

# ***CHAPTER 1***

## **PURPOSE AND NEED**

**MONTANA**



# CHAPTER 1: PURPOSE OF AND NEED FOR ACTION

## Introduction

In 2003, the Bureau of Land Management (BLM) and the state of Montana jointly prepared the Montana Final Statewide Oil and Gas Environmental Impact Statement and Proposed Amendment of the Powder River and Billings Resource Management Plans (Statewide Document). The Statewide Document consisted of an analysis of the environmental impacts associated with the exploration and development of oil and gas resources, including coal bed natural gas (CBNG) in the Powder River and Billings Resource Management Plan (RMP) areas. The BLM Record of Decision (ROD) for the Statewide Document, approved on April 30, 2003, amended the Powder River and Billings RMPs to change existing land use decisions regarding development of oil and gas resources, including CBNG exploration and development.

As a result of lawsuits filed against BLM's ROD, the U.S. District Court issued orders, dated February 25, 2005, and April 5, 2005, that required BLM to 1) prepare a supplemental environmental impact statement (SEIS) to evaluate a phased development alternative for CBNG production, 2) include the proposed Tongue River Railroad (TRR) in the cumulative impact analysis and 3) analyze the effectiveness of water well mitigation agreements.

This Final SEIS (FSEIS) provides additional information and analyses regarding the topics identified by the U.S. District Court. The additional information supplements information in the Statewide Document with new information that is relevant to the purpose and need of the SEIS. This FSEIS has been prepared according to the National Environmental Policy Act (NEPA) of 1969, as amended, and the Federal Land Policy and Management Act of 1976 (FLPMA), as amended. It considers the three topics identified above at a programmatic planning level. Permits for proposed individual drilling and development activities will require site-specific NEPA review.

Additionally, this FSEIS updates the Statewide Document with new information and reflects any changes in policies, regulations, or activities since that document was approved. Summaries of monitoring data and the results of studies completed since the Statewide Document was finalized have been incorporated to update the public. These additions can be found in Chapter 3 under the individual resource topics, as well as in appropriate appendices.

Cooperating agencies assisting in the preparation of this FSEIS include the Environmental Protection Agency (EPA), Department of Energy (DOE), Bureau of Indian Affairs (BIA), U.S. Army Corps of Engineers (USACE), Montana Department of Environmental Quality (MDEQ), Montana Board of Oil and Gas Conservation (MBOGC), Lower Brule Sioux Tribe, Crow Tribe and the following counties: Big Horn, Carbon, Golden Valley, Musselshell, Powder River, Rosebud, Treasure, and Yellowstone. The Northern Cheyenne Tribe has also commented on the development of this FSEIS.

## Conformance with the BLM Land Use Plans

The Billings RMP was approved through a ROD issued by BLM September 28, 1984. The Powder River RMP was approved through a ROD issued by BLM on March 15, 1985. BLM's 1994 Oil and Gas Amendment of the Billings, Powder River, and South Dakota RMPs amended these RMPs. The decisions made in the RMPs allow for a certain level of conventional oil and gas development on federal leases, support limited CBNG exploration and development, but do not include analysis for full-scale CBNG development:

"The [1992] Reasonably Foreseeable Development [RFD] projections can accommodate the drilling of test wells and initial small-scale development of CBM (*sic*). The extension of the nonconventional fuels tax credit for

### What has Changed in Chapter 1 Since the Draft SEIS (DSEIS)?

Chapter 1 has been edited for the FSEIS so that the shaded text is consistent with the unshaded text in tense and conventionality. The purpose and need language for the FSEIS remains the same in Chapter 1, and throughout the FSEIS, to reflect that the state of Montana is not a co-lead for the FSEIS. While the Planning Area for the 2003 Statewide Document was the entire state; the BLM Planning Area for this FSEIS comprises the Billings and Powder River RMP areas only. Planning criteria presented in Chapter 1 have been updated to reflect a completed FSEIS. Note, text from the Statewide Document remains in this report (unshaded text) to provide background and context for the updated text (shaded) FSEIS.

## CHAPTER 1

### Purpose of and Need for Action

wells drilled before December 31, 1993, should generate some activity in the Planning Area. This amendment does not contain either a hydrologic analysis of the RFD area or an environmental study of the impacts of building major pipeline systems. In order for development to occur on federal oil and gas lands, an additional environmental document tied to this amendment would be required” (BLM 1992).

The Statewide Document and this FSEIS will amend the Billings and Powder River RMPs for the management of federal oil and gas resources, including CBNG development.

## The Planning Area

The Planning Area for the FSEIS encompasses BLM-administered lands and minerals in the Powder River and Billings RMP areas (Map 1-1). The Planning Area excludes those lands administered by other agencies such as the Forest Service; and sovereign tribal governments, such as the Crow Tribe of Indians, and the Northern Cheyenne Tribe. Indian allotted lands are also excluded from the Planning Area. BLM will make oil and gas decisions based on the Statewide Document and this FSEIS for the oil and gas estate it administers within the Powder River and Billings RMP areas.

The Powder River RMP Area encompasses the southeastern corner of Montana, including Powder River and Treasure counties, and portions of Big Horn, Carter, Custer, and Rosebud counties. The Powder River RMP area comprises approximately 1,080,675 acres of federally managed surface and 4,103,700 acres of federal mineral estate.

The Billings RMP Area comprises the south-central portion of Montana consisting of Carbon, Golden Valley, Musselshell, Stillwater, Sweet Grass, Wheatland, and Yellowstone counties and the remaining portion of Big Horn County. The Billings RMP area comprises approximately 425,336 acres of federally managed surface and 906,084 acres of federal mineral estate.

Adjacent to the Planning Area, other major land holdings include the Crow, and the Northern Cheyenne, Indian reservations, the Custer National Forest, the Big Horn Canyon National Recreational Area, the Burlington Northern and Santa Fe Railroad, and the Fort Keogh Agricultural Experiment Station.

## Purpose of and Need for Action

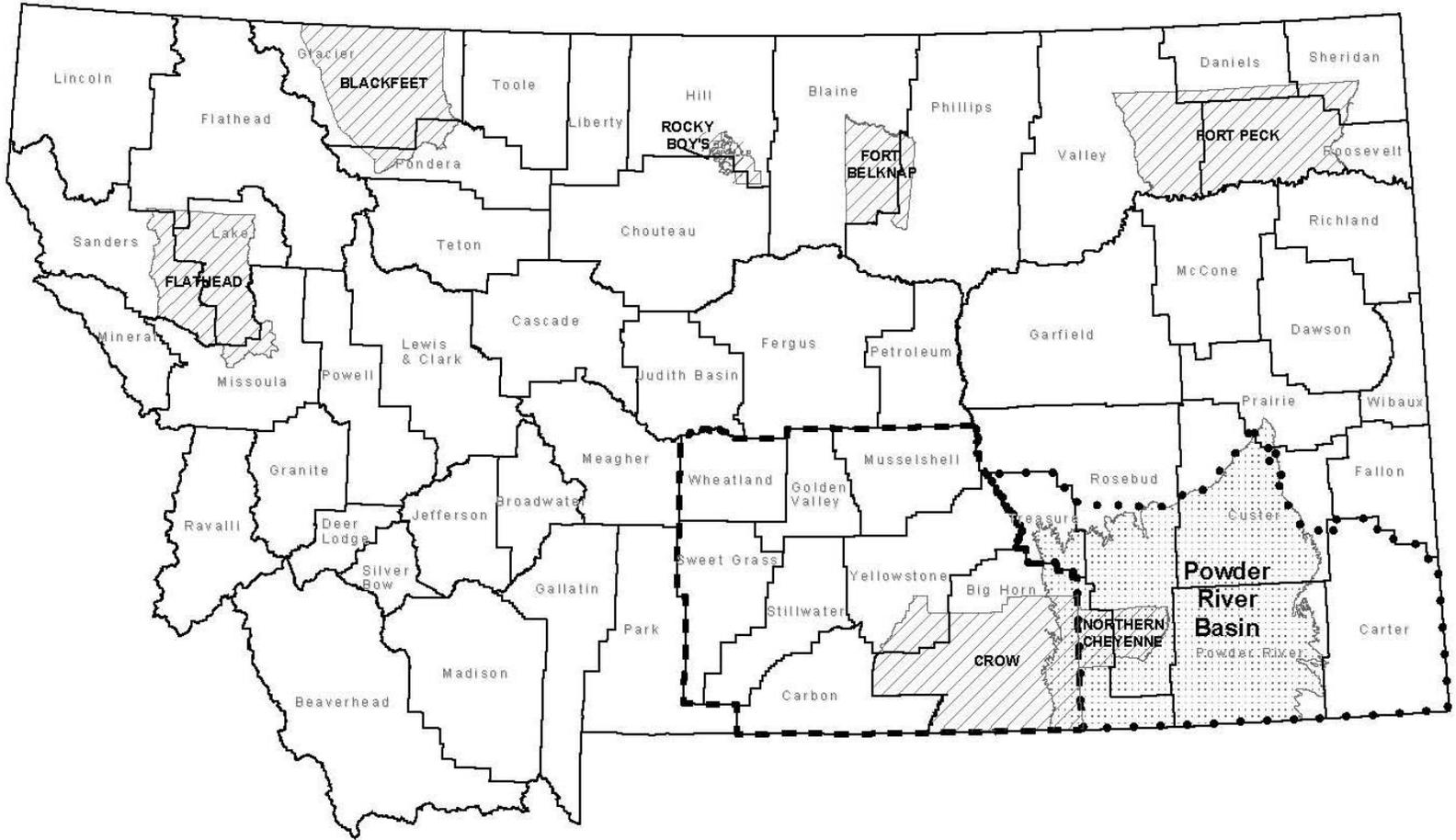
BLM and the state of Montana were co-leads for preparation of the Statewide Document. BLM is responsible for managing federally owned oil and gas resources. For BLM, the purpose of the Statewide Document was to analyze impacts from oil and gas activity, including CBNG exploration, production, development, and reclamation in the Powder River and Billings RMP areas. The FSEIS was used to analyze options for BLM to change its planning decision by considering oil and gas management options, including mitigating measures that will help address the environmental and social impacts related to CBNG activities.

