

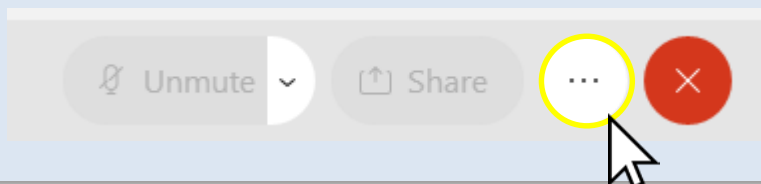
Sound Check

No sound? Connect your audio and listen for a sound check before we start.
Please note that all attendees are muted.

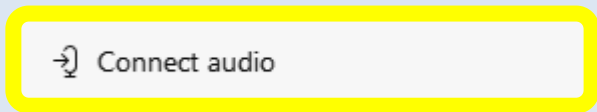
Please connect your audio.



1 Click on the 'More Options' button at the bottom of your screen.



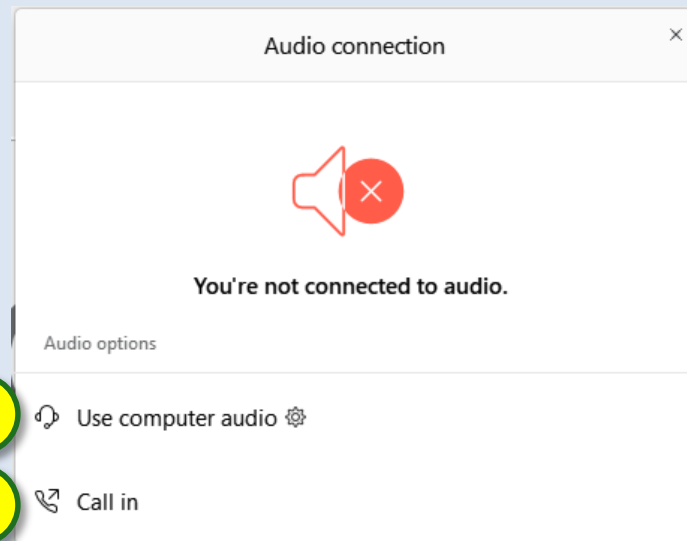
2 Select "Connect Audio" button.



3

Select Audio Connection

2 Options



If you select "Call In" the system will provide you with a phone number and entry information.

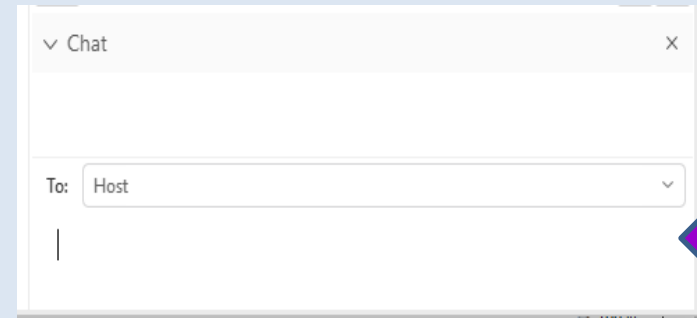
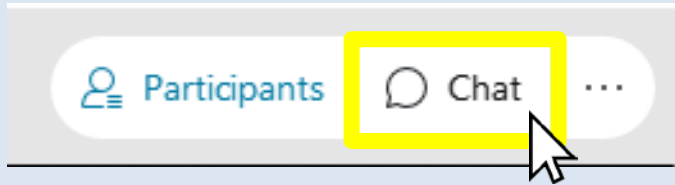


How to Participate



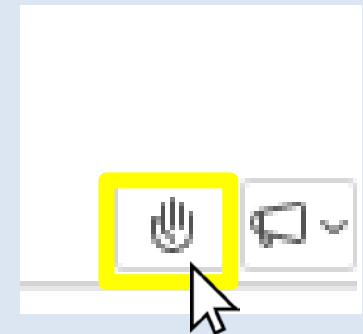
Having technical problem?

Send the host a chat message



Do you have a question?

- **Participating using computer audio: Use the “Raise Your Hand” button**
- **Participants calling-in: Press *3 on your phone. The system will indicate you have your hand raised. The host will then unmute you at your turn and the system will announce that you are unmuted.**





Washington's Regional Haze State Implementation Plan

Regional Haze State Implementation Plan (SIP) Public Information Session

Philip Gent & Colleen Stinson

December 3, 2020



Outline

Introduction to Regional Haze

WA Class I Areas

2017 Revised Regional Haze Rule

Regional Haze Goal

Planning Steps

Coordination with FLMs, EPA, and other states

Opportunities for engagement





Introduction

In 1977, Congress amended the Clean Air Act to protect scenic vistas in certain Class I Areas and declared a national visibility goal:

“The prevention of any future, and the remedying of any existing, impairment of visibility in mandatory class I Federal areas which impairment results from manmade air pollution.” (CAA Section 169A)



