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
Please Introduce Yourself
New Air Quality Staff!!

- Julie Ackerlund, Analysis & Planning Specialist
- Chris Green, Air O & G Scientist
EQC Review of the Air Program
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

<table>
<thead>
<tr>
<th>Community</th>
<th>Pollutant</th>
<th>Standard Violated</th>
<th>Non-Attainment</th>
<th>Attainment/Maintenance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laurel</td>
<td>Sulfur Dioxide</td>
<td>1971 (24-hr)</td>
<td>March 3, 1978</td>
<td></td>
</tr>
<tr>
<td>East Helena</td>
<td>Sulfur Dioxide</td>
<td>1971 (24-hr)</td>
<td>November 15, 1990</td>
<td></td>
</tr>
<tr>
<td>Billings</td>
<td>Sulfur Dioxide</td>
<td>2010 (1-hr)</td>
<td>June 09, 2016</td>
<td></td>
</tr>
<tr>
<td>Libby</td>
<td>Particulate (PM-2.5)</td>
<td>1997 (Annual)</td>
<td>April 5, 2005</td>
<td></td>
</tr>
<tr>
<td>Kalispell</td>
<td>Particulate (PM-10)</td>
<td>1987 (24-hr)</td>
<td>November 15, 1990</td>
<td></td>
</tr>
<tr>
<td>Columbia Falls</td>
<td>Particulate (PM-10)</td>
<td>1987 (24-hr)</td>
<td>November 15, 1990</td>
<td></td>
</tr>
<tr>
<td>Whitefish</td>
<td>Particulate (PM-10)</td>
<td>1987 (24-hr)</td>
<td>October 19, 1993</td>
<td></td>
</tr>
<tr>
<td>Libby</td>
<td>Particulate (PM-10)</td>
<td>1987 (24-hr)</td>
<td>November 15, 1990</td>
<td></td>
</tr>
<tr>
<td>Missoula</td>
<td>Particulate (PM-10)</td>
<td>1987 (24-hr)</td>
<td>November 15, 1990</td>
<td></td>
</tr>
<tr>
<td>Thompson Falls</td>
<td>Particulate (PM-10)</td>
<td>1987 (24-hr)</td>
<td>January 20, 1994</td>
<td></td>
</tr>
<tr>
<td>Butte</td>
<td>Particulate (PM-10)</td>
<td>1987 (24-hr)</td>
<td>November 15, 1990</td>
<td></td>
</tr>
<tr>
<td>Billings</td>
<td>Carbon Monoxide</td>
<td>1971 (8-hour)</td>
<td>April 22, 2002</td>
<td></td>
</tr>
<tr>
<td>Great Falls</td>
<td>Carbon Monoxide</td>
<td>1971 (8-hour)</td>
<td>July 8, 2002</td>
<td></td>
</tr>
<tr>
<td>Missoula</td>
<td>Carbon Monoxide</td>
<td>1971 (8-hour)</td>
<td>September 17, 2007</td>
<td></td>
</tr>
<tr>
<td>East Helena</td>
<td>Lead</td>
<td>1978 (Calendar Quarter)</td>
<td>January 6, 1992</td>
<td></td>
</tr>
</tbody>
</table>
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
95,125 acres burned in the state

108 flagged events

7 days ≥ NAAQS

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

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

Flagged events become part of the Exceptional Events package.

Exceptional Events are those considered not reasonable controllable or preventable.
2005-2016 Fire in Montana

Acres Burned vs. Number of Flagged Events

- 2006: 1,200,000 Acres Burned, 500 Flagged Events
- 2007: 800,000 Acres Burned, 400 Flagged Events
- 2012: 1,400,000 Acres Burned, 600 Flagged Events

Montana Clean Air Act Advisory Committee (CAAAC)
September 27, 2016 | 1:00-3:00 p.m. | Room 111, Metcalf Building, Helena
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
July & August

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

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

- Yellowstone National Park
  - Maple fire: 45,377 acres
  - 4 miles NNE of West Yellowstone
  - Periods of hazardous air quality in West Yellowstone
Bureau Projects
Updates to Today’s Air Website
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
Today’s Air Emphasis:

