

Record of Decision

Rosebud Mine Area F Federal Mining Plan

Rosebud County, Montana

Office of Surface Mining Reclamation and Enforcement

June 2019



Contents

Chapter 1. Introduction.....	1
1.1 Rosebud Mine Background and Overview.....	1
1.2 Purpose and Need for the Action.....	7
1.2.1 Purpose.....	7
1.2.2 Need.....	7
1.3 Agency Authority and Actions.....	7
1.3.1 Lead Agencies.....	7
1.3.2 Cooperating Agencies.....	8
1.4 Key Scoping Issues Considered and Addressed.....	8
1.5 Response to comments on the Final EIS.....	8
Chapter 2. Updates Since the Final EIS.....	9
Chapter 3. OSMRE Decision and Basis for Decision.....	10
3.1 Decision.....	10
3.2 Description of the Selected Alternative.....	10
3.3 Environmentally Preferred Alternative.....	13
3.4 Other Alternatives Considered.....	13
3.4.1 Alternative 1 – No Action.....	13
3.4.2 Alternative 3 – Proposed Action Plus Environmental Protection Measures.....	14
3.4.3 Alternatives Considered but Eliminated from Further Analysis.....	18
3.5 Basis for Decision.....	19
3.5.1 Selected Alternative Compliance with State and Federal Laws.....	19
3.5.2 Environmental Effects.....	26
Chapter 4. Public Involvement.....	26
4.1 EIS Scoping Period.....	26
4.2 Draft EIS Public Meeting and Public Review.....	26
Chapter 5. Additional Information.....	26
Chapter 6. Approval.....	28

Tables

Table 1. Federal T&E Species Potentially Occurring or Potentially Affected by Projects in Rosebud, Treasure, Big Horn, and Powder River Counties.....	21
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Figures

Figure 1. Project Location.....	3
Figure 2. Location of Mine Facilities and Permit Areas.....	5
Figure 3. Proposed Project Area, Alternative 2.....	11

Appendices

Appendix A - Summary of Impacts Table.....	29
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CHAPTER 1. INTRODUCTION

Western Energy submitted a mine permit application package (PAP) on November 2, 2011, to the Montana Department of Environmental Quality (DEQ) for a new permit area (C2011003F), known as Area F (project or project area), at the Rosebud Mine, an existing surface coal mine in Colstrip, Montana (MT). Western Energy Company (Western Energy), a subsidiary of Westmoreland Coal Company (Westmoreland), is the operator of the Rosebud Mine and the project proponent. As proposed by Western Energy, the new permit area would add 6,746 acres and approximately 70.8 million tons of recoverable coal reserves to the Rosebud Mine, extending the operational life of the mine by 8 years (at the current rate of production). Operations in the project area would last 19 years and would disturb 4,260 acres. Of these, 2,159 acres would be disturbed by mining; the remainder would be disturbed by highwall reduction, soil storage, scoria pits, haul road construction, and other mine-related activities. The surface of the project area is entirely privately owned, but the subsurface is both privately (3,479 acres) and Federally (3,267 acres) owned. Western Energy holds leases for the Federal (M82186) and private coal (G-002 and G-002-A). Current surface land uses in the project area include grazing land, pastureland, cropland, and wildlife habitat. A county road, a gas transmission pipeline, and high-voltage electric transmission lines cross the project area.

To analyze environmental impacts of this proposed permitting action and associated Federal mining plan in a coordinated and comprehensive manner, DEQ and the United States Department of the Interior (DOI), Office of Surface Mining Reclamation and Enforcement (OSMRE) Western Region Office prepared a joint Environmental Impact Statement (EIS) for the Western Energy Area F Project. The DOI Bureau of Land Management (BLM) Miles City Field Office acted as a cooperating agency as it is the Federal agency responsible for leasing Federal coal lands under the Mineral Leasing Act (MLA) of 1920, as amended (30 United States Code (USC) Section 181 et seq.). The joint EIS meets the respective requirements of the Montana Environmental Policy Act (MEPA) (Title 75, Chapter 1, Parts 1 through 3) of the Montana Code Annotated (MCA) and its implementing rules; the Administrative Rules of Montana (ARM) 17.4.601 et seq.; the National Environmental Policy Act (NEPA) (42 USC Section 4321 et seq.); the Council on Environmental Quality's (CEQ) NEPA regulations (40 Code of Federal Regulations (CFR) Parts 1500 to 1508); DOI's NEPA regulations (43 CFR 46) and Department Manual 516; and the OSMRE NEPA Handbook. The BLM NEPA Handbook was also considered in the preparation of the EIS. The applicable statutes and regulations for each lead agency, as well as the decisions to be made, are described in the Final EIS (FEIS). The opportunity for public input was provided during public scoping, after issuance of the Draft EIS, and after DEQ issued its Notice of Acceptability for Western Energy's PAP. Responses to these comments are provided in **Appendix F** of the FEIS, and the FEIS adequately and accurately assesses the environmental impacts of the proposed mining plan action.

This document constitutes the Record of Decision (ROD) of the OSMRE Western Region Office, documenting its selected alternative in accordance with NEPA (40 CFR 1505.2). OSMRE will prepare a Mining Plan Decision Document (MPDD) for the DOI Assistant Secretary for Land and Minerals (ASLM) with its recommendation regarding the Federal surface-mining plan for the project area. A MPDD will be prepared because Western Energy's proposed project includes leased Federal coal and requires a new Federal mining plan. The ASLM will decide to approve, disapprove, or conditionally approve the mining plan for the project area.

1.1 ROSEBUD MINE BACKGROUND AND OVERVIEW

The Rosebud Mine is located in Rosebud County and surrounds the city of Colstrip and the Colstrip Steam Electric Station, which is commonly known as the Colstrip Power Plant (**Figure 1** and **Figure 2**). Permit Areas D and E of the Rosebud Mine extend to the east of Colstrip for 3.5 miles, and Permit Areas

A, B, and C extend 12 miles to the west of Colstrip. The project area is located adjacent to the western boundary of Area C (**Figure 2**) in Township 2 North, Range 38 and 39 East, and Township 1 North, Range 39 East, and would expand the mine footprint to the west into Treasure County. Situated in the northern Powder River Basin, the Rosebud Mine is generally east and north of the Little Wolf Mountains. Tributaries of Horse Creek and West Fork Armells Creek, including Black Hank Creek, Donley Creek, Robbie Creek, and McClure Creek (all of which lie within the drainage of the Yellowstone River), drain the project area. A ridge in the western portion of the project area divides the Horse Creek and West Fork Armells Creek drainages.

The Rosebud Mine produces 8.0 to 10.25 million tons of low-sulfur (0.64 percent) subbituminous coal annually and 300,000 tons of high-sulfur “waste coal” annually. Between 1975 and 2016, Western Energy recovered a total of 462,192,473 tons of coal from the Rosebud Mine. Western Energy currently has three other active pit mine areas at the Rosebud Mine operating under permits issued by DEQ: Area A (4,262 acres, permit C1986003A); Area B (6,231 acres, permit C1984003B); and Area C (9,432 acres, permit C1985003C) (**Figure 2**). These active permit areas have been mined since 1976 (Areas A and B) and 1983 (Area C). Two permitted mine areas are no longer actively mined and are being actively reclaimed: Area D (4,554 acres, permit C1986003D) and Area E (1,470 acres, permit C1981003E).

Although Western Energy has shipped coal from the Rosebud Mine by rail as recently as 2010, all coal currently produced by the mine is consumed locally at the Colstrip Power Plant and the Rosebud Power Plant (**Figure 2**). Coal mined in the project area would be burned in Units 3 and 4 of the Colstrip Power Plant and in the Rosebud Power Plant.

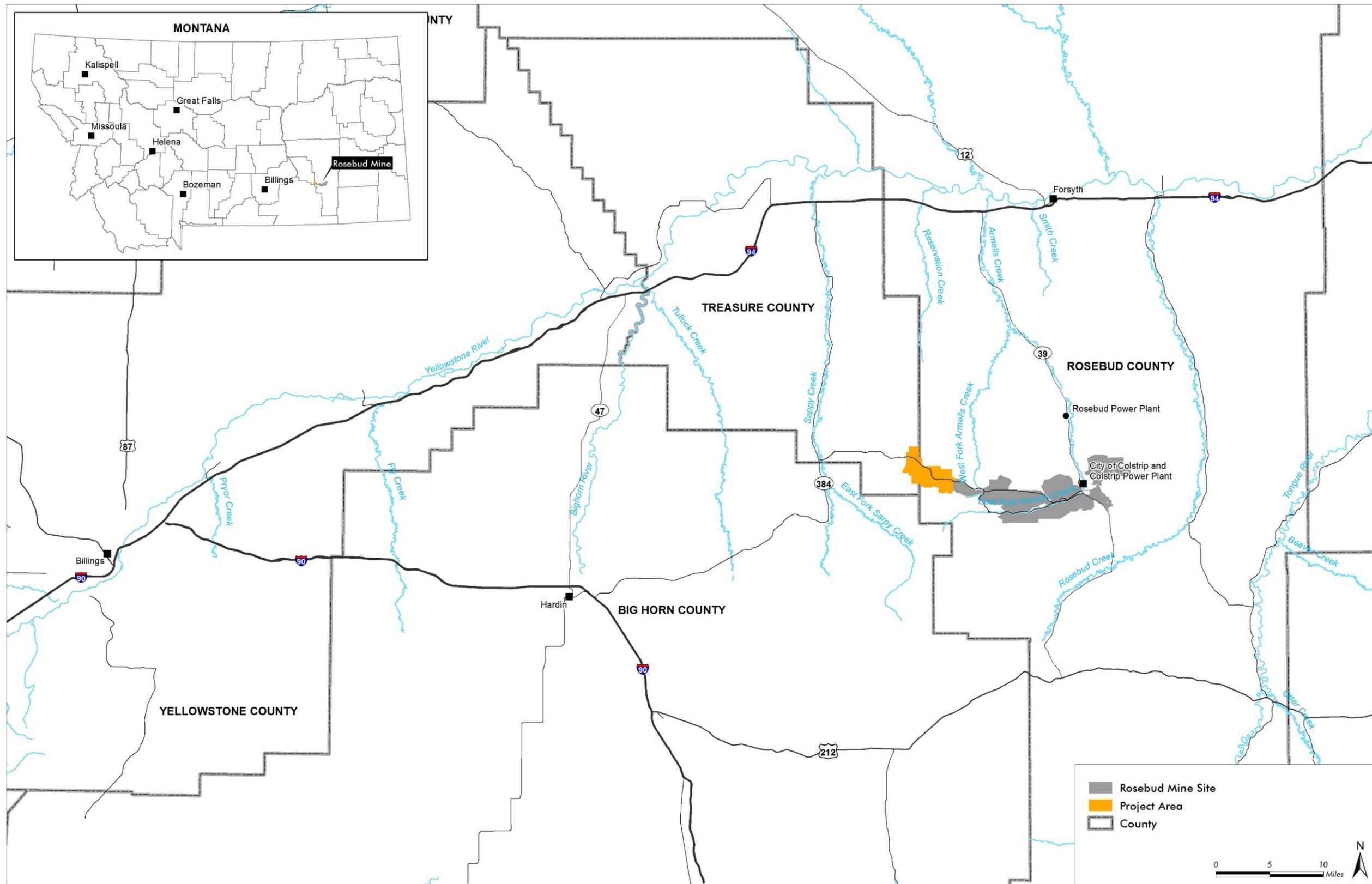


Figure 1. Project Location.

