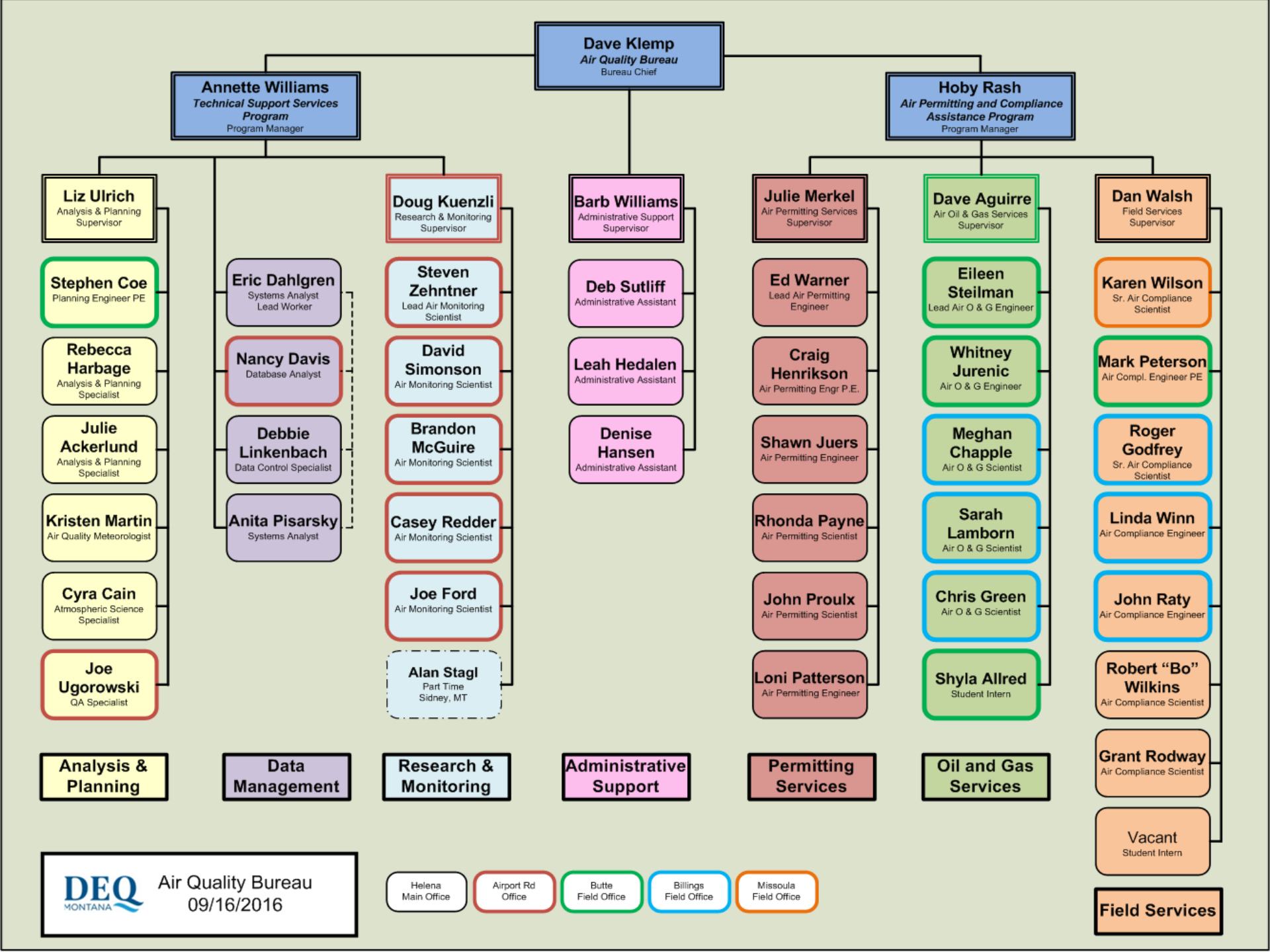
Welcome to CAAAC. Thanks for attending!

Today's Agenda :

1) Welcome and Introductions
2) Air Quality Bureau Updates
    - Environmental Quality Council Review of Program
    - Planning and Regulatory Topics
    - 2016 Wildfire Season in Review
3) Bureau Projects
    - Updates to the *Today's Air* Website
    - Oil and Gas Production Regulatory Review
    - Regional Haze Program Implementation in Montana
    - Permitting Program Improvement Project
4) Questions and Feedback

Welcome and Introductions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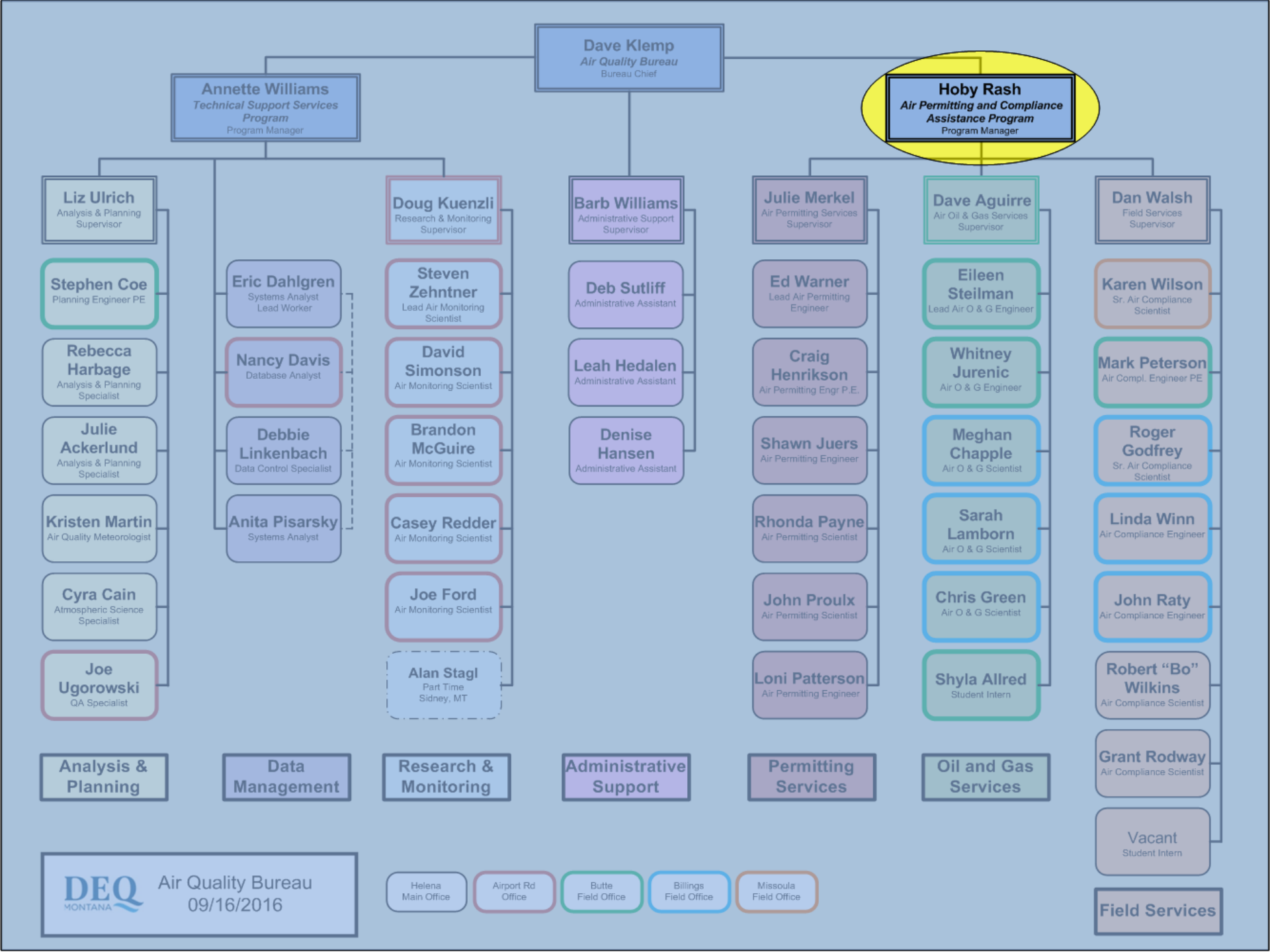
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Air Quality Info

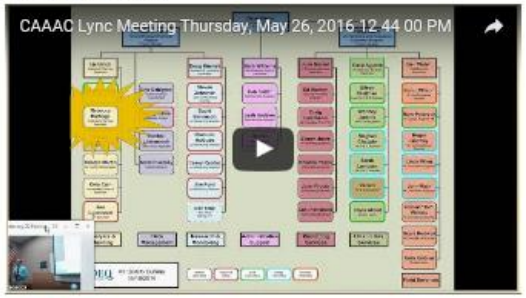
- Air Quality Links & DEQ Publications
- Air Monitoring
- Air Permitting & Compliance Assistance
- Air Quality Analysis & Planning

Clean Air Act Advisory Committee (CAAAC)

The Clean Air Act Advisory Committee (CAAAC) is a stakeholder advisory group formed to enhance communication between the Montana Department of Environmental Quality (DEQ) and a diverse range of air quality stakeholders by developing working relationships centered on a two-way exchange of information. CAAAC advises DEQ on a wide range of air quality issues not limited to establishment and implementation of laws and rules; program funding; compliance assistance; and regional air quality issues, impacts, and challenges. Through regular meetings and email correspondence, DEQ presents information to and solicits feedback from members of CAAAC.

CAAAC Meeting 9/27/16
Meeting Agenda

CAAAC Meeting 5/26/16



Meeting Agenda
Presentation Slides
Incorporation by Reference Table
Activity Guidelines for Wildfire Smoke Events

