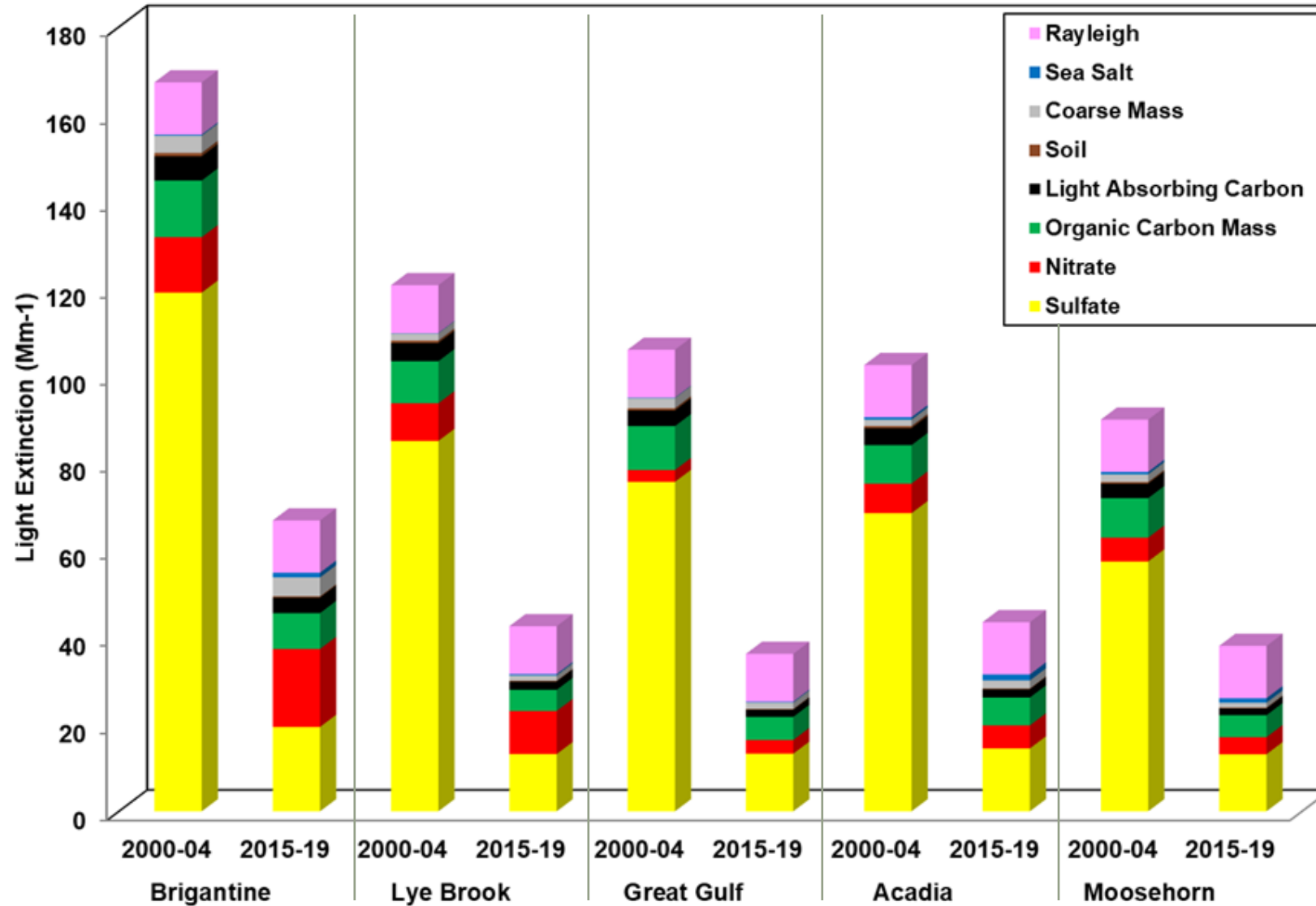
20% MOST IMPAIRED DAYS METRICS / 20% CLEAREST DAYS METRICS



Light Extinction Improvements (Mm^{-1}):