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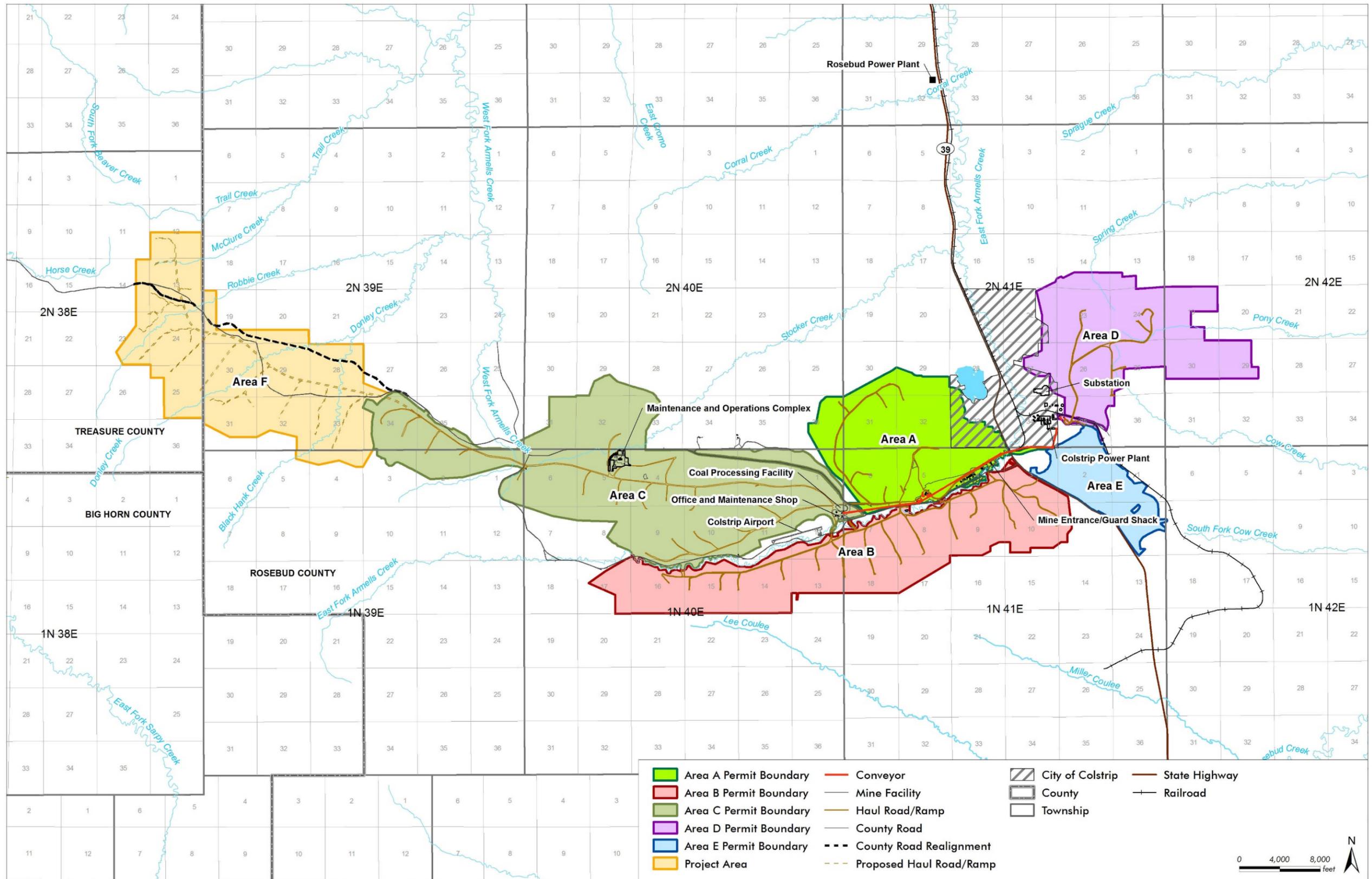


Figure 2. Location of Mine Facilities and Permit Areas.

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1.2 PURPOSE AND NEED FOR THE ACTION

1.2.1 Purpose

The purpose of the Proposed Action is to allow continued operations at the Rosebud Mine by permitting and developing a new surface-mine permit area, known as permit Area F. OSMRE is required to conduct an environmental review and assessment of impact to comply with NEPA; the FEIS evaluated the environmental effects of the Proposed Action and two other alternatives. Based on the findings of the FEIS, OSMRE makes a recommendation in a MPDD to the ASLM to approve, disapprove, or conditionally approve the proposed Federal surface-mining plan for the project area. The ASLM will decide whether the mining plan is approved, disapproved, or approved with conditions.

1.2.2 Need

Western Energy has a need to obtain a surface-mine operating permit, pursuant to Montana Strip and Underground Mine Reclamation Act (MSUMRA), and approval of a Federal surface-mining plan (30 CFR 746) for the project area to access additional coal reserves in Federal coal lease M82186 and in the privately held leases G-002 and G-002-A. OSMRE's need in relation to the action is to review Western Energy's proposal providing them the opportunity to exercise their valid existing rights (VER) granted by BLM under Federal coal lease M82186 to access and mine undeveloped Federal coal resources located in the project area. OSMRE's responsibility under the Surface Mining Control and Reclamation Act (SMCRA) Public Law 95-87, Title I, Section 102 to provide an independent assessment to "assure that the coal supply essential to the Nation's energy requirements, and to its economic and social well-being is provided and strike a balance between protection of the environment and agricultural productivity and the Nation's need for coal as an essential source of energy."

1.3 AGENCY AUTHORITY AND ACTIONS

1.3.1 Lead Agencies

Two lead agencies were responsible for the analysis of this project: OSMRE and DEQ. A joint EIS for the project was prepared to provide a coordinated and comprehensive analysis of potential environmental impacts. Before implementation of the proposed project can begin under a state operating permit and an approved Federal mine plan, various other permits, such as an air quality permit and a MPDES permit from DEQ would be required from multiple state and Federal agencies. The applicable statutes and regulations for each lead agency, as well as the decisions to be made, are described in the FEIS in **Section 1.4, Agency Authority and Actions. Tables 1 and 2** in that section summarize the other state and Federal approvals needed for the project.

The State-Federal Cooperative Agreement (Agreement) between DEQ and OSMRE (codified in 30 CFR 926.30) outlines the decision process for a surface coal mine in MT. Under the Agreement, DEQ reviews an operator's (in this case, Western Energy's) PAP to ensure the permit application complies with the permitting requirements and that the coal-mining operation would meet the performance standards of the approved MT program as outlined in MSUMRA (Section 82-4-221 et seq., MCA) and its implementing regulations (ARM 17.24.301-1309). OSMRE reviews the PAP to ensure it complies with the terms of the coal lease(s), MLA, NEPA, and other Federal laws and regulations. DEQ makes a decision to approve or deny the permit application component of the PAP in accordance with MSUMRA. When DEQ determines that an EIS is needed to make a permit decision, as is the case for the proposed project, DEQ must complete the EIS and issue a Record of Decision for the EIS as well as issue the Written Findings

on the permit application no later than 45 days from the date of the acceptability determination (ARM 17.24.405(1)(2)). After DEQ issues its Written Findings documenting its permit decision, OSMRE, in accordance with 30 CFR 746.1 through 746.18, reviews DEQ's permit and recommends approval, disapproval, or conditional approval of the mining plan to the ASLM.

1.3.2 Cooperating Agencies

The BLM Miles City Field Office served as a cooperating agency for the preparation of the FEIS. BLM is responsible for leasing Federal coal lands under the MLA. As a cooperating agency, BLM provided information, comments, and technical expertise to OSMRE regarding those elements of the FEIS, and the data and analyses supporting them, in which BLM has jurisdiction or special expertise, or for which OSMRE requested their assistance.

In order for OSMRE to make a recommendation on the MPDD to the ASLM, BLM must make a finding and recommendation (43 CFR 3482.2) with respect to Western Energy's Resource Recovery and Protection Plan (R2P2), which was included in the PAP, and other requirements of Western Energy's lease (43 CFR 3482.2). In a letter dated September 1, 2017, BLM determined that the R2P2 conformed with the MLA and the terms and conditions of Western Energy's Federal coal lease.

1.4 KEY SCOPING ISSUES CONSIDERED AND ADDRESSED

During formal public scoping, DEQ and OSMRE sought input from the public, interested organizations, tribes, and government agencies (see **Section 4.1, EIS Scoping Period** below). Eight key issues of concern were identified during scoping and were used to guide the EIS interdisciplinary team's alternatives development. These key issues of concern included: (1) effects on surface water quality and quantity; (2) effects on ground water quality and quantity; (3) effects on wetlands and non-wetland waters of the U.S.; (4) effects on wildlife and their habitats; (5) effects on climate change; (6) effects of the power plants on climate change and environmental resources; (7) effects on human health and the environment; and (8) reclamation. For a more detailed description of identified scoping issues, please see the Final EIS, **Section 1.5.1, Scoping**.

1.5 RESPONSE TO COMMENTS ON THE FINAL EIS

OSMRE received a comment during the 30-day Final EIS waiting period requesting that OSMRE analyze the Colstrip Generating Station to which the Rosebud Mine currently supplies coal as a connected action under the definition of "connected action" set forth in 40 C.F.R. 1508.25(a)(1) based on information found in objections to Westmoreland Energy Company's Chapter 11 Plan from the owners of the Colstrip Generating Station – Northwestern Energy, Talen Energy, Puget Sound Energy, Portland General Electric Company, and Avista Corporation. As described in **Section 1.4.1.1, Office of Surface Mining Reclamation and Enforcement** of the Final EIS, OSMRE – Denver Field Division – Casper Area Office evaluated the project and the Colstrip Power Plant as potentially connected actions. OSMRE determined in a letter dated April 24, 2014, that the project and the Colstrip Power Plant are not connected actions by applying guidance found in the BLM *NEPA Handbook* (H-1790-1). The guidance states, "Actions are connected if they automatically trigger other actions that may require an EIS, cannot or would not proceed unless other actions are taken previously or simultaneously, or if the actions are interdependent parts of a larger action and depend upon the larger action for their justification under 40 CFR 1508.25(a)(1)(i, ii, iii)." In the letter, OSMRE determined that Area F and the power plants are not connected actions because the power plant[s] are existing, operational facilities, and no pending actions or reasonably foreseeable future actions are currently proposed for the power plant[s]. Therefore, Area F is the only proposed action and, as such, is not a connected action to a currently existing and operational

power plant facility, regardless of the power plant facility's physical location (OSMRE 2014a). A similar argument would also apply to the Rosebud Power Plant. Effects from the two power plants are considered as indirect effects in the EIS analyses. After a thorough review of the language in the objections from the owners of the Colstrip Generating Station, no new information has been provided that shows any of the three criteria in 40 C.F.R. 1508.25(a)(1) are now being met; therefore, OSMRE has confirmed that the combustion of coal at the Colstrip Generating Station is not a connected action.

