

# LAW AND ORDER IN THE OIL AND GAS FIELDS

*A REVIEW OF  
INSPECTION AND ENFORCEMENT  
PROGRAMS IN FIVE WESTERN STATES*

*A report by the  
Western Organization of Resource Councils*

February 2005

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*All views and opinions expressed in this report are those of WORC and do not necessarily reflect the views of reviewers or funders. Any errors are the responsibility of WORC.*



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# Executive Summary

The boom in oil and gas development substantially affects public and private lands, water, soil, irrigated crops, air quality, and property values in the Rocky Mountain and Northern Great Plains states. These states can expect even more development in the coming years, as the federal government intends to issue permits for more than 70,000 new coalbed methane wells in the Powder River Basin of Montana and Wyoming and tens of thousands of oil and gas wells in Colorado, New Mexico, and other parts of the West.

Private landowners bear many of the effects of oil and gas development because much of it occurs on split estate lands, where federal minerals underlie privately-owned surface lands. For example, the federal government owns half of the minerals in the Powder River Basin, but the majority of these minerals lie beneath private lands.

To facilitate this boom, the Bush administration and Congress have promoted greater domestic oil and gas production by offering tax breaks, easing regulations, and directing the U.S. Bureau of Land Management (BLM) to issue more permits at a much faster pace. This emphasis on production has greatly overshadowed the BLM's inspection and enforcement responsibilities. At the same time, state agencies have been granting more oil and gas permits than ever before.

Tough standards that are enforced will provide an incentive for companies to comply voluntarily with the law—which is critical to achieving environmental compliance.

The BLM and state agencies have made some genuine efforts to improve their oversight of energy development. For the most part however, the administration, Congress, and states have not balanced efforts to speed development with equally strong efforts to protect landowners, natural resources, and taxpayers from the harmful impacts of oil and gas development.

## Major Findings

This report examines the level of oil and gas drilling and permitting activity in Colorado, New Mexico, North Dakota, Montana and Wyoming, and analyzes the inspection and enforcement programs of selected state agencies and the BLM. The major findings are:

- 1) The BLM has made substantive improvements to its Inspection and Enforcement program since 1998, *but* these improvements have been targeted at production inspections, rather than environmental compliance inspections. The BLM's environmental compliance program has not received and benefited from the same reviews, training and resources as the production portion of the program.
- 2) The number of inspections conducted by the BLM has not increased significantly, even in the face of exploding oil and gas development.
- 3) Environmental compliance inspectors in the BLM spend an average of just 15% of their time on inspection and enforcement activities.
- 4) The average number of inspections per inspector in the BLM Field Offices has declined 33% over the last five years.
- 5) Although the six BLM Field Offices studied are responsible for 79% of active oil and gas wells on BLM lands nationwide in 2003, these six offices employed only 26% of all BLM inspectors during this time.
- 6) Based on 2003 staffing and inspection levels, state agencies can inspect active wells once every 1–3 years on average, while BLM Field Offices can inspect active wells once every 2–10 years on average and inspect active wells for environmental compliance once every 4–59 years.

- 7) Neither the state oil and gas agencies nor the BLM impose many fines; nor do they issue many orders to plug wells, cease and desist operations, or forfeit bonds. While this could indicate good behavior on the part of operators, there is also evidence to suggest some agencies lack the will to enforce the law.
- 8) Of the 22 state and federal agencies surveyed for this report, only two reported tracking citizen complaints and agency responses to those complaints.
- 9) Many state agencies and bureaus have increased the amount of information that is available to the public, particularly over the internet, but these efforts are uneven across states, and between agencies and bureaus within some states.

### **Major Recommendations**

- 1) The number of inspection and enforcement staff should be increased so that each inspector is responsible for no more than 300 active wells.
- 2) State and federal inspection and enforcement programs should be reviewed and/or audited, including, but not limited to, the adequacy of staffing levels. The BLM has conducted a fairly extensive internal review, which should be expanded to include environmental compliance. The Government Accounting Office should review the adequacy of BLM inspection and enforcement staff levels at all field offices with active oil and gas programs and examine the balance between environmental compliance and production inspectors. State agency programs should be reviewed by the State Review of Oil and Natural Gas Environmental Regulations, Inc., or a balanced, multi-stakeholder, state legislative task force.
- 3) The BLM should strengthen its National Inspection and Enforcement Strategy by requiring inspections of every active oil and gas well for environmental compliance at least once a year. The BLM should have the capacity to conduct regular inspections of other wells (such as plugged and abandoned and temporarily abandoned wells) and other facilities, such as compressor stations, water discharge points and impoundments, and to conduct additional inspections at environmentally sensitive sites and sites operated by companies with a history of violations.
- 4) State oil and gas agencies and the BLM should strengthen inspection procedures and develop standardized environmental compliance inspection checklists.
- 5) All state agencies and the BLM should closely track and document their inspection activities, and make all information available to the public. The Colorado Oil and Gas Conservation Commission web site could serve as a model.
- 6) State agencies and the BLM should have clear policies or guidelines that instruct inspectors on when and how to take enforcement actions, including guidelines disclosing how to follow up on violations that are not resolved within the time allowed by law or regulation.
- 7) State agencies and the BLM should exercise their authority to revoke, modify or suspend any permit, assess administrative penalties or seek civil penalties or criminal sanctions in court, and require the forfeiture of financial assurance instruments when necessary.
- 8) All agencies should encourage the public to report perceived violations, apprise the public on how to file complaints, and thoroughly investigate and document every citizen complaint. Once a citizen files a complaint, the agency should schedule an on-site visit within 15 days and allow the complainant to participate. On completing the on-site visit, the appropriate agency official should prepare a written report of the findings for the public record.

# *Purpose and Methodology*

In 2000, WORC initiated a regional *Campaign for Clean Energy and Responsible Development*, with the goal of ensuring the responsible development of renewable and non-renewable energy resources. As a part of that campaign, this report examines the level of oil and gas drilling and permitting activity in five states—Colorado, Montana, New Mexico, North Dakota, and Wyoming—and analyzes the inspection and enforcement programs of selected state agencies and the federal Bureau of Land Management.

The purpose of this report is to safeguard clean air, clean water, land, and quality of life by strengthening the enforcement of oil and gas laws and regulations.

WORC hopes this report will encourage state and federal policymakers to evaluate and strengthen their respective oil and gas inspection and enforcement programs. As the BLM states: “Inspection and enforcement is the single most critical activity that ultimately ensures protection of the natural environment and proper management of ecosystems with regard to the impacts of oil and gas activities.”

This report presents data on oil and gas drilling, permitting, inspection and enforcement activities over the past five years. WORC used telephone interviews, survey forms, Freedom of Information Act requests and agency web sites to gather information from 22 state and federal agencies in the states of Colorado, Montana, New Mexico, North Dakota and Wyoming—states that have been described as “ground zero” for oil and gas production in the United States. WORC encountered significant obstacles in gathering this information, as discussed in more detail in the Public Participation section of this report.

Although oil and gas development is regulated under a number of local, state and federal laws and regulations, and by many different agencies, we focused our research on inspection and enforcement programs carried out by the federal Bureau of Land Management, state oil and gas boards, commissions, and divisions, and state air and water quality protection bureaus. In regard to air and water quality, this report focuses on construction and operating permits issued under the federal Clean Air Act, and National Pollutant Discharge Elimination System (NPDES) permits issued under the federal Clean Water Act. This report focuses on oil and gas exploration and production operations, not on commercial waste disposal facilities, processing plants, or pipelines.



# Introduction

In 2001, President George W. Bush unveiled his National Energy Policy—a plan for the future of the nation’s energy use and development. This plan has been criticized for unfairly subsidizing fossil fuels and undermining the nation’s long-term security. The centerpiece of this Policy is a plan to promote greater domestic oil and gas production by easing regulations and offering tax breaks to oil and gas development companies. However, the National Energy Policy does not take comparable steps to promote an alternative to petroleum.

As the pressure to increase domestic gas supplies mounts, state and federal agencies are shifting new resources towards permitting, and are issuing drilling permits at a record pace. The number of active oil and gas wells in the Rocky Mountain West and Northern Great Plains states has increased significantly over the past five years, and further increases are expected as newly permitted wells are drilled. For the most part, state and federal agencies have not balanced their efforts to speed permitting with an equally strong emphasis on protecting landowners, the environment and taxpayers from the negative impacts of development, however.

Strong programs to enforce existing laws and regulations are critical. Environmental degradation from oil and gas operations can cause serious impacts on private and public lands that will last for generations, including damage to soils and crops from wastewater discharges, harm to surface and groundwater resources, reduced property values, and air quality degradation.

The Bureau of Land Management (BLM) recognizes that “inspection and enforcement is the single most critical activity that ultimately ensures protection of the natural environment and proper management of ecosystems with regard to the impacts of oil and gas activities.” Frequent and thorough on-the-ground inspections are important because, as the BLM emphasizes, “sufficient documentation is the mainstay of successful enforcement.” Tough standards that are enforced will provide an incentive for companies to comply voluntarily with the law—which is critical to achieving environmental compliance.

This report examines oil and gas inspection and enforcement programs in five western states: Colorado, Montana, North Dakota, New Mexico and Wyoming. The BLM and state agencies have made some genuine efforts to see that oil and gas development is done right, but the agencies still have a long way to go. This report offers a number of recommendations to strengthen their inspection and enforcement programs, especially in regard to environmental compliance. These changes are important given the high level of activity in the oil and gas industry.

