Fuel for Thought

A Citizen's Guide to Participating in Oil and Gas Decisions on Your Public Lands

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Cover Photo: Drilling rig on the base of the Roan Plateau near Rifle, Colorado.
Photo by Stephen Torbit.

CONTENTS

1

INTRODUCTION

The Bureau of Land Management (BLM), an agency within the United States Department of the Interior, is charged with managing millions of acres of federal public lands, primarily in the West. Part of its charge is to oversee the exploration and development of oil and natural gas resources on federal lands.[1]

Tens of millions of acres of federal lands in the western United States currently are under *lease* for oil and gas development.[2] More than 125,000 new wells may be drilled on federal lands in the Rocky Mountain West over the next 15 to 20 years.[3]

This handbook is intended to show you how to influence BLM's decisions regarding oil and gas in order to promote better management practices and protect wildlife, recreational, *watershed* and other environmental values on public lands.

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[1] BLM manages 264 million acres of land, located primarily in the 12 western states. BLM also issues mineral leases on lands managed by the United States Forest Service and the United States Fish and Wildlife Service. Both the Forest Service and the Fish and Wildlife Service make decisions regarding the availability of the lands they manage for oil and gas development. However, this handbook focuses primarily on BLM's decisions.

[2] Bureau of Land Management, 2005 Public Land Statistics – Tables 3-13 and 3-14. Available at: http://www.blm.gov/natacq/pls05/PLScover06web.pdf

[3] The Wilderness Society, Preliminary Analysis of Current Federal Actions Authorizing Drilling of New Wells, August 2007.

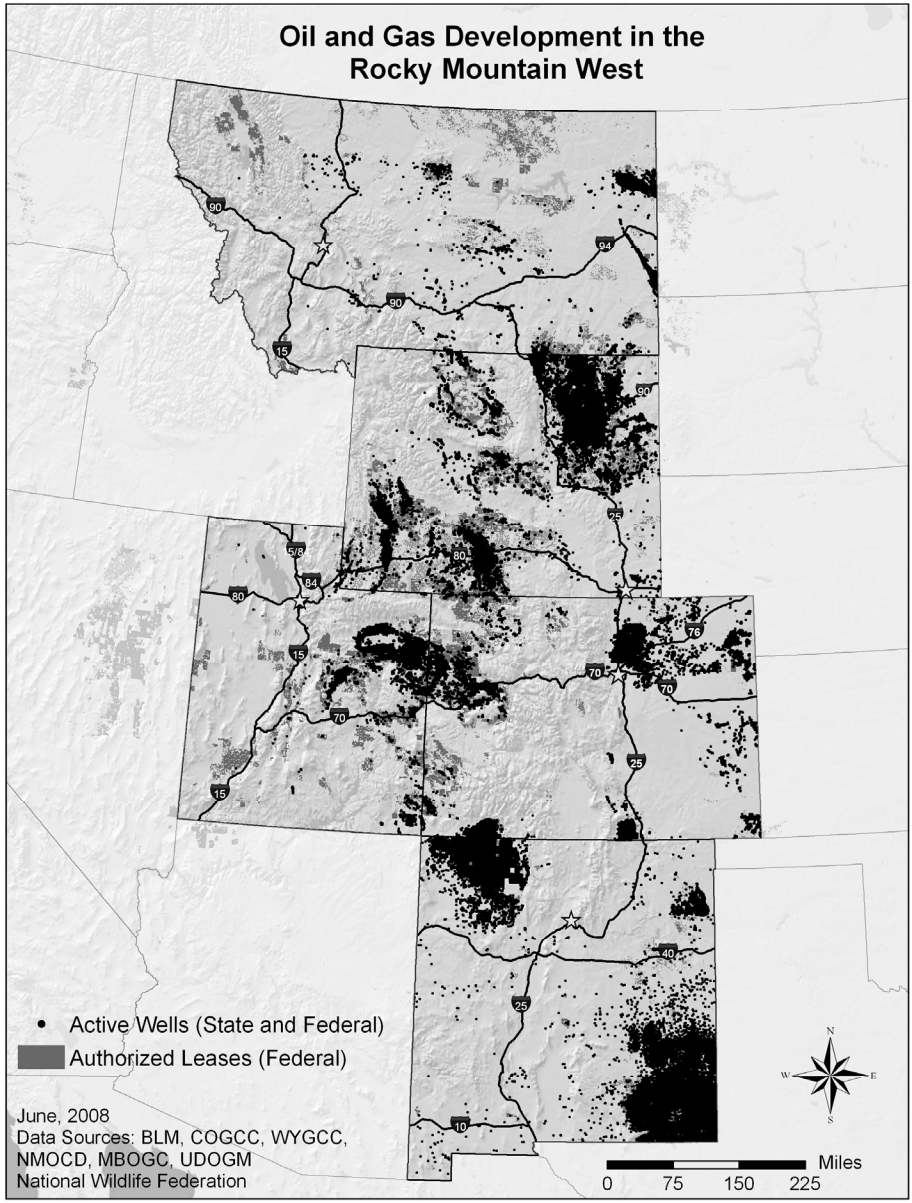

Figure 1. Oil and gas development in the Rocky Mountain West.

Chapter 2 provides a brief overview of how oil and gas wells are drilled and produced. Chapter 3 discusses the environmental impacts associated with oil and gas development. Chapter 4 discusses the legal framework governing the issuance of leases and *permits to drill*. Chapters 5 and 6 outline the opportunities for public participation and the issues that you should address. Finally, Chapter 7 provides suggestions on how to be more effective in your discussions with BLM.

Terms used in this handbook that may be unfamiliar are explained in the glossary. Numbered notes within the text are mostly legal citations found in Footnotes. You may want to look these citations up in a law library someday, but you don't need them to write an effective letter, *protest* or *appeal* about oil and gas development on public lands.

2

THE LIFE CYCLE OF AN OIL OR NATURAL GAS WELL

Development of an oil or gas well begins with exploration to determine both the location and size of potential oil or gas deposits. Upon discovery of an economically viable deposit, the site is developed, comes into full production and is eventually abandoned. Each of these phases can have detrimental impacts on the surrounding environment.

Exploration

Seismic exploration has become the most important tool for discovering oil and gas reserves. This type of exploration uses seismic waves to map the depth and contours of geologic formations in order to determine probable locations of oil or gas deposits. The waves are created either by detonating explosives in shallow holes, or by using a truck equipped with a device called a “thumper” that strikes the ground. Small instruments called geophones are spread out in linear formation away from the hold, or the truck, to detect the waves as they are reflected back by the ground. The return speed of the waves is used to map the contours of the oil and gas reservoir.

Geochemical surveys also may be used to determine a likely location for oil and gas development. Geochemical surveys involve taking

earth samples anywhere from inches to several feet underground. The samples are tested for chemicals that may indicate the presence of oil or natural gas. Geochemical surveys normally involve the use of heavy equipment to drill the core samples and to haul supplies to and from the site. Road construction is often a by-product of this form of exploration.

Development

Once exploration is complete, preparation for full field development begins. This includes construction of additional access roads, well pads and compressor stations, installation of pipelines to carry the oil or gas away from the drill site, as well as oil and waste storage tanks. Road construction will require the use of heavy equipment such as bulldozers, road graders and gravel trucks. The well pad site is cleared using the same kinds of heavy equipment. Ditches for the pipelines also must be dug and pipe laid and buried.

Once the well pad is completed, the *drilling derrick* is erected. Engines power the hoist that lowers and raises the drill stem and bit. A solution of drilling fluid, or "mud," is pumped down the wellbore to lubricate the bit, to remove the cuttings and to dispose of the wastes. When the wellbore is completed, a steel casing is dropped into the hole and cemented into place. The casing must be perforated with explosives to allow the gas or oil to enter. "Stimulation techniques" may be used to speed production from a well. Hydraulic fracturing ("fracing") involves injecting a solution of water, sand and often hazardous materials, such as acid, underground at high pressure to create and hold open the geologic formation in order to release the oil or gas.

Jonah Natural Gas Field, Wyoming.

Photo by: Skytruth

The density of wells in an oil or gas field often is determined by the state oil and gas commission. Well density is based primarily on the spacing of drill holes needed to extract the oil or gas from a particular geological formation. BLM usually adopts the state commission ruling regarding this spacing without public scrutiny or involvement. Spacing is usually set on a well-per-acre basis (e.g., 1 well per 160 acres). It is not uncommon for wells to be spaced on a grid pattern of 440 yards or one well per 20 acres. Well density varies according to the geological characteristics of the field but generally increases as the field is depleted. When the number of approved wells within a field is increased, this is called "in-filling" or "down-spacing."

Production

Permanent valves and tubing are installed, a pump is attached to the well and production begins. The production phase often involves daily *monitoring* of the well and occasional maintenance of the wellbore. The production phase of a field development can last decades. Most new fields are expected to produce for 20-50 years, depending on geologic conditions.

Abandonment

Once production ends, the well is capped. This involves placing cement plugs into the wellbore and at the surface.

Reclamation

Full *reclamation* should leave the land, air and water in the same condition as before oil and gas development was carried out. In practice, this is rarely the case, particularly in the arid Rocky Mountain West where some plant types like sagebrush may require many decades to recover.

3

ENVIRONMENTAL IMPACTS

Destruction and loss of wildlife habitat are major environmental concerns with oil and gas development. Oil and gas wells require well pads and compressor station complexes that strip the land of vegetation, causing soil loss, increased erosion and the opportunity for weed infestation. Many miles of roads are constructed, further disturbing the ground surface and fragmenting wildlife habitat. Add miles of pipelines and power lines, and once wide-open and undisturbed areas become industrial zones.

Compressor stations not only disturb the surface, they are also a tremendous source of noise and air pollution. Air emissions released during development and production can result in elevated, and potentially harmful, concentrations of pollutants. One of these is ozone, an air pollutant that can cause severe health impacts to children, the elderly and people with existing respiratory conditions. Air pollution also can cause significant and adverse impacts to visibility. The wells and pipelines alone create risks to human health and safety – pipeline explosions have occurred and over time, wells, even if properly drilled, cemented and cased, can cause drinking water problems through contamination of groundwater.

The newest form of natural gas extraction is coalbed methane (CBM). CBM production has one marked difference from conventional natural gas wells: in order to mine methane gas, companies must first free

the gas from coal seams, where water pressure causes the gas to remain adsorbed to the coal. To extract this gas, water must be removed from the coal seams, freeing the methane and allowing the gas to migrate to the surface. This process, known as “dewatering,” has unique and often severe impacts.

Perhaps the most significant impact of CBM extraction is on water quantity. For example, in the Powder River Basin in Montana and Wyoming, where more than 80,000 CBM wells could be completed by 2010, water is being pumped out of the coal seams at an average of 15 gallons per minute (gpm) per well. The development of 80,000 wells may dump more than one billion gallons of water per day onto the ground and seriously deplete groundwater aquifers. This waste of water in a semi-arid region may seriously compromise the ability of aquifers and water tables to recharge.

Equally important is the quality of the CBM well water discharge. The water usually carries high concentrations of salts and minerals. Although sometimes used for watering livestock, it is generally unsuitable for irrigation. The salts and minerals build up in soils over time and become toxic to plants. Millions of gallons of water discharged onto the surface each day eventually find their way into creeks, streams, rivers and major watersheds. This poses serious consequences for fisheries as well as downstream users.

Other impacts include methane migration to the ground surface (posing a serious health risk to humans as well as wildlife, soils and vegetation), soil erosion from the well discharges and the documented risk of underground fires sparked by spontaneous combustion.

4

THE LEGAL FRAMEWORK

The Mineral Leasing Act

The primary statute governing oil and gas development on public lands is the Mineral Leasing Act of 1920, as amended by the Federal Onshore Oil and Gas Leasing Reform Act of 1987 (FOOGLRA). This statute authorizes the Secretary of the Interior to issue leases to private individuals and corporations to extract oil and gas from public lands.

Enacted in 1920, the primary objective of the Mineral Leasing Act was to ensure that the federal government received royalties for the sale of these resources. The Mineral Leasing Act contained no provisions for protection of other natural resources.

Like the Mineral Leasing Act, which was driven primarily by economic concerns, FOOGLRA was passed in order to ensure a greater return to the federal treasury from the issuance of oil and gas leases. Under the Mineral Leasing Act, most leases were issued on a "first come, first served" basis for a minimal fee. FOOGLRA mandated that all federal lands must first be offered for lease at auction. The hope was that a competitive bidding process would increase the money received for federal leases.

FOOGLRA also contains some important provisions directed specifically at protection of other natural resources on public lands. For example, the 1987 amendments gave the Forest Service veto authority

over leases to be issued on National Forest lands. Although it is BLM that has the authority to lease oil and gas reserves beneath National Forest lands, it can do so only with the specific approval of the Forest Service. FOOGLRA also requires submission of an acceptable plan of operation before permission to drill is granted and requires companies to pay an upfront amount to restore the land on which they plan to drill.

It is important to remember that while the Mineral Leasing Act authorizes BLM to issue oil and gas leases, it does not require that leases be issued. BLM and the Forest Service retain discretion to preclude such development to protect other public land values, such as wildlife habitat, scenic values and recreation.