The analysis in the Statewide Document focused on oil and gas development issues not covered in the Billings and Powder River RMPs, as amended by the 1994 Miles City Oil & Gas EIS/Amendment, such as water management from CBNG production and full field CBNG development. The alternatives provided a range of management options for amending the RMPs. The preferred alternative (Alternative E) was BLM’s proposed and selected RMP amendment.

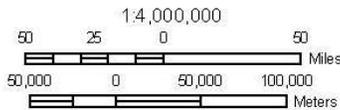
For the state of Montana, the purpose of the Statewide Document was to support the state’s development of a program to address CBNG exploration, development, production, and reclamation in Montana. The FSEIS, in part, responded to the stipulation and settlement agreement, dated June 19, 2000, resulting from a lawsuit brought by the Northern Plains Resource Council challenging MBOGC in the Montana First Judicial District Court, Lewis and Clark County.

BLM published the original Notice of Intent for the Statewide Document in the Federal Register on December 19, 2000. BLM published the Notice of Availability in the Federal Register on January 17, 2003. Immediately following approval of the ROD on April 30, 2003, several lawsuits were filed against BLM’s decision in the U.S. District Court. The U.S. District Court issued orders, dated February 25, 2005, and April 5, 2005, that required BLM to prepare an SEIS to evaluate a phased development alternative for CBNG production. The U.S. District Court also advised BLM to include the proposed TRR in the cumulative impact analysis and to analyze the effectiveness of water well mitigation agreements. This FSEIS addresses the three topics identified by the U.S. District Court. For the evaluation of CBNG phased development, this document analyzes

**Map 1-1: Planning Area - Billings and Powder River RMP Areas**



-  Billings RMP Area
-  Powder River RMP Area
-  Native American Reservations
-  Powder River Geologic Basin



**DATA SOURCES:**

Counties: 1:100,000 scale, counties, Montana State Library/NRIS, Helena, Montana.  
 Reservations: 1:100,000 scale, counties, Montana State Library/NRIS, Helena, Montana.  
 Powder River Geologic Basin: 1:250,000 scale, USGS Professional Paper 1625a.

## CHAPTER 1

### Purpose of and Need for Action

social impacts of phased development alternatives based on issues identified by the U.S. District Court, cooperating agencies, and public scoping comments. These phased development alternatives, coupled with the alternatives presented in the Statewide Document, provide a range of management options for amending the Powder River and Billings RMPs to address CBNG development. This SEIS updates the description of the Affected Environment (Chapter 3) and the Environmental Consequences (Chapter 4) presented in the Statewide Document with relevant new information. The FSEIS impact analysis in Chapter 4 also includes the cumulative impacts from the proposed TRR and addresses the effectiveness of water well mitigation agreements, as required under 85-11-175, Montana Code Annotated (MCA).

## Planning Criteria

### Introduction

Planning criteria are the constraints or ground rules used by the BLM to guide and direct the development of a RMP. Planning criteria guide the resource specialists in the collection and use of inventory information, and in analyzing the management situation, defining and analyzing the alternatives, and selecting the Preferred Alternative.

Planning criteria have been developed for the FSEIS. They ensure that the plan is tailored to the identified issues, and unnecessary data collection and analyses are avoided. Planning criteria are based on applicable laws and regulations; agency guidance; and results of consultation and coordination with the public, other federal, state, and local agencies, and Native American tribes.

### Overall Considerations

1. The FSEIS supplements the Statewide Document. As a supplement to the Statewide Document, the FSEIS references the *Oil and Gas Final EIS and Proposed Amendment of the Billings, Powder River and South Dakota RMPs, Wyodak Coal Bed Methane Project Final EIS, and Board of Oil and Gas Conservation Oil and Gas Drilling and Production in Montana EIS*.
2. The FSEIS is in compliance with the Federal Land Policy and Management Act (FLPMA), NEPA, and all other applicable laws.
3. The FSEIS incorporates the requirements of BLM Handbook H-1624-1, *Planning for Fluid Minerals*, when considering a phased development alternative.

4. The format for the FSEIS follows the format from the Statewide Document.
5. The FSEIS has been prepared by an interdisciplinary team with specialists for recreation, fisheries, economics, sociology, archaeology, air quality, wildlife, hydrology, botany, soils, realty, minerals, and range management.
6. The Planning Area for BLM is the BLM-administered oil and gas estate in Wheatland, Golden Valley, Musselshell, Sweet Grass, Stillwater, Yellowstone, Carbon, Big Horn, Treasure, Powder River, and portions of Carter, Custer, and Rosebud counties. The Planning Area excludes those lands administered by other agencies (for example, Forest Service or Indian reservations).
7. The analysis area is any land that may be affected, regardless of ownership.
8. Data acquisition consists of projecting and compiling existing data, supplemented with data collected and acquired via research conducted since the Statewide Document was issued, data not available for the Statewide Document analyses, and appropriate literature search.
9. The SEIS considers and analyzes the effects from CBNG phased development; the cumulative effects from CBNG production, including from the proposed TRR; and a discussion on how private water well mitigation agreements will help alleviate the impacts from groundwater drawdown and methane migration.
10. The alternatives chosen will be economically and technically feasible. Those alternatives, or components of those alternatives, found not to be economically or technically feasible or viable will be dropped from or modified for consideration in the range of alternatives.
11. Scoping for the FSEIS helped define phased development, and the alternative(s) chosen are reasonable, achievable, and measurable. The theme for the alternative(s) considered follows those in the Statewide Document. Those alternatives, or components of those alternatives, found not to be reasonable, achievable, and/or measurable have been considered and dropped from further analysis.
12. Assumptions for the analyses, including the reasonably foreseeable development scenario and the reasonably foreseeable future actions from the Statewide Document are carried forward in the

FSEIS. Cumulative projects evaluated are carried forward with one known exception: the discussion was modified to include the cumulative effects from the proposed TRR.

13. The management and mitigation measures instituted since the Statewide Document ROD was signed are carried forward as features of the phased development alternatives in the FSEIS.
14. Native American consultation and coordination with the Crow and Northern Cheyenne Indian tribes located within the Planning Area as well as the Lower Brule Sioux Tribe have taken place in accordance with BLM Handbook 8120, *Guidelines for Conducting Tribal Consultations*. The intent of consultation and coordination is to ensure that tribal needs, and those of any other affected tribes, are considered and that BLM fulfills its trust responsibilities. Consultation is government-to-government between BLM and the tribes.
15. Interagency consultation occurs as necessary to comply with regulations, rules, and BLM policy.
16. New decisions in the ROD that are based on the FSEIS are intended to be compatible with existing plans and policies of adjacent local, state, tribal, and federal agencies, as long as the adjacent jurisdictional decisions conform with the legal mandates for management of public lands.
17. Any new decision or new mitigation measures required by the FSEIS must be enforceable, reasonable, achievable, and measurable and have to lend themselves to monitoring.
18. Current management guidance will be expanded to reflect recent resource regulations and guidelines pertaining to oil and gas operations.
19. To the extent practicable, this document will be consistent with adjoining Forest Service lands and leases.
20. Decisions will comply with Rangeland Health Standards.
21. A biological assessment will be prepared based on the preferred alternative and submitted to the U.S. Fish and Wildlife Service for its review and subsequent letter of concurrence.

## Roles and Agency Responsibilities

Several federal agencies, sovereign tribal governments, and state agencies, as well as local county

governments, were involved in the development and preparation of this FSEIS. Cooperating agencies include the BIA, DOE, EPA, USACE, MDEQ, MBOGC, and the following counties: Big Horn, Carbon, Golden Valley, Musselshell, Powder River, Rosebud, Treasure, and Yellowstone. The Crow Tribe of Indians and the Lower Brule Sioux Tribe signed Memoranda of Understanding (MOUs) with BLM to participate as cooperating agencies. The Northern Cheyenne Tribe also helped to prepare the FSEIS. BLM has the responsibility and the authority for preparation of the FSEIS.

The cooperating agencies and collaborators' roles were to participate in the review process of all technical reports and the preliminary draft SEIS. These agencies and tribal governments also attended numerous meetings both public and project-specific to discuss and enumerate concerns and comments.

## Bureau of Land Management

The BLM's authority and decisions, related to oil and gas development in the Planning Area are limited to the agency's stewardship, resource conservation, and resource protection responsibilities for federal lands and minerals. As conservator of the federal surface and mineral estate, the BLM has responsibility for ensuring that the federal mineral resource is conserved (not wasted) and is developed in a safe and environmentally sound manner.

Drilling oil and gas exploration and production wells on lands where mineral rights are administered by the federal government must be conducted under an approved Application for Permit to Drill (APD) issued by the BLM. In considering whether to approve applications for permit to drill and other lease activities, the BLM must consider the possible impacts from typical exploration and development activities, and cumulative environmental effects, to ensure compliance with NEPA. This FSEIS, in combination with the Statewide Document, was prepared to meet those requirements. As part of the permit process, BLM requires that adequate bond coverage is in place prior to approval of drilling activity on federal minerals.

Much of the Planning Area contains lands known as "split estate." These are lands where the surface ownership is different from the mineral ownership. Management of federal oil and gas on these lands is somewhat different from management on lands where both surface and mineral ownership is federal. On split estate lands where surface ownership is private, and BLM administers the minerals, BLM places necessary restrictions and requirements on permitted activities

## CHAPTER 1

### Purpose of and Need for Action

and works in cooperation with the surface owner. BLM has established policies for the management of federal oil and gas resources under the following statutes: FLPMA, NEPA, National Historic Preservation Act (NHPA), and Endangered Species Act (ESA) (see BLM 1992, under “Split Estate” for more information).

