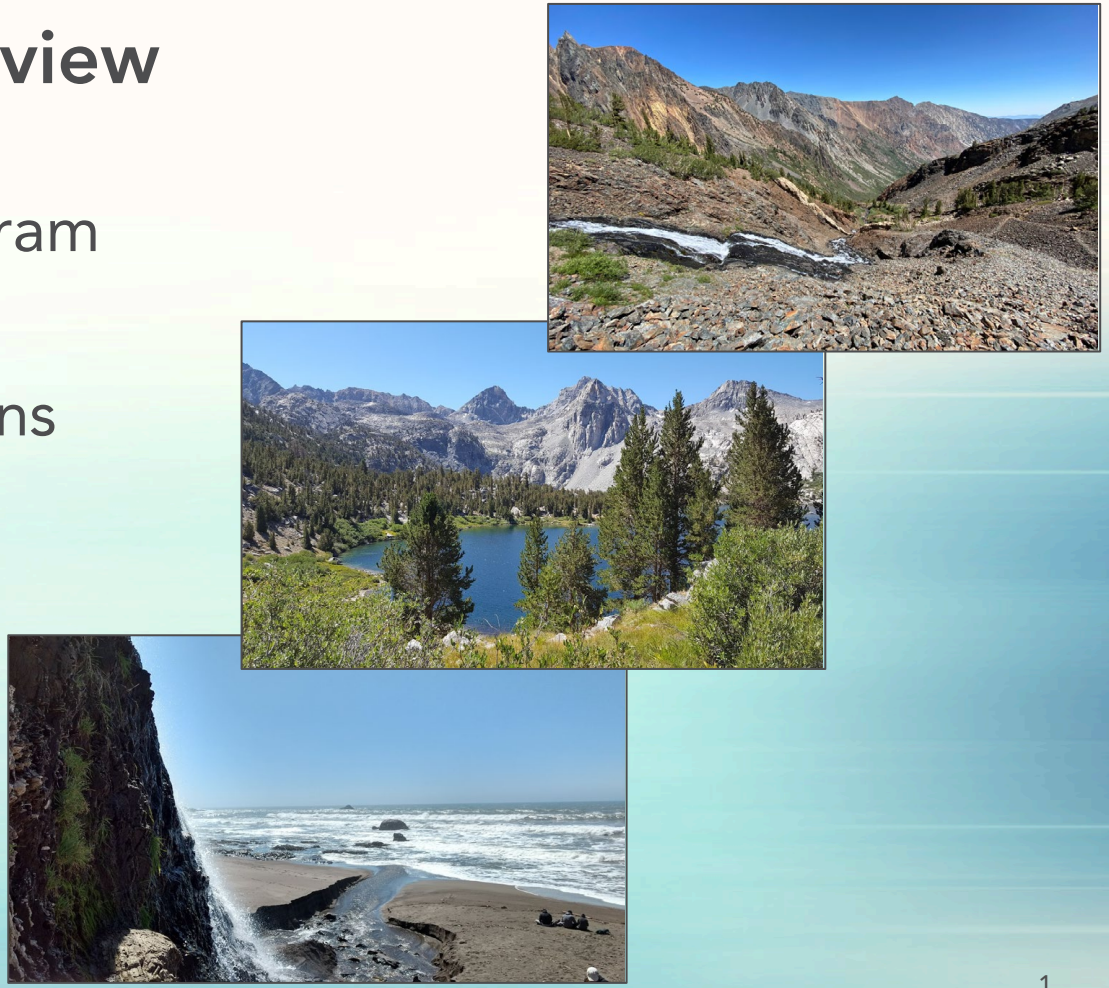
California's Regional Haze State Implementation Plan

June 24, 2022

Presentation Overview

- Regional Haze Program
- SIP Content
- Stakeholder Concerns
- Next Steps



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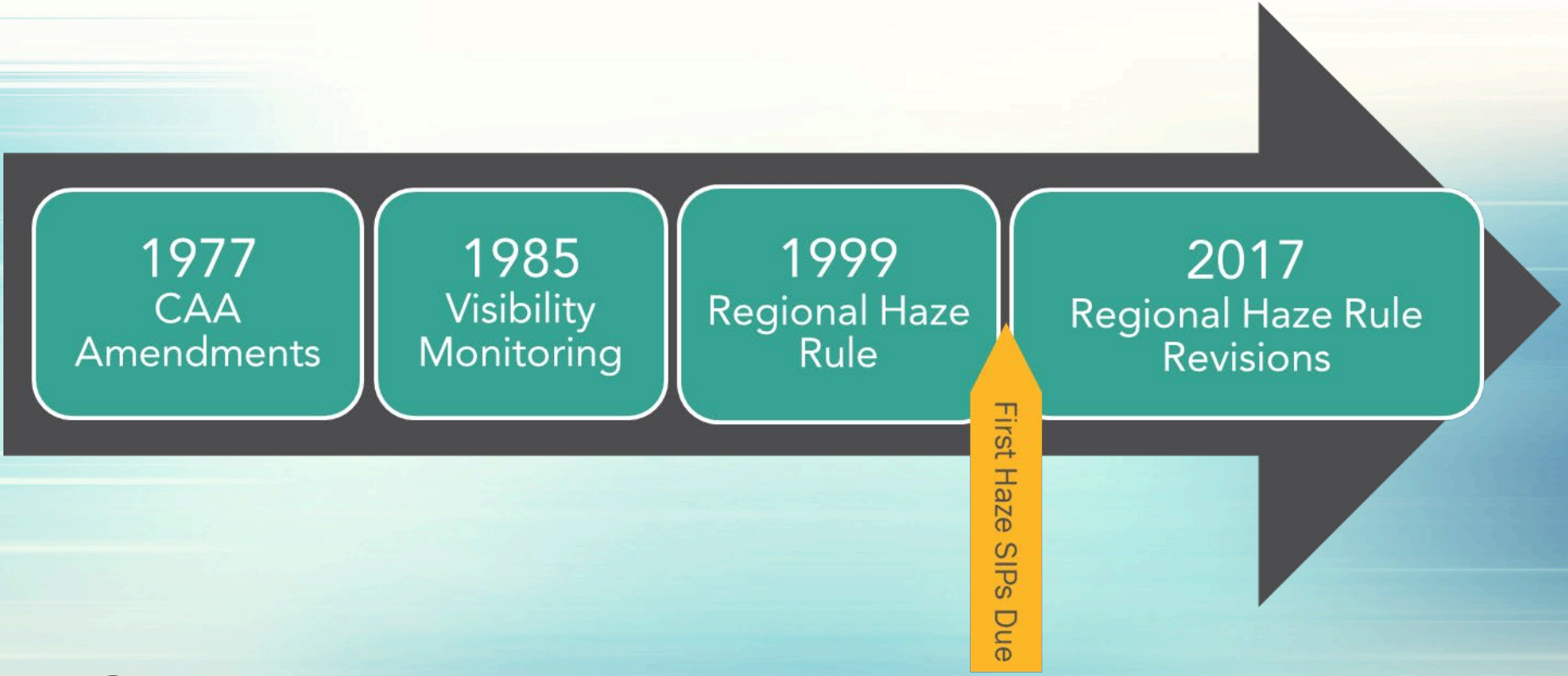
Regional Haze Program Overview