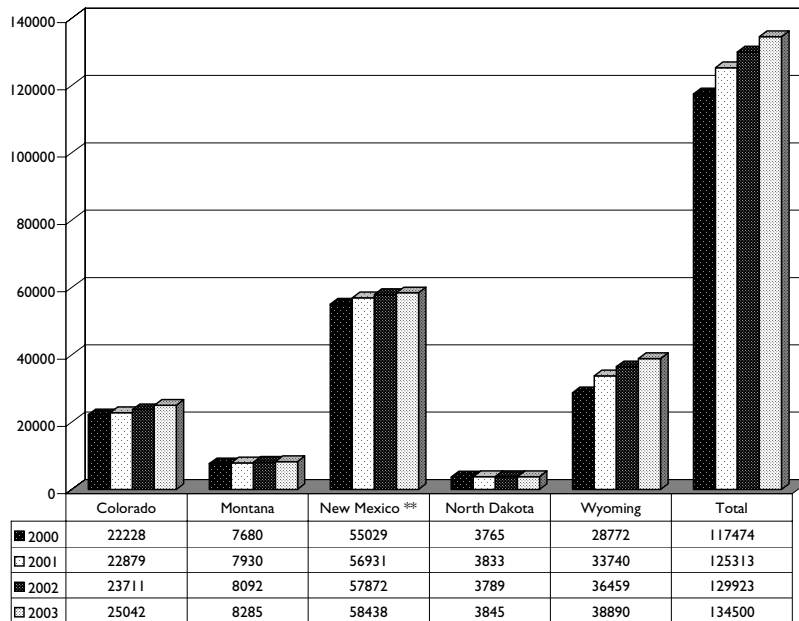
Now is the time to demand that oil and gas operators “Do It Right”—to protect water, farms, ranches, wildlife and communities from careless coalbed methane development, and to demand that government regulators have the authority, resources and will to require tough operating standards, monitoring, and enforcement.

# Oil and Gas Drilling Activity

Oil and gas drilling activity in the Rocky Mountain West and Northern Plains has increased significantly in the past five years.

In the five states studied in this report, the total number of active wells located on private, state and federally owned minerals increased 14% between 2000 and 2003 (Figure 1). The number of active wells located on federally owned minerals alone increased by 15% (Figure 2).

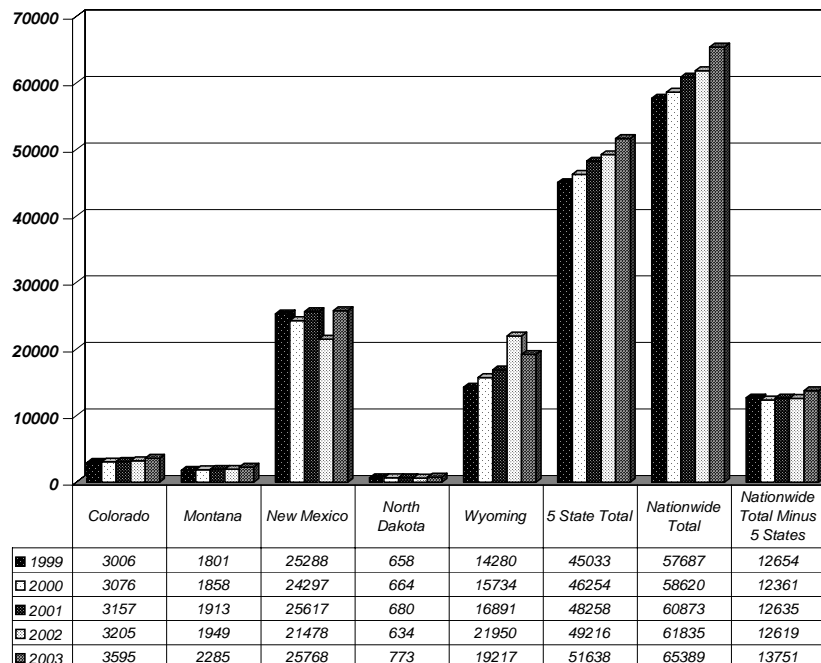
**Figure 1: Active Oil and Gas Wells \***



\* Includes federal, state and private wells

\*\* Some wells producing both oil and gas are counted twice.

**Figure 2: Active Oil and Gas Wells on BLM Lands \***



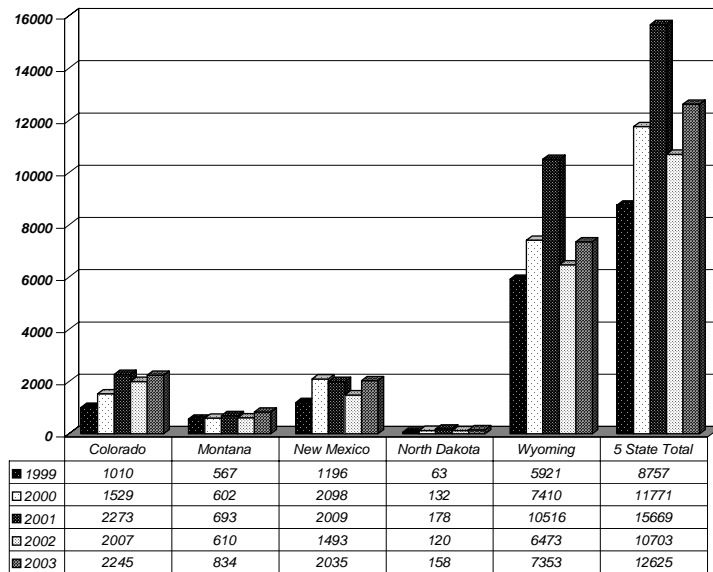
\* Includes federal oil and gas beneath surface owned by private landowners or other parties.

# Oil and Gas Permitting Activity

## Drilling Permits

State agencies issue drilling permits when mineral rights are state or privately owned. In the five states studied, the number of oil and gas drilling permits issued by state agencies rose dramatically between 1999 and 2001, dropped in 2002, and rose again in 2003 (Figure 3). Forty-four percent more permits were issued in 2003 than in 1999 by state agencies.

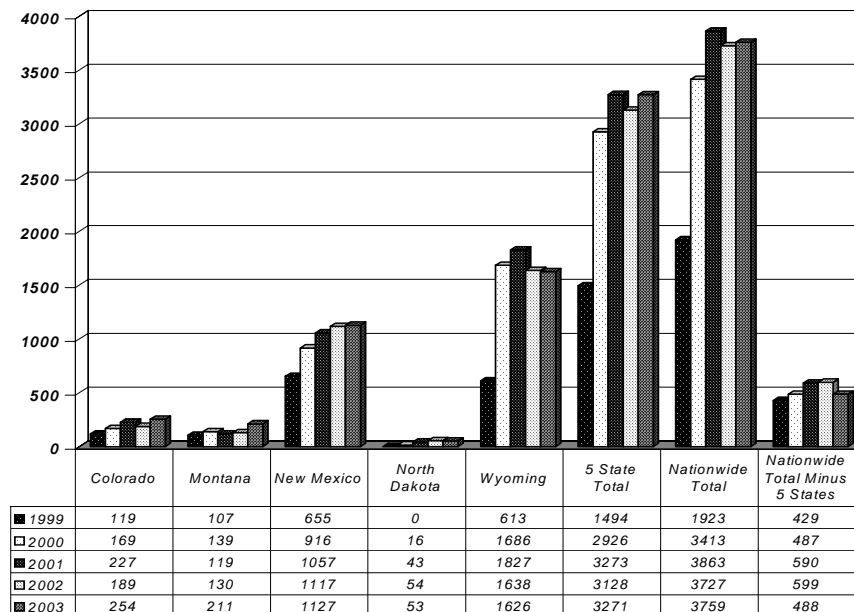
**Figure 3: Permits Issued by State Oil and Gas Agencies \***



\* For state and private minerals

The BLM issues drilling permits for federally-owned minerals, including minerals that underlie private land. The number of drilling permits issued by the BLM nearly doubled from 1999–2003 (Figure 4). Further increases in drilling can be expected, given the number of permits already approved and the likelihood that oil and gas prices will remain high.

**Figure 4: Permits Issued by the BLM**



State agencies and the BLM expected to approve even more oil and gas permits in 2004, and several did. The BLM approved 6,130 new permits in 2004, a one-year record, and a 63% increase over the 3,759 permits issued in 2003. The BLM's Glenwood Springs, Colorado Field Office expected to approve 207 permits, a 283% increase from 2003. The Miles City, Montana Field Office expected to approve 300 permits, a 78% increase. Only the Farmington, New Mexico Field Office expected to see a decline in the number of permits issued—the office anticipated a 5% drop in 2004.

The Colorado Oil and Gas Conservation Commission approved 2,905 drilling permits in 2004, 22% higher than the previous all-time record high of 2,378 back in 1981. The Wyoming Oil and Gas Conservation approved 8,981, a 22% increase over 2003.

## **Water Quality Permits**

In April 2003, the United States Court of Appeals for the Ninth Circuit ruled that water discharges from coalbed methane wells are a pollutant subject to the Clean Water Act. The federal Clean Water Act's National Pollutant Discharge Elimination System (NPDES) permit program controls water pollution by regulating point sources that discharge pollutants into U.S. waters. There are significant differences among the states in the levels at which oil and gas exploration and production operations are permitted under the NPDES program.

The NPDES permit system uses two main types of permits, individual and general. Individual permits require each individual facility to apply for and receive its own site-specific permit. General permits allow one permit for each class of activities, and many facilities can apply to be covered under the conditions of one general permit. Two common general permits relate to industrial and construction site stormwater disposal.