Regulatory areas where the BLM has shared responsibilities or consultation requirements with other federal or state agencies include the following:

- Oil and gas drilling—FLPMA of 1976, 43 U.S.C. 1701 *et seq.* as amended (Public Law [PL] 94-579), and the Mineral Leasing Act of 1920, as amended, (PL 93-153). This is a shared responsibility with the MBOGC.
- Activities that would impact waters of the U.S. from the discharge of produced waters—BLM must comply with the Clean Water Act (CWA) as provided by Sections 313 and 401 of the CWA, Section 313, 33 U.S.C. 1323. The National Pollutant Discharge Elimination System (NPDES) permits and 401 certifications are issued by the State of Montana for actions involving the discharge of water from point sources on non-Indian lands. For actions involving the discharge of water from point sources, BLM works with MDEQ on private and public lands, and with EPA on Indian lands. The BLM will not allow for the discharge of produced waters until approval is given by the State or EPA.
- Activities disturbing more than 1 acre (stormwater permitting) - BLM must comply with Section 402 of the CWA, and with the Montana Water Quality Act (WQA) (Administrative Rules of Montana [ARM], Title 17, Chapter 30, Subchapter 11). For actions involving the disturbance of more than 1 acre, BLM works with MDEQ on private and public lands, and with EPA on Indian lands. The BLM will not allow for the discharge of produced waters until approval is given by the State or EPA.
- Activities that would impact waters of the U.S. from the placement of fill materials—The U.S. Army Corps of Engineers and BLM have shared responsibility in Montana for dredge and fill permits associated with CBNG activities under Section 404, General Permit No. 404. This covers activities that impact waters of the U.S. as a result of placing fill in either waters of the U.S. or jurisdictional wetlands. See 33 CFR Part 320 and 40 CFR Part 230–Section 404(b)(1) Guidelines for the Specification or Disposal Sites for Dredged and Fill Materials.
- Special status species of plants or animals—ESA, U.S.C. 1531 *et seq.* This is a shared responsibility with the U.S. Fish and Wildlife Service (FWS) and Montana Fish, Wildlife, and Parks (MFWP).
- Cultural or historical resources—NHPA, 16 U.S.C. 470. BLM is required to consult with the Montana State Historic Preservation Office (SHPO) and Advisory Council on Historic Preservation (ACHP) in accordance with regulations found at 36 Code of Federal Regulations (CFR) 800 or through alternative procedures as specified through Programmatic Agreements. The BLM in Montana operates under a National Programmatic Agreement and a state-wide Protocol to meet its requirements under the NHPA.
- Air Quality Impacts - FLPMA (43 U.S.C. 1701 *et seq.*) and the Clean Air Act (CAA; 42 U.S.C 7401 *et seq.*) as amended, require that BLM assure the actions it conducts or authorizes (including oil and gas development) comply with all applicable local, state, tribal, and federal air quality laws, regulations, standards, increments, and implementation plans. Local, state, and tribal requirements may be more (but not less) stringent than federal requirements. The implementation of federal requirements is delegated to local, state, or tribal regulatory authorities, under EPA oversight.
- Surface water diversions, stream channel modifications, construction of new reservoirs, reservoir supply, or dam modifications to existing reservoirs, Montana Dam Safety Act, 85-15-207 (dams greater than 50 acre-feet). This is a shared responsibility with the MDEQ Water Resources.
- Oil and gas well spacing—Memorandum of Understanding (MOU) between BLM and the MBOGC concerning Oil and Gas Well Spacing/Well Location Jurisdiction, and the Montana Oil and Gas Conservation Act, Statute 82-11-201, Establishment of Well Spacing Units. This is a shared responsibility with the MBOGC.
- Consultation with Tribal Governments—Under Executive Order 13175, BLM will provide a meaningful opportunity for input by tribal officials where the action would have tribal implications. The Executive Order reflects the federal government’s trust responsibility to federally recognized Indian tribes. Pursuant to this trust responsibility, the federal government establishes regular and meaningful consultation and collaboration with tribes on a government-to-government basis when federal activities may affect Indian tribes.

Protecting the U.S. Government and Indian lessors from loss of royalty as a result of oil and gas drainage is a prime responsibility of BLM. Under the terms of both federal and Indian leases, the lessee has the

obligation to protect the leased land from drainage by drilling and producing any well(s) that is necessary to protect the lease from drainage or in lieu thereof and with the consent of the authorized officer, by paying compensatory royalty. Drainage analysis, on the basis of a production screen or other criteria, is required by BLM's Drainage Protection Guidelines. Federal leases determined to be in danger of drainage are subject to geologic, engineering, and economic analyses in order to define the presence and magnitude of drained reserves.

The geologic analysis is a comprehensive examination of the lithologic, structural, and stratigraphic components of the subject reservoir to determine whether drainage is geologically possible. The subject reservoir is mapped to define its limits and physical characteristics using all available data. Differences between the BLM's independent geologic analysis and the lessee's geologic analysis, if submitted, are discussed and reconciled in the final report. The report describes in detail how the geology affects drainage in the subject area.

The reservoir engineering/economic analysis is the final examination of the reservoir performance, production history, and economic determinants to determine whether drainage is occurring or has occurred and whether an economic protection well could have been drilled. The BLM would evaluate any data submitted by the lessee and resolve or explain any significant differences. The BLM analyses will determine the measures necessary to mitigate the effects of drainage of hydrocarbons ranging from a mineral owner's demand to drill a protection well to holding the lessee liable for the value of drained resource.

Exploration and production wastes include produced water, oilfield production fluids (including drilling muds and fracture fluid flowback), crude oil and condensate, and contaminated soils. Produced water is managed under Onshore Order 7 (Disposal of Produced Water). Drilling muds, and fracture fluids are generally authorized for disposal by underground injection in Class II Underground Injection Control (UIC) wells under regulations of the MBOGC, or the EPA on tribal lands. Small, uneconomical quantities of crude oil and/or condensate, when wasted, are typically collected and sold to a waste oil recycler. Soils contaminated with exploration and production wastes can be disposed in a Subtitle D (nonhazardous) landfill, or may be treated onsite with the approval of the appropriate regulatory authority and surface lessee. Drilling mud is exempt from both the Hazardous Waste Program (ARM 16.44.304(2)(c)), and the Montana Hazardous Waste Act. Drilling mud that contains less

than 15,000 total dissolved solids (TDS) can be disposed of onsite with the landowner's permission.

## State of Montana

State agencies that have authority over oil and gas activities include the Montana Department of Natural Resources and Conservation (DNRC) and MDEQ. The DNRC has two divisions involved in oil and gas development. These divisions are the Oil and Gas Conservation Division—also known as the MBOGC, and the Trust Land Management Division (TLMD). The MBOGC is the lead agency for regulating oil and gas development in Montana. The Board's responsibilities include issuing drilling permits, classifying wells, establishing well spacing units and land pooling orders, inspecting drilling, production, and seismic operations, investigating complaints, conducting engineering studies, establishing bonding requirements, and collecting and maintaining well data and production information. It also administers the federal Underground Injection Control Program for Class II injection or disposal wells in Montana to protect underground sources of drinking water.

Additional regulatory areas where the State of Montana has responsibility are managed by state agencies that have jurisdiction over some aspects of the oil and gas drilling and production. These agencies are the DNRC and MDEQ. The MFWP and the SHPO serve in advisory roles though they have no regulatory authority. Each of these agency's roles and responsibilities are discussed below.

## Department of Natural Resources and Conservation

As a result of the 1995 legislative Natural Resource Agency reorganization, the "new" DNRC was formed. It combined the majority of programs from the old Departments of State Lands and Natural Resources and Conservation. Programs of the reorganized DNRC include: the MBOGC, TLMD, Reserved Water Rights Compact Commission, Forestry Division, Conservation and Resource Development Division, and Water Resources Division.

The DNRC is responsible for sustaining and improving the benefits derived from water, soil, and rangeland, managing the State of Montana's trust land resources, protecting Montana's natural resources through regulation and partnerships with federal, state, and local agencies, promoting conservation of oil and gas and preventing their waste through the regulation of exploration and production, and managing and assisting in the management of several grant and loan

## CHAPTER 1

### Purpose of and Need for Action

programs. Sections addressing the responsibilities of the MBOGC, TLMD, and Water Resources Division as they pertain to oil and gas development follow this discussion.

## Montana Board of Oil and Gas Conservation

The MBOGC is the lead state agency for regulating oil and gas development in Montana. It is a quasi-judicial body that is attached to the DNRC for administrative purposes. The law is quite specific regarding some of the MBOGC's makeup:

*The board consists of seven members, three of whom shall be from the oil and gas industry and have had at least 3 years experience in the production of oil and gas, and two of whom shall be landowners residing in oil- or gas-producing counties of the state but not actively associated with the oil and gas industry, but one of the two landowners shall be one who owns the mineral rights with the surface and the other shall be one who does not own the mineral rights (MCA Section 2-15-3303).*

Additionally, one must be an attorney. All members are appointed to 4-year terms by the governor—four members (the majority) when he or she takes office, the others, 2 years later.

MBOGC's regulatory action serves three primary purposes: (1) to prevent waste of oil and gas resources, (2) to conserve oil and gas by encouraging maximum efficient recovery of the resource, and (3) to protect the correlative rights of the mineral owners, that is, the right of each owner to recover its fair share of the oil and gas underlying its lands. MBOGC also seeks to prevent oil and gas operations from harming nearby land or underground resources. Since 1993, MBOGC has performed the certification required for companies to receive tax incentives available for horizontal wells and enhanced recovery projects.