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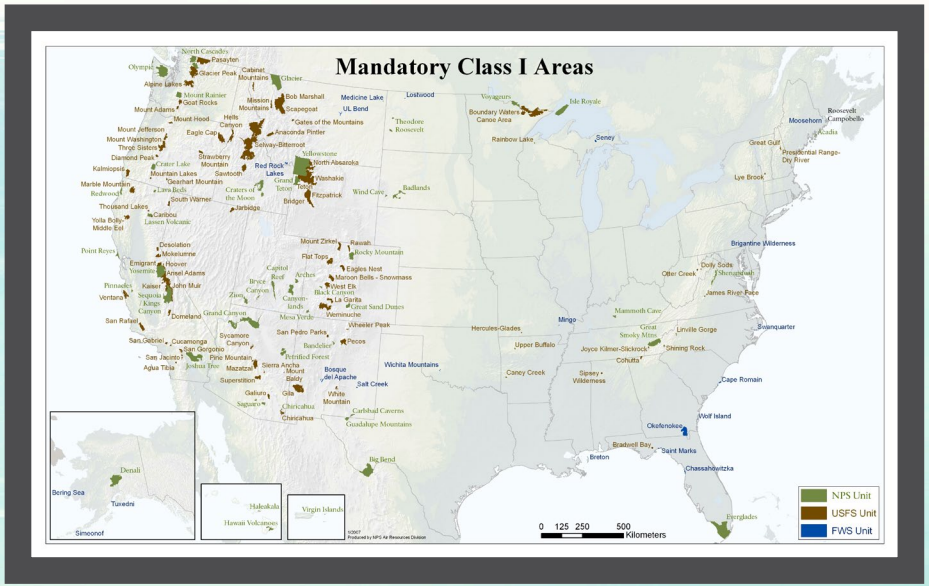
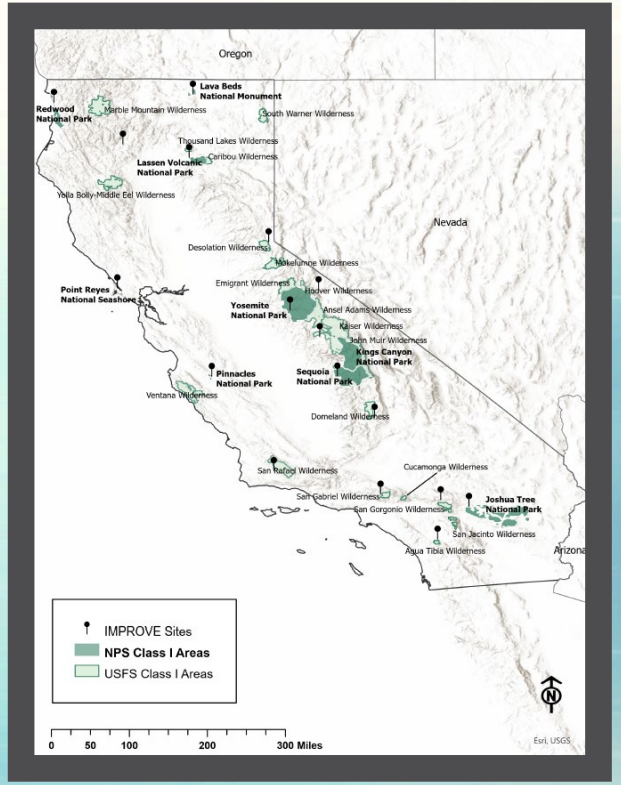
Areas with Visibility Protection





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Western Regional Air Partnership

WRAP Region: 15 states, 118 Class I areas

Regional Haze Planning Workgroup

- Emissions inventories
- Visibility Monitoring Data
- Air Quality Modeling
- Source Analyses
- Meeting Facilitation

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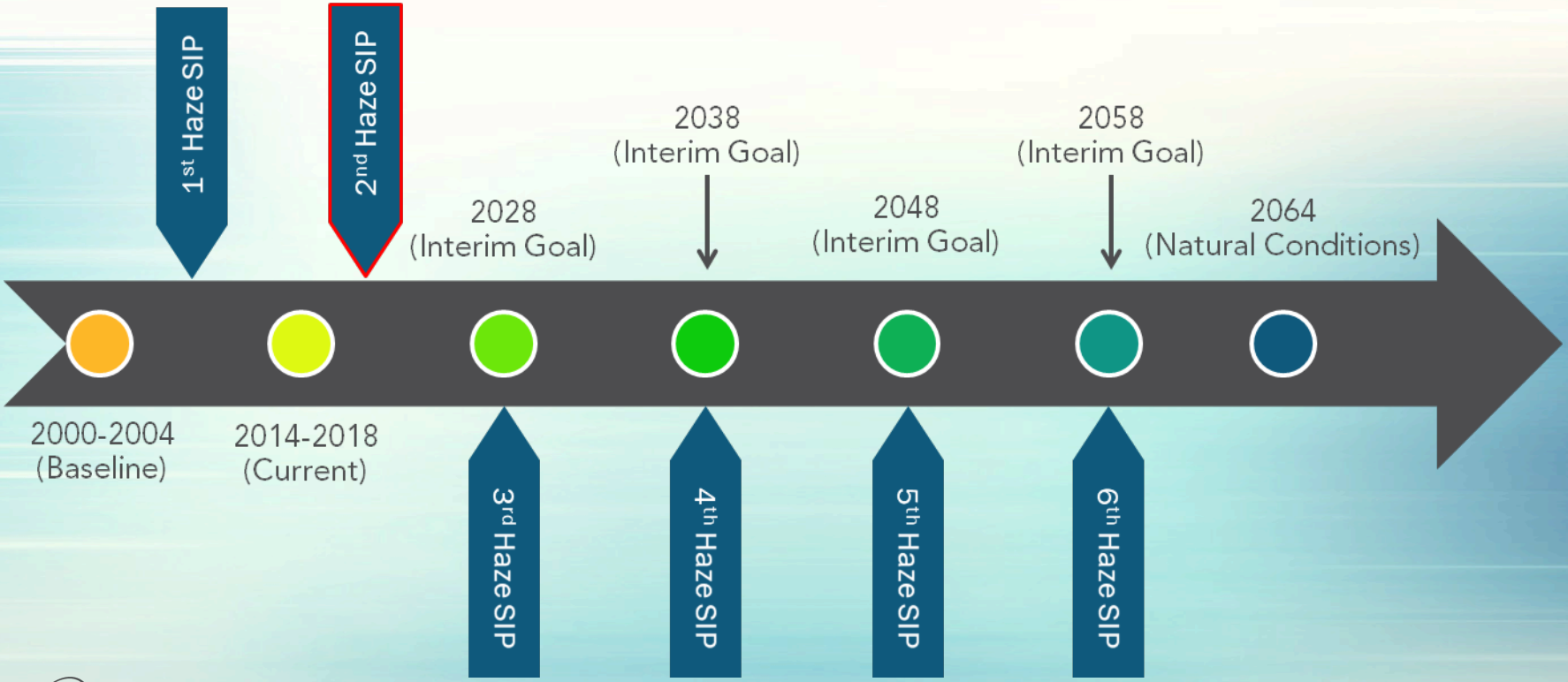
Regional Haze Program Timeline



