

OTC/MANE-VU  
STAKEHOLDERS  
MEETING  
MARCH 30, 2020

# MANE-VU Technical Support Committee

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

# Overview

- MANE-VU and its Class I areas
- 2019 Commissioners' Charge
- Regional Haze SIPs - 2<sup>nd</sup> Planning Period Status
- Visibility Monitoring Data – 2018 Update
- Tee Up:
  - Co-Benefits of MANE-VU Ask
  - Potential Future Focus Areas

# 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

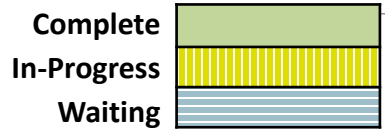
Content may not reflect National Geographic's current map policy. Sources: National Geographic, Esri, DeLorme, HERE, UNEF, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iNaturalist Corp.

## TSC Charge and Future Activities

1. Coordinate among MANE-VU states & tribes and Federal partners
2. Monitor visibility trends for 5-year progress reports (due in 2025)
3. Track MANE-VU & upwind state SIP submittals and proposed EPA SIP actions & approvals
4. Coordinate with other Regional Planning Organizations as needed
5. Review & comment on EPA Regional Haze documents & guidance
6. Training

# MANE-VU RH SIP Tracker

(as of 3/26/2020)