Baseline vs. 2nd RH SIP Planning Goal

**20% Most
Impaired
Visibility Days**

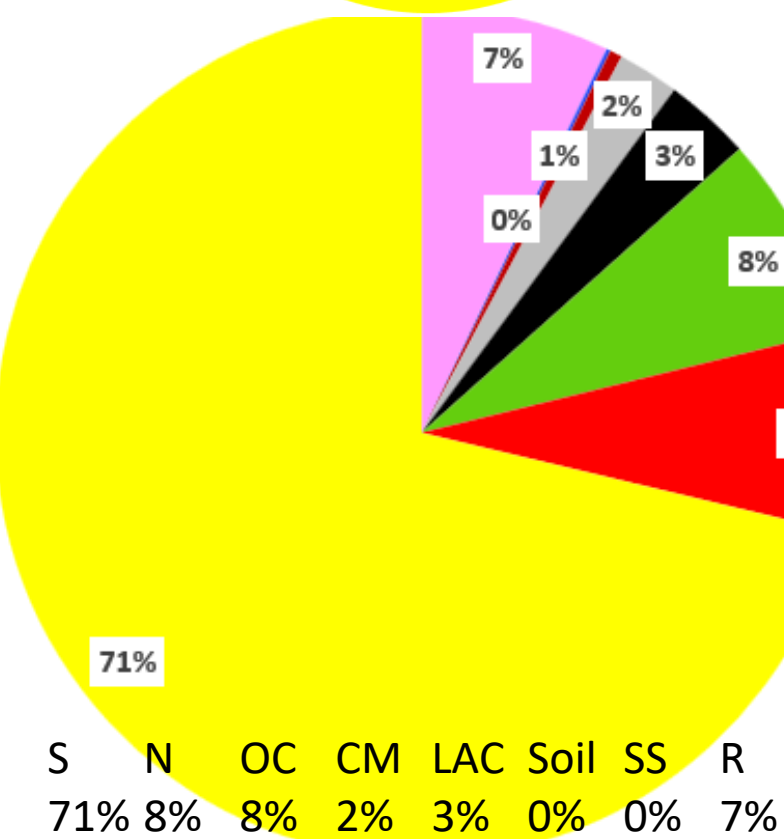
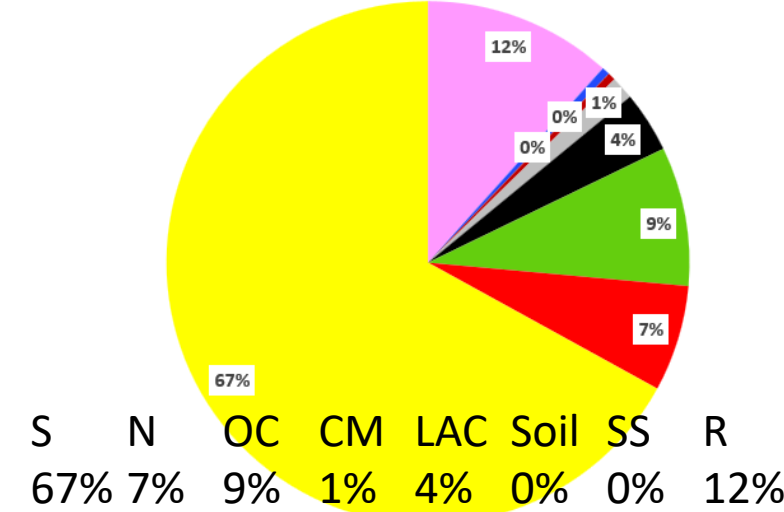


Speciation Changes From Baseline to 2nd RH SIP Planning Goal

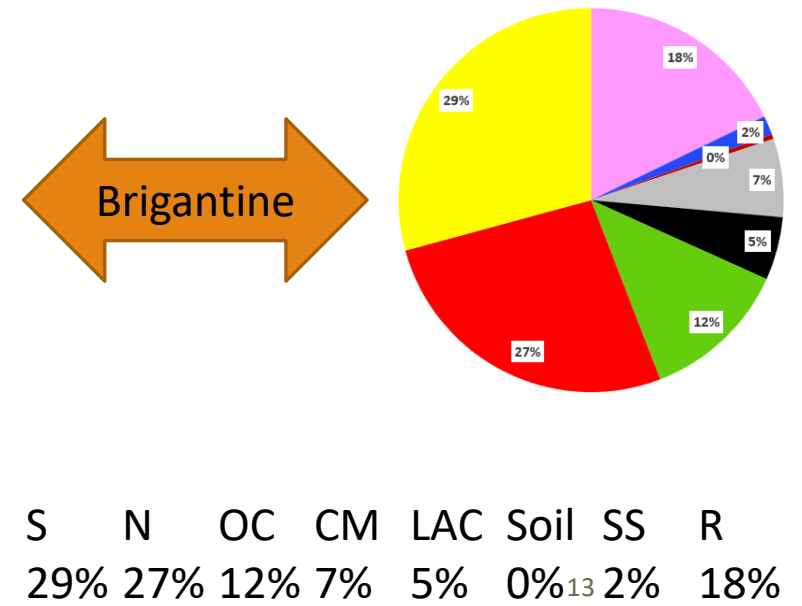
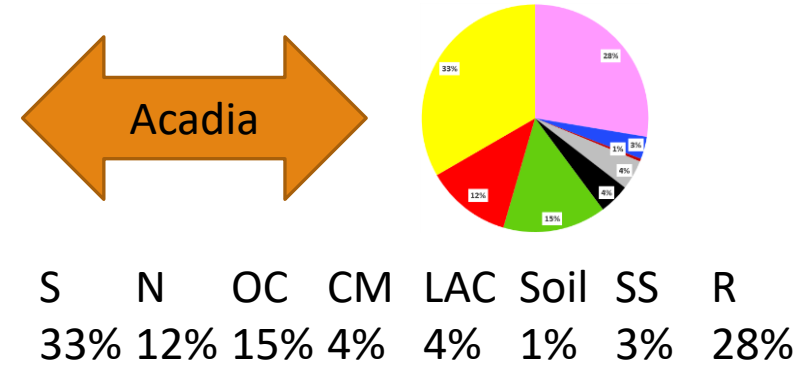
(% of Total Light Extinction)