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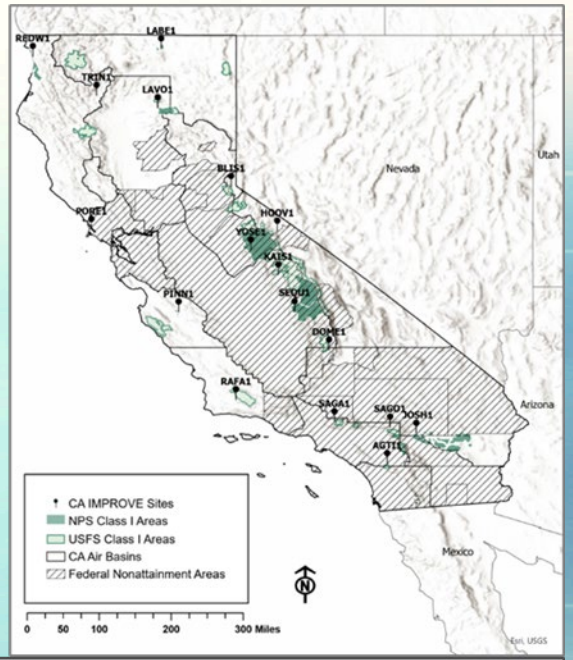
Integrated Planning for Effective Emission Reductions

California Specific Considerations

- Widespread attainment challenges
- Aggressive emission control programs
- Unique mobile source authority
- AB 617 – unique to California
- Same pollutants drive haze and nonattainment
- Integrated planning is important



Federal Nonattainment Areas in CA

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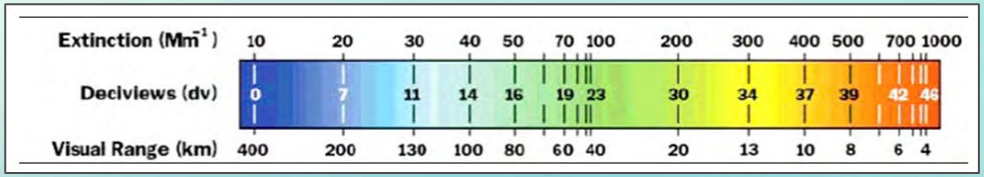
Regional Haze SIP Elements

Visibility conditions	Progress to date	Uniform rate of progress
Long-term strategy	Consultation	Progress report

Visibility Conditions

Deciview units are used to track visibility conditions in Class I areas.



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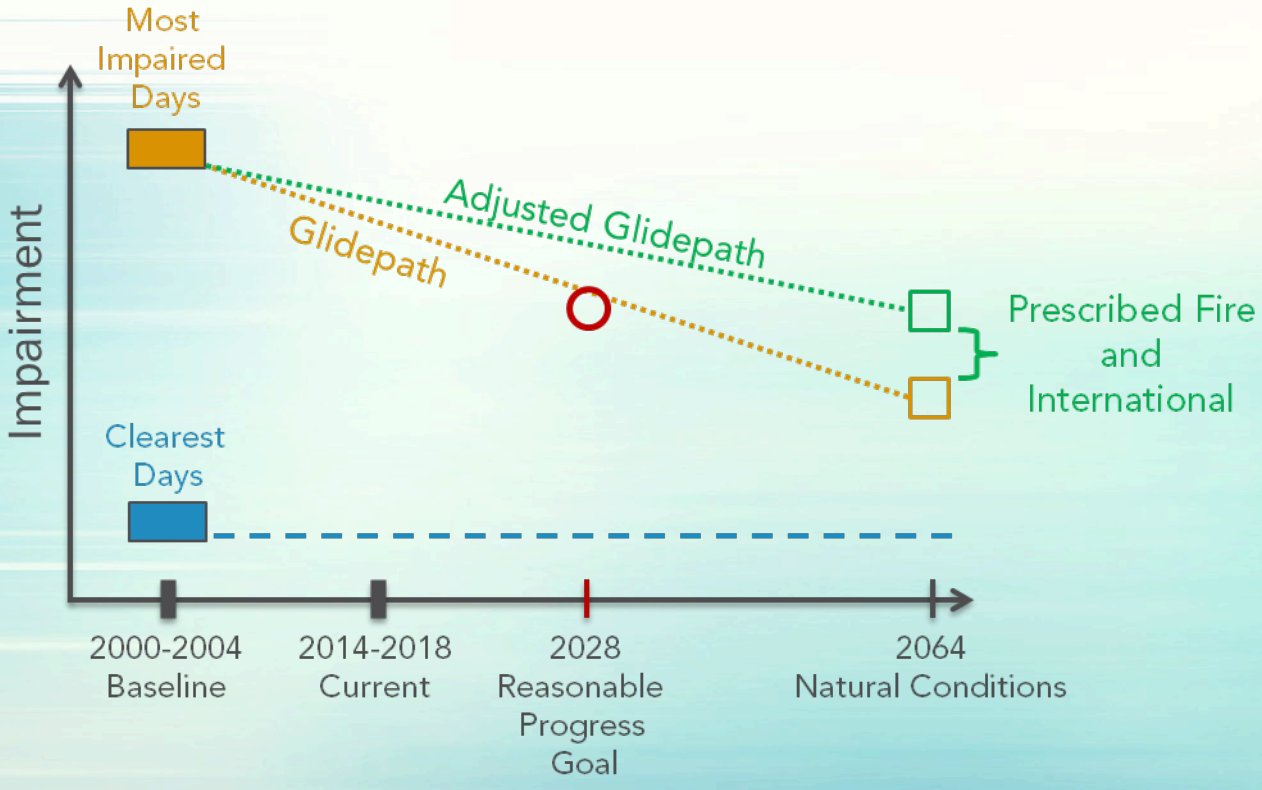
Uniform Rate of Progress



