

Intermountain Oil and Gas BMP Project

*Kathryn Mutz, Natural Resources Law Center
University of Colorado at Boulder
kathryn.mutz@colorado.edu*

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





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 nor 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](#)

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...](#)

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

WHAT'S NEW

New Workshop, Oct 14, 2010
[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.



The Intermountain BMP Project is a work in progress. Currently, the database includes BMPs for a variety of resources (see the [BMP Categories](#) section) from a range of source documents (see the [Bibliography](#)), including project Environmental Impact Statements, Resource Management Plans, state wildlife agency guidelines, and industry and conservation group reports and websites.

Our newest Resources page

BMP Project Components

1 *Searchable Database & Bibliography*

by WebYodel

2 *Website Background Materials*

3 *Research Services*

4 *Workshops*



Intermountain Oil and Gas BMP Project



1 Searchable BMP Database

Basic and advanced BMP search functions

- Keywords
- Resource Categories
- Wildlife and Rare Plant Species
- Location
- Oil and gas field
- Timing



Intermountain Oil and Gas BMP Project



1 Searchable BMP Database

Advanced Search | Intermountain Oil and Gas BMPs

10/12/09 12:00 PM

Natural Resources Law Center

University of Colorado Law School



Intermountain Oil and Gas BMP Project

Advanced Search

You can use this page to perform more precise searches on the database and specify which fields you want to display in the results list. If you prefer a more basic search, you can use the [Basic Search](#) page.

Keywords:

Category: (multiple selections allowed)

Any
Air quality
Aquatic/riparian values
Climate
Cultural/Historic

Species: (multiple selections allowed)

Any
Plant Species
Astragalus debequeus (DeBeque milkvetch)
Astragalus humilimus
Astragalus osterhoutii

Location: (multiple selections allowed)

Any
Unspecified
General / Federal
Western Region
Colorado

Oil/Gas Field Name: (multiple selections allowed)

Any
Atlantic Rim Natural Gas Field
Castle Peak, Eightmile Flat, Monument Butte-Myt
CX Field-Powder River Basin
Desolation Flats Natural Gas Field

Timing: (multiple selections allowed)

Any
Planning / Environmental Review
Construction / Siting / Design
Drilling

Extra Fields to Display

Source Publication
 Include section and page
 Category
 Species
 Location
 Oil/gas Field
 Surface Ownership
 Mineral Ownership
 Usage Type (Recommended vs. Required)
 Timing
 Date Entered
 Last Updated
 Show bibliographic references

Restricted Scope

Only show records with:
 General comments
 Economic comments

Sort Options

Sort By:
Then By:

Submit

Reset

For tips on using Keywords in searches and on composing your data display, go to our [Help page](#).
[View the Bibliography](#)

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

Advanced Search | Intermountain Oil and Gas BMPs 10/10/09 8:42 PM

Natural Resources Law Center University of Colorado Law School

Intermountain Oil and Gas BMP Project

Advanced Search

You are viewing the results of an advanced search. To change your search criteria or start a new search, click [here](#).

Found 16 records.

