



U.S. DEPARTMENT OF THE INTERIOR  
**BUREAU OF LAND  
MANAGEMENT**

November 2024

# Miles City Field Office

Record of Decision and Approved Resource Management Plan Amendment





This page intentionally left blank.



# United States Department of the Interior



BUREAU OF LAND MANAGEMENT  
Montana/Dakotas State Office  
5001 Southgate Drive  
Billings, MT 59101  
<https://www.blm.gov/montana-dakotas>

November 7, 2024

Dear Reader:

The Bureau of Land Management (BLM) Montana/Dakotas State Office has completed the Approved Resource Management Plan Amendment (RMPA). It will provide guidance for the management of 11.7 million acres of subsurface BLM mineral coal estate administered by the Miles City Field Office (MCFO).

The Approved RMPA is identical to Alternative D presented in the 2024 Proposed RMPA/ Final Supplemental Environmental Impact Statement (SEIS), making no BLM-administered coal available for further consideration for coal leasing within the planning area. The BLM has determined that the Approved RMPA is consistent with the purposes, policies, and programs associated with implementing its legal mandates.

The SEIS supporting this planning process includes the necessary National Environmental Policy Act analysis to modify the allocation of BLM-administered coal in the MCFO. The Approved RMPA does not modify other resource management decisions in the MCFO 2015 RMP.

This Record of Decision (ROD) constitutes the final decision of the authorized officer for the allocation of BLM-administered coal in the MCFO. Copies of the BLM ROD and the Approved RMPA are available on the BLM ePlanning website at <https://eplanning.blm.gov/eplanning-ui/project/2021155/510> or by requesting a copy at:

Miles City Field Office  
111 Garryowen Road  
Miles City, MT 59301  
(406) 233-2800

We appreciate all who contributed to the completion of this Approved RMPA. We also appreciate the public involvement during this time by groups, organizations, and individuals.

Sincerely,

Sonya I. Germann  
State Director

---

**INTERIOR REGIONS 5 & 9 • MISSOURI BASIN & COLUMBIA PACIFIC NORTHWEST**

KANSAS, MONTANA, NEBRASKA, NORTH DAKOTA, SOUTH DAKOTA, & IDAHO, OREGON, WASHINGTON

This page intentionally left blank.



---

## TABLE OF CONTENTS

Part	Page
------	------

---

<b>PART I – RECORD OF DECISION .....</b>	<b>I-1</b>
I.1    Introduction .....	I-1
I.1.1    Overview .....	I-1
I.1.2    Description of the Planning Area.....	I-1
I.2    The Decision.....	I-4
I.2.1    Decision Rationale.....	I-4
I.2.2    Mitigation Measures .....	I-5
I.2.3    Plan Monitoring .....	I-5
I.3    Alternatives .....	I-5
I.3.1    Alternatives Considered and Dismissed .....	I-5
I.3.2    Alternatives Analyzed in Detail .....	I-6
I.4    Public Involvement.....	I-8
I.4.1    Public Scoping .....	I-8
I.4.2    Public Review of and Comment on the Draft SEIS/RMPA .....	I-8
I.4.3    Governor’s Consistency Review.....	I-8
I.4.4    Protest Resolution.....	I-10
I.4.5    Consultation and Coordination .....	I-10
I.5    Availability and Approval of the Plan.....	I-11
<b>PART 2 – MILES CITY APPROVED RESOURCE MANAGEMENT PLAN AMENDMENT .....</b>	<b>2-1</b>
<b>PART 3 – REFERENCES.....</b>	<b>3-1</b>

---

TABLE	Page
-------	------

---

2-1    Coal Screening Results for RMP Amendment.....	2-1
--	-----

---

FIGURES	Page
---------	------

---

I-1    Surface Administration .....	I-2
I-2    BLM-administered Coal.....	I-3
2-1    Alternative D: Area Acceptable for Further Consideration for Leasing (Field Office Extent) .....	2-2

---

## APPENDIXES

---

A	Coal Screening Process
B	Coal Reasonably Foreseeable Development Scenario

---

## ACRONYMS AND ABBREVIATIONS

---

Full Phrase

BLM	United States Department of the Interior, Bureau of Land Management
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
DOI	United States Department of the Interior
EIS	environmental impact statement
FLPMA	Federal Land Policy and Management Act
MCFO	Miles City Field Office
NEPA	National Environmental Quality Act
NOA	notice of availability
NOI	notice of intent
RFD	reasonably foreseeable development
RMP	resource management plan
RMPA	resource management plan amendment
ROD	record of decision
SEIS	supplemental environmental impact statement
SHPO	State Historic Preservation Office
US	United States
USFWS	United States Department of the Interior, Fish and Wildlife Service



# Part I – Record of Decision

---

## I.1 INTRODUCTION

### I.1.1 Overview

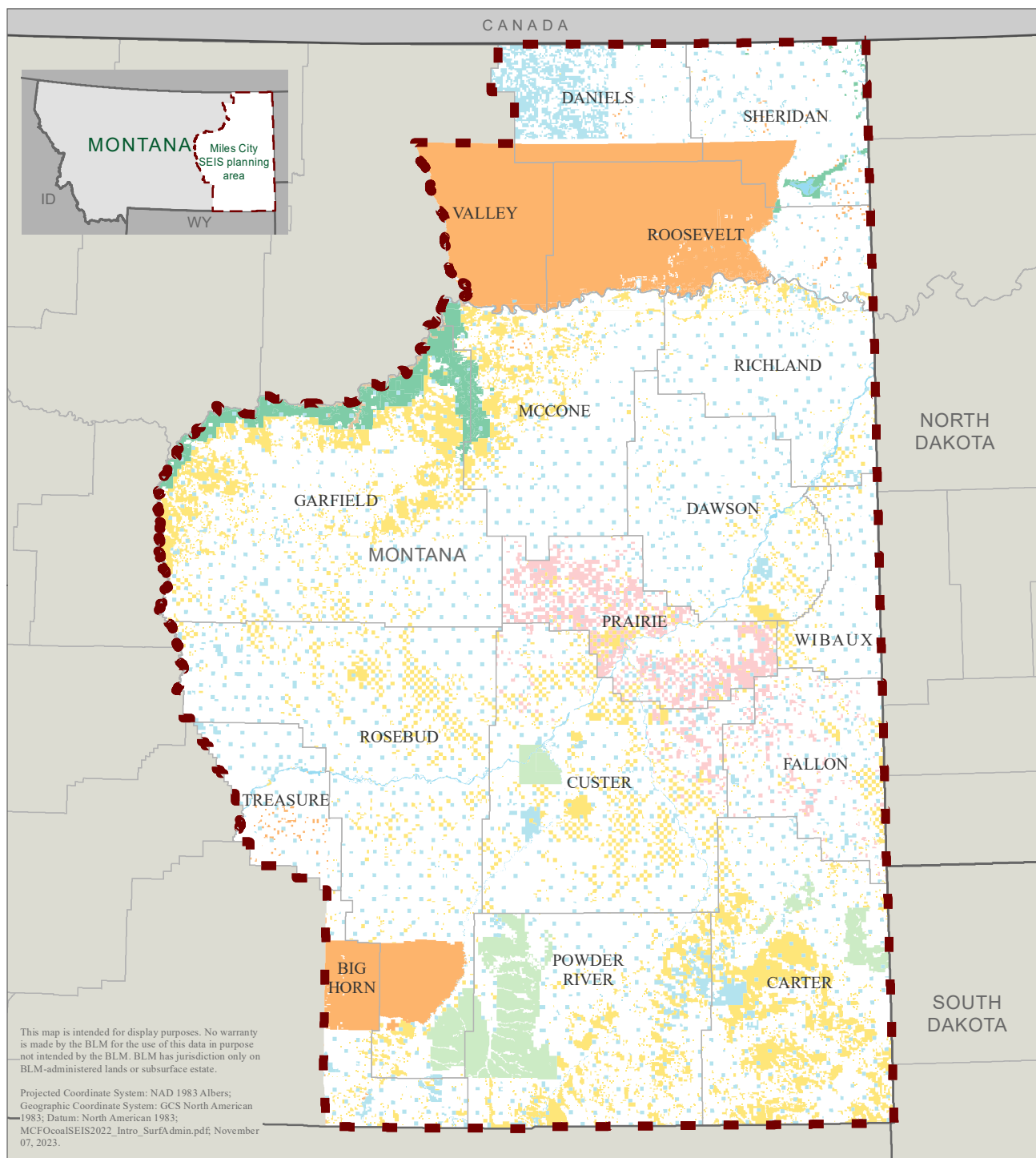
The United States (US) Department of the Interior, Bureau of Land Management (BLM) uses resource management plans (RMPs) to guide management of the land it administers. This record of decision (ROD) approves the BLM's proposal to manage BLM-administered lands in the Miles City Field Office (MCFO) as presented in the attached approved RMP Amendment. This RMP Amendment is in response to the federal district court's order in *Western Organization of Resource Councils, et al. v. Bureau of Land Management*, Civil Action No. CV-00076-GF-BMM). The district court found the BLM violated National Environmental Policy Act (NEPA) and ordered the BLM to complete a new coal screen and remedial NEPA analysis for the 2019 SEIS/RMPA (BLM 2019). Specifically, the order required that: (1) The BLM must complete new coal screening and NEPA analysis that considers no-leasing and limited coal leasing alternatives, (2) The BLM must disclose the public health impacts, both climate and non-climate, of burning fossil fuels (coal, oil, and gas) from the planning areas.

### I.1.2 Description of the Planning Area

The MCFO planning area includes all lands, regardless of ownership, in the 17 eastern Montana counties encompassed by the MCFO boundary.

The decision area is the BLM-administered federal coal in the MCFO. The MCFO administers approximately 2.7 million acres of surface lands and 11.7 million acres of subsurface federal coal estate for which the BLM has the authority to determine its availability.

Maps of the decision area and land ownership in the MCFO are in **Figure I-1** and **Figure I-2**.



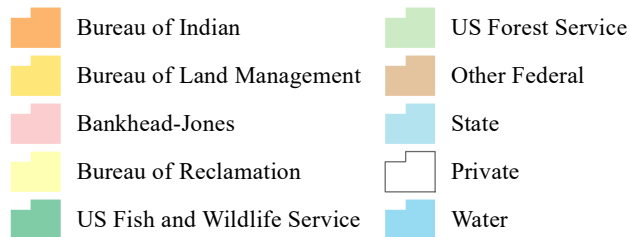
UNITED STATES DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
MILES CITY FIELD OFFICE



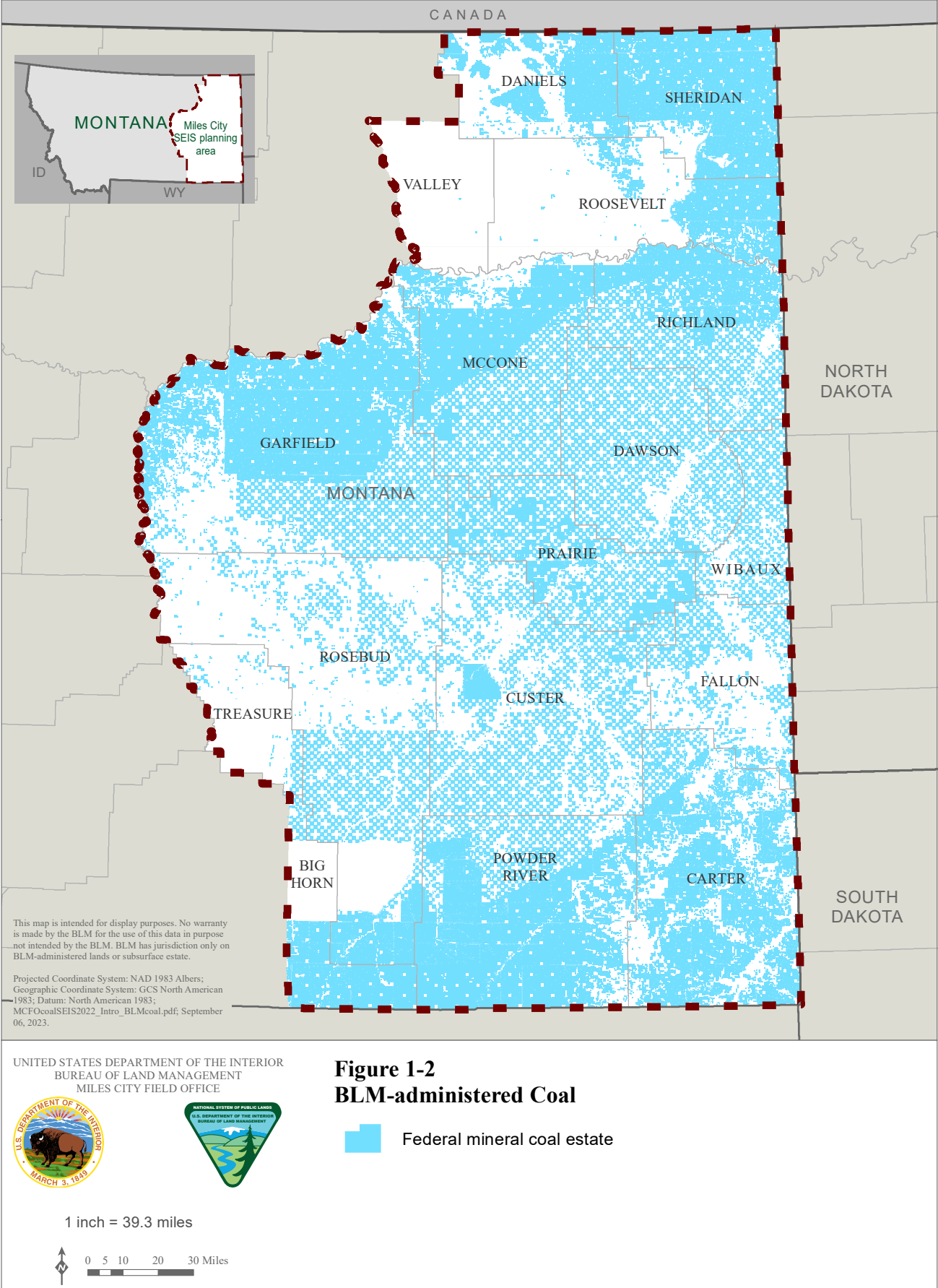
1 inch = 39.3 miles



**Figure 1-1**  
**Surface Administration**







## **I.2 THE DECISION**

The decision is hereby made to approve the attached RMP Amendment. The BLM selected the attached RMP amendment (Alternative D, No Leasing, for the Final SEIS/Proposed RMP Amendment) as the Approved RMP Amendment, making no BLM-administered coal available for further consideration for coal leasing within the planning area.

In addition, this Approved RMP Amendment meets the Purpose and Need by:

- Completing a new coal screening and analysis that considers a no-leasing and limited coal leasing alternatives.
- Disclosing the public health impacts, both climate and non-climate impacts, of burning fossil fuels (coal, oil, and gas) from the decision area.

In addressing these issues, the Approved RMP Amendment complies with the court order in *Western Organization of Resource Councils, et al. v. Bureau of Land Management* [4:20-cv-00076-GF-BMM].

The Approved RMP Amendment does not affect the area with coal development potential (screen 1), or the area determined to be suitable for surface coal mining (screen 2).

The Approved RMP Amendment makes unavailable 1,745,040 acres of BLM administered coal from further consideration for leasing in order to reduce greenhouse gas (GHG) emissions as a proxy for climate change. The BLM would not accept new coal lease applications, only existing coal leases could be developed in accordance with lease terms and conditions.

The BLM prepared the Miles City RMP Amendment in accordance with NEPA, the Council on Environmental Quality (CEQ) regulations implementing NEPA (40 Code of Federal Regulations [CFR] 1500–1508), the US Department of the Interior NEPA regulations (43 CFR 46), the requirements of the BLM’s NEPA Handbook, H-1790-1 (BLM 2008), and the BLM’s Land Use Planning Handbook, H-1601-1 (BLM 2005). Decisions identified in the approved RMP Amendment are final and become effective when this ROD is signed. The Approved RMPA would replace decisions for coal resource leasing availability in the 2021 Miles City Field Office Record of Decision (ROD)/Approved RMPA (BLM 2021).

Only land use plan-level decisions related to the allocation of BLM administered coal are made in this RMP Amendment; no implementation actions are included. Such actions will require further NEPA compliance and must demonstrate conformance with the RMP and this RMP Amendment.

### **I.2.1 Decision Rationale**

The Approved RMP Amendment is consistent with Presidential Executive Orders 13990 (Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis) and 14008 on Tackling the Climate Crisis at Home and Abroad (January 2021) and Interior Secretarial Order 3399 (Department-Wide Approach to the Climate Crisis and Restoring Transparency and Integrity to the Decision-Making Process). It also supports the nation’s long term climate strategy goal of net-zero emissions by 2050 (November 2021).



The Approved RMP Amendment considered analysis in the Final SEIS and reasonably foreseeable development, which indicates an overall market decline with no new mines projected, and the closure or conversion of domestic power plants. The Approved RMP best attains the continuity of existing mining operations at the Rosebud Mine to 2060 and Spring Creek Mine to 2035, while reducing long-term degradation and risks to public health or safety, and other consequences of greenhouse gas emissions.

### **1.2.2 Mitigation Measures**

The approved RMP Amendment does not include any new mitigation measures. Because the selected alternative, Alternative D, doesn't offer additional acres available for further consideration for future coal leasing, no stipulations are needed. See the 2015 Miles City approved RMP, Appendix L, for a full list of current mitigation measures for the MCFO.

### **1.2.3 Plan Monitoring**

The approved RMP Amendment does not include any new monitoring requirements. See the 2015 Miles City approved RMP, Appendix M, for a full list of current monitoring requirements for the MCFO.

## **1.3 ALTERNATIVES**

### **1.3.1 Alternatives Considered and Dismissed**

The BLM considered another approach to a "limited coal leasing" alternative, per the Order. It uses the same coal screen applications for Screen 1 (coal potential), 2 (unsuitability), and 4 (landowner consultation) as Alternative B. It also uses the same application of coal Screen 3 (multiple use) as Alternative B; however, the climate change criterion for air resources was modified to further restrict new federal coal leasing and development to the existing federal mine plan boundaries of active mines with federal coal leases. Under this criterion, the BLM would remove federal lands with coal potential outside the existing federal mine plan boundaries as unacceptable for further consideration for coal leasing. While this would not preclude expansion of the federal mine plan boundaries in the future, it would preclude the opportunity for operators to recover unleased federal coal in any expanded areas. Further, it would not preclude operators from recovering leased and unleased federal coal within the existing federal mine plan boundaries. This differs from Alternative C because Alternative C makes acceptable only pending federal lease applications within the federal mine plan boundary, whereas this alternative would make acceptable all unleased federal lands within the pending federal lease applications, including those outside of the existing federal mine plan boundaries.

There are two mines that are actively mining federal coal, the Rosebud Mine and Spring Creek Mine. The Rosebud Mine has existing federal leases with sufficient federal coal reserves to take the mine life to 2060. The BLM does not forecast a need beyond that at this time. The Spring Creek Mine has two pending federal coal lease applications: MTM 110693 lease modification for 150 acres and 6.9 million tons of recoverable coal, and MTM 10548501 lease application for 1,262 acres containing approximately 161 million tons of recoverable coal. In addition, Spring Creek Mine anticipates an additional 170 million tons (approximately 1,300 acres) for potential subsequent future leasing.