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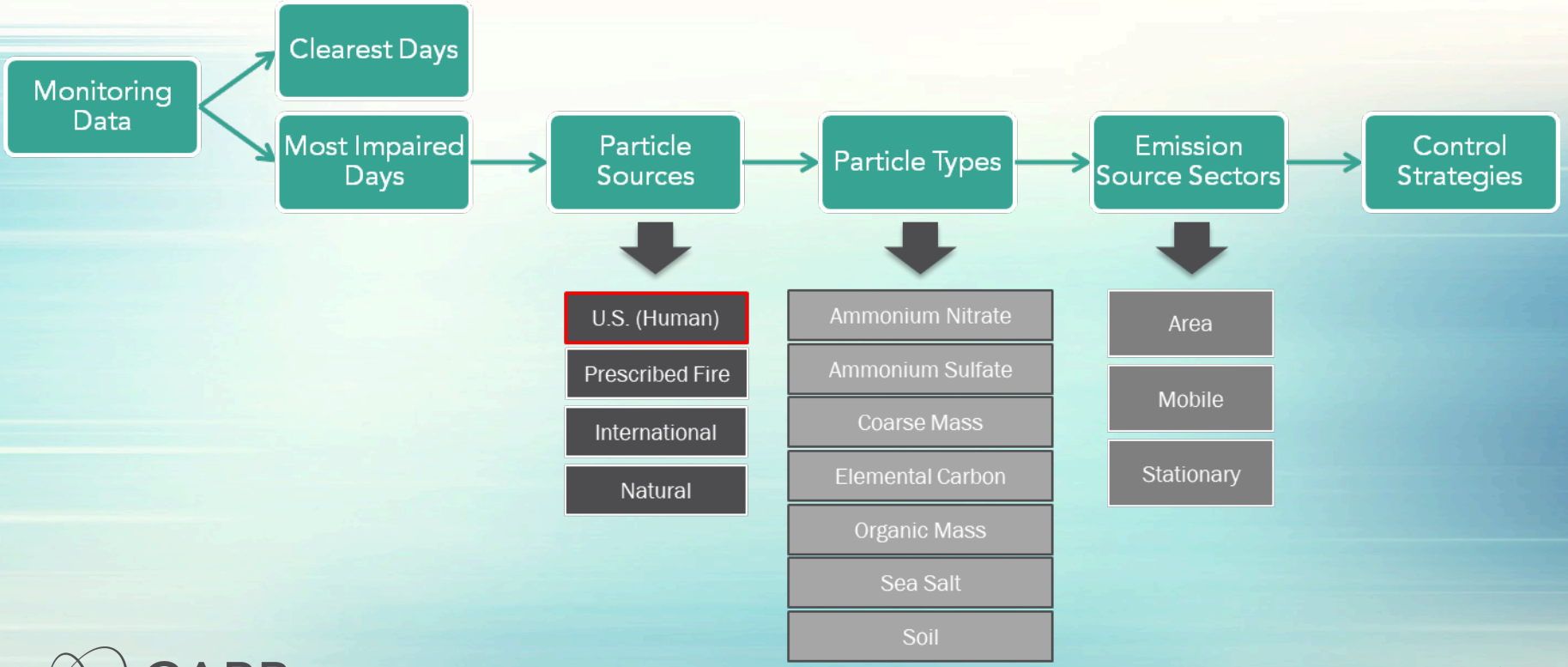
Improving Visibility Conditions



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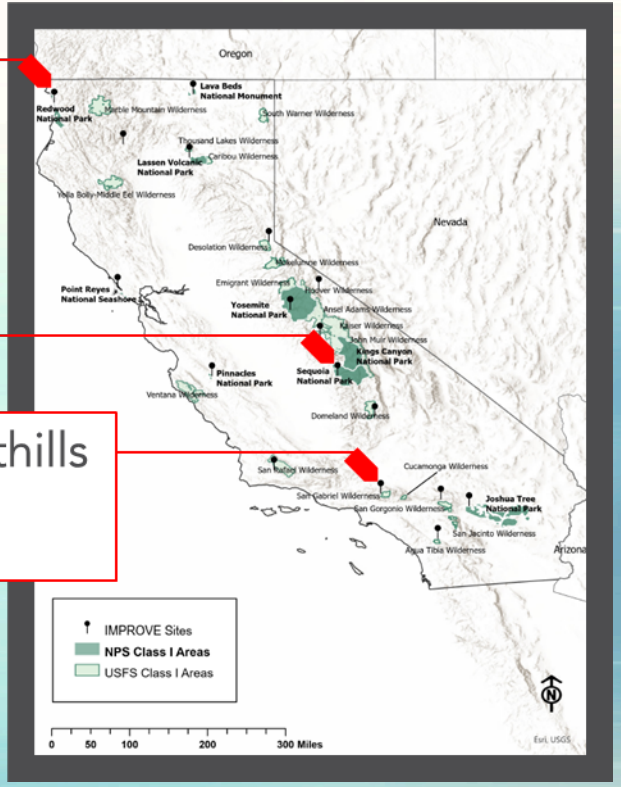
Class 1 Area Spotlight

Redwood National Park: North Coast
- Clearest days = 176 to 189 miles
- Most impaired days = 78 to 92 miles

Sequoia National Park: Central Foothills
- Clearest days = 101 to 120 miles
- Most impaired days = 24 to 38 miles

San Gabriel Wilderness: Southern Foothills
- Clearest days = 150 to 183 miles
- Most impaired days = 40 to 65 miles