Staff Contact

Air Quality Bureau
(406) 444-3490

Air Quality Bureau 2016 Org Chart


Please Introduce Yourself


Dave Klemp
Air Quality Bureau
Bureau Chief
Annette Williams
Technical Support Services Program
Program Manager
Hoby Rash
Air Permitting and Compliance Assistance Program
Program Manager
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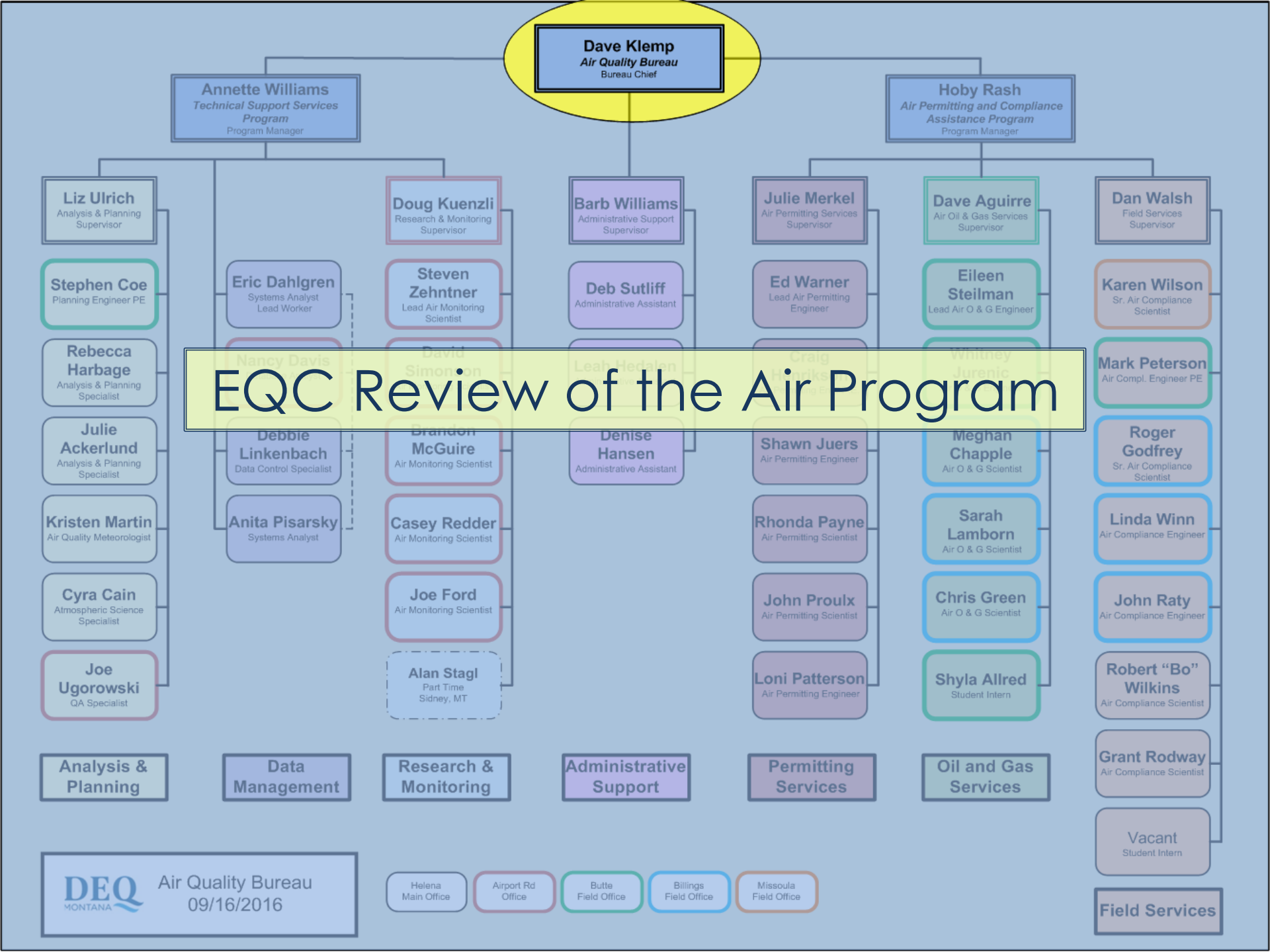
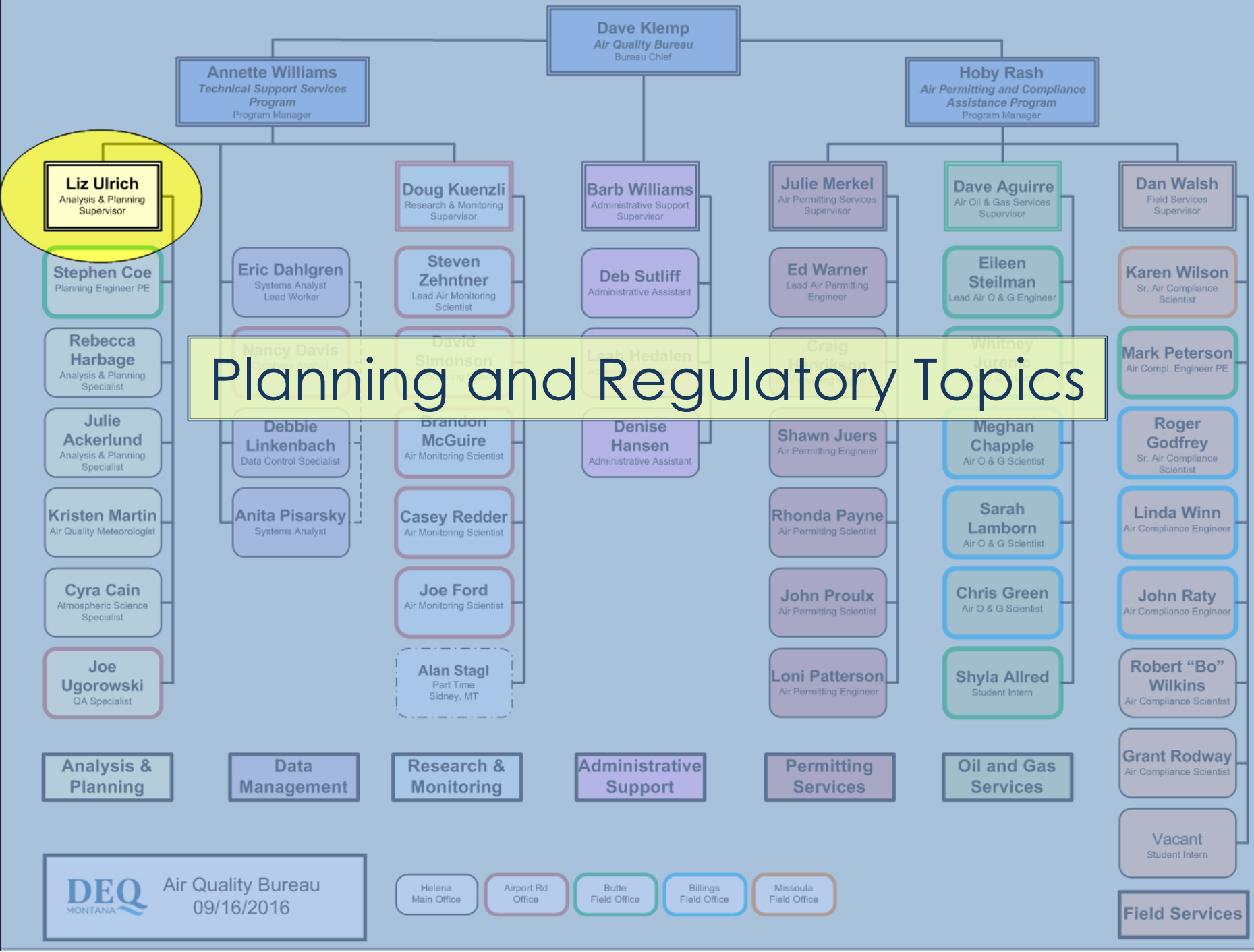
Bureau Updates



EQC Review of the Air Program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Planning Updates

A good plan is like a road map: it shows the final destination and usually the best way to get there.

-H. Stanley Judd

Board of Environmental Review

September 30, 2016

2015 IBR

Incorporation By Reference = Montana incorporates changes to federal regulations, state statutes and rules into the Administrative Rules of Montana

Fee Report

Annual review of air quality permit fees which are anticipated for the next calendar year

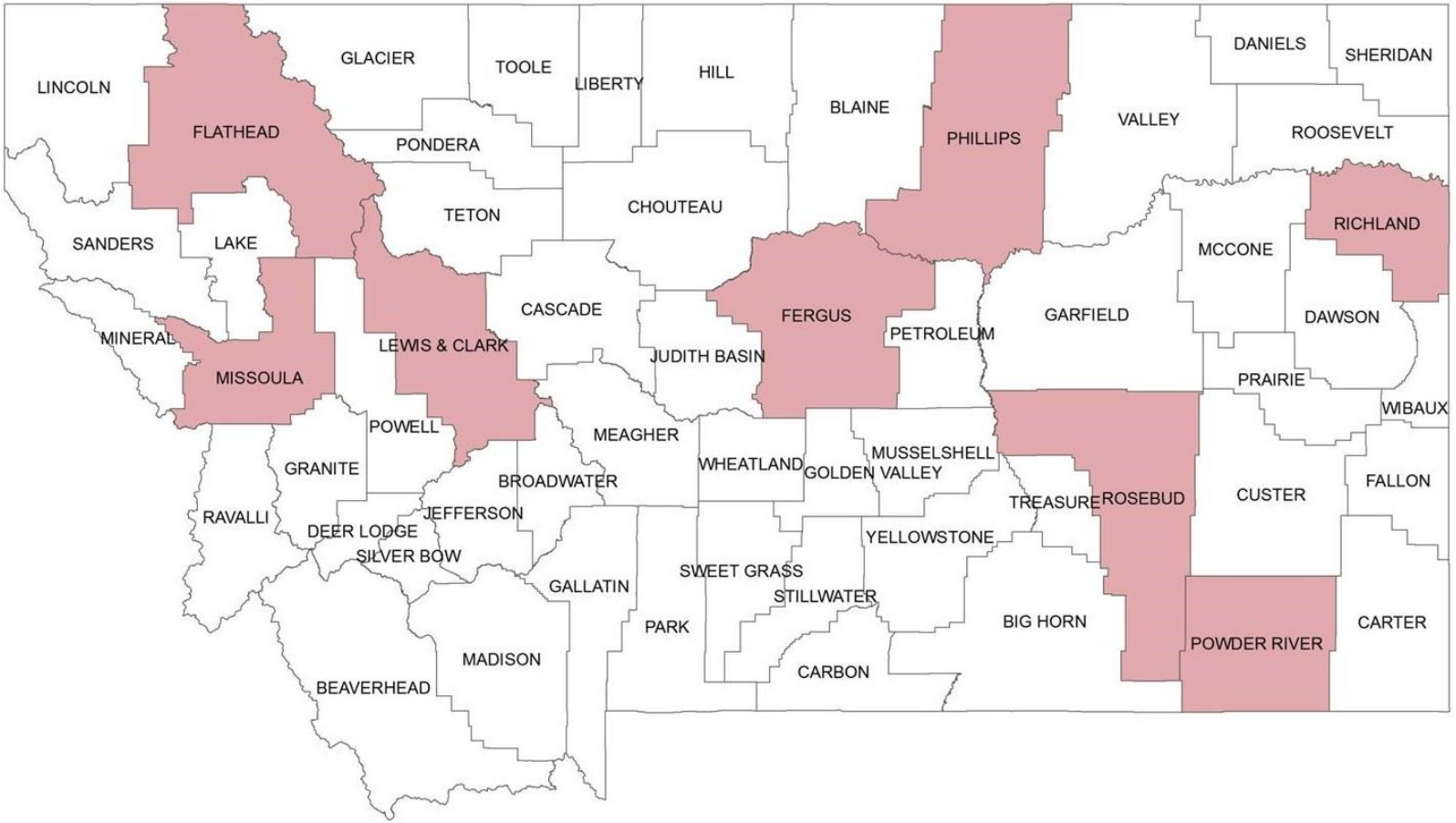
Montana Nonattainment Areas

Community	Pollutant	Standard Violated	Non-Attainment	Attainment/Maintenance
Laurel	Sulfur Dioxide	1971 (24-hr)	March 3, 1978	
East Helena	Sulfur Dioxide	1971 (24-hr)	November 15, 1990	
Billings	Sulfur Dioxide	2010 (1-hr)		June 09, 2016
Libby	Particulate (PM-2.5)	1997 (Annual)	April 5, 2005	
Kalispell	Particulate (PM-10)	1987 (24-hr)	November 15, 1990	
Columbia Falls	Particulate (PM-10)	1987 (24-hr)	November 15, 1990	
Whitefish	Particulate (PM-10)	1987 (24-hr)	October 19, 1993	
Libby	Particulate (PM-10)	1987 (24-hr)	November 15, 1990	
Missoula	Particulate (PM-10)	1987 (24-hr)	November 15, 1990	
Thompson Falls	Particulate (PM-10)	1987 (24-hr)	January 20, 1994	
Butte	Particulate (PM-10)	1987 (24-hr)	November 15, 1990	
Billings	Carbon Monoxide	1971 (8-hour)		April 22, 2002
Great Falls	Carbon Monoxide	1971 (8-hour)		July 8, 2002
Missoula	Carbon Monoxide	1971 (8-hour)		September 17, 2007
East Helena	Lead	1978 (Calendar Quarter)	January 6, 1992	