BMP ID	Short Title	Text	Source Publication	Location	Usage Type (Recommended vs. Required)
1529	Avoid surface disturbance and permanent structures within 1/4 to 1 mile of leks	*Surface disturbance and other actions that create permanent and high-profile structures, such as buildings, storage tanks, and overhead power lines, ...	Atlantic Rim Natural Gas Field Record of Decision	Wyoming	Required
2221	Powerlines near nesting and breeding grounds.	*The Companies will locate aboveground power lines, where practical, at least 0.5 mile from any sage grouse breeding or nesting grounds to prevent ...	Record of Decision and Resource Management Plan Amendments for the Powder River Basin Oil and Gas Project	Wyoming	Required
2239	Power lines: Construction restrictions and requirements near lek	*The Companies will locate aboveground power lines, where practical, at least 0.5 mile from any sage grouse breeding or nesting grounds to prevent ...	Record of Decision and Resource Management Plan Amendments for the Powder River Basin Oil and Gas Project	Wyoming	Required
4682	Locate aboveground powerlines at least 0.5 mile from any sage grouse breeding or nesting grounds	Wildlife: *The Companies will locate aboveground power lines, where practical, at least 0.5 mile from any sage grouse breeding or nesting grounds to ...	Record of Decision and Resource Management Plan Amendments for the Powder River Basin Oil and Gas Project	Wyoming	Required
5208	Bury power lines to avoid use of poles and other tall structures	*Wildlife: Greater Sage-Grouse and Columbian Sharp-Tailed Grouse Habitat: 6) Burying of power lines to avoid use of poles and other tall structures"	Atlantic Rim Natural Gas Field Final Environmental Impact Statement	Wyoming	Required
1883	Raptor perch design	Prevent or minimize raptor perching on oil and gas facilities and structures in important sage-grouse habitat. (drilling and production): *Design ...	Gunnison Sage-Grouse Rangewide Conservation Plan	Colorado	Recommended
1933	Raptor perch design	Prevent or minimize raptor perching on oil and gas facilities and structures in important sage-grouse habitat (drilling and production): *Design ...	Colorado Greater Sage-Grouse Conservation Plan	Colorado	Recommended
3486	Bury new power lines or install perch guards	*GUNNISON AND GREATER SAGE-GROUSE: Where feasible, bury new power lines and retrofit existing power lines by burying them or installing perch guards ...	Colorado Division of Wildlife's Actions to Minimize Adverse Impacts to Wildlife Resources (October 2008)	Colorado	Recommended
2057	Raptor perch prevention	*Sage Grouse: Occupied Sage Grouse Habitats: Power lines. Where feasible, bury new power lines and retrofit existing power lines by burying them or ...	Recommendations for Development of Oil and Gas Resources within Crucial and Important Wildlife Habitats (2004 and 2009 editions)	Wyoming	Recommended
2104	No surface disturbance near occupied leks.	*Greater Sage-Grouse & Columbian Sharp-Tailed Grouse: Surface disturbance and other actions that create permanent and high-profile structures such as ...	Atlantic Rim Natural Gas Field Final Environmental Impact Statement	Wyoming	Recommended
2110	Powerline corridor restrictions	*Powerline corridors should be sited more than 2 miles away from sage grouse leks to prevent major impacts to these sensitive prey species.*	Western Heritage Alternative: A Sustainable Vision for the Public Lands and Resources of the Great Divide	Wyoming	Recommended
2142	Establish measures to avoid predator use or control predators	*Miscellaneous: Retrofit and establish measures to avoid predator use or control predators, e.g., trash control, infrastructure height, raptor perch ...	Petroleum Association of Wyoming Website	Wyoming	Recommended
2175	Bury power lines where feasible	*Power Lines: Identify where power lines can be buried and consider burying existing lines where technically and	Petroleum Association of Wyoming Website	Wyoming	Recommended

http://www.oilandgasbmps.org/advsearch.php?mode=2&kw=%2Bpower*&...ame&disp%5B%5D=usageType&sortBy=usageType&sortBy2=locationName Page 1 of 2

Search Report

BMP Record Detail

View BMP | Intermountain Oil and Gas BMPs

10/10/09 9:30 PM

Natural Resources Law Center

University of Colorado Law School



Intermountain Oil and Gas BMP Project

[View BMP](#)

BMP ID:	1520
Title:	Avoid surface disturbance and permanent structures within 1/4 to 1 mile of leks
Text:	"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 leks, as determined on a case-by-case basis[.]"
Source Publication Name:	Atlantic Rim Natural Gas Field Record of Decision
Citation Section:	Appendix B: Atlantic Rim Natural Gas Project Performance-Based Monitoring and Best Management Practices
Citation Page:	B-16
Supplemental Documents:	
Usage Type:	Required
Timing:	<ul style="list-style-type: none"> • Construction / Siting / Design • Drilling • Production / Operation / Maintenance
Oil / Gas Field:	Atlantic Rim Natural Gas Field
Surface Ownership:	• Federal
Mineral Ownership:	• Federal
Primary Contact:	David Simons BLM - Wyoming State Office 5353 Yellowstone Road Cheyenne, Wyoming 82003 United States Phone: (307) 328-4328 Alt. Phone: Fax: E-mail: Atlantic_Rim_EIS_WYMail@blm.gov
Alternate Contact:	
Categories:	Wildlife disruption Wildlife habitat
Location:	Wyoming
Species:	• Sage grouse
Vegetation Types:	
General Comments:	
Economic Comments:	
Date Entered:	2009-02-04 13:43 PDT
Last Updated:	2009-02-04 13:43 PDT