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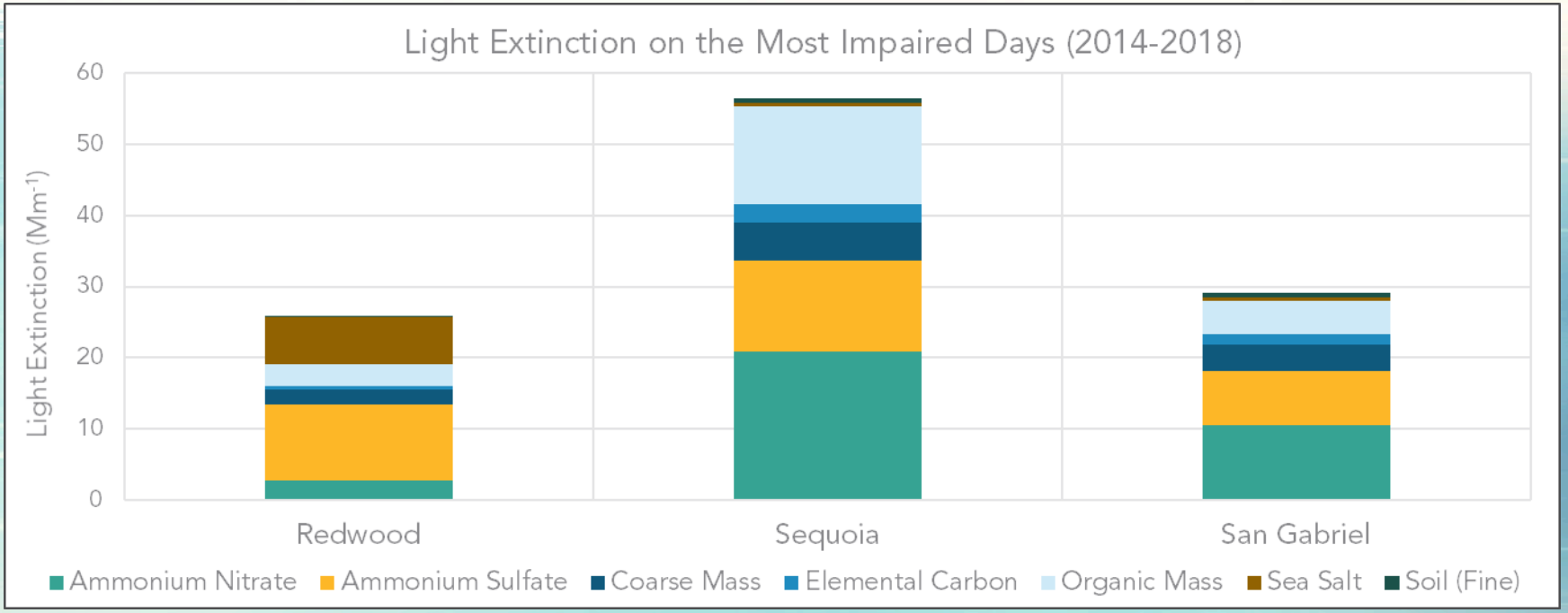
Haze Particles



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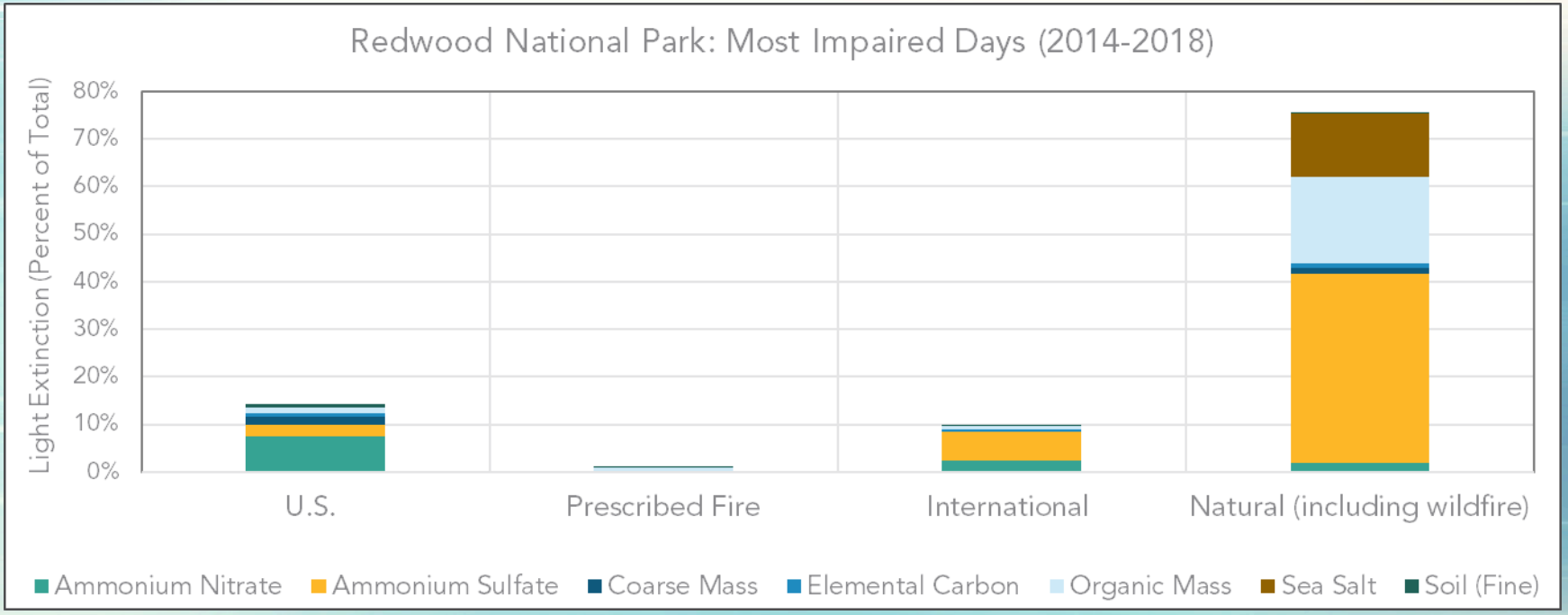
Sources of Haze: Redwood National Park



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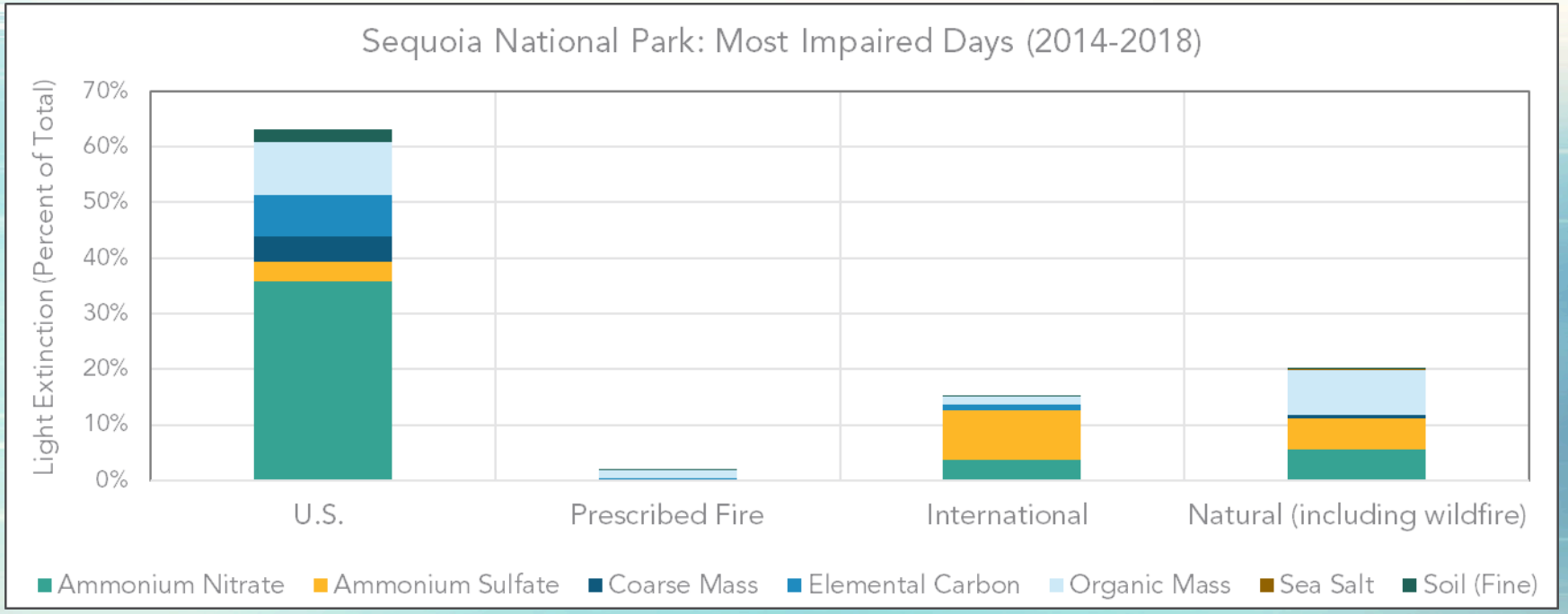
Sources of Haze: Sequoia National Park



