

# Coalbed Methane Alert

Powder River Basin Resource Council  
www.powderriverbasin.org

March 2002

Wyoming Outdoor Council  
www.wyomingoutdoorcouncil.org

## Federal Government to Decide Fate of Powder River Basin

*"The Proposed Action would change the existing rural landscape to a rural/industrial landscape primarily because the 40 to 80 acre spacing of the wells would result in a noticeable density of industrial facilities."*-BLM DEIS

### BLM Analyzes 51,444 CBM Wells Comments Due on Draft Environmental Impact Statement April 18, 2002 Deadline

In January, the Bureau of Land Management (BLM) released its draft environmental impact statement (EIS) analyzing the impacts of the development of 51,444 coalbed methane (CBM) wells and 3,200 oil wells that will be drilled and producing in the Powder River Basin by 2010. Because the federal government, through BLM, owns and manages 63% of the oil and gas estate but only 10% of the surface, BLM has a tremendous amount of authority on whether this development will proceed responsibly, or to the detriment of the citizens living in the area, and the many resources at stake: Clean air, precious groundwater reserves, healthy soil and vegetation, clean surface waters, and property rights.

*Get involved in this public process, raise your questions and voice your concerns!*

To view the EIS go to [www.prb-eis.org](http://www.prb-eis.org) or [www.wyomingoutdoorcouncil.org](http://www.wyomingoutdoorcouncil.org) or feel free to call PRBRC at 307-672-5809 to set up a time to view the documents.

#### Have your say in the fate of the Powder River Basin

Send or Email Comments to:  
Paul Beels, Project Manager  
Bureau of Land Management  
Buffalo Field Office  
1425 Fort Street  
Buffalo, WY 28234-2436  
[www.buffalo\\_wymail@blm.gov](mailto:www.buffalo_wymail@blm.gov)  
Deadline April 18, 2002

The proposal for 51,444 CBM wells -the largest natural gas project ever studied and sanctioned by the BLM- would result in:

- 17,000 miles of new roads - enough to drive from Los Angeles to New York nearly six times.
- The disposal of 1.4 trillion gallons of water over the project's life - over 4 million acre feet, enough water for 16 million people, or all the residents of Wyoming for 30 years.
- 20,000 miles of new pipelines and 5,300 miles of above-ground power lines - long enough to circle the globe.
- Over 200,000 acres of soil and vegetation that will be stripped bare.
- Depending on the alternative, 500 to 1,200 surface discharge facilities for the water.
- 1,800 up to 4,000 infiltration waste pits to handle produced water.

#### Deciding the Future of the Basin

The largest conflict in the Basin is due to the quilted patchwork of land ownership. While the federal government owns, and manages through BLM 63% of the oil and gas estate, only 10% of the surface in the Basin is federal. In fact, over 4 million acres - 1/2 of the entire project area - are described by BLM as private surface over federal minerals. The Bureau of Land Management is making decisions that will affect private landowners, and all of these decisions will have long-lasting and in some cases irreversible impacts. BLM needs to hear that the development of federal minerals must not take place at the expense of landowners and other critical resources.

This Draft EIS is the first of many that will analyze and approve CBM and deep gas projects proposed throughout Wyoming and the Rocky Mountain region. This Draft Environmental Impact Statement on the Powder River Basin will set the standards for proposed gas development in other areas. Your comments are critical to help force the BLM to do the best analysis, implement the strongest mitigation measures and ensure development is done with minimal impacts.

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## Are You Protected?

For federal development, the minimum bond that must be posted by a company is \$10,000 per lease, or \$25,000 for all federal CBM wells in the state. Therefore, a company with 300 federal wells (a small percentage of the 51,444 total) could walk away from its production and leave behind a mere \$83 per well (and associated roads, compressor facilities, buried pipelines and power lines) for clean up. This is clearly not enough money to ensure proper reclamation of land, soils, water wells, crops, and native vegetation to their pre-CBM condition.

**Why aren't bonding levels higher?**

## Does the Powder River Basin Deserve Status Quo or Something Better?

Coalbed methane operations have been ongoing in the Powder River Basin for 10 years. During that time, we have learned a great deal about the impacts associated with the produced water, as well as new technologies to lessen these impacts.

Unfortunately, BLM has analyzed only two real alternatives, and under the "most protective" scenario, most of the water will still be dumped onto the ground, untreated. In BLM's preferred alternative, (Alternative 1), 85 to 90 percent of the water in the sub-watersheds that will receive most of the activity will be dumped untreated on the ground, or into infiltration pits intentionally designed to leak into the shallow groundwater.

