Welcome!

Clean Air Act Advisory Committee

December 12, 2019

DEQ Montana Department of Environmental Quality

CAAAC

Introductions

Air Quality Bureau Fees

Report Requirements

Nonattainment Area Redesignations

Regional Haze

DEQ MONTANA

Air Quality Bureau Fees

Dave Klemp

DEQ MONTANA

Report Requirements

Hoby Rash

Context

- **Purpose:** To **DOCUMENT** and **COMMUNICATE** IN or OUT of Compliance
- **2019:** Receive and process **~1,400** compliance reports from AQ Permitted Sources (mostly stationary)

1. **Stop** - Keep
2. **Summarize** - Keep
3. **Consolidate** - Keep
4. **Communicate** - Don't Keep

Redesignations

Liz Ulrich

Redesignations

Official designation that the air is meeting the standard

- Protecting public health

Removes regulatory burden associated with NAA

- Including more stringent permitting requirements

Increases economic growth potential by allowing new industrial growth within the area

Montana Nonattainment Area Redesignation Project

Area + Pollutant	Status	Date
Missoula PM-10	Attainment	June 24, 2019
East Helena SO2	Attainment	October 11, 2019
East Helena Pb	Attainment	October 11, 2019
Kalispell PM-10	Submitted to EPA	August 9, 2019
Columbia Falls PM-10	Submitted to EPA	August 9, 2019
Libby PM-10	Submitted to EPA	August 9, 2019
Libby PM-2.5	Ready for public comment	December 2019
Butte PM-10	Done, on way to Governor	December 2019
Whitefish PM-10	Working on - almost done	Early 2020
Thompson Falls PM-10	Next	Late 2020
Laurel SO2	Next	Late 2020

DEQ MONTANA

Regional Haze Update

Clean Air Act Advisory Committee

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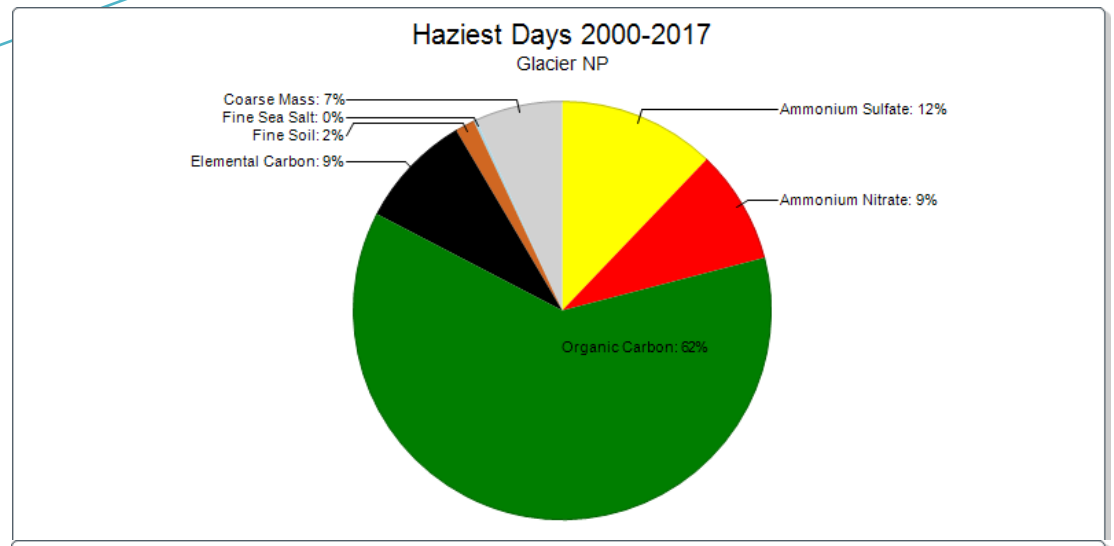
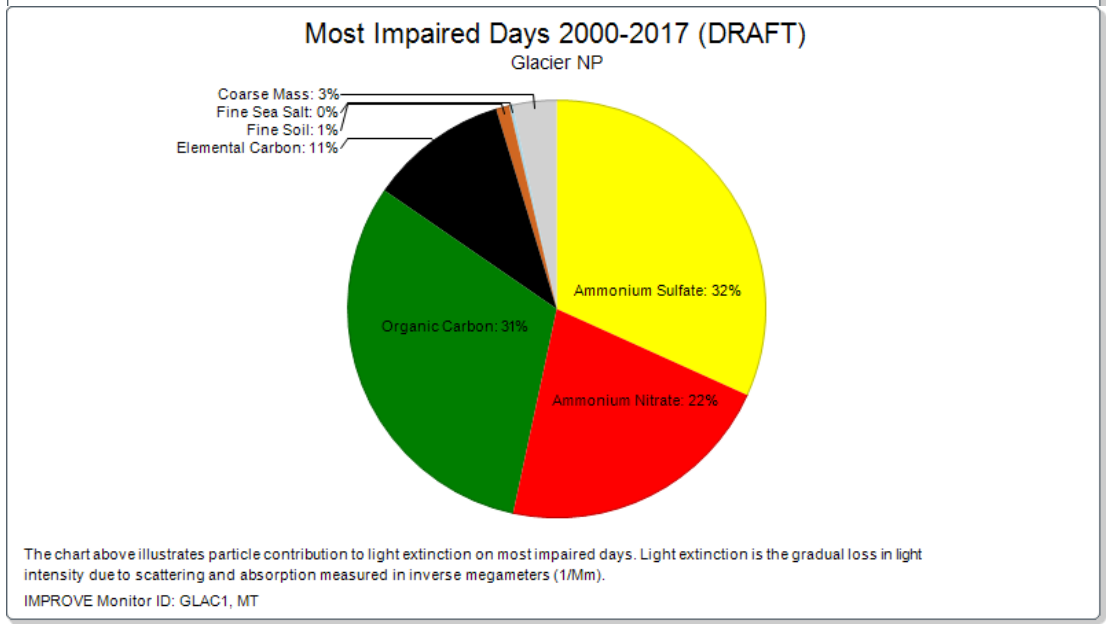
Last time we met…