Lands Available

Congress specifically mandated that some federal lands cannot be subject to oil and gas development. National parks are closed to oil and gas leasing with the exception of some recreational units. National wildlife refuges are closed to leasing unless specifically opened by the Secretary of the Interior.[1] In practice, the Secretary has leased only those refuge system lands subject to *drainage* (when oil and gas is drained from federal lands by drilling operations on adjacent, non-federal land).[2] FOOGLRA formally closed wilderness areas to oil and gas leasing as of 1987.[3]

The Leasing System

Today, all lands not covered by prior leases must first be offered competitively by auctioning the right to drill on specified parcels of federal land to the highest bidder. The system, however, does not ensure that BLM receives what it considers fair market value for leased lands. As long as the highest bid by a qualified bidder for an offered parcel exceeds $2 per acre, BLM must accept it. BLM cannot withdraw parcels it offers simply because no bid equals or exceeds the lease's value. If no such bid is received, BLM must offer that parcel for lease non-competitively (in a hybrid system between first-come, first-served and a lottery) for a period

[1] 16 U.S.C. § 668dd(d)1 (2000).
[2] 16 U.S.C. § 668dd(d)3 (2000).
[3] *See* 43 CFR § 1610.4.

of two years, after which an unleased parcel may again be offered only if it is first offered competitively. FOOGLRA states that lease sales must be held quarterly in states with eligible lands.

1. Competitive Leasing

   BLM starts the competitive leasing process by posting a notice in the appropriate BLM state office (as well as in the appropriate Forest Service office for any National Forest lands) stating which parcels are being offered, the time and place of the auction and any stipulations to be included in the leases. This notice must be posted at least 45 days before the auction is held. If such a notice is not posted for a parcel in accordance with the law, any lease issued on that parcel is invalid.

2. Non-competitive Leasing

   Once offered for lease sale, a parcel must be leased either competitively to a qualified bidder or, if none, non-competitively to a qualified applicant. BLM may retract only those parcels whose leases have expired, been terminated, canceled, or relinquished, or that do not go at auction or in the two-year period of non-competitive leasing following auction.

   BLM offers leases non-competitively in a combination first-come, first-served and lottery system. A non-competitive application may be made for any unleased parcel at any time other than the period between its being posted for competitive sale and its auction. Assuming the competitive auction yields no qualified bids, the BLM accepts non-competitive applications filed before the competitive sale process began on a first-come, first-served basis. If no such application is accepted (i.e., if none is made or if none meets the bonding and reclamation requirements described below), a lottery is held among all applications filed on the first day following the auction. Should none of these be accepted, a lottery is held among all applications filed on the second day following the auction, and so on.

Eligible Leaseholders

By signing a lease, the bidder certifies that he is qualified to purchase and hold a federal mineral lease. Eligibility requirements include not only citizenship, but also a certification that the bidder is in compliance with the anti-fraud provisions of FOOGLRA, the reclamation requirements of the Act and the diligent development requirements for all leases issued to him under the Mineral Leasing Act. Criminal penalties as well as lease cancellation can be imposed for untrue statements.

5

OVERVIEW OF BLM OIL AND GAS DECISIONS

BLM makes several kinds of decisions about oil and gas development on public lands. At the national level, BLM decisions include adopting regulations and management policies. BLM makes decisions at the local level by preparing *land use plans* (called resource management plans – RMPs). These land use plans identify areas that are closed or that are open to oil and gas leasing, as well as areas that require special development practices in order to preserve other resource values. BLM also makes decisions about individual oil and gas operations. You have the right to participate in all of these decisions.

Land Use Plans

The *Federal Land Policy and Management Act* (FLPMA) requires that land use plans be prepared for all public lands managed by the BLM. There are, at least, two decisions concerning oil and gas that should be addressed at the land use planning stage:

1. Identification of areas available for oil and gas development; and
2. Identification of any special development practices or requirements that may limit oil and gas activities in certain areas (management directives).

All future BLM oil and gas decisions within the planning area, such as the issuance of leases or approval of drill permits, must conform to the RMP.

Availability of Specific Lands

Contrary to the message you may have received from BLM, not every acre of public land must be available for oil and gas development. BLM has considerable discretion in determining whether particular public lands ought to be subject to this activity. BLM can decide that recreational, scenic, wildlife or other values on the surface exceed the benefit of leasing the underlying oil and gas reserve. If there are lands that you believe should not be developed because of their unique environmental resources, you should make your views known to the BLM Resource Area Manager in your comments on any proposed land use plan for the area.

Management Directives

A land use plan should also include management directives for how oil and gas operations will be conducted on different lands within the planning area. For example, the land use plan might require that exploration be suspended in elk habitat during the calving season. These limitations become part of any leases issued and are known as "seasonal" or "*timing*" stipulations. On steep slopes with serious erosion problems, the land use plan might set out strict requirements for road construction. In *special management areas*, such as *areas of critical environmental concern (ACECs)* or *research natural areas (RNAs)*, the land use plan might adopt very stringent controls on oil and gas activity. The plan might include a "*no surface occupancy*" (*NSO*) stipulation for fragile areas. Including an NSO stipulation in an oil and gas lease means that there will be no development or disturbance whatsoever of the land surface, including establishment of wells or well pads, and construction of roads, pipelines or power lines. Any oil or gas extracted from the leased area would have to come from "*directional drilling*" – drilling wells at an angle underground from adjacent lands available for surface occupancy. In addition, in areas with special visual qualities, the land use plan might provide that no derricks be erected.

Unlike a decision not to make lands available for leasing, none of these plan provisions will prohibit the area from being developed. However, they will result in better protection for other public lands resources…if fully enforced by BLM.

Public Participation in Land Use Plan Development

BLM must allow the public to participate in developing or amending land use plans. Usually BLM writes an *environmental impact statement* (*EIS*) along with the land use plan. BLM must seek your views at several points in the EIS process. See the section below for advice on commenting on EISs.

Pay particular attention to the issue identification or "*scoping*" stage, which determines much of the subsequent analysis. Be sure to raise oil and gas as an issue of concern. Suggest portions of the planning area that should be off-limits to leasing or will require special management to prevent harm to other environmental resources. When BLM releases the draft plan and EIS, you can make more specific recommendations about management of these areas.

Individual Activities or Projects

Leases

Prior to conducting any oil and gas related activity on public lands, the individual or company first must obtain a mineral lease from BLM. Public notice that lands have been proposed for leasing must be posted 45 days prior to the sale. (See previous discussion of competitive and non-competitive leasing.) That 45 days is your window of opportunity to raise your concerns about environmental impacts to the areas being leased. "Posting" generally means placing written notice of the sale in the BLM state headquarters office, as well as each separate field office where lease parcels will be sold. The sales are not usually announced in newspapers or other public media. More recently, leasing notices have been posted on the state BLM website. (See list of these websites in Appendix 5.)

Effective public participation at the lease sale stage is critical. Once the lease is sold, saying "no" to development becomes more difficult.

Whenever BLM, the Forest Service or a lessee wishes to substantially modify the terms of a lease, the proposed modification must be posted in the appropriate office for at least 30 days prior to any modification taking effect.

Geophysical Exploration

Anyone wishing to conduct geophysical exploration for oil and gas on public lands administered by BLM, outside the State of Alaska[1], must submit a Notice of Intent to Conduct Oil and Gas Exploration Operations. The notice of intent must be filed with the BLM District Manager. BLM then notifies the operator of the practices and procedures to be followed during exploration. A signed Notice of Intent is a formal agreement by the operator to comply with all practices and procedures specified by BLM. The operator also must provide a *bond* of at least $5,000, conditioned on "full and faithful" compliance with the terms and conditions of the Notice of Intent.

When exploration is complete, a Notice of Completion of Oil and Gas Exploration Operations must be filed. Thirty days after filing, BLM notifies the operator whether reclamation is satisfactory or whether additional measures must be taken by the operator. If BLM does not notify the operator of any additional reclamation requirements within 90 days, the operator is no longer liable for that exploration operation.

Applications for Permits to Drill (APDs)

The APD is the fourth and final stage before the drill bit breaks the ground and therefore, is a critical time for public involvement.

A complete APD must contain both a "drilling plan" and a "*surface use plan of operations.*" The drilling plan describes the drilling program, maps out the surface and underground locations to be disturbed, provides geological data, predicts hazards (such as releases of oil to nearby streams) and proposes ways to avoid such hazards or to minimize their effects. The surface use plan describes the location of the roads and

[1] In Alaska, parties wishing to conduct geophysical exploration must submit an application for a permit. BLM has 90 days in which to approve or disapprove the application, unless completion of environmental studies will delay action on the permit. 43 CFR § 3152.

drill pads, provides specifics of the pad construction, details methods for containing and disposing of waste materials and sets out plans for reclaiming the surface. Before activities can begin, BLM must approve both plans.[2]

Most importantly, before BLM can approve an APD, it must first post a notice of the proposed action, including the terms of the lease and a map or description of the affected lands. BLM may not act on an APD until this notice has been posted in the appropriate BLM state office for 30 days. BLM also must notify and consult with any "interested parties" upon receipt of an APD.[3] The notice issued by BLM should include the name and address of the responsible BLM official. This 30-day period may be your only opportunity to tell BLM of your concerns about the proposed drilling activity.

Public Participation in Decisions on Individual Activities

Your ability to participate in BLM's decisions to issue leases or APDs will depend in large part on whether BLM chooses to complete an EIS prior to making its decision. Before taking any of the individual actions described above, BLM must analyze the potential environmental impacts. Issuance of leases, approval of drill permits and authorization of exploration activities may, depending on the circumstances, have a significant impact on the environment and require an EIS.

BLM normally does not prepare an EIS prior to the issuance of leases. Instead, BLM often relies on the EIS it prepared for the applicable land use plan.

In many instances, where individual leases or APDs are issued, BLM will prepare a shorter document called an *environmental assessment* (*EA*). The EA should include a brief discussion of the need for the project, alternatives to the project and the environmental impacts of the proposed action, as well as the alternatives. This discussion must be sufficiently detailed to determine whether impacts may be significant and if the preparation of an EIS is required.

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[2] For National Forest lands, the Forest Service must approve the surface use plan of operations.

[3] 43 CFR § 3162.3-1(h)

BLM also has identified some common activities that normally do not result in significant environmental effects. These activities have been "categorically excluded" from the requirement to prepare an EIS. No EA is prepared prior to authorization of these activities. Approval of a single, exploratory well, for example, might be granted a *categorical exclusion*. In the Energy Policy Act of 2005, Congress carved out several BLM oil and gas activities that may be categorically excluded. These include: individual surface disturbances of less than five acres, drilling an oil and gas location or well pad at a site at which drilling has occurred within the past five years, drilling an oil or gas well in a developed field for which an EIS or EA was completed within the past five years, placement of a pipeline in a right-of-way corridor that was approved within the past five years and minor maintenance activities.

If BLM believes that no significant impact will occur, either as a result of an EA or categorical exclusion, no further environmental analysis will take place and no public comment will be invited before the action is approved. A simple Decision Notice (DN) will be issued by BLM. If approved, a lease or permit goes into effect immediately.

The DN and accompanying *Finding of No Significant Impact* (*FONSI*) are, however, subject to protest to the State BLM Director and appeal to the *Interior Board of Land Appeals* (*IBLA*). (See chapter 7.)

Commenting on Environmental Impact Statements

The *National Environmental Policy Act* (NEPA) requires BLM to prepare an environmental impact statement whenever it proposes to take an action "significantly affecting the quality of the human environment." Preparing a new land use plan or making major amendments to an existing plan almost always require an EIS. Approving permits to drill for oil or gas may require an EIS, depending on the circumstances.

If BLM decides to prepare an EIS, there are several stages at which you can participate (Figure 2). First, you should get involved in the "scoping" process to make sure BLM identifies the issues you want it to consider before authorizing oil and gas development. In a letter to BLM, identify such issues as fish, wildlife, cultural resources, *water quality* and recreation. A sample scoping letter, which includes potential issues to raise in the development of RMPs, is included in Appendix 1.