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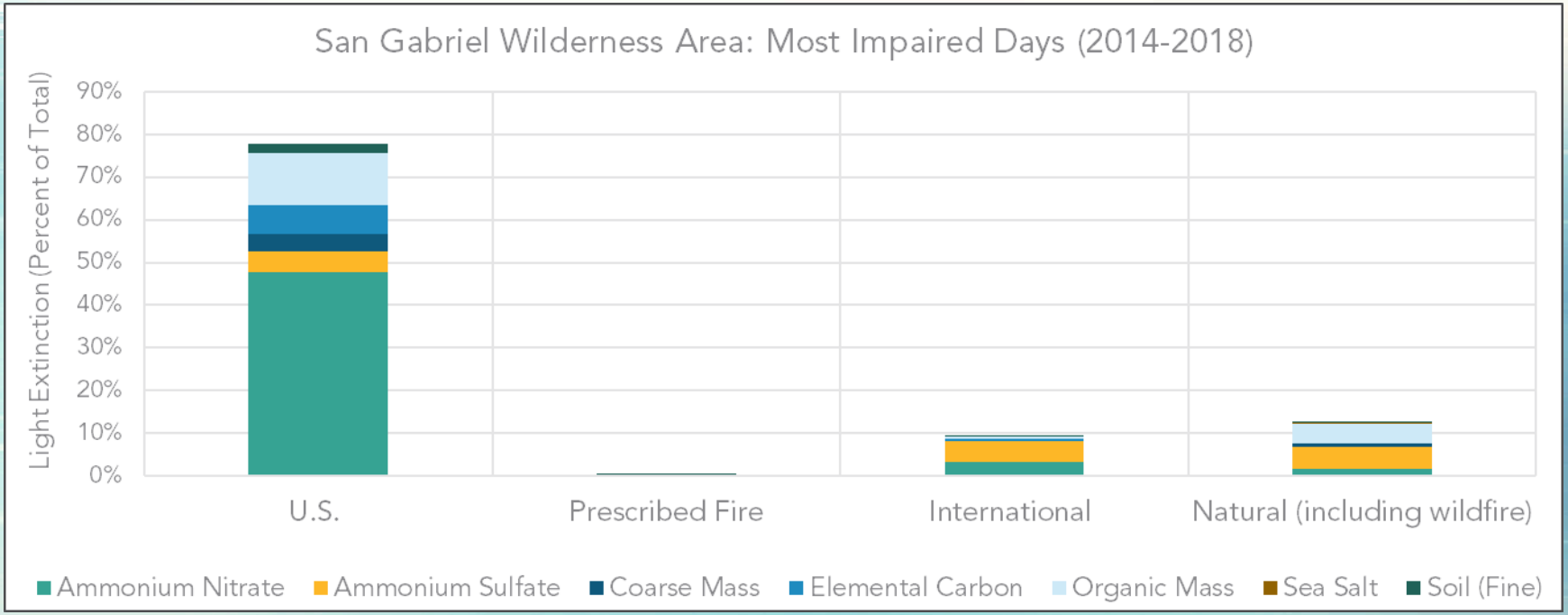
Sources of Haze: San Gabriel Wilderness Area