Coalbed methane operations produce greater volumes of wastewater than conventional oil and gas production. Coalbed methane wells in Colorado and New Mexico yield water of such poor quality that it cannot be discharged into surface waters. Operators use underground injection to dispose of water under regulations set by the Underground Injection Control Program of the Safe Drinking Water Act.

Because the Clean Water Act only regulates discharges into navigable surface water bodies, most coalbed methane operations in Colorado and New Mexico are not required to apply for NPDES permits. Only 18 NPDES permits have been issued to oil and gas production operations in Colorado, and three in New Mexico.

In the Powder River Basin of Montana and Wyoming, coalbed methane wells yield water of marginal quality that can be used for drinking and watering livestock. However, this water can be harmful to plants and soils because it is highly concentrated with dissolved salts. Most wastewater in this region is discharged into rivers, streams, and dry creek beds, or held in unlined impoundments, where it can seep into rivers and streams. These discharges must receive NPDES permits.

Wyoming, which currently has 12,600 producing coalbed methane wells, has issued 1,380 NPDES permits for oil and gas production operations. Montana, with 415 active coalbed methane wells, has issued 25 NPDES permits. North Dakota has one coalbed methane well, currently inactive, and has issued two NPDES permits to oil and gas operations.

## **Air Quality Permits**

The federal Clean Air Act regulates a range of difficult and complicated air pollution problems, and it allows the U.S. Environmental Protection Agency to delegate its authority to issue air quality permits to the states. There are two main types of air quality permits issued by the states to oil and gas exploration and production operations:

- *Construction permits* are required for all new stationary sources (a place or object from which pollutants are released and which does not move, such as a compressor station), and all existing stationary sources that add new emissions units or modify existing emissions units.
- *Operating permits* (also known as Title V permits) are required for all major stationary sources. Any facility that exceeds set limits or has the potential to exceed them is considered a major source of pollution and must obtain a Title V permit within 12 months of beginning operations. These limits are: 100 tons of any regulated air pollutant, 10 tons of any hazardous air pollutant, or 25 tons of a combination of hazardous air pollutants.

Oil and gas exploration and production operations must obtain construction and/or operating permits for facilities and equipment such as compressor stations, glycol dehydrators, storage tanks, heater-treaters, internal combustion engines, generators and oil-water separators.

Hundreds of air quality construction permits have been issued to oil gas operators throughout the West, especially in such hot spots as the San Juan Basin and western Colorado. The total number of oil and gas exploration and production facilities that have received Title V air quality permits in each of the five states can be found in Table 1.

**Table 1: Oil and Gas Exploration and Production Facilities with Title V Operating Permits \***

Colorado	37
Montana	2
New Mexico	31
North Dakota	13
Wyoming	39

\* Does not include gas pipelines.

# Inspection and Enforcement Requirements

## ***BLM National Oil and Gas Inspection and Enforcement Strategy***

The BLM's National Oil and Gas Inspection and Enforcement Strategy provides guidance to ensure orderly and consistent implementation of inspection procedures. The strategy establishes the goal of the BLM's Inspection and Enforcement Program as conducting all high priority drilling, plugging and environmental compliance inspections in accordance with the Federal Oil and Gas Royalty Management Act of 1982 (FOGRMA) and policy set by the BLM Director.

*The Federal Oil and Gas Royalty Management Act, Section 101 (b)(1) and (2), states that the Secretary of Interior shall:*

*(1) establish procedures to ensure that the authorized and properly identified representatives of the Secretary will inspect at least once annually each lease site producing or expected to produce significant quantities of oil and gas in any year or which has a history of noncompliance with applicable provisions of law or regulations; and*

*(2) establish and maintain adequate programs providing for the training of all such authorized representatives in methods and techniques of inspection and accounting that will be used in the implementation of this Act.*

FOGRMA requires inspection of every oil and gas well once every three years. High priority cases must be inspected annually. In 2003, the BLM identified 7,156 high priority environmental cases requiring annual inspections. High priority cases are those that:

- 1) are in or adjacent to an environmentally sensitive area,
- 2) are in areas where noncompliance could have a significant adverse impact on the environment, or
- 3) have had one major violation or five minor violations during the two previous years.

Before the Strategy was established, the BLM's Inspection and Enforcement Program received severe criticism from numerous sources, including Congressional oversight committees, the General Accounting Office and the Office of the Inspector General. In 1989, the BLM established a task force to evaluate its Inspection and Enforcement Program and determine what revisions were needed to comprehensively address the criticisms. In 1990, revisions to the strategy were the primary outcome of this task force.

The criticisms continued, however. In 1998, the BLM initiated another internal effort to assess the Inspection and Enforcement Program. Reviewers visited 21 of the 31 BLM Field Offices, and found that the Inspection and Enforcement Program was not "performing at a level to satisfy the Bureau's goals for high quality inspections to ensure compliance." The review identified several overarching problems, including the need for:

- 1) Increased management and oversight of the program to ensure inspections are conducted and documented properly and enforcement actions are appropriately taken.
- 2) A method to ensure inspection personnel maintain the knowledge, skills and ability to conduct high quality inspections.
- 3) Increased resources to meet the number of inspections needed to ensure compliance.

The review also found that some BLM Field Offices had not been taking appropriate enforcement actions.

In 2000, BLM Director Tom Fry approved a plan to revitalize the Inspection and Enforcement Program, with specific action items identified to address each of these areas. The BLM has completed a number of the steps in the revitalization plan, including reviewing and updating the BLM's enforcement policy, conducting an annual certification course for inspectors, developing a video library to help train newly hired personnel and providing refresher training for certified inspectors.

As a result of these initiatives, the BLM has made substantive improvements to its Inspection and Enforcement Program, particularly in the areas of production, drilling, plugging and workover inspections. Production inspections focus on maximizing the recovery of oil and gas resources while minimizing waste, and ensuring that the production is being handled properly, measured accurately, and reported correctly.

BLM Petroleum Engineering Technicians (PETs) and Petroleum Accounting Technicians (PATs) are responsible for conducting production inspections. Natural Resource Specialists, Environmental Compliance Officers and other designated staff are primarily responsible for conducting environmental compliance inspections.

The BLM's internal reviews and revitalization plan have focused on production inspections, although they have also noted deficiencies in the environmental compliance program.

The 2000 review of the Farmington Field Office's Inspection and Enforcement Program, for example, found that the office had only enough inspectors to conduct environmental compliance inspections at 2% of its high priority environmental sites—sites that must be inspected once a year. The Farmington Field Office has hired additional environmental compliance inspectors, but more are needed.

Environmental compliance personnel do not receive the same oversight, support and resources as production personnel within the inspection and enforcement program. There is no standard check list for environmental compliance inspections as there is for production and drilling inspections. There is no training program specifically designed for environmental compliance inspectors. The certification program for production inspectors does not include a training module on environmental compliance inspections, even though production inspectors are expected to keep an eye out for environmental compliance issues when they are in the field.

### ***BLM Oil and Gas Program Inspection and Enforcement Compliance Procedures***

The BLM's "Oil and Gas Program Inspection and Enforcement Compliance Procedures," instructs BLM staff:

- 1) When and how to issue and document written orders and Notices of Incidents of Noncompliance (INCs),
- 2) How to determine whether a violation should be classified as major or minor,
- 3) How to follow up on an INC or written order,
- 4) When and how to issue fines for noncompliance, and
- 5) When and how to issue civil penalties.

The Compliance Procedures include flow charts instructing personnel on the appropriate sequence of actions for major and minor violations. They list shutting down operations, entering a lease to perform work, bond forfeiture and lease cancellation as enforcement tools for noncompliance, but offer no guidance as to when and how these tools should be used.

## **State Inspection and Enforcement Programs**

Most state agencies surveyed for this report do not have detailed inspection and enforcement policies or guidelines. Several agencies have cited specific inspection requirements under the federal Safe Drinking Water Act's Underground Injection Control program, which governs discharges into groundwater. Few had policies that govern other aspects of oil and gas exploration and production. Inspections in several states appear to be largely complaint-driven.

The North Dakota Oil and Gas Division does have a schedule for routine inspections that includes:

- **Drilling wells:** once per week for vertical wells and twice per week for horizontal wells depending on depth, rig activity and other circumstances.
- **Enhanced recovery and salt water disposal wells:** once per month.
- **Active producing wells:** at least once every two months.
- **Inactive wells:** at least once per year.
- **Reclamation projects:** at least twice per year.
- **Mechanical integrity tests:** from once per year to once every five years, based on risk.
- **Temporarily abandoned wells:** once per year.
- **Investigating complaints:** when received.

Inspection priorities for the Montana Board of Oil and Gas Conservation include responding to complaints, witnessing well plugging, overseeing drilling operations (including setting surface casings), checking for compliance prior to approval of operator changes, and supervising the plugging and abandonment of orphan wells by contractors.

New Mexico's regulations require operators to notify the state so inspectors may view leak detection systems before they are covered, and require inspections upon completion of well plugging, closure of waste facilities and prior to bond release.

The New Mexico Oil Conservation Division has detailed enforcement guidelines which outline the enforcement tools available to inspectors—including tools that can be employed to achieve compliance and respond immediately to a violation.

In contrast to the BLM, state inspectors are responsible for overseeing all aspects of oil and gas exploration and production, including production accountability, the protection of the environment, public health and safety, drilling and work over operations.



# Inspection and Enforcement Resources

## Inspectors

Although the BLM has added inspectors in the past few years, the number of inspections conducted has not increased. Between 1999 and 2003, the highest number of inspections was 17,184 in 2000. There were 16,022 inspections in 2001, 16,025 in 2002, and 16,874 in 2003. As of August 2, 2004, the BLM had conducted 12,352 inspections nationwide in fiscal year 2004.

