SLIDES: Intermountain Oil and Gas BMP Project

Kathryn Mutz

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Intermountain Oil and Gas BMP Project

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Opportunities and Obstacles to Reducing the Environmental Footprint of Natural Gas Development in the Uintah Basin
Thursday, October 14th, 2010
Intermountain Oil and Gas BMP Project

Welcome to the Intermountain Oil and Gas BMP Project Website

Best Management Practices

The Natural Resources Law Center and its partners welcome you to this free-access website of best management practices (BMPs) for oil and gas development in the Intermountain West. The focus of this website is a searchable database addressing surface resources affected by oil and gas development. The database includes both mandatory and voluntary practices currently in use and/or recommended for responsible resource management in the states of Colorado, Montana, New Mexico, Utah, and Wyoming.

The BMP database is not intended to represent a consensus on what the best practices are for specific applications or to advise users on the current legal requirements for specific locations. Rather, the database describes each practice and documents the source of the practice (who requires or recommends it in what specific applications). The database provides a link to the source of the BMP and, where possible, it provides supplemental information, including construction specifications, illustrations, pictures, maps, monitoring reports, and evaluations of the potential of the practice for mitigating impacts of development. Because practices change over time, database users should check with appropriate authorities to verify the latest requirements and recommendations for your area.

Training and Workshops

The BMP project hosted its first workshop on October 14, 2009 in Rifle, CO. Best Practices for Community and Environmental Protection. Almost 60 people participated in a field trip hosted by Williams Production and over 170 attended the sessions at the Garfield County Fairground. For details on the Rifle workshop, go to the Rifle Workshop Webpage for a copy of the agenda and powerpoint presentations made at the workshop.

BMP Categories

The database includes BMPs to address a variety of resources and issues:
- Air quality
- Aquatic/riparian values
- Climate
- Cultural/Historic
- Grazing
- Health/Safety
- Noise
- Other
- Socioeconomic
- Soils/Surface
- Vegetation
- Visual aesthetics
- Water quality
- Water quantity
- Wildlife disruption
- Wildlife habitat

Browse all

What's New

New Workshop, Oct 14, 2019
Opportunities and Obstacles to Reducing the Environmental Footprint of Natural Gas Development in the Uintah Basin

This public workshop will review results of a recent study of energy-environment issues in the Uintah Basin of Northeastern Utah, and will highlight examples of environmental innovation taking place in the region.

Research Assistants needed
The Natural Resources Law Center is interested in hiring two part-time students for the 2010-2011 school year to assist with the Intermountain Oil and Gas BMP Project. See our Employment page for more details.

BMP Search

What management practices are recommended or required for oil and gas development? To find out, use the drop down menus or type Keywords. For a more refined search, click "Advanced Search" or use the BMP SEARCH button.

Keywords:

Category:

Location:

Advanced Search...

Submit Reset

Search the Bibliography

Our searchable bibliography includes over 400 publications, including environmental impact statements, agency guidelines, and many technical reports, websites, and journal articles prepared by the Intermountain BMP Project.
BMP Project Components

1 Searchable Database & Bibliography
   by WebYodel

2 Website Background Materials

3 Research Services

4 Workshops
1 Searchable BMP Database

Basic and advanced BMP search functions

- Keywords
- Resource Categories
- Wildlife and Rare Plant Species
- Location
- Oil and gas field
- Timing
1 Searchable BMP Database
### Advanced Search Result

**Search Criteria:**

- **Keywords =** +power*
  - Power(s)
  - Powerline
  - Power line
- **Category =** Wildlife Disruption
- **Species =** Sage grouse
- **Location =** CO and WY