The MBOGC was established in 1953 with the passage of the Montana Oil and Gas Conservation Act (82-11-101, *et seq.*, Montana Code Annotated [MCA]). Under Montana law, no oil or gas exploration, development, production, or disposal well may be drilled until a bond has been posted and MBOGC issues a drilling permit. This requirement applies to all private, state, and most federal lands, but excludes proposals on allotted or tribal minerals. In November 1987, MBOGC and the BLM signed a cooperative agreement to coordinate their decisions regarding permits to drill. Under this agreement, MBOGC

accepts for the record all permits to drill for federal oil and gas minerals in Montana.

The powers and duties of MBOGC in regulating oil and gas activities are defined in 82-11-111, MCA. MBOGC is charged with determining whether a waste of resources is existing or imminent. Based on their determination, MBOGC can take measures to prevent contamination of or damage to surrounding land and underground strata caused by drilling operations and production. These measures include, but are not limited to, regulating the disposal of produced salt water and the disposal of oil field wastes. The MBOGC regulations are located in Title 36, Chapter 22, of the *Administrative Rules of Montana* (ARM).

In 1989, the MBOGC prepared a programmatic EIS to assist in determining how to incorporate any necessary environmental review into its rules and permitting process in an effort to come into compliance with Montana Environmental Policy Act (MEPA). The programmatic EIS presented various alternatives for addressing environmental reviews during the permitting process. From these alternatives, MBOGC has adopted an environmental review process for permitting wells.

In conducting environmental reviews for new permits, MBOGC works with other state agencies that may become involved in the process. MBOGC was a co-lead agency on the 2003 statewide document, and signed its own ROD. The statewide document was prepared to assist in the review process and to meet the requirements of both MEPA and NEPA for CBNG development. The 2003 statewide document continues to serve this function for MBOGC.

## Trust Land Management Division

The TLMD is responsible for managing the surface and mineral resources of forest, grazing, agricultural, and other classified state trust lands to produce revenue for the benefit of Montana's public schools and other endowed institutions. The TLMD manages more than 5.1 million acres of surface acreage and in excess of 6.3 million acres of mineral acreage.

The TLMD is divided into four bureaus: the Minerals Management Bureau, Agriculture and Grazing Management Bureau, Forest Management Bureau, and Special Uses Management Bureau.

The TLMD administers mineral leases on its school trust land mineral estate and, as a courtesy, other state agency's mineral estate. Leasing procedures will not change because of management alternatives. It should be noted that the TLMD is responsible for management of surface and mineral acreage, while some other

agencies perform in more of a regulatory role. The TLMD must comply with MEPA. MEPA is required for state-proposed actions. The process is implemented both at the leasing stage and for proposed plans of operation (drilling plans). For plans of operation, it is conducted by the area offices. Information, management restrictions, and environmental documents are then forwarded to the Minerals Management Bureau for approval. The Minerals Management Bureau then notifies operators of their decision to approve or disapprove.

## Water Resources Division

The Water Resources Division is responsible for various programs coupled with the development, uses, and protection of Montana's water. It oversees the state-owned water resource projects, water rights, and water reservoirs. Its activities include centralized water rights record keeping, state water planning, floodplain management, dam safety, drought planning, and interstate coordination of water issues. The division provides administrative support to the Board of Water Well Contractors, a board that licenses well drillers and establishes minimum well construction standards.

Through the state water planning process, the division also guides the development of the state water plan and statewide water policies and laws. The state water plan is a progressive, collaborative, and citizen-based process for improving the management of the state's water resources. Other responsibilities include staffing the Drought Advisory Committee and coordinating drought responses, assisting in the planning and developing of water storage projects, analyzing the effects of proposed new water uses on existing water rights, protecting Montana's water from interstate, regional, and international threats, responding to federal laws and actions that potentially affect Montana's water, and providing water resource education to Montanans through the Montana Watercourse.

The division helped draft the *Powder River Basin Controlled Groundwater Area Final Order* that was signed by the DNRC director on December 15, 1999. A copy of the order is contained in Appendix A of the Water Resources Technical Report (ALL 2001b) prepared for this EIS. The order is intended to protect existing water users from impacts of CBNG development. The order recommends monitoring and reporting standards, establishes a Technical Advisory Committee, and calls for the implementation of mitigation agreements between surface owners and CBNG operators. The Technical Advisory Committee makes recommendations to the MBOGC regarding specific site monitoring and reporting requirements. The MBOGC has enforcement authority over monitoring and

reporting requirements for continuing CBNG operations as established in the Boards' Order 99-99, *Establishing CBM Operating Standards*. These requirements have been codified into the MCA as 85-11-175, MCA.

## Montana Department of Environmental Quality

MDEQ has two divisions directly or indirectly involved with oil and gas development: Permitting and Compliance, and Planning, Prevention, and Assistance. The following are brief descriptions of the role of each division:

- The Permitting and Compliance Division is in charge of permit issuance and compliance monitoring for projects relating to air, water, public water supplies, solid and hazardous waste, subdivisions, motor vehicle recycling, open cut, hard rock, coal and uranium mines, and applicable facilities under the Major Facility Siting Act. Nearly all permits and authorizations issued by MDEQ are handled through this division.
- The Planning, Prevention, and Assistance Division is involved with planning, policy, and standards development relating to air quality State Implementation Plans, water quality, non-point source management, groundwater protection, and solid waste management.

MDEQ administers MEPA, Montana's Hazardous Waste Management Act, Clean Air Act, the Solid Waste Management Act, Water Quality Act, Major Facility Siting Act, and the Montana Pollutant Discharge Elimination System (MPDES) permitting process. The Water Protection Bureau (WPB) issues wastewater discharge permits under the MPDES permit program pursuant to the 75-5-402, MCA of the Montana Water Quality Act (WQA) and Sections 402 and 303 of the federal Clean Water Act (CWA). MDEQ is responsible for investigating the environmental impacts associated with continued oil and gas activities in accordance with MEPA and the EIS process. MDEQ was a co-lead agency on the 2003 statewide document, and signed its own ROD.

MDEQ has delegated responsibility under the Federal Clean Water Act (P.L. 92-500) and Montana Water Quality Act (75-5-101, *et seq.*) to monitor and assess the quality of Montana surface waters for toxic and conventional pollutants, to prepare plans to control pollution, to assess water quality conditions and trends, to report them to the EPA and Congress, and to identify impaired or threatened stream segments and lakes. Furthermore, the state must provide a program for the prevention, abatement, and control of water pollution. The CWA and EPA's implementing regulations require

## CHAPTER 1

### Purpose of and Need for Action

that discharges with the potential to cause or contribute to water quality standards excursions be subject to water quality based effluent limitations as stringent as necessary to meet water quality standards. Recent amendments to the Montana Water Quality Act (MCA 75-5-702, effective May 1997) require the Department to consider all currently available data when making water quality assessments, including information or data obtained from federal, state, and local agencies, private entities, or individuals with an interest in water quality protection.

The MDEQ is also responsible for issuing federal CWA Section 401 certification for activities that are licensed or permitted by a federal agency and may result in a discharge to state waters. The Department has adopted administrative rules for the issuance of CWA Section 401 certifications at Title 17, Chapter 30, Subchapter 1 ARM, pursuant to ARM 17.30.105(2)(b).

The MDEQ also administers the MPDES Storm Water Discharge Permitting Program. Owners/operators of Coal Bed Methane exploration, production, processing, or treatment operations, or of associated transmission facilities, are exempt from needing coverage under the MDEQ's MPDES "*General Permit for Storm Water Discharges Associated with Mining and with Oil & Gas Activities.*" The permit is contingent on the discharge being composed entirely of storm water that has not come into contact with, or been contaminated by contact with, any overburden, raw material, intermediate products, finished products, byproducts, or waste products located on the site. If there has been a reportable quantity release, coverage is required under the general permit.

Construction activities associated with CBNG operations are subject to potentially requiring coverage under the MDEQ's MPDES "*General Permit for Storm Water Discharges Associated with Construction Activity.*" A storm water permit may be required when the area of total construction-related disturbance exceeds 1 acre. Permit coverage is obtained by submitting a Notice of Intent (NOI) package, including a completed NOI form, Storm Water Pollution Prevention Plan, and fee before the proposed construction start date. The determination of whether MPDES General Permit coverage for construction is required, or if more than one NOI is necessary under the General Permit, is based on the discharge(s) of storm water runoff to surface water, the acreage of disturbance(s) resulting from construction activity, proximity of construction-related disturbance to surface water, overall time period of construction, contractor(s) performing the construction activity, and number of drainage basins or receiving waterbodies. When areas

with construction-related disturbance have been stabilized, permit coverage under the General Permit may be terminated.

MDEQ–Air & Waste Management Bureau (AWM) also has delegated responsibilities under the federal Clean Air Act (42 U.S.C. 7401, *et seq.*) that requires the State to operate an approved ambient air quality monitoring network for the purpose of evaluating compliance with the National Ambient Air Quality Standards (NAAQS), to report air quality monitoring information to the EPA, and to prepare plans for controlling air pollution. Additionally, the state is required under the Clean Air Act of Montana (75-2-101, *et seq.*) to provide a coordinated statewide program of air pollution prevention, abatement, and control. When actual locations and operational requirements for gas compression facilities (CBNG development) are determined, permit applications would be submitted to MDEQ-AWM. At that time, additional site-specific, air quality analyses, such as the Best Available Control Technology (BACT) analysis or Prevention of Significant Deterioration (PSD) increment analysis, may be performed.

Potential decisions to be made by the Air Resources Management Bureau of the MDEQ include making determinations as to whether a Montana Air Quality Permit would be required for the proposed activities. However, the ARM, Title 17, Chapter 8, Subchapter 7 – Permit, Construction and Operation of Air Contaminant Sources, specifically exempts certain activities from the requirement to obtain a Montana Air Quality Permit (MAQP). ARM 17.8.744(1)(b) exempts mobile emitting units, including motor vehicles, aircraft, and other such self-propelled vehicles from obtaining a MAQP. In addition, ARM 17.8.744(1)(i) exempts drilling rig stationary engines and turbines that do not have the potential to emit more than 100 tons per year of any regulated pollutant and that do not operate in any single location for more than 12 months from obtaining a MAQP.