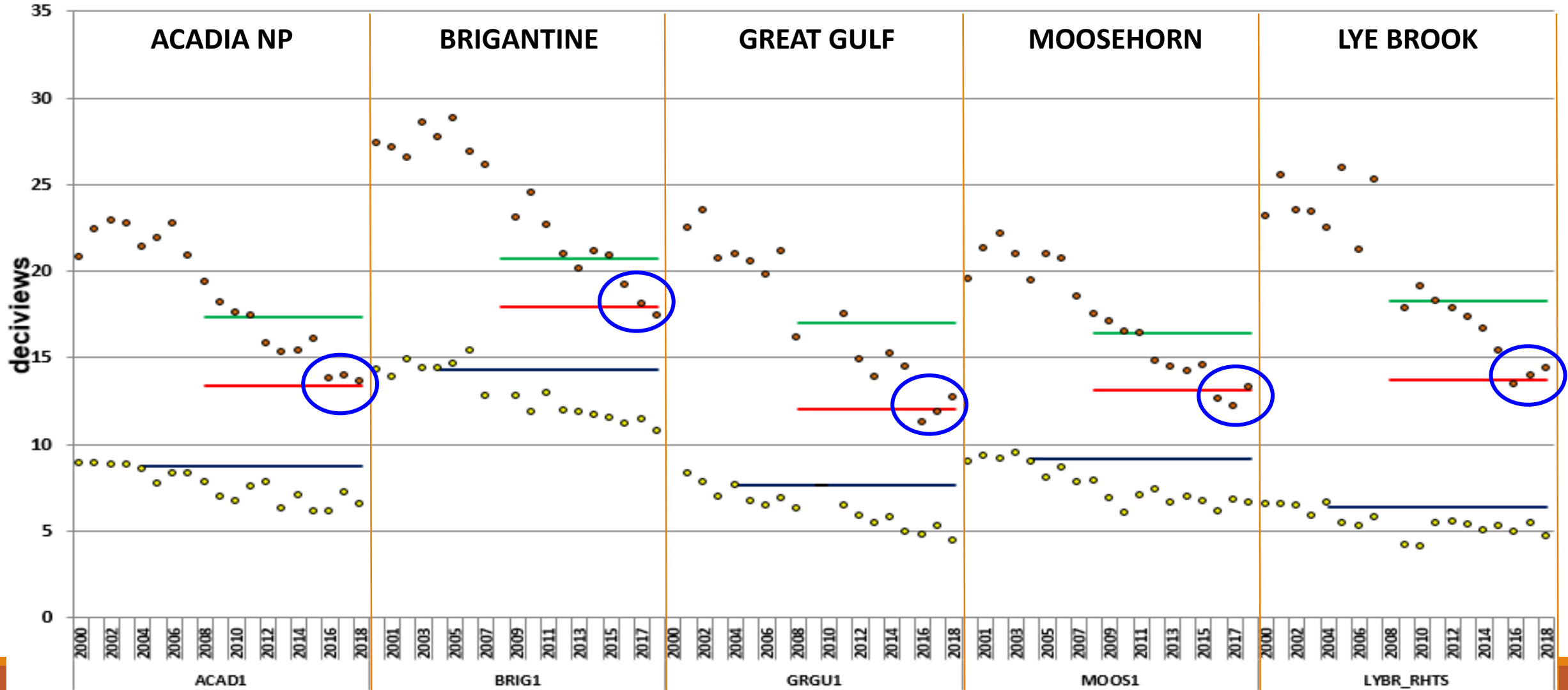


	IMPROVE Data Analysis	Inventory Development & Analysis	Modeling	Consultation with contributing states	State 4-factor analyses completed	Response to MANE-VU Ask Developed	Long-term strategy developed	Initial draft of SIP developed	State rules