**Sort Criteria:**

1. Required v. Recommended
2. Location
# Intermountain Oil and Gas BMP Project

## View BMP

<table>
<thead>
<tr>
<th>BMP ID:</th>
<th>1520</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title:</td>
<td>Avoid surface disturbance and permanent structures within 1/4 to 1 mile of leaks</td>
</tr>
<tr>
<td>Text:</td>
<td>&quot;Surface disturbance and other actions that create permanent and high-profile structures, such as buildings, storage tanks, and overhead power lines, will not be constructed within 0.25 to 1.0 mile of the perimeter of leaks, as determined on a case-by-case basis.&quot;</td>
</tr>
<tr>
<td>Source Publication Name:</td>
<td>Atlantic Rim Natural Gas Field Record of Decision</td>
</tr>
<tr>
<td>Citation Section:</td>
<td>Appendix B: Atlantic Rim Natural Gas Project Performance-Based Monitoring and Best Management Practices</td>
</tr>
<tr>
<td>Citation Page:</td>
<td>B-16</td>
</tr>
<tr>
<td>Supplemental Documents:</td>
<td>Required</td>
</tr>
<tr>
<td>Usage Type:</td>
<td>Construction / Siting / Design</td>
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<tr>
<td>Timing:</td>
<td>Drilling</td>
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<tr>
<td>Oil / Gas Field:</td>
<td>Atlantic Rim Natural Gas Field</td>
</tr>
<tr>
<td>Surface Ownership:</td>
<td>Federal</td>
</tr>
<tr>
<td>Mineral Ownership:</td>
<td>Federal</td>
</tr>
<tr>
<td>Primary Contact:</td>
<td>David Simons</td>
</tr>
<tr>
<td>BLM - Wyoming State Office</td>
<td></td>
</tr>
<tr>
<td>5353 Yellowstone Road</td>
<td></td>
</tr>
<tr>
<td>Cheyenne, Wyoming 82003 United States</td>
<td></td>
</tr>
<tr>
<td>Phone: (307) 328-4326</td>
<td>Alt. Phone:</td>
</tr>
<tr>
<td>Fax:</td>
<td></td>
</tr>
<tr>
<td>E-mail: <a href="mailto:Atlantic_Rim_EIS_WYMail@blm.gov">Atlantic_Rim_EIS_WYMail@blm.gov</a></td>
<td></td>
</tr>
<tr>
<td>Alternate Contact:</td>
<td></td>
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<tr>
<td>Categories:</td>
<td>Wildlife disruption</td>
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<tr>
<td>Wildlife habitat</td>
<td></td>
</tr>
<tr>
<td>Location:</td>
<td>Wyoming</td>
</tr>
<tr>
<td>Species:</td>
<td>Sage grouse</td>
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<tr>
<td>Vegetation Types:</td>
<td></td>
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<td>General Comments:</td>
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<tr>
<td>Economic Comments:</td>
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</tr>
<tr>
<td>Date Entered:</td>
<td>2009-02-04 13:43 PDT</td>
</tr>
<tr>
<td>Last Updated:</td>
<td>2009-02-04 13:43 PDT</td>
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</table>
1 Searchable Bibliography

• Source documents
  ✓ NEPA Documents
  ✓ Agency guidelines
  ✓ Industry recommendations
  ✓ Environmental group recommendations
  ✓ Community plans

• Supplemental documents
  ✓ Specifications
  ✓ Monitoring data
  ✓ Cost/Benefit Analysis
1 Searchable Bibliography

BIBLIOGRAPHY SEARCH

You can use this page to search our bibliography. The bibliography includes Source documents (from which we have derived BMPs for the database) and Supplemental documents (documents linked to and providing additional information about individual BMPs and/or documents cited on our Resource pages).

Keywords:

(Searches Publication Name, Primary Author and Annotation)

Extra Fields to Display
- Citation Label
- Database Usage (Source or Supplemental)
- Primary Author
- Publication Year
- Document Type
- Show Annotation
- Show Section Names
- Show BMP Reference Counts

Sort Options
Sort By: Publication Name
Then By: 

Submit Reset

For tips on using Keywords in searches and on composing your data display, go to our Help page.
Browse the Bibliography
Bibliography Search Result