Old vs New Method – i.e., 20% Haziest Days vs 20% Most-Impaired Days

Gave an overview of the planning needs for 2019

Monitoring data analysis for Montana





Reasonable Progress Analysis Steps

1) Conduct Preliminary Source Screening
2) Populate List of Emission Reduction Strategies
3) Perform Four-Factor Analysis
4) Select Required “Reasonable” Control Strategies

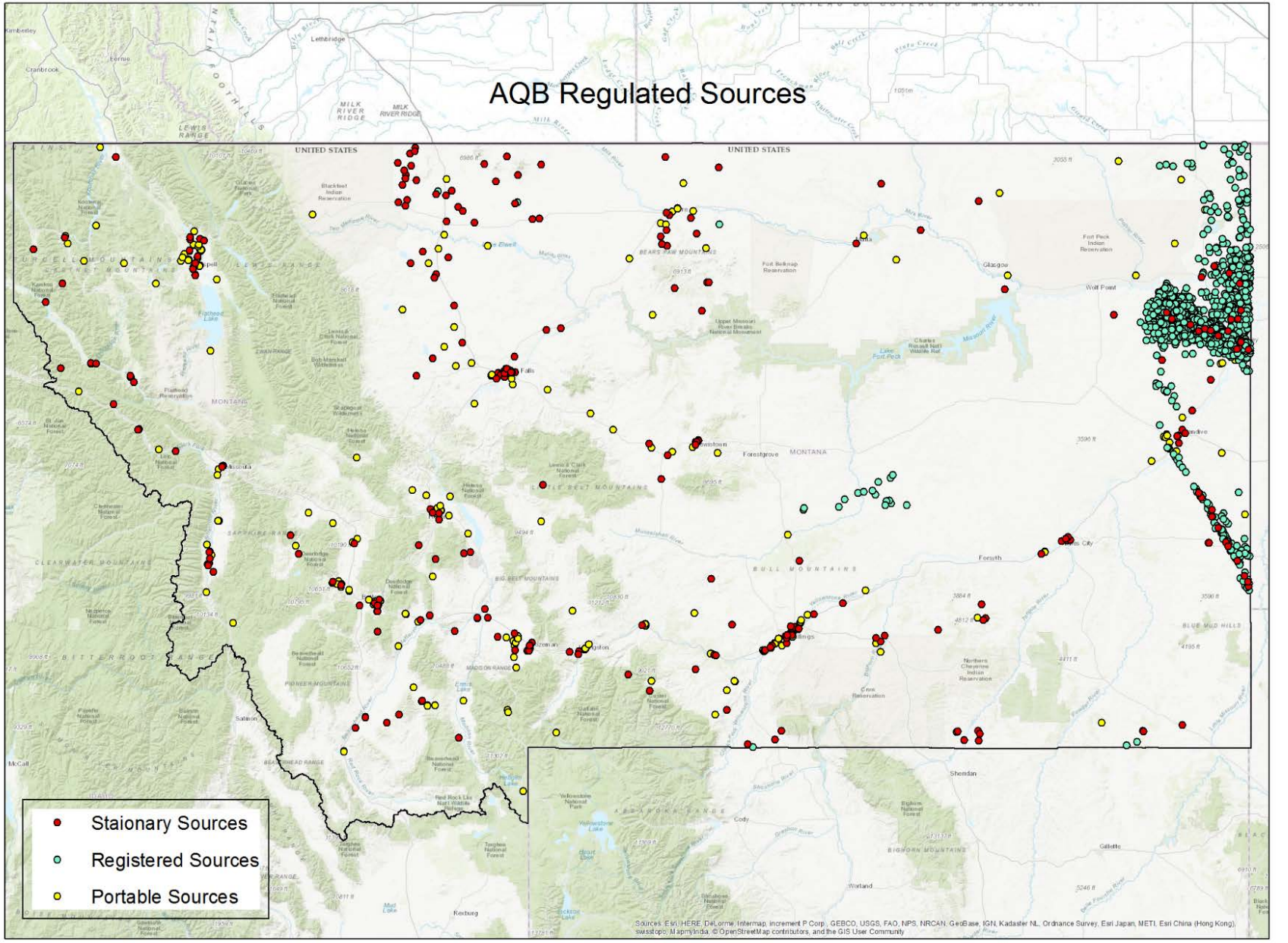
Screening Analysis

What sources are out there?

271 permitted stationary sources

1227 registered O&G sources

portable sources



0 25 50 100 150 200 Miles

Montana Source Screening Steps

Part I: Permitted Stationary Facilities

Total NOx+SO2 from all MT permitted stationary facilities

271

271
Permitted Stationary Facilities

2014-2017
Average Annual Emissions (TPY):

NOx: 25,027
SO2: 15,537
NOx+SO2 = 40,594

24

Screen out facilities with average annual emissions of
NOx+SO2 < 100

95% of total 2014-2017 NOx+SO2 from Permitted Stationary Facilities

NOx: 93%
SO2: 99%

15

From all 271 facilities, screen out facilities with Q/d < 4

90% of total NOx+SO2 from Permitted Stationary Facilities

NOx: 87%
SO2: 96%

Picked up 2 additional with NOx+SO2 < 100 due to proximity to CIAs.