drafted (as appropriate)	FLM/EPA consultation	Draft SIP Submittal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

# Visibility is Improving – Current Levels are Near 2028 RPGs

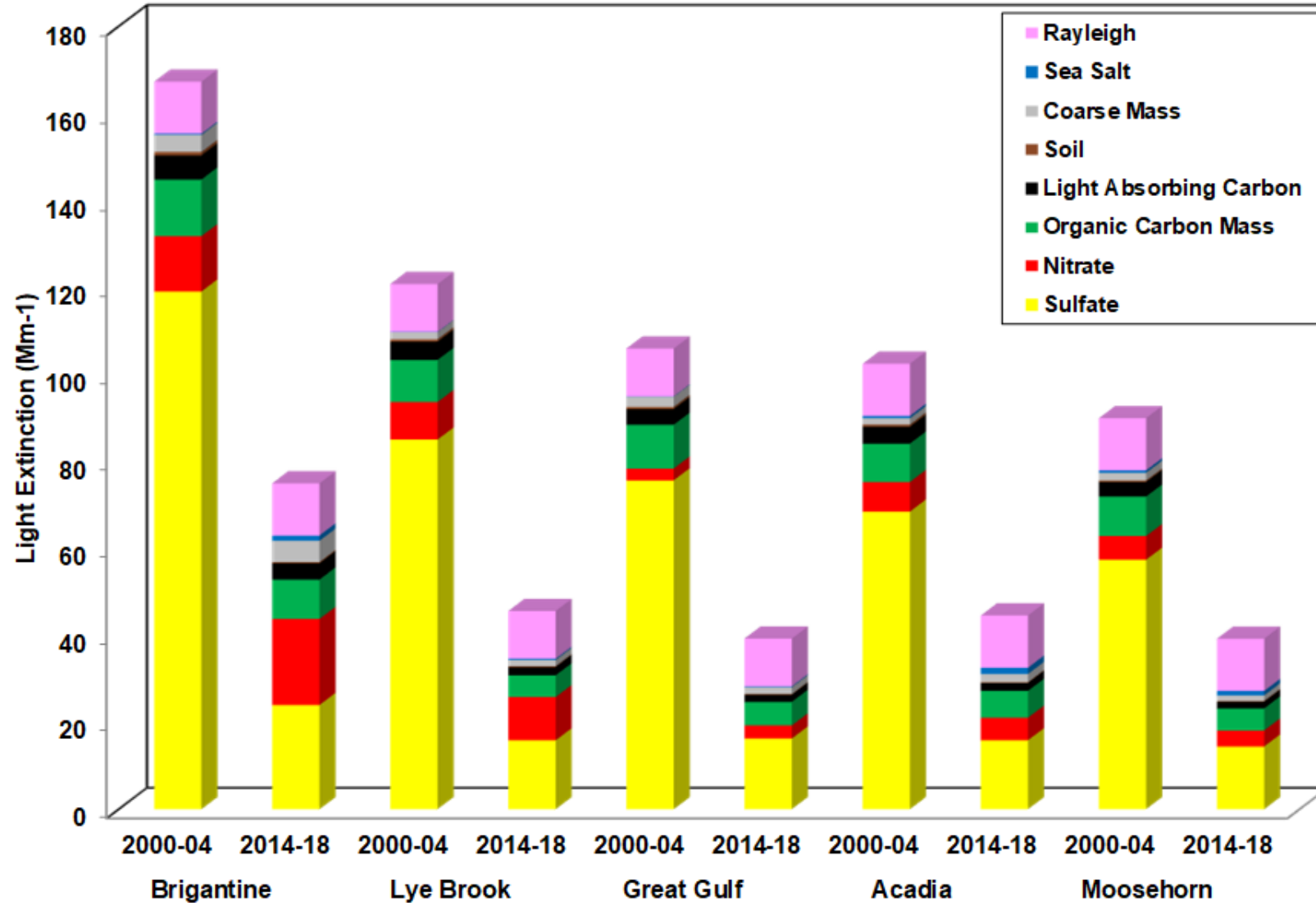
20% MOST IMPAIRED DAYS METRICS / 20% CLEAREST DAYS METRICS