Search Criteria:
Keywords = Vernal

Display Fields:
✓ Title
✓ Author
✓ Year
✓ BMP Count

Sort Criteria:
Publication Name
Intermountain Oil and Gas BMP Project

View Publication

Publication Name: Atlantic Rim Natural Gas Field Record of Decision
Publication Type: Project NEPA Document
Section Name:
Author Name: Bureau of Land Management
Other Authors:
Contractor Name:
Publication Year: 2007
Publication No.:
Local Source File: WY038-AtlanticRimROD.pdf

Annotation: This Record of Decision (ROD) documents the Wyoming State Director’s decision to approve the preferred alternative as described in the Atlantic Rim Natural Gas Field Development Project (ARNG) Final Environmental Impact Statement (FEIS). The ARNG FEIS analyzes various options for oil and gas recovery and resource mitigation. The decision emphasizes limiting surface disturbance and performing interim reclamation, cooperative air quality monitoring with the state of Wyoming, and continued resource monitoring and consultation with federal and state agencies. The ROD provides the plan for future management of the federal surface and mineral estate in the Atlantic Rim Project Area (ARPA).

Required vs. Recommended: Required -- [Appendix B] "... to the Atlantic Rim Record of Decision (ROD) lists the requirements that will be imposed, as appropriate, by the Bureau of Land Management (BLM), Rawlins Field Office (RFO) on all oil and gas development actions approved on federal lands and minerals within the Atlantic Rim Project Area (ARPA). These requirements include mitigation identified in specific resource mitigation subsections of chapter 4 of the Final Environmental Impact Statement (FEIS) for the ARPA." Pg. B-1 Required -- Appendix C: "Many of these environmental protection measures [BMPs] would be included as Conditions of Approval (COAs) in this ROD. However, by additionally including them as Operator-committed practices, the various Operators have made a commitment to implement them throughout the life-of-project (LOP), and the impact analyses provided in the Final EIS take into consideration the implementation of these measures based on this commitment." Pg. C-1

Ownership: Federal -- "The ROD provides the plan for future management of the federal surface and mineral estate in the Atlantic Rim Project Area (ARPA)," Pg. 1 "The BLM has approval authority over actions on federal minerals and lands. When evaluating development applications for affected federal minerals and lands, the BLM will consider impacts and surface disturbance that occur on private and/or state lands relative to an Operator’s disturbance cap allocation." Pg. 5-6

View all BMPs that reference this publication
2 Website Background Material

- Resource Pages
- Law & Policy: Federal, State and Local
- Links
- Case Studies
- Cost/Benefit Analysis
- Effectiveness Data and Critiques
2 Website Background Materials

Resource Pages
- The Development Process
- Air Quality
- Water Quality
- Vegetation
- Wildlife
- Reclamation
- GIS
- Communities
- Costs/Benefits
- Oil and Gas Fields
- Solid Waste
2 Background: Law & Policy

Intermountain Oil and Gas BMP Project

**LAW & POLICY**

**OVERVIEW**

Oil and gas development is regulated by all levels of government—Federal, State, and local. Some statutes deal with oil and gas operations directly, while others are more generally concerned with protecting human health, air, land, wildlife, water or other resources and incidentally apply to oil and gas. After laws are passed by Congress or a state legislature, it is the task of an administrative agency such as the Bureau of Land Management, the Environmental Protection Agency, or a state agency or commission, like the Colorado Oil and Gas Conservation Commission, to issue regulations, further defining and consistent with, the original law. Beyond their regulations (also called rules), the agencies might also issue policy or guidance documents to further explain the law. At the local government level, the law itself, usually called an ordinance, is the most detailed provision of law.

Which laws are applicable to a particular development depends in part on who owns the land and who owns the minerals. For federal lands or minerals, the process can involve three levels of government. For private or state lands and minerals, the process is mostly state and local, although all development needs to comply with the national environmental laws like the Clean Air Act and Clean Water Act. For additional information on the Clean Air Act, Clean Water Act, and other laws applicable to oil and gas development, click on one of the links at the top of this page (e.g., Federal Laws: Oil and Gas). Or go to the index page of the Federal Laws Section on the Red Lodge Clearinghouse website and choose a topic.