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 | Intermountain Oil and Gas BMPs

10/11/10 3:59 PM

Natural Resources Law Center

University of Colorado Law School



Intermountain Oil and Gas BMP Project

BIBLIOGRAPHY SEARCH

[Help](#) | [Add Info](#) | [Acronyms](#)

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:

Then By:

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

Bibliography Search | Intermountain Oil and Gas BMPs 10/11/10 4:11 PM

Natural Resources Law Center University of Colorado Law School


Intermountain Oil and Gas BMP Project

BIBLIOGRAPHY SEARCH [Help](#) | [Add Info](#) | [Acronyms](#)

Found 10 records.

Publication Name	Citation Label	Primary Author	Publication Year	BMP Count
Diamond Mountain Resource Area Resource Management Plan and Record of Decision — Chapter 2: Area Wide Decisions	UT02	Bureau of Land Management	1994	2
Chapter 2 of the Diamond Mountain Resource Area RMP contains a list of BMPs and decisions for fire management, fish and wildlife habitat management, and hazardous materials managements in Utah. It classifies each management type by sensitivity level and mitigation. The document suggests management practices for specific species and includes mandatory lease stipulations for specific areas. See the Vernal Resource Management Plan for more recent analysis of the area.				
Vernal Field Office: Record of Decision and Approved Resource Management Plan	UT20	Bureau of Land Management	2008	0
*The Federal Land Policy and Management Act (FLPMA) requires that the BLM "develop, maintain, and when appropriate, revise land-use plans" (43 United States Code [USC] 1712 [a]). The BLM has determined it is necessary to revise existing land-use plans (LUP) and prepare a new RMP for the VFO based on a number of new issues that have arisen since preparation of the existing plans. In general, the purpose of this RMP is to provide a comprehensive framework for public land management within the jurisdiction of the VFO and its allocation of resources pursuant to the multiple-use and sustained yield mandate of FLPMA." (page 1)				
Vernal Field Office: Record of Decision and Approved Resource Management Plan — Appendix A: Best Management Practices for Raptors and Their Associated Habitats in Utah, August 2006	UT25	Bureau of Land Management	2008	28
*Future raptor management on BLM lands in Utah will be guided by the use of these Best Management Practices (BMPs), which are BLM-specific recommendations for implementation of the U.S. Fish and Wildlife Service, Utah Field Office's "Guidelines for Raptor Protection From Human and Land Use Disturbances" ("Guidelines")." (page A-1)				
Vernal Field Office: Record of Decision and Approved Resource Management Plan — Appendix K: Surface Stipulations Applicable to All Surface Disturbing Activities	UT27	Bureau of Land Management	2008	84
*This appendix lists surface stipulations referred to throughout the Approved RMP. Surface stipulations will be appended, where applicable, to land use authorizations, permits, and leases issued on BLM administered lands." (page K-1)				
Vernal Field Office: Record of Decision and Approved Resource Management Plan — Appendix R: Fluid Minerals Best Management Practices (BMPs)	UT32	Bureau of Land Management	2008	11
*The following typical environmental Best Management Practices (BMP) may be applied on individual Applications for Permit to Drill and associated rights-of-way in the Vernal Field Office on a case-by-case basis." (page R-1)				
Vernal Resource Management Plan Draft Environmental Impact Statement	UT03	Bureau of Land Management	2005	0
The Vernal Field Office (VFO) of the Utah Bureau of Land Management (BLM) is revising and integrating the Book Cliffs and Diamond Mountain Resource Management Plans (RMPs) into a single new RMP for the Vernal Planning Area. The revised RMP will be called the Vernal Field Office RMP and will provide planning guidance for public land and federal mineral estate managed by the VFO in Daggett, Duchesne, and Uintah Counties in northeastern Utah, as well as a small portion of Grand County. The DEIS analyzes the proposed revision and alternatives. Appendix K includes lease stipulations for all surface disturbing activities.				
Vernal Resource Management Plan Draft Environmental Impact Statement — Appendix A: Vernal Field Office Best Management Practices for Raptors and Associated Habitats	UT04	Bureau of Land Management	2005	0
The Vernal Resource Management Plan DEIS analyzes management options for the Vernal Plannig Area. Appendix A provides management practices for raptor conservation in the Vernal Resource Management Area. The appendix also provides specific strategies for reducing conflicts between oil and gas development and raptors and criteria for modifying the recommended management practices.				
Vernal Resource Management Plan Draft Environmental Impact Statement — Chapter 4.15 Special Status Species	UT06	Bureau of Land Management	2005	11
The Vernal Resource Management Plan DEIS analyzes management options for the Vernal Plannig Area. This chapter describes the overall threats				