OSMRE received a comment during the 30-day Final EIS waiting period requesting that OSMRE reassess the analysis of impacts to northern long-eared bat and re-initiate consultation with the U.S. Fish and Wildlife Service per 50 C.F.R. 402.16 (re-initiation is required if new information reveals effects may be different than anticipated). OSMRE has reviewed the information provided by the commenter and determined that the Section 7 consultation requirements under the ESA for northern long-eared bat have been fulfilled through submission of the Northern Long-Eared Bat 4(d) Rule streamlined consultation form submitted on June 21, 2017 to the USFWS Montana Ecological Field Services Office. Per the streamlined consultation, the Proposed Action may affect the northern long-eared bat; however, there are no effects beyond those previously disclosed in the USFWS's programmatic BO for the final 4(d) rule. This project is consistent with the activities outlined in the programmatic BO and the 4(d) rule and any taking that may occur incidental to the Proposed Action is not prohibited under the final 4(d) rule (50 CFR 17.40(o)). Therefore, the programmatic BO satisfies the OSMRE responsibilities under Section 7 of the ESA of 1973, as amended, 16 USC 1531 et seq.

CHAPTER 2. UPDATES SINCE THE FINAL EIS

Since publishing the Final EIS in November 2018, DEQ completed its review of the PAP and issued their Written Findings on April 18, 2019, in compliance with MSUMRA (ARM 17.24.404(3)). While preparing the Written Findings, DEQ determined that the removal of coal in T2N, R38E, Section 12 is likely to result in a change in water quality in the Rosebud Coal outside the permit boundary which could result in material damage, as defined by 30 CFR 701.5. Therefore, in accordance with ARM 17.24.405(4), DEQ did not approve the mine passes proposed in T2N, R38E, Section 12 eliminating approximately 74 acres of Federal coal from Alternative 2-Proposed Action. OSMRE has subsequently incorporated this decrease in 74 acres of Federal Coal for Alternative 2 as described in the FEIS, and subsequently, OSMRE has selected Alternative 2 as described in the DEQ Written Findings. Alternative 2 – Proposed Action as selected by OSMRE would now avoid the impacts from mining and burning an additional 74 acres of Federal coal or approximately 1.9 tons. Removing 74 acres of Federal coal from the selected alternative would reduce the duration of mining in Area F by approximately six months to one year and would prevent the release of coal combustion emissions and residue associated with burning approximately 1.9 tons of Federal coal. Therefore, the intensity of direct, indirect, and cumulative impacts to all resources analyzed in the FEIS would generally be reduced as a result of selecting Alternative 2– Proposed Action as the agency's preferred alternative.

DEQ issued its *Record of Decision & Written Findings* documenting its permitting decision under the Montana Strip and Underground Mine Reclamation Act (MSUMRA) (82-4-201 et seq., MCA) and its implementing regulations (ARM 17.24.301-1309) and providing a public record of DEQ's selected alternative and supporting reasoning in accordance with MEPA (ARM 17.4.629). Other DEQ permitting decisions, such as those for an application for a new Montana Pollutant Discharge Elimination System (MPDES) permit MT-0031828 for project area outfalls and an application to modify Montana Air Quality Permit (MAQP) #1570-07 to include the project area are presented in separate DEQ documents.

CHAPTER 3. OSMRE DECISION AND BASIS FOR DECISION

3.1 DECISION

NEPA (40 CFR 1502.14(e)) requires OSMRE to identify an alternative from among those analyzed in the FEIS as the agency preferred alternative. Three alternatives were analyzed in the FEIS: Alternative 1– No Action, Alternative 2 – Proposed Action, and Alternative 3 – Proposed Action Plus Environmental Protection Measures. OSMRE has selected Alternative 2 as revised to remove T2N, R38E, Section 12, as the agency’s preferred alternative. The preferred alternative incorporates all practicable means to avoid or minimize environmental harm.

In compliance with 40 CFR 1505.2(b), the following sections briefly describe the preferred alternative, other alternatives considered, and the environmentally preferable alternative. **Chapter 2** of the FEIS includes detailed descriptions of the alternatives. OSMRE’s rationale for its selection of Alternative 2 is provided in **Section 3.5, Basis for Decision**.

3.2 DESCRIPTION OF THE SELECTED ALTERNATIVE

The Selected Alternative is Alternative 2 – Proposed Action as described in **Section 2.4** of the FEIS with the exception of 74 acres of Federal coal in T2N, R38E, Section 12, which was not approved for mining. Under the Selected Alternative, 68.5Mt of private and Federal coal would be mined in Area F. Mining operations in Area F would last approximately 18 years. Western Energy would mine 2,085 acres within the proposed 6,746-acre permit area (**Figure 3**). After crushing, most of the coal would be sent via an existing 4.2-mile conveyor to the Colstrip Power Plant. Coal with higher sulfur content (an estimated 105,000 tons/year from the project area) would be trucked to the Rosebud Power Plant, which is also in Colstrip. Western Energy would mine around an electric transmission line and a gas transmission pipeline that cross the project area; relocate portions of other electric distribution lines that run throughout the project area; and relocate two segments of Horse Creek Road, that traverses the project area. Specifically, a 4.2-mile segment of Horse Creek Road in the northeast/north-central portion of the permit area (owned and maintained by Rosebud County) and a 1.3-mile segment in the northwest portion of the permit area (owned and maintained by Treasure County) would be rerouted (**Figure 3**). The road relocation would be done in two phases. The longer segment, which is in Rosebud County, would be relocated during initial development of the project. The west end of the realignment, which is in Treasure County, would be relocated when mining moves into the northwest corner of the project area (about 12 years later). Relocation of the road segments would require permits from the counties and approval from the State.

Reclamation would begin within 2 years of mining the initial pass and would continue as subsequent mine passes are completed until Phase IV bond release. Reclamation would facilitate the following postmine land uses: grazing land, cropland, and wildlife habitat. The major reclamation steps planned to occur before and after mining include, but are not limited to, soil-material salvage and redistribution, pit backfilling, grading and contouring to the postmining topography, drainage construction, revegetation, and postmine monitoring. In addition to the reclamation of the landscape disturbed by mining operations, other disturbed areas that would require reclamation include the road system, mine plant facilities, sedimentation ponds, and temporary diversion structures.

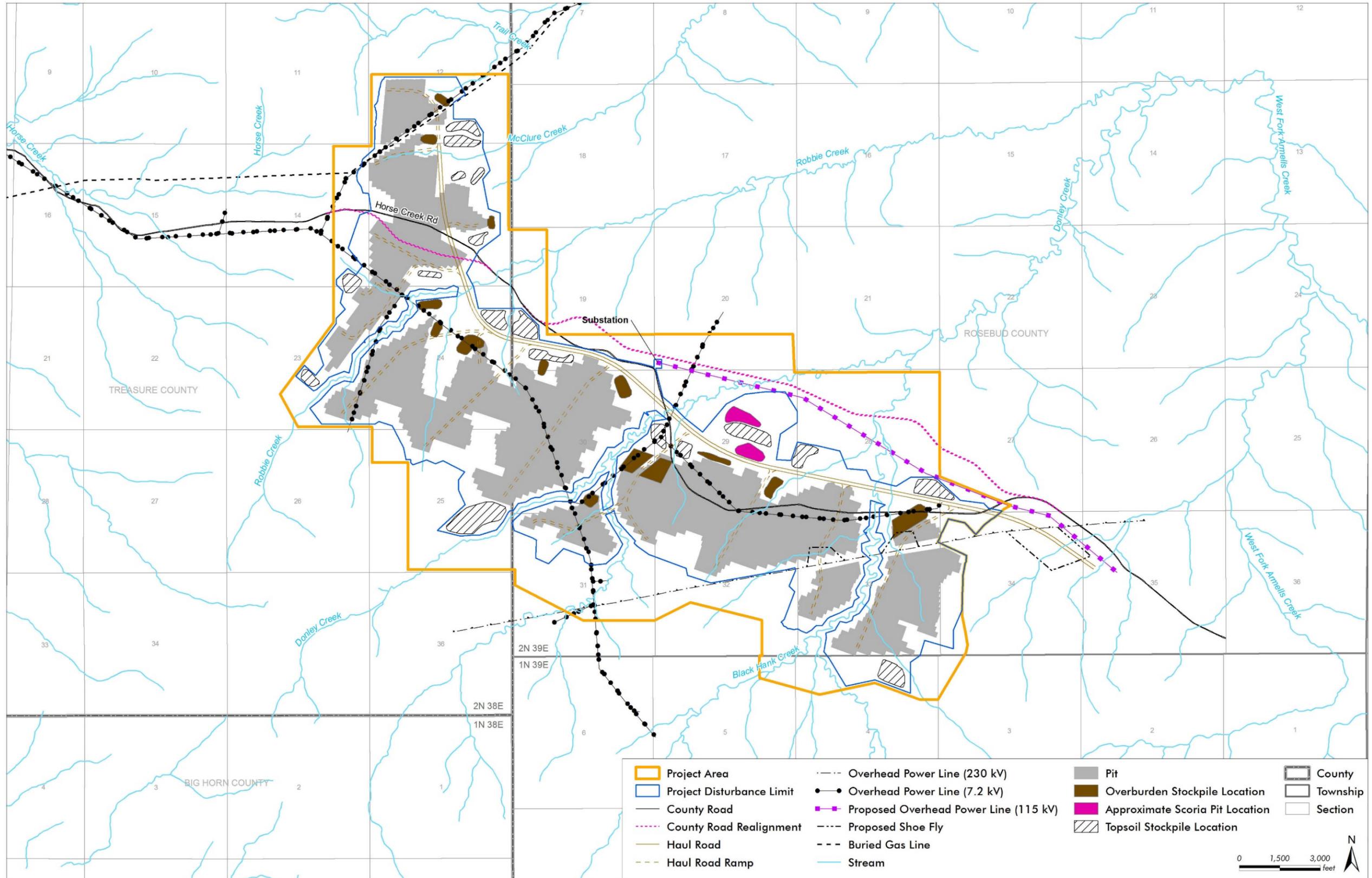


Figure 3. Proposed Project Area, Alternative 2.

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3.3 ENVIRONMENTALLY PREFERRED ALTERNATIVE

An environmentally preferred alternative (40 CFR 1505.2(b)) is one that has the least impact on the physical and biological environment and that best protects, preserves, and enhances historic, cultural, and natural resources. As shown in **Appendix A Summary of Impacts Table**, Alternative 1, the “no action alternative,” would result in the least amount of impact on the physical and biological environment and best meets that definition of environmentally preferred.

3.4 OTHER ALTERNATIVES CONSIDERED

Two alternatives to the Proposed Action were analyzed in the FEIS. OSMRE evaluated and considered both Alternative 1 – No Action and Alternative 3 – Proposed Action Plus Environmental Protection Measures before selecting Alternative 2 – Proposed Action. These alternatives considered by OSMRE, but not selected, are described in the sections below along with OSMRE’s rationale for not selecting them.