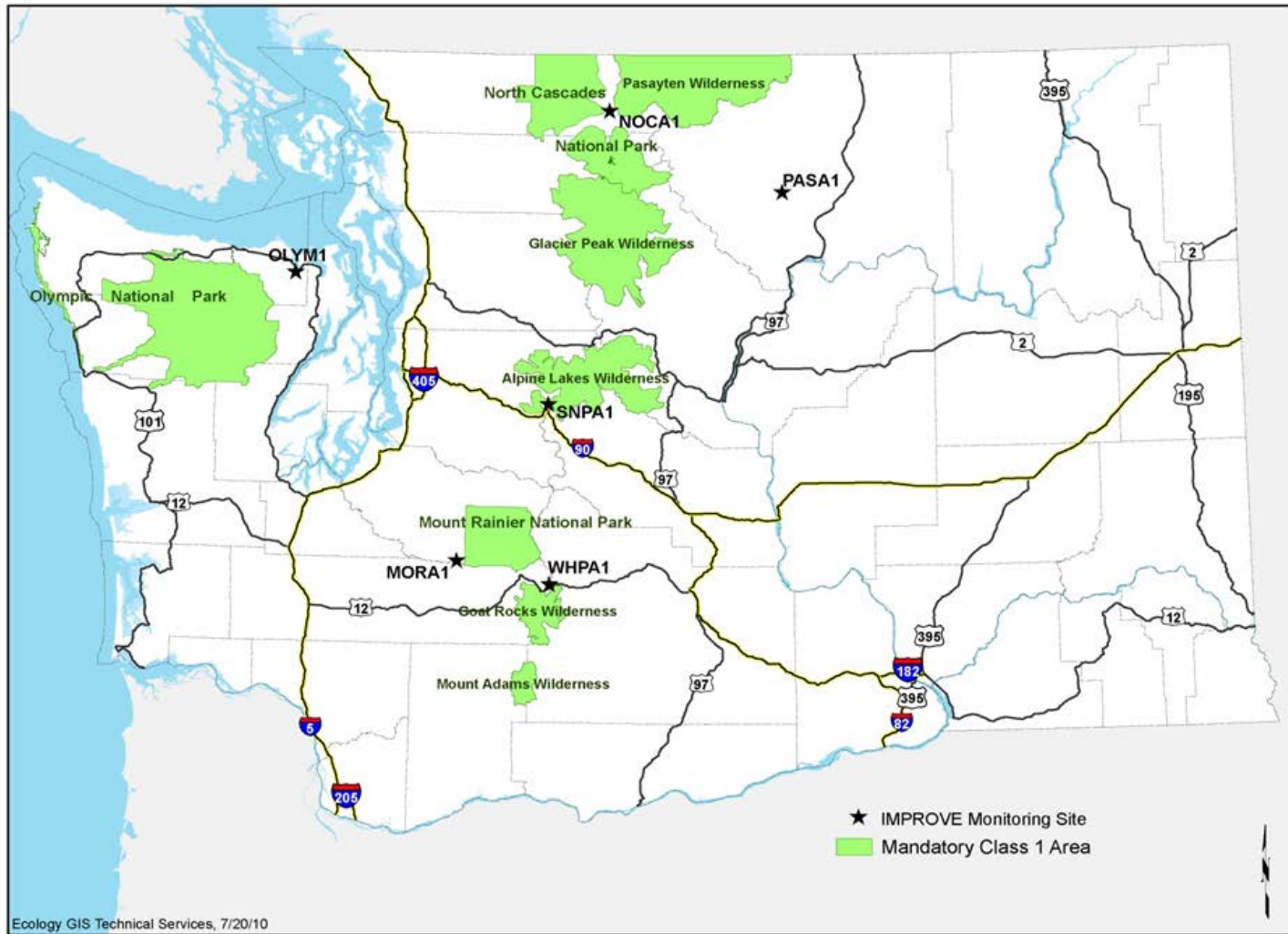
Introduction

In 1979, EPA designated 156 national parks and wilderness areas as mandatory Class I Areas in which they determined visibility was an important factor.

Washington has eight Class I Areas



Washington Class I Areas



Introduction

1999 - EPA announced a major effort to improve air quality in designated Class I Areas with the Regional Haze Rule.

The Regional Haze Rule calls for state and federal agencies to work together to improve visibility in Class I Areas.



Regional Haze Rule

Regional Haze Rule - improve visibility and not allow degradation of visibility in Class I Areas

Goal – Natural conditions by 2064 – no human caused visibility impairment in Class I Areas



What is Regional Haze?

- Regional Haze is a uniform haze that is not attributable to a single source
- All emissions that form particulates contribute to haze



Hazy Day



Clear Day







Regional Haze Rule

1999 - EPA promulgated a regional haze rule

- Natural conditions - visibility goal by 2064



Regional Haze Rule

1999 - EPA promulgated a regional haze rule

- Natural conditions - visibility goal by 2064
- Improve 20% worst days



Regional Haze Rule

1999 - EPA promulgated a regional haze rule

- Natural conditions - visibility goal by 2064
- Improve 20% worst days
- Maintain the 20% best days



Regional Haze Rule

1999 - EPA promulgated a regional haze rule

- Natural conditions - visibility goal by 2064
- Improve 20% worst days
- Maintain the 20% best days

States are required to submit a state implementation plan (SIP) revision approximately every 10 years to show visibility improvement and progress toward that 2064 goal



Regional Haze Rule

Requires us to look at our pollution source impacts on the Class I areas in WA, and in our neighboring states.