The average number of inspections per inspector in the BLM Field Offices studied for this report has fluctuated each year, declining 24% overall over the last five years (Table 2). This trend is especially noticeable in the Pinedale, Farmington, and Dickinson Field Offices.

**Table 2: Average Number of Inspections per Inspector**

BLM Field Office	1999	2000	2001	2002	2003
Grand Junction, CO *	73	67	91	87	61
Miles City, MT	113	111	125	110	84
Farmington, NM	128	120	100	111	92
Dickinson, ND	86	110	88	73	69
Buffalo, WY	50	111	90	124	81
Pinedale, WY	191	92	94	61	47
Six Field Office	102	109	96	106	78
Nationwide	--	--	73	66	63

\* Includes inspections for the Glenwood Springs, CO Field Office

One reason for this trend is the pressure on the BLM to approve permits which diverts staff time from other activities, including inspection and enforcement. When asked how much time she spends in the field on inspection and enforcement activities, one BLM Natural Resource Specialist replied, “Very little, because permitting is taking most of my time.”

“All we do is issue permits for oil and gas,” said a career BLM staff member in a Western office who spoke on the condition he not be named. “We’re told to follow new deadlines that are totally driven by industry. We’re not given time to do adequate [environmental reviews] and to consider the consequences of our decisions.”

Of 65,389 active wells on BLM land nationwide in 2003, 79% are found in the six western BLM Field Offices surveyed for this report. However, only about 70 of the 267 of the total number of inspectors employed by the BLM nationwide in 2003, or 26%, worked in these six field offices.

As the number of active wells has increased across the Rocky Mountain West and Northern Plains, the BLM has added environmental compliance personnel to several of its field offices (Table 3), more than doubling the number of environmental compliance inspectors in the field offices surveyed.

The Dickinson and Miles City Field Offices have not added any environmental compliance inspectors in the last five years. North Dakota is experiencing a boom in oil drilling—the number of active oil rigs has increased 60%. Coalbed methane development is poised to explode in southeast Montana within the next few years.

The ratio of environmental compliance inspectors to the total number of inspectors varies among the BLM Field Offices studied for this report. In the Grand Junction/Glenwood Springs, Miles City, Buffalo and Pinedale Field Offices, environmental compliance inspectors comprise about half of all inspectors. In the Farmington and Dickinson Field Offices, however, environmental compliance inspectors comprise 10–20% of all inspectors.

The number of inspectors has not increased in most of the surveyed state agencies (Table 4). The exceptions are the North Dakota Industrial Commission's Oil and Gas Division, which added one inspector in 2000, and the Wyoming Oil and Gas Conservation Commission, which has added three inspectors since 1999.

**Table 3: BLM Field Office Inspectors \***

	1999	2000	2001	2002	2003	2004
<b>Grand Junction, CO **</b>						
Environmental Inspectors	2	2	2	2	3	3
All Inspectors	4	4	4	4	6	6
<b>Miles City, MT</b>						
Environmental Inspectors	2	2	2	2	2	2
All Inspectors	5	5	5	5	5	5
<b>Farmington, NM</b>						
Environmental Inspectors	0	0	1	1	2	2
All Inspectors	14	12	12	14	20	20
<b>Dickinson, ND</b>						
Environmental Inspectors	1	1	1	1	1	1
All Inspectors	6	6	6	6	6	5
<b>Buffalo, WY</b>						
Environmental Inspectors	4	6	10	8	11	12
All Inspectors	11	14	21	22	25	26
<b>Pinedale, WY</b>						
Environmental Inspectors	2	2	4	3	5	5
All Inspectors	4	6	6	5	6-9	6-11
<b>Nationwide</b>						
Environmental Inspectors					84	
All Inspectors					267	

\* For the purposes of this report, the four staff positions in the BLM considered to be inspector positions are: Petroleum Engineering Technicians, Petroleum Accounting Technicians, Environmental Compliance Officers and Natural Resource Specialists. The latter two positions are categorized in this table as environmental compliance inspectors. While other BLM staff may dedicate a portion of their job to on-the-ground inspections, many Environmental Compliance Officers and Natural Resource Specialists spend a significant portion of their time on non-inspection related matters, including permitting and environmental review.

\*\* Includes Glenwood Springs, Colorado Inspectors

**Table 4: State Oil and Gas Agency Inspectors**

	1999	2000	2001	2002	2003
Colorado	--	8	8	8	8
Montana	6	6	6	6	6
New Mexico	18	18	18	18	18
North Dakota	12	13	13	13	13
Wyoming	6	8	8	9	9

There is a significant variation between state oil and gas agencies and BLM Field Offices in the number of active wells per inspector. In 2003, the BLM had a nationwide average of 245 active wells per inspector. The Grand Junction, Farmington and Miles City Field Offices and all state agencies except for the North Dakota Oil and Gas Division exceed the recommended inspector staffing levels (Tables 5 and 6).

State agencies generally have fewer inspectors relative to the number of active wells than BLM Field Offices, and these ratios are increasing at agencies in all five states. The Colorado Oil and Gas Conservation Commission (OGCC), New Mexico Oil Conservation Division and Wyoming Oil and Gas Conservation Commission (OGCC) have the highest ratios at 3,130, 3,247 and 4,321 active wells

per inspector, respectively, in 2003. The Colorado OGCC and Wyoming OGCC have experienced significant increases in the ratio of active wells per inspector, with the Colorado OGCC rising from 2,779 active wells per inspector in 2000 to 3,130 in 2004—a 13% increase in four years. The Wyoming OGCC’s ratio of active wells per inspector rose 20% from 3,597 in 2000 to 4,321 in 2003.

**Table 5: Average Number of Active Wells per State Agency Inspector in 2003**

	1999	2000	2001	2002	2003
Colorado	—	2779	2860	2964	3130
Montana	1220	1280	1322	1349	1381
New Mexico	—	3057	3163	3215	3247
North Dakota	306	290	295	291	296
Wyoming	—	3597	4218	4051	4321

**Table 6: Average Number of Active Wells per BLM Inspector in 2003**

Grand Junction, CO	305
Miles City, MT	509
Farmington, NM	970
Dickinson, ND	143
Buffalo, WY	214
Pinedale, WY	216
Nationwide	245

In Colorado, many counties and municipalities have Local Government Designees (LGDs), who receive oil and gas permit applications, notices of drilling and seismic operations, and applications for increased well densities on behalf of the local government. Local Government Designees can be a liaison and an important source of information to members of the community regarding oil and gas operations. Garfield County, Colorado, has taken the LGD concept one step further and hired a full time oil and gas auditor who monitors and inspects oil and gas operations.

It is not possible to track and compare the personnel and resources available at the federal, state and local government agencies for conducting air and water quality inspections at oil and gas exploration and production operations because the inspection and enforcement staff at these agencies cover a range of industries, and are not solely focused on oil and gas operations.

### ***BLM Inspection and Enforcement Staff Time and Program Expenditures***

Inspectors at many state oil and gas agencies and BLM Field Offices have multiple responsibilities and, in some cases, spend much of their time on activities other than inspections. Time spent on inspection and enforcement activities is a better indicator of agency priorities than the number of inspectors. In Fiscal Year 2003, the BLM had 267 inspectors nationwide, including 84 environmental compliance inspectors and 145 Petroleum Engineering Technicians (PETs). On average, environmental compliance inspectors spent 1.75 work months per year on inspection and enforcement related activities (field, office and travel time) in fiscal year 2003, while PETs spent 6.4 work months on inspection and enforcement related activities. Environmental compliance inspectors and PETS spent about 15% and 53% of their time, respectively, on inspection and enforcement related activities.

Table 7 shows the total labor expenditures for inspection and enforcement activities from the BLM Field Offices studied for this report. Unfortunately, none of the surveyed state agencies track this information.

The Buffalo, Grand Junction/Glenwood Springs, Farmington and Pinedale Field Offices have shown substantial increases in inspection and enforcement labor expenditures between 2000 and 2003—159%, 107%, 73% and 68% respectively.

Over the same four years, labor expenditures in the Miles City Field Office only increased by 6%, and labor expenditures in the Dickinson Field Office decreased by 5%.

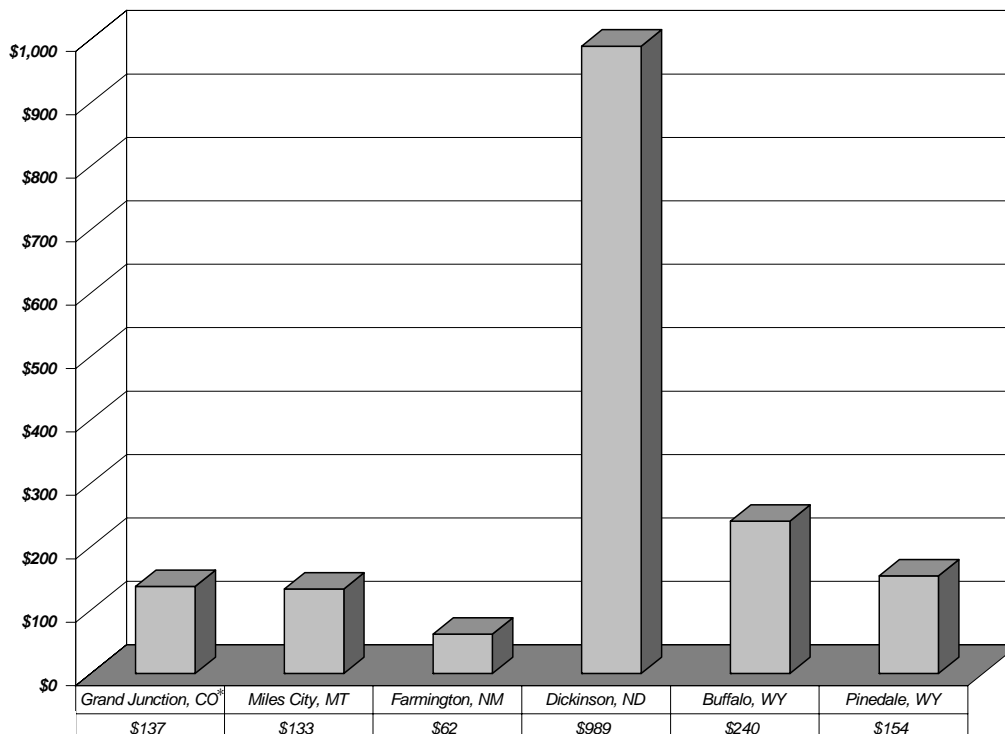
**Table 7: Inspection and Enforcement Labor Expenditures at BLM Field Offices**