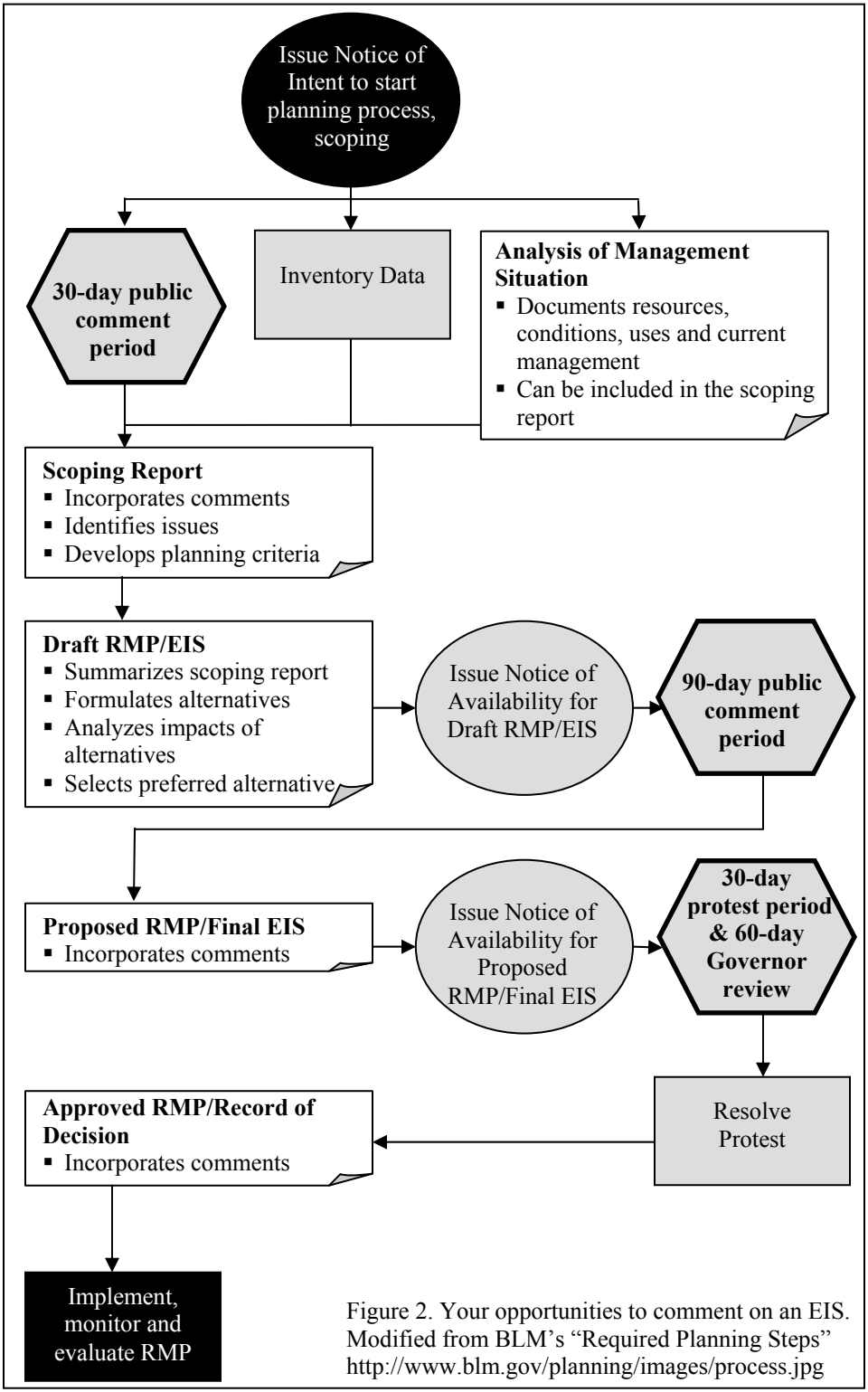

Figure 2. Your opportunities to comment on an EIS. Modified from BLM's "Required Planning Steps" http://www.blm.gov/planning/images/process.jpg

Next, BLM will circulate a draft EIS and invite the public to comment on it. In compiling an EIS, BLM must look at everything that would happen to the environment if the proposed land use or drilling plan goes into effect. Check to see if the EIS contains detailed information about the soils and vegetation of the area, the kinds and numbers of wildlife species that use the area and the effects of oil and gas development on those species, the effects of drilling on water quality and quantity and the scenic and recreational resources in the area and the effects of development on those resources.

Pay particular attention to the *cumulative impact* of the proposed action. For example, in a mineral-rich region, BLM must add the impact from one proposed oil or gas field to that of other existing and foreseeable development in the area. The discussion of cumulative impacts also should include environmental effects resulting from other types of activities in the area. Make sure, for example, that any description of roads and loss of vegetation includes those caused by any timber sales, mining operations or other activities proposed for the vicinity as well as the haul roads and drill pads for the oil and gas operations.

The alternatives section "is the heart of the environmental impact statement," and you should insist that BLM explores meaningful alternatives to the company's proposal or to BLM's proposed land use plan. The alternatives should be realistic – not just straw men designed to make the preferred alternative look good. There should be a detailed description and analysis of each alternative, and a detailed comparison of alternatives.

Look for the following kinds of alternatives and, if they are not discussed, ask BLM to do so.

Alternatives to land use plans or proposed leases:

- Is there a full range of oil and gas leasing alternatives, including different levels of development, as well as BLM's "preferred alternative?"
- Did BLM consider the cumulative impact on the planning area if all leased properties were to be developed?
- Has BLM considered an alternative of no leasing?

- Has BLM considered lease stipulations to conserve surface resources including timing restrictions to protect wildlife habitats, well density limits and/or no surface occupancy?

Alternatives to proposed APDs:

- Did BLM analyze alternative drilling methods, such as directional drilling from off-site, that would cause less surface disturbance?
- Did BLM consider down-sizing the proposed development or gradually phasing in development?
- Did BLM examine alternative locations for haul roads, drill pads or other facilities? Similarly, did BLM examine whether this infrastructure can be consolidated and/or shared among operators?
- Is there a serious "no-action" alternative? No action means just that: BLM takes no action to approve the proposed development and no drilling takes place. Even if BLM feels constrained to approve drill permits because leases already have been issued, a no-action alternative is needed as a basis for comparing the impacts of the development.

Often, you can find notices of the scoping process and availability of the draft EIS and final EIS on the state BLM website. Other information, such as maps, a timeline and contact information also may be available online. An increasing number of states are even offering the option of submitting comments online. Check your state BLM website (listed in Appendix 5) to see what information is available on the plan you're interested in.

Your comments on the draft EIS should emphasize the potential environmental problems presented by the proposed oil and gas activity and failures of the EIS to discuss these problems thoroughly. If you made comments during the scoping phase, be sure to reiterate them at this point. Only issues that you address in your comments can be raised in an administrative challenge to the final EIS and decision.

The final EIS and decision will be issued after BLM has reviewed the public comments. If the decision doesn't adequately redress issues you are concerned about, you can protest or appeal it. (See chapter 7).

6

ISSUES TO RAISE

Oil and gas production has various environmental effects throughout the life of a well, from the initial exploration operations, construction of roads and the well pad, the drilling of the well and preparation for production, to the actual production of oil and gas. This chapter is a "toolbox" of issues to raise when you review BLM resource management plans, and oil and gas leasing and production decisions. It is not necessary to bring up every issue. Focus on the ones that most concern you. Remember that the following issues can and should be raised at all phases of NEPA (initial scoping, EAs, draft EISs and final EISs) as well as at all stages of oil and gas development (land use plan development, pre-leasing, full field development and APD approval).

Soils

BLM is required to manage its lands to protect soil resources. Exploration activity, construction of the roads and well pad and installation of pipelines can cause mixing of soils and loss of vegetation due to explosives used and the digging, leveling and scraping required. The use of trucks and other heavy equipment also compacts the soil. The results can be erosion, loss of soil productivity, increased runoff, landslides and flooding.

Water

Both surface water and groundwater may be adversely affected by drilling operations. Surface waters may be dirtied by increased sediment levels due to erosion, increased flows from runoff and by the construction of road crossings. Stream beds may be altered by changes in the volume or location of water that feed streams. Water quality also may be affected by leaks or disposal of wastewater from wells.

Groundwater may be contaminated if drilling fluids and chemicals from the well hole escape into underground reserves, or minerals migrate between geological formations during drilling. Pipeline or storage tank leaks, leaks from mud pits or wastewater disposal by injection wells may also contaminate the groundwater in the area of the well. If the groundwater feeds surface water, the contamination may also spread to neighboring bodies of water.

BLM has a duty to ensure that its leasing decisions will not lead to violations of water quality standards and other provisions of state water quality programs. The agency cannot simply claim that it has no evidence of water quality violations. BLM is responsible for gathering the needed data and determining the likely impacts of oil and gas operations on water quality.

Your state water pollution control agency can provide a copy of the water quality standards that apply to the streams you are interested in. The state agency will also know if any streams have been designated for special protection under its anti-degradation program. BLM must guarantee that existing water quality in such streams is maintained or improved, even if it is already better than the standards. Also, ask BLM for copies of all water quality monitoring data for the streams in the area you are interested in and compare those data with the standards to see if the standards are being violated.

If water quality data are lacking, BLM should use computer models, past experience, comparisons with similar, nearby watersheds or any other reasonable and available techniques to estimate impacts on water quality. If the impact of a proposed action on water quality cannot be predicted, then BLM should not take the action. The Clean Water Act requires that BLM modify or abandon the action if necessary to ensure that water quality standards will not be violated.

The Energy Policy Act of 2005 created a number of special exemptions for oil and gas activities and their impacts on water quality. The Act exempts oil and gas development activities from the Clean Water Act's stormwater permit requirement to control run-off. However, BLM must still ensure that oil and gas activities do not violate state water quality standards, including standards for sediment levels and other pollutants. Some states, such as Colorado, chose to continue to apply their stormwater permit program to oil and gas operations despite the fact they are no longer required to do so under the Clean Water Act. The Energy Policy Act also exempts hydraulic fracturing from the Safe Drinking Water Act.

Hazardous Waste

Drilling for oil and gas often involves toxic materials. For example, drilling mud (or drilling fluid) is a mixture of water, bentonite, polymers, caustic soda, barite and, in some cases, oil. It is usually stored either in earthen pits on the location or in tanks.

This mud, together with any wastewater that is produced from the well, must be disposed of properly. Injection wells are frequently used to dispose of these wastes by pumping them into another underground formation, but wastewater also may be placed in neighboring bodies of water, dumped on the ground or buried on-site. According to BLM, this is an acceptable method of oil waste treatment. However, a permit from the state's water quality agency should be required if wastewater will be discharged into nearby rivers or lakes.

Plants and Wildlife

Earth-moving required in exploration activity and in constructing roads and well pads destroys vegetation and leaves the top layer of fertile soils extremely vulnerable to erosion. If the drilling sites are located in forested areas, construction also may require destroying trees. The original vegetation may be replaced by new and invasive weeds introduced during construction. Other types of plant life, such as *riparian* (stream-side) grasses and trees, or plants that live in wetlands, can be poisoned by leaks or spills that occur during drilling as well as the production phase of a well.

The effects of drilling on fish and wildlife are related to the impacts on soil, vegetation and water. Erosion, sedimentation and chemical contamination of surface water destroy fish habitat. Stream crossings may affect the ability of fish to migrate upstream to spawn or may destroy spawning areas. When vegetation is removed, wildlife that depend on those types of plants must go elsewhere to forage or hide. In addition, roads and vehicular traffic may disrupt wildlife migration and travel routes or break up the habitat of animals that avoid roads. Habitat fragmentation, or the breaking up of large areas of habitat into smaller and disconnected areas, may limit available food sources, increase stress levels and make wildlife more vulnerable to predators and disease – all of which can reduce population levels. For some species that are especially sensitive to disturbance, increased human presence can push wildlife out of the area. These effects can be especially harmful if they involve *endangered* or *sensitive* species.

BLM has special responsibilities if a lease area contains, or may contain, any federally-listed species or species that has been proposed, or is being considered, for listing under the Endangered Species Act. BLM must thoroughly evaluate the impact of oil and gas operations on those species and their habitats, including potential habitat. You should ask the agency to perform a thorough, on-the-ground inventory before offering any lands for oil and gas leasing.

Contact the regional office of the U.S. Fish and Wildlife Service (FWS) for listings of endangered, threatened, proposed and candidate species for your area of interest. If oil and gas operations are likely to affect either a protected species or its habitat, then BLM must formally consult with the FWS regarding the impact.

BLM should also consult with the state's wildlife agency and protect all plants and wildlife, not just threatened or endangered species. In many areas, the activities associated with leasing can interfere with species such as elk, moose, mule deer, pronghorn, bighorn sheep, sage-grouse, bears and cougars. If BLM has completed a land use plan for the area, check to see if it identifies these or other species of concern. Also ask if BLM (or your state wildlife agency) has special management plans or guidelines which are not part of the land use plan. Find out if there are additional species of concern not listed in the land use plan. Ask for copies of all habitat management plans for these species. Using this information, you may identify potential impacts that BLM has overlooked.

Archaeological and Historical Sites

Frequently, public lands are home to archaeological or historic sites that are listed or eligible to be listed in the *National Register of Historic Places*. The National Historic Preservation Act (NHPA) requires BLM to conduct a literature search to determine whether oil and gas leasing may affect any areas listed or eligible to be listed on the National Register. In addition, BLM must request the views of the State Historic Preservation Officer and seek information from other interested parties who are likely to know about historic properties in the area. The agency must make a "reasonably good faith effort" to identify historic properties that may be affected by its undertaking and gather sufficient information to evaluate the eligibility of these properties for the National Register. If you believe an area has significant cultural resources, ask BLM to perform a thorough on-the-ground cultural resource survey before any construction begins or before any leases are issued. If potential adverse effects are identified, BLM must consult with the Council on Historic Preservation, the State Historic Preservation Officer and other interested parties about *mitigation* measures – ways to minimize impacts.

There also may be Native American burial grounds or other sites that are important for worship or ceremonial uses in the area. The Native American Graves Protection and Repatriation Act of 1990 requires federal agencies to consult with Native Americans concerning activities that may affect archaeological resources of importance to them. Native American access to sacred sites for the purpose of worship or other ceremonial use is protected by the American Indian Religious Freedom Act of 1978, and BLM must ensure continued access to these sites. Drilling can affect these sites directly, by destroying them during construction, or indirectly, by changing the character of their surroundings and by providing improved public access that leads to vandalism.

Visual Quality

Even in areas without specific cultural significance, the ongoing presence of production equipment and the well sites themselves may destroy the scenic value of the area. Especially along major travel routes, or public lands which are unique or especially beautiful, the presence of

oil or gas wells can be devastating to the vista. In addition, air pollution can affect visibility in nearby wilderness areas and even national parks. Check the land use plan for the area to determine what visual quality guidelines apply.