Under this alternative, the pending federal lease application (MTM 10548501) would be reduced to 662 acres (357 acres of BLM surface) and 87.85 million tons of federal coal. The pending lease modification (MTM 110693) would be reduced by 10 acres and does not modify the volume of recoverable coal (6.9 million tons). Spring Creek Mine would still have a need to obtain the approximately 73.15 million tons (approximately 600 acres) from the pending application that are outside the existing federal mine plan boundary and an additional 170 million tons (approximately 1,300 acres) for potential subsequent future leasing. In this scenario, the 243 million tons would come from the 2,600 acres of unleased federal coal within the existing federal mine plan boundary. This would require a new federal lease or leases by 2050 to extend the life of the mine to 2088, the same as under Alternatives A and B.

Even by limiting expansion to the existing federal mine plan boundary, this alternative was considered but eliminated from detailed analysis because it would have similar impacts and forecasted mine life (2088) to Alternatives A and B, which are analyzed in detail, because the reasonably foreseeable development (RFD) scenario would not change. Moreover, this alternative is similar to Alternative C because it limits expansion to within the federal mine plan boundary and reduces the pending federal lease applications. However, it allows for additional unleased federal coal within the existing federal mine plan boundary to be considered for leasing to carry mine operation into the future. Because this alternative is a variation between Alternatives B and C and the impacts would not be substantially different than Alternative B, this alternative was considered but eliminated from detailed analysis in this SEIS.

### **1.3.2 Alternatives Analyzed in Detail**

The BLM performed coal screens 1–4 in order to formulate the action alternatives (see **Appendix A**). In addition, the BLM reviewed the Minerals Appendix of the 2019 Proposed RMP/Final SEIS, decisions made in the 2021 RMP/Record of Decision (which precluded coal development; BLM 2015), new data, and new GIS data.

The unconstrained RFD scenario, or baseline RFD (see **Appendix B**), provides information about the level of coal mining and associated disturbance necessary to analyze temporal and spatial effects that could result from possible leasing and/or production of coal in the planning area during the life of a plan without land use management constraints on future actions. Under Alternatives A and B, the unconstrained RFD is not restricted due to the projected amount of federal coal acres being made acceptable in and around the existing mines. Therefore, the unconstrained RFD would be carried out in both Alternatives A and B and acres of disturbance (1,410 acres from pending lease applications and 1,300 acres from potential future subsequent lease applications) and associated environmental impacts would be the same. Under Alternative C, the amount of land acceptable for further consideration for coal leasing was reduced, thereby restricting the unconstrained RFD. Under Alternative C, leasing would be limited to the pending applications within the federal mine plan boundary. All lands outside of the federal mine plan boundary, as well as unleased federal coal within the federal mine plan boundary but outside of pending federal lease application areas, would be eliminated from further consideration for leasing, reducing disturbance (810 acres from pending lease applications); therefore, associated environmental impacts would be reduced. Under Alternative D, the unconstrained RFD would be further restricted to examine the impacts of no new federal leasing, with zero acres of additional disturbance forecast, and the



reduction of environmental impacts. Valid existing leases would continue under the approved permits.

### **Alternative A**

For the No Action Alternative, the BLM brought forward the management decision from the 2021 ROD/Approved RMPA (BLM 2021). This alternative applied a criterion for maintaining air quality standards as part of the multiple-use screen; however, existing air quality monitoring data and modeling completed in the 2015 Proposed RMP/Final EIS showed no exceedances of national air quality standards. Therefore, no geographic area of land was eliminated from further consideration for coal leasing because of air resources. However, federal lands were eliminated under Screen 3's multiple-use criterion because of conflicts with oil and gas wells; oil and gas units; perennial, riparian, and wetland resources; conservation easements; recreation areas; sport fishing reservoirs; areas of critical environmental concern; and cultural viewsheds. Under Alternative A, 1,214,380 acres are acceptable for further consideration for coal leasing and 530,420 acres are unacceptable for further consideration for coal leasing.

### **Alternative B**

Alternative B represents an approach to a “limited coal leasing” alternative, per the Order. The BLM applied the coal screens using the most up-to-date resource data to determine areas acceptable and unacceptable for further consideration for coal leasing. Under the Screen 3 (multiple use), the BLM applied a climate change criterion for air resources. The climate change criterion for air resources under the multiple-use screen restricts leasing and development to lands near existing mines in the decision area. Knowing that the 8-mile buffer around the then-existing mines and infrastructure analyzed in Alternative C of the 2019 Proposed RMPA/Final SEIS did not result in a reduction in anticipated coal production—and therefore did not satisfy the need to look at a “limited coal leasing” alternative—the BLM applied a climate change criterion for air resources that would restrict future federal coal leasing and development to a 2-mile area around existing federal mine plan boundaries approved by the Office of Surface Mining Reclamation and Enforcement in the decision area. Under this criterion, federal lands with coal potential outside this 2-mile area would be removed as unacceptable for further consideration for leasing. Under Alternative B, 69,310 acres would be acceptable for further consideration for coal leasing and 1,675,730 acres would be unacceptable for further consideration for coal leasing.

### **Alternative C**

Alternative C represents another approach to a “limited coal leasing” alternative, per the Order. It uses the same coal screen applications for Screen 1 (coal potential), 2 (unsuitability), and 4 (landowner consultation) as Alternative B. It also uses the same application of coal Screen 3 (multiple use) as Alternative B; however, the climate change criterion for air resources was modified to further restrict new federal coal leasing and development to pending federal lease applications within the existing federal mine plan boundaries of mines currently mining federal coal (see **Appendix A**). Whereas Alternative B would restrict coal leasing and development to a 2-mile buffer from the existing federal mine plan boundaries, Alternative C would apply a 0-mile buffer to pending federal lease applications within the approved federal mine plan boundaries. Under this criterion, the BLM would remove unleased federal lands with coal potential outside the pending federal lease applications as unacceptable for further consideration. Further, if existing federal leases are relinquished, canceled, or otherwise returned back to the BLM, those lands

would be unacceptable for further consideration for leasing. This would preclude the expansion of mines on federal coal outside of the existing federal mine plan boundaries, as well as outside pending federal lease applications within the existing federal mine plan boundaries. This would not preclude mine expansion to produce nonfederal coal. Under Alternative C, 810 acres would be acceptable for further consideration for coal leasing and 1,744,240 acres would be unacceptable for further consideration for coal leasing.

#### **Alternative D**

As directed by the Order, the BLM “shall consider a no leasing alternative” (page 20). Therefore, only existing federal leases with valid existing rights could be developed under Alternative D. Any unleased federal coal in the decision area, including within existing federal mine plan boundaries, would be removed as unacceptable for further consideration under this alternative. Alternative D uses the same coal screen applications for Screen 1 (coal potential), 2 (unsuitability), and 4 (landowner consultation) as Alternative B. It also uses the same application of coal Screen 3 (multiple use) as Alternative B; however, the climate change criterion for air resources was modified to consider the Order for a no-new-coal-leasing alternative.

Alternative D would apply the climate change criterion that eliminates all new emissions from federal coal leasing and development by prohibiting new federal coal leasing. Any unleased federal coal in the decision area, including within existing federal mine plan boundaries, would be removed as unacceptable for further consideration under this criterion. Alternative D is identified as the environmentally preferred alternative.

## **I.4 PUBLIC INVOLVEMENT**

### **I.4.1 Public Scoping**

The formal public scoping process for the Miles City SEIS/ RMP Amendment began with the publication of the Notice of Intent (NOI) in the *Federal Register* on October 3, 2022 (FR Doc. 2022-59818); the BLM also posted the NOI on the ePlanning website. A public scoping meeting was held on October 18, 2022. Additional information on public scoping can be found in the Miles City Field Office SEIS/ RMP Amendment Scoping Report, posted on the Miles City SEIS/ RMP Amendment ePlanning website, <https://eplanning.blm.gov/eplanning-ui/project/2021155/510>.

### **I.4.2 Public Review of and Comment on the Draft SEIS/RMPA**

On May 5, 2023, the Environmental Protection Agency published a notice of availability (NOA) in the *Federal Register* for the Miles City Draft SEIS/Potential RMPA. This initiated the 90-day public comment period on the Draft SEIS/RMP Amendment. A public comment meeting was held on June 6, 2023. The BLM also hosted an online public meeting on June 7, 2023. The BLM’s responses to the substantive comments are part of the public response report of the Final SEIS/Proposed RMP Amendment (Appendix H of the Final SEIS/Proposed RMP Amendment).

### **I.4.3 Governor’s Consistency Review**

The BLM’s planning regulations require that RMPs be “consistent with officially approved or adopted resource related plans, and the policies and programs contained therein, of other Federal agencies, State and local governments, and Indian tribes, so long as the guidance and resource management plans also are consistent with the purposes, policies, and programs of Federal laws and regulations applicable to public lands” (43 CFR 1610.3-2(a)).

The general requirement in the Federal Land Policy and Management Act (FLPMA) and planning regulations is to coordinate the resource management planning process with plans of other agencies, States, and local governments to the extent consistent with law (see FLPMA Section 202(c)(9) and 43 CFR 1610.3-1(a)) and the respective duties to be consistent with both officially approved or adopted plans (to the extent those plans are consistent with federal law, or to the maximum extent practical; see 43 CFR 1610.3-2(a)(b)). In accordance with FLPMA, the BLM was aware of and gave consideration to State, local, and tribal land use plans, and provided meaningful public involvement throughout the development of the Proposed RMPA/Final SEIS.

The BLM is aware that there are specific State laws and local plans relevant to aspects of public land management that are separate and independent of federal law. However, the BLM is bound by federal law; as a consequence, there may be inconsistencies that cannot be reconciled. FLPMA and its implementing regulations require that the BLM's RMPs be consistent with officially approved State and local plans only if those plans are consistent with the purposes, policies, and programs of federal laws and regulations applicable to public lands.

Where officially approved State and local plans or policies and programs conflict with the purposes, policies, and programs of federal laws and regulations applicable to public lands, there will be an inconsistency that cannot be resolved. With respect to officially approved State and local policies and programs (as opposed to plans), this consistency provision applies only to the maximum extent practical. While county and federal planning processes under FLPMA are required to be as integrated and consistent as practical, the federal agency planning process is not bound by or subject to State or county plans, planning processes, policies, or planning stipulations.

On May 17, 2024, the BLM initiated a 60-day Governor's consistency review on the publication of the Final SEIS/Proposed RMP Amendment in accordance with 43 CFR 1610.3-2(e). The BLM received a response letter, dated July 16, 2024, from the Governor's office. The letter identified a recommendation to withdraw the Proposed RMPA/Final SEIS and develop alternatives to consider additional plans, policies, and programs. The letter also identified inconsistencies with State laws, policies, programs and Plans. On August 12, 2024, the BLM Montana/Dakotas State Director responded to the Governor's letter clarifying how the Final SEIS is consistent, to the extent practical, with state laws, policies, and/or plans. It also addressed the Final SEIS as being responsive to the court order which directed BLM to consider limited leasing and no leasing alternatives and to complete a record of decision by December 3, 2024, and therefore, BLM cannot withdraw the Final SEIS. No changes were made to the Proposed RMPA/Final SEIS.

The Governor submitted an appeal to the BLM Director on September 18, 2024, appealing the State Director consistency response. In accordance with 43 CFR 1610.3-2, the Director notified the Governor the reasons for the determination to reject the Governor's recommendations. A Notice of Availability of the Director response is available in the federal register.

#### **I.4.4 Protest Resolution**

The NOA for the Final SEIS/Proposed RMP Amendment initiated the 30-day protest period. The protest period ended on June 16, 2024.

Pursuant to the BLM's planning regulations at 43 CFR 1610.5-2, any person who participated in the MCFO RMP Amendment planning process and had an interest that may be adversely affected by the BLM's planning decisions was allowed to protest proposed planning decisions within 30 days of when the NOA of the Final SEIS/Proposed RMP Amendment was published in the *Federal Register*. Note that the Final SEIS/Proposed RMP Amendment did not contain any implementation decisions that were subject to the appeal process by procedures set out by other BLM regulations.

The BLM received 8 protest letters during the 30-day protest period provided for the Final SEIS/Proposed RMP Amendment. In accordance with 43 CFR 1610.5-2, one of these letters was addressed to the BLM Director; however, the commenter did not participate in the planning process and the letter was dismissed due to being incomplete. The remaining seven protest letters were from parties who had standing to protest and contained valid protest issues that required a response from the BLM.

The BLM Director's decisions on the protests are summarized in the Director's Summary Protest Resolution Report, Miles City Final Supplemental Environmental Impact Statement and Proposed Resource Management Plan Amendment, which is available on the BLM website: <https://www.blm.gov/programs/planning-and-nepa/public-participation/protest-resolution-reports>. The Director concluded that the BLM Montana State Director followed the applicable laws, regulations, and policies and considered all relevant resource information and public input in developing the Proposed Plan Amendment. Each protesting party was notified in writing of the Director's findings and the disposition of their protests.

The BLM Director resolved the protests without making changes to the Proposed Plan.

#### **I.4.5 Consultation and Coordination**

##### **Consultation**

On September 28, 2022, the BLM sent letters initiating government-to-government consultation with 17 Native American tribes who claim cultural affiliation to, or traditional use of, the Miles City Field Office planning area. Consultation continued throughout the SEIS/RMP Amendment process to ensure that tribal input and concerns were considered in plan development and will continue in any subsequent project-level implementation. No issues were identified by the consulted tribes.

The BLM coordinated and consulted with Montana's State Historic Preservation Office (SHPO) throughout the SEIS/RMP Amendment process. This will continue with subsequent project-level implementation, where applicable. The BLM MCFO sent a letter on September 28, 2022, to the State Historic Preservation Office to notify them of this SEIS's scoping period. To identify and protect cultural resources in the decision area, the two agencies are coordinating under the National Historic Preservation Act. A letter was also sent notifying the SHPO of the availability of the Draft SEIS.



Section 7 of the Endangered Species Act of 1973 requires the BLM to consult with the US Fish and Wildlife Service (USFWS). On September 28, 2022, the BLM MCFO sent a letter to the US Department of the Interior, Fish and Wildlife Service, to notify them of this SEIS's scoping period. The two agencies had a meeting on December 12, 2022, and confirmed they would reinstate consultation. A letter was also sent notifying the USFWS of the availability of the Draft SEIS. After further review, the BLM made a determination of no effect for the Proposed Plan, Alternative D No Leasing. Under the Proposed Plan, there would be no new federal coal available for further consideration for leasing and therefore no new impacts would occur in the planning area.

### **Cooperating Agencies**

Coordination between the cooperating agencies was integral in the development of this SEIS/RMP Amendment. The following entities agreed to participate in the SEIS development as designated cooperating agencies and signed a memorandum of understanding with the BLM: Custer County Commissioners, McCone County Commissioners, Richland County Commissioners, Rosebud County Commissioners, Office of Surface Mining Reclamation and Enforcement, and the EPA. In addition, there were informal meetings and individual communications with agency representatives.

## **I.5 AVAILABILITY AND APPROVAL OF THE PLAN**


Copies of the ROD and the Approved Miles City RMP Amendment may be obtained from the BLM website at <https://eplanning.blm.gov/eplanning-ui/project/2021155/510> or by requesting a copy at the following location:

Bureau of Land Management  
Miles City Field Office  
111 Garryowen Road  
Miles City, MT 59301

**BLM Director Approval**

I hereby approve the land use plan decision. My approval of the land use plan decision in accordance with 43 CFR 1610.5-1 is based on an independent review of the Protest Resolution Report, ROD, Proposed RMPA/Final SEIS, and other documents made available to me. My decision constitutes the final decision of the Department of the Interior in accordance with the land use planning regulations at 43 CFR 1610.

  
\_\_\_\_\_  
Tracy Stone-Manning,  
BLM Director

  
\_\_\_\_\_  
Date

## Part 2 – Miles City Approved Resource Management Plan Amendment

---

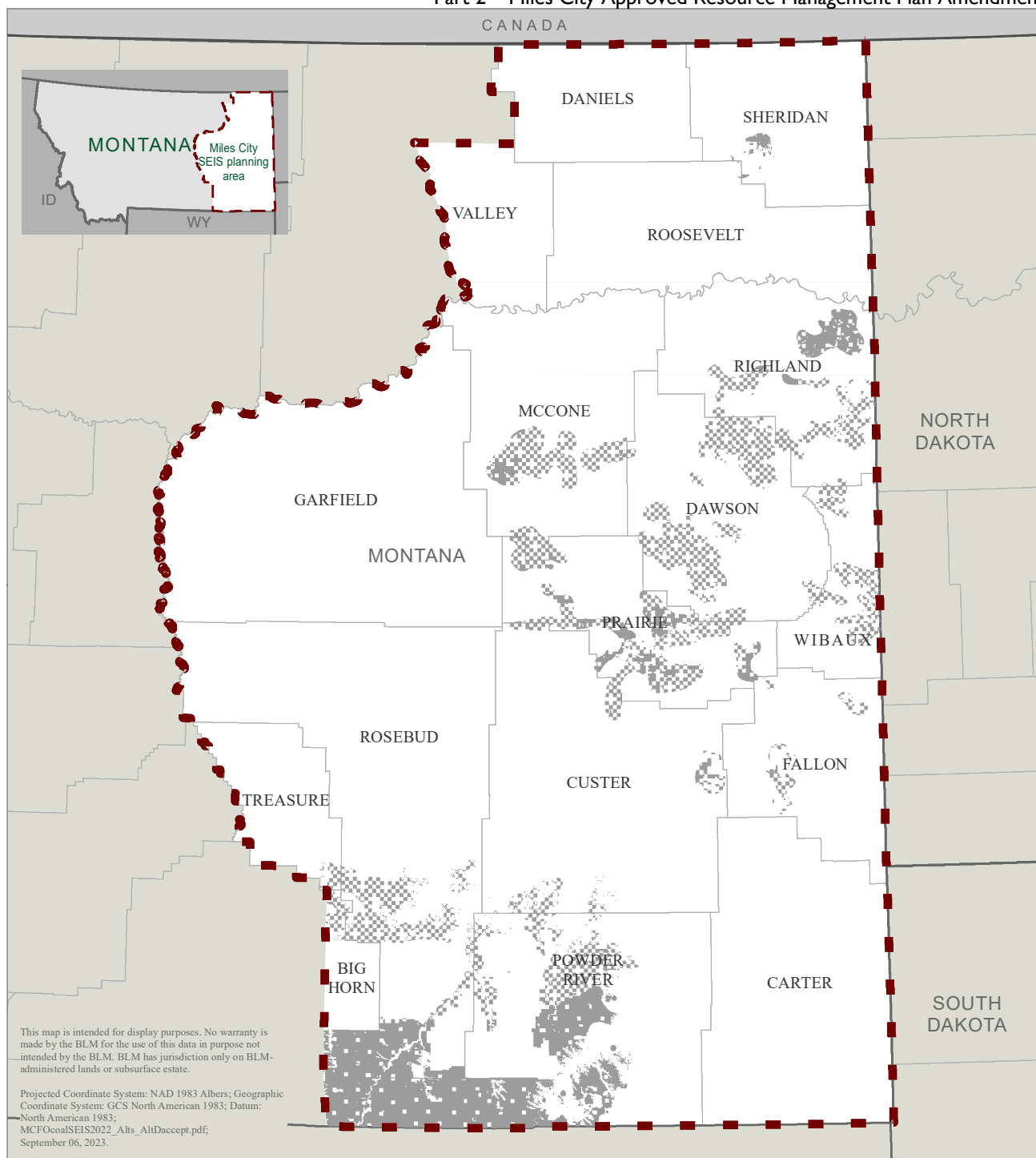
The MCFO RMP Amendment to the 2015 Miles City RMP is included below. The purpose and need for the RMP Amendment is to provide additional analysis for land use planning, specifically for analyzing coal in the MCFO and to determine the lands acceptable for further consideration for coal leasing in response to the federal district court's order in *Western Organization of Resource Councils, et al. v. Bureau of Land Management* [4:20-cv-00076-GF-BMM]. The decision area is BLM-administered federal coal in the MCFO. This includes approximately 11.7 million acres of subsurface federal mineral coal estate for which the BLM has the authority to determine its availability (**Figure 1-1**). To determine areas acceptable for further consideration for coal leasing in the RMP Amendment, the BLM completed new coal screens (**Appendix A**), updated the reasonably foreseeable development scenario (**Appendix B**), and developed a stipulation for coal development for unsuitability criterion 15, Habitat for Species of High Interest to the State. **Figure 2-1** shows the coal acceptability geospatial results of the four-step coal screening process for the RMP Amendment. **Table 2-1** depicts the overall coal screening results for the RMP Amendment. **Appendix A** provides the detailed acreages and figures depicting each of the coal screening criterion for the RMP Amendment.