• 20% Most Impaired Days      — No Deg.      — 2028 URP      — 2028 RPG      • 20% Clearest Days



# Light Extinction Improvements ( $Mm^{-1}$ ): Baseline vs. 2<sup>nd</sup> RH SIP Planning Goal

**20% Most  
Impaired  
Visibility Days**

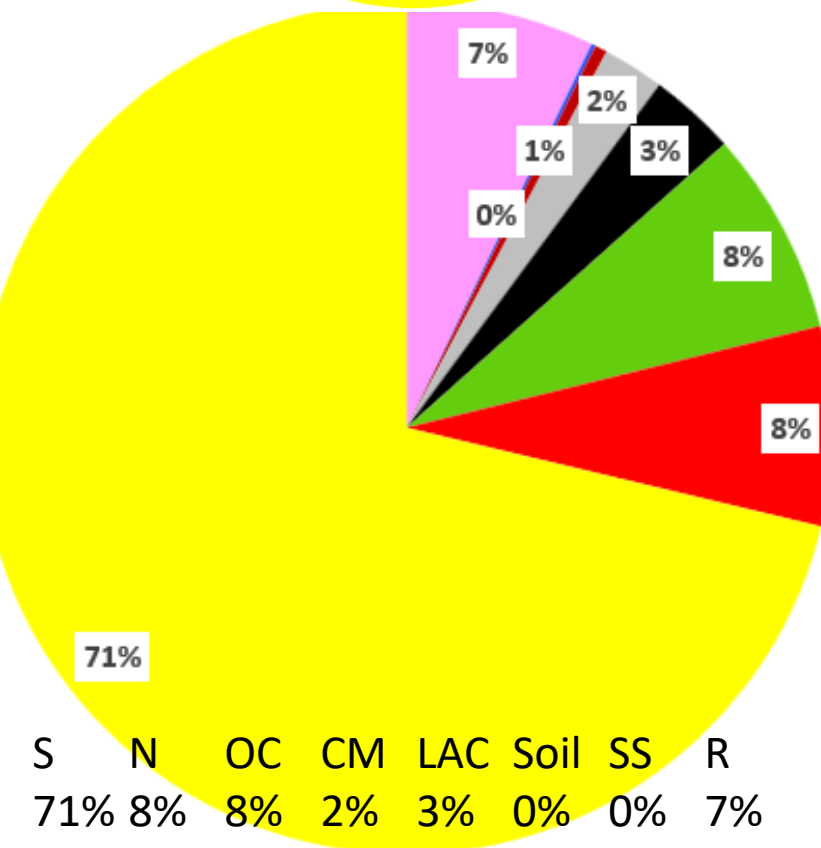
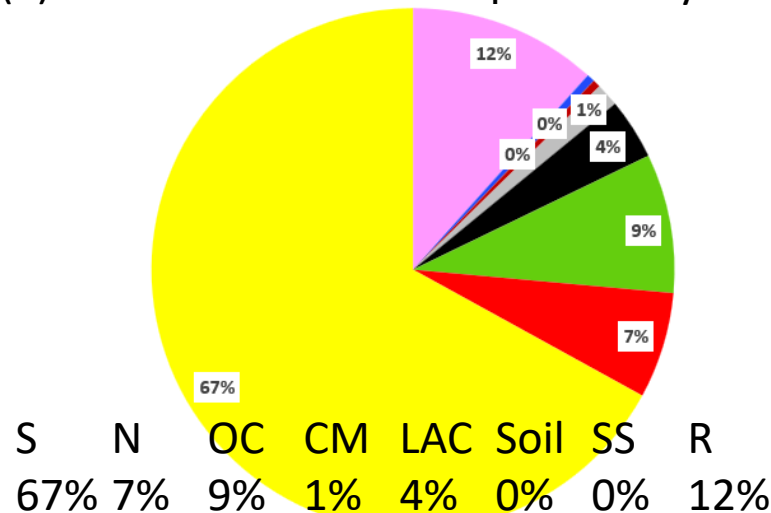