Where there is a “split estate” – different parties owning the surface of the land and its minerals – regulation can be even more complex. Confusion and frustration can also arise where more than one level of government claims jurisdiction. When Federal, state, and local governments all try to regulate development and their laws conflict with one another, the doctrines of preemption dictate that the federal laws will prevail over conflicting state or local laws, and that state laws will prevail over conflicting local laws. While this hierarchy may appear clear-cut, it is not always clear if there is an actual conflict of law that would trigger preemption.

**FEDERAL AND STATE LAW SUMMARIES AND LINKS**

Our federal, state, and local laws pages provide brief summaries of the laws, regulations, and agency policies and guidelines of particular importance to regulation of oil and gas development. They also provide links to the codes, regulations and to the agencies in charge of regulating the industry.

For law and policy of a specific jurisdiction, click on one of the following links or on one of the links at the top of this page.

- **Federal**: Oil and Gas | Air | Water
- **Colorado**: State | Local
- **Montana**: State | Local
- **New Mexico**: State | Local
- **Utah**: State | Local
- **Wyoming**: State | Local

**HOW DO BEST MANAGEMENT PRACTICES FIT INTO “LAW”?**

“Best management practices (BMPs) are state-of-the-art mitigation measures applied on a site-specific basis to reduce, prevent, or avoid adverse environmental or social impacts.”

- Bureau of Land Management BMP website

Many people associated with oil and gas development think of BMPs as strictly voluntary practices. In the Intermountain Oil and Gas BMP Project Database, we have taken a more expansive view of BMPs, in part because what is voluntary today may be required tomorrow or may change from one jurisdiction to another. Consequently, we have included both voluntary and required practices in our database. We designate BMPs as either “Required” or “Recommended” in the database and provide our rationale for this designation in our bibliography.

For more explanation of our designation of BMPs as “Required” or “Recommended,” see Use of “Required”, “Recommended” for BMPs.

Only a small percentage of BMPs are designated as “required” practices
**Intermountain Oil and Gas BMP Project**

**Utah County and Municipal Law**

Several county and municipal governments in Utah have enacted regulations and ordinances, to supplement the applicable federal and state laws and regulations for managing oil and gas development in their jurisdictions.

Not every county or municipality in Utah has chosen to implement such regulations, and among those that have, some address oil and gas issues in more detail than others. The following are examples of local oil and gas regulations currently in place in Utah. Links to the full text of each county's or municipality’s regulations are provided below, but provisions of particular interest are identified as well.

For more information on individual counties visit the [Utah Association of Counties](http://www.utah.gov). Also, for more information on geology of individual counties visit the [Utah geology](http://www.utah.gov) page.

**Utah Counties**

- Carbon
- Davis
- Duchesne
- Emery
- Grand
- Millard
- Sanpete
- Summit
- Uintah
- Wasatch

**Carbon County**

**Carbon County Oil and Gas Provisions**: Carbon County is located between Duchesne and Emery Counties in north eastern Utah. Carbon County has a significant amount of oil and gas development. The Uinta Basin encompasses the eastern portion of the county and there is a large natural gas field in most of the western portion of the county. Visit the Carbon County website. Contact the [Carbon County commissioners](http://www.carboncounty.org).

Provisions of particular interest from the Carbon County Development Code include:

- Table 5.1 – Lists Oil and Gas Wells as a conditional use in all zones except WS (Water Shed), SL (Scoutfield Lakeshore Zone), and HMC (Historic Mining Camp Zone).

**Davis County**

**Davis County Oil and Gas Provisions**: Davis County is located in north central Utah on the West side of the Great Salt Lake. There is no large-scale oil and gas development in Davis County.

Visit the [Davis County website](http://www.daviscounty.org). Contact the [Board of Commissioners](http://www.daviscounty.org).

Provisions of particular interest from the Davis County Code include:

Chapter 14.12 deals with excavation of natural resources in general, but does not specifically deal with oil and gas. There do not appear to be any provisions in the code that directly deal with oil and gas regulation.