<http://www.oilandgasbmps.org/bibliosearch.php?mode=2&kw=Vernal&...ubYear&showanno=1&showsect=1&showcnt=1&sortBy=pubName&sortBy2=> Page 1 of 2

Bibliography Search Report

Source Publication Record Detail

View Publication | Intermountain Oil and Gas BMP

10/10/09 9:47 PM

Natural Resources Law Center

University of Colorado Law School



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.:	
External Link:	http://www.blm.gov/pgdata/etc/medialib/blm/wy/information/NEPA/rfodocs/atlantic_rim/rod.Par.46558.File.dat/ROD.pdf
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

Native Vegetation and Rare Plant Resources affected by Oil and Gas Production 10/10/09 4:06 PM

Natural Resources Law Center University of Colorado Law School

Intermountain Oil and Gas BMP Project







Vegetation

Native Vegetation and Rare Plant Resources

This resource page focuses on the impacts of oil and gas development on native vegetation and rare plants. Through it, we hope to bring awareness to a commonly overlooked component of our natural heritage and crucial element of wildlife habitats -- plants.

Negative impacts to biodiversity (resulting from oil and gas development) may mean habitat conversion, degradation and fragmentation; air, water and soil pollution; deforestation; soil erosion and sedimentation of waterways; soil compaction; contamination from improper waste disposal or oil spills; and loss of productive capacity and degradation of ecosystem functions.

[Center for Plant Conservation](#)

Native vegetation and rare plants support wildlife, the environment, and people. Destruction of native vegetation (by a variety of activities), invasion by foreign plants and animals, over collection, and other environmental damage are eroding our natural plant communities.

Plants and Our Ecosystem

Plants perform irreplaceable functions in natural communities. Photosynthesis by land plants and algae is the ultimate source of energy and organic material in nearly all ecosystems. Plants are the primary producers in most terrestrial ecosystems and form the basis of the food web in those ecosystems. Native plants are especially important to natural communities because they have evolved over time to adapt to the specific climate and habitat of the region. Humans also utilize many resources provided by plants including, food, wood, cloth, and medicines, and use plants for recreational, cultural, and aesthetic purposes.

"Native plants are, in balance with the ecosystem, provide cover and food for native animals, and have developed a surprisingly diverse array of relationships with soil fungi and other native microorganisms."

[Native Plant Society of New Mexico](#)

Environmental Protection For Plant Species

Threatened and Endangered Plant Species in the Intermountain States

The Endangered Species Act (ESA) is a powerful federal law that regulates management of threatened and endangered wildlife species through critical habitat designations and strict controls on activities that could cause harm to protected species. The U.S. Fish and Wildlife Service administers the ESA as it applies to both private and public entities, but state wildlife agencies play a cooperative role in the listing and management of threatened and endangered species.

Listed Plant Species
 Colorado: 13 plant species listed
 Montana: 3 plant species listed
 New Mexico: 13 plant species listed
 Utah: 24 plant species listed
 Wyoming: 5 plant species listed

Rare Plants 101

The US Forest Service answers these commonly asked questions about rare plants:

What is a Rare Plant?
Why Are Some Rare?
Are All Rare Plants Endangered?
How Many?
How Are Rare Plants Conserved?