	FY 2000	FY 2001	FY 2002	FY 2003
Grand Junction, CO *	\$121,127	\$117,315	\$200,845	\$250,964
Miles City, MT	\$321,700	\$375,175	\$360,393	\$339,538
Dickinson, ND	\$743,060	\$728,802	\$719,571	\$709,303
Farmington, NM	\$697,201	\$818,052	\$1,058,750	\$1,205,739
Buffalo, WY	\$495,345	\$677,845	\$914,810	\$1,282,180
Pinedale, WY	\$198,220	\$204,105	\$259,372	\$332,184

\* Includes Glenwood Springs, Colorado expenditures

The BLM’s data show significant differences between the Field Offices studied in this report in inspection and enforcement labor expenditures per active well (Figure 5). The Dickinson Field Office spends significantly more on labor for each active well than the other Field Offices studied, and the Farmington Field Office significantly less.

**Figure 5: BLM Inspection and Enforcement Labor Expenditures per Active Well in 2003**



\* Includes Glenwood Springs, Colorado expenditures

# Inspection Activity

## BLM and State Oil and Gas Agencies

Although state agencies generally have fewer field inspectors relative to the number of active wells than BLM Field Offices, state inspectors conduct significantly more field inspections than their BLM counterparts, as much as 70 times more in some cases.

In the three state agencies for which data was available—Colorado, Montana and New Mexico—the average number of inspections per inspector in 2003 ranged from 483 by Montana Board of Oil and Gas Conservation inspectors to 1,547 by New Mexico Oil Conservation Division inspectors. Colorado averaged 1,038 inspections per inspector in 2003.

The North Dakota Oil and Gas Division provided WORC with the number of inspections conducted over one 90-day period in 2004, which could not be extrapolated out over a year. The Wyoming Oil and Gas Conservation Commission does not track its field inspections, except those conducted under the federal Safe Drinking Water Act’s Underground Injection Control program.

In 1998, a non-profit, multi-stakeholder organization was formed, called State Review of Oil and Natural Gas Environmental Regulations, Inc. (or “STRONGER”) to conduct state regulatory oil and gas program reviews. STRONGER emphasizes an important truth: “What gets measured gets done. Therefore it is important for [agencies] to measure how well [they] perform....” And, as the BLM recognizes, “sufficient documentation is the mainstay of successful enforcement.”

In contrast, the average number of inspections per BLM inspector in fiscal year 2003 ranged from 47 in the Pinedale Field Office to 92 in the Farmington Field Office. The nationwide average was 63 inspections per inspector (Table 8). The average number of inspections per environmental compliance inspector ranged from 22 in the Miles City Field Office to 322 in the Farmington Field Office. The nationwide average was 66 inspections per environmental compliance inspector.

**Table 8: Active Oil and Gas Well Inspections per Inspector in Fiscal Year 2003**

	Total Inspections	Total Inspectors	Average Number of Inspections Per Inspector	Total Environmental Inspections	Total Environmental Inspectors	Average Number of Environmental Inspections Per Inspector
Grand Junction, CO *	366	6	61	177	3	59
Miles City, MT	422	5	84	43	2	22
Farmington, NM	1,843	20	92	643	62	322
Dickinson, ND	413	6	69	171	1	171
Buffalo, WY	2,064	25	81	912	11	83
Pinedale, WY	330	7	47	189	5	38
Six Field Offices	5,398	69.5	71	2,135	24	89
Nationwide	16,874	267	63	5,571	84	66

\* Includes Glenwood Springs, Colorado Field Office inspections

State inspectors have fewer non-inspection and enforcement responsibilities, and spend most of their time on inspection and enforcement activities, whereas BLM inspectors have other responsibilities on which they spend nearly two-thirds of their time.

State agencies spend less time on each inspection than BLM inspectors. In fiscal year 2003, BLM inspectors averaged 3.96 hours on each environmental compliance inspection, 18.12 hours on each production inspection, 23.07 hours on each drilling inspection, and 27.30 hours on each plugging inspection.

As a result of the higher number of inspections per inspector, state agencies in Colorado, New

Mexico and Montana are able to inspect active wells once every 1-3 years on average, even with fewer inspectors. The BLM Field Offices are able to inspect active wells once every 2–10 years on average (Table 9) and inspect active wells for environmental compliance once every 4–59 years.

The BLM’s National Inspection and Enforcement Strategy requires all high priority environmental sites to be inspected once a year. In fiscal year 2003, the BLM conducted 85% of all high priority inspections and 78% of all high priority environmental compliance inspections. The shortfall can be attributed to staffing shortages. The BLM completed more environmental compliance inspections than it planned to do with available staff (101% of planned inspections) although the number of inspections still fell short of the Bureau’s high priority target.

**Table 9: Years Needed to Inspect All Active BLM Wells at Current Rate of Inspection**

	Active Wells in 2003	Total Inspections in 2003	Years to Complete Inspections at Current Rate	Environmental Inspections in 2003	Years to Complete Environmental Inspections at Current Rate
Grand Junction, CO*	1,831	366	5.0	177	10.3
Miles City, MT	2,548	422	6.0	43	59.3
Farmington, NM	19,392	1,843	10.5	643	30.2
Dickinson, ND	717	413	1.7	171	4.2
Buffalo, WY	5,349	2,024	2.6	912	5.9
Pinedale, WY	2461	330	7.5	189	13.0
Six Field Offices	32,298	5,438	5.9	2,135	15.1
Nationwide	65,389	16,874	3.8	5,571	11.7

\* Includes Glenwood Springs, Colorado Field Office inspections

### State Water and Air Quality Protection Bureaus

States rely heavily on self-reporting to gauge compliance with National Pollutant Discharge Elimination System (NPDES) permits. All permittees are required to submit semi-annual discharge monitoring reports. States conduct some on-site inspections, but many sites with water discharge permits can go years without an on-the-ground inspection (Table 10).

**Table 10: NPDES Permits and On-Site Inspections**

	NPDES Permits	On-Site Inspections January 1999 to July 2004
Colorado	18	18
Montana	25	5
New Mexico*	3	0
North Dakota	2	7
Wyoming	1380	635

\* New Mexico has not been delegated primary authority over the NPDES program. The U.S. Environmental Protection Agency is responsible for NPDES permitting, inspections and enforcement in New Mexico.

For example, a 2003 legislative task force in Wyoming—which issues the most NPDES permits to oil and gas drilling operations—found that the state has had almost no on-the-ground monitoring, inspection or enforcement of water quality regulations. Since the task force report, Wyoming has made significant improvements to its enforcement of water quality regulations. There is still a long way to go, however, considering the damage caused by years of neglect (Case Study 1).

# Case Study I

## **Wyoming struggles to improve coalbed methane management**

More than ten years into Wyoming's coalbed methane (CBM) boom, the state agency charged with regulating environmental compliance is developing a plan for better management of the wastewater impacts. The federal Clean Water Act requires regulation of wastewater discharged during CBM extraction under the National Pollutant Discharge Elimination System (NPDES) program.

In March 2001, the Powder River Basin Resource Council and Wyoming Outdoor Council petitioned the Environmental Protection Agency (EPA) to take corrective action against the State of Wyoming for failing to properly regulate wastewater discharges, or take over enforcement responsibilities from the state. Because of the petition, the EPA has issued yearly updates on the Wyoming NPDES program and required the state to make improvements.

In response to the petition and the increased regulatory responsibility that has come with the CBM boom, the 2003 Wyoming Legislature instructed the Wyoming Department of Environmental Quality (DEQ) to create a task force to identify problems associated with DEQ's wastewater permitting program and recommend improvements.

Representatives from the DEQ, CBM industry and conservation community formed a permitting task force. The task force discovered what many Wyoming landowners already knew: that the permitting program was grossly understaffed and had inadequate compliance monitoring, insufficient laboratory facilities, insufficient communication between agencies, inconsistency in permitting policies, significant delays in permitting processes, and an overall increase in complexity of the program. The task force attempted to address these areas of concern and other challenges in the October 2003 report, "Review and Evaluation of the National Pollutant Discharge Elimination System Permitting Process."\*

"Looking around the room during that first meeting, I was a bit intimidated. But when I realized I was standing up for principles held by many other Wyoming farmers, ranchers, and conservationists I got more confident. Soon enough, I learned that many of the task force members, no matter what their interest, supported the values I was promoting," said Nancy Sorenson, a Wyoming rancher and Chair of the Powder River Basin Resource Council (PRBRC).