(a) 2000-04 20% Most Impaired Days

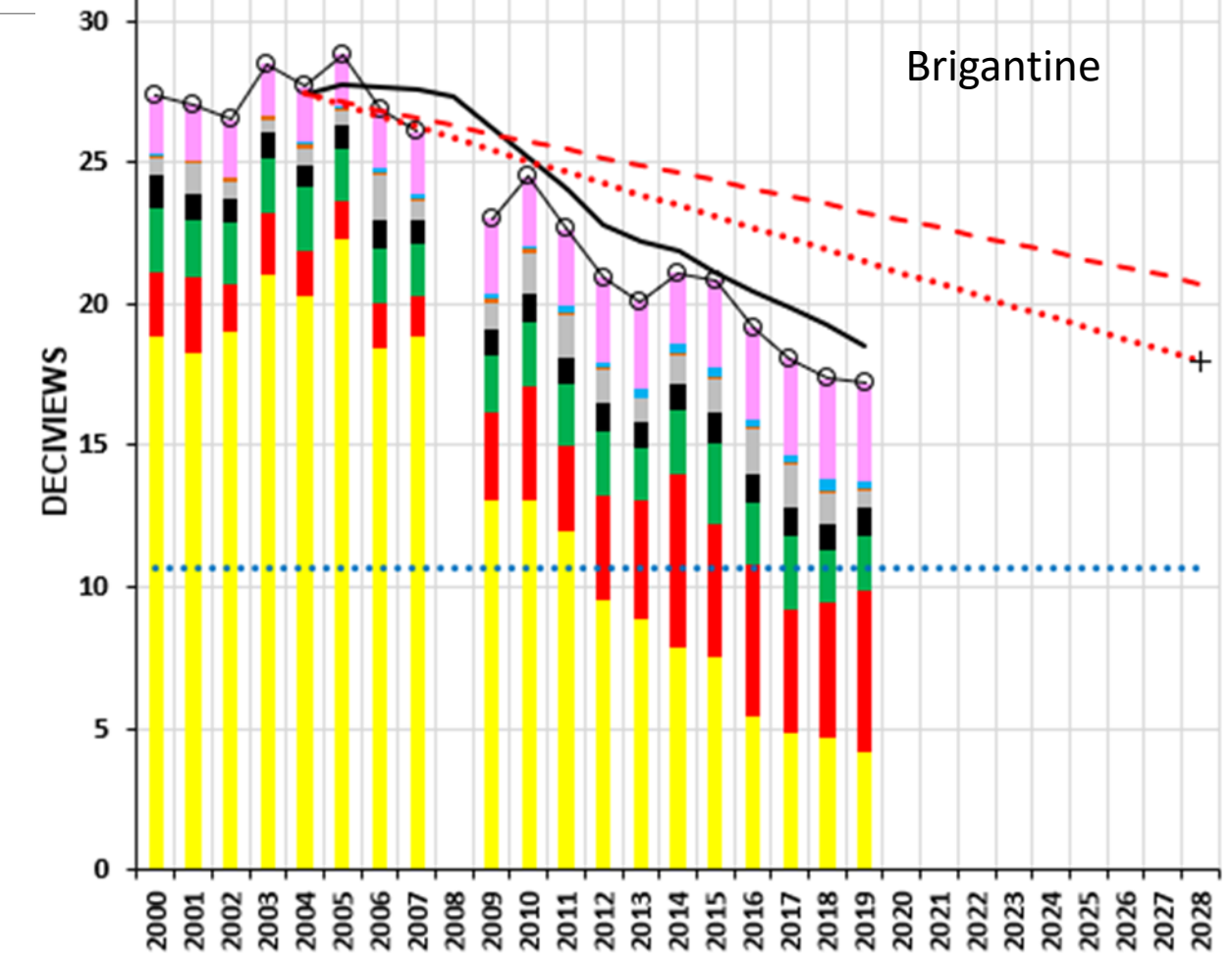