**Table 2-1**  
**Coal Screening Results for RMP Amendment<sup>1</sup>**

<b>Coal Screen<sup>1</sup></b>	<b>Total (acres)<sup>2</sup></b>
Coal potential (Screen 1)	1,745,040
Unsuitable for all methods of coal mining without exception (Screen 2)	202,325
Unsuitable for all or certain stipulated methods of coal mining with exception/stipulation (Screen 2)	1,270,360
Unacceptable for further consideration for leasing (Screen 3)	1,745,040
Unacceptable for further consideration for leasing (Screen 4)	820
<b>Total Acceptable</b>	<b>0</b>
<b>Total Unacceptable</b>	<b>1,745,040</b>

<sup>1</sup> See **Appendix A** for full coal screening results.

<sup>2</sup> There is overlap between the coal screens; acres are not additive.



UNITED STATES DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
MILES CITY FIELD OFFICE



1 inch = 39.3 miles



**Figure 2-1**

**Alternative D: Area Acceptable for Further Consideration for Leasing (Field Office Extent)**



Unacceptable

\*No acres are acceptable for further consideration for leasing

The Approved RMP Amendment does not modify other resource allocation management decisions in the MCFO 2015 RMP; it only modifies management decision MD MIN I for the allocation of BLM administered coal in the MCFO. Goals, objectives, and management actions from the 2015 RMP for resources not related to the allocation of BLM-administered coal remain valid and applicable to future management decisions.

The Approved RMPA does not include any new mitigation measures. Because the selected alternative, Alternative D, doesn't offer additional acres for further consideration for coal leasing, no stipulations are needed. See the 2015 Miles City approved RMP, Appendix L, for a full list of current mitigation measures for the MCFO.

Only land use plan-level decisions related to the allocation of BLM administered coal are made in this Approved RMP Amendment; no implementation actions are included. Such actions will require further NEPA compliance and must demonstrate conformance with the RMP and this Approved RMP Amendment.



This page intentionally left blank.

## Part 3 – References

---

- BLM (United States Department of Interior, Bureau of Land Management). 2005. Handbook H-1601-I. BLM Land Use Planning Handbook. Washington, DC. March 2005. Internet website: [https://www.blm.gov/sites/blm.gov/files/uploads/Media\\_Library\\_BLM\\_Policy\\_Handbook\\_h1601-I.pdf](https://www.blm.gov/sites/blm.gov/files/uploads/Media_Library_BLM_Policy_Handbook_h1601-I.pdf).
- \_\_\_\_\_. 2008. Handbook H-1790-I. BLM NEPA Handbook. Washington, DC. January 2008. Internet website: [https://www.ntc.blm.gov/krc/system/files?file=legacy/uploads/16011/BLM\\_NEPA\\_Handbook\\_H-1790.pdf](https://www.ntc.blm.gov/krc/system/files?file=legacy/uploads/16011/BLM_NEPA_Handbook_H-1790.pdf).
- \_\_\_\_\_. 2015. Miles City Field Office Approved Resource Management Plan. BLM, Miles City Field Office, Miles City, MT. Internet website: [https://eplanning.blm.gov/public\\_projects/lup/59042/86804/104007/Miles\\_City\\_Field\\_Office\\_Approved\\_Resource\\_Management\\_Plan\\_\(2015\).pdf](https://eplanning.blm.gov/public_projects/lup/59042/86804/104007/Miles_City_Field_Office_Approved_Resource_Management_Plan_(2015).pdf).
- \_\_\_\_\_. 2019. Miles City Field Office Proposed Resource Management Plan Amendment and Final Supplemental Environmental Impact Statement. BLM, Miles City Field Office, Miles City, MT. Internet website: <https://www.govinfo.gov/content/pkg/GOVPUB-I53-PURL-gpo127568/pdf/GOVPUB-I53-PURL-gpo127568.pdf>.
- \_\_\_\_\_. 2021. Miles City Field Office Record of Decision and Approved Resource Management Plan Amendment. BLM, Miles City Field Office, Miles City, MT. Internet website: [https://eplanning.blm.gov/public\\_projects/116998/200282983/20032221/250038420/MCFO\\_ROD-ARMP%20\(2021-01-04\)%20FINAL.pdf](https://eplanning.blm.gov/public_projects/116998/200282983/20032221/250038420/MCFO_ROD-ARMP%20(2021-01-04)%20FINAL.pdf).

This page intentionally left blank.

---

# Appendix A

## Coal Screening Process

This page intentionally left blank.



---

# TABLE OF CONTENTS

Section	Page
---------	------

---

## APPENDIX A. COAL SCREENING PROCESS.....A-1

A.1	Introduction .....	A-1
A.2	Regulatory Overview .....	A-1
A.3	Coal Screening Results .....	A-3
A.3.1	Screen 1—Coal Development Potential.....	A-3
A.3.2	Screen 2—Unsuitability.....	A-3
A.3.3	Screen 3—Multiple Use .....	A-5
A.3.4	Screen 4—Consultation with Qualified Surface Owners .....	A-8
A.4	References .....	A-9

---

## TABLES

TABLES		Page
A-1	Screen 2 Results.....	A-3
A-2	Screen 3 Results.....	A-6

---

## FIGURES *(see Attachment 1)*

---

- A-1 Screen 1 Coal Development Potential
- A-2 Screen 2 Criterion 1 (Without Exception)—Federal Land System
- A-3 Screen 2 Criterion 2 (With Exception)—Federal Lands within Rights-of-Ways
- A-4 Screen 2 Criterion 3 (With Exception)—Buffer Zones along Public Roads, Schools, and Parks
- A-5 Screen 2 Criterion 4 (Without Exception)—Wilderness Study Area
- A-6 Screen 2 Criterion 5 (Without Exception)—Scenic Areas
- A-7 Screen 2 Criterion 7 (With Exception)—Historic Lands and Sites
- A-8 Screen 2 Criterion 9 (With Exception)—Federally Designated Critical Habitat for Threatened and Endangered Species
- A-9 Screen 2 Criterion 13 (With Exception)—Falcon Nesting Sites
- A-10 Screen 2 Criterion 14 (With Exception)—Migratory Birds of High Federal Interest
- A-11 Screen 2 Criterion 15 (With Exception)—Habitat for Species of High Interest to the State
- A-12 Screen 2 Criterion 16 (Without Exception)—100-Year Floodplain
- A-13 Screen 2 Criterion 17 (With Exception)—Municipal Watersheds
- A-14 Screen 2 Criterion 19 (Without Exception)—Alluvial Valley Floors
- A-15 Screen 2 (Unsuitable for All or Certain Stipulated Methods of Coal Mining)
- A-16 Screen 3 Multiple-Use Decisions—Cultural Viewshed, Recreation Area, and ACECs
- A-17 Screen 3 Multiple-Use Decisions—Oil and Gas
- A-18 Screen 3 Multiple-Use Decisions—Biological Resources
- A-19 Screen 3 Multiple-Use Decisions—Air Resources Alternative B
- A-20 Screen 3 Multiple-Use Decisions—Air Resources Alternative C
- A-21 Screen 3 Multiple-Use Decisions—Air Resources Alternative D
- A-22 Screen 3 (Multiple Use)—Alternative B
- A-23 Screen 3 (Multiple Use)—Alternative C
- A-24 Screen 3 (Multiple Use)—Alternative D
- A-25 Screen 4 Consultation with Qualified Surface Owners

---

## ATTACHMENTS

---

- 1 Figures
- 2 Sample Private Landowner Letter

# Appendix A. Coal Screening Process

## A.1 INTRODUCTION

As part of the land use planning process (regulated under 43 Code of Federal Regulations [CFR] 1600), surface management agencies are charged with filtering lands overlying federally administered coal through four screens. These screens result in the allocation of lands as acceptable for further consideration for leasing and development, giving consideration to resource conflicts with coal development (43 CFR 3420.1–4(d)).

This appendix describes the coal screening process undertaken by the United States (US) Department of the Interior, Bureau of Land Management (BLM) for the Miles City Field Office (MCFO), complying with 43 CFR 3420.1-4(e). The screening process informs potential land use decisions regarding coal leasing availability under the alternatives analyzed in this supplemental environmental impact statement (SEIS).

In the 2019 SEIS, the BLM updated the coal screens from those used in the 2015 Miles City Approved Resource Management Plan/Record of Decision (RMP/ROD; BLM 2015a). The results of that screening process are static for the purposes of this SEIS. That is, the BLM did not update the coal screens for Alternative A, which is the 2019 coal screen results. Therefore, the acreages and data reported in this appendix apply only to Alternatives B, C, and D. The total acres acceptable for further consideration for leasing and development based on this coal screening process are in **Chapter 2, Table 2-3, Table 2-4, and Table 2-6.**

## A.2 REGULATORY OVERVIEW

Federal coal is governed by Section 522(b) of the Surface Mining Control and Reclamation Act and by the Federal Land Management and Policy Act and its implementing regulations at 43 CFR 3400 and 43 CFR 1600. One aspect of coal leasing governed under these regulations is land use planning (43 CFR 3420.1–4(d); 43 CFR 1610.7-1) and the review of federal lands for suitability for coal leasing (43 CFR 3461). These regulations identify certain lands as unsuitable for surface mining or surface mining operations because they contain significant values that conflict with coal development. These include components of the National Wildlife Refuge System, the National System of Trails, and incorporated cities, towns, and villages, among other entities. Other unsuitability criteria include critical habitat for threatened and endangered species and cultural resources listed on the National Register of Historic Places. Essentially, these regulations identify certain lands as unsuitable for surface mining or surface mining operations because they contain significant values that conflict with coal development. Therefore, through the application of the coal screens, areas were eliminated from further consideration for coal leasing where protection or use of the noncoal resource would be precluded by surface coal mining and where the noncoal resource or use is of greater value than coal.

The regulations at 43 CFR 3420 govern the land use planning process as it pertains to coal, including the four coal screens for identifying areas acceptable for further consideration for leasing and unsuitable for surface mining or surface mining operations (43 CFR 3420.1–4). Under this process, the BLM must complete the following:

1. Identification of coal with development potential—Lands determined to have development potential are considered acceptable for further consideration for leasing. These lands are applied to the remaining coal screens. Lands determined to not have development potential are eliminated from further consideration for leasing.
2. Application of unsuitability criteria—Lands with coal potential are assessed with procedures outlined in 43 CFR 3461. Lands with coal potential may be eliminated from further consideration for leasing if they are determined unsuitable without exception pursuant to Section 522(b) of the Surface Mining Control and Reclamation Act. In accordance with 43 CFR 3461.2-1, the BLM could, based on additional site-specific surveys or changes in resource conditions, change the unsuitability determination of a given tract at the activity-planning stage.
3. Multiple-use conflict analysis—Title 43 CFR 3420.1-4e(3) states: “ Multiple land use decisions shall be made which may eliminate additional coal deposits from further consideration for leasing to protect other resource values and land uses that are locally, regionally, or nationally important or unique and that are not included in the unsuitability criteria discussed in [paragraph \(e\)](#) of this section. Such values and uses include, but are not limited to, those identified in section 522(a)(3) of the Surface Mining Reclamation and Control Act of 1977 and as defined in [30 CFR 762.5](#). In making these multiple use decisions, the Bureau of Land Management or the surface management agency conducting the land use planning shall place particular emphasis on protecting the following: Air and water quality; wetlands, riparian areas and sole-source aquifers; the Federal lands which, if leased, would adversely impact units of the National Park System, the National Wildlife Refuge System, the National System of Trails, and the National Wild and Scenic Rivers System.” Lands with coal potential may be eliminated from further consideration for leasing where multiple uses conflict.
4. Surface owner consultation—This screen requires the BLM to consult with qualified surface owners whose land overlies federal coal with development potential. The BLM asks the qualified surface owners for their preference for or against offering the coal deposits under their land for lease. Lands with coal potential may be eliminated from further consideration for leasing based on qualified surface owner preference.

In accordance with 43 CFR 3420.1-4e(3), lands may be eliminated from further consideration for leasing, to protect resource values of a locally important or unique nature not included in the unsuitability criteria (i.e., air and water quality, wetlands, riparian areas, and sole-source aquifers). Therefore, only Coal Screen 2: 20 Unsuitability Criteria provides a mechanism for developing coal lease stipulations for those criteria that allow for an exception (see **Table A-1** below for criteria with an exception). These stipulations are developed during a lease application review. After the 20 unsuitability criteria are reapplied using the most current data, if a criterion exception is identified for federal lands that are a part of the coal application, the exception is developed in coordination with the appropriate entities and applied as a stipulation to the lease. For example, Criterion 2 may apply for an existing right-of-way (ROW) on BLM lands. The exception could be to relocate the ROW in coordination with the ROW holder or to avoid the ROW at a specified distance (e.g., a 300-foot buffer). The stipulation would be added to the lease and, when a federal mine plan and mining permit are issued, would be enforced by the Office of Surface Mining Reclamation and Enforcement and the Montana Department of Environmental Quality, respectively.

### A.3 COAL SCREENING RESULTS

#### A.3.1 Screen 1—Coal Development Potential

Coal potential was evaluated through consultation with Montana Bureau of Mines and Geology and the United States Geological Survey (USGS) in 2018. The USGS models have not been updated and BLM has not authorized new exploration since that time. The mines and the public did not provide additional data regarding coal potential during the call for coal data initiated as part of scoping for this effort (October 3, 2022–November 2, 2022). Therefore, BLM determined that Coal Screen 1 conducted for the 2019 effort (BLM 2019, Appendix A) is still adequate and carried forward for this analysis.

USGS datasets (Kinney et al. 2015 and USGS 2019) were used to determine areas within the MCFO that had coal with potential to be strip mined. Factors influencing potential include coal thicknesses, stripping ratios, and maximum depth. The BLM and USGS delineated areas that have at least 1 coal bed that is 10 feet thick or greater at a depth of less than 500 feet and that contained cumulative stripping ratios of 10:1 or less. Areas that met all three parameters were identified as having coal potential and moved forward under Coal Screen 1. Lands covered in this review are federal lands, including split-estate, administered by the BLM. Split-estate refers to subsurface federal coal overlain by state or private surface lands within the decision area. No decisions will be made relative to non-BLM-administered lands.

There are approximately 11.7 million acres of BLM-administered federal coal in the decision area, of which 1,745,040 acres were carried forward under Screen 1. **Figure A-1** displays the results of Screen 1.

#### A.3.2 Screen 2—Unsuitability

The BLM interdisciplinary team of resource specialists reviewed available data and solicited expertise and data from state and federal agencies (Montana Fish, Wildlife and Parks; Montana Department of Environmental Quality; US Fish and Wildlife Service; and USGS) to assess the applicability of each of the 20 unsuitability criteria to the decision area.

The acres designated unsuitable under each unsuitability criterion are tabulated under **Table A-1**. Areas identified as unsuitable under each unsuitability criterion are mapped in **Figures A-2** through **A-15**, **Attachment I**. For each criterion, resources that trigger unsuitability are identified. Please note that the resources identified are not exhaustive of that type of resource in the decision area; they are only those resources that overlie areas with coal potential identified under Screen 1 (**Figure A-1**), which result in areas being identified as unsuitable for Screen 2. Acreages are not additive across the table because of overlapping resources (for example, wilderness study areas that drive unsuitability are also managed as visual resource management Class I; therefore, they are subject to both criteria 5 and 6). **Figure A-15** shows the aggregate result of Screen 2.

**Table A-1**  
**Screen 2 Results**

<b>Criterion Number</b>	<b>Criterion Name/Applicable Resources<sup>1</sup></b>	<b>Acres Unsuitable</b>
<i>Criterion 1</i> <i>Figure A-2</i>	<i>Federal Land System</i> <ul style="list-style-type: none"> <li>• Lewis and Clark National Historic Trail System</li> </ul>	15,270
<i>Criterion 2</i> <i>Figure A-3</i>	<i>Federal Lands within Rights-of-Way</i> <ul style="list-style-type: none"> <li>• Rights-of-way</li> </ul>	48,870

<b>Criterion Number</b>	<b>Criterion Name/Applicable Resources<sup>1</sup></b>	<b>Acres Unsuitable</b>
Criterion 3 Figure A-4	Buffer Zones along Public Roads, Schools, and Parks <ul style="list-style-type: none"> <li>• Parks</li> <li>• Cemeteries</li> <li>• Schools</li> <li>• Public roadways</li> <li>• Dwellings</li> </ul>	41,930
Criterion 4 Figure A-5	Wilderness Study Areas (WSAs) <ul style="list-style-type: none"> <li>• Terry Badlands WSA</li> </ul>	15,600
Criterion 5 Figure A-6	Scenic Areas <ul style="list-style-type: none"> <li>• Terry Badlands WSA</li> </ul>	14,970
Criterion 6	Scientific Study	0
Criterion 7 Figure A-7	Historic Lands and Sites <ul style="list-style-type: none"> <li>• Battlegrounds</li> <li>• Listed Sites</li> </ul>	8,640
Criterion 8	Natural Areas	0
Criterion 9 Figure A-8	Federally Designated, Proposed, or Essential Critical Habitat for Threatened and Endangered Species <ul style="list-style-type: none"> <li>• Least tern</li> <li>• Whooping crane</li> <li>• Pallid sturgeon</li> </ul>	124,480
Criterion 10	State-Listed Threatened and Endangered Species	0
Criterion 11	Bald and Golden Eagle Nest Sites	24,770
Criterion 12	Bald and Golden Eagle Roost and Concentration Areas	0
Criterion 13 Figure A-9	Falcon Cliff Nesting Sites <ul style="list-style-type: none"> <li>• Prairie falcon or merlin, or both</li> </ul>	13,390
Criterion 14 Figure A-10	Migratory Birds of High Federal Interest	118,500
Criterion 15 Figure A-11	Habitat for Species of High Interest to the State <ul style="list-style-type: none"> <li>• Big game crucial winter range (mule deer, white-tailed deer, and antelope)</li> <li>• Shortnose gar, blue sucker, sicklefin chub, sturgeon chub, and paddlefish</li> <li>• Greater sage-grouse leks and habitat management areas (for example, priority habitat management areas)</li> <li>• Sharp-tailed grouse leks and buffer zones</li> <li>• Nuttall Desert-parsley (<i>Lomatium nuttallii</i>)</li> <li>• Visher's Buckwheat (<i>Eriogonum visherii</i>)</li> </ul>	1,169,960
Criterion 16 Figure A-12	100-Year Floodplain	4,460
Criterion 17 Figure A-13	Municipal Watersheds	8,190
Criterion 18	National Resource Waters	0
Criterion 19 Figure A-14	Alluvial Valley Floors	175,060
Criterion 20	Tribal and State Proposed Criteria	0

Source: BLM GIS 2022

<sup>1</sup>The BLM applied this screen only to lands within the coal development potential area.



**Stipulation for Criterion 15**

All of the species listed under criterion 15, Habitat for Species of High Interest to the State, have reclamation as a stipulated method of coal mining. This stipulation requires reclamation using an approved seed mix that is appropriate to the soil type(s) found within the disturbance area.