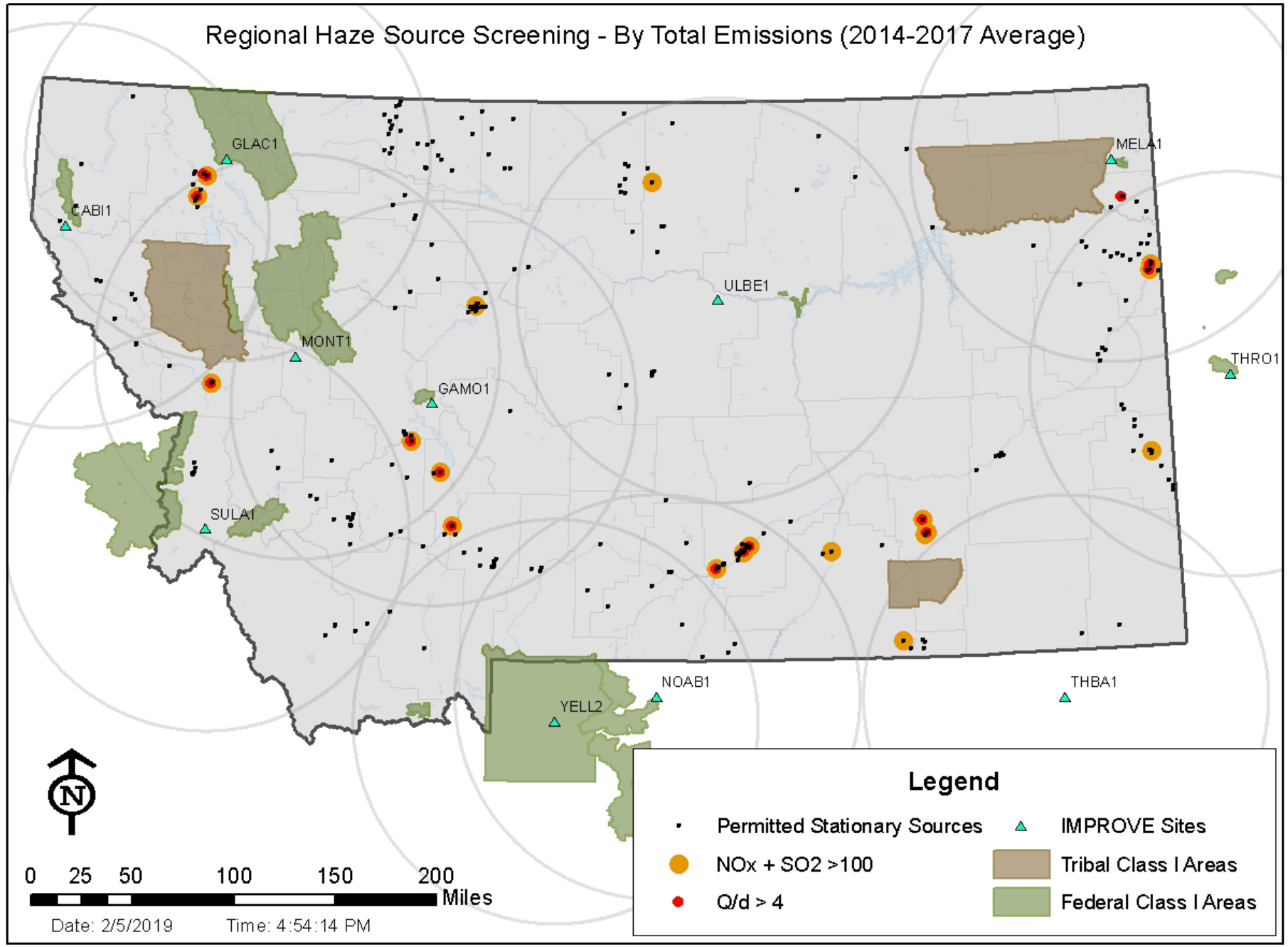
17

Facility Identification		Average TPY (2014-2017)		Sum TPY	Class I Area Analysis		
MAILING_COMPANY	FACILITY_NAME	NOx	SO2	Q NOx+SO2	Nearest CIA	d (km)	Q/d
TALEN MONTANA LLC	COLSTRIP STEAM ELECTRIC STATION #1-4	13969.55	8895.52	22865.08	UL Bend	198.9	115.0
WEYERHAEUSER NR - COLUMBIA FALLS	WEYERHAEUSER-CFALLS	969.60	14.77	984.36	Glacier	13.3	74.0
ASH GROVE CEMENT COMPANY	ASH GROVE CEMENT	1029.91	205.21	1235.11	Gates of the Mountains	30.6	40.4
MONTANA DAKOTA UTILITIES CO	MDU - LEWIS & CLARK STATION	604.67	447.60	1052.28	Teddy Roosevelt	51.8	20.3
GCC TRIDENT, INC.	TRIDENT	1473.87	14.52	1488.39	Yellowstone	97.4	15.3
YELLOWSTONE ENERGY LIMITED PARTNERSHIP	YELLOWSTONE POWER PLANT	404.32	1732.01	2136.33	North Absaroka	143.8	14.9
ROSEBURG FOREST PRODUCTS CO	ROSEBURG FOREST PRODUCTS	299.28	3.33	302.61	Selway Bitterroot	26.6	11.4
COLSTRIP ENERGY LTD PARTNERSHIP	COLSTRIP ENERGY LTD PARTNERSHIP	811.68	1123.92	1935.61	UL Bend	188.7	10.3
GRAYMONT WESTERN US INC	GRAYMONT WESTERN US INC	363.06	161.17	524.23	Gates of the Mountains	57.1	9.2
MONTANA SULPHUR & CHEMICAL CO	MONTANA SULPHUR & CHEMICAL	4.74	1305.53	1310.27	North Absaroka	143	9.2
EXXONMOBIL FUELS & LUBRICANTS COMPANY	EXXONMOBIL BILLINGS REFINERY	435.75	598.65	1034.41	North Absaroka	143.7	7.2
CENEX HARVEST STATES COOPERATIVE INC	CHS INC REFINERY LAUREL	420.60	208.13	628.73	North Absaroka	113.5	5.5
F H STOLTZE LAND & LUMBER CO	F.H. STOLTZE LAND AND LUMBER CO	68.62	6.60	75.22	Glacier	14	5.4
SIDNEY SUGARS INC	SIDNEY SUGAR FACILITY	210.75	58.04	268.79	Teddy Roosevelt	51.9	5.2
PHILLIPS 66 CO	BILLINGS REFINERY	540.05	104.87	644.92	North Absaroka	137	4.7
WEYERHAEUSER NR - KALISPELL	WEYERHAEUSER-EVERGREEN	129.45	4.87	134.32	Glacier	30.5	4.4