# Speciation Changes From Baseline to 2<sup>nd</sup> RH SIP Planning Goal

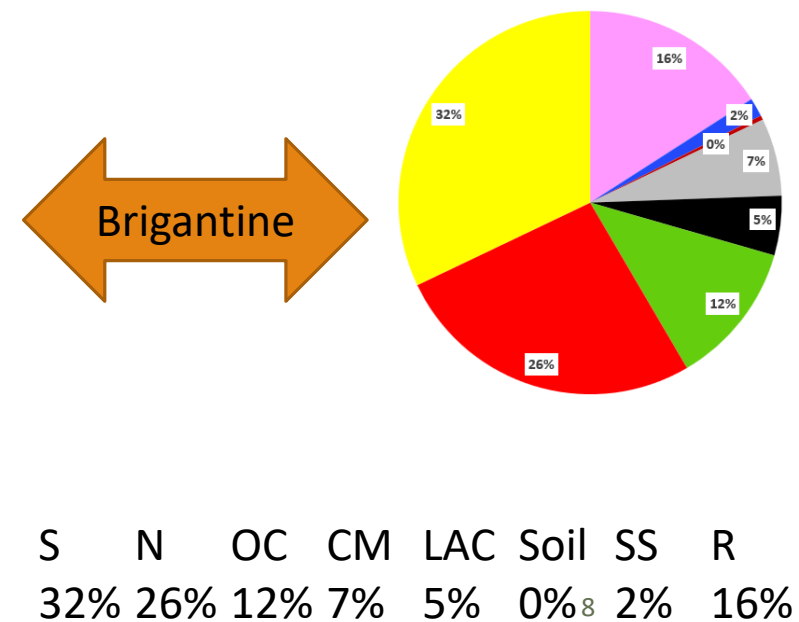
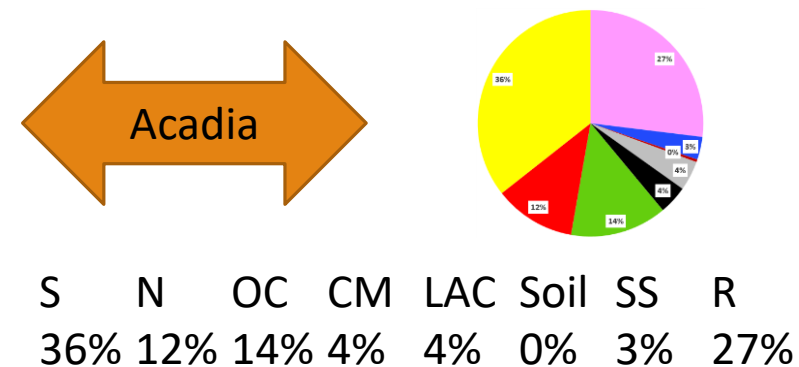
(% of Total Light Extinction)