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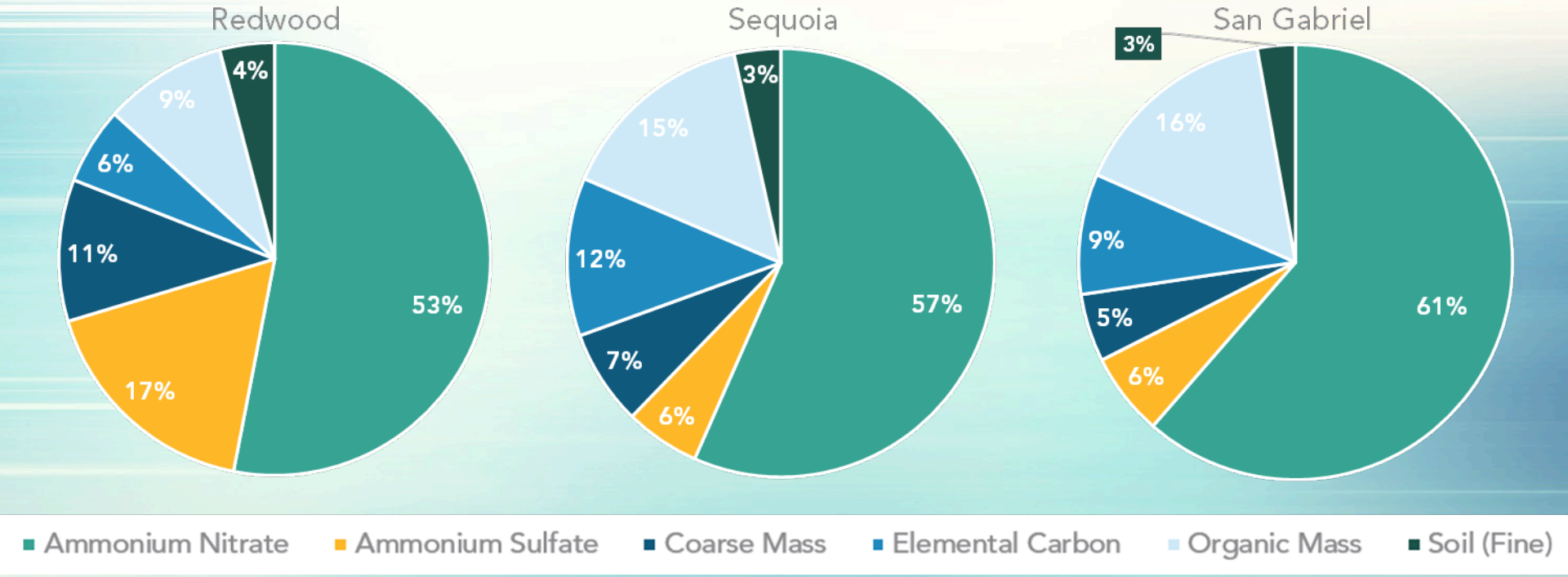
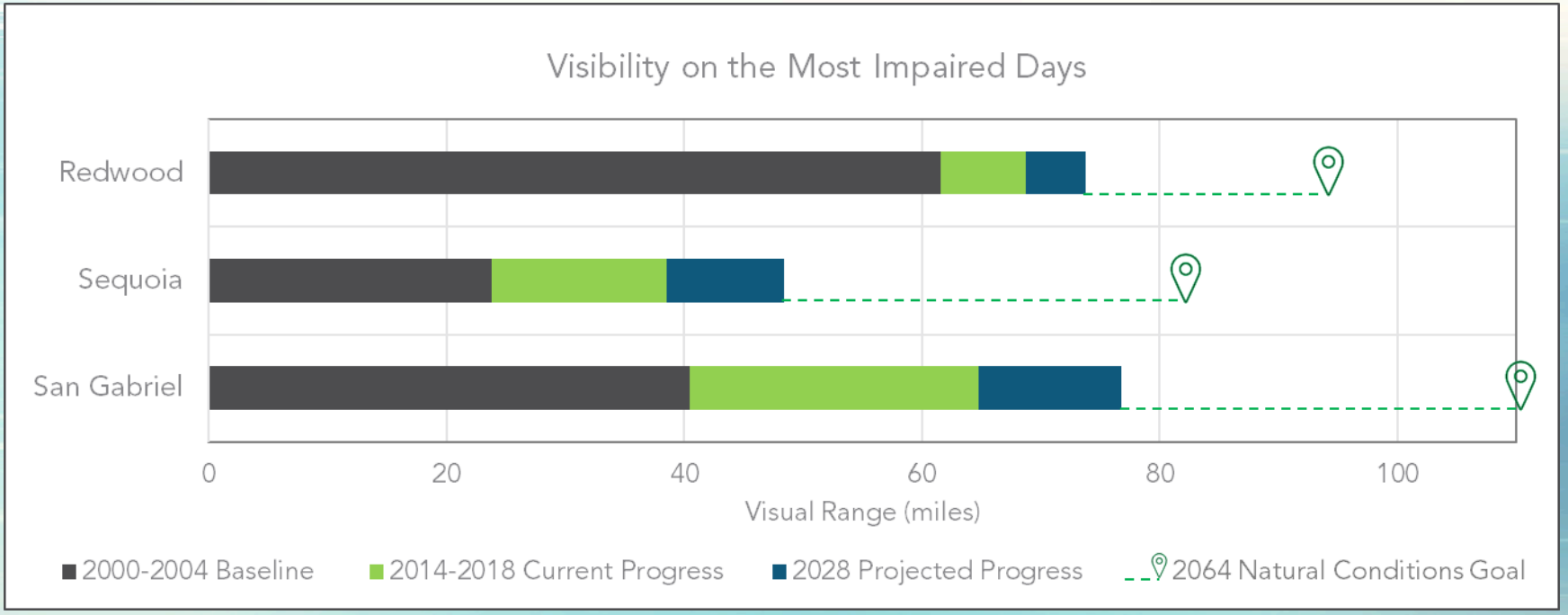
Haze Particles from U.S. Sources



Progress Through 2028



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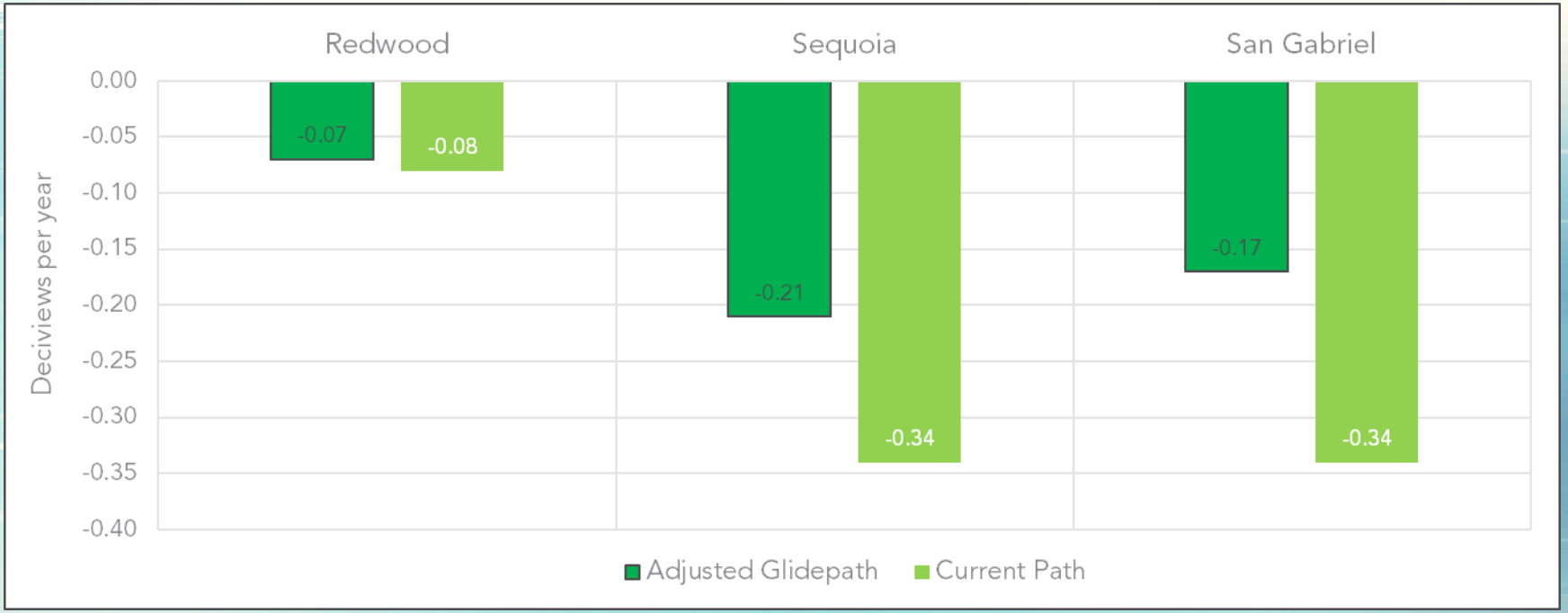
Rate of Progress vs Glidepath