NORTHERN BORDER PIPELINE CO	N. BORDER PIPELINE CO STA. 3	91.50	4.25	95.76	Medicine Lake	22.8	4.2
HAVRE PIPELINE COMPANY, LLC	BLAINE COUNTY #1	512.12	0.09	512.21	UL Bend	134.1	3.8
ROCKY MOUNTAIN POWER INC	ROCKY MOUNTAIN POWER	230.39	262.39	492.78	North Absaroka	183.6	2.7
WESTERN SUGAR	WESTERN SUGAR COOPERATIVE	237.91	120.85	358.76	North Absaroka	138.2	2.6
CALUMET MONTANA REFINING LLC	CALUMET MONTANA REFINING	141.72	29.34	171.06	Gates of the Mountains	76	2.3
ONEOK ROCKIES MIDSTREAM, L.L.C. (ORM)	BAKER PLANT	55.96	70.87	126.82	Teddy Roosevelt	80.2	1.6
SPRING CREEK COAL LLC	SPRING CREEK MINE	160.26	18.85	179.11	North Absaroka	202.9	0.9

NOx	
Sum(17):	21,827
Sum(271):	25,057
% Total:	87%

SO2	
Sum(17):	14,889
Sum(271):	15,537
% Total:	96%

NOx+SO2	
Sum(17):	36,620
Sum(271):	40,594
% Total:	90%


Regional Haze Source Screening - By Total Emissions (2014-2017 Average)
GLAC1
CABI1
MONT1
GAMO1
SULA1
ULBE1
MELA1
THRO1
NOAB1
THBA1
YELL2
N
0 25 50 100 150 200
Miles
Date: 2/5/2019
Time: 4:54:14 PM
Legend
Permitted Stationary Sources
NOx + SO2 >100
Q/d > 4
IMPROVE Sites
Tribal Class I Areas
Federal Class I Areas

Montana Source Screening Steps

Part I: Permitted Stationary Facilities

17

1 facility to consider for additional control for SO2 only

9 facilities to consider for additional control for both NOx and SO2

7 facilities to consider for additional control for NOx only

DEQ – Facility Conversations

1

Introductions to DEQ project team and Regional Haze programs

Introductions to facility staff and/or contractors

2

Confirm average annual emissions used in analysis

Confirm current level of control

3

Review documented control analysis from first round

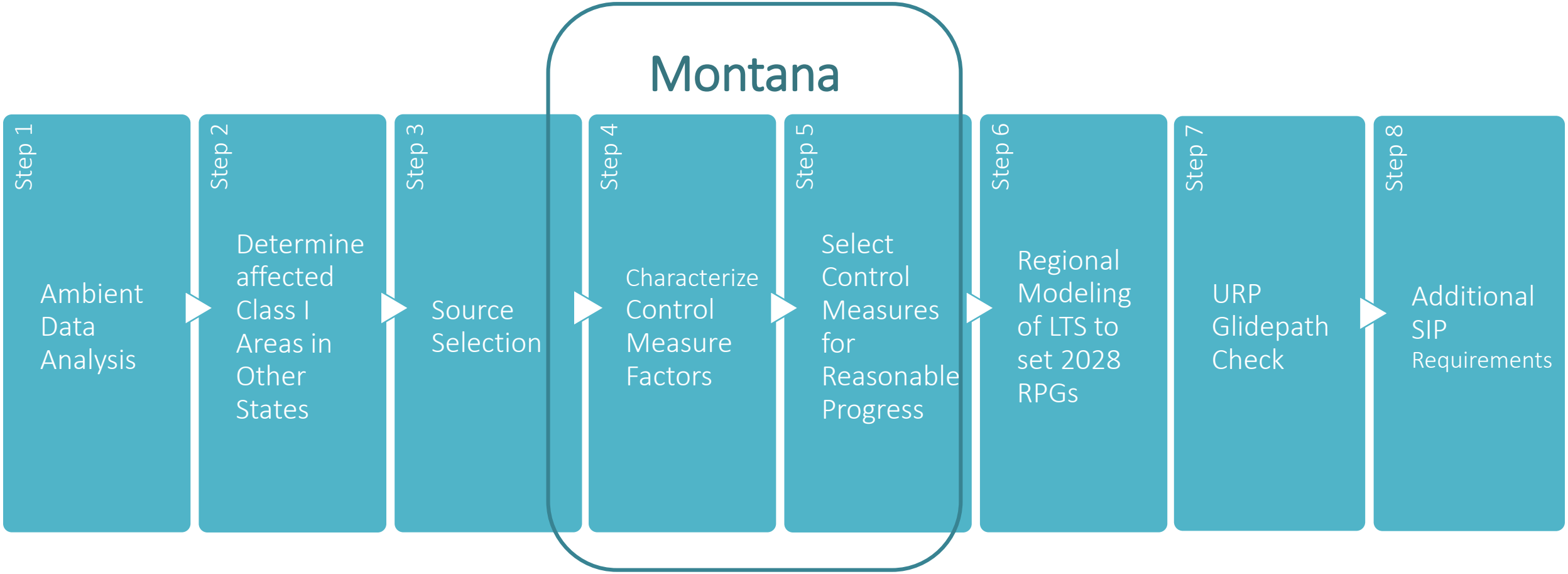
Perform BACT-like analysis of additional controls