(a) 2000-04 20% Most Impaired Days



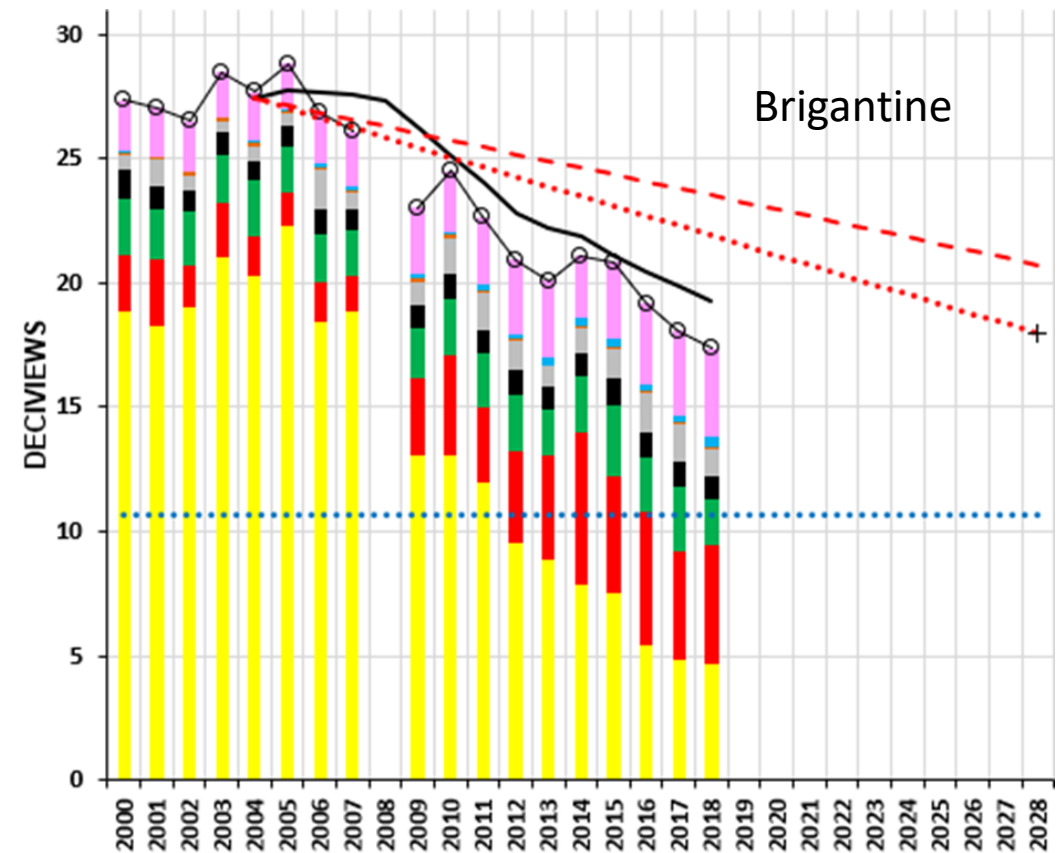
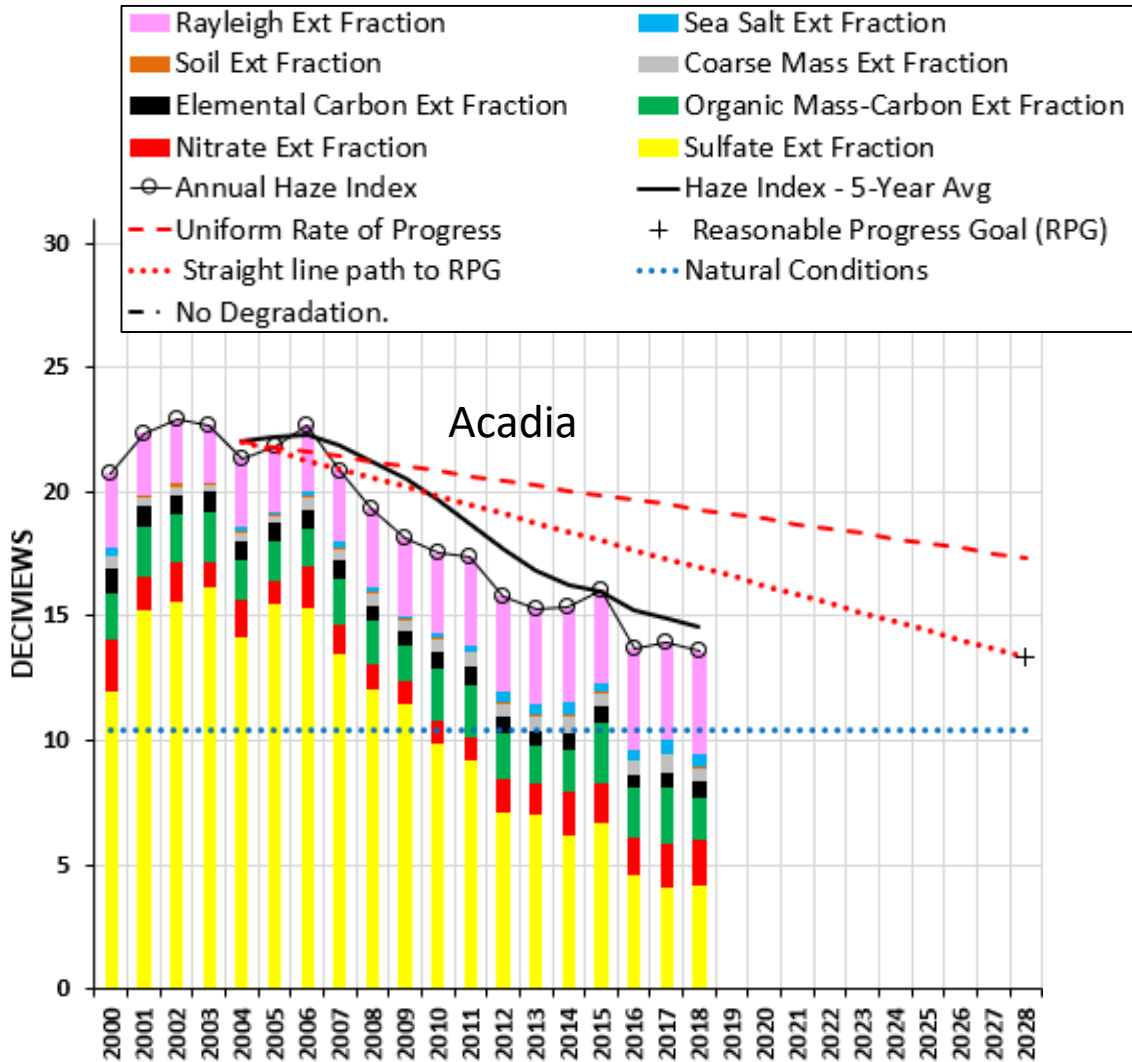
(b) 2014-18 20% Most Impaired Days