Regional Haze Rule 2017 revision

EPA revised the Regional Haze Rule in 2017

- Required early consultation with the Federal Land Managers (FLMs)



Regional Haze Rule 2017 revision

EPA revised the Regional Haze Rule in 2017

- Required early consultation with the Federal Land Managers (FLMs)
- Changed the submittal date from 2018 to 2021



Regional Haze Rule 2017 revision

EPA revised the Regional Haze Rule in 2017

- Required early consultation with the Federal Land Managers (FLMs)
- Changed the submittal date from 2018 to 2021
- Switch from WORST days to most IMPAIRED days to measure progress toward natural conditions



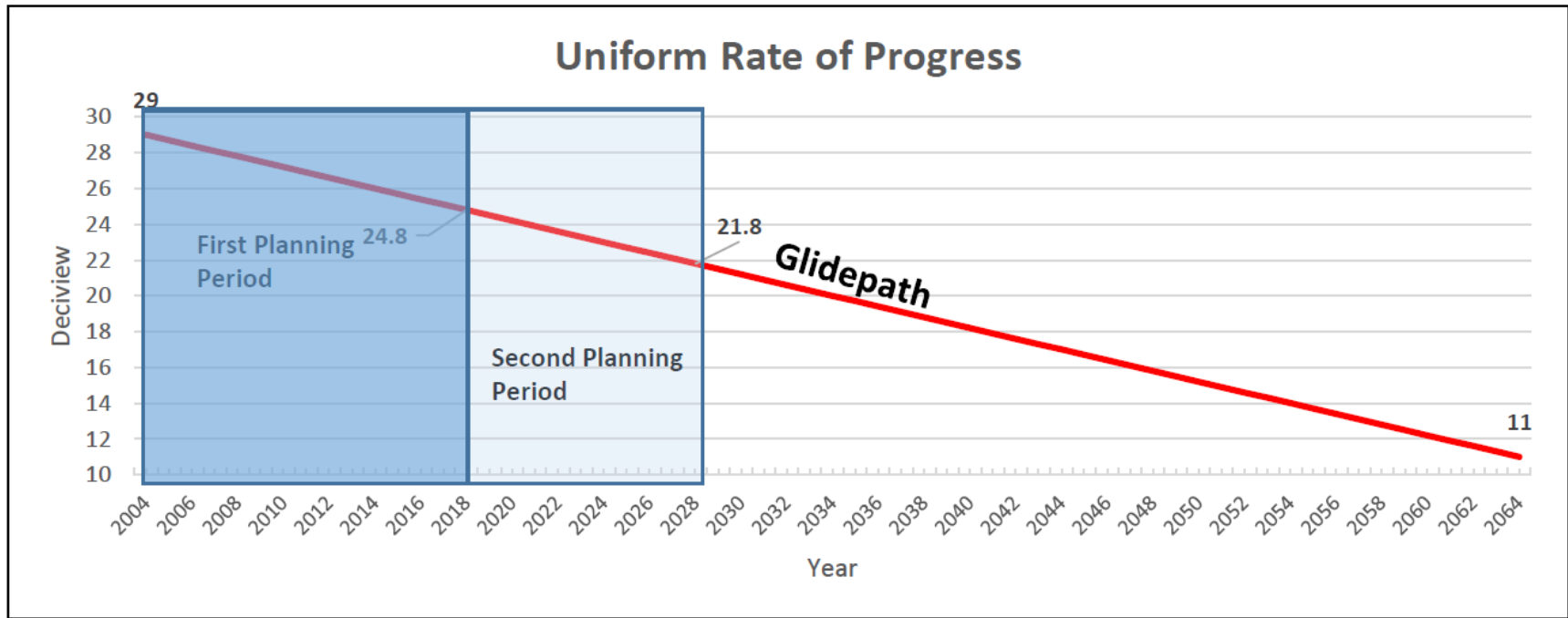
Regional Haze Rule 2017 revision