4

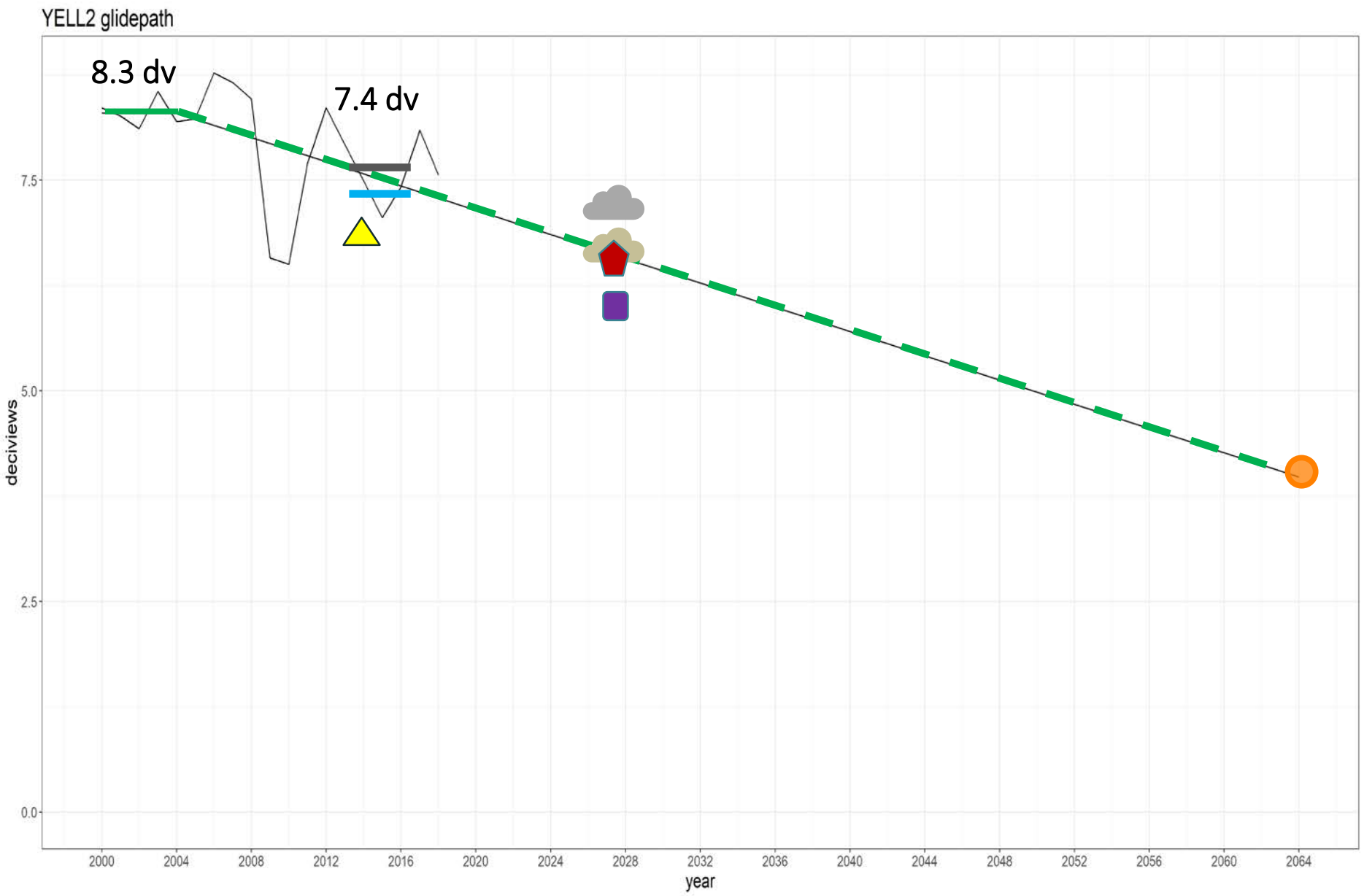
Select controls for further analysis

Conduct 4-factor analysis of potential controls

Key Steps in Developing a RH SIP for the 2nd Implementation Period



Step 6 - Regional Modeling Efforts



IMPROVE monitoring

- 2000-2004 5 yr aver.
- 2014-2018 5 yr aver.
- 2064 EPA Natural Conditions
- EPA URP