Any future development, such as the placement of compressor engines or turbines, would also require a permit determination from MDEQ. ARM 17.8.743 requires that a person may not construct, install, modify, or operate a new facility or emitting unit upon which construction was commenced, or that was installed after November 23, 1968, that is not specifically excluded under ARM 17.8.744, and that has the potential to emit more than 25 tons per year of any regulated airborne pollutant, other than lead, without first obtaining a MAQP.

## Montana Fish, Wildlife, and Parks

MFWP is responsible for the conservation and associated management of the fish, wildlife, parks, and recreational resources of Montana. This department advises other agencies of wildlife concerns.

MFWP will be involved, as needed and as agreed upon, in the inventory and monitoring of fish and wildlife species, review of plans of development (PODs), participation on the core team associated with implementation of the Wildlife Monitoring and Protection Plan (WMPP), and in providing general oversight on issues related to fish and wildlife or their habitats.

## State Historic Preservation Office

Under the National Historic Preservation Act of 1966 as amended, states were given certain responsibilities. These responsibilities have been assigned to the SHPO, which is a program within the Montana Historical Society. The SHPO provides assistance in the following areas: the identification and listing of properties on the National Register of Historic Places (NRHP), historic building maintenance and rehabilitation, archaeological sites and research, tax incentives for preservation, community surveys, the PLACES program (Peoples, Lands, and Cultural Environments), National Register Signs, local government and grant assistance, preservation education, and state and federal agency responsibilities. The SHPO provides information regarding the procedures that state and federal agencies must follow to consider historic and archaeological resources in their activities and programs.

BLM in Montana coordinates its preservation activities with the Montana SHPO through a formal protocol implementing BLM's National Programmatic Agreement for Cultural Resources (BLM 1997b).

## Tribal Governments

The following two sections address the roles and responsibilities of the Crow Tribe of Indians and the Northern Cheyenne Tribe as they relate to the development of CBNG on and around their reservations.

### Crow Tribe of Indians

The Crow Tribe's territorial jurisdiction as administered by the General Council extends to all lands within the exterior boundaries of the Crow Indian Reservation. The Crow Tribal Court has civil jurisdiction over all persons who reside, enter, or transact business within the reservation including non-

Indian activities on private lands within the reservation that may directly impact reservation lands or tribal welfare. The Crow Tribe's Constitution (Crow Tribe, 2001) tasks the Executive Branch with management and development of natural resources pending final approval of the Legislative Branch for any mineral agreement.

Within the context of resource utilization, the Crow Tribe's Natural Resources and Environmental Departments may establish codes and set standards under federal statutes or inherent tribal authority for regulating activities that affect the tribal resources and environmental conditions. The Crow Tribe is in the process of developing and implementing several environmental and land use planning codes, including a tribal environmental policy act, water quality act, and cultural resource protection act.

The tribe has developed Draft Water Quality Standards and Draft Air Quality Standards, which will govern all development actions once these requirements are officially enacted. All mineral leasing and permitting for development, exploration, and right-of-way (ROW) authorization on Tribal or Allotted lands, is subject to federal approval and 25 CFR regulations enforced through BIA and BLM procedures.

The 1984 EPA *Indian Policy* acknowledges tribal governments as the primary parties for setting standards, making environmental policy decisions, and managing reservation programs consistent with agency standards and regulations. The EPA will assist interested tribal governments in developing programs and in assuming regulatory responsibility for reservation lands. Until the Crow Tribe is granted formal primacy for these delegated programs, the EPA will retain management and enforcement responsibilities.

The Crow Tribe continues to plan for development of its CBNG and coal resources within the reservation and the Planning Area.

### The Northern Cheyenne Tribe

The Northern Cheyenne Tribal government is structured by a Constitution and By-laws endorsed by the tribe and approved by the Secretary of the Interior in 1936. The Northern Cheyenne amended their Constitution in 1960 and in 1996 to address changes in their governmental structure. The Northern Cheyenne Government is organized into three branches, an executive branch, a legislative branch, and a judicial branch.

The Executive Branch oversees a series of boards, commissions and programs, some of which deal with the regulation and control of natural resources. Through

## CHAPTER 1

### Purpose of and Need for Action

these boards and programs, the Executive Branch administers federal contracts and grants, and conforms to federal standards for environmental quality.

The Legislative Branch (Tribal Council) has the power to negotiate with the federal, state, and local governments, approve or prevent the sale, disposition, or lease of tribal lands including oil and gas, eminent domain, and protect and preserve tribal natural resources. The Tribal Council also has economic powers such as the right to engage in any business that might further the economic interests of the tribe or to carry out other economic activities that are not inconsistent with their constitution.

The Judicial Branch has the power to review the constitutionality of ordinances adopted by the Tribal Council, including mineral leases.

The Northern Cheyenne Tribe has redesignated their lands under the CAA as a PSD Class I area. The allowable incremental impacts within PSD Class I areas are very limited. The CAA directs the EPA to promulgate the Tribal Authority Rule, establishing tribal jurisdiction over air emission sources on both trust and private lands within the exterior boundaries of tribal lands. The Northern Cheyenne are currently in the process of developing a tribal Implementation Plan, to submit a "Treatment as State" application to the EPA. Requesting that the Tribe be treated in the same manner as a state under the CAA will allow them to participate in Section 105 grants and have formal recognition as an affected "state" when permits are written for sources within 50 miles of tribal lands.

The Northern Cheyenne Tribe has a formal water code that the Secretary of the Interior approved on October 9, 2001. The Northern Cheyenne Water Resource Administrator manages tribal water resources on the reservation including, but not limited to, storage water in the Tongue River and Big Horn Reservoirs. The Natural Resources Board serves as the Water Board. The board provides oversight for implementation of the code and permitting process to account for beneficial use of the tribe's water. The water code is enforceable for all activities affecting tribal waters on the reservation.

On April 29, 2002, the Tribe submitted an application under Section 518 of the CWA for "Treatment as a State" (TAS). This was done to administer the CWA Section 303(c) water quality standards and CWA Section 401 water quality certification programs. On December 2, 2003, the tribe supplemented its application. EPA approved the Northern Cheyenne Tribe's application for TAS on August 11, 2006.

On June 4, 2002, the Tribal Council adopted tribal water quality standards which became effective on July 15, 2002. On April 21, 2005, the tribe held public hearings to take comments on the updated water quality standards. Tribal staff is currently preparing a final, updated standards package for consideration by the Tribal Council. After approval by the Tribal Council, the new standards will be submitted to EPA for review and approval pursuant to CWA Section 303(c).

A complete explanation of the Draft Standards can be found in the Northern Cheyenne portion of the Native American section of Chapter 3.

## Other Federal Agencies

### Environmental Protection Agency

Under Section 402 of the CWA, 33 U.S.C. Section 1342, and 40 CFR Parts 122-125, EPA has authorized the state of Montana to issue National Pollutant Discharge Elimination System (NPDES) permits for discharges of pollutants from point sources into waters of the U.S. located in Montana, excluding Indian country as defined at 18 U.S.C. 1151. EPA retains an oversight and partnership role in state NPDES programs. As described in 40 CFR Part 123, Subpart C, EPA reviews proposed state NPDES permits for compliance with CWA requirements. For discharges in **Indian country** (a term that is defined in 40 CFR Section 122), EPA has direct implementation authority for issuing NPDES permits. The following sections of the CWA also apply:

- **CWA Section 401, 33 U.S.C. Section 1341, and 40 CFR Part 121.** These provisions describe EPA's role in addressing certain discharges in one state that may affect the quality of water within any other state. This role is particularly important due to the difference in surface water quality standards developed by Montana and Wyoming.
- **CWA Section 518, 33 U.S.C. Section 1377, and 40 CFR Part 131.8.** In June of 1999, the Crow Tribe submitted a draft application to EPA to administer a water quality standards program. The Northern Cheyenne Tribe submitted a draft application to EPA to administer water quality standards in January of 2001.
- **CWA Section 303 (c).** This section requires states and authorized Indian tribes to submit new or revised water quality standards to EPA for review. EPA reviews and approves or disapproves the submitted standards. If EPA determines that any standard is not consistent with the requirements of the Act, EPA

notifies the state or authorized tribe and specifies the changes needed. If needed changes are not adopted, EPA is to promptly propose and promulgate a federal standard. NPDES permits must include limits as stringent as necessary to meet water quality standards (40 CFR 122.44). When waters are monitored and assessed, the data are compared to the water quality standards to determine whether the water is impaired and whether discharges have the reasonable potential to cause or contribute to such impairments.

- **CWA Section 303(d), 33 U.S.C. Section 1313(d) and 40 CFR Part 130.** These provisions require states to identify waters that need Total Maximum Daily Loads (TMDLs) standards and to establish TMDLs for them, with an oversight and partnership role for EPA. Currently, EPA and the State of Montana are subject to a court order that prohibits NPDES permits for new or increased discharges into any water body that has been listed as needing any TMDLs standards until all necessary TMDLs standards are established for a particular water quality limited segment (U.S. District Court 2000). TMDLs for the Tongue River, Powder River, and Rosebud Creek are in development (see <http://www.deq.state.mt.us/wqinfo/TMDL/TonguePowderRosebudTMDL.asp>).

The Safe Drinking Water Act (SDWA) also applies to CBNG projects, specifically, 42 U.S.C. Section 300f, *et seq.*, particularly 42 U.S.C. Sections 1421 *et seq.*, and 40 CFR Parts 144-147 regarding UIC. Should produced water from CBNG operations be injected into the ground, UIC permits may be necessary. EPA and the states administer UIC programs to protect underground sources of drinking water. EPA administers the programs for Class V UIC wells in the State of Montana and for all classes of UIC wells on Indian lands in Montana. EPA has approved Montana's program for administering the UIC program for Class II wells. EPA retains an oversight and partnership role with the state for these programs. EPA's approvals of the state's authority to administer these programs do not extend to Indian country.