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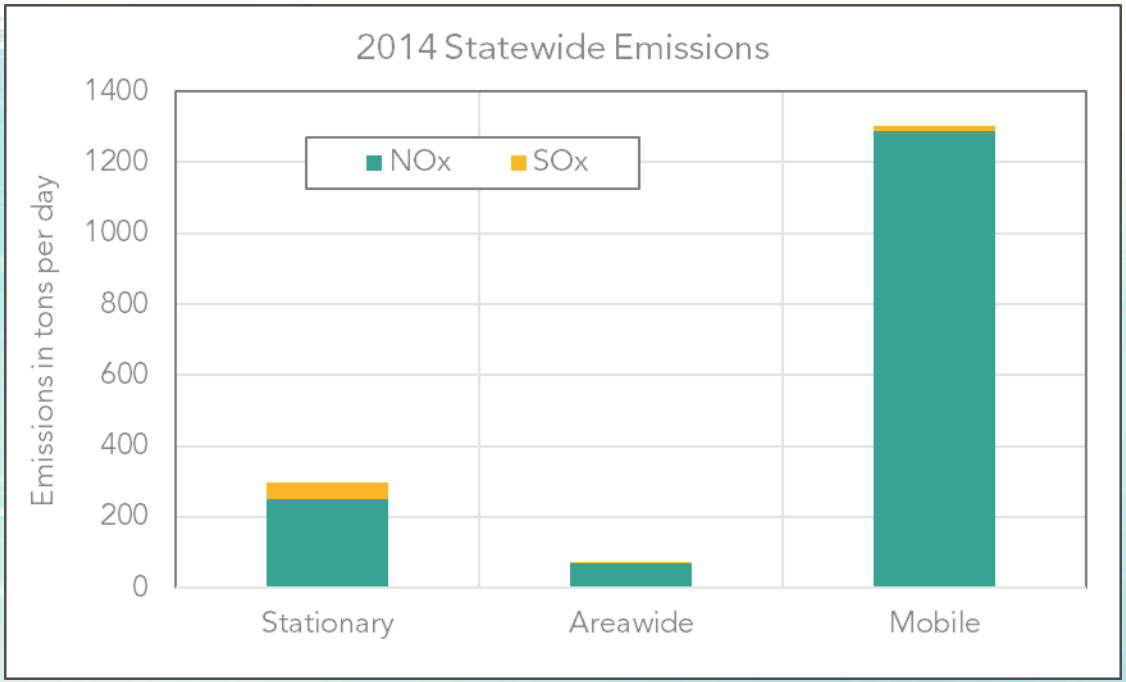
Controls to Improve Visibility



- Mobile Sources
  - Sector Emissions
  - Control Strategies
  - Four-Factor Evaluation

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Long-Term Strategy

Adopted Measures
- > 400 tons per day of NOx

Additional Commitment
- 40 tons per day of NOx

Visibility
- Improved visibility in all Class 1 areas
- 2028 projections on or better than the glidepath




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Reasonable Progress Goals

Site	2000-2004 Baseline Visibility (dv)	2014-2018 Current Visibility (dv)	2028 Reasonable Progress Goal (dv)	2028 Adjusted URP Projection (dv)
Redwood National Park	13.7	12.6	**11.9**	11.9
Sequoia National Park	23.2	18.4	**16.1**	17.7
San Gabriel Wilderness	17.9	13.2	**11.5**	13.5

Assessment of Stationary Sources

- **Emission/Distance:** Ratio > 5
- **Device-Level Emissions:** Identify dominant emission devices
- **Controls:** Current, Planned (ex: AB 617), Proposed (ex: refinery conversions)
- **Four-Factor Evaluation:** Cost, Time, Environmental Impacts, Remaining Useful Life

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Steps to Further Address Stationary Source Emissions

2022
- Criteria & Toxics Reporting (CTR) Regulation Initial Phase-In Begins

2023
- Deadline to install controls for AB617 expedited BARCT

2025
- Regional Haze Progress Report

2026
- CTR Regulation Phase-In continues

2028
- CTR regulation implemented
- Regional haze milestone year and regional haze SIP revision due

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Stakeholder Engagement

Federal Land Manager Comments

National Park Service	• Appreciate CARB mobile source program • Assess NOx and SO_2 from stationary sources
U.S. Forest Service	• Largely satisfied with the strategy • Increase adjustments for prescribed fire • Assessment of SO_2 emissions

Public Comments

- Accelerate transition to zero emission economy
- Extend comment period and delay Board consideration
- Provide more consideration of SOx emissions and stationary sources
- Fuels are a necessary component of agricultural food production
- Plan lacks controls developed and implemented solely for regional haze
- Increasing ethanol content in fuels would provide air quality benefits
- Uncertainties associated with 2064 natural condition estimates
- Natural does not always mean clear and pristine visibility
- Natural conditions must consider future changes to fire regimes and fire frequencies

Responses to Comments Received

Federal Land Manager Comments

- Evidence-based approach to strategy development
- Mobile sources NOx emissions reductions are critical
- Stationary source control program is stringent and evolving
- Progress report will detail impact of reductions from stationary source efforts
- Planning is iterative and CARB staff will continue to engage with FLMs

Public Comments

- Taking aggressive efforts to transition to zero-emission technologies
- Draft plan is in-line with themes communicated at workshops and meetings
- Integrated planning is key to meeting host of air quality goals
- Natural condition estimates will be considered in each planning period
- Fire will continue to be an important planning consideration

Staff Recommendation

- Approve 40 tpd NOx mobile source reduction commitment
- Approve California's Regional Haze SIP
- Direct the EO to submit to U.S. EPA



Photography Credits

Slide 1: Hoover Wilderness Area, courtesy of Nicole Dolney; Kings Canyon National Park, courtesy of Rebecca Garcia; Point Reyes National Seashore courtesy of Jeff Kessler

Slide 8: Joshua Tree National Park, courtesy of NPS/Robb Hannawacker

Slide 9: Yosemite National Park, courtesy of Josh Berghouse; Ansel Adams Wilderness Area, courtesy of Rebekka Fine

Slide 20: Domeland Wilderness Area, courtesy of Jeff Kessler; Desolation Wilderness Area, courtesy of Nicole Dolney; Sequoia National Park, courtesy of Jeff Kessler; Redwood National Park, courtesy of Jeff Kessler

Slide 28: San Jacinto Wilderness Area, Pinnacles National Park, and Mokelumne Wilderness Area, all courtesy of Jeff Kessler