### **Impacts on Wildlife**

According to the DEIS, disturbances to wildlife from 51,444 wells will be widespread and significant, affecting birds (including raptors, sage and sharp-tailed grouse, and songbirds); big game species (including over 157,000 mule deer, almost 12,000 elk, and over 108,000 pronghorn antelope); and a number of sensitive fish and wildlife species.

Predicted to occur:

- Losses of crucial habitat, particularly big game winter ranges;
- Habitat fragmentation from road construction and development of well pads, compressor stations, power lines and reservoirs;
- Increase in predation rates by raptors as more power lines increase the number of perch sites;
- Increases in hunting pressure and wildlife harassment;
- Mortality of wildlife from poaching, trapping, poisoning, road kills, and raptor collision and electrocution on power lines.

Wyoming Game & Fish has stated that CBM development on this scale could have an unprecedented impact on sagebrush communities and the wildlife species they support, including mule deer, sage and sharp-tailed grouse, sage and Brewer's sparrows, and sage thrashers. A recent study by Franz Ingelfinger entitled "The Effects of Natural Gas Developments on Sagebrush Steppe Passerines in Sublette County, Wyoming" pointed out that there was a 50% reduction in songbirds that require sagebrush for their habitat within 100 meters of roads.

## If BLM Has Its Way the Basin Will Never Be the Same

During the public comment period, take the opportunity to inform the federal government of your concerns and issues with this development on your private land. BLM is telling us in black and white terms that:

- The landscape of the Powder River Basin will be transformed from rural/agricultural to industrial.
- The transfer of groundwater to surface water - 1.4 trillion gallons over the life of the project - will be "irreversible". Drawdowns from 1200 -1400 feet near the center of activity, and from 200-400 feet in areas of active development are predicted.
- Some local aquifers will be depleted and not fully recharged for *100 years or longer*.
- Vegetative cover, riparian areas, big game habitat, sensitive species' habitat and livestock forage will be "eliminated" for an indefinite period of time
- BLM admits this project as currently proposed will catapult at least 15 sensitive species (including the white-tailed prairie dog) closer to listing and protection under the Federal Endangered Species Act.



**CBM Developments on State/Federal Lands Near the Powder River**

## **Don't Allow BLM To Turn the Powder River Basin into a National Energy Sacrifice Area!**

**Demand mitigations to reduce the impacts:**

**Water well replacement, reinjection or water treatment and storage for future use, higher bonding, noise controls, surface damage use agreements, lighting controls, limited access during critical wildlife mating, calving or hunting seasons.**



**This is your chance to get involved. Tell the government your concerns!**

## In your comments to BLM, or at one of the public meetings, you may want to highlight some of these issues and ask some hard questions:

1. Why are there only two alternatives? Why did BLM consider only two alternatives in their analysis, and why did they fail to look at production scenarios that include utilizing new technologies (including increased spacing, directional drilling, recycling of drilling fluids, desalinization and water treatment, new water injection technology that separates gas from water underground, and alternative power sources, such as fuel cell technology and solar energy--to reduce the number of powerlines that will negatively impact open spaces and wildlife); more surface owner protections, BLM's authority to raise reclamation bonds, staged production of coal seams, or reinjection of the water on federal wells? BLM promised to utilize the latest and best technologies to reduce impacts. Why is BLM breaking its promise to families in the Powder River Basin? PRBRC, Wyoming Outdoor Council, and other concerned citizens filed an alternative that would allow drilling but with important mitigation measures designed to lessen impacts to the land, air, water, and surface owners; but BLM rejected almost every component of the alternative without analysis. Tell BLM to include the Citizen's Alternative in their analysis! ( See our website at <http://www.powderriverbasin.org> to view this alternative, or see [www.wyomingoutdoorcouncil.org](http://www.wyomingoutdoorcouncil.org)).
2. One size does not fit all. Sixty-three percent of the more than 39,000 new CBM wells will occur in only two of fourteen sub-watersheds: The Upper Powder River, and the Upper Belle Fourche. Yet the BLM has chosen to use averages for water quantities and surface disturbances over the entire 8 million-acre project area. Tell the BLM they must assess impacts identified in this DEIS on a site-by-site basis. Site-specific analysis is the only way to understand the true nature of the impacts.  
Production water quantities will be highest in the early years of production, yet BLM averages out water production over the 17-year life of the project. Impacts to soils, vegetation, aquifers, and watersheds will be far greater in the early phases of development, when water production could triple BLM's stated average. Demand a site-specific, thorough analysis of these impacts.
3. Study now, not later. BLM avoids analyzing the cumulative impacts of 51,444 CBM wells by deferring to future studies of a few wells at a time when drilling permits are issued. BLM needs to identify now the location and siting of all compressor stations, roads, pipelines, power lines, and other infrastructure, in order to assess how the Basin as a whole will be affected. BLM needs to provide an inventory now of existing springs, cultural and historical resources and how they would be impacted; and wildlife and aquatic species and the effect of 51,444 wells on them and their habitat. Tell BLM now is the time to conduct these studies rather than down the road when development is already underway.
4. Degree of impacts vs. nature of impacts. BLM has failed to quantify the degree of impacts to soils, native vegetation, wildlife, water quality, ranching operations, and property values. They need to look at how much soil will be lost? What are the specific impacts to vegetation? How much sediment load? What are the specific impacts to aquatic species and dependent wildlife species? Merely stating these resources will be "affected" is not sufficient!
5. Tell BLM to do its job! BLM is shirking its responsibility to protect the resources on the surface estate, including landowner rights, and is making no effort to mitigate the effects of this development. BLM by law has the authority to control the timing of operations, the spacing of wells, compressor stations, pipelines, and other infrastructure, and to impose reasonable mitigation measures to reduce impacts. Tell BLM it is their job to regulate industry's actions, not to treat mitigation measures on the part of CBM companies as voluntary!
6. Don't let BLM pass the buck! BLM should not be allowed to pass on its obligations to ensure responsible development to state agencies such as the Wyoming Department of Environmental Quality (which is geared toward maximizing revenue for Wyoming at any cost.) Remind BLM of its obligations under the Federal Land Policy and Management Act, the Clean Water Act, and the Clean Air Act to protect our resources through cautious, responsible development of CBM.