EPA also administers Section 309 of the CAA, 42 U.S.C. Section 7609. This provision calls for EPA to review and comment on the environmental impact of major federal actions to which the NEPA, 42 U.S.C. Section 4332(2)(C), applies.

## Bureau of Indian Affairs

BIA is responsible for the approval of any lease, agreement, permit, or document that could encumber lands and minerals owned by either tribes or allottees. Title to these resources is held by the U.S. Government

in trust. As such, agreements or arrangements, involving the trust assets that tribes or allottees make are not binding until they have been approved by the trustee. The agency that has been authorized to act as the trustee to keep the resources from being harmed or alienated is the BIA.

Within the Crow Reservation, there are approximately 1,497,000 acres of trust land out of the 2,282,000 total acres within the boundary. The Northern Cheyenne Reservation is composed of 444,000 acres within the external boundary. Of that amount, 442,000 acres are held in trust. (Land Titles and Records Office, BIA, Rocky Mountain Regional Office 1994).

The BIA intends to adopt the SEIS for future decisions it may have to make on hydrocarbon exploration and production with an emphasis on CBNG involving trust minerals. Such decisions relate to approval of leases, agreements, easements and/or ROW associated with exploration and production. The BIA will rely on the reasonably foreseeable development estimates and cumulative impact analysis anticipated for the region. The science and analysis components of the document may be incorporated in future BIA NEPA compliance documents.

## U.S. Department of Energy

### Fossil Energy

The Office of Fossil Energy is charged with enhancing the U.S.' economic and energy security through the following actions:

- Managing and performing energy-related research that promotes the efficient and environmentally sound production and use of fossil fuels.
- Partnering with industry and others to advance clean and efficient fossil energy technologies toward commercialization.
- Managing the Strategic Petroleum Reserve to reduce vulnerability to economic, national security, and foreign policy consequences of supply interruptions.
- Supporting the development of information and policy options that benefit the public by ensuring access to adequate supplies of affordable and clean energy.

### Office of Fossil Energy—Oil and Gas Program

The primary mission is to assure that fossil energy resources can meet increasing demand for affordable energy without compromising the quality of life for future generations. This program has been at the

## CHAPTER 1

### Purpose of and Need for Action

forefront of research to advance fossil energy exploration, supply, and end-use technologies.

The Oil and Gas programs include the following:

- **Natural Gas Technologies.** Pursuing advances in exploration and production, infrastructure reliability, and technologies including fuel cells and gas turbines systems.
- **Oil Technology.** Enhancing the efficiency of oil exploration, recovery, and processing while improving environmental quality.
- **Gas Energy Systems Dynamics.** Activities will lead to the development of the next generation of gas turbines, fuel cells, coupled turbine-fuel cell systems, and reciprocating engines, and lay the foundation for new gas utilization technologies.
- **Ultra Clean Fuels.** Developing enabling science for the production of ultra-clean and affordable fuels from fossil resources for high-efficiency transportation systems.

### U.S. Army Corps of Engineers

The legislative origins of USACE's permitting program are the Rivers and Harbors Act of 1890 (superseded) and 1899 (33 U.S.C. 401, et seq.). Various sections establish permit requirements to prevent unauthorized obstruction or alteration of any navigable water of the United States. The most frequently exercised authority is contained in Section 10 (33 U.S.C. 403), which covers construction, excavation, or deposition of materials in, over, or under such waters, or any work that would affect the course, location, condition, or capacity of those waters. The authority is granted to the Secretary of the Army. Other permit authorities in the Act are Section 9 for dams and dikes, Section 13 for refuse disposal and Section 14 for temporary occupation of work built by the United States. Various pieces of legislation have modified these authorities, but have not removed them.

In 1972, amendments to the Federal Water Pollution Control Act added what is commonly called Section 404 authority (33 U.S.C. 1344) to the program. The Secretary of the Army, acting through the Chief of Engineers, is authorized to issue permits, after notice and opportunity for public hearings, for the discharge of dredged or fill material into waters of the United States at specified disposal sites. Selection of such sites must be in accordance with 404(b)(1) Guidelines developed by EPA in conjunction with the Secretary of the Army. The discharge of all other pollutants into

waters of the United States is regulated under Section 402 of the Act, which supersedes the Section 13 permitting authority mentioned above. The Federal Water Pollution Control Act was further amended in 1977; it was given the common name "Clean Water Act" and was again amended in 1987 to modify criminal and civil penalty provisions and to add an administrative penalty provision.

The purpose of the Section 404 program is to ensure that the physical, biological, and chemical quality of U.S. water is protected from irresponsible and unregulated discharges of dredged or fill material that could permanently alter or destroy the valuable resource.

Section 404 of the Clean Water Act requires that approval be obtained before discharging dredged or fill material into the waters of the United States. Typical activities requiring Section 404 permits are as follows:

- Depositing of fill or dredged material in waters of the U.S. or adjacent wetlands
- Site development fill for residential, commercial, or recreational developments
- Construction of revetments, groins, breakwaters, levees, dams, dikes, and weirs
- Placement of riprap and road fills

The Secretary of the Army has delegated most of these permit authorities (with the specific exception of Section 9) to the Chief of Engineers and that individual's authorized representatives. Any person, firm, or agency (including federal, state, and local government agencies) planning to work in, dump, or place dredged fill in waters of the United States must first obtain a permit from the Corps of Engineers. Permits, licenses, variances, or similar authorizations may also be required by other federal, state, and local statutes. Waters of the United States include essentially all surface waters such as all navigable waters and their tributaries, all interstate waters and their tributaries, all wetlands adjacent to these waters, and all impoundments of these waters.

### Agency Permits and Reviews

Table 1-1 shows the agencies and applicable permits or reviews potentially required for oil and gas operations on federal minerals. Table 1-2 is a matrix showing the permissible activity and the responsible agency issuing a permit or approval.

**TABLE 1-1**  
**APPLICABLE PERMITS/REVIEWS FOR OIL AND GAS DEVELOPMENT ACTIVITIES**

Agency	Review/Permit/Approval
Bureau of Land Management (BLM)	<p>Approval of PODs, APDs and Sundry Notices (SNs) on federal leases. Approval or issuance of ROW on federal surface.</p> <p>Review all applicable Federal, State and local laws, rules, regulations and permits for Federal mineral development, found below.</p> <p>Approval of Communitization Agreements and Federal Unit Agreements.</p> <p>BLM determines need for inventory and, if necessary, mitigation to meet its obligations under the NHPA, Native American Graves Protection and Repatriation Act (NAGPRA), other Federal Preservation Laws, Regulations, Executive Orders, and Departmental and Bureau Policies. BLM’s cultural resource requirements for CBNG projects are found in the Cultural Resources Appendix (Appendix E) of the BLM 2003 POD Guidance Manual.</p>
U.S. Army Corps of Engineers (USACE)	<p>American Indian Religious Freedom Act (AIRFA) and Executive Order 13007 acknowledges the rights of Native Americans to practice traditional religion, have access to and protect religious sites, and possess sacred objects.</p> <p>Section 404 of the Clean Water Act—regulates the discharge of dredged or fill material into waters of the U.S.; Section 404 permit.</p>
U.S. Fish and Wildlife Service (FWS)	<p>Review under ESA including the issuance of Biological Opinions or Letters of Concurrence. The Service also provides recommendations for protective measures for migratory birds in accordance with the Migratory Bird Treaty Act (MBTA), Bald and Golden Eagle Protection Act (BGEPA), Executive Orders 11990 and 11988, CWA, Fish and Wildlife Coordination Act (FWCA), and the Fish and Wildlife Act (FWA).</p>
U.S. Environmental Protection Agency (EPA)	<p>Regulates Underground Injection Control (UIC) Class V injection program/UIC Permit.</p> <p>Regulates all classes of underground injection wells and all point source discharge to streams for any source located in Indian country.</p> <p>ESA review for NPDES permits, TMDLs and Water Quality Standards (WQS) on state and tribal lands.</p> <p>Clean Air Act (CAA)—(42 U.S.C. 7401, <i>et seq.</i>) Air quality permitting for air pollutant emitting sources within the exterior boundaries of tribal lands.</p> <p>404 enforcement under the CWA for dredge and fill activities.</p> <p>401 Discharge certification under the CWA on tribal lands and certain discharges in one state that may affect the quality of water within any other state.</p> <p>518 under the CWA for approval or disapproval of Tribal Water Quality Standards.</p> <p>Section 303(d) of the CWA regarding EPA’s oversight and partnership role with states to identify streams that do not meet the CWA objectives by establishing TMDLs for such streams.</p>