Designations

Ozone

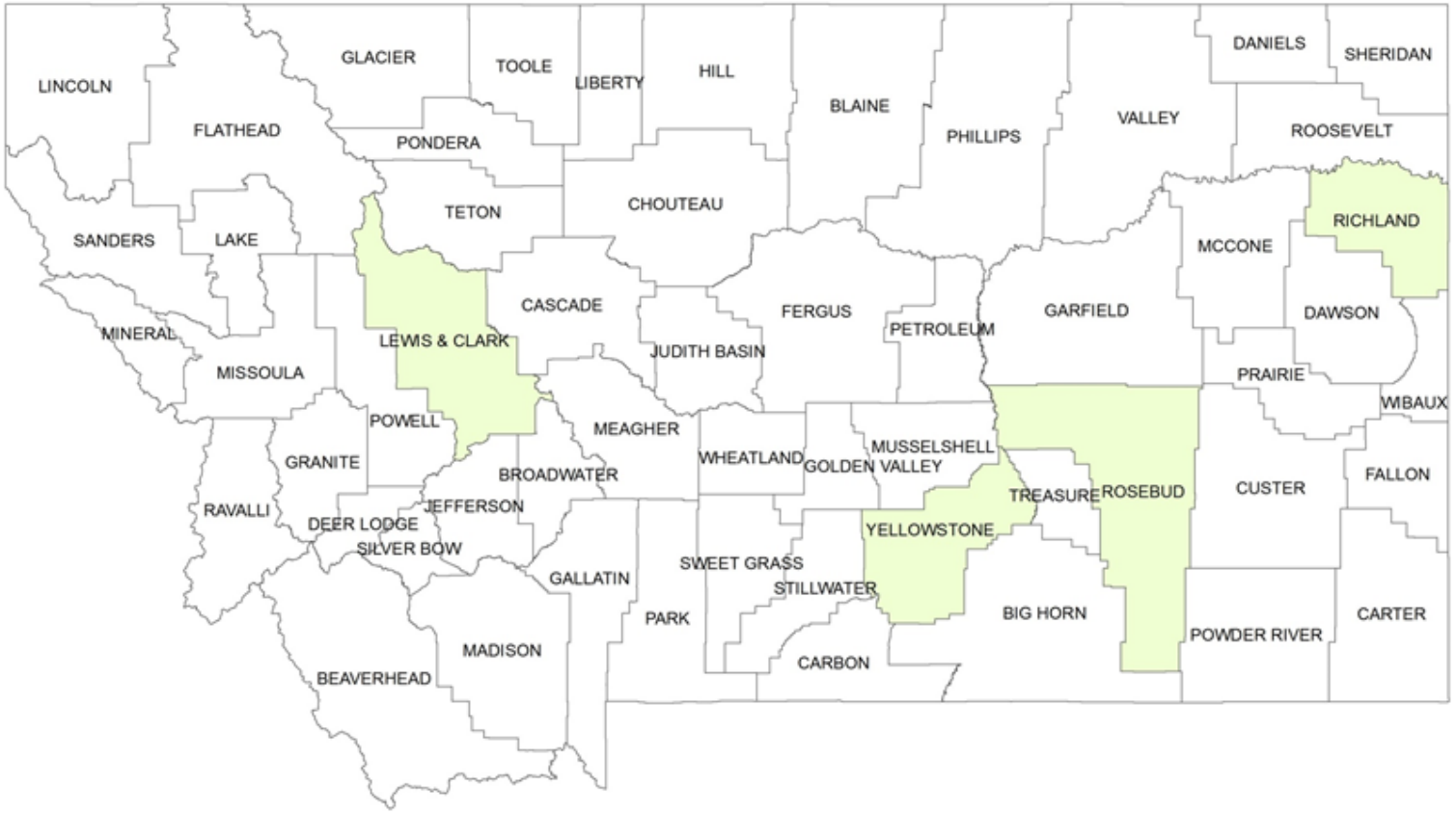
- 2015 Revised 8-hour Ozone National Ambient Air Quality Standard
- Submitted to EPA



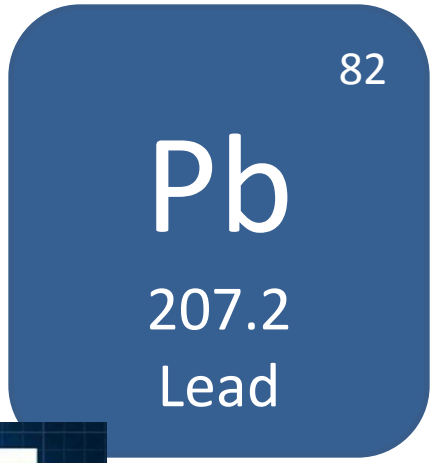
Designations

Sulfur Dioxide

- 2010 Revised 1-hour Sulfur Dioxide National Ambient Air Quality Standard
- Will be noticed for public comment in October



Regulations coming your way…



2016 Wildfire Season in Review

2016 WILDFIRE SEASON IN REVIEW

KRISTEN MARTIN

2016 Montana Overview

95,125 acres burned in the state

108 flagged events

7 days ≥ NAAQS

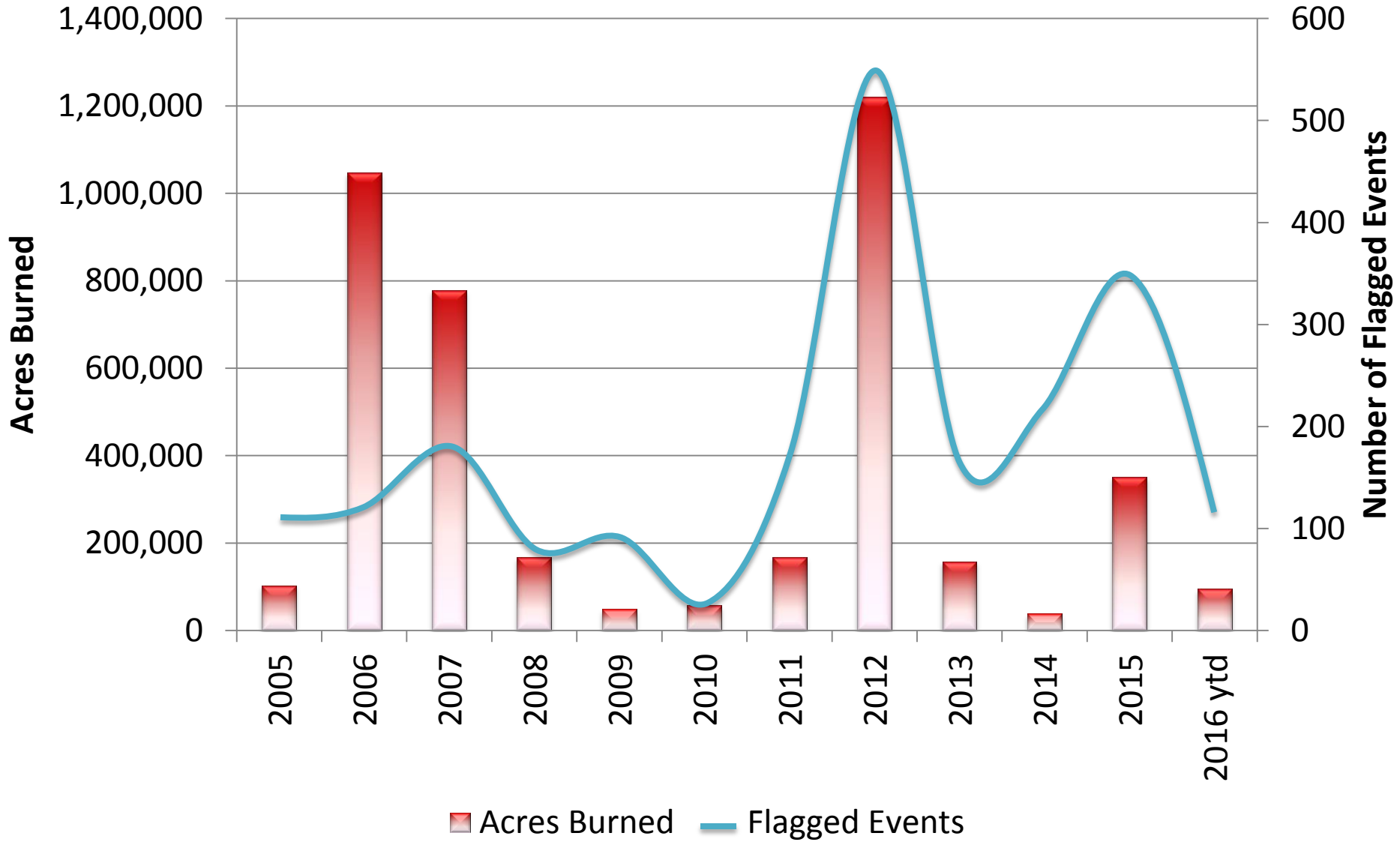
The 24-hour $PM_{2.5}$ NAAQS is 35 µg/m^3.

Flagged events become part of the **Exceptional Events** package.

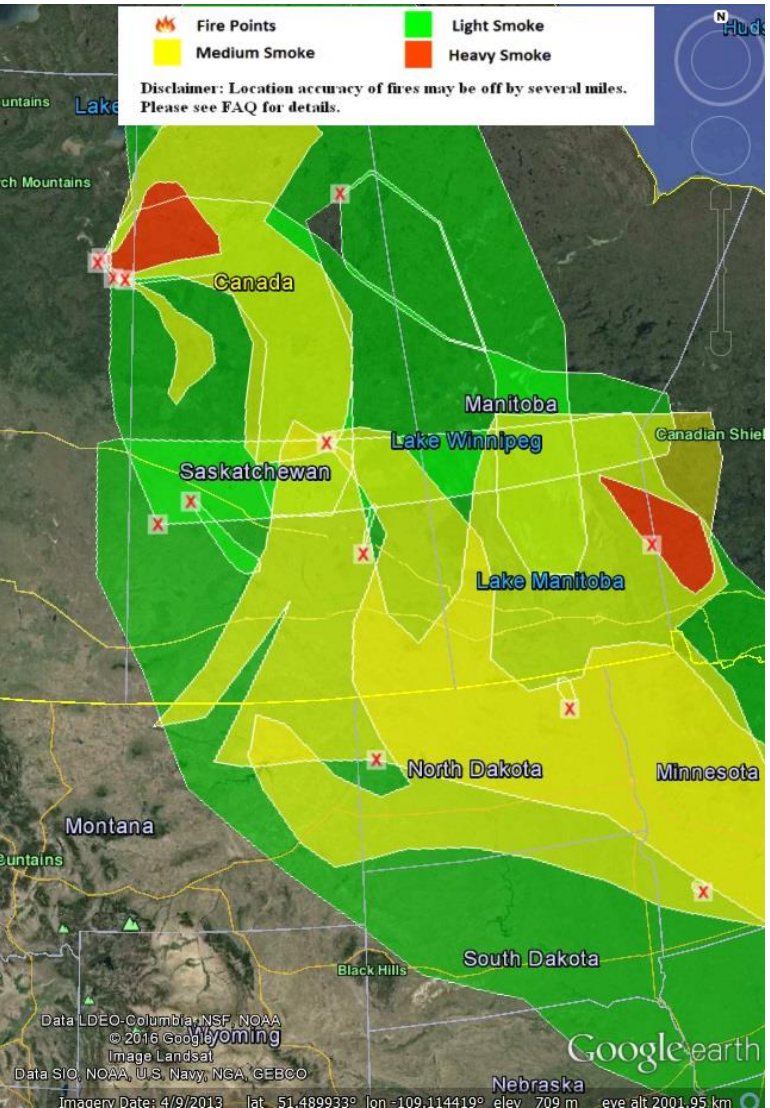
A wildfire **flagged event** is one in which $PM_{2.5}$ values were impacted by wildfires.

Exceptional Events are those considered **not reasonable controllable or preventable**.