Todd Parfitt of the DEQ was also pleased with the work of the task force and the final report. "Positive things came out during the interviews and meetings," Parfitt said. "Our permitting program will be more user-friendly, proactive, and transparent." Steps toward implementing the program include:

- Creating a fee structure for wastewater permit applications where industries pay the state for each permit applied for in a watershed, generating revenue to be used for water monitoring;
- Funding eight new DEQ positions including field inspectors, laboratory scientists, and compliance specialists;
- Upgrading laboratory equipment and initiating plans to remodel the state laboratory;
- Upgrading computer software to improve examination of industry data monitoring reports;
- Securing funding to maintain 22 water-monitoring stations;
- Facilitating coordination between state agencies with duties related to CBM; and
- Designing and implementing a "watershed management" approach to planning and processing permits.

PRBRC has a more critical view. Even though the DEQ has been given more money for inspection and enforcement activities, enforcement actions are taking a year or more to complete and the agency has taken a year to hire new inspectors. The DEQ recently pushed through some new water quality regulations that PRBRC has asked Governor Freudenthal not to sign because they do not require notification of downstream landowners affected by wastewater discharges, and they declare that wastewater is a "beneficial use" to livestock and wildlife, which is not always the case. Despite some improvements, PRBRC believes the DEQ still lacks leadership, follow through and commitment when it comes to inspection and enforcement activities.

The reforms could promote much-needed safeguards for Wyoming and down-stream states. "We can't undo the destruction caused by a decade of substandard management. I just hope that the state will fully fund and put into action our recommendations to prevent future damages to Wyoming's family farms and ranches and water quality," added Sorenson.

\*The Task Force Report is available online at <http://deq.state.wy.us/wqd/events/0304.pdf>.

It is not possible to track and compare air quality inspections at oil and gas exploration and production operations in the five states because most of the state air quality bureaus responsible for conducting these inspections do not break their activities out by industry code, and inspection data is not readily available on the U.S. Environmental Protection Agency's website as it is for Clean Water Act inspections.

### **U.S. Environmental Protection Agency Region 8**

In 1996, Region 8 of the U.S. Environmental Protection Agency (EPA) and Region 6 of the U.S. Fish and Wildlife Service created a team to assess site operator management of oil and gas exploration and production wastes. State agencies, tribal governments, the BLM and the U.S. Bureau of Indian Affairs also participated in the effort. The team wanted to determine where oily waste in open pits posed a significant threat to birds and wildlife, and to assess the potential threat posed by open pits to surface water, groundwater and wetlands.

The effort involved four phases: (1) information gathering, exchange and distribution, (2) ground inspections, (3) evaluation of findings, (4) site-specific follow-up. It took place over several years, and 516 sites (sites may have multiple open pits) were identified as warranting ground inspection. There are about 28,000 open pits in the six Region 8 states—Colorado, Wyoming, Montana, South Dakota, North Dakota and Utah. Conditions observed during the ground inspections included:

- bird and other wildlife mortality resulting from exposure to oil,
- improperly designed, located and operated pits (including exposed oil on pits),
- ineffective or non-existent wildlife exclusionary devices,
- improper or non-existent secondary containment for oil storage tanks,
- unpermitted or out-of-compliance discharges to surface waters,
- leaks and spills from equipment, and
- improper discharges to groundwater.

Table 11 has more detailed information regarding the ground inspections that were conducted in Colorado, Montana, North Dakota and Wyoming.

During the assessment, inspections were generally not conducted until at least thirty days after the operators were notified, although some sites were inspected without advance notice.

#### **U.S. EPA Comments on the Pros and Cons of Advance and No-Notice Inspections**

The fact that 185 site operators fixed problems prior to ground inspections shows that advance notice can be a useful tool. More conditions of environmental concern and of noncompliance were observed at sites where advance notice was not provided. Several sites in Colorado, Wyoming, and on the Wind River Indian Reservation were inspected without advance notice to the facility, primarily because they were identified as potential repeat problem sites. Most continued to have problems...

While it has been shown that advance notice of ground inspections will result in improved conditions at many sites, *an accurate assessment of site conditions can only be achieved by conducting ground inspections without advance notice. No-notice inspections and more frequent inspections will likely improve conditions and compliance with the regulated industry, reducing the impact on the environment.* (emphasis added)



## **Table 11: Violations and Significant Environmental Issues at Oil and Gas Waste Disposal Pits.**

*(Source: U.S. EPA Region 8)*

### **Colorado**

- 10,950 estimated waste pits
  - 38 sites ground inspected by multi-agency teams
  - 8 sites inspected by state and Fish and Wildlife Service
  - 3 sites received an aerial survey
  - 2 sites inspected by state only in Fall 1997, Spring 1998 and Summer 1999 (96 pits observed)
  - 8 of 38 sites (21%) cleaned up or clean, no environmental conditions of concern, no non-compliance noted
  - 30 of 38 (79%) required follow-up
  - 6 sites with ongoing discharges - 5 of those sites were unpermitted
- 

### **Montana**

- 1,370 \* estimated waste pits
- 137 sites ground inspected in July 1997 (169 pits observed)
- 76 of 137 (55%) cleaned up or clean, no environmental conditions of concern, no non-compliance noted
- 61 of 137 (45%) required follow-up
- 21 sites with ongoing, unpermitted discharges \*\*

\* BLM does not keep a tally of the number of pits on BLM land in Montana

\*\* Information on unpermitted discharges at 21 sites was provided to the Montana Department of Environmental Quality. The status at these sites is unknown.

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### **North Dakota**

- 2,000 estimated waste pits
  - 41 sites ground inspected in August-September 1998; (56 pits observed) NDIC confirmed that 23 sites identified during aerial survey had been addressed prior to ground surveys
  - 5 additional sites were inspected that were not identified during the aerial survey
  - 19 of 41 (46%) cleaned up or clean, no environmental conditions of concern, no non-compliance noted
  - 22 of 41 (54%) required follow-up
- 

### **Wyoming**

- 9,000 estimated waste pits
- 201 sites ground inspected (347 pits observed) in June 1997
- 63/201 (31%) cleaned up or clean, no further action required
- 155 pits with oil on surface, bird mortalities
- 25 sites had unpermitted waste water discharges, discharges above permitted limits for oil and grease, and/or oil contamination of waterways and wetlands

# Violations and Enforcement Actions

## **BLM and State Oil and Gas Agencies**

Recognizing a violation is the first critical step in ensuring compliance. All state agencies and BLM Field Offices surveyed for this report work with oil and gas operators to bring them back into compliance, allowing them a reasonable (and sometimes excessive) amount of time to comply.

State and federal regulatory agencies have the authority to issue written orders and incidents of noncompliance (INCs), impose fines or civil penalties, and issue orders to plug wells, cease and desist or shut down operations, and forfeit reclamation bonds.

Written orders, issued by BLM inspectors or authorized officers, are used to correct problems identified in the field—such as environmental or health and safety issues—that have no specific regulatory standards, are not a regulatory violation, or to supplement existing regulatory requirements. If the problem is not corrected by a certain date, the BLM is supposed to issue an INC. In the BLM system, written orders are an important first step to ensure the protection of the environment, public health and safety.

Incidents of noncompliance are issued by a BLM inspector when he/she encounters a regulatory violation that must be corrected. The state equivalent to an INC is called a notice of violation (NOV), or notice of alleged violation (NOAV). The BLM distinguishes between minor and major violations. Verbal INCs are used when an inspector encounters a minor and “inadvertent” violation that must be corrected.

Table 12 shows the number of written orders issued by the BLM from 1999 through 2003. The number of written orders issued by the BLM nationwide has more than tripled, although there is a great deal of variation among the Field Offices. Further analysis is needed to better understand the significance of these differences among the BLM Field Offices.

**Table 12: BLM Written Orders**

	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
Grand Junction, CO *	20	71	210	161	62
Miles City, MT	25	27	29	19	26
Farmington, NM	0	7	2	119	185
Dickinson, ND	56	30	13	19	9
Buffalo, WY	42	61	133	218	86
Pinedale, WY	1	0	0	2	4
<b>BLM Nationwide</b>	<b>618</b>	<b>1006</b>	<b>1302</b>	<b>1391</b>	<b>2093</b>

\* Includes Glenwood Springs, Colorado

Table 13 shows the number of INCs and NOV/NOAVs issued by state oil and gas agencies and BLM Field Offices between 1999 and 2003 (some state data was unavailable). The number of NOV/NOAVs issued by the New Mexico Oil Conservation Division has skyrocketed since 2001, whereas the number of INCs issued by the BLM Farmington Field Office has remained relatively steady. Second, the number of INCs issued by the Buffalo Field Office has more than doubled over the five year period, whereas the number issued by the Pinedale Field Office is tiny by comparison, even though the Pinedale area is one of the hottest gas plays in the country. This can be partly explained by the fact that there are twice as many active wells in the Buffalo Field Office as in the Pinedale Field Office.

**Table 13: Incidents of Noncompliance/Notices of Violation**

<b>State Agencies</b>	1999	2000	2001	2002	2003
Colorado Oil and Gas Conservation Commission	182	276	291	317	153
Montana Board of Oil and Gas Conservation	-	-	-	-	130
New Mexico Oil Conservation Division	131	529	1638	2501	1940
North Dakota Oil and Gas Division	0	0	0	0	0
Wyoming Oil and Gas Conservation Commission	0	0	0	0	0

\* Montana Board of Oil and Gas Conservation data are unavailable prior to 2003.