**§ 14.12.010 Purpose and Intent** – describes the purpose of the ordinance and that while mineral extraction is a value to the County and society, it should be done in a way that minimizes environmental impacts.

3 Research Services

- Instructions for database searches
  - Help pages
  - Live staff
- Custom searches and data reports
- Supplemental data research/reports
  - Research, report, and incorporate
  - e.g., Comparison of jurisdictions
## Comparison of Oil and Gas Regulations for Wildlife in the Intermountain West

<table>
<thead>
<tr>
<th>Regulation Type</th>
<th>Colorado</th>
<th>Montana</th>
<th>New Mexico</th>
<th>Utah</th>
<th>Wyoming</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Overarching Principles Applicable to all Processes</strong></td>
<td>Conditions of Approval: In selecting conditions of approval from such Best Management Practices or other sources, the Director shall consider the following factors, among other considerations: Anticipated direct and indirect effects of the proposed oil and gas location on wildlife resources. (COGCC Rules 1202(c)(3)(2009).)</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>Migratory Bird Treaty Act: &quot;The United States Fish and Wildlife Service administers the Migratory Bird Treaty Act in Wyoming. Oil and gas owners or operators have to be aware of the obligation to comply with this regulation as they permit, construct, and maintain all facilities that may contain hydrocarbons or produced waters.&quot; (Chap. 46.11(c)(iii)).</td>
</tr>
<tr>
<td><strong>Definitions</strong></td>
<td>Wildlife Resources: &quot;WILDLIFE RESOURCES shall mean fish, wildlife, and their aquatic and terrestrial habitats.&quot; (COGCC Rules 100 (2009)).</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>Pollution Definition: &quot;(5) &quot;Pollution&quot; means any discharge of any liquid, gaseous or solid substance into any waters of the state in such manner as will create a nuisance or render such waters harmful, detrimental or injurious to livestock, wild animals, birds, fish, or other aquatic life.&quot; (Utah Admin. r. 649-1-1 (2003)).</td>
</tr>
<tr>
<td><strong>Best Management Practices</strong>: BMPS &quot;any practices that are designed to prevent or reduce impacts caused by oil and gas operators to air, water, soil, or biological resources, and to minimize adverse impacts to public health, safety and welfare, including the environment and wildlife resources.&quot; (COGCC Rules 100 (2009)).</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td><strong>Minimize Adverse Impacts</strong>: shall mean &quot;wherever reasonably practicable, to avoid adverse impacts to wildlife resources or significant adverse impacts to the environment from oil and gas operations, minimize the extent and severity of those impacts that cannot be avoided, mitigate the effects of unavoidable remaining impacts, and take into consideration cost-effectiveness and technical feasibility with regard to actions and decisions taken to minimize adverse impacts.&quot; (COGCC Rules 100 (2009)).</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td><strong>Restricted Surface Occupancy Area</strong>: shall mean &quot;rocky mountain bighorn sheep production areas; desert bighorn sheep production areas; (COGCC Rules 100 (2009)).&quot;</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>
4 Workshops

• Best Practices for Community and Environmental Protection, October 2009, Rifle CO
  – > 160 attendees (industry, consultants, citizens, conservation groups, government)
  – Field trip and plenary sessions

• CO Front Range Workshop, 2011
  ✓ Colorado Oil and Gas Rules ?
  ✓ RCRA Subtitle C exemption petition ?
  ✓ BMPs: How Well Do They Work?

• Database Training, by appointment
Project Sponsors/Advisors

Project Funding
- Miller, Agro & Robbins
- RPSEA
- LCAOF
- RMMLF
- U of C Outreach
- Ruckelshaus Institute
- Upper Green River Valley Coalition
- Petroleum Field Services, LLC

In-kind Contributions
- Advice
- DB Information
- Case Studies
- BMP critiques
- Workshop/Field Trips

See our ABOUT US page for details
What We Need from You!

• Try the DB -- What works? What would improve it?
• Give Us Advice
• Provide DB information (Company guidelines or manual?)
• Provide case studies
• BMP critiques
• Speak at our workshops
• Lead field trips