Air Quality

Oil and gas drilling may affect the air quality in the region near a well. Dust from roads, emissions from exploration, construction, drilling and production equipment and exhaust from traffic to and from the well area can lower air quality. Development and production of oil and gas wells can result in the release of potentially harmful pollutants into the atmosphere including nitrogen oxides, particulates, volatile organic compounds (VOCs), sulfur dioxide, benzene and carbon monoxide. When nitrogen oxides combine with VOCs, ground-level ozone is formed.

The Clean Air Act requires BLM to "affirmatively protect the air quality related values" (AQRV) in an area. Check the land use plan to determine whether there are AQRV standards for the area, and whether BLM's leasing decisions and actual drilling operations are consistent with them. Also check with the state air pollution control agency regarding any permits that must be obtained for activities affecting air quality.

Special Concerns with CBM Development

When the issue is CBM extraction, remember to raise all the above issues. In addition, the following considerations should be raised:

- Water quantity and management: how will BLM manage the water pumped out of the coalbed to release the natural gas? If reinjection is involved, underground drinking water sources may be contaminated. Is the agency adding mitigation stipulations to adequately protect existing water rights?
- Water quality: CBM by-product water is typically high in total dissolved solids (TDS), minerals and salts. Has BLM provided baseline information for existing water quality if the water is to be stored in reservoirs or dumped onto the ground? Has BLM assessed the impacts of high saline water on soils, vegetation, fisheries, domestic livestock and wildlife?

- Has the agency thoroughly examined the potential for spontaneous combustion in partially dewatered underground coal seams?
- Has the agency studied the potential impacts due to migrating methane (gas that vents to the surface other than through the well), and the impacts to wildlife, soils and human safety?
- Has the agency studied the possibility of ground subsidence that may occur when the structural integrity of underground geological substrata is compromised due to dewatering?
- Has the agency adequately assessed and modeled the time for groundwater to recharge and replenish?
- Is the agency requiring an adequate number of monitoring wells to keep an eye on changing water quality, drops in hydrostatic pressure, lowering of the water table and rates of groundwater recharge?

These are but a few of the major impacts associated with CBM extraction. The purpose of NEPA, of course, is to study, understand, disclose and assess mitigation alternatives for all of these impacts before the project is approved, and not years later, when the environmental impacts may be irreversible.

Reclamation and Bonding

Before the BLM authorizes "surface disturbing activities" on a leased parcel, the lessee must post a bond with BLM to ensure that lands and surface waters disturbed by the lessee's oil and gas operations are restored to their prior state after operations cease. If the lessee does not adequately restore the disturbed land, BLM can take all or part of the bond and perform the necessary reclamation itself.

The lessee may provide a bond for each of his leases at the minimum rate of $10,000 per lease. Alternatively, the lessee may provide a bond for all of its leases in any one state for a mere $25,000 or for all of its leases nationwide for $150,000. These bonding amounts have not changed since the 1960s and are dramatically low in comparison to the costs of full reclamation. Reclamation of just one well may require tens of thousands of dollars. At current bond levels, it is anticipated that there are insufficient funds for the federal government to reclaim wells not appropriately abandoned and reclaimed by the driller.

BLM can increase the minimum bond amount for such reasons as a history of previous violations or a failure to pay royalties on time. Furthermore, if BLM has had to demand payment from a lessee for failure to plug a well or properly restore lands on any parcel in the preceding five years, the required bond for new activities will be 100% of the estimated cost of plugging wells and reclaiming lands on the parcel that the lessee now proposes to develop. These rules are intended both to penalize lessees and operators who do a poor job environmentally, and to make sure that any future problems they cause will be cleaned up entirely.

BLM has the authority to require an increase to an existing statewide or nationwide bond, as well as an individual lease bond, to cover a specific "liability." Liabilities may include water impoundment structures or significant reclamation challenges. BLM may require bonding for reclamation of off-lease lands or surface waters that may be adversely affected by oil and gas operations on a lease.

7

BEING AN EFFECTIVE ADVOCATE

1. Get to Know the BLM

BLM is organized by state, but you should work most closely with the Resource Area Field Manager (see Appendix 5 for a list of state BLM offices). Don't overlook the wildlife biologists and recreation specialists, who may well be more helpful than other staffers.

2. Arm Yourself with the Facts

Check the state BLM website or ask BLM District or Resource Area staff for copies of the agency's planning and leasing regulations; the regulations establish the rules both they and you will need to follow. Also, check online or ask for copies of all relevant environmental and planning documents for the lands you are concerned about, including:

- The leasing or drilling permit Environmental Impact Statement or Environmental Assessment, if there is one;
- The draft and final land use plan and EIS;
- Any analysis of available monitoring data on air and water quality;
- Any proposed or final habitat management plan or other special activity plan that has been prepared for the area;

- A copy of the lease; and
- A history of the use of the lands, and of the lease applicant, including any violation of drilling permit terms.

If the lease offering overlaps a wilderness study area, the draft or final wilderness EIS for the area also may contain valuable information.

Read these documents carefully. They are almost certain to contain information that will help you get started as well as help you determine whether changes in management are necessary.

Then, pay a visit to the District or Resource Area office and carefully inspect the file for the lease offering or APD. All files are public information with the exception of personnel files. You have the right to review them. If you can, it is probably worth going through the files twice: once at the beginning of your involvement and again later when you are more knowledgeable and able to recognize the real significance of the documents that are there. Ask for copies of the documents that look useful or important.

Make use of the Freedom of Information Act: If BLM refuses to provide access to, or copies of, documents that you want, use the Freedom of Information Act (FOIA). Submit your request in writing, describing as specifically as you can the documents that you want to look at or have copies of. At the beginning of your letter, write: "this is a request under the Freedom of Information Act" and, be sure to put "Freedom of Information Act Request" on your envelope. (A sample Freedom of Information Act request in included in Appendix 2.)

Refusals of FOIA requests are rarely justified. If your request is denied, you should request a review of the denial by writing a letter to:

Department of the Interior
Office of the Solicitor
1849 C Street NW – Mail Stop 6556
Washington, D.C. 20240
Attn: FOIA Appeals Office

Get to Know your Neighbors: Contact organizations and agencies that may be able to provide information, assistance or support. These include state agencies like the wildlife or water quality agency, local offices of national environmental organizations, grassroots groups and

federal agencies like the Environmental Protection Agency. One good way to locate the names of individuals and organizations who share your interest in a particular area is to attend a local meeting or see who commented on the draft EIS or land use plan for the area. Comments are usually printed in the back of the final EIS.

Get to Know the Areas You Want to Protect: Visit the area as often as you can. Take a camera and keep a journal. Your observations and photographs can provide powerful support for your recommendations. Document leasing management problems with your camera or camcorder.

3. Be Persistent

Make sure you let BLM know, in writing, that you want to be informed of, and consulted about, all decisions, plans and environmental documents affecting the area.

Ask questions and follow up on the answers you get. For example, if you are told that the approved surface use plan is being compiled by the company, look at the requirements of the plan and inspect the drilling site yourself. Ask to see BLM's inspection reports on the operation.

Keep a record of your letters and, if problems are not being resolved, send copies to your congressional representative and your senators. Use these examples, or let others use them, in oversight hearings by committees of Congress. Make them available to other federal agencies and investigative reporters. If you decide to protest or appeal a subsequent leasing or permitting decision, submit copies of past letters of complaint.

Remember, put everything in writing. Put your observations of land conditions, your objections to BLM failures to notify you or consult with you and your criticisms and praise in letters to BLM. Save copies of your letters.

4. Don't Burn Your Bridges

Start off assuming that BLM personnel want to do a good job of managing public lands and would like your help. Local BLM personnel are your neighbors. If you do encounter resistance to your participation, insist on your rights. Both FLPMA and NEPA require BLM to involve interested citizens in management of public lands.

When BLM does something right, whether it is providing you with information or making a good, substantive decision, don't forget to let them know. Support good managers whenever you find them.

5. Don't be Intimidated

Don't be afraid to tell BLM what is bothering you about the agency's management decisions. You don't need to be a wildlife biologist, a hydrologist or a lawyer to insist that something is wrong. If the area looks bad, say so! Protecting scenery, recreation and aesthetic values are among BLM's most important legal duties.

These are your lands and resources. You have a right to participate in decisions about how they are managed.

6. Build Public Support

Development of domestic reserves of energy fuels has become a national debate. Prehistoric fossil fuel-based energy policies will continue to create pressure for faster and cheaper production of oil and gas here at home. Proponents of fossil fuel-based energy sources are seeking to make more federal lands available for development, rather than seeking to make America less dependent on fossil fuels, regardless of the source, foreign or domestic. For that reason, it is extremely important to raise public awareness about all the costs of oil and gas development, from air and water pollution to wildlife impacts, lost recreation opportunities and global warming. Here are a few other ways you can get involved:

- Lead outings of conservation groups or nature clubs to areas scarred by drill pads and haul roads. These are excellent opportunities to learn first-hand about what is happening on the ground. Encourage trip participants to write letters of complaint or praise to federal agencies and elected officials.
- Develop a slide show and give talks to local groups about the environmental consequences of oil and gas development.
- Write letters to the editors of local papers to encourage conversations in your community.

- Talk to newspaper and TV reporters, tell them your story and show them your photos. A human voice is very compelling.

7. Administrative Reviews

[Portions of this chapter have been adapted from How Not to be Cowed (NRDC/SUWA, 1991).]

So, you've done your homework, lobbied officials, raised public awareness and still BLM goes ahead and approves an objectionable lease or drill permit. What do you do now?

BLM and its parent agency, the Department of the Interior, have a formal complaint procedure that any citizen can use.

Although these "administrative remedies" are much less complex than a courtroom trial, you must be careful to follow the rules. It never hurts to ask a conservation group for assistance and legal advice.

Protesting the Resource Management Plan (RMP)

If you believe a land use plan's oil and gas leasing provisions are inadequate, you can protest them. But remember: only issues raised in comments submitted during the planning process can be protested.

You can file a protest by sending BLM a letter within 30 days of the plan's adoption. Send it via Certified Mail to:

BLM Director
U.S. Department of the Interior
18th and C Street N.W.
Washington, D.C. 20240

Your protest letter should include:

1. Name, address, phone number and interest in the plan, e.g., "concerned citizen;"
2. A statement of the issues being raised;

3. A copy of written comments previously submitted or the date on which the issues in the protest were discussed for the record, such as in the scoping meeting; and
4. A brief statement of why the plan is wrong.

If BLM rules in your favor, the plan will be sent back to be revised. If the Director rules against you and the final RMP is upheld, you have no other administrative remedy. Your only recourse is to file a lawsuit challenging the plan.

Protesting Lease Offerings and APDs

If you are unhappy about a decision to issue leases or drilling permits on public lands, you can also file a formal protest. The regulations don't spell out any particular form for this type of protest. It's usually just a letter addressed to the BLM state director in the state where the lease is located. You should give your name and address and identify the lease or APD at issue. The letter should explain why you think the lease or APD was improperly approved. It should be as specific as possible about what is wrong. Any available documents that show the failure of the applicant or BLM to comply with the law should be attached to the letter.

Protests against decisions to issue a lease must be filed before the lease is sold. This means your protest must reach the state director before the oral auction of a competitive lease. Check the lease sale notice for the protest deadline. Often, you can find this information on the state BLM website. Your letter should include a request that sale of the lease be suspended until a decision on the merits of your protest can be made.

It is also important to note that BLM's regulations allow only the Assistant Secretary of Interior for Land and Minerals Management to suspend an entire competitive lease sale. Nevertheless, the BLM state director can suspend the offering of a specific parcel in light of a protest that he or she believes to be well-grounded.

Protests against decisions to approve APDs must be filed with the state director within 20 business days of the notice of the decision. The state director must respond within 10 business days. Always ask for a suspension of activity on the well site in the interim. If the state director refuses to grant a stay or fails to make a decision on the protest within the

required time, you may be able to appeal the APD decision directly to the Interior Board of Land Appeals.

Appealing to the Interior Board of Land Appeals

If you are dissatisfied with a decision approving the issuance of leases or APDs, you may be able to file an appeal with the Interior Board of Land Appeals (IBLA). Appeals to IBLA are often complex, and will almost always be defended by attorneys within the Department of the Interior's Solicitor's Office. For these reasons, it is recommended that you seek the advice and participation of counsel experienced in public lands law.

To file an appeal with IBLA, you must (1) be a party to the case and (2) have been "adversely affected" by a BLM decision.

To meet the "party to a case" requirement, it is essential that you "actively participate in the decision-making process regarding the subject matter of the appeal." This entails going to public meetings early in the process when BLM is receiving public comment on the draft EA or EIS. Check online or read local newspapers for BLM notices regarding public meetings on proposed leases or APDs since BLM is usually not required to provide notice directly to potentially interested parties. You should make sure to "sign in" at these meetings and also to make comments which will help establish early involvement and "party" status. Filing a timely protest with the state director is one way to gain party status in those circumstances where no public comment was invited prior to the decision.

A party is not "adversely affected" by a decision unless the record shows that they have a "legally recognizable interest." Recreational use of the land involved has been found to be such an interest. In your appeal, you should be very specific in detailing your use of the land involved and how the recreational or aesthetic values could be damaged.