**BLM Offices**

Grand Junction/Glenwood Springs, CO	199	277	450	311	546
Miles City, MT	51	127	111	70	47
Farmington, NM	461	518	585	483	503
Dickinson, ND	100	127	93	140	72
Buffalo, WY	265	287	219	412	564
Pinedale, WY	10	27	8	21	24
BLM Nationwide	4612	5266	3955	3359	5224

The Grand Junction/Glenwood Springs, Miles City, Farmington and Dickinson BLM Field Offices imposed *no* fines or penalties between 1999 and 2003. The Pinedale BLM Field Office imposed one \$3,000 fine in 2002 (Table 14).

**Table 14: Civil Penalties Collected**

*Number of Operations Fined*

<b>State Agencies</b>	1999	2000	2001	2002	2003
Colorado Oil and Gas Conservation Commission	23	19	9	21	—
Montana Board of Oil and Gas Conservation	0	2	1	1	0
New Mexico Oil Conservation Division	—	—	1	6	7
North Dakota Oil and Gas Division	3	1	1	0	0
Wyoming Oil and Gas Conservation Commission	1	5	2	0	2

**BLM Offices**

Grand Junction/Glenwood Springs, CO	0	0	0	0	0
Miles City, MT	0	0	0	0	0
Farmington, NM	0	0	0	0	0
Dickinson, ND	0	0	0	0	0
Buffalo, WY	5	2	1	0	1
Pinedale, WY	0	0	0	0	0
BLM Nationwide	5	4	1	9	2

**State Agencies** *Fines Collected*

Colorado Oil and Gas Conservation Commission	\$10,000	\$84,500	\$35,000	\$48,250	—
Montana Board of Oil and Gas Conservation	0	\$10,000+	\$500	\$500	0
New Mexico Oil Conservation Division	—	—	\$2,000	\$12,500	\$18,000
Wyoming Oil and Gas Conservation Commission	0	\$13,350	\$1,600	0	\$6,000

**BLM Offices**

Buffalo, WY	\$131,000	\$30,500	\$2,000	0	\$500
Pinedale, WY	0	0	0	\$3,000	0
Nationwide	\$131,000	\$34,700	\$2,000	\$86,000	\$1,000

## Case Study 2

### **Montana Agency Shirks Duties**

Since the late 1990's, members of the Northern Plains Resource Council, a Montana conservation and family agriculture group, have watched with dread as irresponsible coalbed methane (CBM) development advanced north in the Powder River Basin from Wyoming into Montana. They feared the damage to water and land suffered by farmers and ranchers in Wyoming, but hoped that Montana's higher environmental standards would protect them from such destruction.

Several years later, Northern Plains members have realized that it takes dogged determination on their part to ensure the state and federal agencies charged with protecting the clean water and productive soils in the Powder River Basin do their jobs. "You'd think after all these years of us watching and reporting, the agencies would be responsible," said Mark Fix, Tongue River rancher and Chairman of the Northern Plains Coalbed Methane Task Force. "Instead they continue their willful neglect of duties when it comes to making the methane industry do it right."

In June 2001, members and staff of the group discovered an unauthorized discharge of 22,000 barrels of methane wastewater during an on-site inspection of Fidelity Exploration and Production Company's CBM field near Decker, Montana. Although Fidelity took responsibility for the violation and reported it to the Montana Department of Environmental Quality (DEQ), a few months later the DEQ withdrew the violation from any enforcement action citing confusion as to whether or not the discharge water was pollution. Subsequently, the Ninth Circuit Court of Appeals cleared up any confusion by ruling that methane wastewater is industrial pollution that the DEQ must regulate.

Most recently, Fix and other irrigators have collected and sent Tongue River water samples to a professional laboratory to analyze its safety for irrigation and document current water quality. Three months in a row the Tongue River was shown to be in violation of Montana's electrical conductivity (EC) limit, which indicates high levels of salts detrimental to soil and crops. Although Fix informed the DEQ of these violations by telephone and in writing, no corrective action has been taken and Fidelity continues to discharge CBM wastewater directly into the river.

"The Montana Department of Environmental Quality seems more concerned about the interests and challenges of the methane industry than in protecting our irrigation water and crops from damage," said Fix. "We just wish they'd do their jobs and enforce Montana's laws and water quality standards."

The New Mexico Oil Conservation Division has issued more orders to cease and desist operations, plug wells or forfeit bonds than all of the other state agencies and BLM Field Offices combined (Table 15). This large number of enforcement actions is related to an initiative by the Division to shut in abandoned wells.

**Table 15: Cease and Desist Orders, Orders to Plug Wells and Orders to Forfeit a Bond**

<b>State Agencies</b>	1999	2000	2001	2002	2003
Colorado Oil and Gas Conservation Commission	7	2	6	6	5
Montana Board of Oil and Gas Conservation*	3	5	9	4	6
New Mexico Oil Conservation Division**	52	749	370	255	90
North Dakota Oil and Gas Division	0	0	3	1	0
Wyoming Oil and Gas Conservation Commission***	16	1	3	0	4
<b>BLM Offices</b>					
Grand Junction/Glenwood Springs, CO	0	1	0	0	0
Miles City, MT	0	0	1	0	0
Farmington, NM	1	1	0	2	6
Dickinson, ND	1	0	0	0	0
Buffalo, WY	8	12	4	24	13
Pinedale, WY	0	0	0	0	0
BLM Nationwide	19	31	16	32	31

\* Show Cause Orders only

\*\* Temporary Shut In Orders only

\*\*\* Bond Forfeitures only

### State Water and Air Quality Protection Bureaus

It is not possible to track and compare water quality violations and enforcement actions at oil and gas exploration and production operations in the five states specific to NPDES permits issued under the Clean Water Act based on the data that is readily available to the public.

Limited data is available regarding air quality violations and enforcement actions in the five states specific to Title V operating permits issued under the Clean Air Act (Table 16). Neither Montana or North Dakota has taken an enforcement action under Title V in the last two years.

More data and analysis is needed about Clean Air and Water Act violations and enforcement actions at oil and gas exploration and production operations.

**Table 16: Title V Permits, Violations and Enforcement Actions for Oil and Gas E&P Operations**

	Number of Permits	Violations in the Last 2 Years	Current Significant Violations	Enforcement Actions in the Last 2 Years
Colorado	37	33	8	2
Montana	2	1	0	0
New Mexico	31	7	5	6
North Dakota	13	0	0	0
Wyoming	39	6	3	17

# Case Study 3

## **Industry Self-Reporting Leads to Water Well Contamination**

Like many state and federal agencies, the Colorado Oil and Gas Conservation Commission (COGCC) has relied heavily on industry self-monitoring and reporting to ensure compliance with the state's standards. A gas leak in Silt, Colorado has demonstrated just how dangerous it can be to depend on companies to "Do It Right" without close oversight from regulatory agencies.

Local landowners reported gas bubbling in West Divide Creek south of Silt to state authorities on April 1, 2004. They worried the bubbles might be caused by nearby natural gas drilling. Samples taken the next day by a COGCC inspector confirmed the landowners' suspicions, revealing high levels of toxic chemicals associated with oil and gas production such as benzene, toluene, ethyl benzene, and xylene.

Upon further investigation, the COGCC determined that EnCana Oil and Gas (USA), Inc. was responsible for gas leaking into the creek and the wells of four landowners. Encana had drilled a well nearby on February 9, 2004 – the Schwartz 2-15B well. During drilling, Encana experienced lost circulation and "kicks"—an indication that the cement casing designed to contain drilling fluids and protect surface and groundwater from contamination has failed. One week later, Encana ran tests that revealed that the top of the well's casing ended less than 200 feet above the top of the gas, and that gas had entered the space between the casing and the well bore and migrated behind the pipe.

Colorado's rules require oil and gas operators to take immediate steps to bring such wells under control, yet Encana did not take immediate remedial action or notify the COGCC. On March 30, 2004, one day before the seep was discovered by the landowners, Encana notified the COGCC that it planned to remediate the casing of the Schwartz 2-15B well and one other well. Encana completed the remedial cementing on April 7, 2004.

According to the COGCC, inadequate cementing allowed the well to blowout underground, uncontrolled, and 115.5 million cubic feet of gas was lost over the following 55 days. The COGCC issued a Notice of Alleged Violation to Encana on April 23, 2004, charging that Encana contaminated fresh water, failed to notify the state that public health or safety was in jeopardy, inadequately cemented the well casing, and failed to notify the Director of a gas release.

At first, Encana claimed not to have violated any rules, and stated that there was no definitive evidence that it caused the gas seep. But on August 17, the company admitted to nine violations arising from the incident and endorsed a recommended fine by the COGCC staff of \$371,000.

"In my opinion it was through sheer unadulterated incompetence that we are here today and over the last few days to address this problem," said COGCC commissioner John Ashby, addressing Encana representatives at a public hearing where the \$371,200 fine was officially approved. "I'm very upset about that. I think it reflects poorly on the industry and on your company in particular."

Fellow COGCC commissioner Tom Ann Casey said, "It's not a problem with the geology, it's a problem of some people not following the rules."

The BLM's "National Oil and Gas Inspection and Enforcement Strategy" states: "Ensuring that drilling and plugging operations are in compliance from the outset will minimize potential problems in the long term, particularly with regard to contamination of subsurface water resources and surface related environmental concerns, to reduce future liability problems and workload."

Not only was Encana's Schwartz 2-15B well not "in compliance from the outset," but an over reliance on industry self-monitoring and reporting led to the "contamination of subsurface water resources" and "future liability problems and workload."

"In all the years my family has owned land, recreated on, and enjoyed the benefit of West Divide Creek, we've never seen this sort of reckless treatment of our water," said local landowner and member of the Western Colorado Congress, Lisa Bracken. "It's a sad day when oil and gas companies try to get away with polluting our water and state agencies try to regulate disasters after the fact."