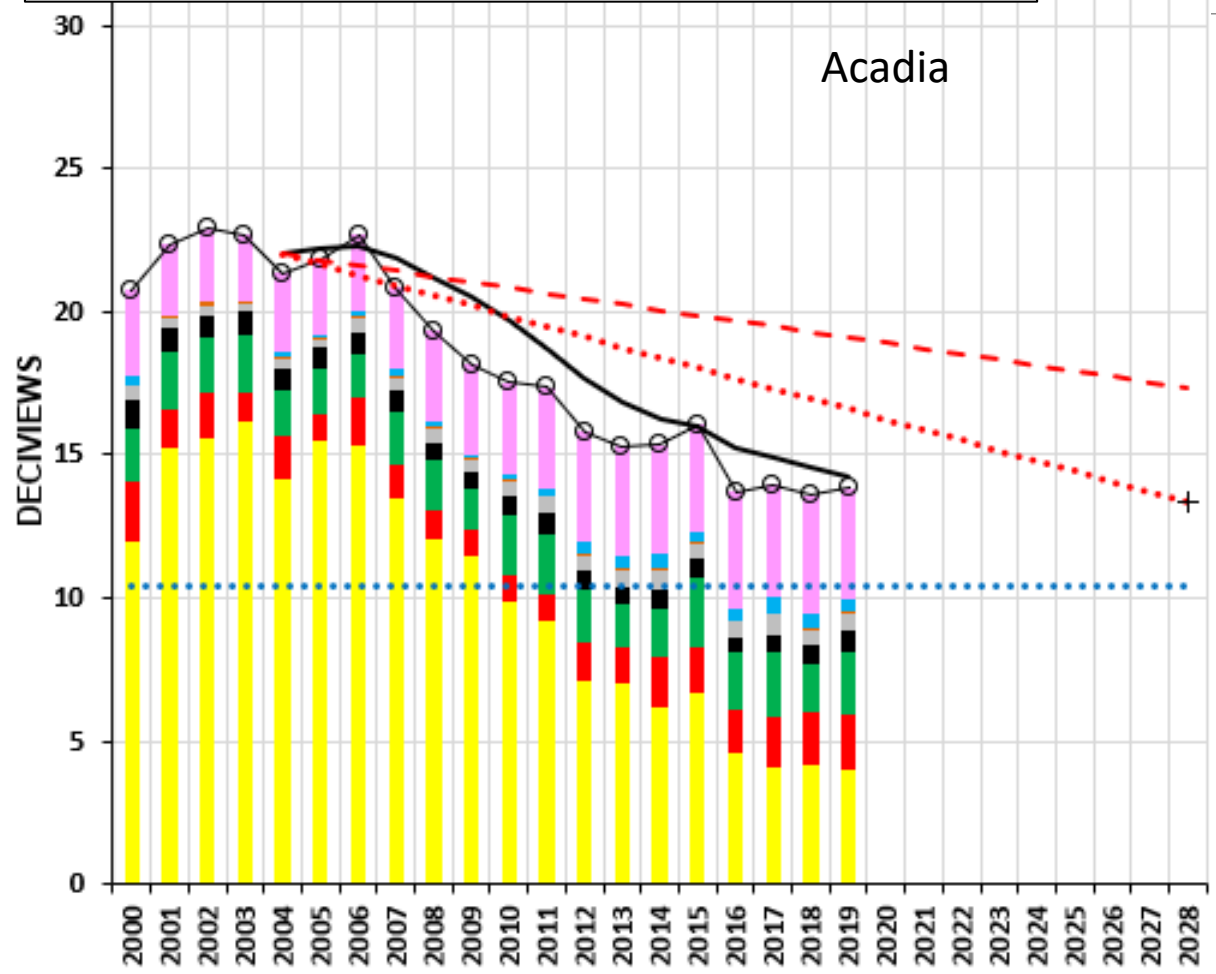
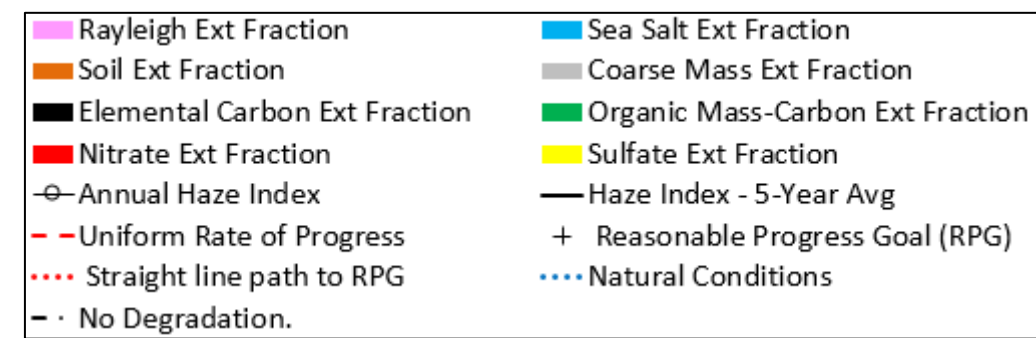