If you decide to appeal a BLM decision to the IBLA, the following procedures must be followed:

1. Within 30 days of the BLM decision, submit a Notice of Appeal to the BLM officer who issued the decision; and

2. Within 30 days of filing the Notice, submit a detailed statement of reasons to support your appeal. The Statement of Reasons must be filed with:

   U.S. Department of the Interior
   Office of Hearings and Appeals
   Interior Board of Land Appeals
   4015 Wilson Boulevard
   Arlington, Virginia 22203

Send copies of your Notice of Appeal and Statement of Reasons to the Regional Solicitor. (See address in Appendix 6.) Use certified mail, return receipt requested and send copies of the receipts (after they come back to you) to IBLA. If you know the name of the leaseholder or APD applicant, copies of the Notice and Statement must also be sent to them.

Remember that unless the IBLA grants a "stay" of the agency's decision pending review of the case, the activity being appealed is allowed to continue! Your appeal should include a request for a stay. That request requires a careful description of the potential harm to the environment that will occur if the activity goes forward.

Conservation groups in the West have been remarkably successful with appeals to IBLA, which indicates just how often state BLM officials may stretch the rules. But IBLA gives BLM officials broad discretion and often refuses to overturn their decisions. If this happens, your only recourse is to file a lawsuit in federal court.

Lawsuits

If unsuccessful after exhausting administrative remedies, relief can be sought in the federal courts. The particular facts of a controversy will determine whether and when a lawsuit can – and should – be brought. The law is undeveloped and unsettled on many points concerning oil and gas development on public lands. Please contact an attorney familiar with public lands and oil and gas law to provide legal counsel.

GLOSSARY OF TERMS

Appeal – formal request for reconsideration of a final BLM decision that is made to the Interior Board of Land Appeals.

Application for permit to drill (APD) – a drilling permit application submitted for each well by the operator to BLM. No drilling operations or surface disturbance can occur prior to BLM approval of the permit.

Area of critical environmental concern (ACEC) – defined by Congress to mean public land areas where special management is required to protect and prevent irreparable damage to important historical, cultural or scenic values, fish and wildlife habitat, other natural systems or processes or to protect life and safety from natural hazards. 43 U.S.C. § 1702(a).

BLM – Bureau of Land Management, the federal agency in charge of managing the public lands and their mineral resources. BLM is part of the Department of the Interior.

Bond – a financial guarantee supplied by a company to ensure reclamation, or recovery, of the lands disturbed by oil and gas development. If required reclamation is not completed, BLM can use the money supplied by the bond to complete the necessary work.

Categorical exclusion (CE) – a category of actions which do not individually or cumulatively have a significant effect on the human environment. Neither an environmental assessment nor an environmental impact statement is required for actions which have been categorically excluded. Nevertheless, an agency may choose to prepare an environmental assessment for an action covered by a categorical exclusion even though it is not required to do so. The agency must prepare an environmental assessment or even an environmental impact statement in extraordinary circumstances in which a normally excluded action may have a significant environmental effect. 40 CFR § 1508.4. BLM has published a list

of CEs for its oil and gas program - http://www.blm.gov/pgdata/etc/medialib/blm/wo/Information_Resources_Management/policy/im_attachments/2005.Par.19381.File.dat/im2005-247attach2.pdf

Cumulative impact – the result of adding the incremental impact of the proposed action with other past, present and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions. 40 CFR § 1509.7.

Directional drilling – Drilling laterally or horizontally beneath the surface, making it possible to reach oil and gas reservoirs not directly below the well and allowing multiple wells to be drilled from the same well pad.

Diversity – a measure of the variety of species and habitats in an area that takes into account the relative abundance of each species or habitat.

Drainage – occurs when multiple wells withdraw oil or gas reserves from the same underground pool.

Drilling derrick – a complex set of machines used to lift and position the drilling bit and piping above the oil or gas well hole and to turn the drilling bit around in the hole.

Endangered species – a plant, animal or fish species whose survival or reproduction is in immediate danger as determined by the Secretary of the Interior in accordance with the Endangered Species Act.

Environmental assessment (EA) – a concise public document prepared by a federal agency that serves (a) to determine whether to prepare an EIS or a finding of no significant impact; (b) to aid an agency's compliance with the National Environmental Policy Act when no EIS is necessary; and (c) to facilitate preparation of an EIS when one is necessary. 40 CFR § 1508.9.

Environmental Impact Statement (EIS) – a detailed written statement prepared by a federal agency prior to deciding to take a proposed action that may have a significant environmental impact.

Federal Land Policy and Management Act (FLPMA) – BLM's organic Act, 43 U.S. C. §§ 1701 *et seq*., passed October 21, 1976. FLPMA provides BLM with its principal management responsibilities, mandates and policies.

Finding of no significant impact (FONSI) – a document prepared by a federal agency which briefly presents the reasons why an action will not have a significant effect on the human environment and thus does not require an environmental impact statement. 40 CFR §1508.13.

Injection well – an underground well in which water, other liquids or gases are injected instead of being pumped out. Injection wells are used to dump wastewater for petroleum production and in environmental remediation.

Interior Board of Land Appeals (IBLA) – the arm of the Department of the Interior which renders final decisions on administrative appeals relating to the management of public lands.

Land use plan – a resource management plan (RMP) or management framework plan (MFP) which is being followed until replaced by an RMP. RMPs are developed in accordance with regulations issued by the BLM pursuant to the Federal Land Policy and Management Act and establish management direction for resource uses. The Forest Service calls them Land and Resource Management Plans (LRMPs), prepared pursuant to the National Forest Management Act (NFMA).

Lease – any contract, profit-shared arrangement, joint venture or other agreement issued or approved by the United States that authorizes exploration for, extraction of or removal of oil or gas.

Mitigation – includes avoiding an impact by not taking a certain action; minimizing impacts by limiting the action; rectifying the impact; reducing or eliminating the impact over time by preservation or maintenance operations during the life of an action; or providing substitute resources or environments. 40 CFR § 1508.20.

Monitoring – the periodic observation and orderly collection of data to evaluate the effects of management actions and their effectiveness in meeting management objectives. 43 CFR § 4100.0-5.

Multiple use – Congress' lengthy definition refers to the management of public lands so that they best meet present and future needs for renewable and nonrenewable resources including recreation, range, timber, minerals, watershed, wildlife and fish, and natural scenic, scientific and historical values without permanent impairment of the productivity of the lands or environmental quality. 43 U.S.C. § 1702(c).

National Environmental Policy Act (NEPA) – the federal law under which Environmental Impact Statements or Environmental Assessments are prepared.

National Register of Historic Places (NRHP) – a register of districts, sites, buildings, structures and objects significant in American history, architecture, archaeology, and culture established by the National Historic Preservation Act of 1966 and maintained by the Secretary of the Interior.

No surface occupancy (NSO) – a requirement in a lease or APD that prohibits an operator from physically placing any equipment or material on the surface of a particular tract of land. Oil and gas reserves under parcels with NSO stipulations are usually recovered from nearby parcels using directional drilling techniques.

Produced water – liquids produced during the drilling operation. Produced water usually is composed of existing ground water that is pumped out of a well along with by-products of the drilling operation such as mud, drilling lubricants and oil.

Protest – a formal request made to a BLM official to reconsider a proposed or final decision.

Reclamation – the restoration of lands disturbed by oil and gas activity to productive use. It normally includes recontouring the land and reseeding it with desirable vegetation.

Research natural areas (RNA) – a natural area established and maintained for research and education. RNAs may have typical or unusual plant or animal types, associations, or other biotic phenomena, or characteristic or outstanding geologic, soil or aquatic features or processes.

Reservation – action by the federal government reclassifying a tract of land to a specified purpose -- e.g., wildlife preservation.

Riparian area – an area of land adjacent to a creek, stream or other body of water where vegetation is strongly influenced by the presence of water.

Scope – the range of actions, alternatives and impacts to be considered in an Environmental Impact Statement. 40 CFR § 1508.2.

Scoping – the early and open process used for determining the scope of issues to be addressed during the NEPA process and for identifying the significant issues related to the proposed action. 40 CFR § 1501.7.

Sensitive species – plant, fish or animal species not listed as threatened or endangered pursuant to the Endangered Species Act, but which are undergoing status review or are proposed or candidate species for listing.

Special management areas – see area of critical environmental concern and research natural area.

Surface use plan of operations – description of proposed oil and gas activity and reclamation methods.

Sustained yield – defined by Congress to mean the achievement and maintenance in perpetuity of a high-level annual or regular periodic output of the various renewable resources of the public lands consistent with multiple use. 43 U.S.C. § 1702(h).

Tiering – refers to the reliance upon previous Environmental Impact Statements or Environmental Assessments such as those prepared for a land use plan or lease sale to support a more site-specific project such as an APD. The environmental analysis for the APD is said to be tiered to the previous Environmental Impact Statement.

Timing stipulation – requirement placed on a lease or APD that limits physical activities to certain times of the year. These stipulations usually are adopted to protect important wildlife migrations or breeding cycles.

Unnecessary and undue degradation – the duty imposed on BLM to protect federal lands from unnecessary or undue impacts. 43 U.S.C. § 1732(b).

Water quality – the chemical, physical and biological characteristics of water with respect to its suitability for a particular use.

Watershed – lands which are enclosed by a continuous hydrologic drainage divide and located upslope from a specified point on a stream.

Watershed values – soil productivity and stability and the storage, yield, quantity and quality of surface and subsurface waters.

Wilderness study area (WSA) – a roadless area that has been found to be wilderness in character, having few human developments and providing opportunities for solitude and primitive recreation.

Appendix 1

SAMPLE SCOPING LETTER

Re: Scoping Comments for the _____ Resource Management Plan

Dear:

The following comments are submitted on behalf of _____for consideration during the scoping process for the _____ Resource Management Plan (RMP) revision and associated environmental impact statement (EIS).

The Federal Land Policy and Management Act (FLMPA) and related regulations require the Bureau of Land Management (BLM) to manage the public lands and their resources pursuant to an RMP. All future actions on the Resource Area must conform to the terms and conditions established in the RMP. Given the importance of this planning document, BLM must ensure careful adherence to the legal requirements of both FLPMA and the National Environmental Policy Act (NEPA). In addition to strict compliance with the letter of these laws, we encourage BLM to honor their spirit as well. One of the underlying goals of both NEPA and FLPMA is to achieve environmentally sound management of the Nation's lands and natural resources.

GENERAL REQUIREMENTS APPLICABLE TO SCOPING AND THE PREPARATION OF AN ENVIRONMENTAL IMPACT STATEMENT

The "scoping" stage of preparing an EIS requires BLM to make two determinations: (1) what is the scope of the project – in this case the RMP – to be analyzed in the EIS and (2) what are the issues that will be analyzed "in depth" in the EIS.

In determining the scope of the EIS, BLM must consider "connected actions," "cumulative actions," and "similar actions." 40 C.F.R. § 1508.25. Connected actions include any reasonably foreseeable activities that would not occur "but for" the authorization provided in the RMP. For example, oil and gas development would not occur but for the

decision in the RMP to make lands available for leasing. Thus, the EIS should address the full progression of oil and gas development from the issuance of leases to full field production.

Similar actions include comparable activities on state and private lands in or adjacent to the geographic area of the RMP, as well as these activities on other federal lands in the area. For example, the environmental impacts of oil and gas development on private lands on watersheds or wildlife habitat also impacted by such development on the public lands of the Resource Area must be addressed.

Cumulative actions are actions that, when combined, have significant impacts, even if the impact of each individual activity is minor. Impacts that should be addressed in a cumulative fashion include, but are not limited to: habitat fragmentation and air or water pollution. Such cumulative impacts result from a number of activities authorized on BLM-administered lands and other lands, including oil and gas development, logging, mining, grazing, and off-road vehicle (ORV) use. The EIS must include consideration of both direct and indirect effects of these activities. 40 C.F.R. § 1508.25.

Regulations adopted by the Council on Environmental Quality (CEQ) require a reasonable range of alternatives to be presented and analyzed in the EIS so that issues are "sharply defined" and the EIS provides "a clear basis for choice among options . . . ." 40 C.F.R. § 1502.14. BLM must use the scoping process to develop alternatives that emphasize needed environmental protection, for example, even if such alternatives limit and/or strongly regulate other actions. In addition to the requirement to manage for multiple use and sustained yield, Congress declared that the public lands are to be "managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values . . ." as well as to "preserve and protect certain public lands in their natural condition" and provide "food and habitat for fish and wildlife." 43 U.S.C. §1701(a)(8) (emphasis added). Alternatives that do not meet these criteria should be rejected without further consideration.

BLM's Land Use Planning Handbook requires BLM to identify desired outcomes or desired future conditions resulting from implementation of the RMP. BLM should determine the desired outcome from oil and gas development and how such development will impact the desired future condition of wildlife habitat, recreation, air and water

quality, and energy reserves. Mechanisms available for resolving conflicts between oil and gas development and other resource values should be identified in the EIS and adopted in the RMP. Closure of lands to some uses, such as oil and gas development or logging or grazing, is specifically acknowledged as a means to achieve desired outcomes for other resource values.