### When commenting, be **SPECIFIC** - Address the following areas:

- **Water Management**

Detailed water management plans should be required for all drilling operations, and included within these plans, the latest technologies for injection of produced water and water treatment. This would eliminate the need for drilling waste reserve pits. BLM should protect existing uses including irrigation, wildlife, stock and drinking water sources, fisheries and other aquatic life.  
Water Well agreements should be required for all wells within 3 miles of CBM wells, with the burden of proof in the case of a loss of hydrostatic pressure on CBM operators.

- **Baseline Studies**

Baseline information is crucial for all resources, including cultural & historical, biological, and aquatic species. Mapping locations of resources on a regional basis, as well as mechanisms for adaptive rules, mitigation, and enforcement procedures should occur before any drilling can begin.

- **Safety**

Safety provisions need to be implemented, covering every aspect of CBM extraction, including methane migration and venting. Any immediate threat to public health, safety or welfare, or the environment, should result in an immediate shut-in of all offending wells, pending further investigation. If the threat(s) cannot be remedied, the wells must be plugged, reclaimed, and monitored. All reports of methane migration to any residence, building, or near human activity should result in the automatic shutting in of all CBM wells within a 3 mile radius. BLM should require operators to regularly monitor basements, well-houses, and other enclosed spaces for methane gas within two miles of any CBM operation.

- **Wildlife**

Because no one knows how extensive the impacts to wildlife will be, BLM should provide:

- Inventories of affected populations and their locations, including breeding grounds, migration routes, and calving areas for big game, breeding grounds and nesting areas for sage grouse (a species in serious decline in Western states), and other birds.
- Mitigation measures for protecting seasonal habitat of wildlife populations, including adaptive strategies for closing off areas during crucial times such as breeding season, calving or nesting seasons, and hunting season.
- Regular monitoring of wildlife populations, in order to record the effects of increased human activities on their migration habits, population numbers, and inter-species effects.

- **Mitigation Strategies**

All federal permits should be subject to "reopen". Drilling permits should be conditioned on implementing new mitigation measures to reduce impacts that have not yet been studied (particularly when BLM is deferring most of the impact analysis to the results of future monitoring.)

#### **Methane Venting & Explosions**

The draft EIS briefly discusses the serious safety threat of methane venting and explosions. The document states, "Methane emissions by a well pose a potential explosive safety hazard, particularly if gases build up in an enclosed space." Methane emissions can be expected to occur in both domestic and stock wells. It further states, "In areas within two miles of operational CBM well fields, well houses and basements should be well ventilated and periodically checked for methane gas."

- Monitoring**

BLM should adopt an adaptive environmental management (AEM) process, as endorsed by EPA, including a comprehensive monitoring program with specific, measurable parameters for all resources including water, wildlife, air, soils, and fisheries. The AEM process should be designed to ensure that the decisions and required mitigation measures are carried out, to inform cooperating agencies on progress in carrying out mitigation measures, and to make the monitoring results available to the public.
- Landowner Agreements**

In split estate leases (the majority of the area to be developed), BLM should require that landowners be given a surface use agreement with companies before entry upon any privately owned surface estate is allowed. Furthermore, on-site pre-drill inspections should be conducted by BLM with surface owner participation before drilling can commence. Surface use agreements must include water well replacement provisions whereby landowners will be compensated adequately for loss of domestic or stock water wells within 3 miles of CBM activity.
- Private Property Rights**