3.4.1 Alternative 1 – No Action

3.4.1.1 Description of the Alternative

Alternative 1 considered a scenario where Federal and private coal in the project area would not be mined. Under the No Action Alternative, Western Energy’s application for the project would not have been approved by DEQ for one or more of the conditions outlined in the FEIS (**Section 1.4.1.2, Montana Department of Environmental Quality, Conditions for Denial**). Without an approved state permit, OSMRE would not make a recommendation to ASLM regarding a Federal mining plan for the project. Without an approved permit and Federal mining plan, Western Energy would not develop the project, resulting in approximately 33,885,390 tons of Federal coal not being recovered from lease M-82816 and 37,036,115 tons of private coal not being recovered from private leases G-002 and G-002-A. It would also result in 4,260 acres of previously undisturbed ground not being disturbed. The environmental, social, and economic conditions described in **Chapter 3** of the FEIS (and summarized in **Appendix A Summary of Impacts Table**) would continue. The conditions under which OSMRE could select the No Action Alternative or DEQ could deny Western Energy’s application for an operating permit for the project area, MPDES permit, or air quality permit are described in the FEIS (see **Section 1.4, Agency Authority and Actions**).

Under the No Action Alternative, coal within the project area would not be available for combustion in the Colstrip Power Plant or the Rosebud Power Plant. For analysis purposes, the FEIS assumed that the power plants would continue operations through 2038. (see FEIS, **Section 1.2.2, Coal Combustion at Colstrip**). Selection of the No Action Alternative would not have changed the status of the other five areas of the Rosebud Mine that are currently permitted and being mined or reclaimed by Western Energy (see FEIS, **Section 2.2, Description of Existing Mine and Reclamation Operations**), nor would it have changed the status of other areas of the Rosebud Mine that are in the permitting process (see FEIS, **Section 5.2.2.7, Mining and Mineral Development**).

3.4.1.2 Rationale for Not Selecting Alternative 1 – No Action

OSMRE did not select Alternative 1 – No Action because it does not meet OSMRE’s purpose and need. OSMRE’s need for the action is to provide Western Energy the opportunity to exercise its VER granted by BLM under Federal coal lease M82186 to access and mine undeveloped Federal coal resources located

in the project area. The need for the action to provide Western Energy the opportunity to mine the Federal coal obtained under Federal coal lease M82186 would not be met by this alternative.

3.4.2 Alternative 3 – Proposed Action Plus Environmental Protection Measures

3.4.2.1 Description of Alternative 3

Under Alternative 3, OSMRE would have required Western Energy to implement additional environmental protection measures that are above and beyond the requirements of MSUMRA and SMCRA. These measures (listed below and described in the FEIS, **Section 2.5.2, Environmental Protection Measures**) were conceptual in nature and were designed by OSMRE and DEQ to minimize environmental effects and address key issues identified during the scoping process (see FEIS, **Section 1.5.2.1, Key Issues Identified During Scoping for Detailed Analysis**). Under Alternative 3, Western Energy would mine and reclaim the project area as described in Alternative 2 while also implementing the additional environmental protection measures as required by OSMRE. The proposed additional protection measures included:

- Additional requirements for a Water Management Plan:
 - Enhancement of wetland habitats (managed discharges from MPDES outfalls)
 - Pit water management
 - Ground water monitoring and mitigation
- Additional requirements for the Wetland Mitigation Plan:
 - Natural water source for off-site mitigation areas
 - Mitigation sites to be within the same watershed
 - Deed restrictions or easements on mitigation sites
 - Soil salvage from affected wetlands
 - Managed water releases (from MPDES outfalls)
- Modifications to reclamation practices
 - Soil salvage from affected wetlands (and stockpiling, if necessary)
 - Organic amendments on small-acre problem areas
 - 5-foot contours for postmine topography design
 - DEQ review of drainage basin design for select drainages
- Other mitigations
 - Geological resources survey
 - Paleontology resources survey

As described above in **Section 1.3, Agency Authority and Actions**, MSUMRA (ARM 17.24.405(1)(2)) mandates that DEQ complete an EIS and issue a decision on a permit application no later than 45 days from the date of the acceptability determination. In order to meet MSUMRA-mandated timelines, preparation of the EIS and development of the alternatives occurred concurrently with DEQ's acceptability review of Western Energy's application. During the course of the acceptability review, Western Energy revised its application eight times in response to deficiencies identified by DEQ. As a result, certain components of the additional environmental protection measures concerning water management, wetland mitigation, reclamation practices and geological resources developed for Alternative 3 were incorporated into Western Energy's permit application as part of the MSUMRA-required water management and reclamation plans and are analyzed under Alternative 2 in the FEIS. The

remaining components of the additional environmental protection measures were retained in the FEIS to provide continuity during the concurrent NEPA/MEPA environmental impacts analysis.

3.4.2.2 Rationale for Not Selecting Alternative 3 – Proposed Action Plus Environmental Protection Measures

In its consideration of alternatives, OSMRE looked at Alternative 3 in its entirety and at the individual environmental protection measures described in Alternative 3 for possible incorporation into the selected agency preferred alternative. The environmental protection measures that make up Alternative 3 are conceptual in nature and would be incorporated into the MSUMRA permit in addition to the resource protection measures currently in Western Energy’s permit application as analyzed under Alternative 2 in the FEIS. Western Energy would incur the additional costs of implementing these environmental protection measures. Like the selected alternative, Alternative 3 would be consistent with the project’s purpose and need. Similarly, it also would have complied with state and Federal laws. However, OSMRE determined that the requirements of MSUMRA, which are met by the Proposed Action as described in Alternative 2 in the FEIS, are sufficiently protective of resources within the project area and the general vicinity of the project area (see **Section 2.5.2, Environmental Effects** in the FEIS). Therefore, OSMRE chose not to select Alternative 3 as a whole or any of the individual protection measures analyzed in the EIS due to the negligible benefit they would provide to affected resources. The rationale for not selecting Alternative 3 or any of the alternative’s specific environmental protection measures is provided in the following sections.

Additional Requirements for a Water Management Plan

The analysis in the FEIS for the Proposed Action (Alternative 2) shows that the intensity of effects on surface and ground water would be short- and long-term, minor to moderate, and adverse and would not rise to the level of significance requiring additional mitigation under NEPA. The MSUMRA-compliant Alternative 2, which requires Western Energy to prepare and implement a water management plan, would be sufficiently protective of surface and ground water. MSUMRA conditions approval of an application for a coal mine operating permit on demonstration by the applicant that “the assessment of the probable cumulative impact of all anticipated mining in the area on the hydrologic balance has been made by the department [DEQ] and the proposed operation of the mining operation has been designed to prevent material damage to the hydrologic balance outside the permit area” under 82-4-227(3)(a), MCA, and ARM 17.24.405(6)(c). The permit application must contain a detailed description of the “measures to be taken during and after mining activities to minimize disturbance to the hydrologic balance on and off the mine permit area, and prevent material damage to the hydrologic balance outside the permit area” under ARM 17.24.314(1). Alternative 3 modifications to Western Energy’s Water Management Plan would have included enhancement of downstream wetland habitat through managed discharges, alternative pit water management practices, and installation of alluvial monitoring wells to be sampled monthly. However, OSMRE determined that these modifications would not measurably reduce the intensity of impacts on surface and ground water below the intensity identified in Alternative 2 (see **Appendix A Summary of Impacts Table**). A rationale specific to each Alternative 3 protection measure is provided below.

Enhancement of Wetland Habitats

Managing discharges from MPDES outfalls to enhance downstream wetland habitats would only be beneficial during mining. Any benefits would cease once the area was reclaimed; under the Western Alkaline Coal Mining standard (40 CFR 434 subpart H), Western Energy would have to reclaim ponds as soon as practicable after mining and replace them with DEQ-approved sedimentation structures. As a result, any enhancements to wetlands would be temporary.

Pit Water Management

MSUMRA's regulatory requirements and environmental performance standards are protective of resources. Pursuant to ARM 17.24.405 and 82-4-227, MCA, MSUMRA provides all practical means to avoid or minimize environmental harm, including water quality and quantity impacts. Alternative 2, which is MSUMRA-compliant (see **DEQ Decision** below in **Section 3.5.1.2**), is sufficiently protective of the hydrologic balance.

Ground Water Monitoring

Installation of additional alluvial monitoring wells would have limited benefit. Alternative 2, which is MSUMRA-compliant (see **DEQ Decision** below in **Section 3.5.1.2**), is sufficiently protective of ground water quality. The preferred alternative includes a comprehensive groundwater monitoring plan that would identify an increase in concentration for any ground water parameter that would adversely affect beneficial uses of the alluvial water (based on the ground water classification).

Additional Requirements for the Wetland Mitigation Plan

The analysis in the FEIS for the Proposed Action (Alternative 2) shows that the intensity of effects on wetlands and wetland habitat would be short- and long-term, moderate, and adverse and would not rise to the level of significance requiring additional mitigation under NEPA. The MSUMRA-compliant Alternative 2, which requires Western Energy to prepare and implement a wetland mitigation plan, would be sufficiently protective of wetlands and wetland habitat. Wetlands, including those determined to be nonjurisdictional by the Corps, are waters of the state. Under MSUMRA, these resources are considered important as part of the hydrologic balance and wildlife habitat. ARM 17.24.751 requires surface mine operating permit applicants to restore or avoid disturbance to wetlands. Alternative 3 modifications to Western Energy's Wetland Mitigation Plan would have included the requirement that off-site mitigation areas be supported by a natural water source, be located in the same watershed as the impact, and be protected by a deed restriction or easement. Soil salvage from affected nonjurisdictional wetlands and managed discharges (described above) also would have been required. OSMRE determined that these modifications would not measurably reduce the intensity of impacts on wetlands below what is identified in Alternative 2 (see **Appendix A Summary of Impacts Table**). A rationale specific to each Alternative 3 protection measure is provided below.

Require a Natural Water Source for Off-Site Mitigation Areas

OSMRE determined that a requirement for off-site mitigation areas to be supported by natural water sources would be unnecessary as DEQ would not approve a mitigation site that uses an artificial water source, such as a well, in a permit. Western Energy's proposed wetlands mitigation plan (PAP, **Appendix N**) described in Alternative 2 does not propose artificial water sources. Instead, Western Energy will opportunistically enhance existing natural wetland areas or develop wetlands during reclamation where natural water sources are present.

Require Mitigation Sites to be within the Same Watershed

OSMRE determined that a requirement for mitigation sites to be in the same watershed as the effect would be overly restrictive and would not provide for opportunistic enhancement of wetlands where natural water sources are available (such as in other permit areas of the Rosebud Mine). Allowing mitigation sites to be implemented mine-wide, as in Alternative 2 and as currently provided under Western Energy's other MSUMRA operating permits, will provide operational flexibility and be more beneficial to wetland associated resources.

Require Deed Restrictions or Easements

OSMRE determined that requiring a deed restriction or easement on mitigation sites to protect the site from future development or mining would be difficult to implement uniformly. Western Energy does not own all the surface area where mitigation would occur. As a result, the benefit to wetlands would be limited. The measure could also potentially infringe on private property rights.

Soil Salvage

OSMRE determined that salvaging hydric soils from wetlands is already covered in the Proposed Action (Alternative 2). Western Energy's proposed wetland mitigation plan (PAP, **Appendix N**) described in Alternative 2 includes development of site-specific wetland mitigation plans two years prior to wetland disturbance. Direct haul of wetland soils to mitigation sites could be incorporated into those site-specific plans as deemed necessary by DEQ.

Managed Water Releases

As described above under **Additional Requirements for the Water Management Plan**, managing discharges from MPDES outfalls to enhance downstream wetland habitats would only be beneficial during mining. As a result, the benefit to wetlands would be limited due to the fact that at some point during reclamation the MPDES outfalls would be eliminated; therefore, the wetlands in question would still experience the adverse impacts as disclosed in the FEIS.