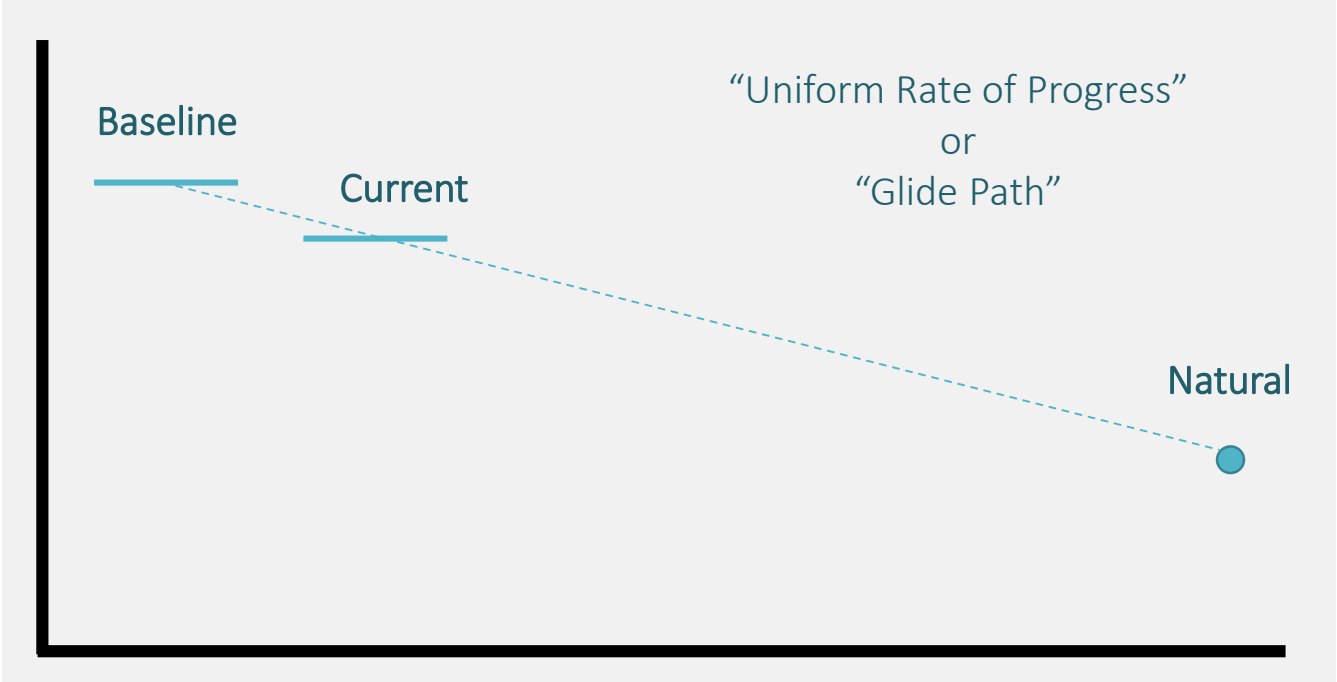
CAMx Modeling

- 2014 Actual Emissions
- Modeled Baseline
- 2028 OTB/W with Fires
- 2028 Controls with Fires
- 2028 OTB/W + Wildfire
- 2028 OTB/W + Rx Fire

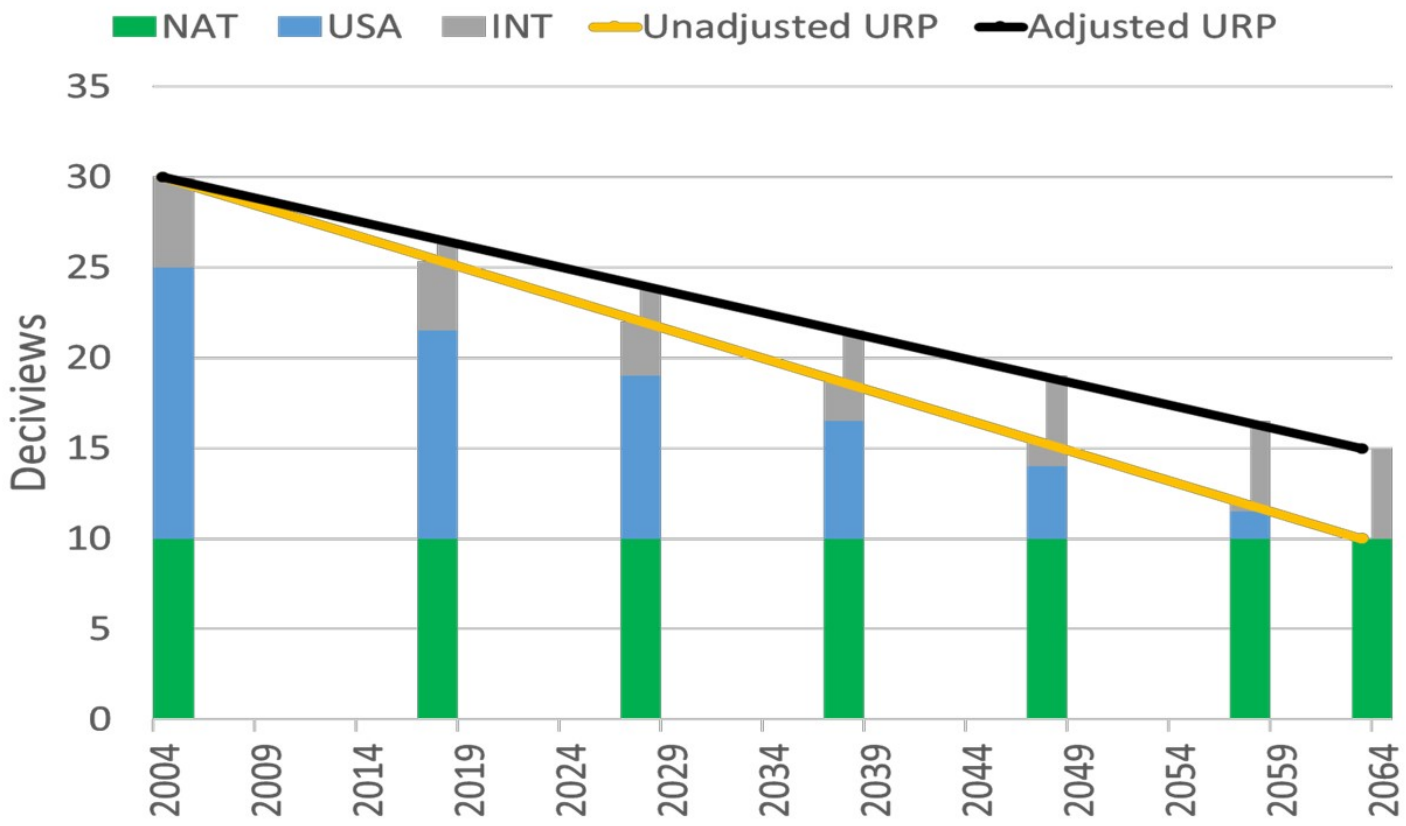
Regional Technical Analysis
Analyze monitoring data
Process & evaluate 2014 NEI data
Develop & populate TSSv2
Develop 2028 projected inventories
Conduct & evaluate base year and OTB/OTW 2028 modeling
Develop criteria for source screening
Add control strategies to 2028 inventory
Conduct & evaluate 2028 control scenario modeling
Establish reasonable progress goals
State Planning & SIP Development
Introduce stakeholders to regional haze process
Review IMPROVE data
Decide whether to use recommended MID metric
Assess needs and functionality of TSSv2
Share visibility progress findings with stakeholders, FLMs, EPA, and neighboring states
Check and refine 2014 NEI data, including oil & gas, fire & smoke, and EGU emissions data
Sign off on 2014 data file
Review and OK screening protocol
Introduce stakeholders to screening and four-factor analysis
Conduct preliminary screening & confirm with modeling
Share screening results with stakeholders
Solicit feedback on screening results from FLMs and EPA
Sign off on 2028 projections
Conduct four-factor analysis with selected sources
Contact neighboring states to discuss upwind/downwind control strategies
Discuss control strategies with sources, FLMs, and EPA
Document reasonable emission reduction measures
Submit control strategies to WRAP for modeling
Review modeling results and evaluate reasonable progress goals
Solicit feedback on reasonable progress goals from FLMs and EPA
Evaluate visibility progress from base year to 2028
Continue regular updates with stakeholders
Begin formal FLM consultation
Begin 30-day public comment period
Hold public hearing on SIP
Submit final SIP to EPA
2019
2020
2021