(b) 2015-19 20% Most Impaired Days



Visibility Metrics Trends

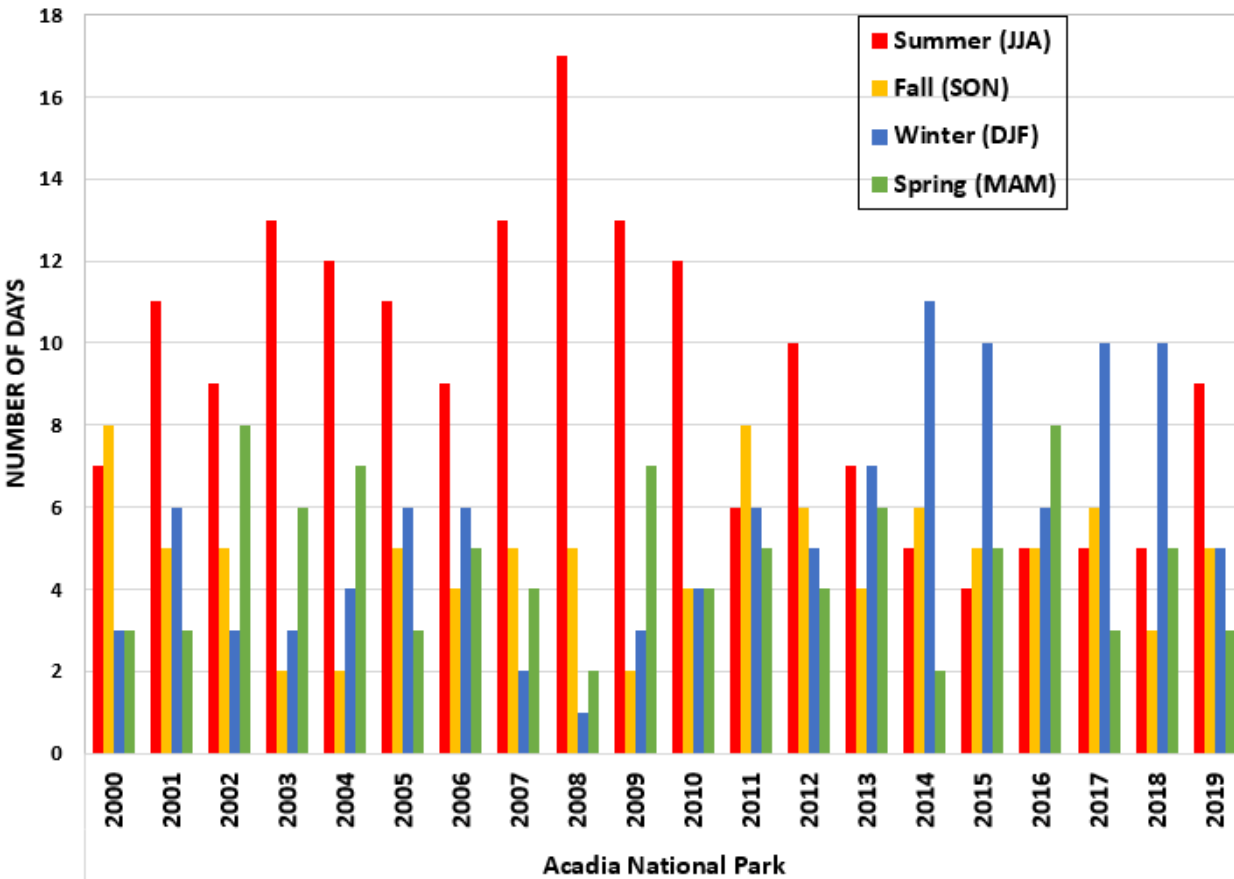