Modifications to Reclamation Practices

The MSUMRA-compliant Alternative 2, which requires Western Energy to prepare and implement a reclamation plan, will be sufficiently protective of vegetation, water resources, and wildlife. MSUMRA (82-4-233 and 82-4-235, MCA) and its implementing rules (Subchapters 3, 5, 6, 7, 8, and 11 of the ARM) include regulations applicable to vegetation including requirements for baseline investigations, requirements for reclamation and revegetation, protection of Federally T&E species, and conditions for bond release. Alternative 3 modifications to the reclamation plan would have included the requirement that soil salvaged from affected nonjurisdictional wetlands be salvaged and stockpiled and that organic amendments (i.e., grass mulch) be applied to small-acre problem areas. Western Energy also would have been required to design the project area's postmine topography at a finer scale (5-foot contours instead of 10-foot) and to submit drainage designs for additional (smaller) drainages. However, OSMRE determined that these modifications would not measurably reduce the intensity of impacts to the project area nor measurably improve revegetation and prevent erosion (see **Appendix A Summary of Impacts Table**). A rationale specific to each Alternative 3 protection measure is provided below.

Soil Salvage and Stockpiling

OSMRE determined that stockpiling salvaged hydric soil from disturbed nonjurisdictional wetlands would have limited benefit. When hydric soil (soil from wetlands) is stockpiled, wetland characteristics of the soil are removed due to lack of water. As described above, salvaging and direct-hauling hydric soil is a component of Western Energy's proposed wetland mitigation plan (PAP, **Appendix N**) described in Alternative 2. Western Energy's plan includes development of site-specific wetland mitigation plans two years prior to wetland disturbance.

Organic Amendments

DEQ has experimented with the application of organic amendments on problem areas on other similar mine sites and determined that the practice has limited benefits for revegetation efforts. After consulting with DEQ, OSMRE concluded that this practice would not measurably reduce impacts on vegetation in the project area.

Postmine Topography

OSMRE concluded that requiring a finer design scale (5-foot contours rather than 10-foot contours) for postmine topography would reduce reclamation flexibility and could lead to a more engineered and unnatural postmine topography. That level of design also could create a postmine topography that would be inconsistent with pre-mine site conditions. After consulting with DEQ, OSMRE concluded the benefits would be limited and would not measurably reduce the intensity of impacts on the relevant resources.

Drainage Basin Design

DEQ has required designs for smaller drainages (defined as those with an estimated 2-year, 24-hour peak discharge greater than 5 cubic feet per second) on other permit areas, but when constructed, the designed drainage basins often appeared engineered and unnatural. OSMRE considered requiring this level of design for haul road crossings and drainages outside the disturbance boundary; however, after consulting with DEQ, OSMRE concluded the benefits would be limited and would not measurably reduce the intensity of impacts on the relevant resources.

Other Mitigations

Geological Resources Survey

This environmental protection measure was incorporated into Western Energy's permit application during DEQ's acceptability review and will be implemented by DEQ as needed to reduce impacts on geological resources.

Paleontology Resources Survey

The analysis in the FEIS for the Proposed Action (Alternative 2) shows that paleontological resources not identified or salvaged prior to mining would be permanently lost, resulting in impacts that are short- and long-term, major, and adverse. All surface area within the Area F permit area is privately owned. All paleontological resources discovered during mining would be the property of the surface owner. OSMRE has determined that while there could be an increase in the potential for discovery of paleontological resources of scientific interest under an unanticipated discovery and mitigation plan, due to private ownership of paleontological resources in the project area, the plan would not ensure protection of the paleontological resources, thus having limited benefit in reducing adverse impacts. In addition, OSMRE does not have the authority to impose the implementation of the aforementioned unanticipated discovery and mitigation plan. Therefore, OSMRE has determined that an unanticipated discovery and mitigation plan would not effectively reduce impacts on paleontological resources below the intensity identified in Alternative 2.

3.4.3 Alternatives Considered but Eliminated from Further Analysis

Seven alternatives were suggested by the public in scoping comments or by specialists based on professional experience but were not analyzed in detail for a variety of reasons, including operational

feasibility and failure to meet the project purpose and need (see **Chapter 2, Section 6** in the FEIS). Dismissed alternatives include (1) coal conservation; (2) private coal mining; (3) underground mining; (4) mining within a smaller disturbance area, for a shorter duration, and/or within a different timeframe; (5) transporting coal by rail to western and international ports; (6) alternative land uses; and (7) alternative energy generation.

3.5 BASIS FOR DECISION

OSMRE has based its decision to select Alternative 2 without 74 acres of Federal coal in T2N, R38E, Section 12 based on a thorough review of the FEIS, review of public and agency concerns received on this project, consultation with cooperating and regulatory agencies, consultation with interested tribes, DEQ's April 18, 2019 Written Findings and the project record. OSMRE also considered the intensity of impacts expected for each of the analyzed alternatives. Alternative 1 has the least impacts, but does not meet purpose and need, and OSMRE determined that implementation of Alternative 3 would not measurably reduce the intensity of impacts described for Alternative 2 (see **Table A-1** in **Appendix A**).

As described in the following sections, Alternative 2 meets the project's purpose and need (**Section 1.2**) and is consistent with all applicable regulatory requirements (**Section 3.5.1**), while minimizing potential impacts (**Section 3.5.2**). Alternative 2 also addresses the issues of concern identified during the scoping process. The effects on surface and groundwater quality and quantity are described in **Section 4.7, Water Resources - Surface Water** and **Section 4.8 Water Resources – Groundwater** of the FEIS, and the duration and intensity of potential adverse impacts would be reduced under the MSUMRA permit issued by DEQ. There are no jurisdictional wetlands or other waters in the project area (see FEIS, **Section 3.11, Wetlands and Riparian Zones**). USFWS concurred with OSMRE's determination that there would be no effects to threatened and endangered species as a result of approving the Proposed Action with the exception of the northern long-eared bat which the Proposed Action may affect, but is not likely to adversely affect (see FEIS, **Section 4.13, Special Status Species**). OSMRE analyzed potential impacts of coal combustion on climate and environmental resources as outlined in the FEIS (see FEIS, **Section 4.4, Climate and Climate Change**). OSMRE disclosed the potential impacts of Alternative 2 on human health in **Section 4.16, Public Health Impacts** of the FEIS. OSMRE described reclamation practices that would be implemented under Alternative 2 in **Section 2.4.4, Reclamation Plan** of the FEIS.

The FEIS meets the standards for an adequate EIS under CEQ regulations. OSMRE, as a co-lead agency, has taken responsibility for the preparation of the FEIS and has determined that all stakeholders' concerns, comments, and suggestions provided during the NEPA process have been satisfactorily addressed, and all identified issues and potential impacts have been adequately analyzed and disclosed.

OSMRE's decision to select the Proposed Action in part as the agency's preferred alternative will be implemented through issuance of this ROD, my recommendation to approve the mining plan decision document to the ASLM and the ASLM's approval, if given.

3.5.1 Selected Alternative Compliance with State and Federal Laws

OSMRE considered all applicable statutory and regulatory requirements necessary for approval of the proposed project. The following sections document the selected alternative's compliance with applicable statutory and regulatory requirements.

3.5.1.1 National Environmental Policy Act

NEPA declares a national environmental policy and promotes consideration of environmental concerns by Federal agencies in decision making. Procedures and regulations issued by CEQ, as authorized under NEPA, direct implementation of NEPA by Federal agencies. CEQ regulations are promulgated at 40 CFR 1500–1508, and DOI’s NEPA regulations are promulgated at 43 CFR 46 and in Department Manual 516. The OSMRE NEPA Handbook and the BLM NEPA Handbook also provide guidance and were considered in the preparation of the FEIS. OSMRE prepared the Western Energy Area F FEIS jointly with DEQ to meet the requirements of NEPA and MEPA, respectively.

Finding

OSMRE finds that the Western Energy Area F FEIS complies with the procedural and analytical requirements of NEPA.

3.5.1.2 SMCRA/State-Federal Cooperative Agreement

OSMRE is an office of DOI charged with administration of SMCRA. SMCRA establishes a program of cooperative Federalism that allows the states to enact and administer their own regulatory programs within limits established by Federal minimum standards and with prescribed backup enforcement authority by OSMRE (30 CFR 1253). DEQ operates an approved state program under SMCRA and, therefore, has primary jurisdiction over the regulation of surface coal-mining and reclamation operations on non-Federal and non-Indian lands within the state. See 45 CFR 21560, 30 CFR 926.15, 30 CFR 926.16, and 30 CFR 926.30. Under Section 1273(c) of SMCRA, a state with a permanent regulatory program approved by the DOI Secretary, such as DEQ, can elect to enter into a cooperative agreement for state regulation of surface coal-mining and reclamation operations on Federal lands within the state. OSMRE granted DEQ this authority, and DEQ regulates permitting and operation of surface coal mines on Federal lands within MT under the authority of MSUMRA (Section 82-4-221, MCA).

The Agreement between DEQ and OSMRE (codified in 30 CFR 926.30) outlines the decision process for a surface coal mine in MT. Under the Agreement, DEQ reviews an operator’s (in this case, Western Energy’s) PAP to ensure the permit application complies with the permitting requirements and that the coal-mining operation would meet the performance standards of the approved MT program as outlined in MSUMRA (Section 82-4-221 et seq., MCA) and its implementing regulations (ARM 17.24.301-1309). OSMRE, BLM, and other Federal agencies such as the USFWS review the PAP to ensure it complies with the terms of the coal lease(s), MLA, NEPA, and other Federal laws and regulations. DEQ makes a decision to approve or deny the permit application component of the PAP in accordance with MSUMRA. OSMRE, and 30 CFR 746.1 through 746.18; reviews DEQ’s permit; and recommends approval, disapproval, or conditional approval of the mining plan to the ASLM.

DEQ Decision

DEQ reviewed Western Energy’s PAP and determined that under MSUMRA it is technically adequate (August 8, 2012) and that it is complete and acceptable under MSUMRA (October 5, 2018). DEQ issued a public Notice of Acceptability and accepted objections from the public. DEQ also completed a Cumulative Hydrologic Impact Assessment (CHIA) for the project area, which included an analysis of impacts on the hydrologic balance and an assessment of the Probable Hydrologic Consequences of the proposed project. DEQ concluded in the CHIA that no material damage has occurred from current or approved mining and that the additional mining under the proposed project would not create material damage with the exclusion of 74 acres of Federal coal in T2N, R38E, Section 12, which has not been permitted for mining. On April 18, 2019, DEQ issued Written Findings and Notice of Decision,

documenting its decision to select Alternative 2 in part and to issue a surface-mine operating permit for Western Energy’s proposed permit Area F that excludes mining of 74 acres of Federal coal in T2N, R38E, Section 12.

Finding

MSUMRA’s regulatory requirements and environmental performance standards are protective of resources. Pursuant to ARM 17.24.405 and 82-4-227, MCA, MSUMRA provides all practical means to avoid or minimize environmental harm including, without limitation, measures addressing water quality and quantity impacts, wildlife impacts, reclamation, and other measures. OSMRE finds that DEQ’s certification that Western Energy’s PAP as technically adequate and acceptable, DEQ’s Written Findings and Notice of Decision, and DEQ’s 2018 CHIA constitute compliance with SMCRA, per the Agreement.