2005-2016 Fire in Montana



May



- Fort McMurray Fire
  - Northeast Alberta
  - 1.5 million acres
- Smoke impacted eastern Montana

June

- Generally clean air with frequent precipitation and cool temperatures
- Isolated fires impacting Hamilton and Broadus
- No days above NAAQS
- Observation Fire
  - 10 miles SW of Hamilton
  - 1,422 acres

Helena Daily $PM_{2.5}$

June						
28	29	30	31	4	5	3
6	7	8	8	8	7	8
4	2	3	3	2	5	3
4	2	5	5	4	6	4
4	4	4	8	7	8	1
2	3	4	5	6	7	8
S	S	M	T	W	T	F

July & August

- Good … until the last weekend of July
- Roaring Lion Fire – July 31st, 2016
  - 8,658 acres
  - 5 miles SW of Hamilton, MT

Hamilton Daily $PM_{2.5}$

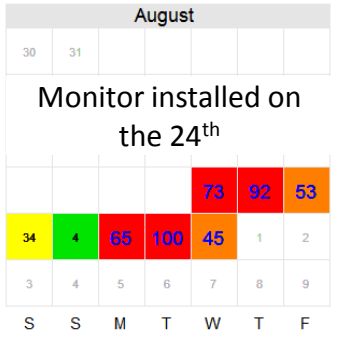
July						
25	26	27	28	29	30	10
8	3	6	4	0	4	4
4	2	3	4	4	6	6
4	5	4	6	7	8	7
6			6	8	7	8
6	6	1	2	3	4	5
S	S	M	T	W	T	F

August						
30	31	68	40	15	31	40
37	18	16	7	6	8	6
8	8	11	12	16	14	4
9	16	38	25	9	5	9
15	58	19	31	31	1	2
3	4	5	6	7	8	9
S	S	M	T	W	T	F

August

- Copper King Fire
  - 28,553 acres
  - 7 miles east of Thompson Falls
  - Significant impacts to Thompson Falls

Thompson Falls Daily $PM_{2.5}$



August & September

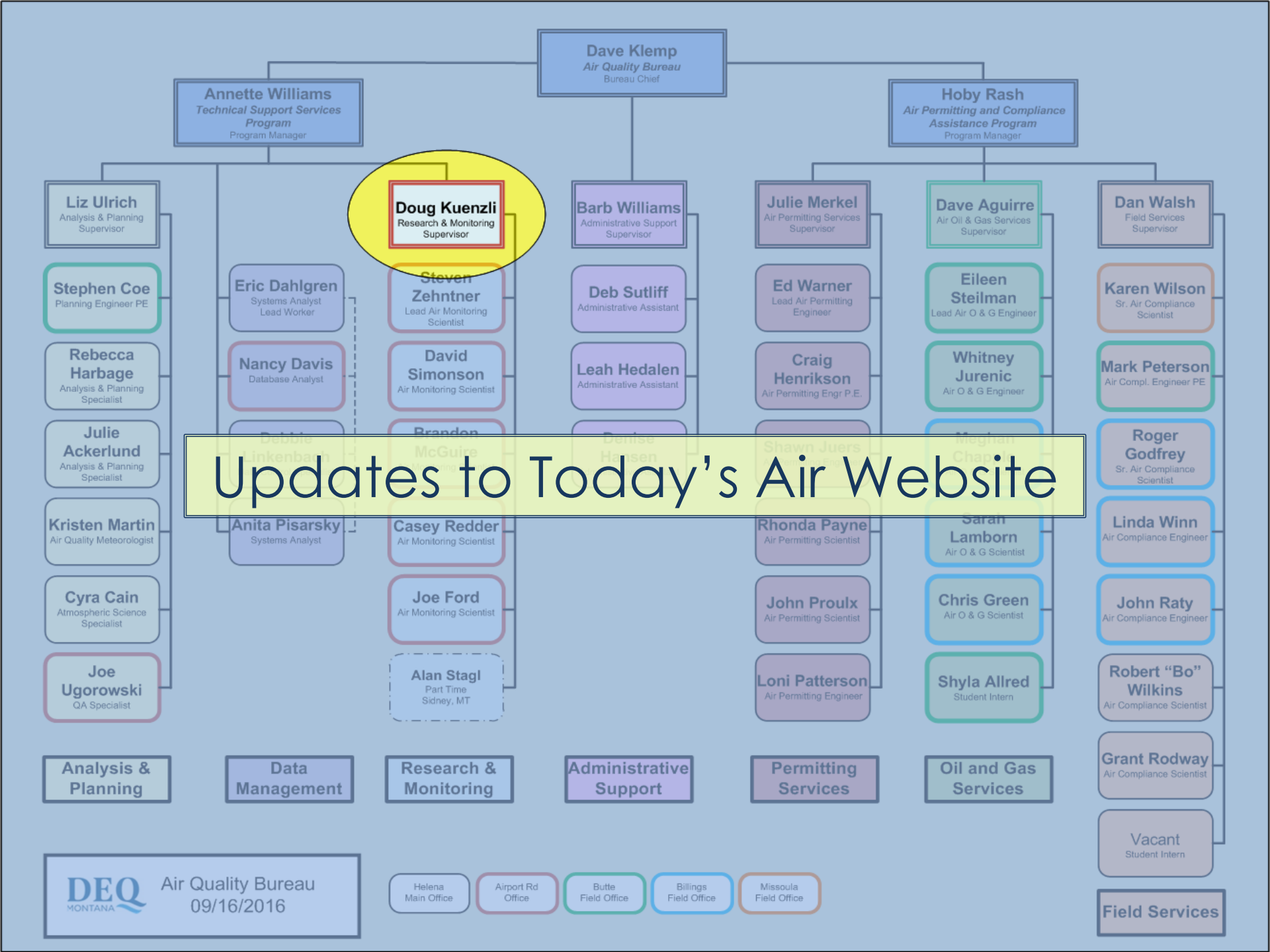
- Yellowstone National Park
  - Maple fire: 45,377 acres
    - 4 miles NNE of West Yellowstone
    - Periods of hazardous air quality in West Yellowstone

West Yellowstone Daily $PM_{2.5}$

August						
30	31	17	13	10	8	9
11	13	7	7	4	9	8
8	15	18	29	38	36	17
				45	35	47
31	69	61	52	80	1	2
3	4	5	6	7	8	9
S	S	M	T	W	T	F

September						
27	28	29	30	31	45	7
9	11	4	6	4	4	10
36	184	38	15	5	7	
1	2	3	4	5	6	7
S	S	M	T	W	T	F


Bureau Projects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Today's Air Update Project

Presentation for the Montana Clean Air Act Advisory Committee (CAAAC)

September 27, 2016

- Reported $PM_{2.5}$ concentration values
- Exposure related health impact assessments
- Smoke & health information

Today's Air - Objective & Audience:

Provide technical data and health impact information

- Local and state environmental and public health agencies
- School officials
- General public

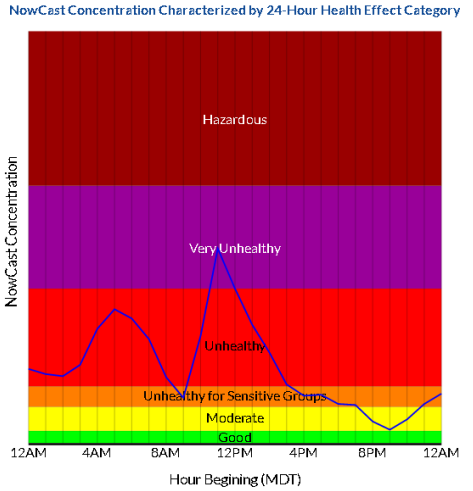
Hourly Data Table Interpretation

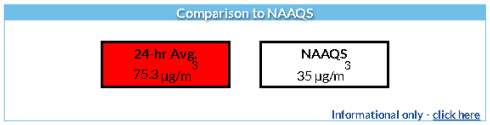
Health Effects Categories are based on 24-hour average particulate levels, adjusted to a time-weighted NowCast to provide a real time assessment of current air quality. More information about the NowCast method can be found here

Hourly Data
Previous Day 9/25/2016 Next Day

Hour	1-Hour Avg	NowCast Concentration
0:00-1:00	13.2	9.5
1:00-2:00	8.6	9.0
2:00-3:00	8.9	8.9
3:00-4:00	5.6	7.2
4:00-5:00	1.8	4.5
5:00-6:00	3.0	3.7
6:00-7:00	2.1	2.9
7:00-8:00	6.1	4.5
8:00-9:00	5.3	4.9
9:00-10:00	15.3	10.1
10:00-11:00	8.2	9.1
11:00-12:00	1.7	5.4
12:00-13:00	0.0	2.2
13:00-14:00	0.0	0.9
14:00-15:00	1.1	1.0
15:00-16:00	2.1	1.5
16:00-17:00	1.3	1.4
17:00-18:00	2.7	2.0
18:00-19:00	3.1	2.5
19:00-20:00	4.7	3.6
20:00-21:00	3.6	3.6
21:00-22:00	6.3	4.9
22:00-23:00	4.4	4.6
23:00-0:00	5.5	5.0

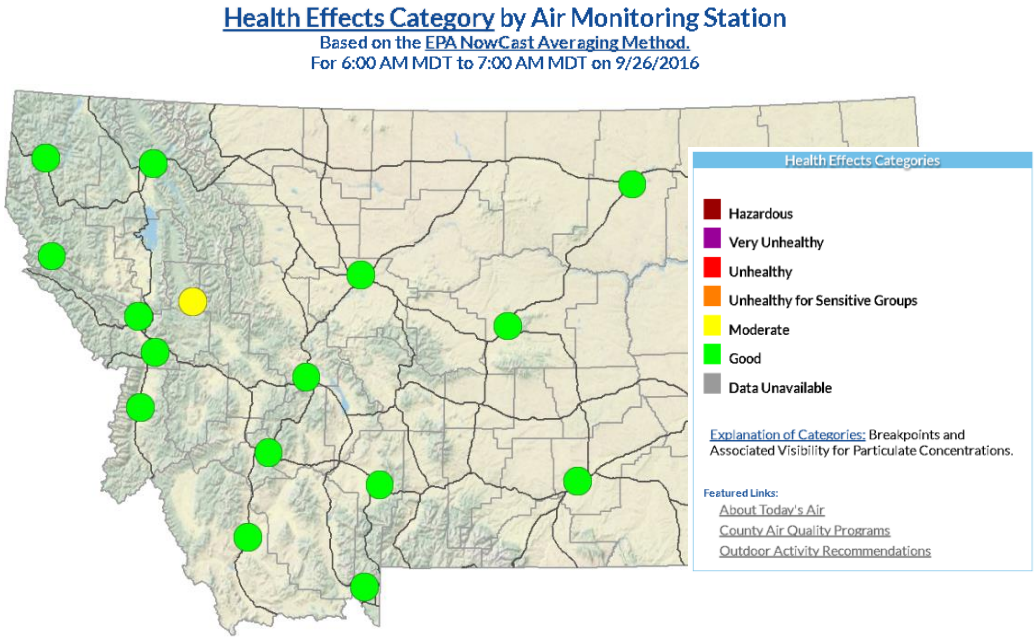
All data in $\mu g/m^3$
DU = Data Unavailable





Today's Air Emphasis:

- Intuitive
- Easy to navigate
- Substantive
- Understandable



Each dot on the map represents an air monitoring station, click on a dot for station specific data. The color of the dot is determined by the current local air quality and comparison to the health effects category table.