**TABLE 1-1**  
**APPLICABLE PERMITS/REVIEWS FOR OIL AND GAS DEVELOPMENT ACTIVITIES**

Agency	Review/Permit/Approval
Montana Department of Environmental Quality (MDEQ)	<p>Administers MEPA (75-1-101, MCA).</p> <p>Clean Air Act of Montana (75-2-101 <i>et seq.</i>, MCA)(ARM 17.8). Air quality permitting for air pollutants emitting sources outside the exterior boundaries of tribal lands.</p> <p>Resource Conservation and Recovery Act (RCRA) Waste Disposal—Hazardous Waste Management Act (75-10-401, MCA ARM 17.53.101).</p> <p>Solid Waste Management Act (75-10-201, MCA) (ARM 17.50.501).</p> <p>Water Quality Act (75-5-401 through 405, MCA).</p> <p>Montana Surface WQS (ARM 17.30.601 <i>et seq.</i>).</p> <p>401 Discharge Certification under the CWA.</p> <p>Montana Nondegradation Rules (ARM 17.30.701 <i>et seq.</i>).</p> <p>Montana Pollutant Discharge Elimination System (MPDES) (ARM 17.30.1201-1426).</p> <p>Certificate of environmental compatibility—Major Facility Siting Act (75-20-101, MCA).</p> <p>Montana Groundwater Pollution Control System (MGWPCS) (ARM 17.30.100 <i>et seq.</i>).</p>
Montana State Historic Preservation Office (SHPO)	Review under the National Historic Preservation Act (NHPA) regarding identification and evaluation of cultural/historic resources.
County Weed Districts	Review for control and prevention of noxious weed infestations under the Noxious Weed Control Law (7-22-2101, MCA).
Local Conservation District	Montana Natural Streambed and Land Preservation Act (310 Permit).
Rosebud County	Rosebud Conservation District’s Land Use Ordinance 1 for Coal Bed Methane Produced Water—This ordinance addresses the following major points: reclamation bond for CBNG impoundments, beneficial use permit required to produce water, required lining of CBNG impoundments, required monitoring of CBNG managed irrigation sites, and required surface owner consent for placement of impoundments and managed irrigation areas.
Montana Department of Natural Resources and Conservation (DNRC)	See descriptions for individual bureaus and divisions listed below.
Trust Land Management Division (TLMD)	Approval of activities on state trust surface and mineral estate (subsurface) lands; issuing land use licenses, easements, and mineral leases; conducting land exchanges; manages grazing permits.
Minerals Management Bureau (MMB)	Responsible for leasing, permitting, and managing mineral leasing program.
Water Resources Division, Water Rights Bureau	<p>Permit to allow beneficial use of groundwater and surface water. (85-2-310 to 312, MCA).</p> <p>Permitting of reservoirs with storage capacities over 50 acre-feet.</p>
Montana Board of Oil and Gas Commission (MBOGC)	<p>Approval of state drilling permits on state and private leases (APDs). (ARM 36.22) (82-11-111, MCA).</p> <p>Oversee UIC program for Class II wells (ARM 36.22.1401)(82-11-101, MCA).</p> <p>RCRA-exempt Solid Waste Disposal (ARM 36.22.1105).</p> <p>Surface Restoration (ARM 36.22.1307).</p>

**TABLE 1-2**  
**PERMITTABLE ACTIVITIES FOR CBNG DEVELOPMENT**

Permittable Activity	Federal Agencies	State Agencies
<b>Drilling on a Federal Lease</b>	<b>BLM</b> - Approval of APDs and SNs on Federal leases. (3162.3-1, Onshore Oil and Gas order No. 1) <b>USACE</b> - 404 General permit if access roads cross perennial streams <b>FWS</b> - Review of EA/EIS for Biological Opinion	<b>MBOGC</b> - Federal APD (for record purposes only) <b>SHPO</b> - Review under the National Historic Preservation Act (NHPA) regarding protection of cultural/historic resources
<b>Right-of-Ways (ROW)</b>	<b>BLM</b> - Approval of ROWs on BLM-administered surface lands	<b>DNRC/TLMD</b> - Approval of ROWs on State Trust lands <b>Surface Owner</b> - Agreement of ROWs under Surface Owner Agreement <b>SHPO</b> - Review under the NHPA
<b>Building a Gas Compressor Station on a Federal lease</b>	<b>EPA</b> - Clean Air Act (CAA)—(42 U.S.C. 7401, <i>et seq.</i> ) Air Quality Permits within the exterior boundaries of tribal lands <b>BLM</b> - Approval when facility is located on BLM administered surface	<b>SHPO</b> - Review under the NHPA <b>MDEQ</b> - Permit Determination ARM 17.8.743
<b>Construction (&gt;1 acre)</b>	<b>BLM</b> - Approval when activity is located on BLM administered surface, including private surface over federal minerals.	<b>DNRC</b> - Approval on State Trust Lands <b>MBOGC</b> - Approval on private surface via approved drilling permit <b>MDEQ</b> - General Storm Water Permit (Administrative Rules of Montana [ARM] 17.30.11, >1 acre)
<b>Discharge of Dredged or Fill Material</b>	<b>USACE</b> – discharge of dredged or fill material into waters of the U.S.; Section 404 permit	<b>MDEQ</b> - MPDES General Discharge permit <b>MDEQ</b> - 401 Discharge Certification under the CWA and Montana Nondegradation Rules (ARM 17.30.701 <i>et seq.</i> )
<b>Hazardous Waste Disposal</b>		<b>MDEQ</b> – RCRA Waste Disposal—Hazardous Waste Management Act (75-10-401, MCA (ARM 17.53.101)
<b>Drilling Mud and other Solid Waste Disposal</b>	<b>BLM</b> - Approval via APD or SN for federal actions	<b>MBOGC</b> - RCRA-exempt Solid Waste Disposal (ARM 36.22.1105) <b>MDEQ</b> - Solid Waste Management Act (75-10-201, MCA) (ARM 17.50.501)
<b>Disposal of Produced Water</b>		
Injection	<b>EPA</b> - Underground Injection Control (UIC) Class V Permits for wells on both Federal and State lands. UIC Class II and V Permits for Indian Reservations <b>BLM</b> - Permit under Onshore Order No. 7 for water from federal wells	<b>MBOGC</b> - Oversee UIC program for Class II wells (ARM 36.22.1401)(82-11-101, MCA)

**TABLE 1-2**  
**PERMITTABLE ACTIVITIES FOR CBNG DEVELOPMENT**

Permittable Activity	Federal Agencies	State Agencies
Infiltration Pit	<b>BLM</b> - Permit under Onshore Order No. 7 for water from federal wells	<b>MBOGC</b> - Infiltration Pit Permit for construction and operation  <b>MDEQ</b> - Montana Pollutant Discharge Elimination System (MPDES) Permit (ARM 17.30.1301 – 1426 ) and 401 certification for on-drainage pits  <b>MDEQ</b> - Groundwater discharge permit
<b>Evaporation/Storage Pit</b>	<b>BLM</b> - Permit under Onshore Order No. 7 for water from federal wells	<b>MBOGC</b> - Earthen Pit or Pond Permit for the construction and operation  <b>MDEQ</b> - MPDES Permit and 401 certification for on-drainage pits. <b>MDEQ</b> - MPDES Permit and 401 certification
Discharge to Surface Waters (Treated or Untreated)	<b>EPA</b> - Oversight on NPDES permits and 401 certifications issued under CWA. On tribal lands, issues NPDES permits and 401 certifications  <b>BLM</b> - Permit under Onshore Order No. 7 for water from federal wells	
Beneficial Use	<b>BLM</b> - Permit under Onshore Order No. 7 for water from federal wells	<b>DNRC/Water Resources Division/Water Rights Bureau</b> - Issue water rights to allow beneficial use of groundwater and surface water (85-2-310 to 312, MCA)

## Issues

### Statewide Document

This section presents planning issues identified through the public scoping process held in January 2000 and the BLM and state planning activities. The issues raised were in relation to CBNG development and were included in the initial Statewide Document.

### Air Quality and Climate

- Reduction in visibility occurring to the Northern Cheyenne Indian Reservation PSD Class I airshed from emissions
- Air quality impacts from oil- and gas-related activities
- Dust and emissions associated with road and drill pad construction, drilling operations, production, and compression
- Creation or release of harmful gases (hydrogen sulfide) and venting

- Consistency with the air quality model currently being developed for the Powder River EIS through the BLM Buffalo Field Office, Wyoming
- Release of greenhouse gases and effect on global warming
- Changes in ambient air quality and how this relates to objectives for minimizing regional haze based on the “Regional Haze Rule”
- Changes in climate associated with CBNG development

### Cultural Resources

- Avoidance of direct and indirect disturbances to cultural resources may precipitate the development of targeted inventory and evaluation strategies in the planning stages of field development
- Impacts on the qualities of a cultural resource site affecting its eligibility for the NRHP
- Increased access for oil and gas exploration and development may result in inadvertent, indirect, and cumulative effects to cultural resources

- Identification of specific districts or localities in which oil and gas development may be incompatible with existing cultural values
- Identification of areas of critical environmental concern

## Geology and Minerals

- Re-establish hydrologic balance and functionality after CBNG development so that adjacent or nearby coal companies can recover their bonds and determine effects on aquifer reconstruction in coal mine areas
- Discharge of CBNG -produced waters could affect new coal mines if entering the mine permit boundaries
- Effects on oil and gas development from other resource protection measures
- Loss of methane resource because of venting from coal mines
- Drainage of methane from federal minerals from offsetting state and private wells
- Quantity of methane recovered
- Effect of over-pumping CBNG water on gas recovery
- Subsurface coal fires
- Potential loss of coal production due to CBNG development

## Hazardous Materials and Waste Management

- Use of hazardous materials and potential for misuse as a part of CBNG development

## Hydrology

### Groundwater

- Produced water quality and appropriate beneficial reuses
- Drawdown of aquifers and drying up of natural springs due to CBNG production
- Appropriate water management alternatives
- Water quality impacts
- Water rights conflicts

- Changes in pumping rate and cumulative drawdown due to CBNG development
- Impacts on down- and up-gradient water resources in both confined and unconfined aquifers
- Long-term effects of CBNG pumping on aquifer recharge and groundwater resources
- Effects on DNRC established Powder River Basin Controlled Groundwater Area
- Shallow (Class V) and deep (Class II) injection of produced water opportunities

### Surface Water

- Effect of high sodium adsorption ratio (SAR) and increased flow rates on eroding stream channels
- Impacts on water quality from produced water
- Impacts on biota from water quality changes
- MPDES discharge analysis for CBNG -produced waters
- Cumulative impacts on water quality and quantity
- Impacts on irrigated cropland

## Indian Trust Resources and Native American Concerns

- Unique Native American concerns and social impact on Native Americans
- The effects of discharged water on agriculture, fishing, hunting, and gathering of native and sacred plants as they relate to traditional values held by the tribes
- Protection of Indian trust assets with regard to resource drainage and reduction of usable assets
- Water quality preservation agreement with the Northern Cheyenne
- Effects to reservation PSD Class I area classification and nonattainment area
- Impacts on sites with traditional cultural importance to Native Americans in areas on and adjoining the reservations
- Increased use of public facilities and services on reservations
- Cultural and socioeconomic impacts on tribal members associated with CBNG development