3.5.1.3 Endangered Species Act

The Endangered Species Act (ESA) provides a means for conserving the ecosystems upon which threatened and endangered (T&E) species depend and a program for the conservation of such species. The ESA directs all Federal agencies to participate in conserving these species. Specifically, Section 7(a)(1) of the ESA charges Federal agencies to aid in the conservation of listed species, and Section 7(a)(2) requires the agencies to ensure that their activities are not likely to jeopardize the continued existence of listed species or adversely modify designated critical habitats. Section 7 of the ESA (16 United States Code (USC) 1531 et seq.) outlines the procedures for Federal interagency cooperation to conserve Federally listed species and designated critical habitats.

Four Federally listed species potentially occur or are affected by projects in Rosebud, Treasure, Big Horn, and Powder River Counties, as shown in **Table 1**.

Table 1. Federal T&E Species Potentially Occurring or Potentially Affected by Projects in Rosebud, Treasure, Big Horn, and Powder River Counties.

Common Name	Scientific Name	Status* Federal/State	General Habitat Affinity	Habitat in Analysis Area
Birds				
Whooping crane	<i>Grus americana</i>	E	Wet meadows, marshes	None
Mammals				
Black-footed ferret	<i>Mustela nigripes</i>	E	Active prairie dog towns or complex > 80 acres in size	None
Northern long-eared bat	<i>Myotis septentrionalis</i>	T	Rock cavities and crevices, behind bark in trees, dead hardwood trees	None
Fish				
Pallid sturgeon	<i>Scaphirhynchus albus</i>	E	Slow-moving, large rivers	None

*E = Endangered; T = Threatened.

Source: USFWS.

The USFWS was sent a scoping newsletter on August 30, 2013 describing the Proposed Action and requesting comments. OSMRE contacted the USFWS Ecological Services Montana Field Office in Helena on June 9, 2014 to discuss the project. USFWS advised that if OSMRE is making a determination of “no effect,” then no further USFWS consultation is needed. OSMRE followed up with USFWS in 2017 regarding the indirect effects analysis area for the proposed project. Specifically, OSMRE provided information to USFWS on January 31, 2017 disclosing Federally listed T&E species that could be present in Rosebud, Treasure, and Big Horn Counties and any potential effects on the species or habitat that could

result from the proposed project. USFWS communicated to OSMRE via phone that they were in agreement with OSMRE's determination that there would be "no effect" on T&E species within the indirect effects analysis area. In May 2017, the indirect effects analysis area was expanded from a 29-kilometer (km) radius to a 32-km radius from the Rosebud and Colstrip Power Plants. The 32-km analysis area extended into Powder River County; therefore, species potentially occurring in Powder River County were included in the T&E species analysis.

Under the Proposed Action (Alternative 2) and Alternative 3 – Proposed Action Plus Environmental Protection Measures, a portion of the indirect effects analysis area for special status species falls within the area of impact for the northern long-eared bat. OSMRE has complied with the USFWS's programmatic Biological Opinion (BO) for the January 5, 2016 Northern Long-Eared Bat 4(d) Rule and fulfilled the Section 7 consultation requirements under the ESA through submission of the streamlined consultation form on June 21, 2017 to the Montana Ecological Field Services Office. There are no effects on the northern long-eared bat beyond those previously disclosed in the USFWS's BO for the final 4(d) rule. Any taking that may occur incidental to Alternative 2 or 3 is not prohibited under the final 4(d) rule (50 CFR 17.40(o)). This project is consistent with the activities outlined in the programmatic BO, and the 4(d) rule does not prohibit incidental take of the northern long-eared bat that may occur as a result of this project. Therefore, the programmatic BO satisfies OSMRE responsibilities under Section 7 of the ESA of 1973, as amended, 16 USC 1531 et seq., relative to the northern long-eared bat for this project.

Additionally, USFWS and OSMRE were able to conclude that no other Federally listed T&E species or their critical habitats exist within the direct and indirect effects analysis areas for special status species (see FEIS, **Section 3.1, Special Status Species**), and no further USFWS consultation was needed.

Finding

OSMRE has met the requirements of the ESA. This determination is based on documented communications between OSMRE and the USFWS.

3.5.1.4 Clean Air Act

The State of Montana administers the Federal Clean Air Act. The limits in the approved Montana Air Quality Permit (MAQP) #1570-07 are necessary to ensure that all potential sources of air pollutants from mining Area F coal comply with the Clean Air Act of Montana. DEQ would document compliance with the Clean Air Act of Montana in its Final Determination for MAQP #1570-07 prior to the start of mining operations in Area F at the Rosebud Mine.

Finding

DEQ's permit decision and conditions on the air quality permit constitute compliance with Clean Air Act of Montana requirements. The FEIS analyzes the direct, indirect and cumulative impacts to air quality as a result of Alternative 2 - Proposed Action (see FEIS, **Section 4.3, Air Quality** and **Section 5.3.2.2, Air Quality**). Direct impacts would be short-term, negligible to minor, and adverse. Indirect impacts of coal combustion would be short- and long-term, minor, and adverse. Cumulative impacts of mining and coal combustion would be short-term, minor to moderate, and adverse. The emissions concentrations for all constituents created directly, indirectly and cumulatively under the Proposed Action are expected to fall below the National Ambient Air Quality Standards (NAAQS) and Montana Ambient Air Quality Standards (MAAQS).

3.5.1.5 Clean Water Act

DEQ is responsible for administering the Montana Water Quality Act, which prevents degradation of surface and ground water due to discharges of mine wastewater and storm water (implementing rules: ARM 17.30 Subchapters 11, 12, and 13). MT's nondegradation rule applies to any human activity resulting in a new or increased source that may cause degradation of high-quality waters. The project would be considered a new source.

DEQ also administers several sections of the Clean Water Act pursuant to an agreement between the state and Environmental Protection Agency (EPA). DEQ developed water quality classifications and standards, as well as a permit system to control discharges into state waters. Mining operations must comply with state regulations and standards for surface water and ground water. MPDES permits are required for point discharges of wastewater to state surface water. MPDES permits regulate discharges of wastewater by establishing effluent limitations based on, when applicable, technology-based effluent limits, state surface water quality standards including numeric and narrative requirements, and nondegradation criteria.

Finding

DEQ's permit decision and conditions on the MPDES permit constitutes compliance with Clean Water Act requirements. Compliance with applicable water quality regulations, including water quality standards and nondegradation rules and the subsequent Fact Sheet for the MPDES permit, are discussed in DEQ's decision documents for the surface-mine operating permit and the MPDES permit. During the PAP review process, DEQ concluded that no material damage has occurred from current or approved mining and that the additional mining under the Proposed Action would not create material damage to water resources outside the permit boundary with the exclusion of 74 acres of Federal coal in T2N, R38E, Section 12, which has not been permitted for mining. On April 18, 2019, DEQ issued Written Findings and Notice of Decision, documenting its decision to select Alternative 2 in part and to issue a surface-mine operating permit for Western Energy's proposed permit Area F that excludes mining of 74 acres of Federal coal in T2N, R38E, Section 12. The FEIS analyzes the direct, indirect and cumulative impacts to water resources within and downstream of the project area as a result of Alternative 2 - Proposed Action (see FEIS, **Section 4.7, Water Resources - Surface Water; Section 4.8, Water Resources – Groundwater; Section 5.3.6, Water Resources – Surface Water; and Section 5.3.7, Water Resources – Groundwater**). Direct impacts would be short- and long-term, minor to moderate, and adverse. Indirect impacts of coal combustion would be short- and long-term, negligible to moderate, and adverse. Cumulative impacts of mining and coal combustion would be short-term, minor to major, and adverse. Due to the exclusion of mining in Section 12 of the project area, there would be a decrease in the intensity of the impacts to water resources from the selection of Alternative 2 – Proposed Action as the agency's preferred alternative.

3.5.1.6 National Historic Preservation Act

Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations under 36 CFR 800 require all Federal agencies to consider effects of Federal actions on cultural resources eligible for or listed in the National Register of Historic Places (NRHP). Traditional cultural properties are also protected under Section 106 of the NHPA.

Impacts on cultural resources were assessed within the 8,280-acre area of potential effect (APE) during two Class III cultural resource surveys completed in 2010 (PAP, **Appendix A-1**) and 2012 (PAP, **Appendix A-2**). The APE was defined as the entirety of the project area or the proposed permit boundary. A total of 105 cultural resources were documented within the APE. Eighty-one (81) of the sites have been evaluated as not eligible for listing in the NRHP. Sixteen sites are recommended eligible for listing in the

NRHP. Both historic districts intersecting the APE—the Castle Rock and Lee Historic Districts—have been recommended eligible for listing in the NRHP. Adverse effects on four archaeological properties (24RB958, 24RB2334, 24RB2339, and 24RB2438) would potentially occur within the first 5 years (60 months) of project operations. A Memorandum of Agreement (MOA) was entered into by Western Energy, the State Historic Preservation Office, DEQ, BLM, and OSMRE and would implement mitigation measures for the four archaeological properties. A Programmatic Agreement (PA) has also been developed among the same parties and was officially executed on March 27, 2017 (see FEIS, **Appendix H**). The PA provides direction to the parties to ensure continued Section 106 compliance.

Under the selected alternative, surface disturbance from mining and wetland mitigation activity may result in disturbance or destruction of historic properties located within the analysis area, and these impacts would be long-term, major, and adverse. Adverse impacts would be resolved through both a property-specific MOA and a long-term PA stipulating measures for continued Section 106 compliance (see FEIS, **Appendix H**).

Tribal Consultation

In compliance with Section 106 of the NHPA of 1966, as amended, and its implementing regulations under 36 CFR 800, OSMRE initiated formal tribal consultation with the Northern Cheyenne, Fort Peck Assiniboine and Sioux Tribes, and Crow Tribes regarding the identification and effects on traditional cultural properties (TCPs) and archaeological sites of significance to the tribes. Consultation was initiated through letters sent to the three tribes on April 14, 2014. OSMRE did not receive any communications in response to these letters. Each tribe also was contacted during the two formal public scoping periods. None of the tribes provided comments during either public scoping period.

OSMRE contacted the Northern Cheyenne, Fort Peck Assiniboine and Sioux Tribes, and Crow Tribes again via letter on January 6, 2015, to inform the tribes of potential adverse effects on four archaeological properties (24RB958, 24RB2334, 24RB2339, and 24RB2438) that would potentially occur within the first 5 years (60 months) of project operations. The letters informed the tribes that a MOA would be prepared for standard data recovery for the four affected sites and invited tribal participation in the MOA. The letter also informed the tribes that a PA would be developed for the project to implement mitigation measures for effects on known sites and stipulations to treat unanticipated discoveries during mining operations. Comments on the affected sites were solicited and information was requested regarding traditional uses, ethnographic resources, and TCPs in the project area. OSMRE did not receive any responses to these letters.

On June 2, 2015, OSMRE notified the Northern Cheyenne, Fort Peck Assiniboine and Sioux Tribes, and Crow Tribes via letter that the Black Hank Site (24RB2339) had been determined eligible for listing in the NRHP under Criterion D. Comments on the affected site, as well as the other three sites covered by the MOA, were solicited and information was once again requested regarding traditional uses, ethnographic resources, and TCPs in the project area. OSMRE did not receive any responses to these letters.