**Stipulation**

The holder shall seed all disturbed areas with the seed mix, as agreed upon by the BLM, based on the soil type(s). There shall be no primary or secondary noxious weed seed in the seed mixture. Seed shall be tested, and the viability testing of seed shall be done in accordance with state law(s) and within 6 months prior to purchase. Commercial seed shall be either certified or registered seed. The seed mixture container shall be tagged in accordance with state law(s) and available for inspection by the BLM Authorized Officer.

**A.3.3 Screen 3—Multiple Use**

In addition to the areas unsuitable under Screen 2, land use decisions to protect resources of high value to the public may eliminate additional coal deposits from further consideration. The BLM reviewed other resource values and land uses not addressed under the 20 unsuitability criteria that are locally, regionally, or nationally important or unique; additional lands were determined unacceptable for further consideration for leasing.

After close review of resources in the decision area, and in consultation with state and federal agencies, the BLM identified a number of resources that are eliminated from further consideration for coal leasing under Screen 3 in this SEIS. Approximately 193,010 acres were determined unacceptable for further consideration for leasing in the 2019 SEIS based on the same concerns below (**Table A-2**). However, the application of the air resources criterion was different. The 2015 Approved RMP/ROD (BLM 2015a) considered air resources by looking at exceedance of the National Ambient Air Quality Standards. Data and modeling done for the 2015 Proposed RMP/Final EIS (BLM 2015b) showed no air quality standards were exceeded. Therefore, no resulting geographic area of land was removed as unacceptable for further leasing of coal in the 2019 SEIS.

Specific to the Order, Screen 3 plays an important role in eliminating additional federal lands with coal development potential from further consideration for leasing to meet the “no new leasing” and “limited leasing” requirements. The BLM applied a climate change criterion, as described in Section 2.2. Alternatives Development, and in Air Resources below.

**Cultural Resources**

Coal leasing and potential development activity would adversely affect the landscapes of two properties listed on the National Register of Historic Places (Rosebud Battlefield and Battle Butte) and two BLM-administered ACECs (Powder River ACEC and Reynold’s Battlefield ACEC) by impacting the visual settings integral to those resources and their value to the public. The BLM developed viewshed analyses from these sites to identify potential conflicts.

**Table A-2**  
**Screen 3 Results**

<b>Multiple-Use Screen<sup>1</sup></b>	<b>Acres Unacceptable for Further Consideration for Leasing</b>
<i>Cultural Viewsheds (Figure A-16)</i>	99,050
<i>Recreation Areas (Figure A-16)</i>	8,770
<ul style="list-style-type: none"> <li>• Special recreation management areas/extensive recreation management areas</li> <li>• Travel management areas</li> </ul>	
<i>Areas of Critical Environmental Concern (ACECs; Figure A-16)</i>	1,410
<i>Active Oil and Gas Wells (Figure A-17)</i>	46,580
<ul style="list-style-type: none"> <li>• 0.5-mile buffer on active gas wells</li> </ul>	
<i>Active Oil and Gas Units (Figure A-17)</i>	1,440
<ul style="list-style-type: none"> <li>• All lands within an active oil and gas unit agreement (excluding coalbed natural gas units)</li> </ul>	
<i>Perennial, Riparian, and Wetland Resources (Figure A-18)</i>	104,100
<ul style="list-style-type: none"> <li>• 300-foot buffer on all lentic and lotic systems, including perennial streams</li> <li>• 100-foot buffer on all riparian habitat</li> </ul>	
<i>Fishing Reservoirs (Figure A-18)</i>	830
<ul style="list-style-type: none"> <li>• 0.25-mile buffer on all sport fish reservoirs on BLM-administered lands</li> </ul>	
<i>Conservation Easements (Figure A-18)</i>	1,840
<i>Air Resources—Alternative B (Figure A-19)</i>	1,661,530
<ul style="list-style-type: none"> <li>• Excludes federal coal outside a 2-mile buffer of existing federal mine plan boundaries</li> </ul>	
<i>Air Resources—Alternative C (Figure A-20)</i>	1,744,240
<ul style="list-style-type: none"> <li>• Excludes federal coal outside existing and pending federal leases/ applications and outside the existing federal mine plan boundaries</li> </ul>	
<i>Air Resources—Alternative D (Figure A-21)</i>	1,745,040
<ul style="list-style-type: none"> <li>• Excludes federal coal outside valid existing federal leases</li> </ul>	

Source: BLM GIS 2022

<sup>1</sup>The BLM applied this screen only to lands within the coal development potential area.

### **Recreation Areas**

Recreation opportunities are available to the public on all BLM-administered lands with legal access. The BLM can designate these lands as either a special recreation management area or an extensive recreation management area. There are also travel management areas that require special management by the BLM. Potential conflicts between development of coal mineral resources and special recreation management areas, extensive recreation management areas, the Hay Draw Travel Management Area, and the Knowlton Travel Management Area warrant their designation as unsuitable.

### **Areas of Critical Environmental Concern**

ACECs are unique to the BLM and can be designated only on BLM-administered surfaces. These areas require special management to protect and prevent irreparable damage to important historic, cultural, or scenic values; fish and wildlife resources; or other natural systems or processes, or to protect life and safety from natural hazards (43 CFR 1610). An ACEC may emphasize one or more unique resources. Potential conflicts between development of coal mineral resources and two ACECs (Powder River ACEC and Reynold's Battlefield ACEC) warrant their designation as unsuitable.

**Fluid Minerals**

Coal development activities can compromise oil and gas well integrity and oil and gas infrastructure around active wells where the two overlap. Oil and gas development and current oil and gas agreements merit buffers on coal leasing availability to prevent such conflicts. The delineated areas below reflect the smallest area reliably needed to protect equipment, flow lines, and well integrity, based on an assumption that 1.0 square mile was the minimum amount of land needed to develop a coal mine. The BLM excluded coalbed natural gas units from the multiple-use screen due to the short project durations and the ability for coalbed natural gas and coal development to coexist. The following delineated areas apply to all active wells and units, regardless of ownership:

- A 0.5-mile buffer from all active oil and gas wells
- Existing oil and gas unit agreements (excluding coalbed natural gas units)

**Wildlife**

Potential conflicts between development of coal mineral resources and riparian areas, perennial streams, and sport fish reservoirs warrant their designation as unsuitable. These areas include:

- A 300-foot buffer on all lentic and lotic systems, including perennial streams
- A 100-foot buffer on all riparian habitat
- A 0.25-mile buffer on all sport fish reservoirs on BLM-administered lands

**Conservation Easements**

A conservation easement is a tool used between a volunteering landowner and a government agency to permanently limit uses of the land to protect its conservation values. The MCFO identified Montana Fish, Wildlife and Parks conservation easements within the decision area that protect natural resource values in the areas. Potential conflicts between development of coal mineral resources and conservation easements warrant their designation as unsuitable.

**Air Resources**

Specific to this SEIS and Order, Screen 3 is unique in each alternative, as listed below, because it allows the BLM to “eliminate additional coal deposits from further consideration for leasing to protect other resource values and land uses that are locally, regionally, or nationally important or unique” that are not considered in Screen 2 (43 CFR 3420.14e(3)). See Section 2.2, Alternatives Development, for more details.

Alternative B represents an approach to a limited coal leasing alternative, per the Order. The BLM applied a climate change criterion that would limit future federal coal leasing and development to a 2-mile area around existing federal mine plan boundaries of active mines with federal coal leases. Two active coal mines produce federal coal in the decision area (see **Appendix B**); the 2-mile buffer is applied to the existing federal mine plan boundary of these two mines. Federal lands with coal potential outside this 2-mile area would be removed as unacceptable for further consideration for leasing under this criterion.

Alternative C represents another approach to a limited coal leasing alternative, per the Order. The climate change criterion was modified from Alternative B to further restrict new federal coal leasing and development to the existing federal mine plan boundaries of mines that have indicated a need for additional federal coal leases. In other words, whereas Alternative B would limit coal leasing and development to a

2-mile buffer from the existing federal mine plan boundaries, Alternative C would apply a 0-mile buffer to the existing federal leases and pending federal lease applications within the existing federal mine plan boundaries. Federal lands with coal potential outside the existing federal leases and pending federal lease applications would be determined as unacceptable for further consideration for coal leasing. Further, if existing leases are relinquished, canceled, or otherwise returned back to the BLM, those lands would be unacceptable for further consideration for leasing. This would preclude the expansion of mines on federal coal outside existing federal mine plan boundaries; it also would preclude the expansion of mines on federal coal outside pending federal lease applications within the existing federal mine plan boundaries. This would not preclude mine expansion to produce nonfederal coal.

Alternative D represents the no-leasing alternative, as directed by the Order (page 20 of the Order). Only existing federal leases with valid existing rights could be developed under Alternative D. Under this climate change criterion, any unleased federal coal in the decision area, including within existing federal mine plan boundaries, would be removed as unacceptable for further consideration.

#### **A.3.4 Screen 4—Consultation with Qualified Surface Owners**

The BLM sent letters to surface owners with lands overlying BLM-administered federal coal in the 2-mile buffer area around existing federal mine plan boundaries<sup>1</sup> requesting that the surface owners confirm they are qualified to express their preference on mining federal coal (see 43 CFR 3400.0-5(gg)). The BLM also asked that the surface owners respond with their preference for or against mining by other-than-underground methods (that is, surface mining) on the BLM-administered federal coal beneath their land. A sample of the letters sent to private surface owners can be found in **Attachment 2**.

To be a qualified surface owner in accordance with the regulations at 43 CFR 3400.0-5(gg), the individual(s) must:

1. Hold legal or equitable title to the surface of split-estate lands
2. Have their principal place of residence on the land; personally conduct farming or ranching operations upon a farm or ranch unit to be affected by surface mining operations; or receive directly a significant portion of their income, if any, from such farming and ranching operations
3. Have met the first two conditions for a period of at least 3 years, except for persons who gave written consent less than 3 years after they met the requirements. In computing the 3-year period, the BLM Authorized Officer shall include periods during which title was owned by a relative of such person by blood or marriage if, during such periods, the relative would have met the requirements of this section.

On September 28, 2022, the BLM mailed 43 letters to surface owners with lands overlying BLM-administered federal coal in the 2-mile buffer area around existing federal mine plan boundaries. The BLM requested a response by October 31, 2022. Responses received by November 14, 2022, were included in Screen 4 of the Draft SEIS. In the letter, the BLM requested verification of landowner qualifications and an opinion on leasing federal coal beneath their surface (in favor, against, and undecided). The BLM included an addressed, postage-paid envelope to encourage a response. Of the 43 letters mailed, the BLM

---

<sup>1</sup> The BLM reached out only to landowners within the 2-mile buffer area around existing federal mine plan boundaries; this is because under all the action alternatives, coal resources outside this buffer would be unacceptable for further consideration for leasing, based on the air resources criterion in the multiple-use screen (Screen 3). Therefore, outreach to landowners outside the 2-mile buffer area was not needed.

MCFO received 31 responses from the time of mailing through November 14, 2022. The BLM will consider any responses received after November 14, 2022, during development of the Final SEIS.

A qualified surface owner that has previously given consent to mine their property is considered in favor of leasing per 43 CFR 3420.1-4(e)(4)(ii). Therefore, those landowners that have given consent to mine at Rosebud Mine, Spring Creek Mine, or Decker Mine were identified as in favor even if they submitted a response of not in favor. The BLM identified lands as unavailable for further consideration for coal leasing under this screen only where qualified landowners clearly stated they were not in favor of leasing. All other lands were identified as available for further consideration for coal leasing under this screen. Because of the landowner responses, the BLM MCFO removed 13,680 acres from consideration for coal leasing (**Figure A-25**). The project record includes the landowner response letters.

At the time of coal leasing, the current landowners will need to provide written consent to mine, whether they have expressed an opinion in favor of or against leasing in this process (30 United States Code 1304).

#### A.4 REFERENCES

BLM (United States Department of Interior, Bureau of Land Management). 2015a. Miles City Field Office Approved Resource Management Plan. BLM, Miles City Field Office, Miles City, Montana.

Internet website:

[https://eplanning.blm.gov/public\\_projects/lup/59042/86804/104007/Miles\\_City\\_Field\\_Office\\_Approved\\_Resource\\_Management\\_Plan\\_\(2015\).pdf](https://eplanning.blm.gov/public_projects/lup/59042/86804/104007/Miles_City_Field_Office_Approved_Resource_Management_Plan_(2015).pdf).

\_\_\_\_\_. 2015b. Miles City Field Office Proposed Resource Management Plan and Final Environmental Impact Statement. BLM, Miles City Field Office, Miles City, Montana.

\_\_\_\_\_. 2019. Miles City Field Office Proposed Resource Management Plan Amendment and Final Supplemental Environmental Impact Statement. BLM, Miles City Field Office, Miles City, Montana. Internet website: <https://www.govinfo.gov/content/pkg/GOVPUB-I53-PURL-gpo127568/pdf/GOVPUB-I53-PURL-gpo127568.pdf>.

BLM GIS (United States Department of Interior, Bureau of Land Management geographic information systems). 2022. GIS data on file with the BLM's eGIS server, used for calculations or figures related to the coal development strategy. BLM, Miles City Field Office, Montana.

Kinney, S. A., D. C. Scott, L. M. Osmonson, and J. A. Luppens, J.A , 2015, Geospatial Data for Coal Beds in the Powder River Basin, Wyoming and Montana: U.S. Geological Survey Data Series 912, Internet website: <http://dx.doi.org/10.3133/ds912>.

USGS (United States Department of the Interior, Geological Survey). n.d. Unpublished data for the BLM's Williston Basin Region for the 2019 Miles City Field Office Proposed Resource Management Plan Amendment and Final Supplemental Environmental Impact Statement.

This page intentionally left blank.