Air Monitoring Stations

Billings
Birney
Bozeman
Broadus
Butte
Dillon
Flathead Valley
Frenchtown
Great Falls
Hamilton
Helena
Lewistown
Libby
Malta
Missoula
Seeley Lake
Sidney
Thompson Falls
West Yellowstone

Today's Air Update Project

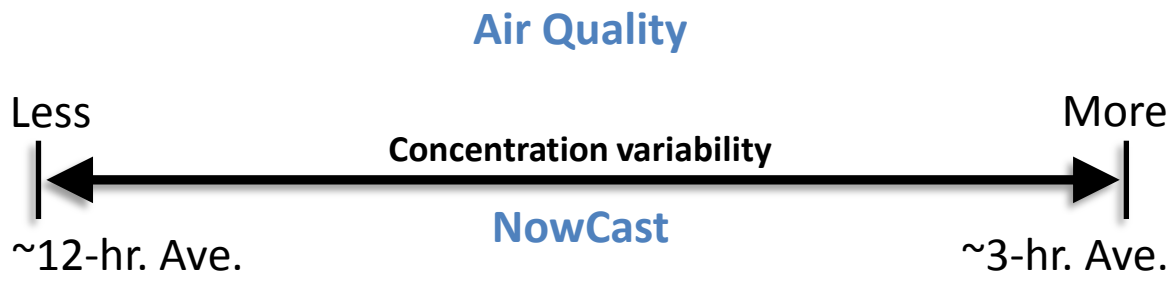
Transition to the NowCast Method

Concerns with Current Method

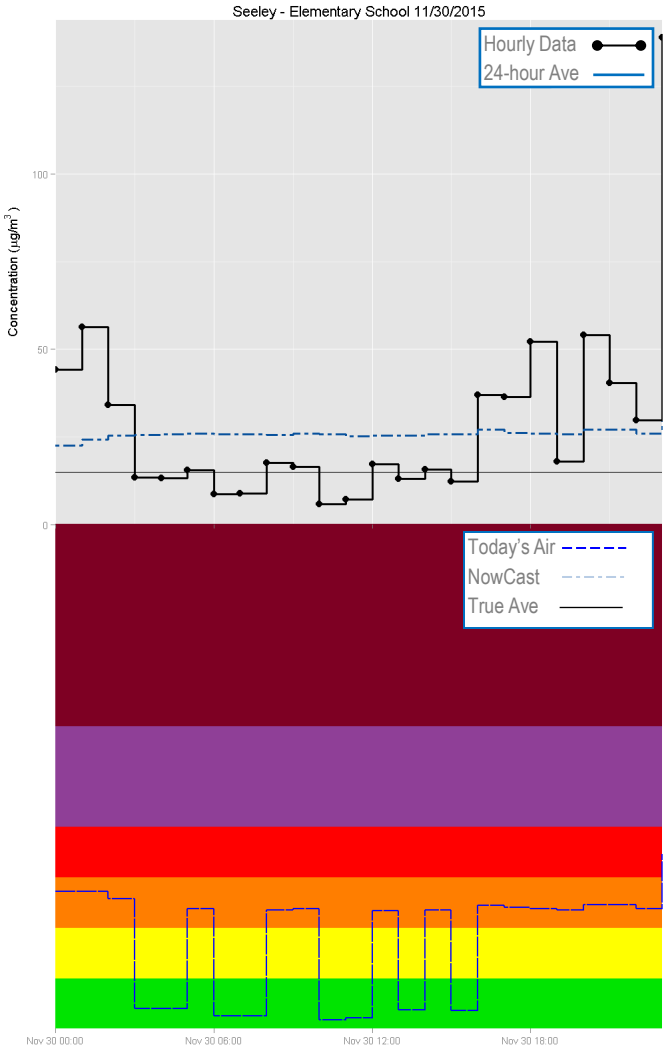
- Incorporates three averaging times & breakpoints
  - 1-hour, 8-hour & 24-hr
- Front map display
  - Not responsive to rapidly changing conditions
  - Erratic characterization of conditions
- Relevance of health assessment breakpoints

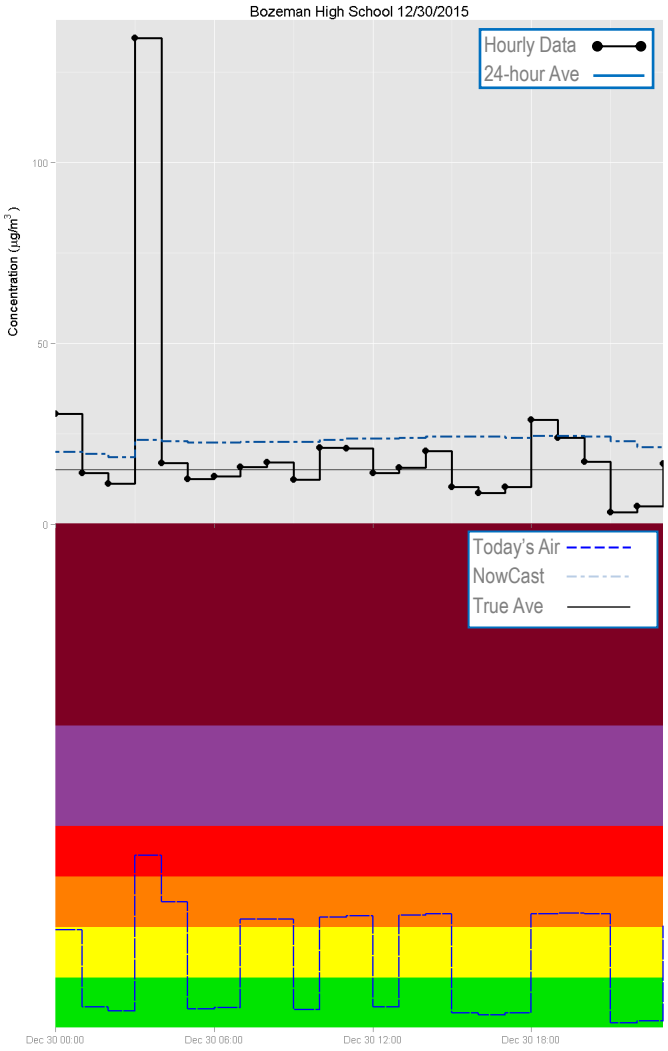
USEPA's NowCast Method

- Scales previous 12 hourly concentrations
- Weighted averaging based on variability of conditions
  - Less variable = even weighting
  - More variable = weighted toward recent hours

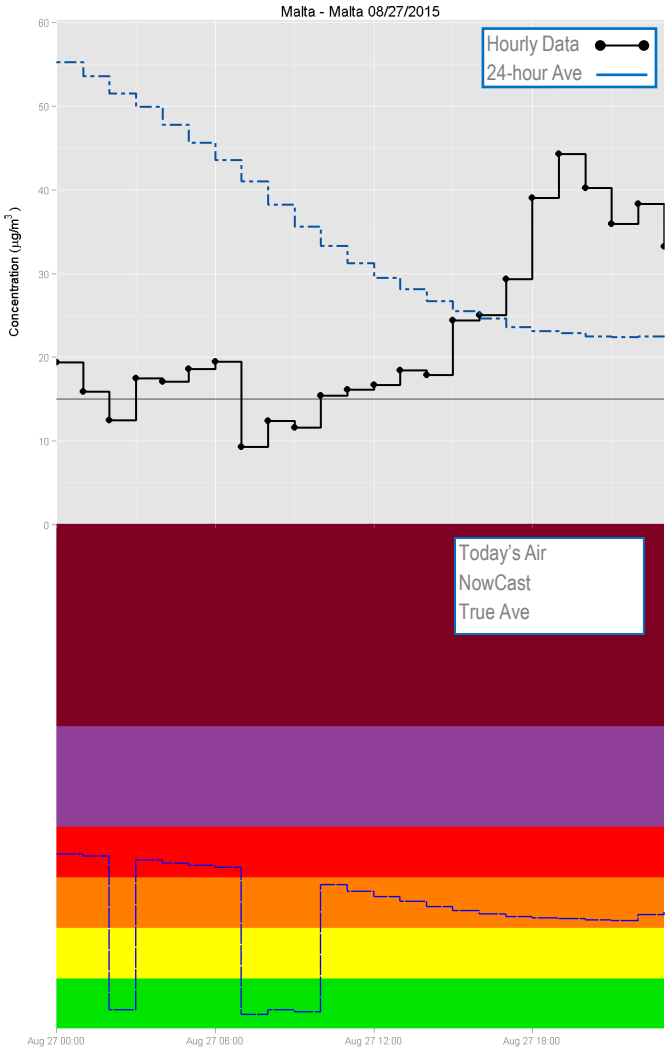


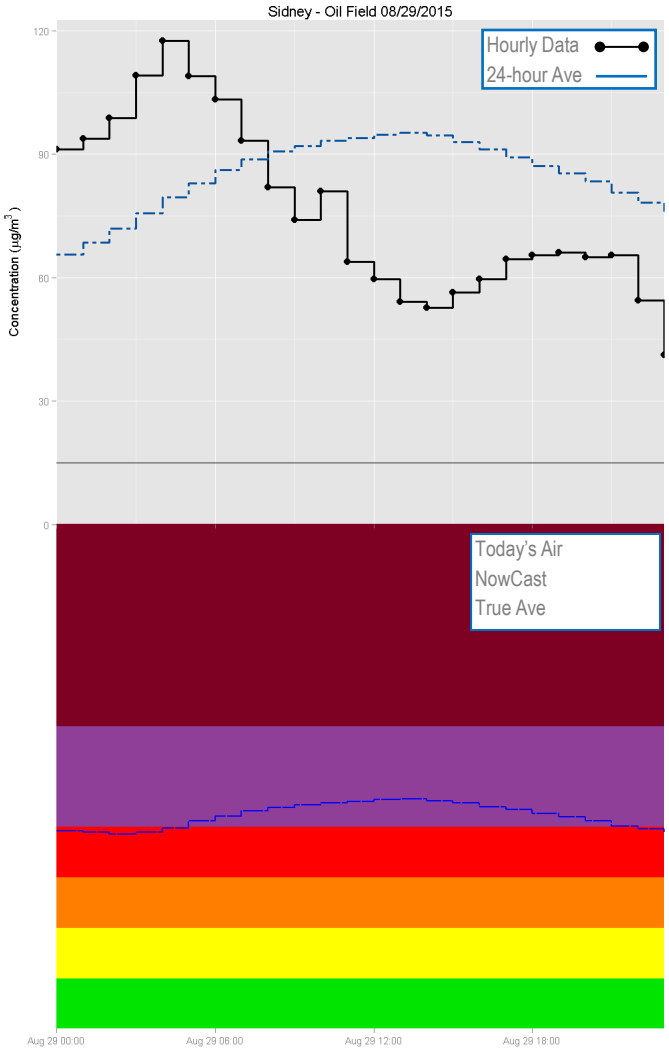
Method Comparison





Method Comparison





NowCast Method Advantages

- Effectively represents short-term & cumulative exposures
- Responsive to rapidly changing conditions
- More representative of actual conditions
- Single data point for health categorization

Today's Air Update Project

Update Objectives

Stakeholder input

Maintain format & Appearance

Enhanced features

Today's Air Update Project

Recommendations for Outdoor Activities Based on Air Quality for Schools and Child Care Facilities

Health Effect Category		Good	Moderate	Unhealthy for sensitive groups*	Unhealthy	Very Unhealthy/ Hazardous
Visibility (miles)		13+	9-13	5-9	2-5	Less than 2
Particulate levels (µg/m^3)	1 hr	Less than 34	34-51	51-89	89-201	Greater than 201
	8 hr	Less than 23	23-35	35-62	62-140	Greater than 140
	24 hr	Less than 13	13-20	20-35	35-80	Greater than 80
Recess or Other Outdoor Activity (15 minutes)		No limitations	No limitations	Make indoor space available for all children to be active, especially young children. If outdoors, limit vigorous activities and people with chronic conditions should be medically managing their condition.	Keep all children indoors.	Keep all children indoors.
Physical Education Class (1 hour)		No limitations	Monitor sensitive groups and limit their vigorous activities.	Make indoor space available for all children to be active, especially young children. If outdoors, limit vigorous activities and people with chronic conditions should be medically managing their condition.	Conduct P.E. indoors. If outdoors, only allow light activities for all participants. People with chronic conditions should be medically managing their condition.	Conduct P.E. in a safe (good air quality) indoor environment.
Athletic Practice, Training (2-4 hours)		No limitations	Monitor sensitive groups and limit their vigorous activities.	People with chronic conditions should be medically managing their condition. Increase rest periods and substitutions for all participants to lower breathing rates.	Conduct practice and trainings indoors. If outdoors, allow only light activities for all participants. Add rest breaks or substitutions to lower breathing rates. People with chronic conditions should be medically managing their condition.	Conduct practice and trainings in a safe (good air quality) indoor environment.
Scheduled Sporting Events (2-4 hours)		No limitations	Monitor sensitive groups and limit their vigorous activities.	People with chronic conditions should be medically managing their condition. Increase rest periods and substitutions for all participants to lower breathing rates.	Consider rescheduling or relocating event. If outdoor event is held, have emergency medical support immediately available. Add rest breaks or substitutions to lower breathing rates. People with chronic conditions should be medically managing their condition.	Reschedule or relocate event.
Examples of light activities: Walking slowly on level ground Carrying school books Hanging out with friends				Examples of moderate activities: Skateboarding Slow pitch softball Shooting basketballs	Examples of vigorous activities: Running, jogging Playing football, soccer, and basketball	Please note that the intensity of an activity can vary by person and ability

See the back of this document for suggestions on how to use particulate concentration measurements and visibility guidelines to make a decision about poor outdoor air quality and your event. Visit www.todaysair.mt.gov for more information.