In response to public comments on the Draft EIS, OSMRE initiated consultation with additional tribes, including the Apache, Blackfeet Nation, Eastern Shoshone, Kiowa, and Oglala Sioux. The purpose of continuing consultation is to inform the tribes of Stipulation 10 in the PA that allows new stakeholders to request consulting status at any time (see FEIS, **Appendix H**).

Finding

OSMRE finds that the selected alternative complies with the NHPA based on the coordination with SHPO and the tribes described above in **Section 2.5.1.6**. OSMRE has completed the Section 106 consultation process for this project and will insure that the stipulations in the PA are implemented.

3.5.1.7 Executive Order (EO) 13175 – Government-to-Government Consultation with Tribes

EO 13175 requires Federal agencies to consult with American Indian tribal representatives and traditionalists on a government-to-government basis. OSMRE's tribal consultation is described above in **Section 3.5.1.6, National Historic Preservation Act**.

Finding

OSMRE finds that the selected alternative complies with EO 13175 based on the coordination with SHPO and the tribes described above in **Section 2.5.1.6**. OSMRE has completed the Section 106 consultation process for this project and will insure that the stipulations in the PA are implemented.

3.5.1.8 EO 12898 Environmental Justice

EO 12898 requires Federal agencies to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects on minority and low-income populations when implementing their respective programs, including American Indian programs. OSMRE's analysis of environmental justice impacts under Alternative 2 follows the CEQ's guidance on environmental justice, the EPA's guidance on environmental justice, and the U.S. Department of Agriculture's (USDA) regulation on environmental justice. The USDA's regulation indicates an effect on a minority or a low-income population is disproportionately high and adverse if the adverse effect is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the nonminority population and/or non-low-income population.

Consistent with the EO, OSMRE provided for effective community participation in the NEPA process for the relevant populations (see FEIS, **Section 6.1, Consultation Process**). Populations living in the EIS analysis area meet the environmental justice guidelines for minority and low-income residents. Effects of Alternative 2 on these minority and low-income populations were analyzed in the FEIS. The selected alternative would extend the life of the Rosebud Mine by 8 years, delaying the onset of adverse economic impacts associated with mine closure and possibly allowing time for other sectors to develop. There may be potential for adverse health risk to environmental justice populations and individuals from incidental exposure to PM, DPM, and coal dust while traveling along public roads adjacent to the project area, and roads connecting the project area to the Rosebud and Colstrip Power Plants. These effects would be negligible and short-term, and not disproportionate relative to the overall population (see FEIS, **Section 4.16.3, Public Health Impacts**).

Finding

OSMRE's decision to select Alternative 2 was made in consideration of and consistent with EO 12898 as described above in **Section 2.5.1.8** of this ROD and supported by the analysis in **Section 4.16** of the FEIS.

3.5.2 Environmental Effects

OSMRE's decision considered the environmental effects of each alternative. The intensity of effects for Alternative 2 (the selected alternative) and Alternative 3 were considered. All direct and indirect impacts, including their intensities, are described fully in **Chapter 4** of the FEIS, and cumulative impacts are described in **Chapter 5** of the FEIS. For a summary comparison of effects by all resources analyzed in the FEIS, see **Table A-1** in **Appendix A** of this document, which also is included in **Section 2.7** of the FEIS.

Direct, indirect, and cumulative effects were largely similar between Alternatives 2 and 3, and the differences in effect intensities between these two alternatives were minimal. OSMRE concluded that the requirements of MSUMRA, which equate to the requirements of SMCRA under the Agreement (described above in **Section 3.5.1.2**), are sufficiently protective of resources in the project area and vicinity and would be met by the selected alternative.

CHAPTER 4. PUBLIC INVOLVEMENT

4.1 EIS SCOPING PERIOD

Two formal public scoping periods were held before preparation of the EIS. DEQ held its scoping period in fall 2012. OSMRE did not become a co-lead agency on the EIS until 2013, so a second scoping period was held in fall 2013. The intent of both scoping periods was to gather comments, concerns, and ideas from those who have interest in or may be affected by the Proposed Action. Key issues raised in scoping comments are described above in **Section 1.3**. A detailed accounting of DEQ and OSMRE scoping processes can be found in the Public Scoping Report and Public Scoping Report II, respectively. Both reports are available on the OSMRE website: <http://www.wrcc.osmre.gov/initiatives/westernEnergy.shtm>.

4.2 DRAFT EIS PUBLIC MEETING AND PUBLIC REVIEW

OSMRE and DEQ conducted a 60-day public comment period on the Draft EIS. The initial 45-day public comment period on the Draft EIS began on January 4, 2018, and was noticed in the *Federal Register*, on agency websites, in legal notices, and in local newspapers. At the request of the Northern Plains Resource Council and Montana Environmental Information Center, the comment period was extended by the agencies to March 5, 2018 (a 15-day extension). OSMRE and DEQ jointly hosted a public open house and town hall meeting in Colstrip, Montana, on February 13, 2018. Substantive public comments received during the public comment period and agency responses are included in the **Appendix F, Comments on the DEIS and Responses**.

CHAPTER 5. ADDITIONAL INFORMATION

The FEIS and electronic copies of this ROD can be downloaded as PDFs from OSMRE's webpage: <https://www.wrcc.osmre.gov/initiatives/westernEnergy.shtm>. The ROD is also available to view at OSMRE Western Region Office, the BLM Miles City Field Office, and the BLM State Office (addresses and hours of availability are below). For additional information regarding the project or to request a hard copy version of the ROD, please contact the OSMRE Project Coordinator, Logan Sholar, lsholar@osmre.gov, (303) 293-5036.

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Between the hours of 7:45 AM and 4:30 PM Monday
through Friday (Closed Saturday and Sunday)

OSMRE, Western Region
1999 Broadway, Suite 3320
Denver, CO 80202
Between the hours of 8:00 AM and 4:00 PM Monday
through Friday (Closed Saturday and Sunday)

BLM State Office
5001 Southgate Drive
Billings, MT 59101
Between the hours of 8:00 AM and 4:00 PM Monday
through Friday (Closed Saturday and Sunday)

CHAPTER 6. APPROVAL

In consideration of the information presented above, I approve this OSMRE ROD and the selection of Alternative 2 (Proposed Action) as described in **Section 3.2** of this ROD. The State of Montana has approved the MSUMRA permit, which sets forth requirements to minimize environmental impacts that could potentially occur as a result of the Proposed Action. Accordingly, I recommend approval without conditions of the new mining plan to the ASLM. This action can be implemented following approval of the mining plan by the ASLM.

This ROD is effective on signature.



David Berry, Regional Director, Regions 5, 7, 8, 9, 10 and 11
Office of Surface Mining Reclamation and Enforcement

6/18/19

Date

For additional information regarding the project, this ROD, or the FEIS, please contact the OSMRE Project Coordinator: Logan Sholar, OSMRE Western Region, 1999 Broadway, Suite 3320, Denver, CO 80202, lsholar@osmre.gov, (303) 293-5036.

Appendix A Summary of Impacts Table

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Table A-1. Summary Comparison of Direct and Indirect Environmental Impacts.

Resource	Alternative 1 – No Action	Alternative 2 – Proposed Action	Alternative 3 – Proposed Action Plus Environmental Protection Measures
Topography	No impacts	Changes in topography during mining would be noticeable and would be short-term, major, and adverse. In the years immediately following reclamation, impacts from erosion would be negligible. Over time, differential erosion of the spoil would create a hummocky terrain with fragments of more resistant stone scattered throughout the analysis area; these impacts would be long-term, minor, and adverse. Differential erosion of backfilled areas and unmined drainage basins would result in topographic inversion of the analysis area; these impacts would be long-term, major, and adverse.	Impacts would be similar to those described for Alternative 2. Improved water management during mining may result in decreased short-term erosion rates, and tighter elevation control may result in a more stable land surface.
Air Quality	No impacts	Air emissions would not result in exceedances of any NAAQS. Direct and indirect impacts on air quality would be short-term, negligible to minor, and adverse. Deposition impacts would be long-term, negligible to minor, and adverse.	Impacts would be the same as those described for Alternative 2.
Climate and Climate Change	No impacts	Direct and indirect greenhouse gas emissions would contribute incrementally to climate change. Direct impacts on climate change would be negligible relative to other sources.	Impacts would be the same as those described for Alternative 2.

Table A-1. Summary Comparison of Direct and Indirect Environmental Impacts.

Resource	Alternative 1 – No Action	Alternative 2 – Proposed Action	Alternative 3 – Proposed Action Plus Environmental Protection Measures
Public Health	<p>There would be no immediate effects on the public health of the analysis area's overall population and sensitive subpopulations, including those with chronic disease and American Indian populations. There may be long-term negligible impacts on public health within the direct effects analysis area resulting from fugitive dust from reclamation activities. If and when the Rosebud Mine does close, revenues that support access to public health services, such as hospitals, libraries, schools, and other services, would cease, resulting in direct and indirect moderate to major long-term effects on social services and resources.</p>	<p>The public's exposure to diesel particulate matter (DPM) and fugitive dust, including coal dust, would be low due to limited exposure time and extent. Deposition of airborne contaminants of potential concern on soils and surface waters may occur, but it is not likely that the public would be exposed to these except incidentally. Project impacts on air concentrations of PM would result in a short-term minor adverse impact on public health within the project area and public access roads. Members of the public would not be permitted within the project area where PM and other hazardous substances would be present at higher concentrations. Any potential exposure of sensitive receptors to PM would be incidental and limited in duration. Therefore, the direct impacts on public health from PM_{2.5} and PM₁₀, including from DPM and coal dust, would be short-term, negligible to minor, and adverse. There is a low likelihood that human consumption or contact with contaminated surface or ground water would occur from the Proposed Action. With monitoring and mitigation activities, increased risk to public health from exposure to water because of the Proposed Action is not likely. The Proposed Action would have a short-term moderate beneficial impact on public health as it relates to economics and social services; a short-term negligible impact on community health; and a short-term minor adverse effect on land use as it relates to public health. Effects on public safety from noise and from solid and hazardous waste would be none to negligible.</p>	<p>Impacts would be similar as those described for Alternative 2.</p>

Table A-1. Summary Comparison of Direct and Indirect Environmental Impacts.

Resource	Alternative 1 – No Action	Alternative 2 – Proposed Action	Alternative 3 – Proposed Action Plus Environmental Protection Measures
Geology	No impacts	Horizontal continuity of the geology in the analysis area would be lost during mining, and the overburden would be vertically altered. Rock-outcrop features of historical significance would also be lost. Impacts would be short- and long-term, major, and adverse. Impacts would last until the spoil used to replace the geologically distinct layers was eroded away.	Impacts would be similar to those described for Alternative 2. Rock-outcrop features of historical significance would be identified prior to disturbance as part of a geological resources survey, and if DEQ determines the feature should remain in place, the mine plan would be adjusted to avoid long-term major adverse impacts.
Water Resources – Surface Water	Impacts due to current and future mining and/or reclamation in other areas of the Rosebud Mine would continue.	Impacts on stream and spring flows, pond levels, and hydrologic balance due to road relocation and construction would be short-term, minor, and adverse. Impacts from changes in flow volumes, timing of flows, and frequency of flows would be long-term, minor to moderate, and adverse. Impacts due to mining activities within the 100-year floodplains would be short-term, minor, and adverse. Impacts on surface water quality due to mining would be long-term, minor to moderate, and adverse. Some surface water resources would be permanently lost or changed.	Impacts on stream and spring flows, pond levels, and hydrologic balance would be similar to those described for Alternative 2. Pit water would be managed to protect surface water quality outside of the analysis area. Postmine topography would be designed using 5-foot (instead of 10-foot) contours. DEQ approval would be required for drainage designs with estimated 2-year, 24-hour peak flows greater than 5 cfs (vs. the standard 15 cfs).