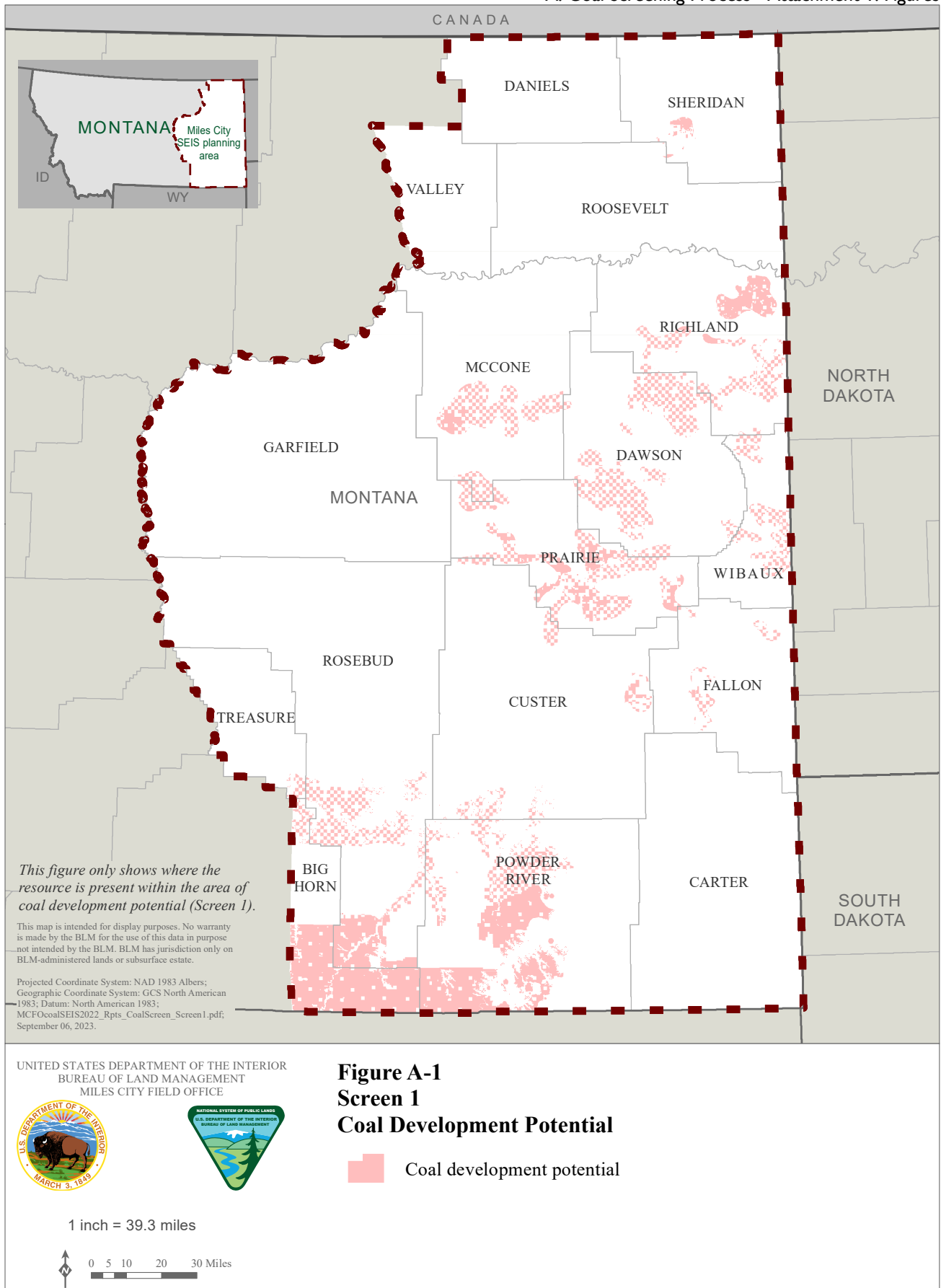
---

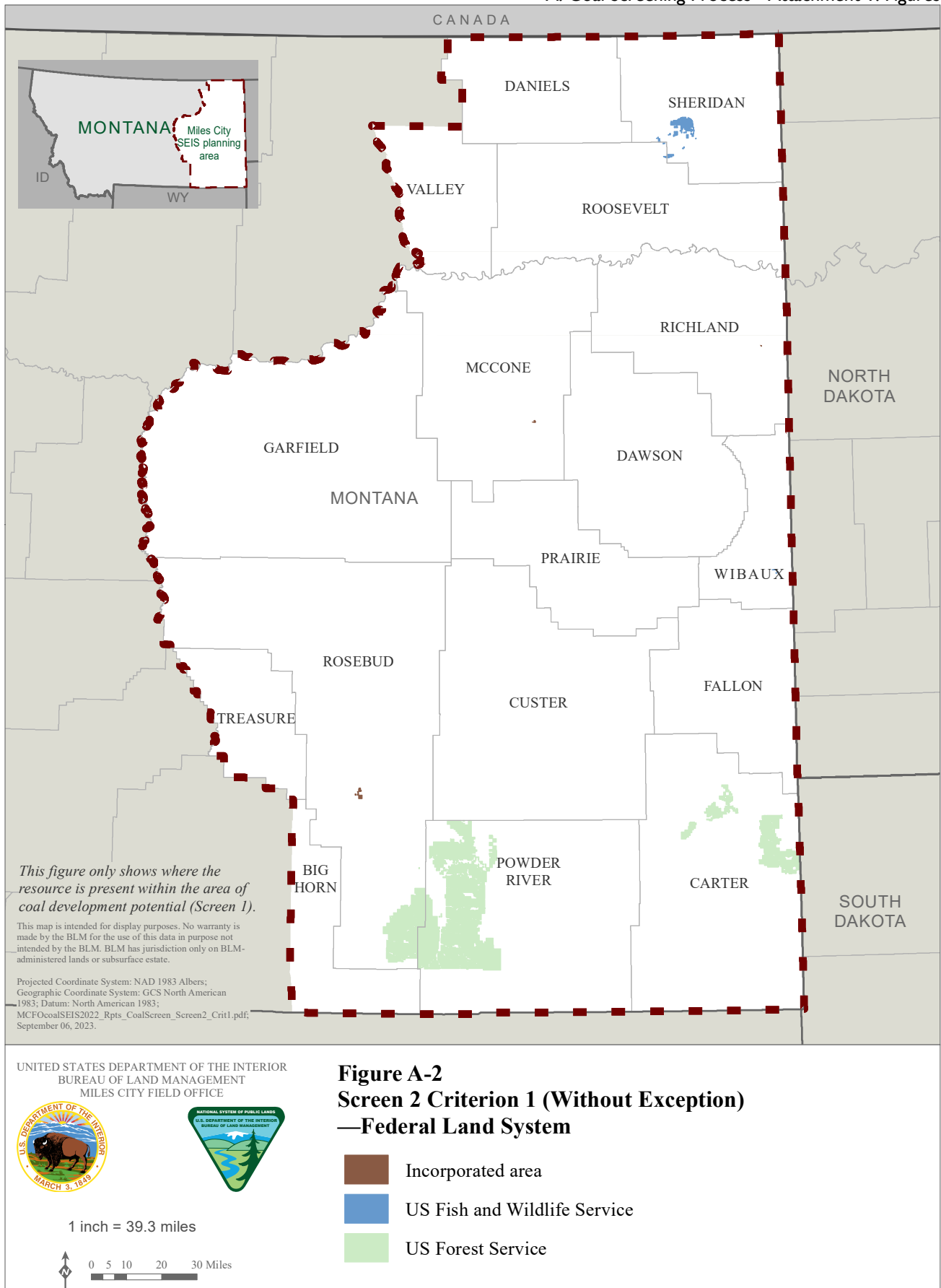
# Attachment I

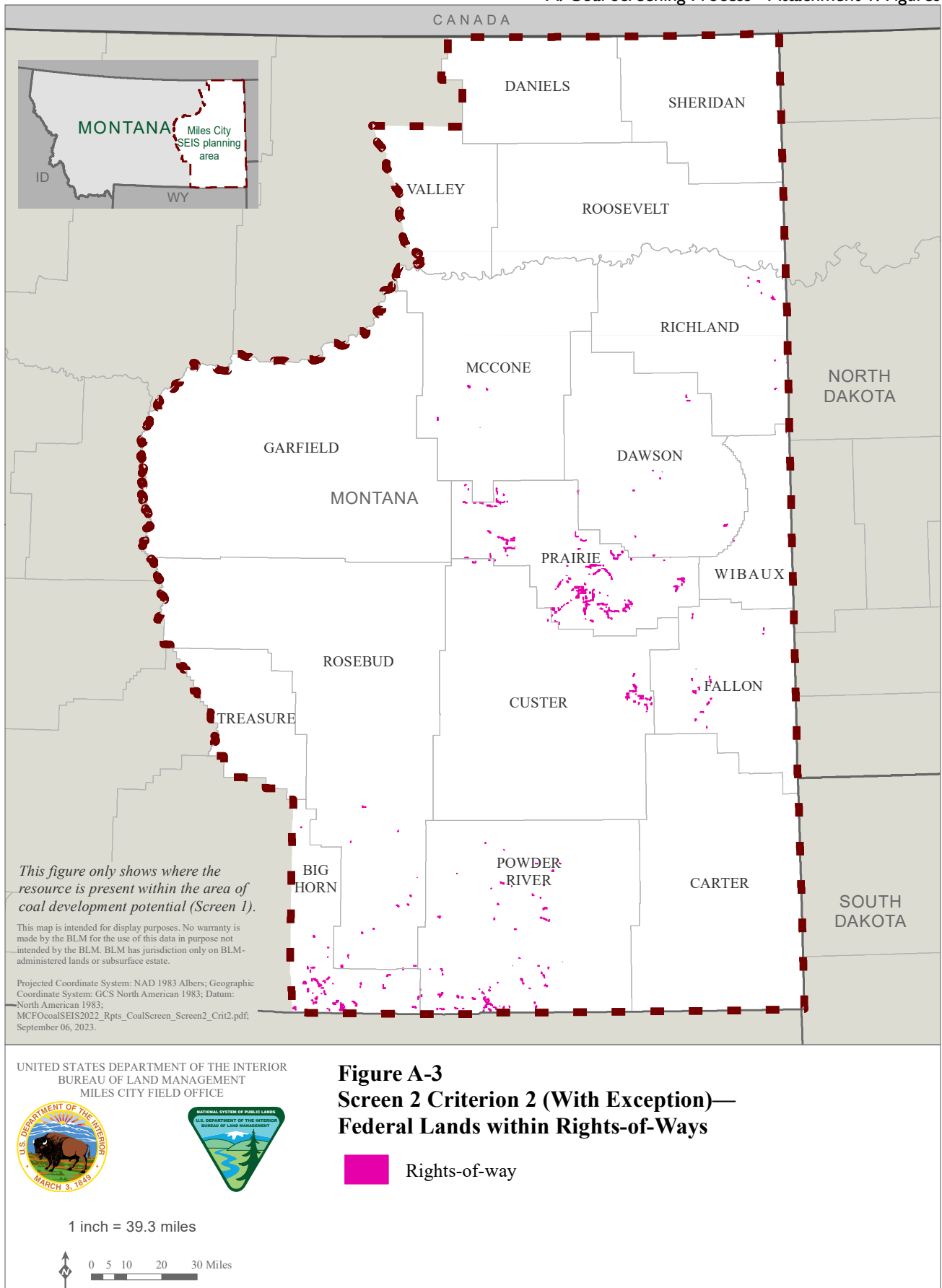
## Figures

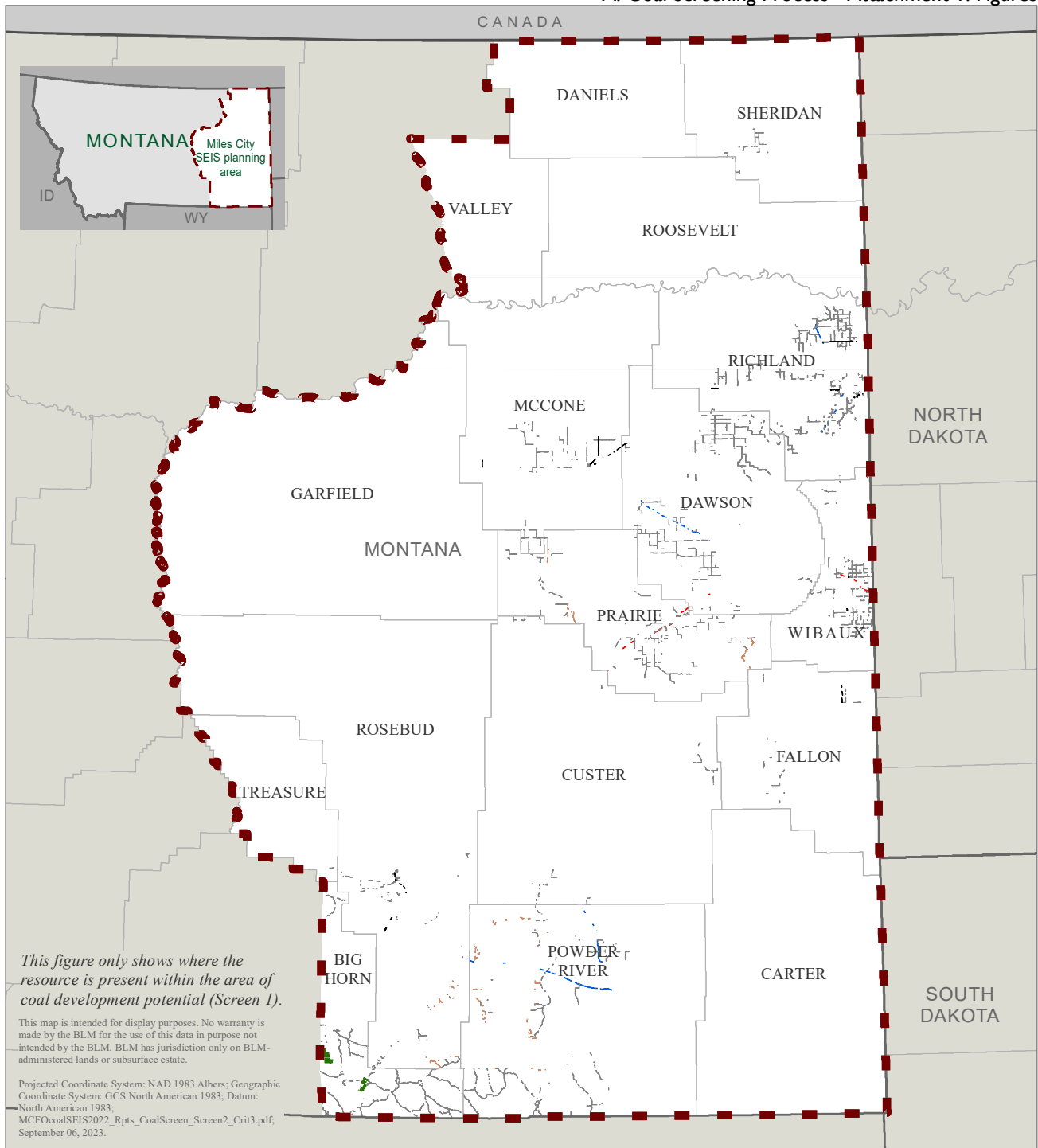
This page intentionally left blank.











UNITED STATES DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
MILES CITY FIELD OFFICE

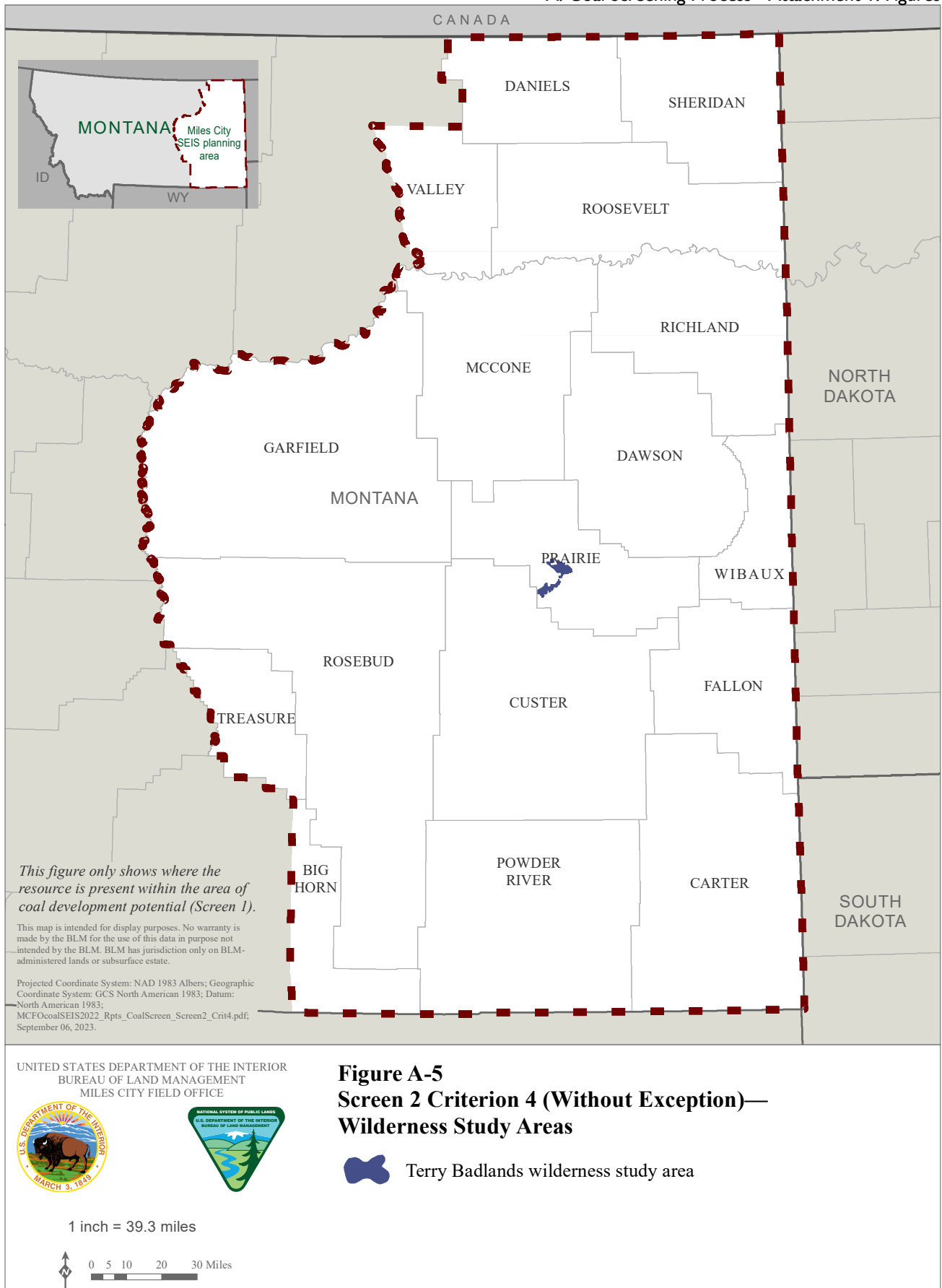


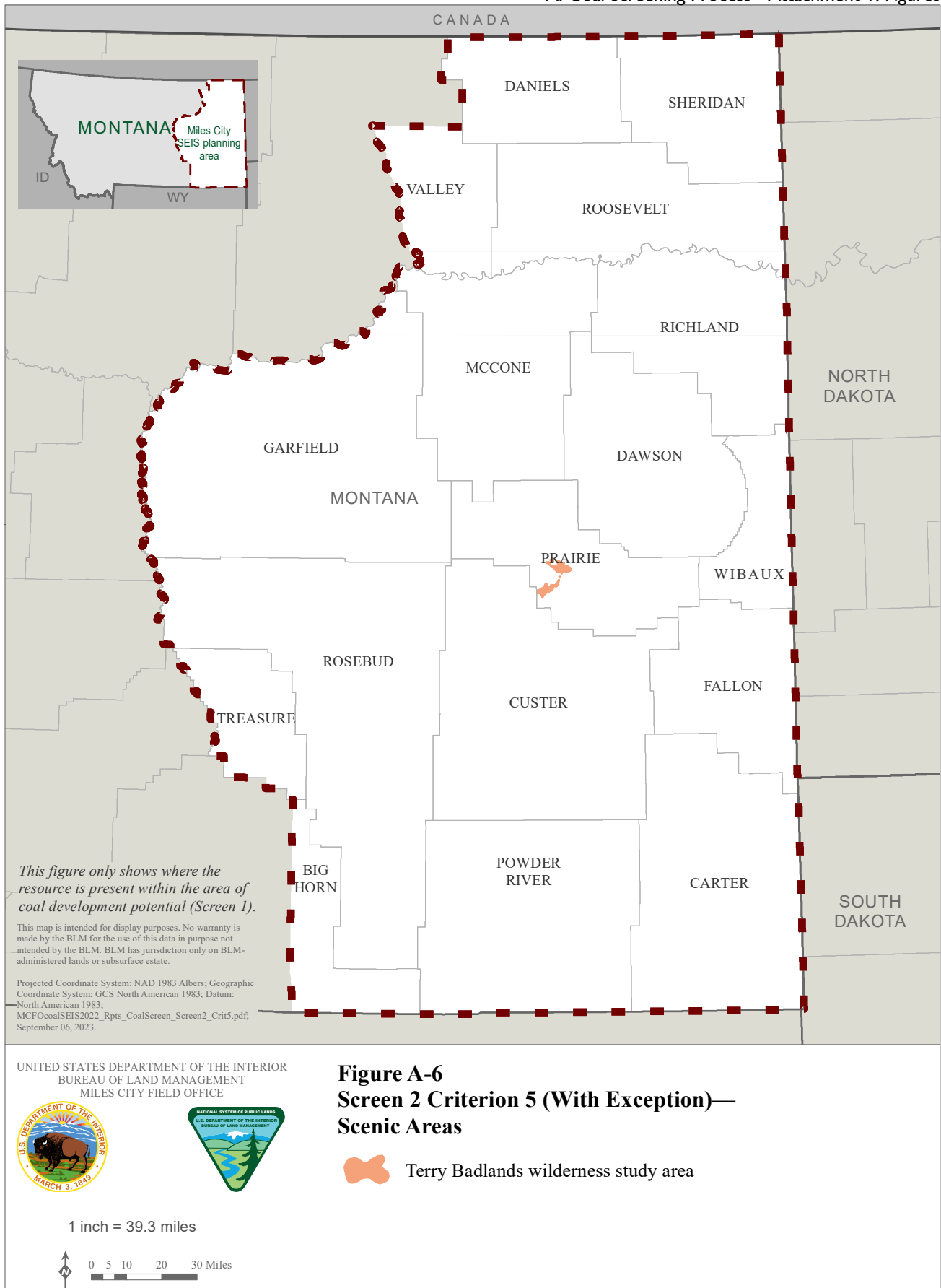
1 inch = 39.3 miles

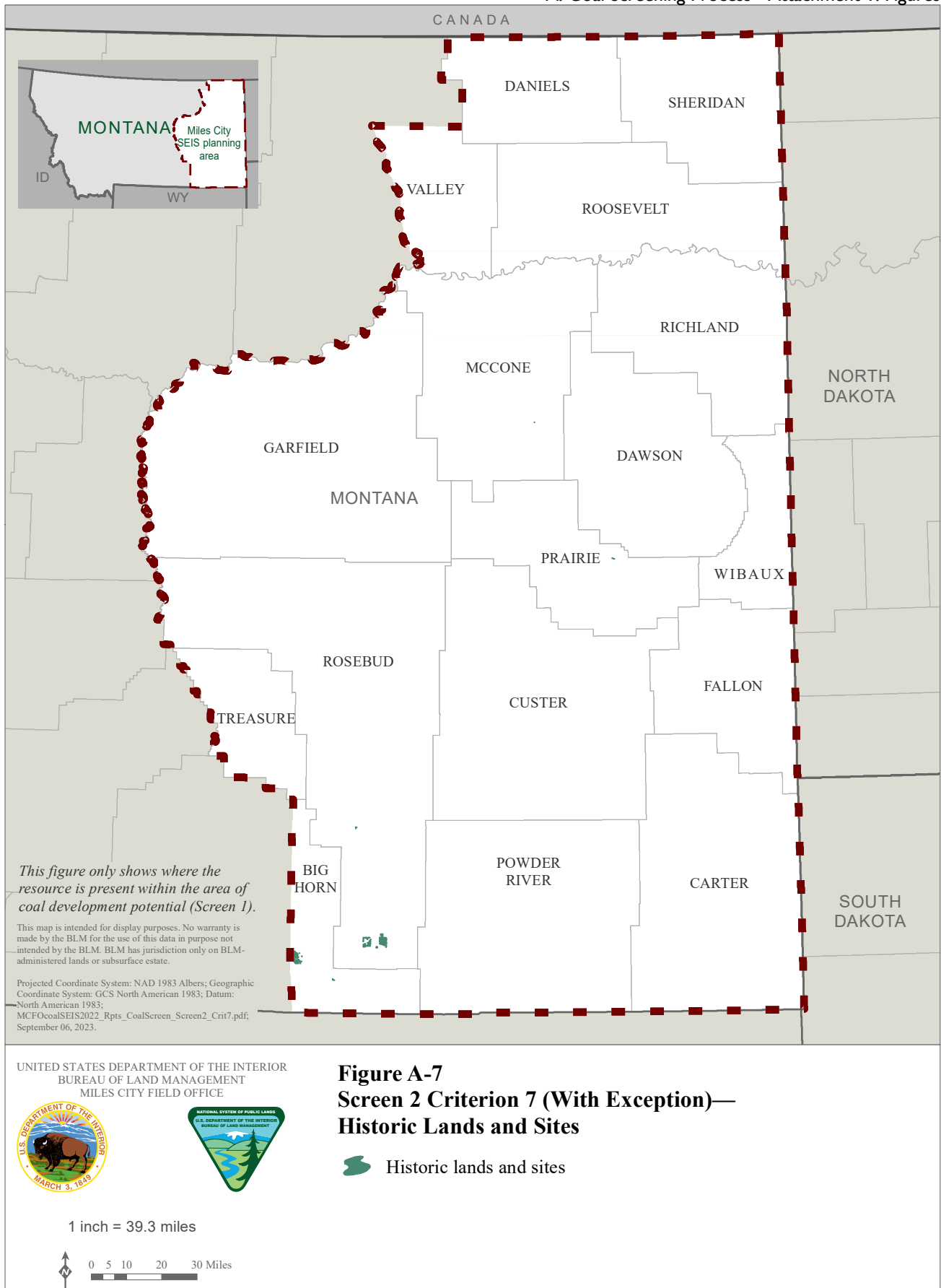


**Figure A-4**  
**Screen 2 Criterion 3 (With Exception)—**  
**Buffer Zones along Public Roads, Schools, and Parks**

- |  |               |  |              |
|--|---------------|--|--------------|
|  | State Park    |  | Primary road |
|  | Interstate    |  | Public road  |
|  | Major highway |  | Agency road  |