EPA revised the Regional Haze Rule in 2017

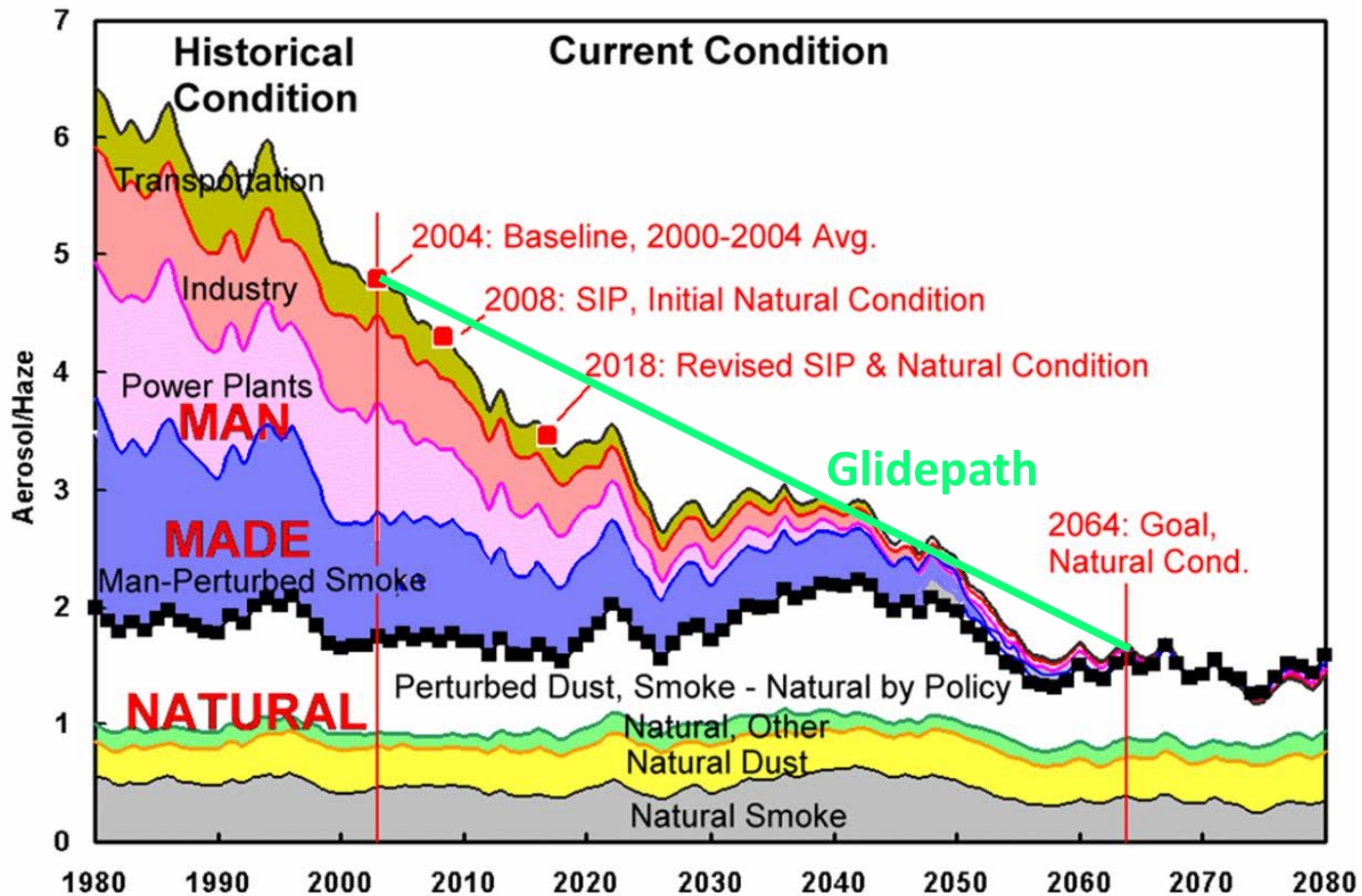
- Required early consultation with the Federal Land Managers (FLMs)
- Changed the submittal date from 2018 to 2021
- Switch from WORST days to most IMPAIRED days to measure progress toward natural conditions
 - Most Impaired Days (MID) removed 5% of the worst days to remove most effects of events such as wildfire and dust storms



Glidepath – Uniform Rate of Progress



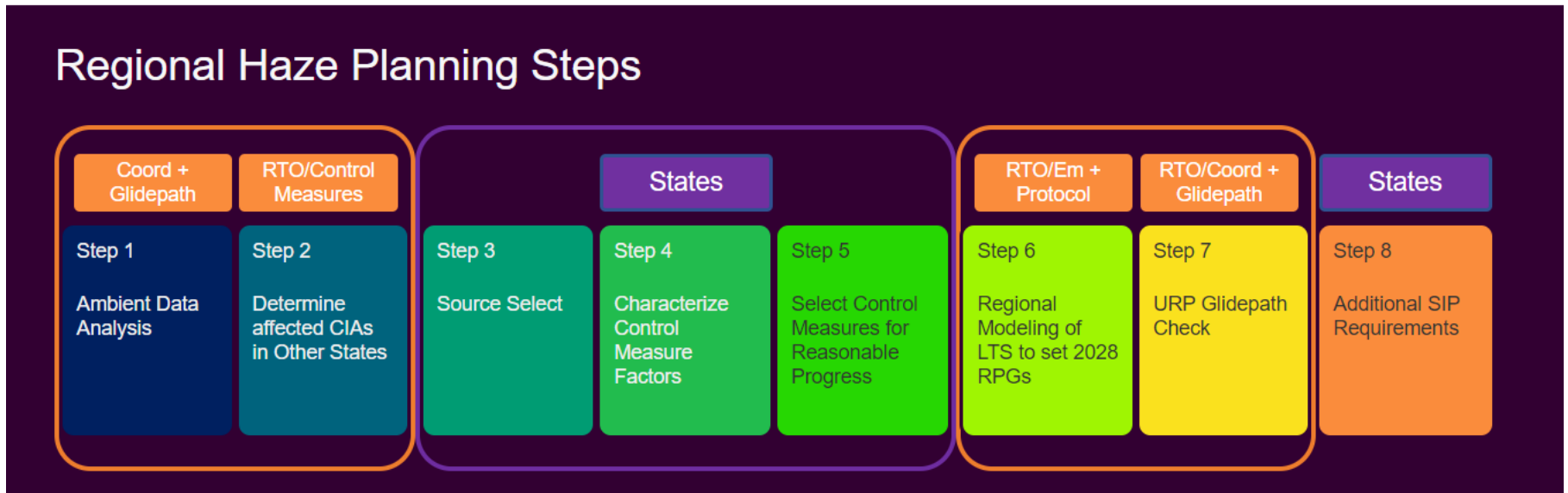
Regional Haze Glidepath





Planning Steps

EPA identified 7 steps in their guidance document:



Step 8 added - consultations between states and with federal land managers (FLMs).