* For the purpose of this document, sensitive groups include:

- Young children (ages 0-5 years). Young children may be more sensitive to air pollution as their lungs are still developing and they may have an unknown underlying health condition.
- People who have a chronic condition, such as asthma or another respiratory disease, or cardiovascular disease. People with these conditions may be more sensitive to air pollution and should talk with their primary healthcare provider about managing their condition.

Montana DPHHS Healthy People. Healthy Communities. | DEQ Montana Department of Environmental Quality | Montana Office of Public Instruction Denise Juneau, State Superintendent opi.mt.gov

Today's Air Update Project

Update Process & Timing

Beta tested July 18th - September 1st

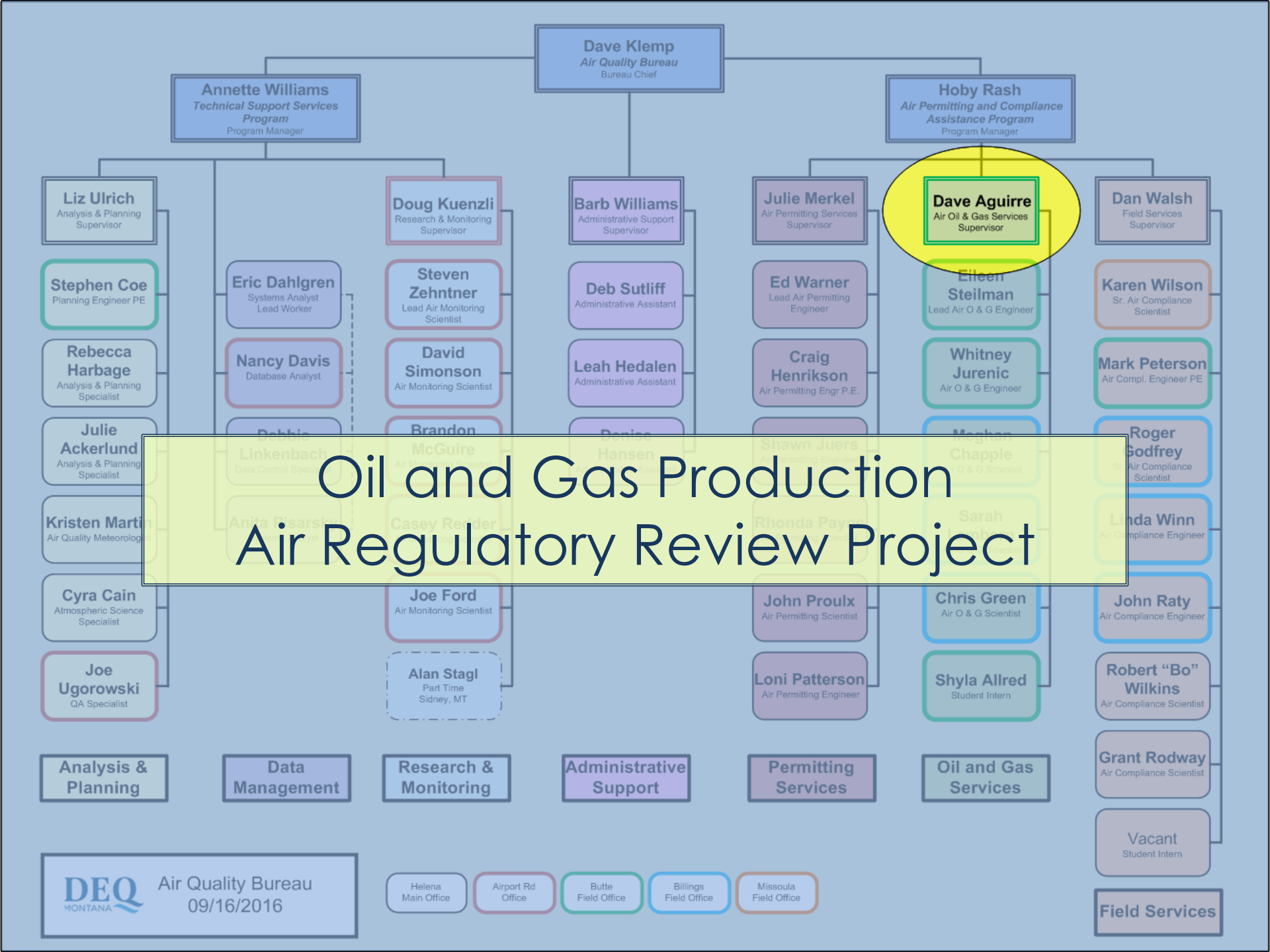
Comment period ended September 15th

Anticipated launch date November 15th

Today's Air Update Project

Questions?

http://svc.mt.gov/deq/todaysair



Oil and Gas Production Air Regulatory Review Project

DEQ MONTANA

Oil & Natural Gas Production Air Regulatory Review

Clean Air Act Advisory Committee – 9/27/2016

Dave Aguirre

Outline

May 26, 2016 CAAAC Presentation Take Away(s) & Updates

Federal Rule Activity

- Updates

Montana's Oil & Gas Registration Program

- Program Evaluation

AQB Oil & Gas Program Project

Activities

- Stakeholder Involvement
- Rule Evaluation

Next Steps

Take Aways: Federal Rule Activity / Updates

Environmental Protection Agency (EPA)

Final (Effective August 2, 2016)

- Federal Implementation Plan – Minor New Source Review (NSR) on Indian Lands
- Source Determination Rule (Aggregation)
- Standards of Performance for New Stationary Sources (NSPS) – OOOOa (Challenged)

Proposed

- Control Technique Guidelines (CTGs)
- Information Collection Request (ICR) (2nd draft not yet published)

Bureau of Land Management (BLM)

Proposed

- Waste Prevention, Production Subject to Royalties, and Resource Conservation

Take Aways: Montana's Oil & Gas Program

Program Evaluation

Rules

- Evaluate Montana's registration program rules against federal rules
- Identify most stringent/robust requirements

Efficiencies

- Internal/External

Stakeholder Involvement

AQB Oil & Gas Program Project

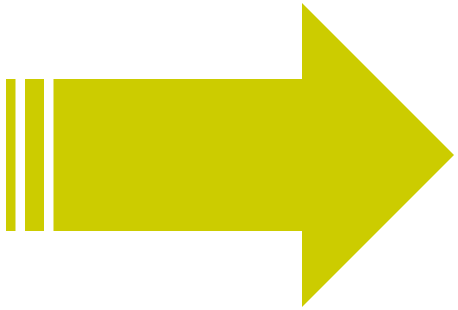
Activities

Stakeholder Involvement

- CAAAC
- Regulated Stakeholders (Sidney, Billings & Shelby)

Rule Evaluation

- 90 % Complete



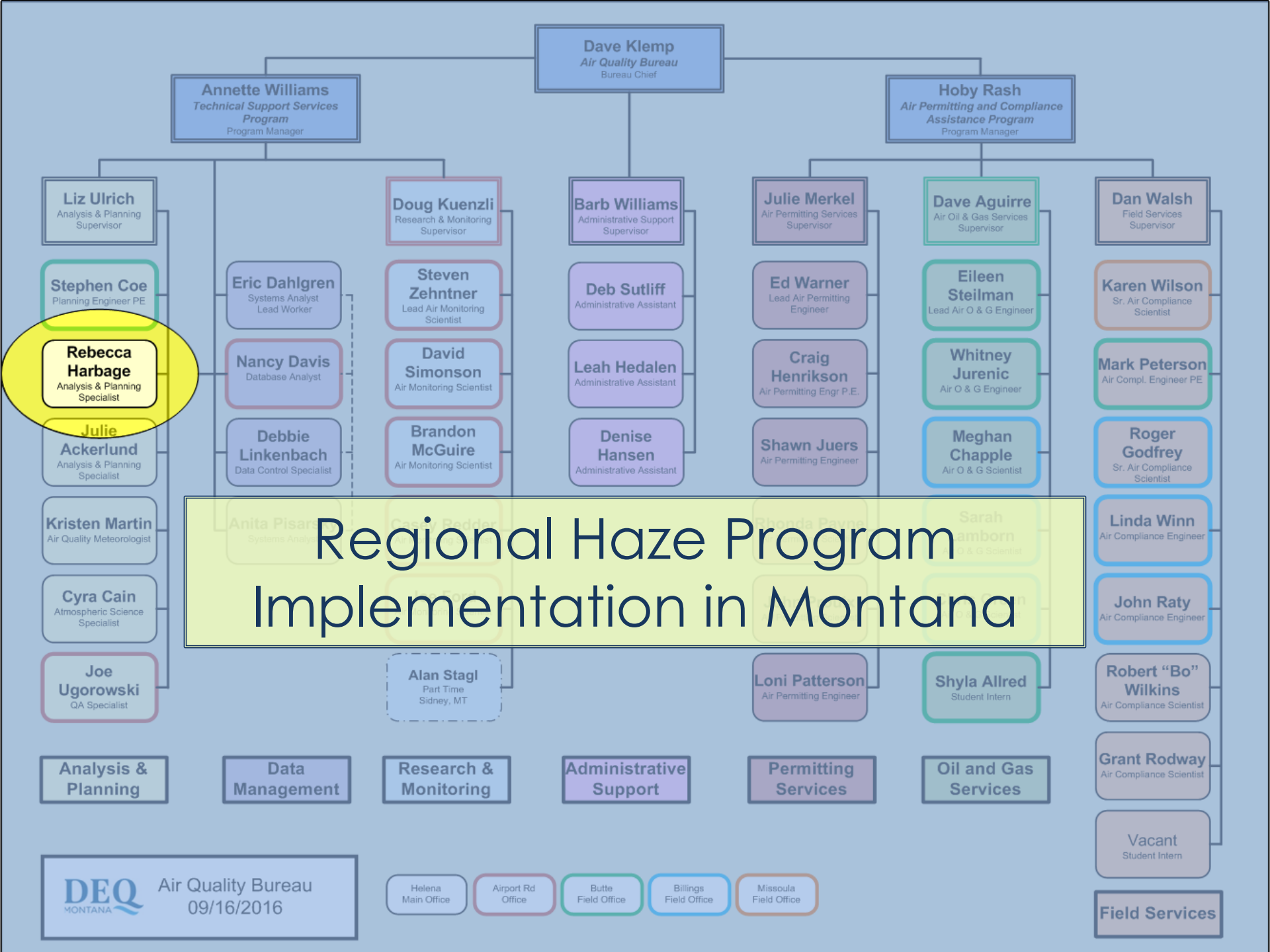
Next Steps

Work Group

- Rule Discussions
- Efficiency Needs

Questions?

Dave Aguirre, Oil & Gas Services Section Supervisor
daguirre@mt.gov | (406) 782-2689, Ext. 205



Regional Haze Program Implementation in Montana

Regional Haze Program Implementation in Montana

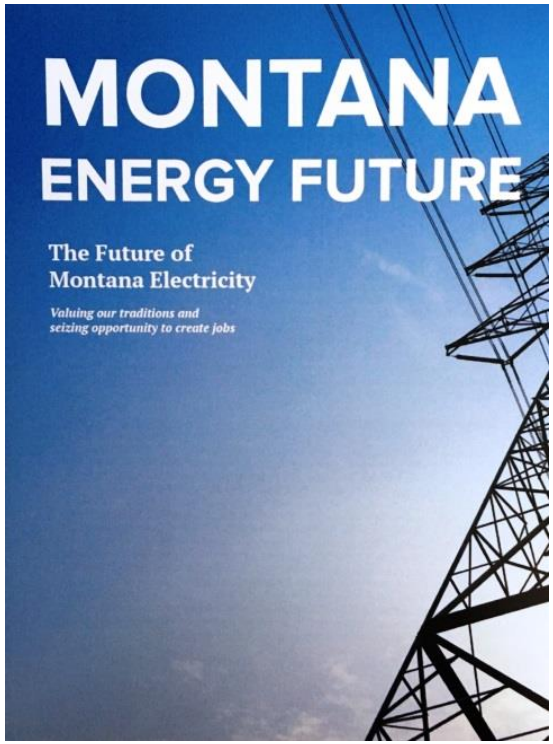
September 27, 2016

Regional Haze Program?