Table A-1. Summary Comparison of Direct and Indirect Environmental Impacts.

Resource	Alternative 1 – No Action	Alternative 2 – Proposed Action	Alternative 3 – Proposed Action Plus Environmental Protection Measures
Water Resources – Ground Water	No impacts	Mining of the project area would permanently remove the Rosebud Coal aquifer and result in long-term reduction or elimination of the bedrock ground water contribution to baseflow in the perennial and intermittent reaches of the major tributaries. Long-term ground water drawdown due to mining would extend upgradient to the south beyond the mine area. Drawdown may affect existing water users of the Rosebud Coal aquifer. Mining would permanently remove springs in the project area whose ground water source is either the Rosebud Coal or overburden that would be removed. Replacement of the Rosebud Coal with spoil would have long-term, moderate, adverse impacts on ground water quality in the analysis area. When the spoil is sufficiently resaturated to discharge to alluvium in the major tributaries, impacts on alluvial ground water quality would likely be long-term, minor to moderate, and adverse.	Impacts would be similar to those described for Alternative 2. Pit-water handling requirements during mining would reduce potential impacts on alluvial ground water downgradient of storage ponds.
Water Resources – Water Rights	Impacts due to current and future mining and/or reclamation in other areas of the Rosebud Mine would continue.	If a surface or ground water right became unusable for its specified purpose due to flow or water quality changes, the impact would be short-term, moderate, and adverse; a suitable replacement source would be provided by Western Energy. If a water right were impacted by mining but still contained sufficient water of adequate quality to meet beneficial use needs, the impact would be short-term, negligible to minor, and adverse.	Impacts would be the same as those described for Alternative 2.

Table A-1. Summary Comparison of Direct and Indirect Environmental Impacts.

Resource	Alternative 1 – No Action	Alternative 2 – Proposed Action	Alternative 3 – Proposed Action Plus Environmental Protection Measures
Vegetation	No impacts	The removal of 4,260 acres of vegetation for mining activities would result in direct impacts that are short-term, moderate, and adverse. Decreased vegetation vigor and diversity, and the potential for changes to vegetation communities from a reduced amount of surface and ground water in the area, would result in impacts that are long-term, minor, and adverse. The indirect impacts on vegetation from power-plant emissions would be long-term, minor, and adverse.	Impacts would be similar to those described for Alternative 2. Development of a water-management plan and modifications to reclamation practices related to soil stockpiling, soil redistribution, and seeding to better manage water and improve reclamation success would have a beneficial effect on vegetation.
Wetlands and Riparian Zones	No impacts	Surface disturbance and changes to surface and ground water during mining activities would result in impacts that are short- and long-term, moderate, and adverse. A wetland mitigation plan would reduce the loss of wetland function and values. Indirect impacts on wetlands from power-plant emissions would be negligible.	Impacts would be similar to those described for Alternative 2. Development of a water-management plan and additional requirements for the wetland mitigation plan would have a beneficial effect on wetlands and would reduce long-term adverse impacts.
Fish and Wildlife Resources	No impacts	Mining activities would result in loss of habitat due to surface disturbances that remove vegetation, direct mortality or injury due to vehicle or construction equipment collisions, and behavioral shifts such as a change in movement or displacement to other areas due to increased human activity and noise from blasting and mining operations. Direct impacts on small mammals, carnivores, big game, migratory birds, shorebirds, raptors, reptiles and amphibians, and aquatic species would be short- and long-term, negligible to minor, and adverse. Impacts on bats would be short- and long-term, moderate, and adverse. Indirect impacts from power-plant emissions would be negligible.	Impacts would be the same as those described for Alternative 2. Development of a water-management plan in conjunction with a nonjurisdictional wetland mitigation plan would result in potential beneficial impacts on most wildlife species that depend on wetland and riparian habitat.

Table A-1. Summary Comparison of Direct and Indirect Environmental Impacts.

Resource	Alternative 1 – No Action	Alternative 2 – Proposed Action	Alternative 3 – Proposed Action Plus Environmental Protection Measures
Special Status Species	No impacts	Mining activities would result in loss of habitat due to surface disturbances that remove vegetation, direct mortality or injury due to vehicle or construction equipment collisions, and behavioral shifts such as a change in movement or displacement to other areas due to increased human activity and noise from blasting and mining operations. There would be no impacts on Federally listed threatened and endangered species. Direct impacts on state species of concern would be short- and long-term, moderate, and adverse. Indirect impacts from power-plant emissions would be negligible.	Impacts would be the same as those described for Alternative 2. Development of a water-management plan in conjunction with a nonjurisdictional wetland mitigation plan would result in potential beneficial impacts on most wildlife species that depend on wetland and riparian habitat.
Cultural and Historic Resources	No impacts	Surface disturbance from mining and wetland mitigation activity may result in disturbance or destruction of historic properties located within the analysis area, and these impacts would be long-term, major, and adverse. Adverse impacts would be resolved through both a property-specific Memorandum of Agreement and a long-term PA stipulating measures for continued Section 106 compliance.	Wetland mitigation has the potential to adversely affect known and unknown historic properties. A PA would stipulate measures for Section 106 compliance prior to undertaking wetland mitigation.

Table A-1. Summary Comparison of Direct and Indirect Environmental Impacts.

Resource	Alternative 1 – No Action	Alternative 2 – Proposed Action	Alternative 3 – Proposed Action Plus Environmental Protection Measures
Socioeconomic Conditions	Annual economic impacts associated with continued operation of the Rosebud Mine would be short-term and negligible since the mine would continue to support local economic activity. With the retirement of the Colstrip Power Plant Units 1 and 2 in 2022, impacts of changes in mine operation would likely be short-term and moderate since the mine would support local economic activity at a reduced level. Eventual mine closure would likely result in long-term, moderate to major negative impacts.	Impacts would be the same as those described for Alternative 1.	Impacts would be the same as those described for Alternative 1.
Environmental Justice	When the Rosebud Mine eventually closes, all populations within Rosebud County will be negatively affected, including the substantial environmental justice populations. Impacts would be long-term, negligible, and adverse.	Alternative 2 would delay the onset of adverse economic impacts, possibly allowing time for other sectors to develop. Therefore, impacts would be short-term and minor because the mine would continue to support local economic activity during the life of the mine.	Impacts would be the same as those described for Alternative 2.

Table A-1. Summary Comparison of Direct and Indirect Environmental Impacts.

Resource	Alternative 1 – No Action	Alternative 2 – Proposed Action	Alternative 3 – Proposed Action Plus Environmental Protection Measures
Visual Resources	No impacts	Mining activities would change the visual landscape for drivers traveling along Horse Creek Road through the project area through changes to geology and topography, and removal of vegetation; the impact would be short-term, moderate, and adverse. For seven residences adjacent to the Rosebud Mine, active mining adjacent to existing mining areas may be visible in a small portion of the viewshed from a few locations. Depending on location, impacts would range from none to long-term, moderate, and adverse.	Impacts would be similar to those described for Alternative 2. Measures to improve revegetation success and a pre-mining geological resource survey to identify rock-outcrop features to be left intact may help the area return to pre-mine visual conditions more quickly.
Recreation	No impacts	All current use of the land for recreation (primarily hunting) would be unavailable during mine operations. Hunting opportunities on mine-related disturbance areas would be lost until revegetation and forage production were comparable to pre-mining levels associated with adjacent land. Impacts would be long-term, moderate, and adverse.	Impacts would be the same as those described for Alternative 2.
Paleontology	No impacts	Paleontological resources not identified or salvaged prior to mining would be permanently lost, resulting in impacts that are short- and long-term, major, and adverse. However, previously unknown paleontological resources may also be identified during mining activities and potentially salvaged, resulting in a beneficial impact.	The Unanticipated Discovery Plan required under Alternative 3 would increase the potential for discovery of paleontological resources of scientific interest. Discovery would not ensure protection but would help minimize unintentional destruction of these resources.

Table A-1. Summary Comparison of Direct and Indirect Environmental Impacts.

Resource	Alternative 1 – No Action	Alternative 2 – Proposed Action	Alternative 3 – Proposed Action Plus Environmental Protection Measures
Access and Transportation	The haul road from Area C West would likely be decommissioned 15 to 20 years earlier.	A 4.2-mile segment of Horse Creek Road in the northeast/north-central portion of the analysis area would be relocated, and a 1.3-mile segment in the northwestern portion would be rerouted. Impacts from the relocation/reroute of Horse Creek Road would be short-term, minor, and adverse. The impacts due to haul, ramp, and service roads would be short-term, negligible, and adverse because the overall transportation system would not be disrupted.	Impacts would be the same as those described for Alternative 2.
Solid and Hazardous Waste	No impacts	Potential leaks or releases of solid or hazardous wastes would result in impacts that are short-term, negligible, and adverse. Impacts from boron toxicity related to the receipt and use of bottom ash at other permit areas of the mine would be short-term, negligible, and adverse.	Impacts would be the same as those described for Alternative 2.
Noise	No impacts	Direct impacts due to noise from mining and reclamation in the project area would be short- and long-term, negligible to minor, and adverse for the nearest rural residences. Indirect impacts due to noise from operation of the Rosebud and Colstrip Power Plants would continue to be moderate to minor for the residences in Colstrip and for those adjacent to the Rosebud Power Plant.	Impacts would be the same as those described for Alternative 2.
Land Use	No impacts	All current land uses within the analysis area would be temporarily disturbed during mine operations based on the timing of the approved mine plan. Impacts on grazing land would be long-term, moderate, and beneficial. Impacts on cropland would be long-term, moderate, and adverse.	Impacts would be similar to those described for Alternative 2. Loss of soil productivity and associated loss of cropland/grazing-land productivity would vary slightly, with productivity potentially returning to postmine conditions more quickly.

Table A-1. Summary Comparison of Direct and Indirect Environmental Impacts.

Resource	Alternative 1 – No Action	Alternative 2 – Proposed Action	Alternative 3 – Proposed Action Plus Environmental Protection Measures
Soil	No impacts	Soil salvage, storage, and respreading would result in soil erosion and changes to physical, chemical, and biological soil characteristics. During mining, soil erosion impacts would be short-term, minor, and adverse. Erosion rates in reclaimed areas would return to pre-mine rates within 2 years once vegetation stabilizes the surface. It would be many years before physical, chemical, and biological soil characteristics return to pre-mine conditions; impacts in reclaimed areas would be long-term, minor, and adverse.	Contouring soil stockpiles during mining would reduce short-term erosion from stockpiles compared to Alternative 2. Applying organic amendments such as grass to the upper 4 inches of soil in small problem areas (i.e., areas lacking sufficient organic matter, areas with limited vegetation cover, or areas susceptible to erosion) would enhance soil productivity and reduce erosion when compared to Alternative 2. Long-term impacts on soil would be the same as those described for Alternative 2.