# Visibility Metrics Trends

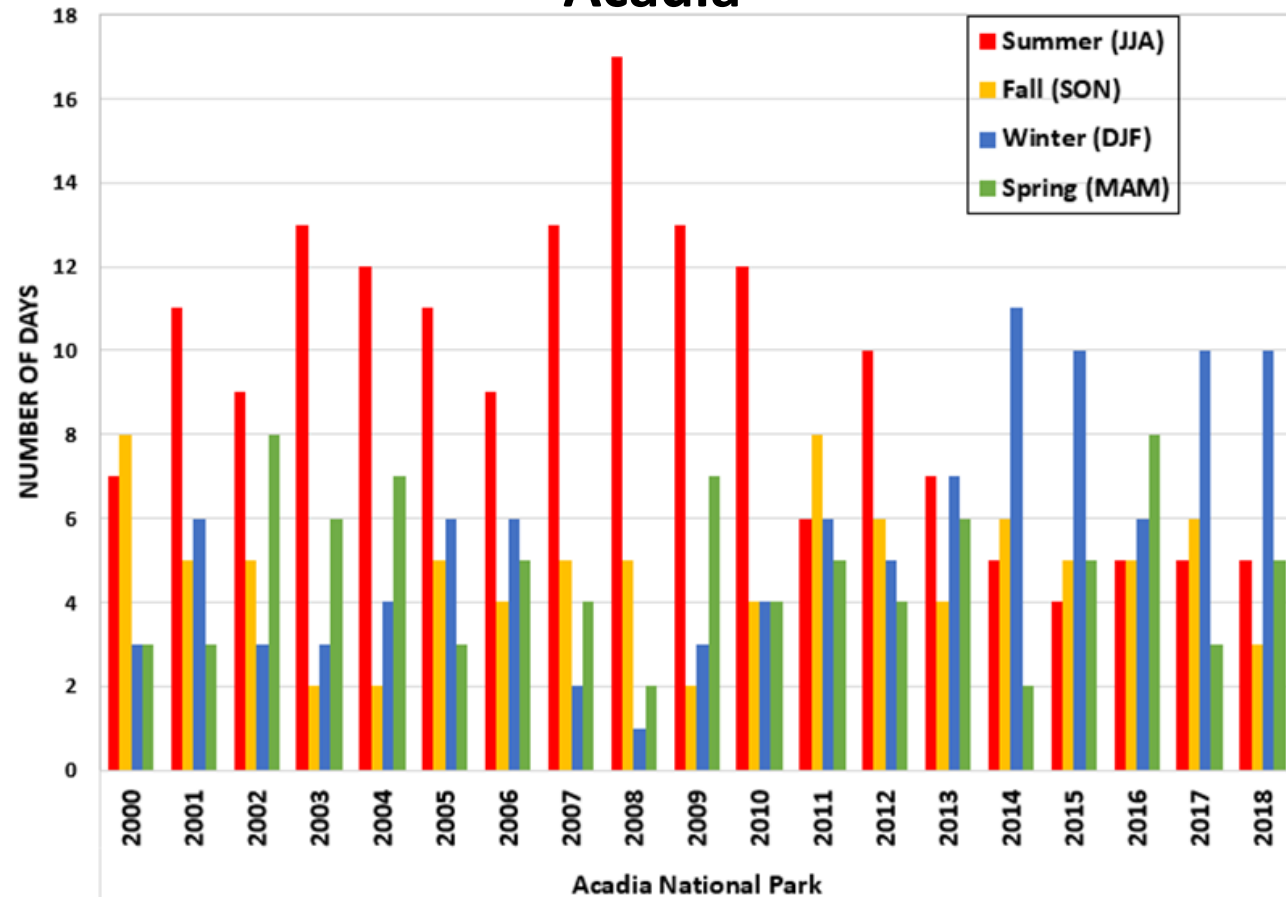
## 20% Most Impaired Days



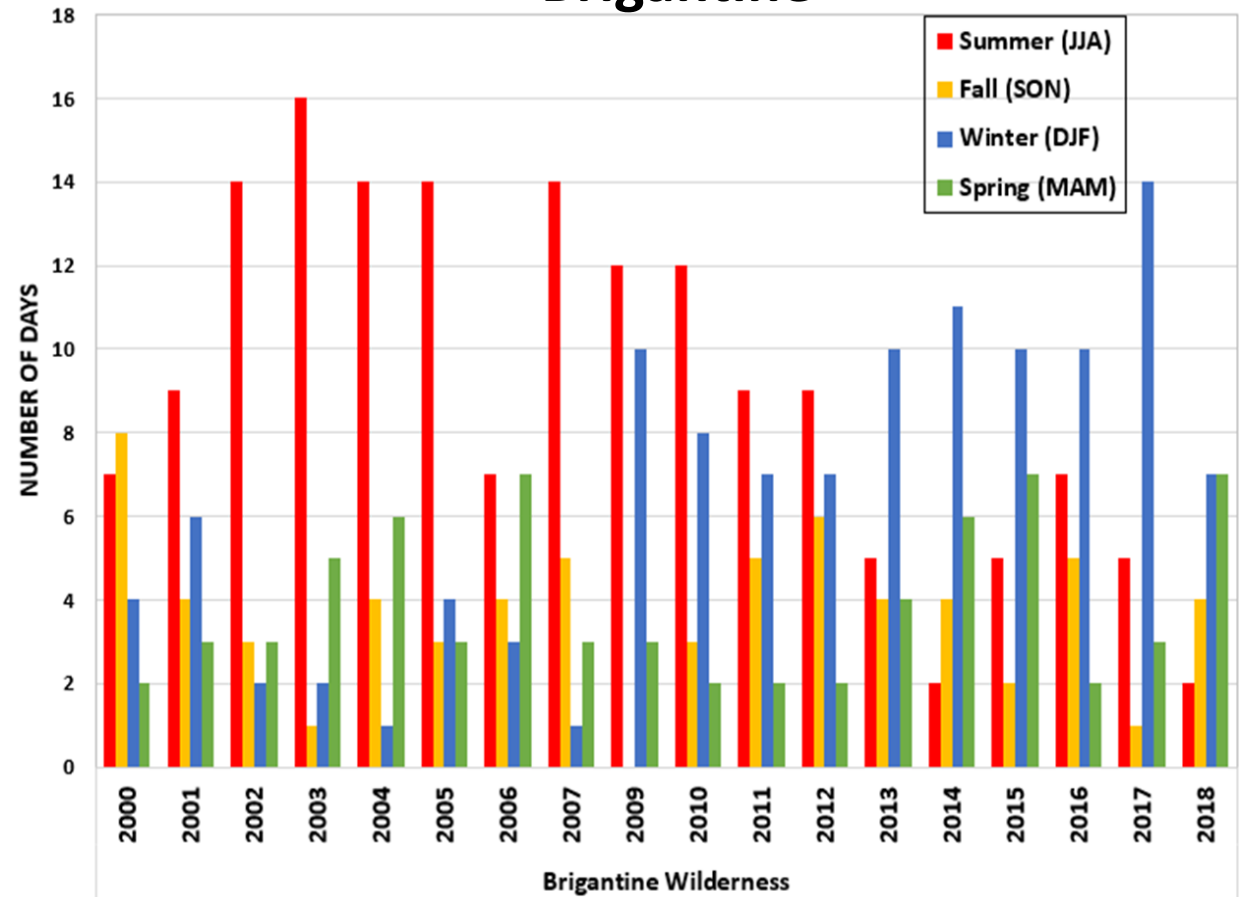
# Seasonal Changes to Most Impaired Days