20% Most Impaired Days



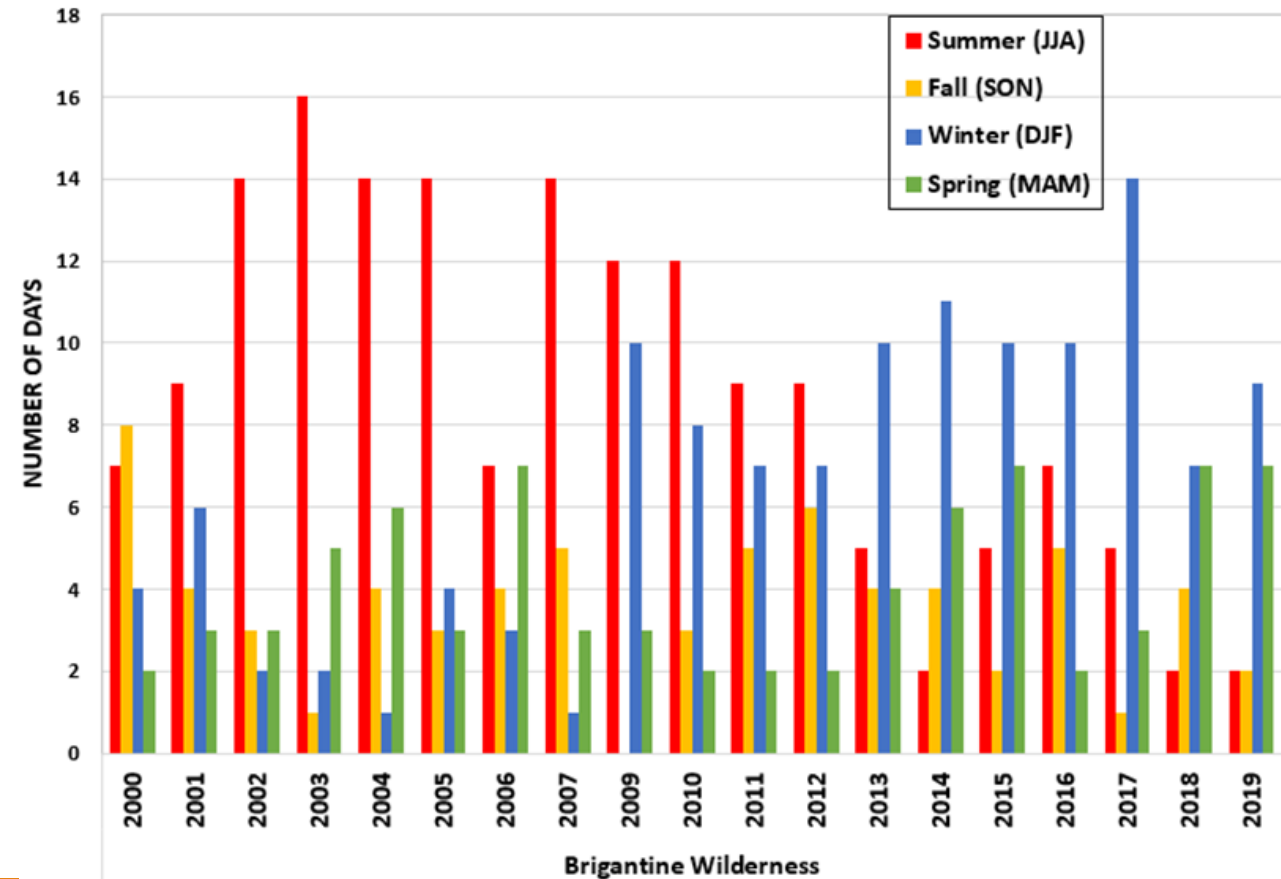
Seasonal Changes to Most Impaired Days