Graph courtesy of CIRA



Step 1 – Monitoring Data

- Federal interagency monitoring of protected visual environments (IMPROVE) monitor data for Class I Areas across the country - 110 total – 6 in Washington
- Five monitors except visibility improvements on track to meet the 2064 visibility goals.
- One Class I Area is not on track to meet the 2064 goal.



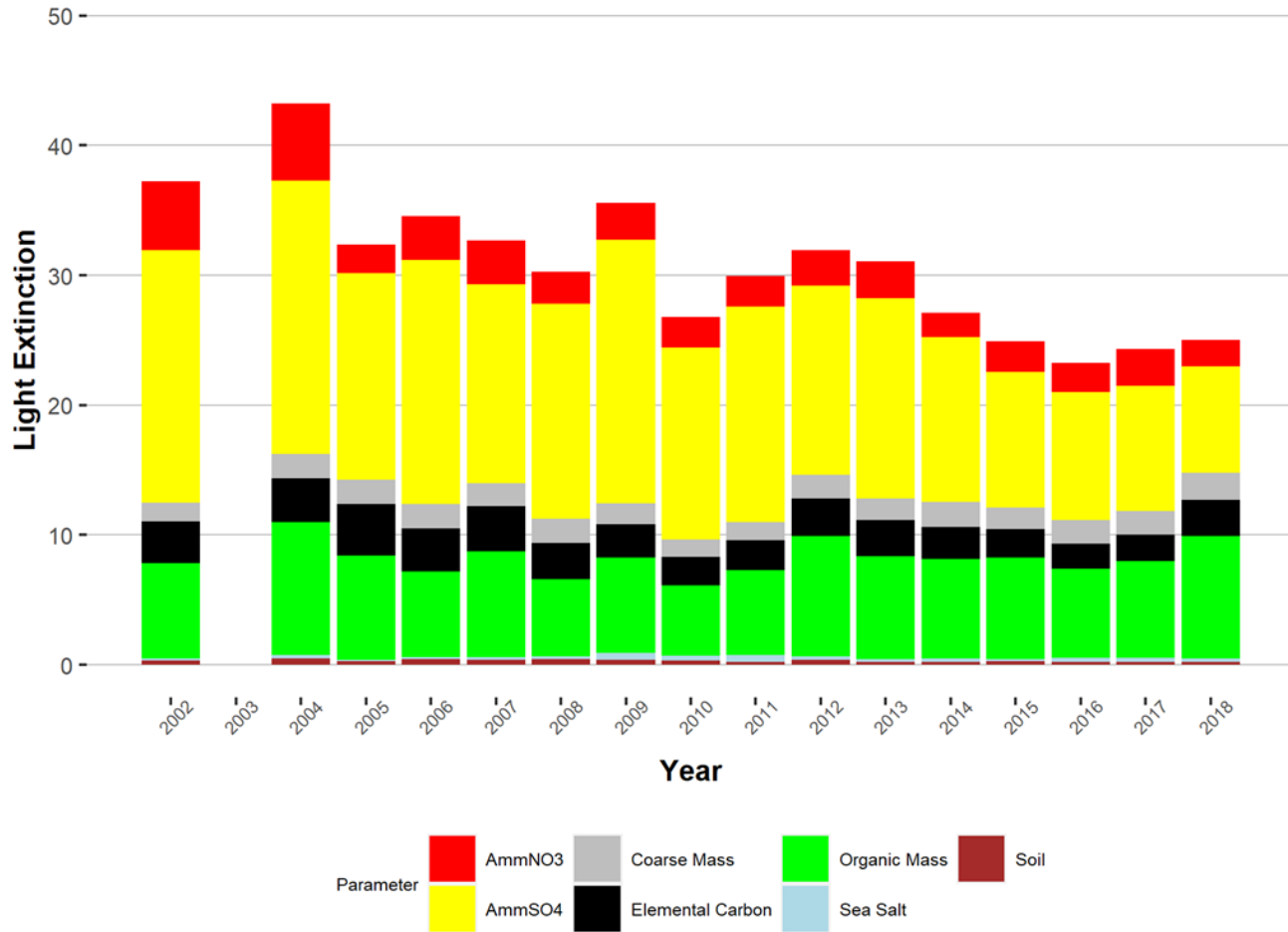
Mt Rainier National Park

Glidepath for Mt Rainier



Mt Rainier trend

Annual Extinction Composition
Most Impaired Days per Year



Step 2 – Determine effect on other states

We are required to consult with other states about the effect of our emissions on their Class I Areas. Also look at other state's contribution to our Class I Areas.

Consultation is ongoing – recently received data



Step 3 – Select sources for further analysis

- EPA Q/d method (Q = emissions, d=distance to closest Class I area)
- 2014 Emission Inventories
- $Q/d \geq 6.7$ includes sources emitting 80% of haze causing pollutants
- 17 facilities subject to the 4-factor analysis



Steps 4 and 5 – Analyze and select emission controls

A four-factor analysis of potential controls is required by the Regional Haze Rule even if the Class I Area's visibility impairment is below the glidepath.

Four-factor analysis is used to determine reasonableness of installing additional emission controls.