"The Environmental Protection Agency (EPA) is promulgating a Federal Implementation Plan (FIP) to address **regional haze** in the State of Montana. EPA developed this FIP in response to the State's decision in 2006 to not submit a regional haze State Implementation Plan (SIP) revision."

September 18, 2012

Regional Haze Program?



"Take over from the EPA the Regional Haze Program for the upcoming planning cycle."

June 21, 2016

Visibility Background

History of Visibility Protection

Regional Haze in Montana

Where are we Today?

Next Steps

Regional Haze & Visibility

VISIBILITY means the degree of perceived clarity when viewing objects at a distance. Visibility includes perceived changes in contrast, coloration, and texture.

- Not just how far you can see, but how well you can see

VISIBILITY IMPAIRMENT means any humanly perceptible difference between actual visibility conditions and natural visibility conditions.


24 15: 0

Causes of Visibility Impairment

Emissions of certain pollutants cause what is commonly known as **HAZE**

- PM_{10}
- $PM_{2.5}$
- NO_x
- SO_2
- VOCs
- NH_3

REGIONAL HAZE means visibility impairment that is caused by the emission of air pollutants from numerous sources located over a wide geographic area. Such sources include, but are not limited to, major and minor stationary sources, mobile sources, and area sources.

History of Visibility Protection

1977 Clean Air Act Amendments

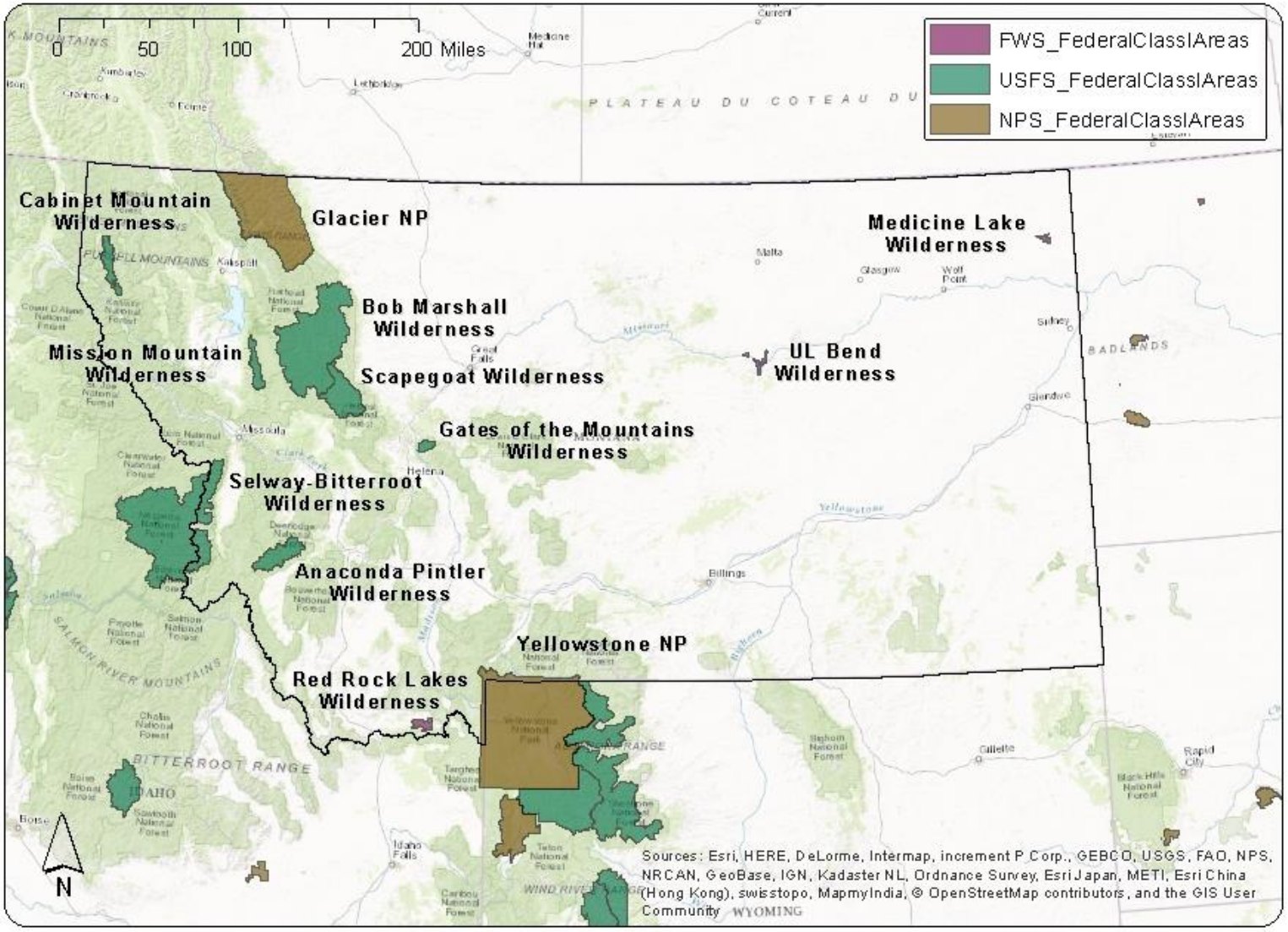
1980 Reasonably Attributable Visibility Impairment (RAVI)

1990 Clean Air Act Amendments

1999 Regional Haze Rule

IMPROVEMENT	NO DEGRADATION
on the worst days	on the best days

Mandatory Federal Class I Areas



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Regional Haze in Montana

2006 Montana withdrew efforts to develop a State Implementation Plan (SIP)

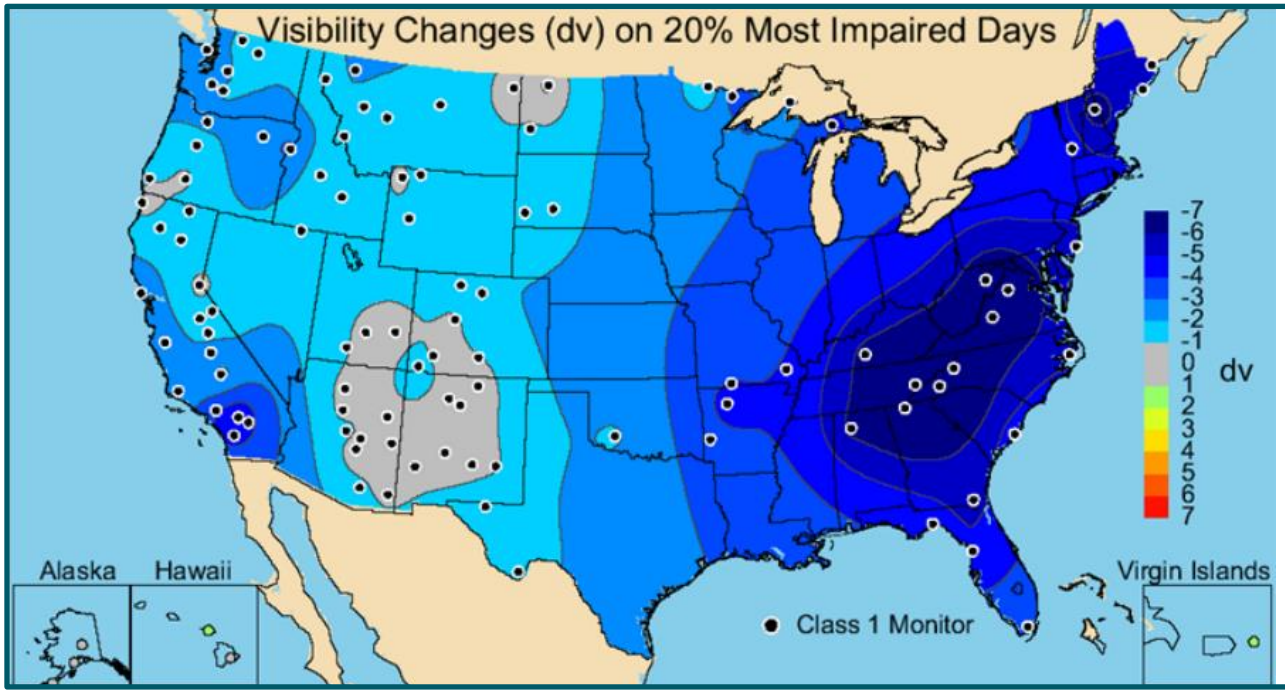
2012 MT Regional Haze Federal Implementation Plan (FIP)

Facility	Control Type	Emissions Controlled
Ash Grove Cement	BART	NO_x, SO_2, PM
Blaine Co. #1 Compressor Station	Reasonable Progress	NO_x
Colstrip Units 1 & 2	BART (remanded)	NO_x, SO_2, PM
J.E. Corette (shut down)	BART (remanded)	NO_x, SO_2, PM
Oldcastle Trident Cement Plant	BART	NO_x, SO_2, PM

Visibility Improvements

Visibility has improved in most areas since 2000-2004 baseline

Western states had better visibility from the start, compared to Eastern states



Blue indicates improvement. Gray indicates areas of little change.

EPA, Technical Support Document: Revised Recommendations for Visibility Progress Tracking Metrics for the Regional Haze Rule, July 2016

Current Timeline

2016 "Montana Energy Future"

2016 Proposed revisions to Regional Haze Rule

2017 Deadline to submit progress report on the MT FIP

2018 Start of the second implementation period

The second planning period is coming up, is it time for Montana to be in the driver's seat?

Next Steps

Scope of Work

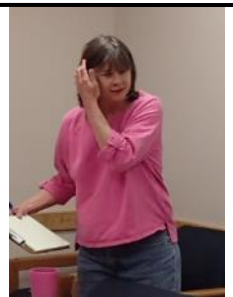
(1) UNDERSTAND the requirements of the federal regional haze program,

(2) DEVELOP a state regional haze program, and

(3) IMPLEMENT the program into the future.

DEQ Project Team

Cyra Cain | Stephen Coe | Craig Henrikson | Kristen Martin | Rhonda Payne





Key Stakeholders

Clean Air Act Advisory Committee (CAAAC)

Environmental Protection Agency

Montana Governor's Office

Federal Land Managers (FLMs)

Regional Planning Organizations: Western States Air Resources Council

(WESTAR), Western Regional Air Partnership (WRAP)