Baseline vs. 2nd RH SIP Planning Goal

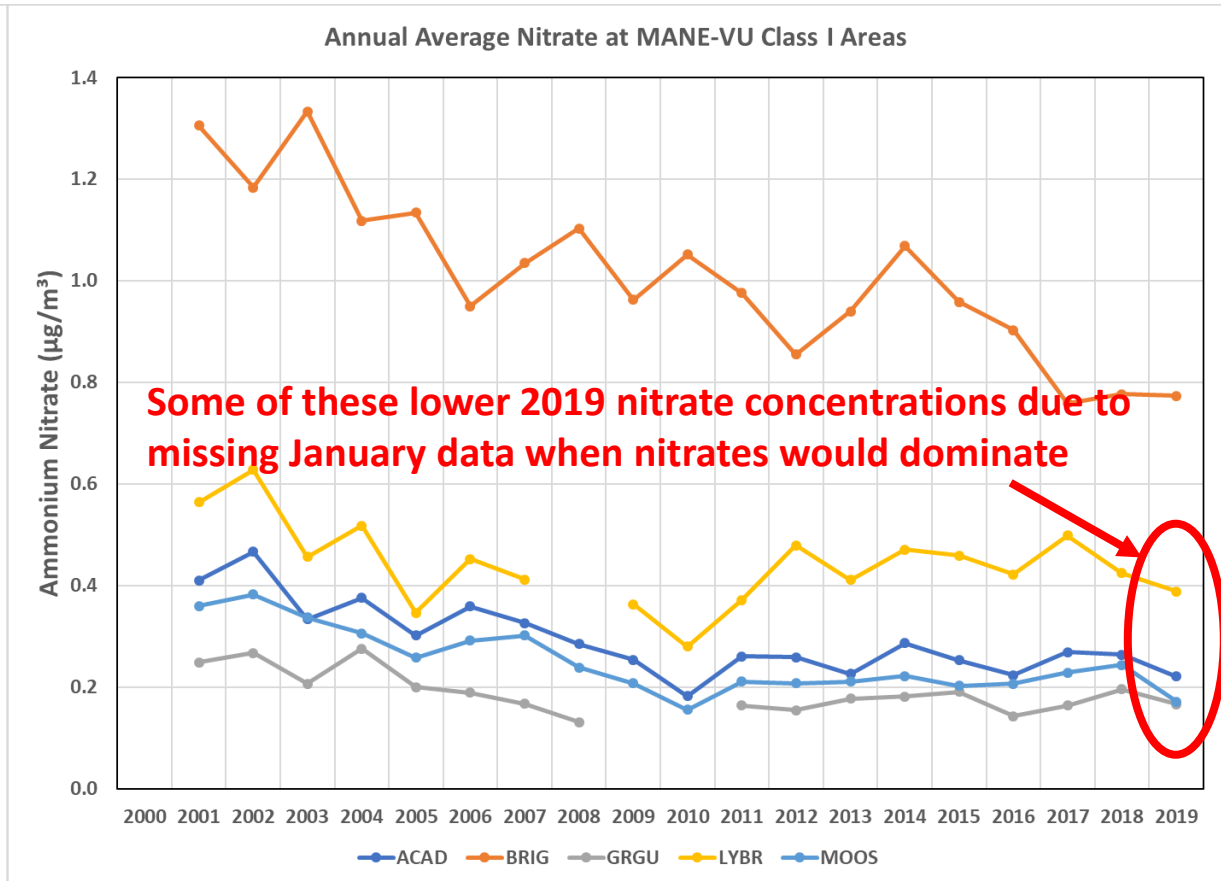
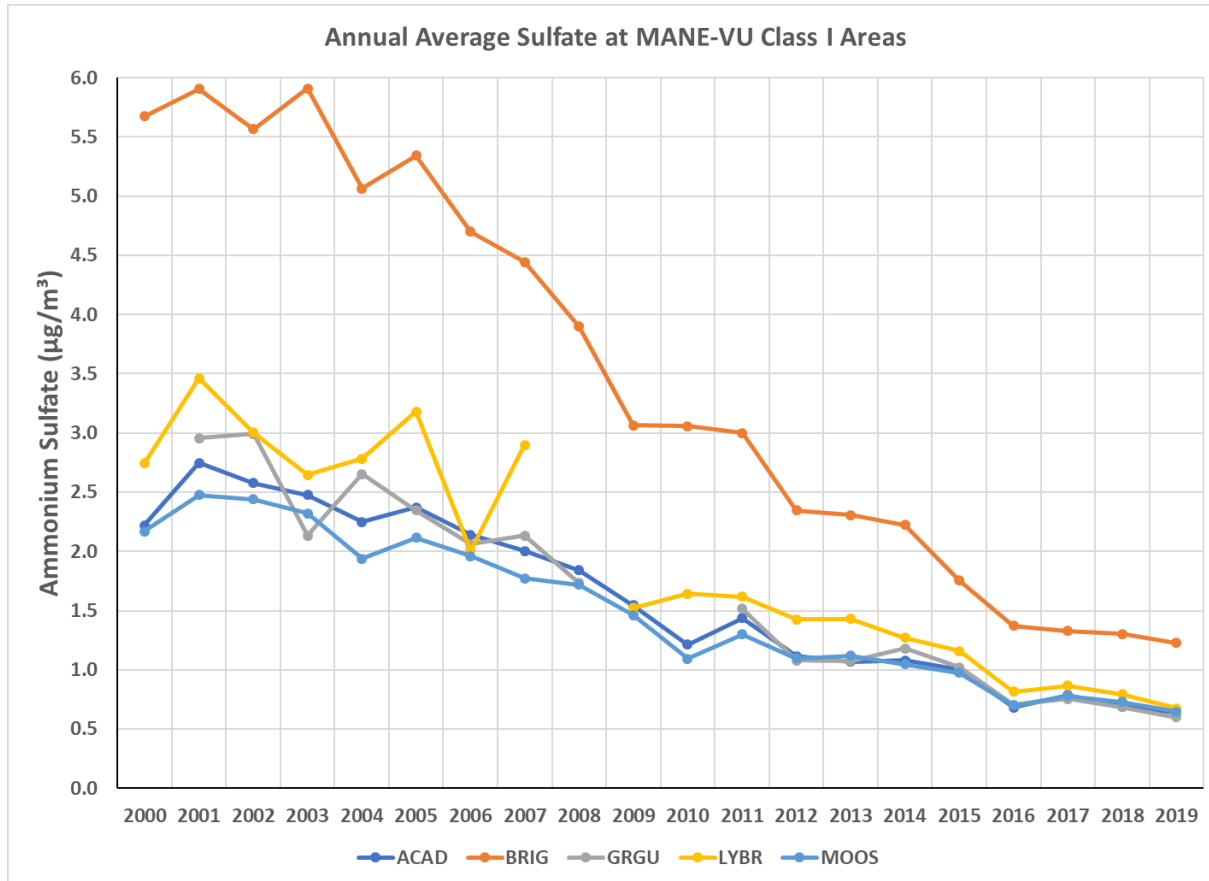
Acadia