The best available information should be utilized in developing the EIS and RMP. It is rarely possible to obtain perfect information. BLM should not allow this to pre-empt informed decision-making. The agency should gather the best information possible in all but the narrow range of exceptions permitted by CEQ's regulations. See 40 C.F.R. § 1502.22; see also 40 C.F.R. § 1502.24 (requiring professional and scientific integrity in an EIS).

Moreover, the RMP should make provision for the effective enforcement of its provisions. Monitoring of RMP implementation and the impacts resulting from plan implementation are crucial. The RMP should include a rigorous monitoring protocol as well as impact thresholds for wildlife and other resources. The RMP should establish corrective actions that will be taken when it becomes apparent that thresholds may be exceeded.

Issues Specific to Energy Development

Energy development is, in many ways, an environmentally harmful activity. Wildlife habitat is fragmented, scenic vistas marred and obstructed, air quality degraded, vegetation crushed and altered, and water sources drained and polluted. Natural areas, in essence, are converted into industrial zones. On "split-estates," the lives and livelihoods of private surface owners can be severely impacted. For these reasons, energy development on the public lands must be strictly regulated on the Resource Area.

Oil and Gas Leasing and Land Use Planning Issues

The revised RMP for the Resource Area should ensure that future oil or gas leasing is based upon completion of an EIS that analyzes the full site-specific impacts of oil and gas development. It is crucial that this "look before you leap" policy be followed in order to ensure that

additional leases are not issued before the potential impacts on other resource values in a Resource Area are fully understood. This is necessary to make certain that an informed decision can be made pursuant to NEPA as to whether leasing is appropriate, or whether other resource values might outweigh the economic benefits of oil and gas development.

No new leases or development should be authorized in crucial wildlife habitats until BLM has conducted a thorough and public analysis of the effectiveness of existing stipulations and other mitigation measures and the agency has adopted additional measures to preserve the habitat function of these lands.

It is critical to note that protecting biological diversity can only be dealt with appropriately at the planning level. Habitat fragmentation, connectivity and other factors affecting biological diversity are inherently landscape-level considerations. The project level is simply too small a scale for adequate exploration of impacts to the health of large ecosystems. For this reason, the RMP itself should establish specific, binding limits on road densities and other habitat disturbance that cannot be exceeded in the Resource Area. This is the only way to ensure biological diversity is preserved, and that ecosystem attributes are not "nickel and dimed" to death by individually small, but cumulatively significant site-specific projects.

To avoid impacts to some resources, some lands should be withdrawn permanently from oil and gas development or protected with stipulations prohibiting any adverse impacts to surface resources. These lands include: [Specify lands of importance to you in the Resource Area that should be off-limits to oil and gas drilling such as ACECs, habitat for endangered, threatened or sensitive species, crucial game animal habitats, wildlife migration corridors, and/or wetlands.]

Moreover, because so much of the Resource Area currently is under lease, BLM should use the RMP process as an opportunity to examine whether the agency should suspend, buy back, or exchange out some of those leases in order to ensure that other resource values are not lost to oil and gas development and a more balanced approach to such development can be achieved.

Coalbed Methane Issues

Coalbed methane (CBM) development is significantly different from conventional oil and gas activities. For example, CBM fields often have a much higher density of wells than conventional gas fields. Because of this, adverse impacts such as habitat fragmentation, loss of habitat, air and water pollution and damage to visual resources are magnified. In addition, CBM development also is distinguished by large quantities of produced water, with impacts that include aquifer drawdown, water quality problems, questions of disposal and impacts on soils and vegetation. The RMP must ensure that the unique impacts of CBM development are examined prior to leasing and other CBM activities.

The RMP should prohibit discharge of water extracted from coalbeds onto the ground or into surface waters. This is particularly true of saline or sodic "produced" water. Produced water is often contaminated with heavy metals. Selenium is of particular concern because of its impacts on aquatic and avian species. When produced water is stored in reservoirs or pits, heavy metals can become concentrated. The RMP must address the problem of produced water storage pits and reservoirs leading to concentrated chemical solutions that harm wildlife. Compliance with the Migratory Bird Treaty Act, for example, may require that such storage facilities be covered.

In most instances, water from CBM development should be re-injected in a manner that ensures groundwater supplies are not contaminated. If water from CBM production is discharged, directly or indirectly, into streams, the impacts of augmented flows and increased concentrations of salts and dissolved solids on the streams should be analyzed. Such analyses must account for the full range of variations in stream flow, effluent (produced water) concentrations, and sensitivities of different species at different life-stages. Impacts from altering stream thermal conditions and the timing of flows must be analyzed. Effects of discharged produced water on adjacent riparian areas and the effects of increased turbidity and sedimentation should be considered. The RMP should adopt measures to prevent or mitigate these impacts.

In addition to the impacts associated with the discharge of produced water, BLM must address the environmental effects of dewatering the coal seam. CBM development can lower water tables and have serious impacts on the accessibility of water for domestic and

agricultural uses. It can increase the likelihood of difficult-to-control coal seam fires. Seepage of methane and its effects on vegetation, water (including domestic water and aquifers) and public safety must be considered. The RMP must ensure these impacts are adequately mitigated or prohibited.

Full Field Development and Application for Permit to Drill Issues

For lands already under lease, the RMP should require staged development with monitoring adequate to ensure that predicted impacts to environmental resources have not been exceeded and that mitigation measures are sufficient. In addition, the RMP should impose reasonable measures to minimize adverse impacts to other resources. For example, seasonal restrictions should be imposed for the protection of important wildlife habitats, including crucial winter range and birthing areas.

Clustered development of these leases should be required to minimize new roads and pipelines, as well as the number of drill pads. Directional drilling should be used. New road construction should be restricted to the minimum distance necessary to access the site. All newly constructed or upgraded routes should be closed and rehabilitated immediately following termination of oil and gas activity. Pitless drilling methods using closed-loop circulation of drilling muds should be employed for all new wells unless a less environmentally harmful drilling technique is available.

The RMP must address the issue of granting exemptions and exceptions to lease stipulations at the permit to drill (APD) stage. Such stipulations should be waived only in the most extraordinary circumstances. The mere convenience of the lessee or operator should never be adequate justification. For example one common rationale for permitting exemptions or exceptions to timing stipulations intended to protect crucial winter range or birthing areas is that the animals are not yet present. However, drilling may prevent animals that would have moved onto the site from doing so. It may disturb and stress animals that are in areas adjacent to or nearby the area being drilled. It concentrates animals in areas that are not being drilled, resulting in overuse of otherwise undisturbed areas. All of these factors weigh against the easy waiver of lease stipulations.

Toxic and Hazardous Wastes and Chemicals

Hydraulic fracturing and drilling fluids contain a wide array of chemicals, many of which are toxic. Spills of these chemicals should be avoided. The RMP must ensure compliance with the Clean Water Act, Safe Drinking Water Act, Toxic Substances Control Act, Resource Conservation and Recovery Act and the Comprehensive Environmental Response Compensation Liability Act relative to the use of these and other hazardous substances. The RMP should provide specific guidance regarding the standards oil and gas operators must abide by to meet the requirements of these laws and provide for monitoring and enforcement by BLM.

Clean Air Issues

The RMP adopted by BLM must ensure that state and federal air quality standards are achieved. BLM should adopt a pro-active approach to air quality issues by using the land use planning process and the EIS to gather baseline air quality data and fully analyze the cumulative impact of any actions that may be authorized under the RMP, as well as past, present and reasonably foreseeable future actions on all lands within the airshed. The RMP should establish an effective monitoring program and adopt measures adequate to curb the release of pollutants if monitoring reveals that standards have been exceeded. The RMP should set forth steps that will be taken to ensure that non-attainment areas are returned to compliance. This must include, as BLM already acknowledges, an analysis not only of air quality within the Resource Area but a region-wide cumulative analysis.

The Clean Air Act requires the prevention of any significant deterioration of air quality in some areas, particularly in Class I airsheds applicable to national parks and wilderness areas. The RMP should adopt measures to ensure the air quality of all proposed wilderness within the Resource Area is preserved.

The RMP should address the issue of regional haze and the destruction of viewsheds caused by haze. BLM must acknowledge that oil, gas and coalbed methane development on federal, state and private lands is a significant contributor to haze. Oil and gas development contributes to this and other forms of air pollution in several ways. Oil and gas activities

produce large surface disturbances (pads and roads) and increase vehicle traffic which contribute to particulate pollution (dust). Oil and gas development also contributes to NOx,, SO2, and volatile organic compound (VOCs) pollution through activities like flaring, drilling, processing plants, wellhead compressors and compressor stations. These data emphasize the importance of regulating air pollution from oil and gas development activities in the RMP area.

Rights-of Way

Section 505 of FLPMA requires BLM to minimize all adverse impacts to environmental resources when it grants private rights-of-way across the public lands for power lines, pipelines or other infrastructure associated with oil and gas development.

The issue of the impact of power lines on birds and bats, for example, should be addressed. Violations of the Migratory Bird Treaty Act, the Bald Eagle Protection Act and the Endangered Species Act must be avoided. In addition to the obvious physical barrier they pose to flying species, power lines change the "structure" of other habitats, which may create favorable conditions for some species but be unfavorable for others. For example, sage grouse and prairie dogs are threatened if raptors are provided hunting perches in their habitat. For these reasons, the RMP should require that existing rights-of-way, with similar types of structures, be utilized to the maximum extent possible.

Reclamation

All plans of operations should include a reclamation plan that describes in detail the methods that will be used to ensure complete and timely restoration of all lands impacted by oil and gas activities to their prior natural condition. Reclamation should be conducted concurrently with other operations.

In addition, BLM must ensure that bonds are adequate to cover actual reclamation costs so neither taxpayers nor landowners are left to foot the bill. The RMP should identify those lands within the Resource Area or specific resource values that may require additional bonding.

Monitoring and Enforcement

The EIS should include a realistic assessment and analysis of the costs to the agency of monitoring and enforcing lease stipulations, conditions of approval for APDs, as well as reclamation standards. If BLM lacks resources sufficient to ensure compliance with applicable requirements, the agency should defer additional development.

Renewable Energy Sources and Global Warming

BLM should address the problem of global warming and the steps BLM can take to reduce this problem. For example, coal seam fires may contribute to global warming. Flaring of hydrocarbon by-products may contribute to global warming. BLM should make a thorough analysis of how activities it undertakes or authorizes contribute to the generation of carbon dioxide or other "greenhouse gases," and the RMP should make provisions to reduce and minimize them.

In addition, the RMP must tackle the impacts global warming will have on wildlife and habitats within the Resource Area and identify management strategies to address those impacts. Those management strategies should include the conservation of large unfragmented blocks of habitat and the migration corridors that connect them in order to ensure sufficient flexibility for wildlife to respond to changes in vegetation and water availability.

CONCLUSION

As noted above, under the CEQ regulations, rigorous analysis of all reasonable alternatives is "the heart" of an EIS. Under FLPMA, the chosen alternative must "best" meet the needs of the American people as a whole. FLPMA makes it explicitly appropriate that not all uses be accommodated in all areas, and requires consideration of the relative values of resources that cannot be defined in solely economic terms.

Thank you for considering these comments.

Sincerely,

Appendix 2

SAMPLE FREEDOM OF INFORMATION ACT REQUEST (BLM)

XXXX, XX, 20XX
Jane Doe, District Manager
Bureau of Land Management
XXX District
YYYYYYYYYY, ZZ 000000

Re: Freedom of Information Act Request

Dear Manager Doe:

It has come to my attention that ABC Petroleum, Inc. is seeking approval of a proposed application to drill for natural gas in the San Juan Resource Area near Durango, Colorado. I live in Durango and use the public lands in the San Juan Resource Area. This request pursuant to the Freedom of Information Act, 5 U.S.C. §§ 551 *et seq*. (FOIA), as implemented by the Department of the Interior at 43 C.F.R. §§ 2.11-22, concerns materials relating to the pending APD of ABC Petroleum. As all of the records requested herein are maintained by your local field office, this FOIA request is being sent directly to you in accordance with 43 C.F.R. § 2.14(a)(1).

In order that I may fully participate in any decisions regarding the proposal, I request copies of the following documents:

a) The application for permit to drill and any supporting documents submitted by ABC Petroleum, Inc.;
b) Any documents that discuss the potential environmental impacts of the proposed operation, including any environmental assessments or environmental impact statements;
c) The surface use plan of operations;
d) Any correspondence between ABC Petroleum, Inc. and the Bureau of Land Management regarding the proposed oil and gas operation or other ABC operations on public lands, including any

notices of violation of previously approved APDs or reclamation requirements;

e) Any data on wildlife populations and habitat in the area of the proposed operation; and

f) Any water quality data currently available on surface or ground water resources in the area of the proposed operation.

Pursuant to the Electronic Freedom of Information Act Amendments of 1996, 5 U.S.C. § 552(a)(2) (1996), we request that these materials be supplied on computer diskette formatted for a commercially-available software program. If the information we have requested is not immediately available in electronic form, we are amenable to receiving the information in paper form.

I ask that you waive all fees connected with this request, as authorized by both FOIA, 5 U.S.C. § 552(a)(4)(A), and Departmental regulations, 43 CFR § 2.19(c). The documents I am requesting will not be used for private gain. I will use them as indicated to permit me to participate effectively in your decision-making process. In the event that fees will not be waived, please do not incur any charges without first notifying me.

Thank you for your attention to this request. If you have any questions about the documents I have requested or the requested fee waiver, please do not hesitate to contact me.