Four-factor Analysis



Cost



Time



Energy & Non-AQ



Remaining Life



Facilities selected for FFA

17 facilities selected using emissions/distance to nearest mandatory Class I Area (Q/d)

- 1 coal-fired power plant
- 2 primary aluminum smelters
- 6 Kraft mills (Pulp and Paper)
- 1 sulfite mill (Pulp and Paper)
- 5 refineries
- 1 plate glass facility
- 1 cement plant





Updates since FFA initiated

- TransAlta has a revised BART Order to lower NO_x until coal-fired operation ceases end of 2025.
- Alcoa aluminum smelter (Intalco) entered curtailment. Agreed Order for FFA prior to startup



FFA compliance

Regional Haze Rule relies on each state's enforcement authority to achieve identified emission controls.

State's regulatory actions are reflected in their Regional Haze SIP





Compliance Options

Five potential compliance options:

- Taking no action
- Agreed Orders
- Compliance Orders
- Permit modifications
- RACT – Reasonably available control technology



FFA compliance

TransAlta (coal-fired power plant), Cardinal glass, primary aluminum smelters, and Ash Grove (cement plant) have identified compliance pathways

Refineries and Pulp and Paper (P&P) facilities still need a compliance pathway.



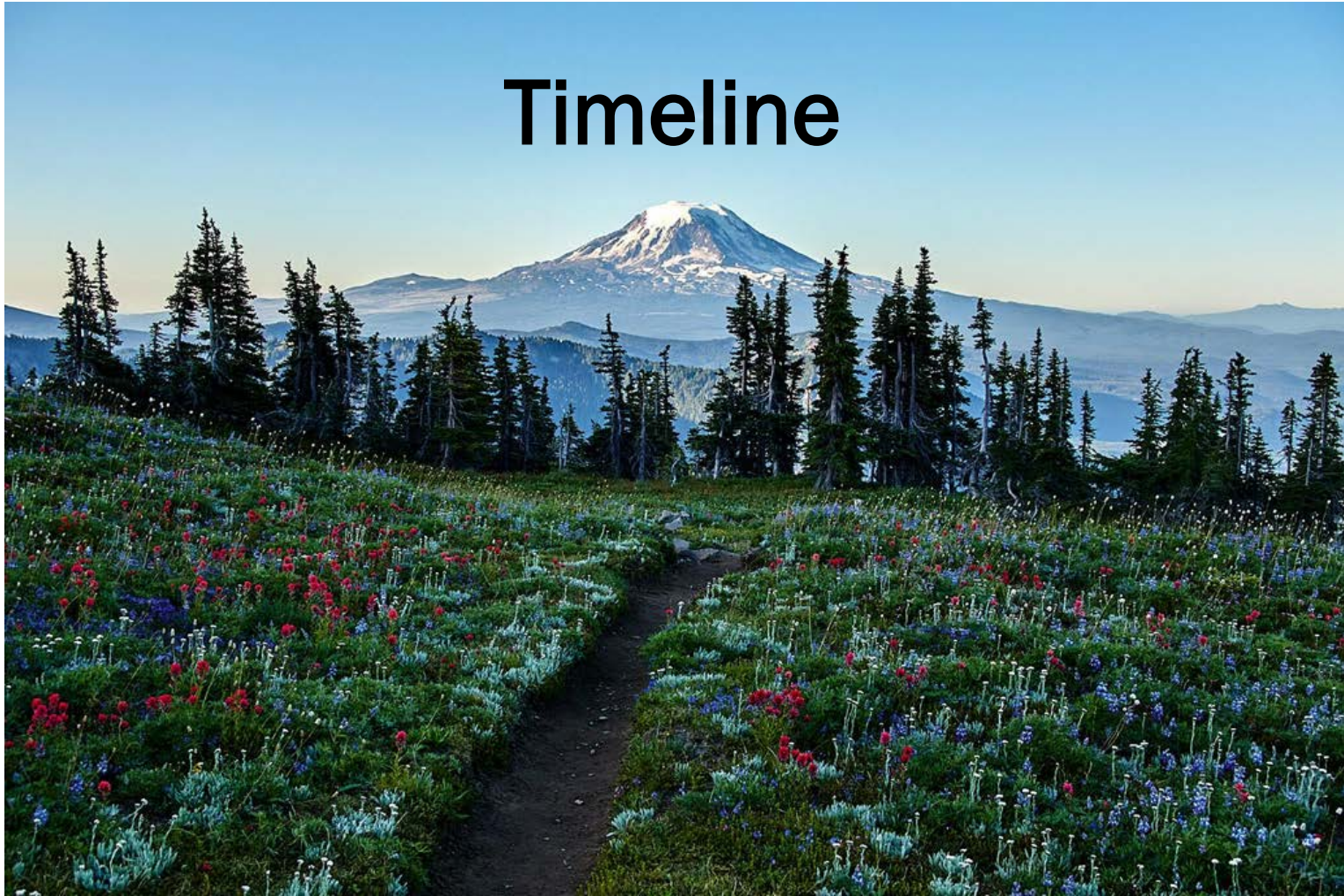
Step 6 – Long-term Strategy

The regional haze SIP must include a long-term strategy for making reasonable progress toward the national visibility goals.

Modeling will provide an assessment of our visibility improvements during this implementation period (2018 to 2028) for the most impaired days. These are the Reasonable Progress Goals to arrive at by 2028 for each Class I Area.