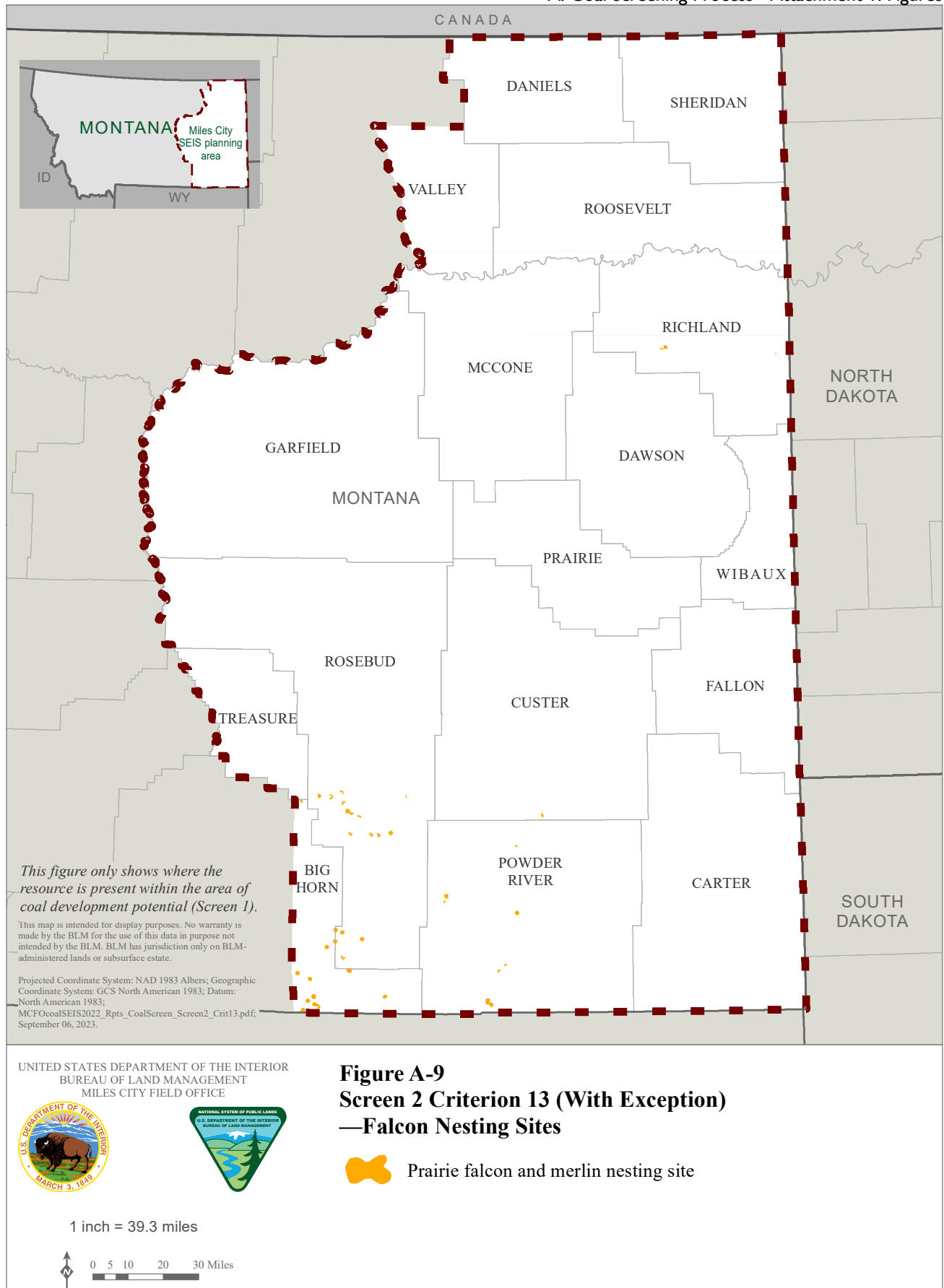


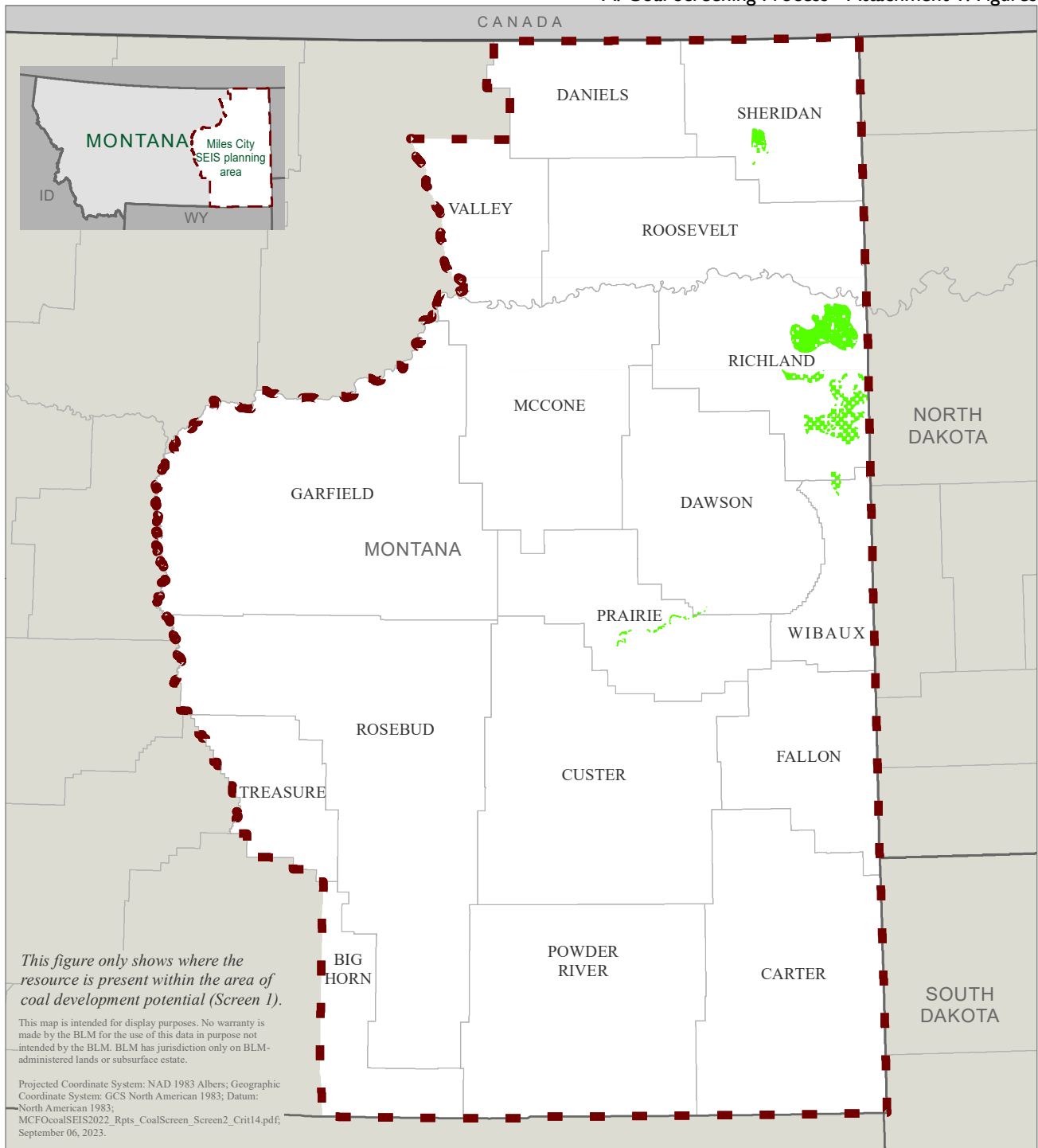












UNITED STATES DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
MILES CITY FIELD OFFICE



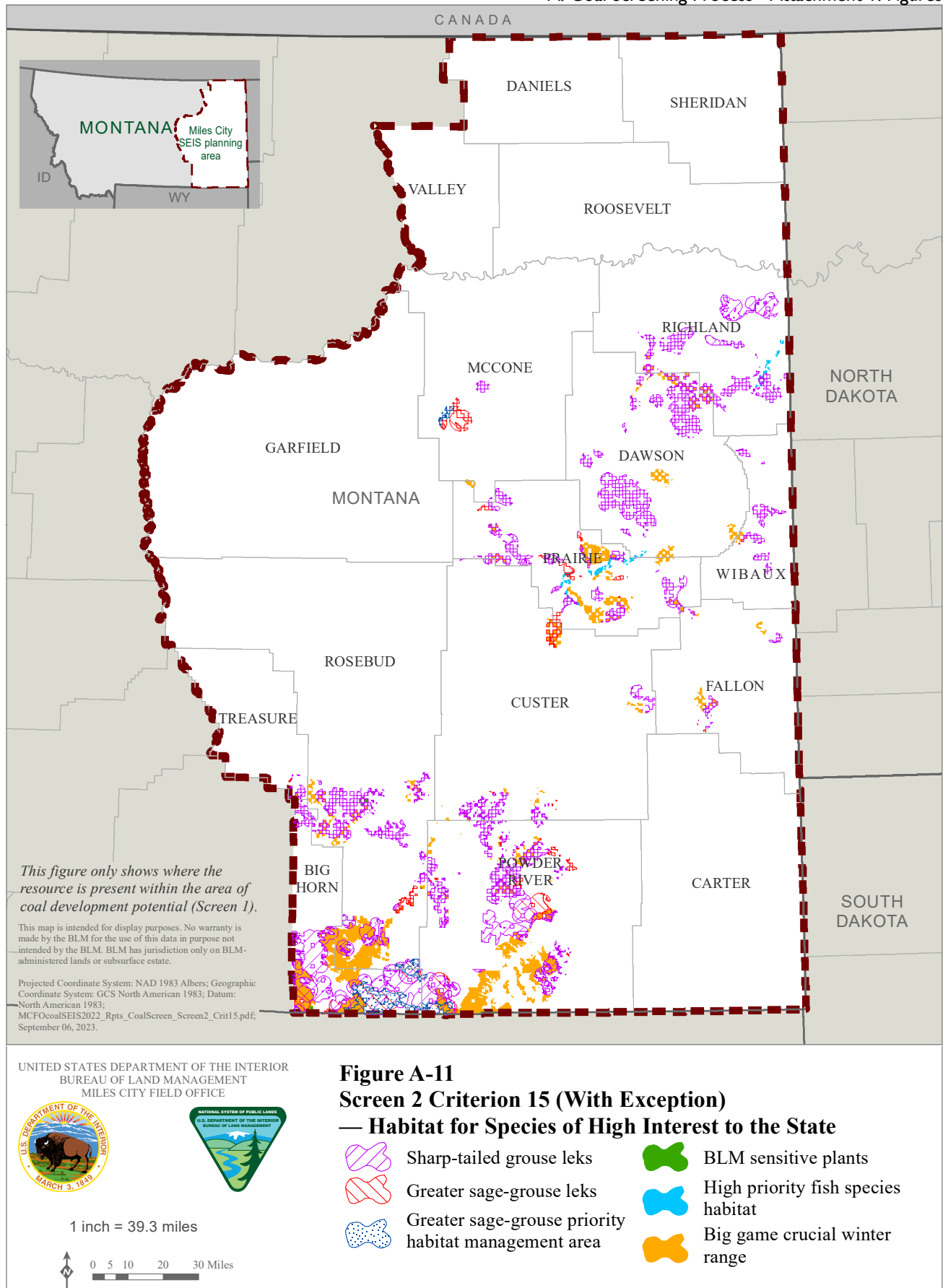
**Figure A-10**  
**Screen 2 Criterion 14 (With Exception)**  
**—Migratory Birds of High Federal Interest**

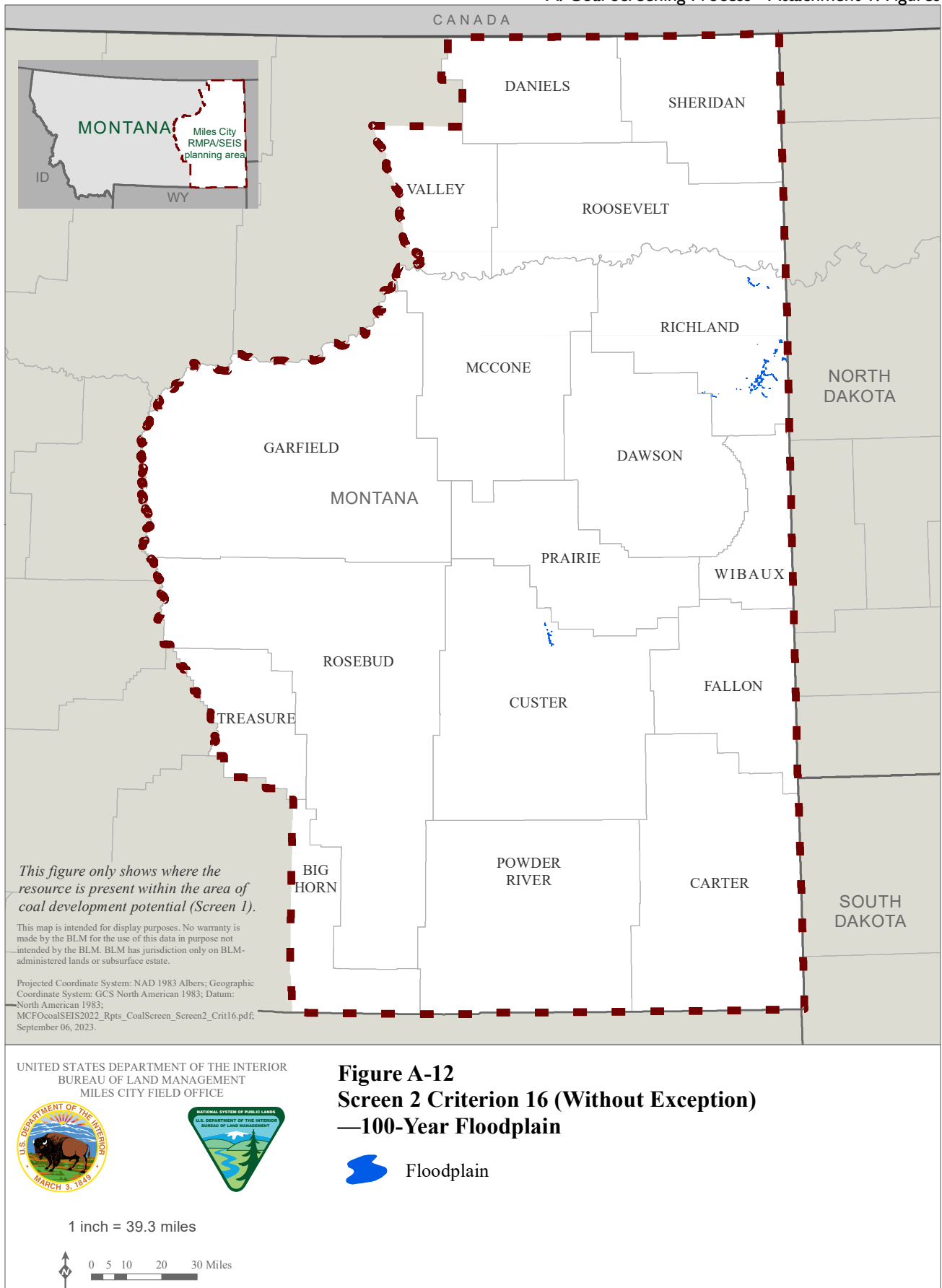


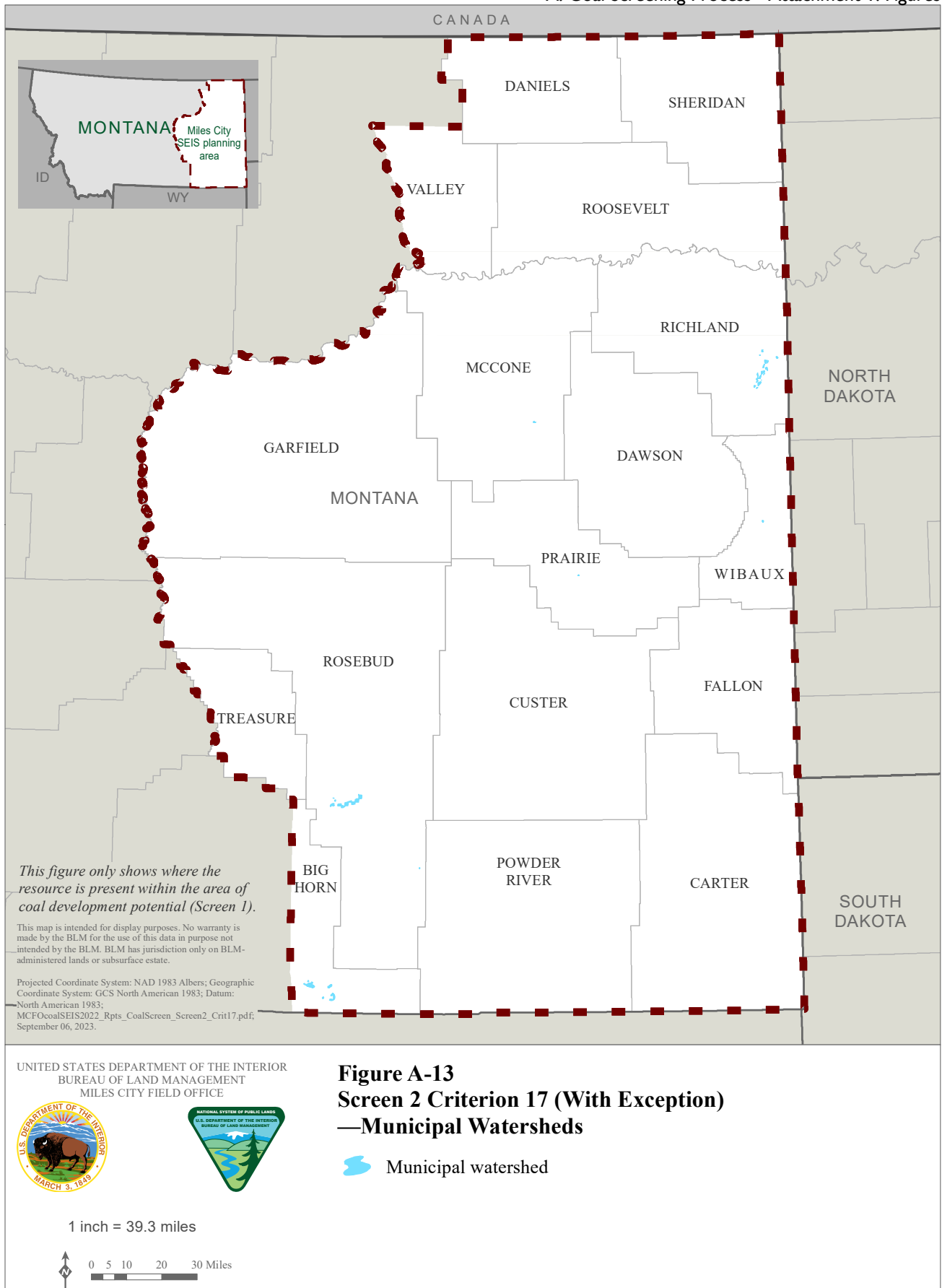
Habitat for migratory birds of high federal interest