Replay

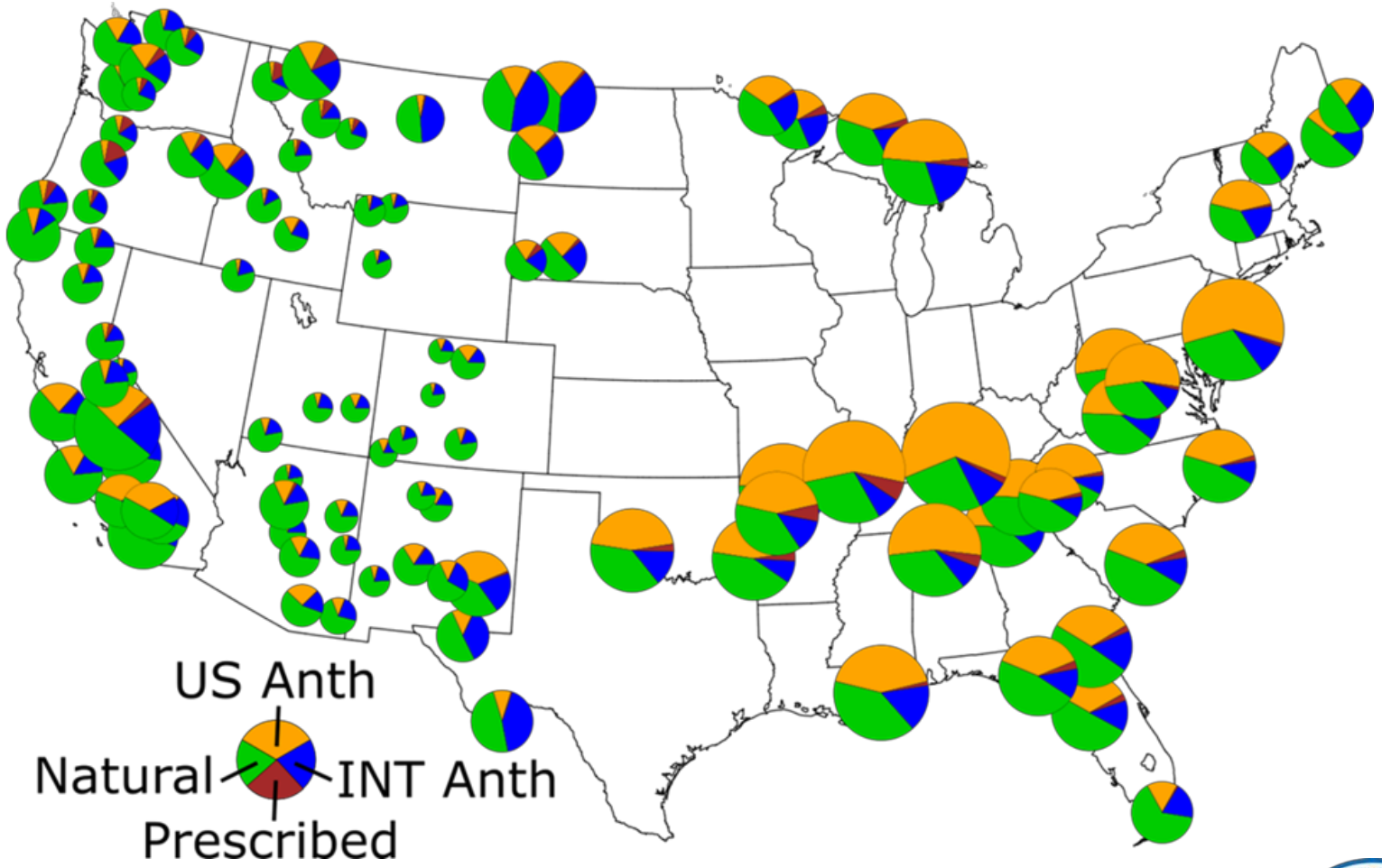
The Regional Haze program is about making incremental progress to improve visibility (aiming toward the goal of “natural” conditions) over a long period of time.