Timeline



Consult with FLMs

Sep 22 - Nov 30

Informal comment period

Dec 3 - Jan 13

Complete draft plan

Dec 20 - Mar 23

Stakeholder meetings

Feb 1 - Mar 15

Public comment period

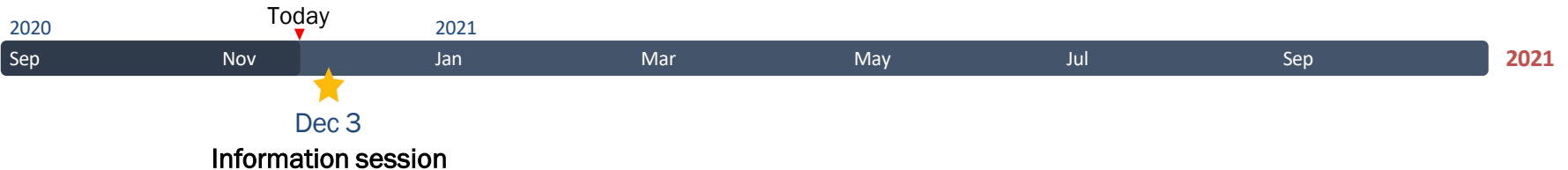
Apr 15 - May 27

Finalize plan

Jun 1 - Aug 19

Submit plan

Aug 23 - Sep 9



More information at Ecology's regional haze website:
<https://ecology.wa.gov/Air-Climate/Air-quality/Air-quality-targets/Regional-haze>

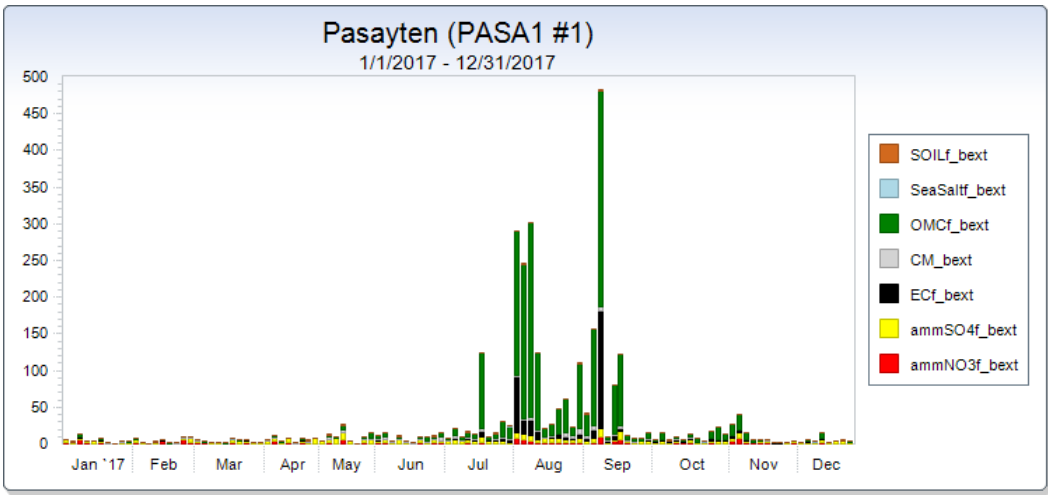
If you have questions or comments or want to be on the listserv list, please send a comment to
<http://aq.ecology.commentinput.com/?id=hKeMR>







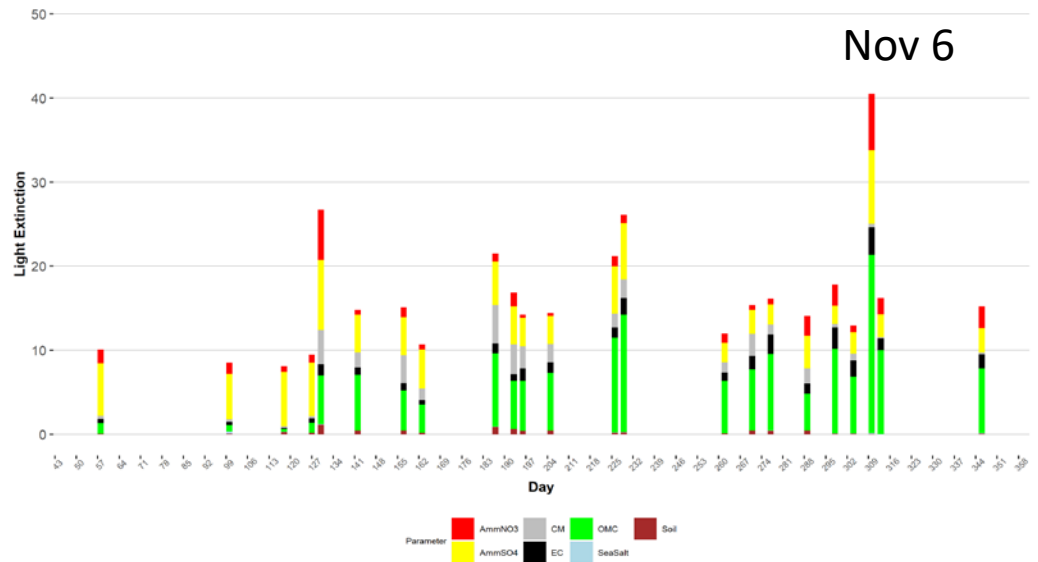
Pasayten Light Extinction Composition



All days 2017



Most Impaired Days 2017



Step 1 – Monitoring Data

Pasayten Wilderness (PASA)