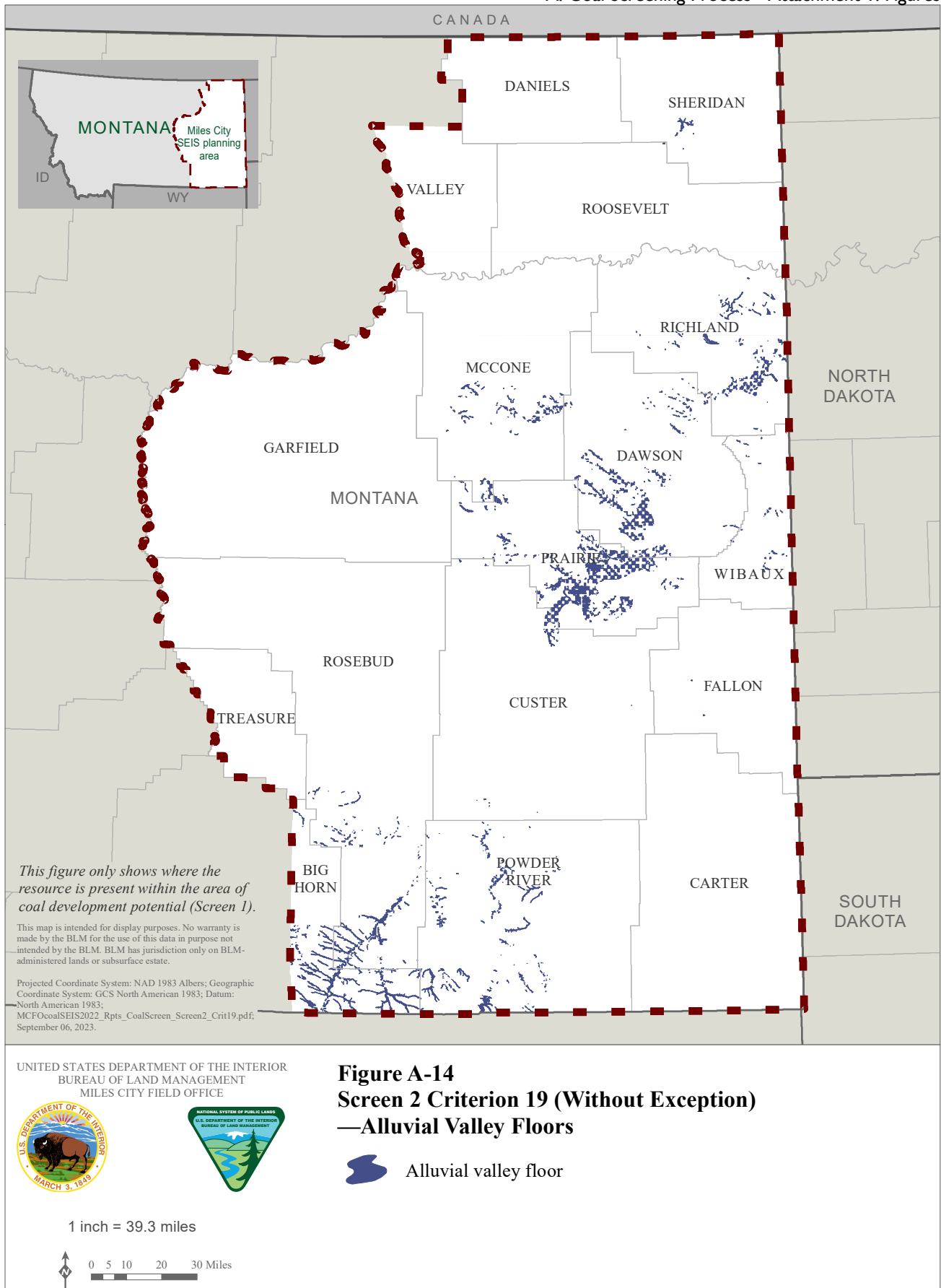
1 inch = 39.3 miles

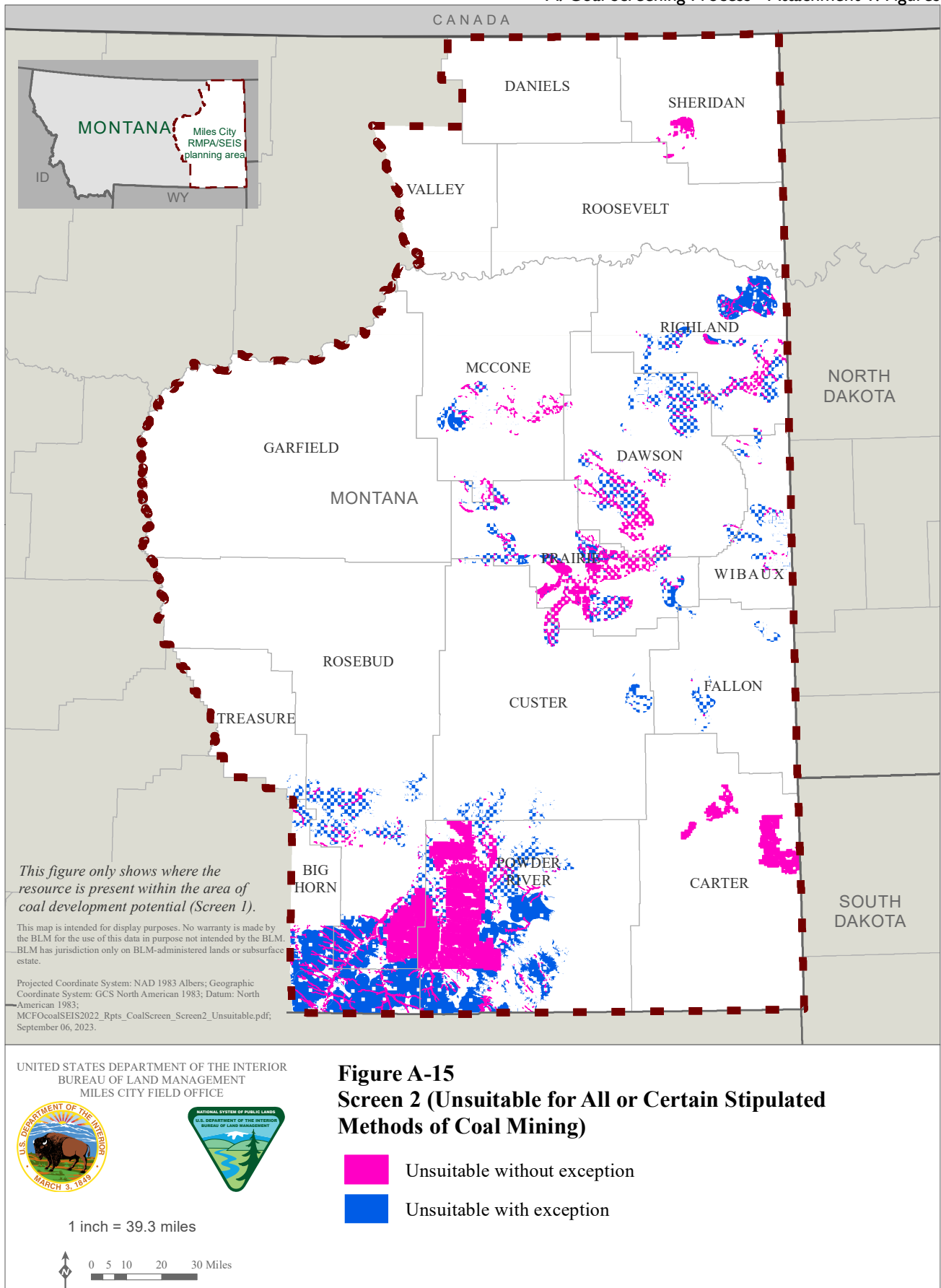


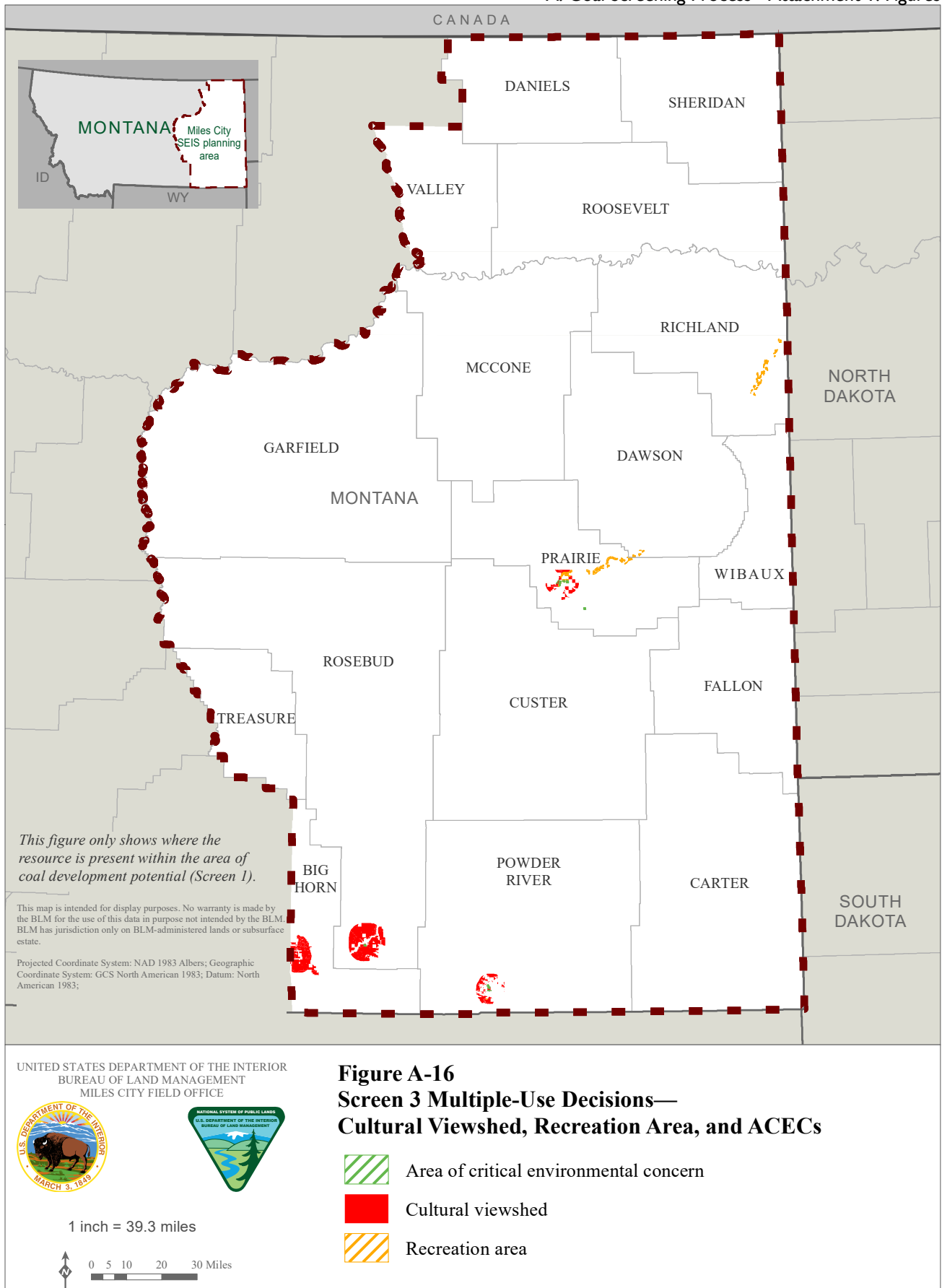




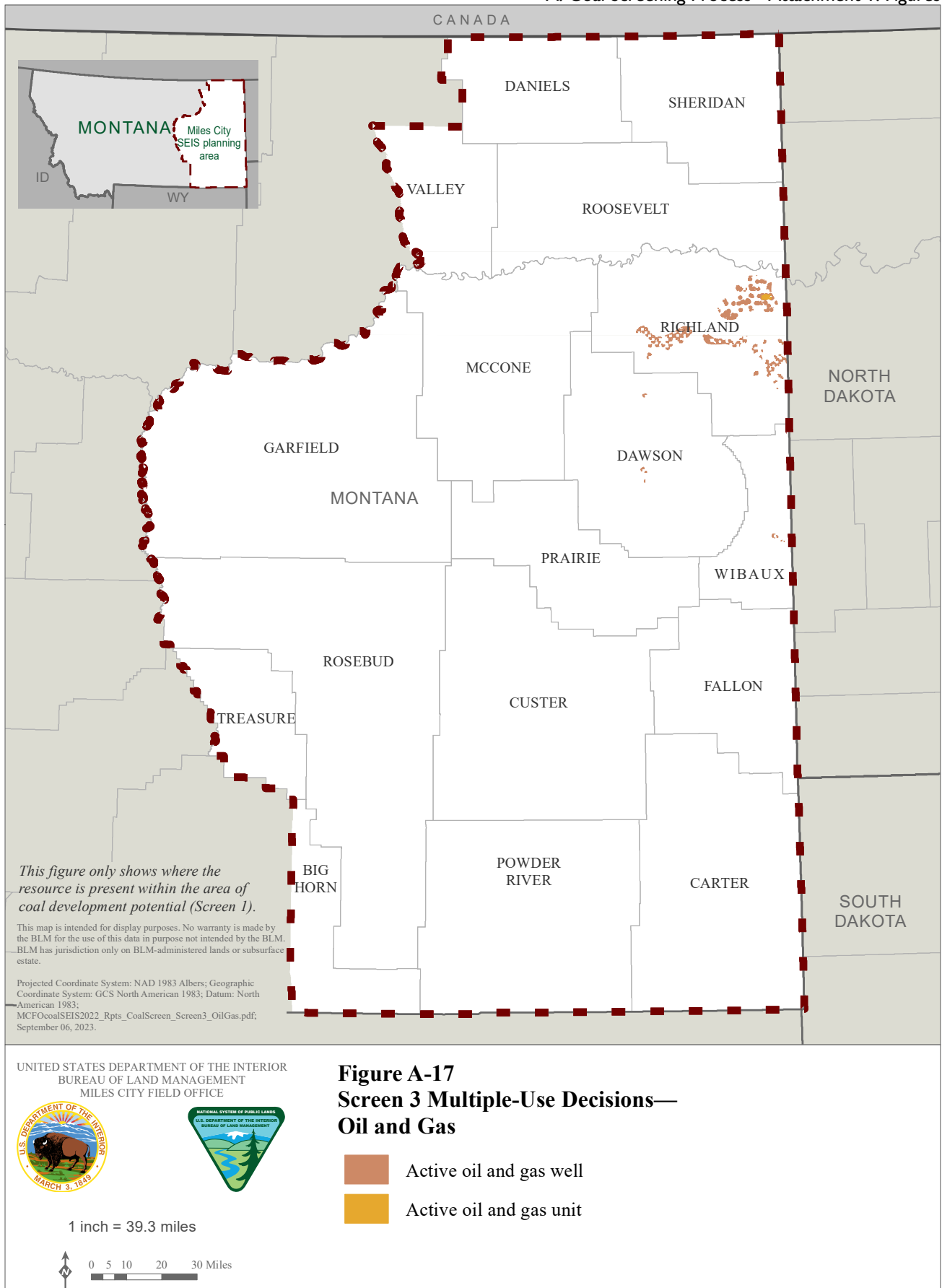


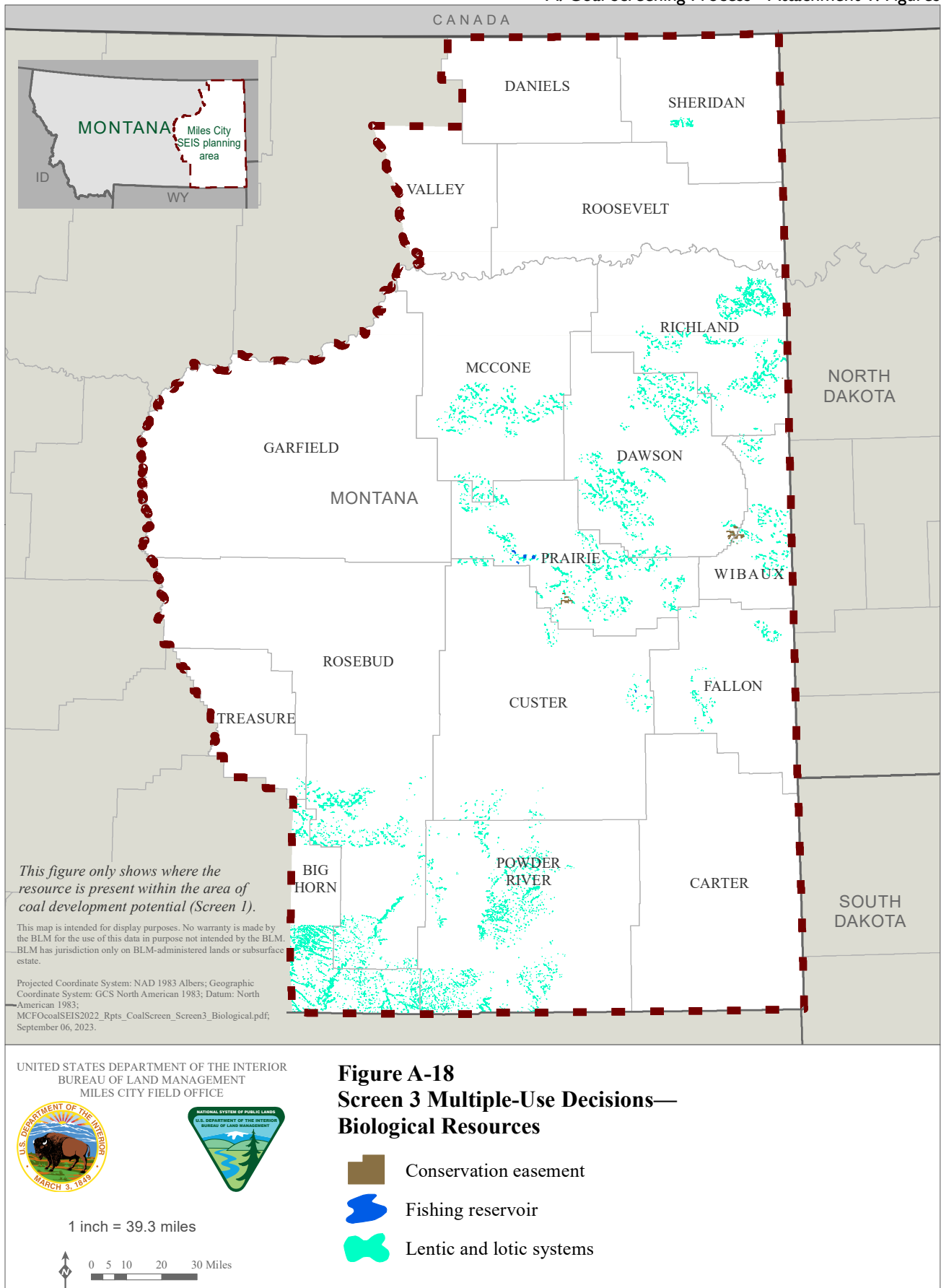