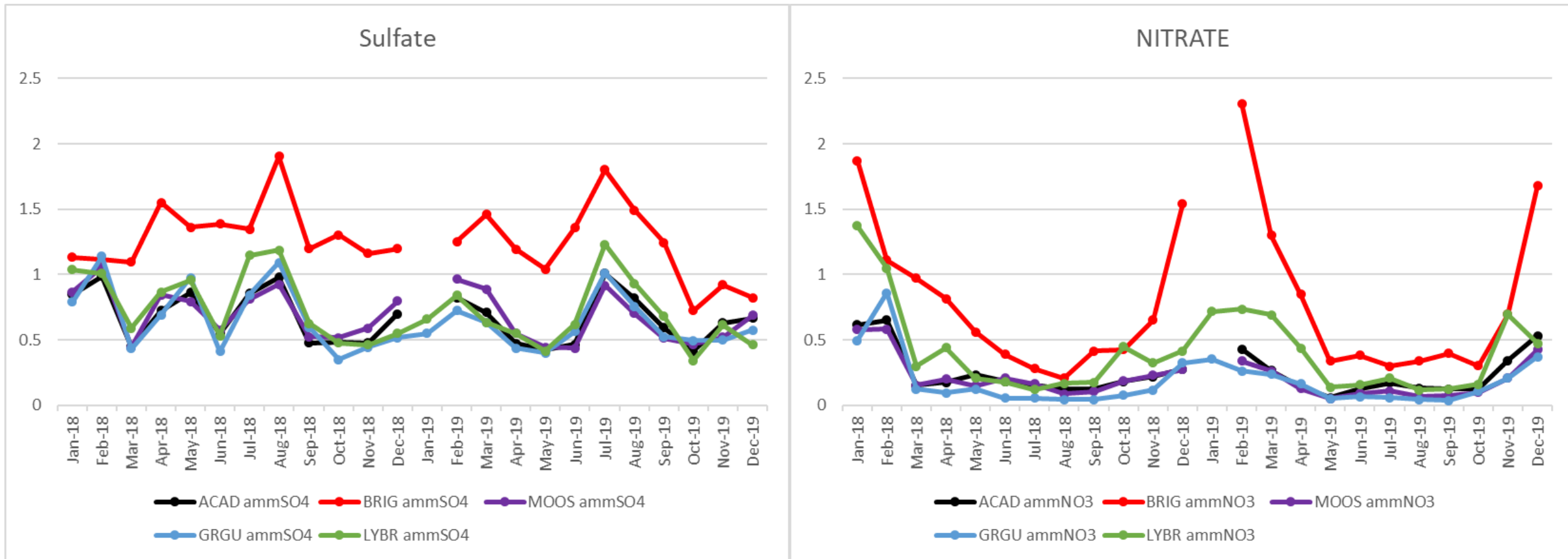
Brigantine



Annual Average Sulfate and Nitrate MANE-VU Class I Areas (2000 – 2019)



Monthly Average Sulfate and Nitrate MANE-VU Class I Areas (2018 – 2019)



Data Summary

- Overall, Class 1 areas are seeing visibility improvements
- 20% Most Impaired Days
 - Significant decreases in Sulfate contribution to visibility impairment
 - Nitrate, Black Carbon (light absorbing), Organic Carbon Mass collectively larger factor in visibility impairment and are becoming increasingly common during winter months
 - More winter days dominate the mix of 20 percent most impaired days.
- New multi-pollutant focus (NO_x and SO₂ reductions)

In Summary

- MANE-VU TSC meeting workplan goals
- States making good progress towards finalizing RH SIPs
- 2019 Visibility IMPROVE Data
 - Overall Class 1 areas seeing visibility improvements
 - Most Impaired Days
 - Significant decreases in Sulfate contribution to visibility impairment;
 - Nitrate larger factor in visibility impairment
 - 20% most impaired days increasingly common during the winter months

Moosehorn, ME



Roosevelt Campobello International Park, NB



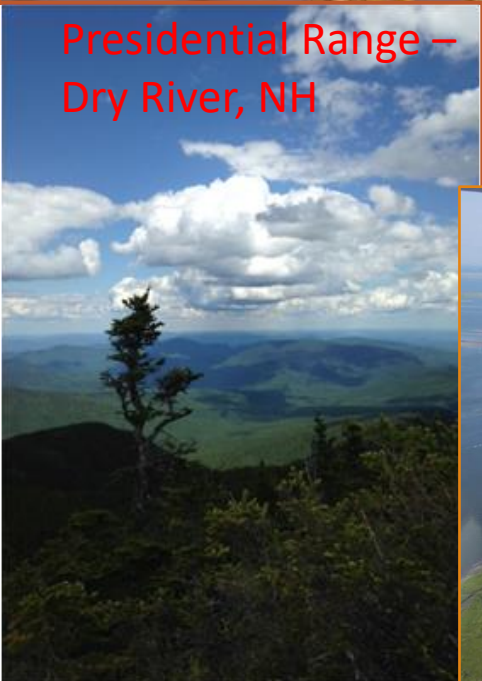
Acadia, ME



Lye Brook Wilderness, VT



Presidential Range – Dry River, NH



Brigantine NJ



Thank You!

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