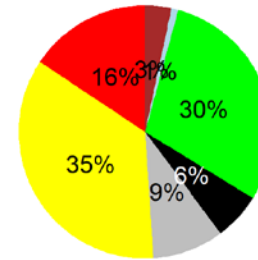
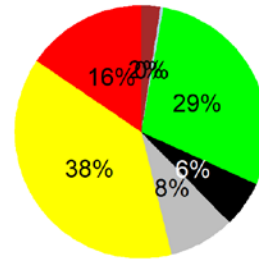
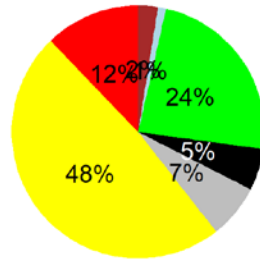
Step 1 – Monitoring Data

Pasayten Wilderness (PASA)

2014

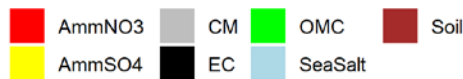
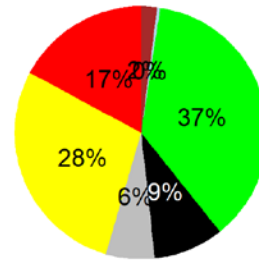
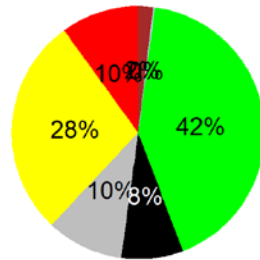
2015

2016



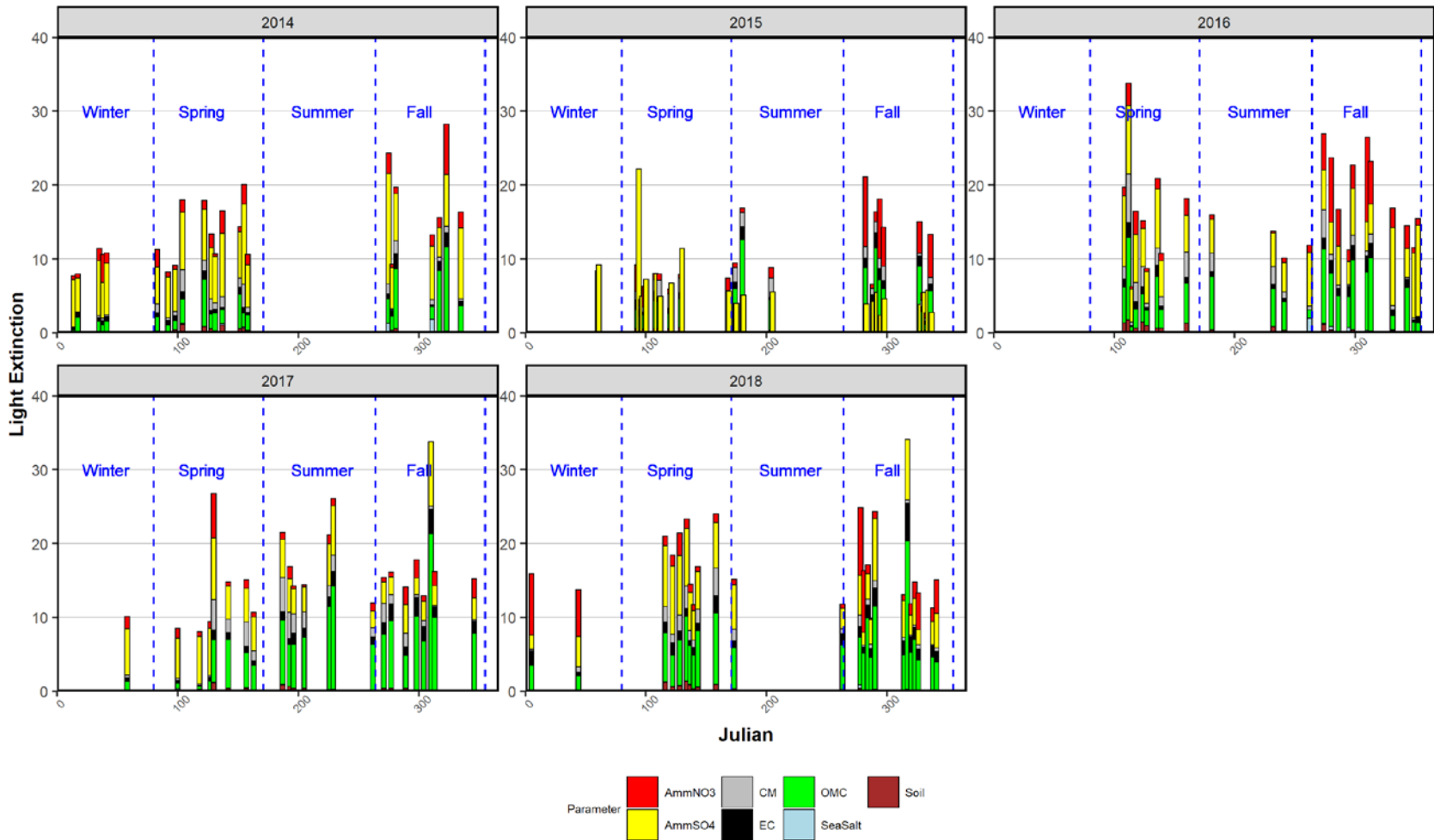
2017

2018



Step 1 – Monitoring Data

2014-2018 Impaired Days at PASA









National Park Service (Courtesy Image)