Baseline vs. 2<sup>nd</sup> RH SIP Planning Goal

## Acadia



## Brigantine



# MANE-VU “Ask” Review

## MANE-VU States

- Ensure effective use of installed controls on EGUs ( $\geq 25$  MW) year-round
- 4-factor analysis for most important sources ( $> 3 \text{ Mm}^{-1}$  extinction)
- Complete 2007 low sulfur fuel oil rule
- Update permits and/or rules to reflect already achieved rates for  $\text{SO}_2$ ,  $\text{NO}_x$ , and  $\text{PM}_{2.5}$
- Strive to meet particular  $\text{NO}_x$  emissions standards or perform 4-factor analysis on HEDD units
- Increase energy efficiency and implement CHP or other DG

## Upwind States

- Ensure effective use of installed controls on EGUs ( $\geq 25$  MW) year-round
- 4-factor analysis for most important sources ( $> 3 \text{ Mm}^{-1}$  extinction)
- Complete 2007 low sulfur fuel oil rule
- Update permits and/or rules to reflect already achieved rates for  $\text{SO}_2$ ,  $\text{NO}_x$ , and  $\text{PM}_{2.5}$
- Increase energy efficiency & implement CHP or other DG

## FLMs / EPA

- FLMs consult with MANE-VU Class I States when scheduling prescribed burns
- EPA develop measures that will further reduce emissions from heavy-duty on-road vehicles
- EPA ensure that Class I Area state “Asks” are addressed in “contributing” state SIPs prior to approval

# Co-Benefits of MANE-VU “Ask”

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- Reductions in precursors of Ozone and PM2.5: NO<sub>x</sub> and SO<sub>2</sub>
- Public Health Improvements
  - Reduced exposure to PM2.5
  - May assist in reductions in ozone exceedance days
- Reduced acidic deposition
- Reduced nitrogen deposition to bays and estuaries (eutrophication)
- Ask 1 important because it extends stationary source NO<sub>x</sub> reductions to year round (if currently ozone season only)

# Potential Future Focus Areas

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- Seeing relatively larger collective influence of nitrates, organic carbon and black carbon (light absorbing)
- 20% Most Impaired Days are dominant in the Winter
- Additional Areas to address may include:
  - Support heavy-duty on-road NOx reductions (coordinate with OTC Mobile Source Committee)
  - Winter wood combustion activities (organic carbon, black carbon)
- Assess emission sector trends for particle formation similar to OTC Stationary and Area Source (SAS) Committee methodology for ozone.
- Work with MANE-VU Air Directors on next steps

# In Summary

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- MANE-VU TSC meeting workplan goals
- States in various stages of SIP writing
- 2018 Visibility Monitoring 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
    - Winter months are becoming increasingly common during 20% most impaired days
- Identify potential areas for future focus

# Questions? Thank You!

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