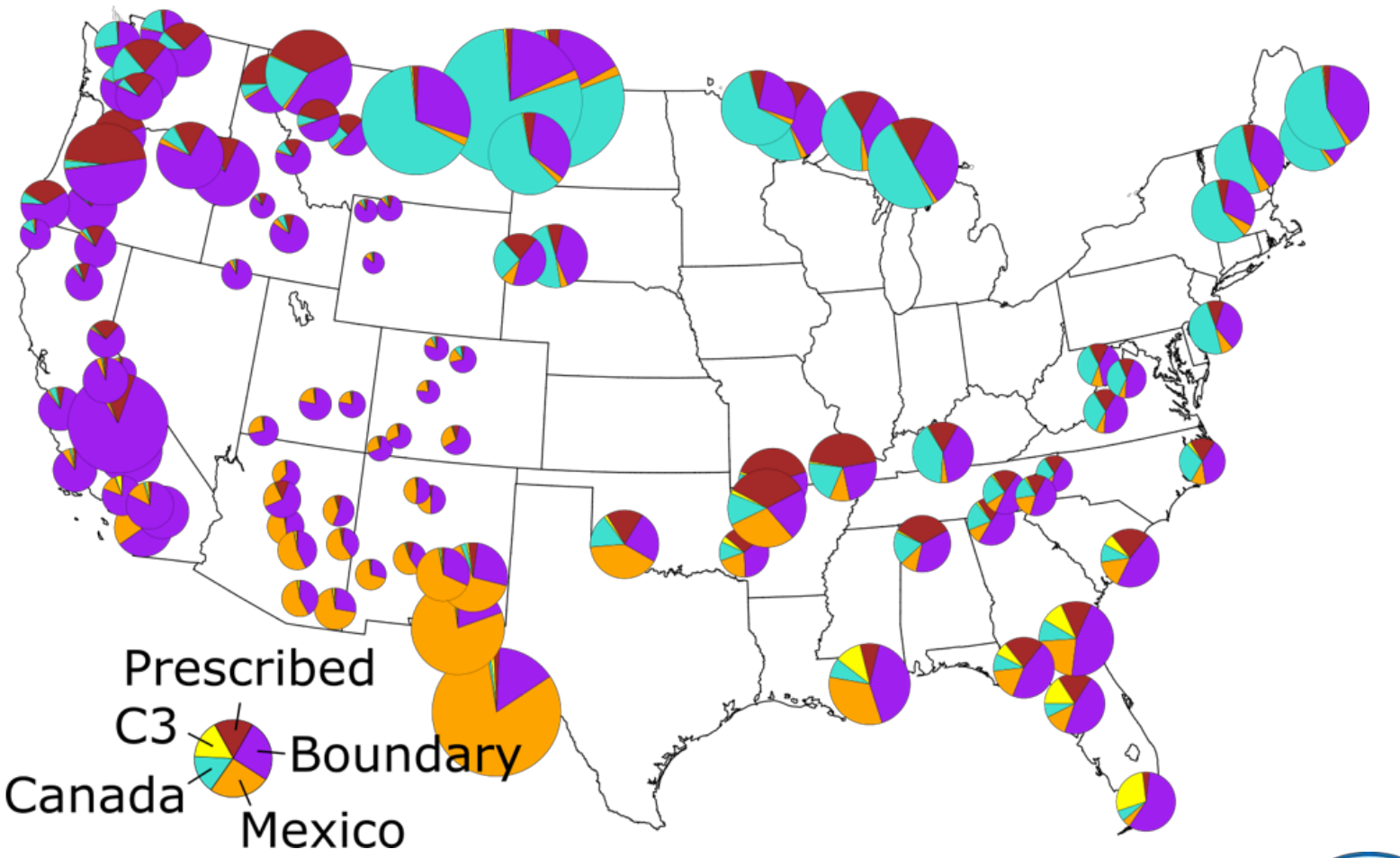
Glidepath Adjustment for International Contributions



2028 Visibility Impairment	Range (Mm-1)
US anthropogenic	0.98–45.68
International anthropogenic	2.88–19.33
Prescribed Fires	0.03-5.15
Modeled natural (including Rayleigh)	11.72-29.83



Glidepath Adjustment components	Range (Mm-1)
Prescribed fires	0.03-5.15
C3 commercial marine outside the US ECA region	0-2.28
Canada anthropogenic	0.01–15.49
Mexico anthropogenic	0.02–14.39
International anthropogenic from outside the 36km domain (boundary conditions)	1.19–11.73



Thank you!

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Cabinet Mountains
https://www.umt.edu/this-is-montana/photos/stories/cabinet-mountains.php

Thank You!

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