Tribes

Other Industry Representatives

Other NGOs

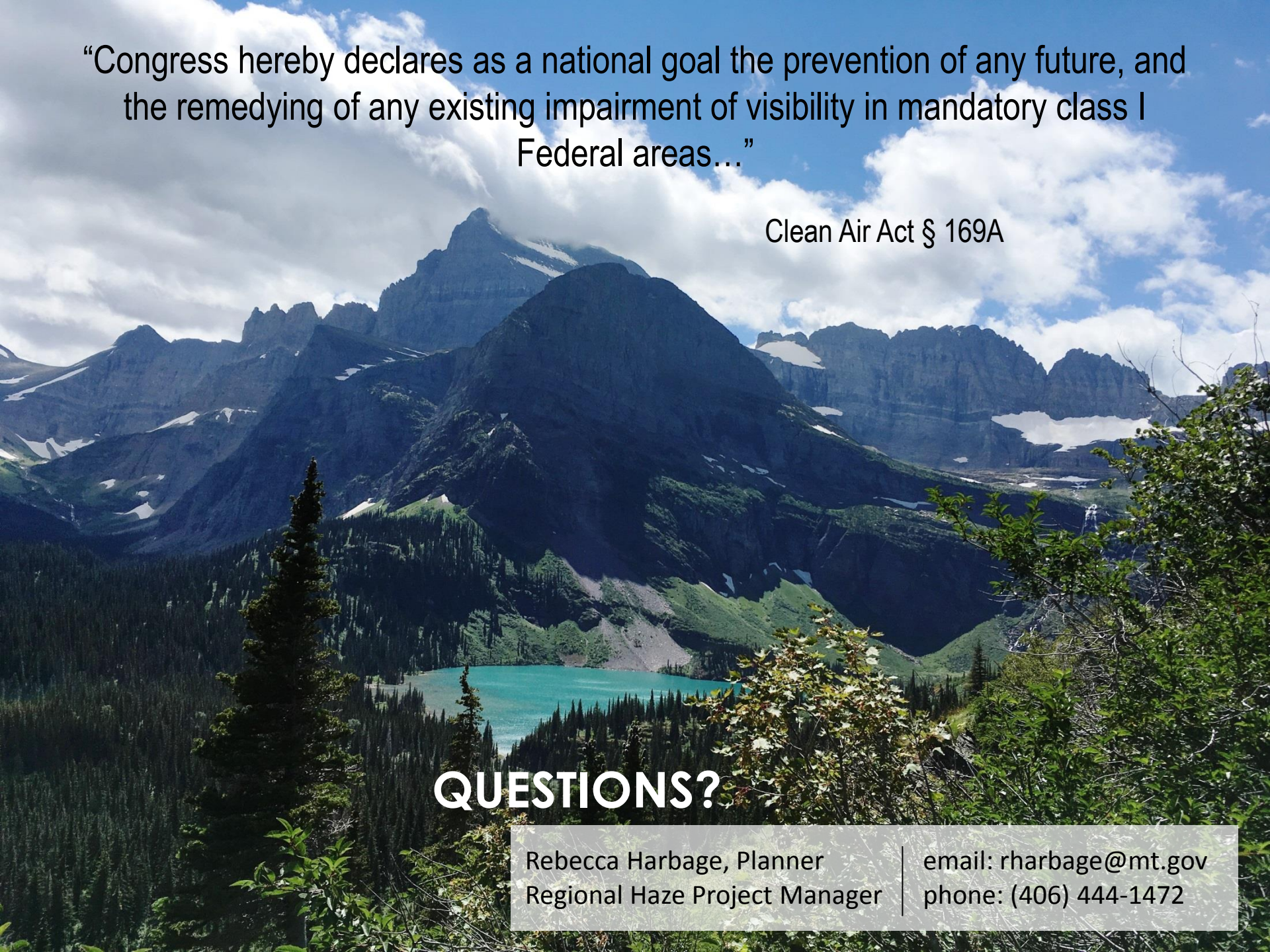
So really, what will it take?

Understand what visibility impairment can be attributed to man-made sources at each mandatory class I area.

Determine the specific sources of the emissions.

Develop a plan to control those emissions into the future.

Implement the plan!



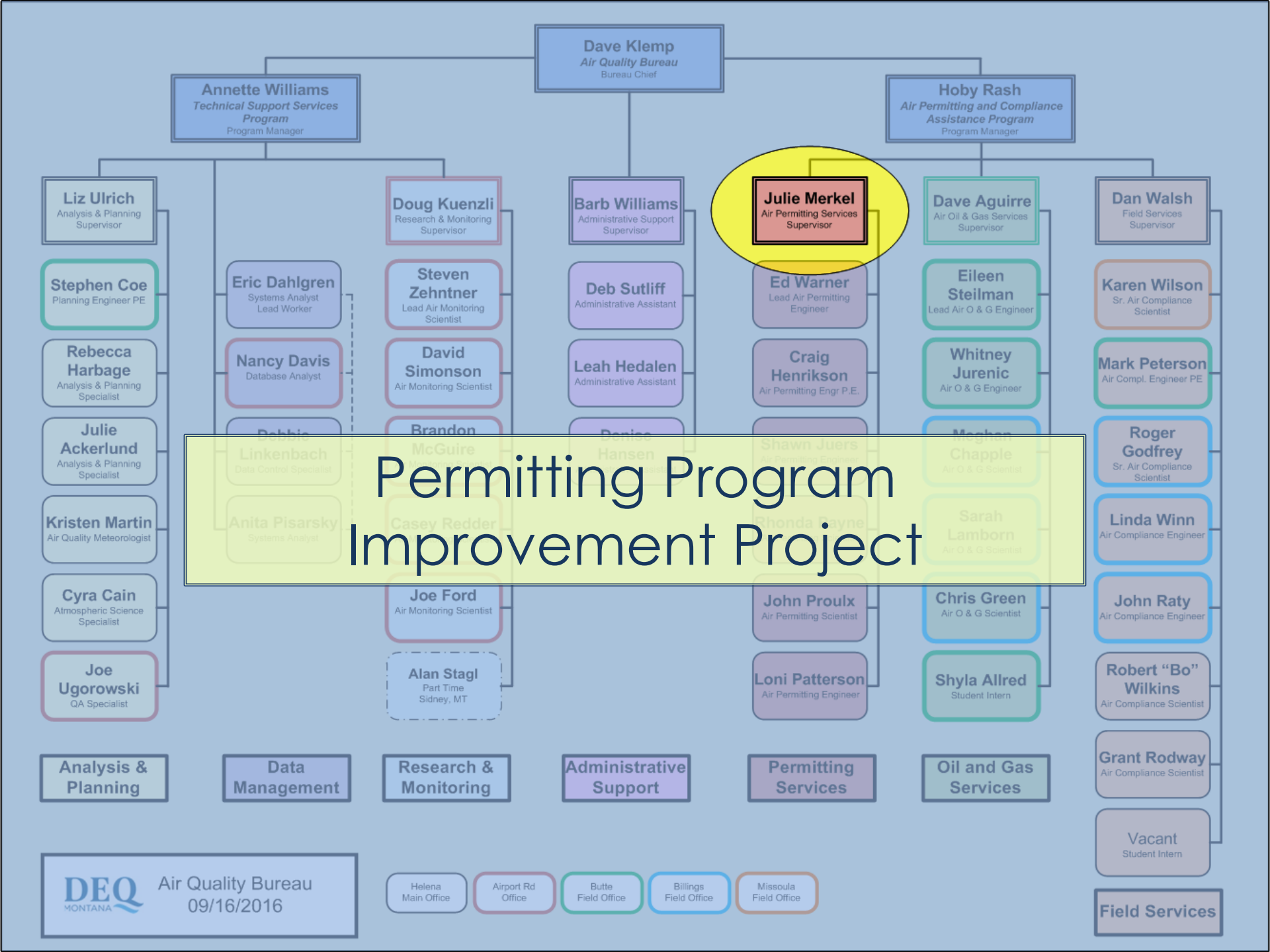
"Congress hereby declares as a national goal the prevention of any future, and the remedying of any existing impairment of visibility in mandatory class I Federal areas…"

Clean Air Act § 169A

QUESTIONS?

Rebecca Harbage, Planner
Regional Haze Project Manager

email: rharbage@mt.gov
phone: (406) 444-1472



Permitting Program Improvement Project

Projects

Efficiencies in Air Quality Permitting

Sage Grouse Project

Loni Patterson

Craig Henrikson

Nat Carter

Eric Dahlgren

Carolyn Sime

Project Scope

The Sage Grouse Workflow Tracking project will develop features within Workflow to track details of permit actions under the Air Quality Bureau's authority within the designated Sage Grouse Habitat. The tracking project will also develop a report summarizing the new features and existing data regarding these permit actions within designated Sage Grouse Habitat. This will clearly demonstrate that the AQB is in compliance with Executive Orders 12-2015 and 21-2015 as well as the exceptions as approved by the Montana Sage Grouse Oversight Team.

Permitting Program Improvement Project

Julie Merkel

Ed Warner

Shawn Juers

Dan Walsh

Rebecca Harbage

Eric Dahlgren

Finding a new way to do business

Fee based program

Changing universe of sources

Streamlining the process

Maintain protection of air quality

What makes sense?

Permit by Rule?

General Permit?

Registration by Source Type?

Continue permitting as we are?

A Few Considerations

- Review of Statutory Requirements
  - Public notice requirements
  - MEPA requirements
- Remove case-by-case BACT where appropriate
- Maintain some kind of public involvement process
- Portables – Keeping track of facility locations
- Appropriate level of stakeholder involvement
- Implement appropriate compliance strategy

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Benefits

Offer cost-effective means of issuing permits

Provide quicker and simpler means of permitting minor sources

Standardize requirements that similar sources can utilize

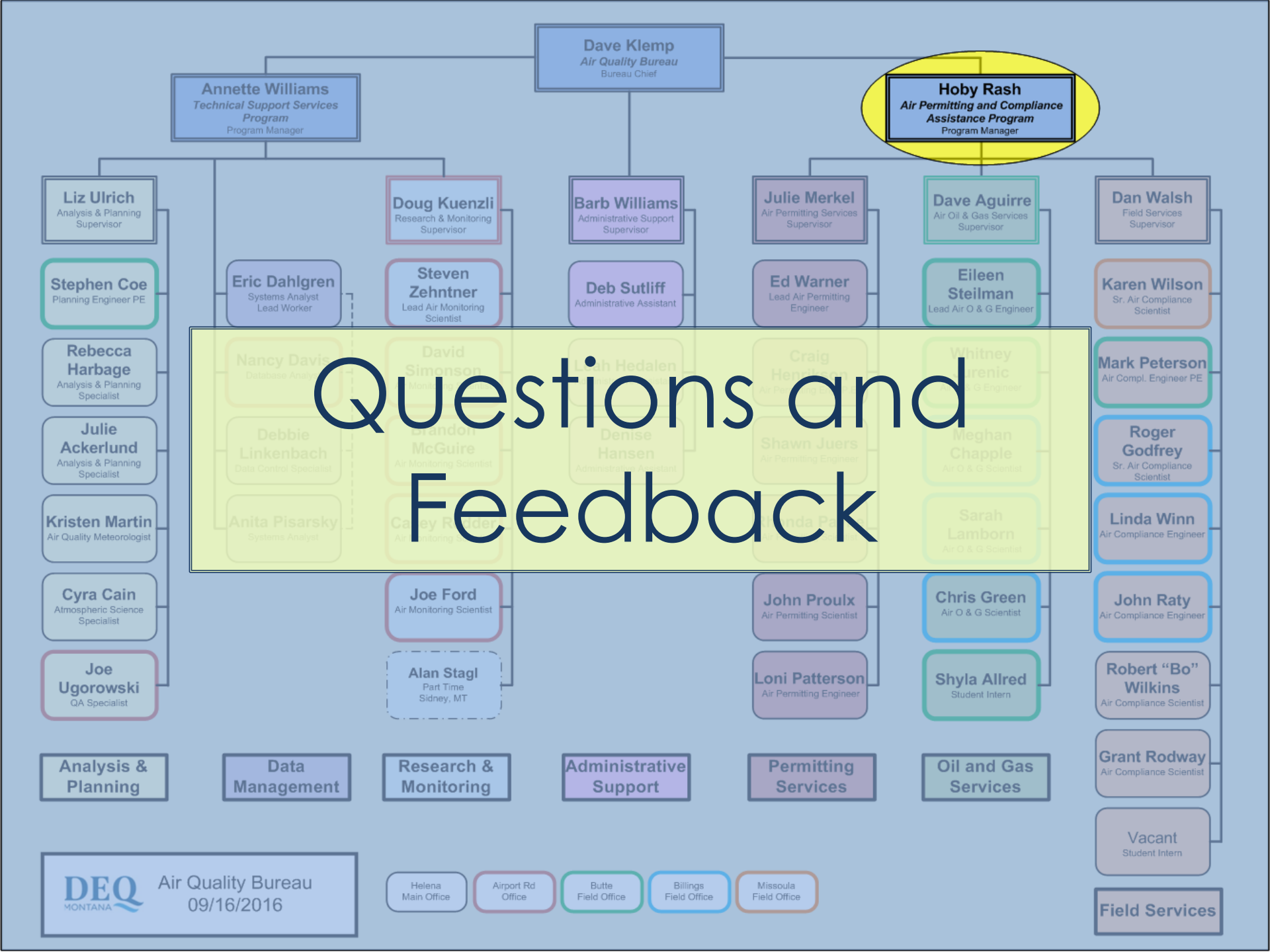
Next Steps

Pinpoint program needs

Establish detailed project scope

Determine need for rule making

Pull in stakeholders at appropriate time



Questions and Feedback