Rare Plant Species Impacted by Oil and Gas Development on Forest Service Lands

From Celebrating Wildflowers: Rare Plant Profiles
 U.S. Forest Service Plant Profiles provide information on the listed Threatened and Endangered and other critically imperiled (by NatureServe's definition) plants occurring on the national forests and grasslands in each state. The links include information on threats to these species and conservation efforts in place to protect them. The following rare plants are being impacted by oil and gas development.

Guadalupe Mountain necklecepod (*Sophora gypsophila* var. *guadalupeensis*)

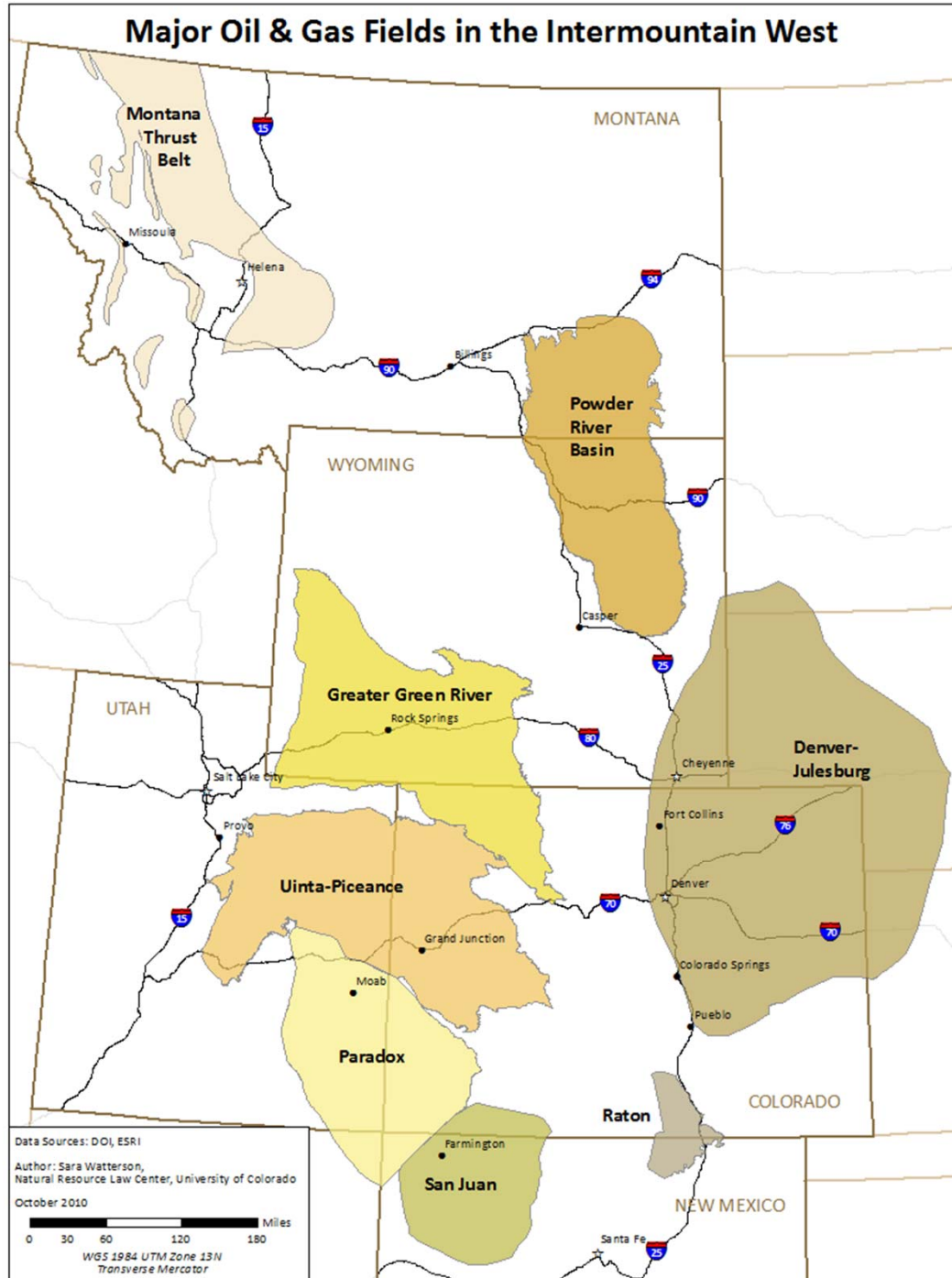
Heliotrope milkvetch (*Astragalus limnocharis* var. *monti*)