BLM should use its authority to raise the bonding amount to adequately cover the costs of reclamation in split estate leases, and to take into account the costs of 1) damage to crops, 2) damage to tangible improvements, 3) loss of grazing land, and 4) adverse water impacts (as stipulated in BLM Instruction Memorandum WY-99-57).
- Reclamation**

BLM must require reclamation of land and land surfaces to pre-surface disturbance activities. BLM should require a reclamation plan to address:

  - \* Plugging and abandonment of wells
  - \* Restoration and replacement of soils (including contaminated soils)
  - \* Restoration of both irrigated crops and native vegetation
  - \* Eradication of all exotic, non-native vegetation
  - \* Backfilling and contouring of all disturbed lands, including reservoirs
  - \* Restoration of underground aquifers to proper function (or adequate compensation)
  - \* Removal and proper disposal of all equipment and infrastructure, including, roads, compressor areas, water treatment facilities, pipelines, power lines and PVC pipe
- Public Participation**

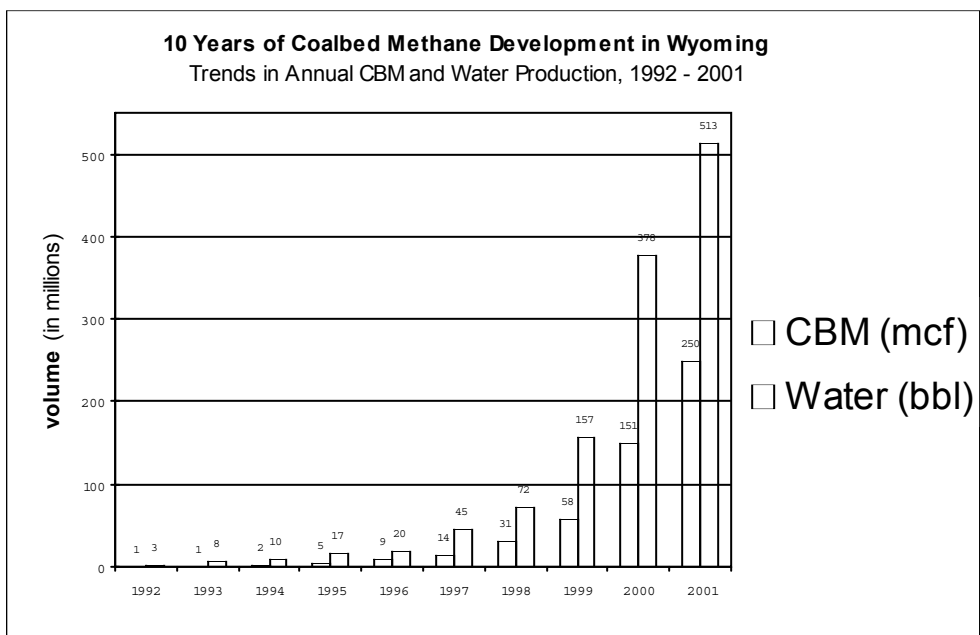
BLM proposes to look at many of the impacts discussed here at the Application for Permit to Drill stage (APD), yet they do not notify affected landowners or citizens of this analysis and permitting process, demand that BLM adopt the procedure used by the US Forest Service to mail notices of APD's to interested parties for comment.
- Social & Economic Impacts**

BLM avoids discussing the social impacts of increased CBM activity in the Powder River Basin, when in reality the development will affect every aspect of life in the Basin. Most impacted will be ranchers and rural subdivision dwellers, who must deal with the everyday disturbances of traffic, noise, dust, and the stress associated with industrialization of a formerly rural-ranching environment. Town dwellers will also be impacted by CBM development, in the form of increased traffic, a higher cost of living, housing shortages, increases in crime, and other boom related impacts.

**Tell BLM how your quality of life has been affected by CBM development.**

**Points to bring up:**

- Stress related impacts, such as ranching operation worries, time and income spent negotiating with operators, money spent on lawyers and other experts in order to protect private property, effects of harassment by "landmen", and fear of losing land or property and property values due to CBM activity.
- Breakdown of neighboring practices; rural fragmentation and alienation from disproportionate benefits of CBM (Split estate issue).
- Direct health impacts, such as pneumonia, respiratory problems (both in livestock and humans), and mental health problems, including domestic violence, alcohol and drug abuse and depression.



**Attend one of four public meetings to tell BLM what you think of this proposal:**

March 18th, Best Western Douglas WY

March 19th, Clarion, Gillette WY

March 20th, Holiday Inn, Sheridan WY

March 21st, Bozeman's Conference Center, Buffalo WY

All meetings will start at 7:00 pm and will end about 9:00 pm