## Lands and Realty

- Construction effects from drilling, roads, pipelines, and water disposal facilities
- Infrastructure needed to accommodate CBNG development would require numerous road, powerline, and pipeline ROWs

## Livestock Grazing

- Impacts on grazing lands from discharge of high salinity water
- Effects on livestock and ranching operations from the increased availability of water
- Displacement of grazing lands from the development of CBNG well pads and loss of natural forage
- Change in vegetative communities to more salt-tolerant species that are generally not preferred by livestock

## Paleontological Resources

- Impacts from vandalism and unpermitted collectors as a result of increased access to remote areas
- Impacts on paleontological localities from oil and gas development

## Recreation

- Effects on hiking, hunting, and other recreational activities from CBNG development
- Displacement and disturbance of wildlife and habitat will affect hunting, hiking, and other recreational activities

## Social and Economic Values

- Increased levels of background noise and what noise mitigation would be conducted
- Impacts on social service agencies and local economics from increased population
- Decreased land values
- Escalated real estate prices
- Agricultural job loss
- Economic effect on local communities, including potential increased wage income, lower unemployment, increased local business, and potential costs of a “boom and bust” scenario

- Cost to residents from potential CBNG production affects on springs, livestock watering, and domestic water
- Social structure impacts through direct impacts on the local economy
- Revenue associated with the amount of methane recovered
- Tax revenue to local, state, and federal entities
- Effects on local economies and lifestyle from royalties to the state and federal government
- Royalties to local landowners who own mineral rights and surface disturbance payments to landowners who do not own mineral rights
- Lack of royalties or tax revenues available for Tribes from non-Indian oil and gas leases.
- Benefits from more abundant clean energy
- Effect from Wyoming CBNG development (cumulative)
- Economics of mitigation strategies
- Socioeconomic effect from lowering the water table
- Quantity of economical oil and gas resources and market implications
- Effects to agricultural productivity from SAR levels
- Effects to agriculture from air, soil, and water contamination
- Private surface owner notification prior to work
- Mechanism needed for land owner input on drilling, and leasing and mineral estate issues

## Environmental Justice

- Make distributive justice analysis part of the public comment and decision process
- Northern Cheyenne Tribal Government’s reliance on operator lease fees from tribal ranchers and irrigators operating on private and reservation lands

## Soils

- High sodium effects: dispersion of soil colloids, reduced water infiltration, vegetative composition and population changes, mud pits and bogs, change in crop production yields, and changes in crops grown because of salinity tolerance levels
- Effects on soils from surface discharge flow changes: erosion on stream banks and in ephemeral drainages

if these are the discharge points (increased erosion where dispersion occurs)

- Effects on irrigated soils: changes in salt content in soil profile, changes in salt composition, saline seeps downgradient from irrigated soils, dispersion of soil colloids (reduction of soil permeability and increased erosion), and changes to micro-organism populations and composition
- Development effects: disturbance during drilling at pads (exposure to wind and water erosion), and road development (loss of soil used to develop road beds, and packing soil in undeveloped roads, leading to wind erosion)
- Effects on irrigation and crop management practices: addition of additional water for leaching fraction, potential for water logging soils, modification of irrigation systems, change in cropping equipment, and effects on crops
- Effects from land subsidence and disturbance

## Vegetation

- Effect of surface discharge of high sodium or SAR water on native vegetation species that are salt intolerant, as well as on streamside vegetation
- Change in vegetative communities to more salt-tolerant species
- Loss of surface vegetation from construction
- Invasion of exotic and noxious plant species in disturbed areas
- Loss of plant productivity from development
- Protection of grasslands within the Powder River Basin
- Agricultural land withdrawal for CBNG production

## Special Status Species

- Mitigation measures or avoidance needed to manage and protect candidate and sensitive species
- Loss of threatened and endangered species from development

## Visual Resource Management

- Visual degradation from construction of production facilities, roads, powerlines, and pipelines
- Visual pollution

## Wilderness Study Areas

- Effects on wilderness study areas from CBNG exploration and development

## Wildlife

- Impacts from infrastructure development and increased human disturbance on wildlife habitat availability, quality and integrity, escape habitat, and management plans of MFWP
- Fragmentation of wildlife habitat
- Effects from water availability, quality, and quantity
- Loss of animals from hazards to the habitat, such as vehicles, equipment, and increased human access
- Effects on major waterways, such as the Tongue and Powder rivers, and to aquatic ecosystems, including fisheries
- Effect on migration patterns
- Change in vegetative communities to species that are generally not preferred by wildlife
- Effects from increased noise levels
- Effects from powerlines

## SEIS

The following issues were identified during the public scoping process held in August and September 2005. The issues raised were in relation to CBNG phased development. These issues have been expressed in the form of questions.

## Air Quality/Climate

- How will air quality, including visibility, be protected and mitigated, especially when considering all existing and proposed sources within the region? Concerns include general air quality, visibility, and potential adverse effects to public health from cumulative emissions of fine particles and fine particle precursors.
- How will air quality, including visibility, be protected within the Northern Cheyenne Indian Reservation airshed and other Class I airsheds?
- How will impacts on water chemistry be prevented in high altitude lakes with little acid neutralizing capacity?

## CHAPTER 1

### Purpose of and Need for Action

- How will potential for fires from the migration of methane be avoided?
- What additional impacts will the TRR have on regional air quality?

### Cultural Resources

- How will culturally important springs and other traditional cultural properties be affected and protected? These include all traditional cultural properties identified by the Northern Cheyenne Tribe as important such as the Rosebud and Wolf Mountains Battlefield sites and Northern Cheyenne Homestead sites in the Tongue River Valley.
- What traditional cultural properties in the RMP areas may be affected by CBNG development, and how will they be managed?

### Native American Concerns

- How will unique environmental, social, economic, and cultural impacts to Native Americans be addressed by phased development?
- How will phased development provide an economic base to benefit tribal members, while not leading to another boom-and-bust cycle?
- How will subsistence hunting, fishing, and gathering be affected and protected?
- How will phased development help BLM to fulfill its Native American treaty trust obligations?
- How will phased development provide protection to tribal reserved water rights?
- How will phased development include coordination and consultation with tribal representatives?

### Oil and Gas

- How will phased development be structured to address the national supply and demand situation and reduce U.S. dependence on foreign energy resources?
- How will RMP or landscape-scale effects be addressed by phased development?
- How will lease stipulations be used to mitigate for effects from phased development?

- How will phased development be structured to minimize infrastructure development (to reduce both costs and impacts), including coordination with neighboring landowners?

- How will reclamation and restoration be addressed by phased development?

### Phased Development

- How will phased development be planned to account for and protect other resources?
- How will resource impacts from development and other CBNG activities be evaluated and addressed throughout the implementation of phased development?
- How will phased development minimize fluctuations in populations, air quality impacts, overburdening of infrastructure and services, and increases in secondary development?
- How will drainage of federal gas resources and impacts to federal lessees be addressed or affected by phased development?
- What phased development implementation strategy or strategies will be included (e.g., restrictions on location [specific area or coal seam], timing, or number of wells)?
- Will more than one phased development alternative be addressed in the FSEIS/Amendment?
- How will phased development reduce impacts, improve mitigation options, or protect multiple-use of resources?

### Socioeconomics

- How will social and cultural changes be addressed by phased development? Specific concerns include infrastructure and service costs borne by state, local, and tribal governments, increased population, social pathologies (crime, alcoholism, drug use, etc.), and environmental exploitation.
- How will revenues (income lessees and state and local taxes) be affected by phased development, and how will these effects differ for reservation and off-reservation communities?
- How will phased development affect jobs, job security, local economy, and farming and ranching activities, and how will these effects differ for reservation and off-reservation communities?

## Vegetation

- How will phased development address impacts to and reclamation of sagebrush steppe and grassland ecosystems?
- How will phased development account for the relatively slow vegetative response to changes in groundwater or surface water characteristics?
- How will phased development address the spread of non-native species in affected areas?
- How will phased development affect medicinal and ceremonial native plants important to Native Americans?

## Water Resources

- How will produced water be managed by phased development?
- How will groundwater impacts be addressed by phased development? Concerns include groundwater drawdown in area or neighboring aquifers, effects on drinking water and stock watering wells, natural springs, and approved water rights.
- How will phased development address surface water effects and mitigation? Concerns include the consequences of changing surface water quality and transforming ephemeral or intermittent streams into perennial water bodies.
- How will effects from development outside the Planning Area be addressed by phased development?
- How will water well mitigation agreements mitigate the effects of aquifer drawdown and methane migration?
- How will phased development affect surface and groundwater quality?

## Wildlife

- How will phased development address impacts on wildlife (particularly fish and other aquatic species) and habitat from changes to water quality?
- How will phased development address impacts (both site-specific and at the RMP, landscape, or ecosystem scale) on terrestrial wildlife species (and associated habitats), including song birds, burrowing owls, and bald eagles, but especially sage-grouse and prairie dogs? Particular concerns included habitat fragmentation and cumulative effects from development outside the Planning Area (especially the Wyoming PRB) and the ability to assign and quantify impacts from various anthropogenic influences.
- How will phased development address potential effects on big game and other subsistence wildlife populations relative to tribal hunting and fishing rights?
- How will phased development affect ESA-listed or potentially listed species?

## Data Gaps

The FSEIS planning process will incorporate relevant new data collected since the spring of 2002 to update information presented in the Statewide Document, as needed, to meet the requirements of the Court's decision. BLM will incorporate these new data to address the topics identified by the Court and during public scoping, evaluate project effects from phased development alternatives, and analyze significant new environmental information relevant to environmental concerns and having bearing on alternatives or their impacts.