Sincerely,
John Smith

Appendix 3

KEY STATUTES

These key laws, which apply to oil and gas development on public lands, are some of the many legal tools available to citizens interested in participating in BLM management decisions. We encourage you to learn more about these laws, as well as others not mentioned in this handbook.

The Mineral Leasing Act
The Mineral Leasing Act is the primary federal statute governing the availability of public lands for private oil and gas development.

The Federal Onshore Oil and Gas Leasing Reform Act
This series of amendments to the Mineral Leasing Act was intended to increase profits to the federal treasury from the sale of oil and gas leases by requiring competitive lease sales in most instances.

National Historic Preservation Act
The National Historic Preservation Act (NHPA), passed in 1966, is aimed at protecting areas of historic importance, including archaeological and paleontological sites. When federal agencies are considering actions, including oil and gas development, NHPA requires that they go through various consultation processes in order to identify and mitigate potential adverse impacts on historic sites.

National Environmental Policy Act
The National Environmental Policy Act (NEPA), which was passed in 1970, provides one of the most important ways for the public to participate in a federal agency's decision-making process. NEPA requires agencies to identify and describe the environmental impacts any proposed actions or its alternatives may cause, and to disclose those impacts to the public for review or comment. NEPA requires that federal agencies prepare either an environmental impact statement (EIS) or an environmental assessment (EA) before they make any final decisions about proposed actions, including oil and gas development. NEPA, however, does not require that

agencies choose the alternative which will cause the least amount of damage to the environment.

Endangered Species Act
The Endangered Species Act (ESA) was passed in 1973 to protect plant, fish and wildlife species whose populations have been so damaged that they are threatened with extinction. Under the ESA, the U.S. Fish and Wildlife Service is responsible for classifying species as endangered or threatened, depending on the condition of their populations and habitat. The ESA requires agencies to consider the impacts of any proposed actions on listed species and their habitats; actions which will harm either a species or its habitat cannot be taken. In addition, ESA requires agencies to actively conserve listed species so that protection is no longer necessary.

Federal Land Policy and Management Act
The Federal Land Policy and Management Act (FLPMA), passed in 1976, is BLM's "organic act." FLPMA directs that public lands be managed in accordance with comprehensive land use plans which reflect the principles of multiple use and sustained yield. Multiple use means that fish and wildlife, ecological preservation, recreation, watershed and historical values all be given equal consideration in developing land use plans, along with economic resources. The concept of sustained yield requires BLM to have a long-term perspective in its management actions and to ensure that the land's productive capacity is maintained. FLPMA also states that the public shall be allowed "to participate in the preparation and execution of land use plans and programs for, and the management of, the public lands."

Clean Air Act Amendments
In 1990, Congress amended the Clean Air Act to improve regulation of the emission of air toxins. It also adopted a provision that requires all federal agencies to ensure that federal projects will not result in violations of state and federal air quality requirements. This includes many areas on federal lands that have been designated for non-degradation of air quality.

National Forest Management Act

The National Forest Management Act (NFMA) was passed in 1976 and reorganized, expanded and otherwise amended the Forest and Rangeland Renewable Resources Planning Act of 1974, which called for the management of renewable resources on National Forest lands. The National Forest Management Act requires the Secretary of Agriculture to assess forest lands, develop a management program based on multiple-use, sustained-yield principles and implement a resource management plan (LRMP) for each unit of the National Forest System. It is the primary statute governing the administration of national forests.

Appendix 4

KEY REGULATIONS

In addition to the statutes mentioned in Appendix 3, the administration of oil and gas is determined by the agency's own regulations. In general, regulations are more detailed than statutes. They spell out how agencies are to interpret and execute the provisions of statutes and have the full force and effect of laws. BLM, like other federal agencies, is required to abide by its regulations. In some cases, federal agencies must also abide by the regulations of other federal agencies. BLM has adopted regulations for the administration of oil and gas, the preparation of land use plans and for administrative challenges of oil and gas decisions. All of these regulations are found in Title 43 of the Code of Federal Regulations or "CFR."

Other key regulations which guide the oil and gas decision-making process for BLM include the regulations implementing NEPA, which come from the Council on Environmental Quality (CEQ). These are found in Title 40 of the CFR. In addition, BLM must comply with the regulations drawn up by the United States Fish and Wildlife Service to implement the Endangered Species Act.

You should obtain copies of the oil and gas and NEPA regulations from BLM. Non-compliance with regulations as well as statutory requirements is one of the bases of successful protests and appeals of agency decisions.

The Internet is an invaluable tool for the activist. This source of information has made access much easier – at the time of publication, BLM's oil and gas regulations and onshore orders that deal with the particulars of leasing and operations, are online at http://www.mt.blm.gov/oilgas/operation/index.html. If these sites no longer contain the information, these regulations can be found fairly easily with a search engine.

Appendix 5

ADDRESSES OF BLM OFFICES IN 11 WESTERN STATES

ARIZONA

Arizona State Office
One North Central Avenue, Suite 800
Phoenix, AZ 85004-4427
Ph. (602) 417-9200
Fax (602) 417-9556
http://www.az.blm.gov/azso.htm

Arizona Field Offices:

- Kingman Field Office
- Tucson Field Office
- Yuma Field Office
- Lake Havasu Field Office
- Arizona Strip Field Office
- Safford Field Office
- Hassayampa Field Office
- Lower Sonoran Field Office

CALIFORNIA

California State Office
2800 Cottage Way Suite W-1834
Sacramento, CA 95825-1886
Ph. (916) 978-4400
Fax (916) 978-4416
http://www.ca.blm.gov/caso/index.html

California Field Offices:

- Bakersfield Field Office
- Bishop Field Office
- Folsom Field Office
- Hollister Field Office
- Alturas Field Office
- Eagle Lake Field Office
- Surprise Field Office
- Ukiah Field Office
- Arcata Field Office
- Redding Field Office
- California Desert District Office
- Barstow Field Office
- El Centro Field Office
- Palm Springs/South Coast Field Office
- Needles Field Office
- Ridgecrest Field Office

COLORADO

Colorado State Office
2850 Youngfield Street
Lakewood, Colorado 80215
Ph. (303) 239-3600
Fax (303) 239-3933
http://www.co.blm.gov/index.htm

Colorado Field Offices:

- Grand Junction Field Office
- Glenwood Springs Field Office
- Gunnison Field Office
- San Juan Public Lands Center
- Uncompahgre Field Office
- White River Field Office
- Royal Gorge Field Office
- Kremmling Field Office
- Little Snake Field Office
- Anasazi Heritage Center
- Saguache Field Office BLM/USFS
- La Jara Field Office BLM/USFS
- Del Norte Field Office BLM/USFS

- Arkansas Headwaters Recreation Area - State Parks/BLM

IDAHO

Idaho State Office
1387 S. Vinnell Way
Boise, Idaho 83709
Ph. (208) 373-4000
Fax (208) 373-3899
http://www.id.blm.gov/

Idaho Field Offices:

- Challis Office
- Four Rivers Office
- Jarbidge Office
- Owyhee Office
- Burley Office
- Pocatello Office
- Salmon Office
- Shoshone Office
- Coeur d'Alene Office
- Cottonwood Office
- Bruneau Field Office
- Upper Snake Field Office

MONTANA

Montana State Office
5001 Southgate Drive
Billings, Montana 59101
Ph. (406) 896-5000
Fax (406) 896-5299
http://www.mt.blm.gov/index.html

Montana Field Offices:

- Billings Field Office
- Butte Field Office
- Dillon Field Office
- Glasgow Field Station
- Great Falls Field Station
- Havre Field Station
- Lewistown Field Office
- Malta Field Office
- Miles City Field Office
- Missoula Field Office

NEVADA

Nevada State Office
1340 Financial Blvd.
Reno, NV 89502
Ph. (775) 861-6400
http://www.blm.gov/nv/st/en.html

Nevada Field Offices:

- Battle Mountain Field Office
- Caliente Field Station
- Carson City Field Office
- Elko Field Office
- Ely Field Office
- Las Vegas Field Office
- Winnemucca Field Office

NEW MEXICO

New Mexico State Office
P.O. Box 27115
Santa Fe, NM 87502-0115
Ph. (505) 438-7400
Fax (505) 438-7435
http://www.blm.gov/nm/st/en.html

New Mexico Field Offices:

- Albuquerque Field Office
- Carlsbad Field Office
- Farmington Field Office
- Las Cruces Field Office
- Rio Puerco Field Office
- Roswell Field Office
- Socorro Field Office
- Taos Field Office

OREGON

Oregon State Office
333 S.W. 1st Avenue
Portland, Oregon 97204
Ph. (503) 952-6002
Fax (503) 952-6308
http://www.or.blm.gov/

Oregon Field Offices:

- Baker Office
- Burns District (including Three Rivers and Andrews Areas)
- Coos Bay District (Including Umpqua and Myrtlewood Resource Areas)
- Eugene District
- Klamath Falls Resource Area
- Lakeview District
- Medford District
- Prineville District
- Roseburg District
- Salem District
- Tillamook Resource Area
- Vale District

UTAH

Utah State Office
440 West 200 South, Suite 500
Salt Lake City, Utah 84145-0155
Ph. (801) 539-4001
Fax (801) 539-4013
http://www.ut.blm.gov/

Utah Field Offices:

- Cedar City Field Office
- Fillmore Field Office
- Grand Staircase- Escalante National Monument
- Kanab Field Office
- Moab Field Office
- Monticello Field Office
- Price Field Office
- Richfield Field Office
- St. George Field Office
- Salt Lake Field Office (includes Bear River & Pony Express Resource Areas)
- Vernal District (includes Diamond Mountain and Book Cliffs Resource Areas)

WASHINGTON

[state office - See Oregon]

Spokane Office
1103 N. Fancher Road
Spokane, WA 99212
Ph. (509) 536-1200
Fax (509) 536-1275
http://www.blm.gov/or/districts/spokane/index.php

Washington Field Offices:

- Wenatchee Resource Area

WYOMING

Wyoming State Office
5353 Yellowstone Road
P.O. Box 1828
Cheyenne, WY 82003
Ph. (307) 775-6256
Fax (307) 775-6129
http://www.blm.gov/wy/st/en.html

Wyoming Field Offices:

- Buffalo Field Office
- Casper Field Office
- Cody Field Office
- Kemmerer Field Office
- Lander Field Office
- Newcastle Field Office
- Pinedale Field Office
- Rawlins Field Office
- Rock Springs Field Office
- Worland Field Office (includes Grass Creek & Wasbakie Resource Areas)

Appendix 6

DOI REGIONAL SOLICITORS' OFFICES

http://www.doi.gov/solicitor/regions.html

ARIZONA

Regional Solicitor
Intermountain Region
U.S. Dept. of the Interior
125 South Street, Room 6201
Salt Lake City, UT 84138
Ph. (801) 524-5677

CALIFORNIA

Regional Solicitor
Pacific Southwest Region
U.S. Dept. of the Interior
2800 Cottage Way, Rm. E-1712
Sacramento, CA 95825
Ph. (916) 978-6131

COLORADO

Regional Solicitor
Rocky Mountain Region
U.S. Dept. of the Interior
755 Parfet Street, Suite 151
Lakewood, CO 80215
Ph. (303) 231-5353

IDAHO

Regional Solicitor
Pacific Northwest Region
U.S. Dept. of the Interior
500 NE Multnomah Street, Suite 607
Portland, OR 97232
Ph. (503) 231-2126

MONTANA

Regional Solicitor
Pacific Northwest Region
U.S. Dept. of the Interior
500 N.E. Multnomah Street, Suite 607
Portland, OR 97232
Ph. (503) 231-2126

NEVADA

Regional Solicitor
Intermountain Region
U.S. Dept. of the Interior
125 South Street, Room 6201
Salt Lake City, UT 84138
Ph. (801) 524-5677

NEW MEXICO

Regional Solicitor
Southwest Region
U.S. Dept. of the Interior
505 Marquette Avenue, NW, Suite 1800
Albuquerque, NM 87102
Ph. (505) 248-5600

OREGON

Regional Solicitor
Pacific Northwest Region
U.S. Dept. of the Interior
500 NE Multnomah Street, Suite 607
Portland, OR 97232
Ph. (503) 231-2126

UTAH

Regional Solicitor
Intermountain Region
U.S. Dept. of the Interior
125 South Street, Room 6201
Salt Lake City, UT 84138
Ph. (801) 524-5677

WASHINGTON

Regional Solicitor
Pacific Northwest Region
U.S. Dept. of the Interior
500 NE Multnomah Street, Suite 607
Portland, OR 97232
Ph. (503) 231-2126

WYOMING

Regional Solicitor
Rocky Mountain Region
U.S. Dept. of the Interior
755 Parfet Street, Suite 151
Lakewood, CO 80215
Ph. (303) 231-5353

Appendix 7

WILDLIFE AND WATER QUALITY AGENCIES

ARIZONA

Arizona Dept. of Game & Fish
5000 W. Carefree Highway
Phoenix, AZ 85086
Ph. (602) 942-3000
http://www.gf.state.az.us/

Department of Environmental Quality
1110 W. Washington St.
Phoenix, AZ 85007
Ph. (602) 771-2300
http://www.azdeq.gov/