► Intuitive
► Easy to navigate
► Substantive
► Understandable

*Health Effects Category by Air Monitoring Station*

Based on the EPA NowCast Averaging Method,
For 6:00 AM MDT to 7:00 AM MDT on 9/26/2016

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
- 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

Seeley - Elementary School 11/30/2015

Bozeman High School 12/30/2015
Montana Clean Air Act Advisory Committee (CAAAC)
September 27, 2016 | 1:00-3:00 p.m. | Room 111, Metcalf Building, Helena

Method Comparison

- **Graph 1:** Malta - Malta 08/27/2015
  - Hourly Data
  - 24-hour Ave

- **Graph 2:** Sidney - Oil Field 08/29/2015
  - Hourly Data
  - 24-hour Ave

- Today’s Air
- NowCast
- True Ave
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

<table>
<thead>
<tr>
<th>Health Effect Category</th>
<th>Good</th>
<th>Moderate</th>
<th>Unhealthy for sensitive groups*</th>
<th>Unhealthy</th>
<th>Very Unhealthy/Hazardous</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visibility (miles)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13+</td>
<td>9-13</td>
<td></td>
<td>5-9</td>
<td>2-5</td>
<td>Less than 2</td>
</tr>
<tr>
<td>Portalcate levels (µg/m³)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 hr</td>
<td>Less than 34</td>
<td>34-51</td>
<td>51-89</td>
<td>99-201</td>
<td>Greater than 201</td>
</tr>
<tr>
<td>8 hr</td>
<td>Less than 23</td>
<td>23-35</td>
<td>35-62</td>
<td>62-140</td>
<td>Greater than 140</td>
</tr>
<tr>
<td>24 hr</td>
<td>Less than 13</td>
<td>13-20</td>
<td>20-35</td>
<td>Greater than 80</td>
<td></td>
</tr>
</tbody>
</table>

### Recess or Other Outdoor Activity (15 minutes)
- 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.
- No limitations: Keep all children indoors.

### Physical Education Class (1 hour)
- No limitations: Monitor sensitive groups and limit their vigorous activities.
- Monitor sensitive groups and limit their vigorous activities.
- Conduct P.E. outdoors. If outdoors, limit 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.
- Monitor sensitive groups and limit their vigorous activities.
- Conduct practice and training indoors. If outdoors, limit 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 training in a safe (good air quality) indoor environment.

### Scheduled Sporting Events (2-4 hours)
- No limitations: Monitor sensitive groups and limit their vigorous activities.
- Monitor sensitive groups and limit their vigorous activities.
- 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

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](http://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.
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 & 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
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.
Emissions of certain pollutants cause what is commonly known as **HAZE**.

**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

<table>
<thead>
<tr>
<th>IMPROVEMENT</th>
<th>NO DEGRADATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>on the worst days</td>
<td>on the best days</td>
</tr>
</tbody>
</table>
Mandatory Federal Class I Areas

Map showing various wilderness areas and national parks in Montana.
Regional Haze in Montana

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

2012  MT Regional Haze Federal Implementation Plan (FIP)

<table>
<thead>
<tr>
<th>Facility</th>
<th>Control Type</th>
<th>Emissions Controlled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ash Grove Cement</td>
<td>BART</td>
<td>NO\textsubscript{x}, SO\textsubscript{2}, PM</td>
</tr>
<tr>
<td>Blaine Co. #1 Compressor Station</td>
<td>Reasonable Progress</td>
<td>NO\textsubscript{x}</td>
</tr>
<tr>
<td>Colstrip Units 1 &amp; 2</td>
<td>BART (remanded)</td>
<td>NO\textsubscript{x}, SO\textsubscript{2}, PM</td>
</tr>
<tr>
<td>J.E. Corette (shut down)</td>
<td>BART (remanded)</td>
<td>NO\textsubscript{x}, SO\textsubscript{2}, PM</td>
</tr>
<tr>
<td>Oldcastle Trident Cement Plant</td>
<td>BART</td>
<td>NO\textsubscript{x}, SO\textsubscript{2}, PM</td>
</tr>
</tbody>
</table>
Visibility Improvements

Visibility has improved in most areas since 2000-2004 baseline

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