Draft Heliotrope milkvetch (*Astragalus monti*) [Recovery Plan](#)

Last Chance townsendia (*Townsendia arctica*)

<http://www.oilandgasbmps.org/resources/vegetation.php> Page 1 of 4

Major Oil & Gas Fields in the Intermountain West



2 Background: Law & Policy

Resources Affected By Oil and Gas Drilling Best Management Practices

10/11/10 5:26 PM

Natural Resources Law Center

University of Colorado Law School



Intermountain Oil and Gas BMP Project

Federal Laws: [Oil & Gas/Air/Water](#) | Colorado Laws: [State/Local](#) | Montana Laws: [State/Local](#) | New Mexico Laws: [State/Local](#) | Utah Laws: [State/Local](#) | Wyoming Laws: [State/Local](#)

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 all 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 doctrine of preemption dictates 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 Lands

The Federal government owns a large percentage of the land within each of the intermountain states:

Colorado	- 36.9%
Montana	- 29.9%
New Mexico	- 41.8%
Utah	- 57.5%
Wyoming	- 42.3%

From: *Federal Real Property Profile, 2004*

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" versus "Recommended" for BMPs](#).

Only a small percentage of BMPs are designated as "required" practices



Intermountain Oil and Gas BMP Project

Federal Laws: [Oil & Gas/Air/Water](#) | Colorado Laws: [State/Local](#) | Montana Laws: [State/Local](#) | New Mexico Laws: [State/Local](#) | Utah Laws: [State/Local](#) | Wyoming Laws: [State/Local](#)

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](#). Also, for more information on geology of individual counties visit the [Utah geology](#) 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](#).

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 (Scottfield Lakeshore Zone), and HMC (Historic Mining Camp Zone). There are no other provisions specific to oil and gas development, however, the provisions indicate that Carbon County considers the Utah Division of Oil, Gas, and Mining to be the county's expert on all issues relating to oil and gas and has adopted all of the applicable state regulations.

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](#). Contact the [Board of Commissioners](#).

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.

§ 14.12.020 Enforcement – describes enforcement mechanisms for the provisions of the chapter



Image courtesy Utah.gov – January 2009

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



Supplemental Data Research/Reports

Comparison of Oil and Gas Regulations
for Wildlife in the Intermountain West

Regulation Type	Colorado	Montana	New Mexico	Utah	Wyoming
Overarching Principles Applicable to all Processes	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).)	None	None	None	Migratory Bird Treaty Act: "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." (Chap. 4 § 1(c)(iv)).
Definitions	Wildlife Resources: "WILDLIFE RESOURCES shall mean fish, wildlife, and their aquatic and terrestrial habitats." (COGCC Rules 100 (2009)).	None	None	Pollution Definition: "[S]uch contamination or other alteration of the physical, chemical or biological properties of any waters of the state, or the 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." (Utah Admin. r. 649-1-1 (2003)).	None
	Best Management Practices: BMPS "are practices that are designed to prevent or reduce impacts caused by oil and gas operations to air, water, soil, or biological resources, and to minimize adverse impacts to public health, safety and welfare, including the environment and wildlife resources." (COGCC Rules 100 (2009)).	None	None	None	None
	Minimize Adverse Impacts: shall mean "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." (COGCC Rules 100 (2009)).	None	None	None	None
	Restricted Surface Occupancy Area: shall mean "rocky mountain bighorn sheep production areas; desert bighorn sheep production areas; (COGCC Rules 100 (2009)).	None	None	None	None

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*



Intermountain Oil and Gas BMP Project



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



Intermountain Oil and Gas BMP Project



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



Intermountain Oil and Gas BMP Project