"Colorado can take advantage of our gas reserves, but we can do it in an orderly, environmentally sound way," said Bracken. "We only have one chance to protect our family farms and ranches, local communities, and good clean water. Let's not screw it up in a rush to develop."

# *Public Participation*

Strong citizen oversight of oil and gas development is critical to ensure that it is done right, especially in light of the regulatory agencies often permissive attitude toward industry. Oil and gas field citizens have insights and information that can be helpful to agencies, but in order to be effective, they must have access to information and their participation must be valued. Unfortunately, many agencies do not appear to recognize the benefits of public knowledge and participation.

## **Public Access to Information**

During research for this report, WORC discovered how difficult it can be to access information about oil and gas permitting, inspection and enforcement programs at the state and federal level.

Some state and federal agency personnel were extremely helpful and quick to respond to requests for information, while others were much less helpful and responsive. In some cases, WORC's information requests dragged on for weeks and months before they were filled, and telephone calls were not returned. WORC was forced to file a Freedom of Information Act Request (FOIA) with four BLM Field Offices to obtain information that three other Field Offices readily provided.

Many state agencies are increasing the amount of information that is readily available to the public, especially over the internet, but these efforts are uneven across states, and between agencies within some states.

Specifically, WORC encountered the following problems accessing information for this report:

- Several state agencies post a great deal of information on their web sites, and some post very little. The Colorado Oil and Gas Conservation Commission's site is a model for other agencies.
- The U.S. Environmental Protection Agency allows the public to access numerous databases via its web site. Several of these are quite user friendly, such as EPA's "Environmental Compliance History Online" (ECHO) database. Others, such as EPA's "Permit Compliance System" database, are cumbersome and difficult for untrained users to access and decipher. The BLM has very little data available on its website.
- Staff at several agencies do not seem to be aware of what information is available on their web sites. WORC had to follow up repeatedly with staff at several agencies to get information that we later found out was available online.
- Some agencies do not track basic information. For example, the Wyoming Oil and Gas Conservation Commission does not track the number of inspections conducted and the number of incidences of noncompliance.

## **Citizen Complaints**

Of the 22 state and federal agencies WORC surveyed in Colorado, Montana, New Mexico, North Dakota and Wyoming, only the Colorado Oil and Gas Conservation Commission and the New Mexico Oil Conservation Division track citizen complaints and agency responses to those complaints. The Colorado Oil and Gas Conservation Commission posts all citizen complaints and how they were resolved on its web site.

Record keeping is one indication that agencies treat complaints seriously. Of the agencies that don't track complaints, many reported that they do not recall receiving any complaints, or that they receive very few. Colorado and New Mexico reported receiving 905 and 119 complaints, respectively, from 1999 through May 2004. This discrepancy between states that track citizen complaints and those that do not needs to be rectified for citizens to have confidence that their complaints will be taken seriously.

# Findings

- 1) The number of active oil and gas wells has risen by 14% between 2000–2003 in the five states surveyed for this report. State agencies and the BLM issued 44% and 119% more oil and gas permits in 2003 than in 1999, respectively.
- 2) The BLM has made substantive improvements to its Inspection and Enforcement Program since 1998, *but* these improvements have been targeted at production inspections, rather than environmental compliance inspections. The BLM’s environmental compliance program has not received and benefited from the same reviews, training and resources as the production portion of the program.
- 3) The average number of inspections per inspector in the BLM Field Offices surveyed has declined 33% over the last five years.
- 4) Although the six western BLM Field Offices are responsible for nearly 79% of active oil and gas wells on BLM lands nationwide in 2003, these six offices employ only 26% of all BLM inspectors at that time.
- 5) As the number of active oil and gas wells has increased, the number of state oil and gas inspectors has generally not increased.
- 6) The Grand Junction, Farmington, and Miles City Field Offices and all state oil and gas agencies except for the North Dakota Oil and Gas Division exceed the recommended inspector staffing levels.
- 7) The number of on-the-ground inspections conducted by the BLM has not increased significantly, even in the face of exploding oil and gas development.
- 8) Most state agencies do not have detailed inspection and enforcement policies or guidelines that govern all aspects of oil and gas exploration and production.
- 9) Environmental compliance inspectors in the BLM spend an average of just 15% of their time on inspection and enforcement activities.
- 10) There are dramatic differences among BLM Field Offices in inspection and enforcement labor expenditures per active well.
- 11) State agencies inspect active wells once every 1–3 years, while BLM Field Offices inspect active wells once every 2–10 years and inspect active wells for environmental compliance once every 4–59 years.
- 12) The number of written orders issued by the BLM nationwide has more than tripled, although there is a great deal of variation among the Field Offices.



- 13) The number of INCs issued by the Buffalo Field Office has more than doubled over the five year period, whereas the number issued by the Pinedale Field Office is tiny by comparison.
- 14) Neither the state oil and gas agencies nor the BLM impose many fines, nor do they issue many orders to plug wells, cease and desist operations, or forfeit bonds. While this could indicate good behavior on the part of operators, there is also evidence to suggest some agencies lack the will to enforce the law.
- 15) Of the 22 state and federal agencies surveyed for this report, only two reported tracking citizen complaints and agency responses to those complaints.
- 16) Many state agencies and bureaus have increased the amount of information that is readily available to the public, particularly over the internet, but these efforts are uneven across states, and between agencies and bureaus within some states.

# Recommendations

Oil and gas inspection and enforcement programs at the state and federal level have strengths and weaknesses. More needs to be done to improve enforcement of oil and gas laws and regulations, and correct violations of environmental and human health standards. Based on the information and analysis from this report, we have these recommendations:

## **Inspection and Enforcement Staffing Levels and Training**

- 1) The number of inspection and enforcement staff should be adequate so that *each full time inspector is responsible for no more than 300 active wells*. Additional staff must be added as the number of permitted and active wells increases.
- 2) State and federal inspection and enforcement programs should be reviewed and/or audited, including, but not limited to, the adequacy of staffing levels. The BLM should expand its existing internal review to include environmental compliance. A Government Accounting Office review of the adequacy of BLM inspection and enforcement staffing levels at all field offices with an active oil and gas program is necessary, with a close look at the balance between environmental compliance and production inspectors. State agency programs should be reviewed by STRONGER or a balanced, multi-stakeholder state legislative task force.
- 3) Counties should consider designating Local Government Designees, similar to those in Colorado, or hiring a county oil and gas auditor who has the authority to monitor and inspect oil and gas operations and serve as a conduit of information to the public.
- 4) All state and federal inspectors should receive adequate training and be properly certified to conduct environmental compliance inspections.
- 5) A greater percentage of BLM environmental compliance inspectors' time should be devoted to on-the-ground inspection and enforcement activities.

## **Inspection Frequency, Procedures and Documentation**

- 6) The BLM should increase management and oversight of their Inspection and Enforcement Program to ensure inspections are conducted and documented properly and enforcement actions are appropriately taken. This should include a method to ensure inspection personnel maintain the knowledge, skills and ability to conduct high quality inspections as well as providing sufficient resources to complete the number of inspections needed to ensure compliance.
- 7) The BLM should strengthen its National Inspection and Enforcement Strategy by requiring that every active oil and gas well be inspected at least once each year for environmental compliance. The BLM should conduct regular inspections of plugged and abandoned and temporarily abandoned wells, compressor stations, water discharge points and impoundments, as well as additional inspections at environmentally sensitive sites and those operated by companies with a history of violations.
- 8) States should adopt specific goals for inspection frequency, similar to the BLM's National Inspection and Enforcement Strategy.

- 9) No new drilling permits should be issued if inspection goals are not met.
- 10) State oil and gas agencies and the BLM should strengthen their inspection procedures, and develop standardized check lists for their inspectors to use during environmental compliance inspections.
- 11) An accurate assessment of site conditions can only be achieved by conducting ground inspections without advance notice. No-notice inspections and more frequent inspections will improve conditions and compliance within the regulated industry, reducing the impact on the environment.
- 12) Every oil and gas well should be thoroughly inspected prior to the beginning of production operations, with special attention paid to whether or not the well is properly cemented.
- 13) All state agencies and the BLM should closely track and document their inspection activities, and make all information readily available to the public. The Montana Board of Oil and Gas Conservation just started tracking inspections in 2003, and the Wyoming Oil and Gas Conservation Commission still does not track inspections.

### ***Violations and Enforcement Actions***

- 14) State agencies and the BLM should have clear policies or guidelines that instruct inspectors on when and how to take enforcement actions, including how to follow up on violations when they are not resolved within the time period allowed.
- 15) The Wyoming Oil and Gas Conservation Commission should begin tracking notices of violation immediately.
- 16) State agencies and the BLM should exercise their authority to revoke, modify or suspend any permit, assess administrative penalties or seek civil penalties or criminal sanctions, and require the forfeiture of financial assurance instruments.

### ***Ease and Accessibility of Public Information***

- 17) Public access to state and federal agency information on inspection and enforcement programs should be improved. One way to accomplish this would be for all agencies to use the Colorado Oil and Gas Conservation Commission web site as a model.
- 18) The public should be provided with adequate notice of an agency's intention to issue a permit or license, an appropriate opportunity to comment on a permit or license prior to issuance, and agency records should be readily available for public review.

### ***Citizen Complaints***

- 19) All agencies should encourage the public to report perceived violations, apprise the public of the process to be followed in filing complaints, and document and thoroughly investigate every citizen complaint. When citizen complaints are received, agencies should schedule on-site visits within 15 days and allow complainants to participate. Once on-site visits are completed, appropriate agency officials should prepare written reports of findings for the public record.

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