U.S. Fish and Wildlife Service
Ecological Services Field Office
2321 West Royal Palm Road, Suite 103
Phoenix, AZ 85021-4915
Ph. (602) 242-0210
Fax (602) 242-2513
http://www.fws.gov/southwest/es/arizona/

CALIFORNIA

Office of Environmental
Health Hazard Assessment
Division of Water Quality
P.O. Box 4010
1001 I Street
Sacramento, CA 95814-2815
Ph. (916) 323-2514
http://www.oehha.org/

Department of Fish & Game
1416 9th Street
Sacramento, CA 95814
Ph. (916) 653-7667
Fax (916) 653-7387
http://www.dfg.ca.gov/

U.S. Fish and Wildlife Service
Sacramento Office
2800 Cottage Way, Rm. W-2605
Sacramento, CA 95825
Ph. (916) 414-6600
Fax (916) 414-6712
http://www.fws.gov/sacramento/default.htm

COLORADO

Division of Wildlife
6060 Broadway
Denver, CO 80216
Ph. (303) 297-1192
Fax (303) 291-7105
http://wildlife.state.co.us/

Water Quality Control Division
State of Colorado Department of Health
4300 Cherry Creek Drive South
Denver, CO 80246-1530
Ph. (303) 692-3500
http://www.cdphe.state.co.us/wq/

U.S. Fish and Wildlife Service
Regional Office
Denver Federal Center
P.O. Box 25486
Denver, CO 80025
Location Address:
Lake Plaza North
134 Union Boulevard
Lakewood, Colorado 80228
Ph. (303) 236-7920
Fax (303) 236-8295
http://www.fws.gov/mountain-prairie/

IDAHO

Division of Environmental Quality
1410 North Hilton
Boise, ID 83706
Ph. (208) 373-0502
Fax (208) 373-0417
http://www.deq.state.id.us/

Department of Fish & Game
P.O. Box 25
Boise, ID 83707
Ph. (208) 334-3700
Fax (208) 334-2148
http://fishandgame.idaho.gov/

U.S. Fish and Wildlife Service
Snake River Fish and Wildlife Office
1387 South Vinnell Way, Suite 368
Boise, ID 83709
Ph. (208) 378-5243
Fax (208) 378-5262
http://www.fws.gov/idaho/

MONTANA

Department of Environmental Quality
Water Protection Bureau
Metcalf Building
1520 E. Sixth Avenue
P.O. Box 200901
Helena, MT 59620
Ph. (406) 444-2544
Fax (406) 444-9526
http://www.deq.state.mt.us/

Department of Fish, Wildlife & Parks
1420 East 6th Avenue
Helena, MT 59620
Ph. (406) 444-2535
Fax (406) 444-4952
http://fwp.mt.gov/default.html

U.S. Fish and Wildlife Service
Ecological Services
585 Shepard Way
Helena, MT 59601
Ph. (406) 449-5225
http://www.fws.gov/montanafieldoffice/

NEVADA

Nevada Division of Wildlife
Reno Headquarters
1110 Valley Road
Reno, NV 89512
Ph. (775)688-1500
http://www.ndow.org/

Nevada Division of Environmental Protection
901 South Stewart Street, Suite 4001
Carson City, Nevada 89701-5249
Ph. (775) 687- 4670
Fax (775) 687-5856
http://ndep.nv.gov/

U.S. Fish and Wildlife Service
Ecological Services Field Office
1340 Financial Blvd, Suite 234
Reno, NV 89502
Ph. (775) 861-6300
Fax (775) 861-6301

NEW MEXICO

New Mexico Game and Fish Department
P.O. Box 25112
Santa Fe, NM 87504
Ph. (505) 476-8000
http://www.wildlife.state.nm.us/

Environment Department
Surface Water Quality Bureau
Harold Runnels Building, N2050
1190 St. Francis Drive
Santa Fe, New Mexico 87502
Ph. (505) 827-0187
Fax (505) 827-0160
http://www.nmenv.state.nm.us/SWQB/

U.S. Fish and Wildlife Service
Southwest Region
500 Gold Ave., S.W.
P.O. Box 1306
Albuquerque, NM 87102
Ph. (505) 248-6931
http://www.fws.gov/southwest/index.html

U.S. Fish and Wildlife Service
New Mexico Ecological Services Field Office
2105 Osuna NE
Albuquerque, NM 87113
Ph. (505) 346-2525
http://www.fws.gov/southwest/es/NewMexico/

OREGON

Department of Environmental Quality
811 SW Sixth Avenue
Portland, OR 97204-1390
Ph. (503) 229-5696
Fax (503) 229-6124
http://www.oregon.gov/DEQ/

Department of Fish & Wildlife
3406 Cherry Avenue, N.E.
Salem, OR 97303
Ph. (503) 947-6000
http://www.dfw.state.or.us/

U.S. Fish and Wildlife Service
Pacific Region
Eastside Federal Telplex
2500 Southeast 98th Avenue, Suite 100
Portland, Oregon 97266-1398
Ph. (503) 231-6179
Fax (503) 231-6195
http://www.fws.gov/pacific/

UTAH

Dept. of Environmental Quality
Division of Water Quality
P.O. Box 144870
Salt Lake City, UT 84114-4870
Ph. (801) 538-6146
Fax (801) 538-6016
http://www.waterquality.utah.gov/

Division of Wildlife Resources
1596 West North Temple
Salt Lake City, UT 84116
Ph. (801) 538-7230
Fax (801) 538-7279
http://www.water.utah.gov/

U.S. Fish and Wildlife Service
Ecological Services Field Office
2369 West Orton Circle, Suite 150
West Valley City, UT 84119
Ph. (801) 975-3330
Fax (801) 975-3331
http://www.fws.gov/mountain-prairie/es/Utah/index.htm

WASHINGTON

Department of Ecology
Water Quality Program
Nonpoint Source Program
P.O. Box 47600
Olympia, WA 98504-7600
Ph. (360) 407-6000
Fax (360) 407-6989
http://www.ecy.wa.gov/programs/wq/wqhome.html

Department of Fish & Wildlife
600 Capital Way North
Olympia, WA 98501-1091
(360) 902-2200
(360) 902-2230 Fax
http://wdfw.wa.gov/

WYOMING

Wyoming Dept. of Environmental Quality
Water Quality Division

122 West 25th Street
Herschler Building
Cheyenne, WY 82002
Ph. (307) 777-7937
Fax (307) 777-7682
http://deq.state.wy.us/

Wyoming Game & Fish Department
5400 Bishop Blvd.
Cheyenne, WY 82006
Ph. (307) 777-4600
http://gf.state.wy.us/

Appendix 8

STATE OIL AND GAS AGENCIES

ARIZONA

Arizona Geological Survey
416 West Congress, Suite 100
Tucson, Arizona 85701
Ph. (520) 770-3500
Fax: (520) 770-3505
http://www.azgs.az.gov/

CALIFORNIA

Division of Oil, Gas and
Geothermal Resources
801 K Street, MS 24-01
Sacramento, CA 95814
Ph. (916) 322-1080
Fax (916) 445-0732
http://www.conservation.ca.gov/dog/Pages/Index.aspx

COLORADO

Oil and Gas Conservation Commission
Department of Natural Resources
1120 Lincoln Street, Suite 801
Denver, CO 80203
Ph. (303) 894-2100
Fax (303) 894-2109
http://oil-gas.state.co.us/

IDAHO

Bureau of Minerals
Department of Lands
300 North 6th Street, Suite 103
P.O. Box 83720
Boise, ID 83720-0050
Ph. (208) 334-0200
Fax (208) 334-3698
http://www.idl.idaho.gov/

MONTANA

Board of Oil and Gas Conservation
Department of Natural Resources
2535 St. Johns Avenue
Billings, MT 59102
Ph. (406) 656-0040
Fax (406) 655-6015
http://bogc.dnrc.mt.gov/default.asp

NEVADA

Division of Minerals
400 W. King St., #106
Carson City, NV 89703
Ph. (775) 684-7040
Fax (775) 684-7052
http://minerals.state.nv.us/

NEW MEXICO

Energy, Minerals, and Natural
Resources Department
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
Ph. (505) 476-3200
Fax (505) 476-3220
http://www.emnrd.state.nm.us/main/index.htm

OREGON

Department of Geology and Mineral
Industries
800 N.E. Oregon Street #28, Suite 965
Portland, OR 97232
Ph. (503) 673-1555
Fax (503) 673-1562
http://www.oregongeology.com/sub/default.htm

UTAH

Division of Oil, Gas & Mining
1594 West North Temple, Suite 1210
P.O. Box 145801
Salt Lake City, Utah 84114-5801
Ph. (801) 538-5340
http://ogm.utah.gov/

WASHINGTON

Division of Lands and Resources
Department of Natural Resources
P.O. Box 47000
1111 Washington ST SE
Olympia, WA 98504-7000
Ph. (360) 902-1000
http://www.dnr.wa.gov/Pages/default.aspx

WYOMING

Oil and Gas Conservation Commission
2211 King Blvd
P.O. Box 2640
Casper, WY 82602
Ph. (307) 234-7147
Fax (307) 234-5306
http://wogcc.state.wy.us/

Appendix 9

STATE HISTORIC PRESERVATION SOCIETIES

ARIZONA

State Historic Preservation Office
1300 W. Washington
Phoenix, AZ 85007
Ph. (602) 542-4009
http://www.pr.state.az.us/partnerships/shpo/shpo.html

CALIFORNIA

Office of Historic Preservation
Department of Parks and Recreation
1416 9th Street, Room 1442-7
Sacramento, CA 95814
P.O. Box 942896
Sacramento, CA 94296-0001
Ph. (916) 653-6624
Fax (916) 653-9824
http://ohp.parks.ca.gov/

COLORADO

Historical Society of Colorado
Office of Archaeology and Historic Preservation
1300 Broadway
Denver, CO 80203
Ph. (303) 866-3682
http://www.coloradohistory.org/

IDAHO

Idaho State Historical Society
2205 Old Penitentiary Road
Boise, ID 83712
Ph. (208) 334-2682
Fax (208) 334-2774
http://www.idahohistory.net/

MONTANA

Montana State Historic Preservation Office
1410 8th Avenue
Helena, MT 59620
Ph. (406) 444-7715
http://www.his.state.mt.us/shpo/default.asp

NEVADA

Historic Preservation Office
100 N. Stewart Street
Carson City, NV 89710
Ph. (775) 687-8323
Fax (775) 684-5446
http://dmla.clan.lib.nv.us/docs/shpo/

NEW MEXICO

Historic Preservation
Div. of the Office of Cultural Affairs
Bataan Memorial Building
407 Galisteo Street, Suite 236
Santa Fe, NM 87501
Ph. (505) 827-6320
Fax (505) 827-6338
http://www.nmhistoricpreservation.org/

OREGON

State Parks and Recreation Department
State Historic Preservation Office
725 Summer Street NE, Suite C
Salem, OR 97310
Ph. (503) 986-0671
Fax (503) 986-0793
http://www.oregon.gov/OPRD/HCD/SHPO/

UTAH

Utah State Historical Society
300 S. Rio Grande St.
Salt Lake City, UT 84101
Ph. (801) 533-3500
Fax (801) 533-3567
http://history.utah.gov/

WASHINGTON

Office of Archeology and Historic Preservation
P.O. Box 48343
Olympia, WA 98504-8343
1063 S. Capitol Way, Suite 106
Olympia, WA 98501
Ph. (360) 586-3065
Fax (360) 586-3067
http://www.dahp.wa.gov/

WYOMING

Wyoming State Historic Preservation Office
Barrett Building
2301 Central Ave., 3rd Floor
Cheyenne, WY 82002
Ph. (307) 777-7697
Fax (307) 777- 6421
http://wyoshpo.state.wy.us/

Appendix 10

FOR MORE INFORMATION: KEY ORGANIZATIONS

NATIONAL WILDLIFE FEDERATION

Rocky Mountain Natural Resource Center
2260 Baseline Road, Suite 100
Boulder, CO 80302
Ph. (303) 786-8001
Fax (303) 786-8911
http://www.ourpubliclands.org

COLORADO WILDLIFE FEDERATION

1410 Grant Street Suite C-313
Denver, CO 80203
Ph. (303) 987-0400 x1
Fax (303) 987-0200
http://www.coloradowildlife.org

MONTANA WILDLIFE FEDERATION

5530 N. Montana Avenue
Helena, MT 59601
P.O. Box 1175
Helena, MT 59624
Ph. (406) 458-0227
Fax (406) 458-0373
http://www.montanawildlife.com

NEW MEXICO WILDLIFE FEDERATION

2610 San Mateo Blvd. NE, Suite A
Albuquerque, NM 87110
Ph. (505) 299-5404
http://www.nmwildlife.org

WYOMING WILDLIFE FEDERATION

P.O. Box 106
Cheyenne, WY 82003
Ph. (307) 637-5433
Fax (307) 637-6629
http://www.wyomingwildlife.org

TROUT UNLIMITED

1300 N. 17th Street Suite 500
Arlington, VA 22209
Ph. (703) 522-0200
Fax (703) 284-9400
http://www.tu.org

THEODORE ROOSEVELT CONSERVATION PARTNERSHIP

555 Eleventh Street, NW, 6th Floor
Washington, DC 20004
Ph. (202) 654-4600
http://www.trcp.org

SPORTSMEN FOR RESPONSIBLE ENERGY DEVELOPMENT

http://www.sportsmen4responsibleenergy.org