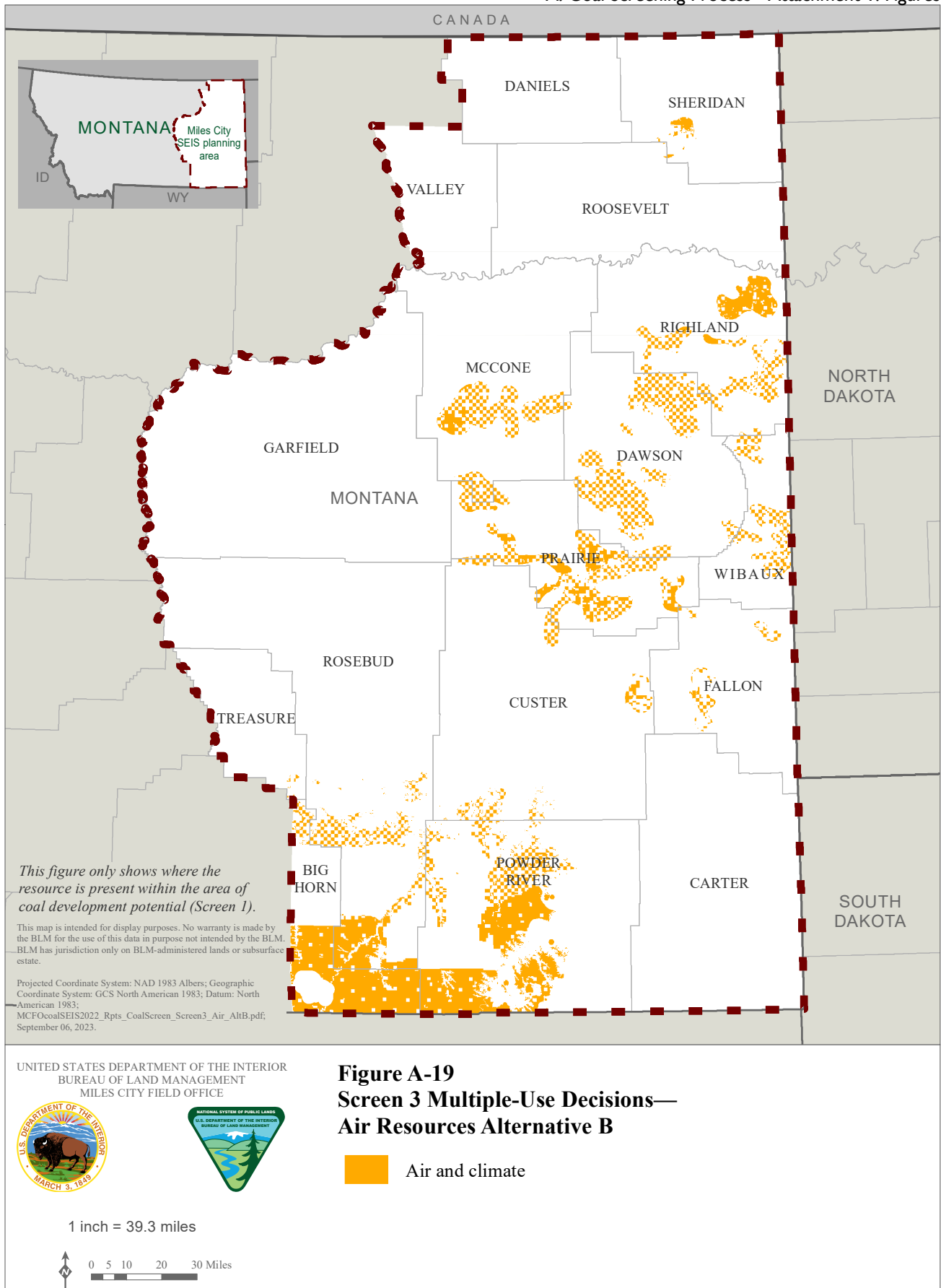


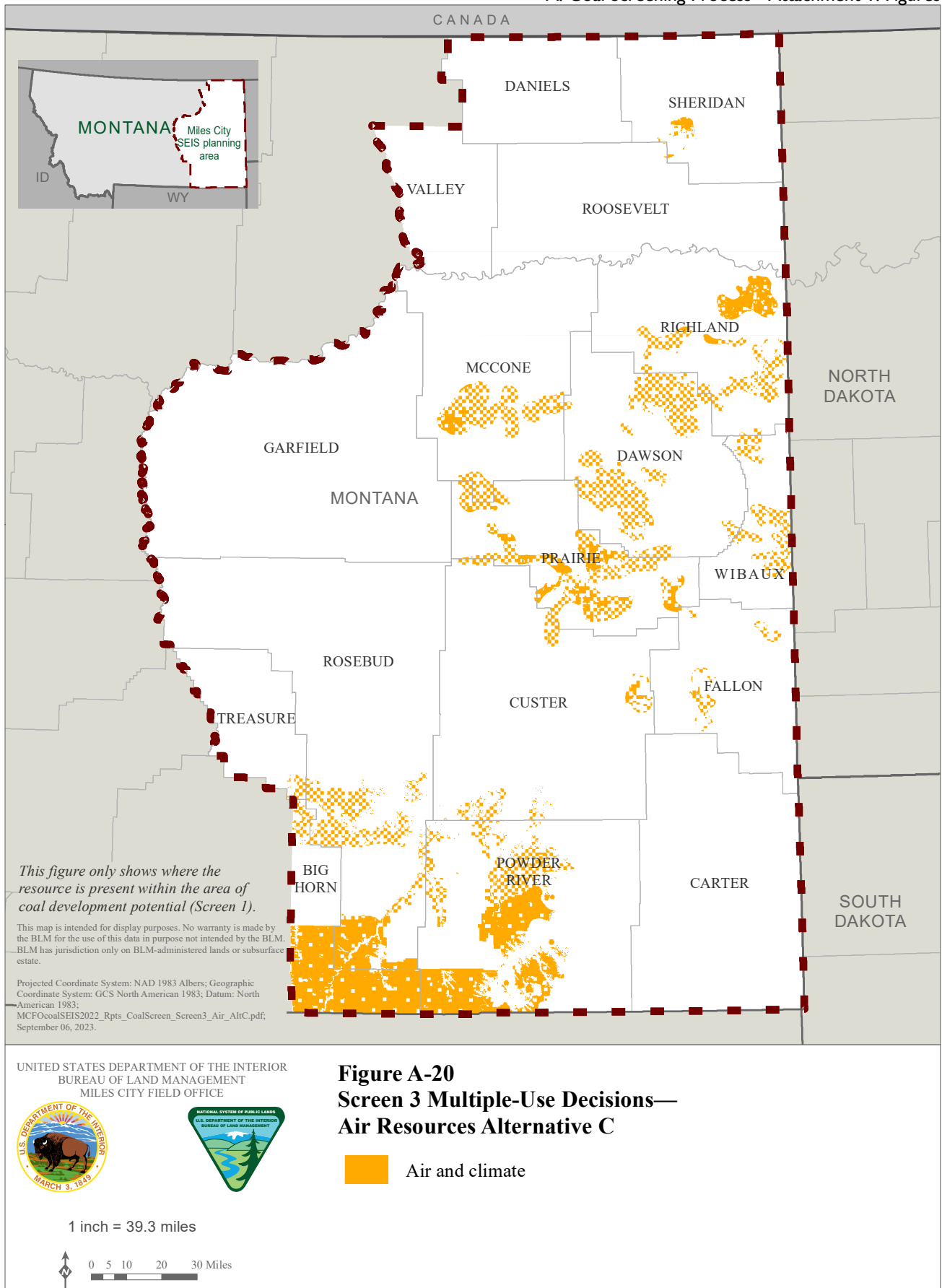


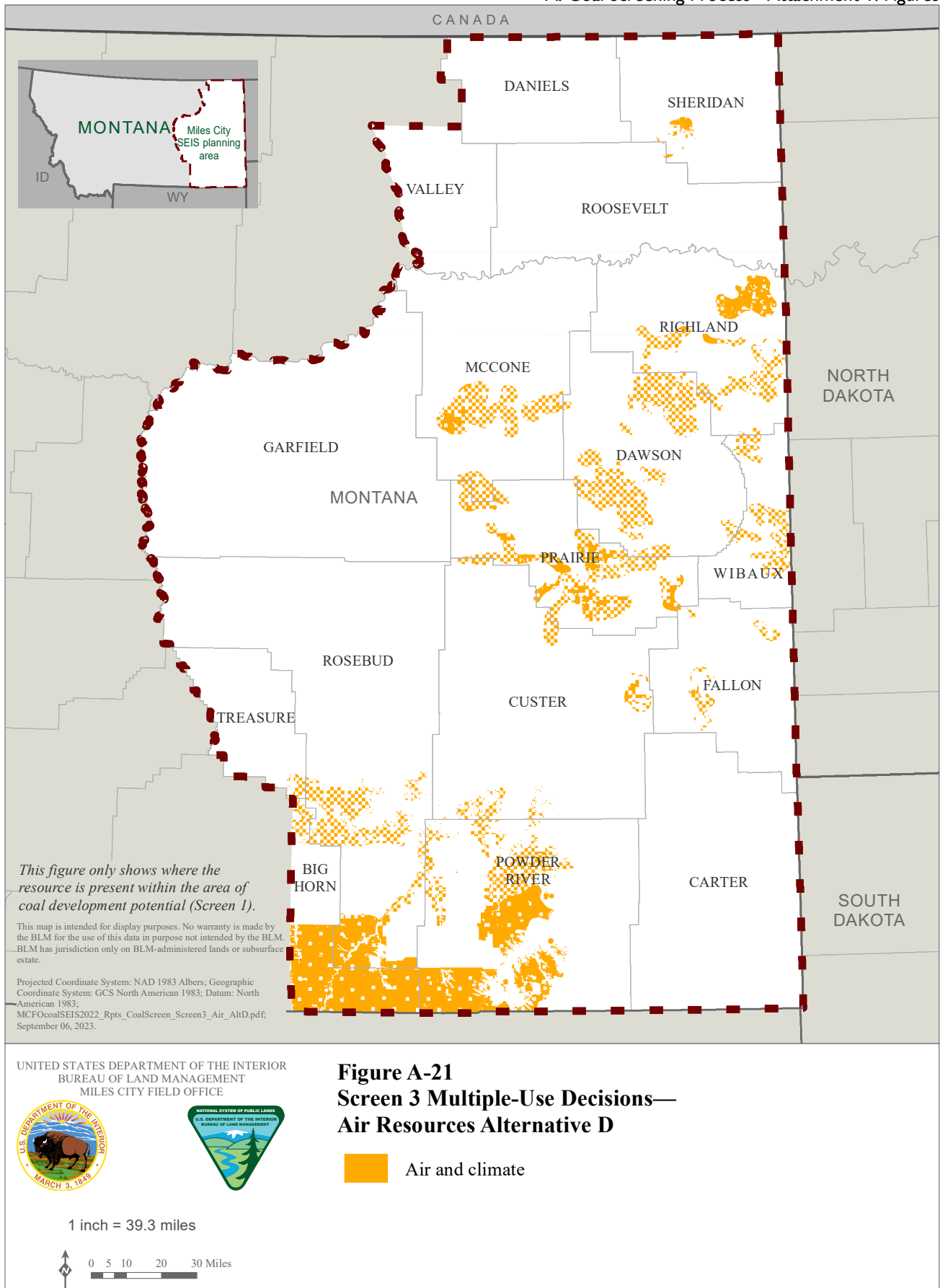


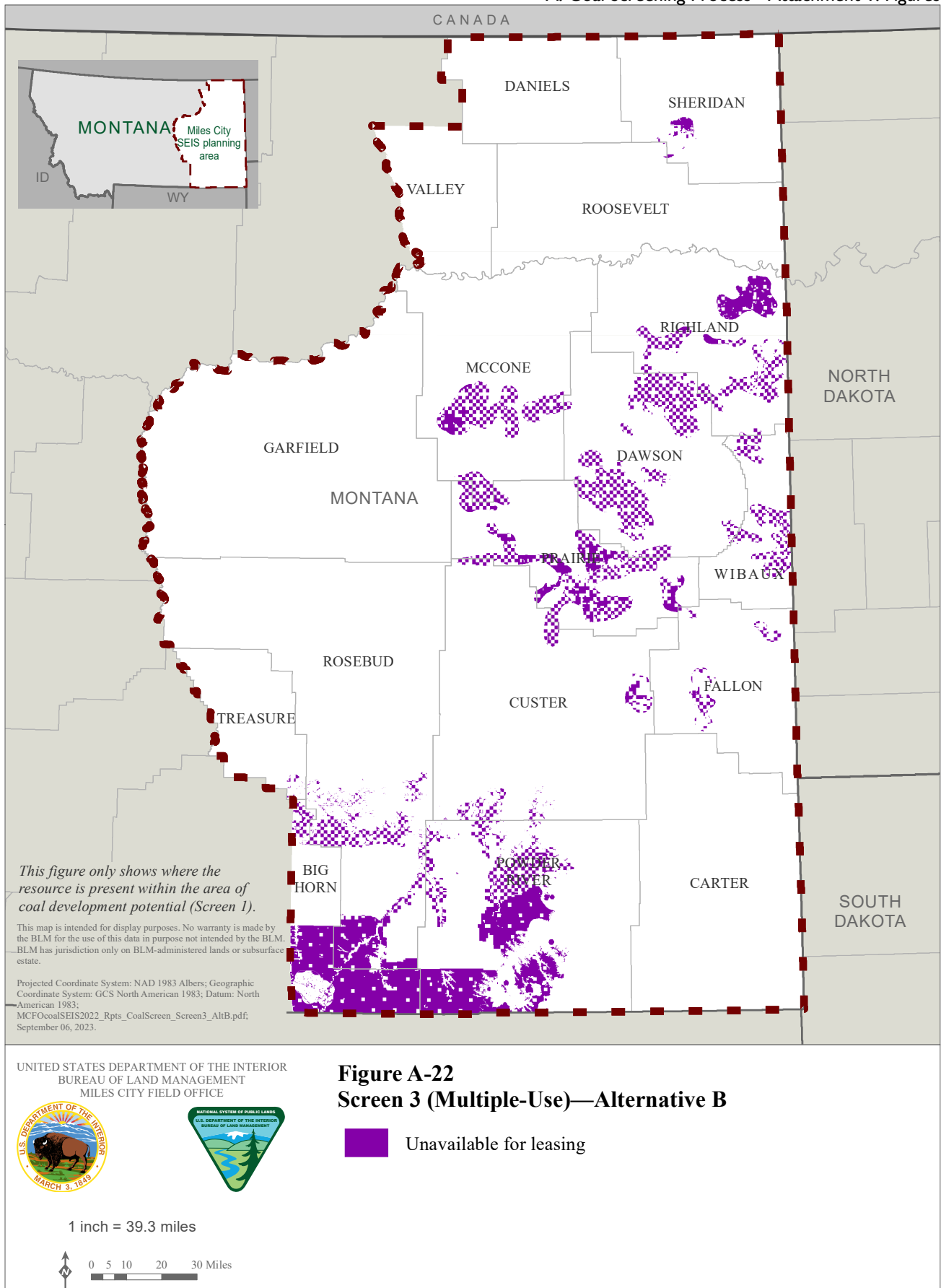


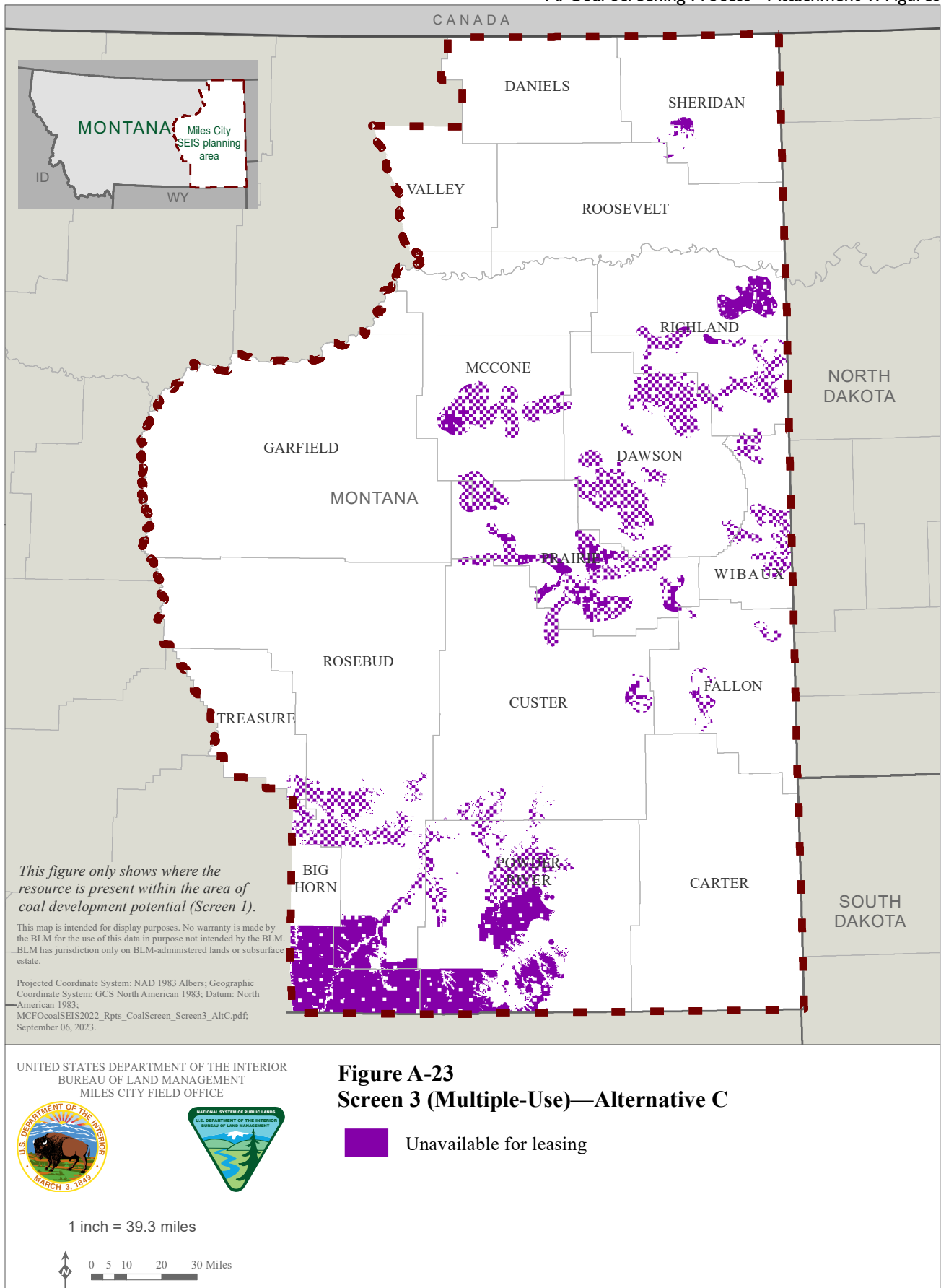


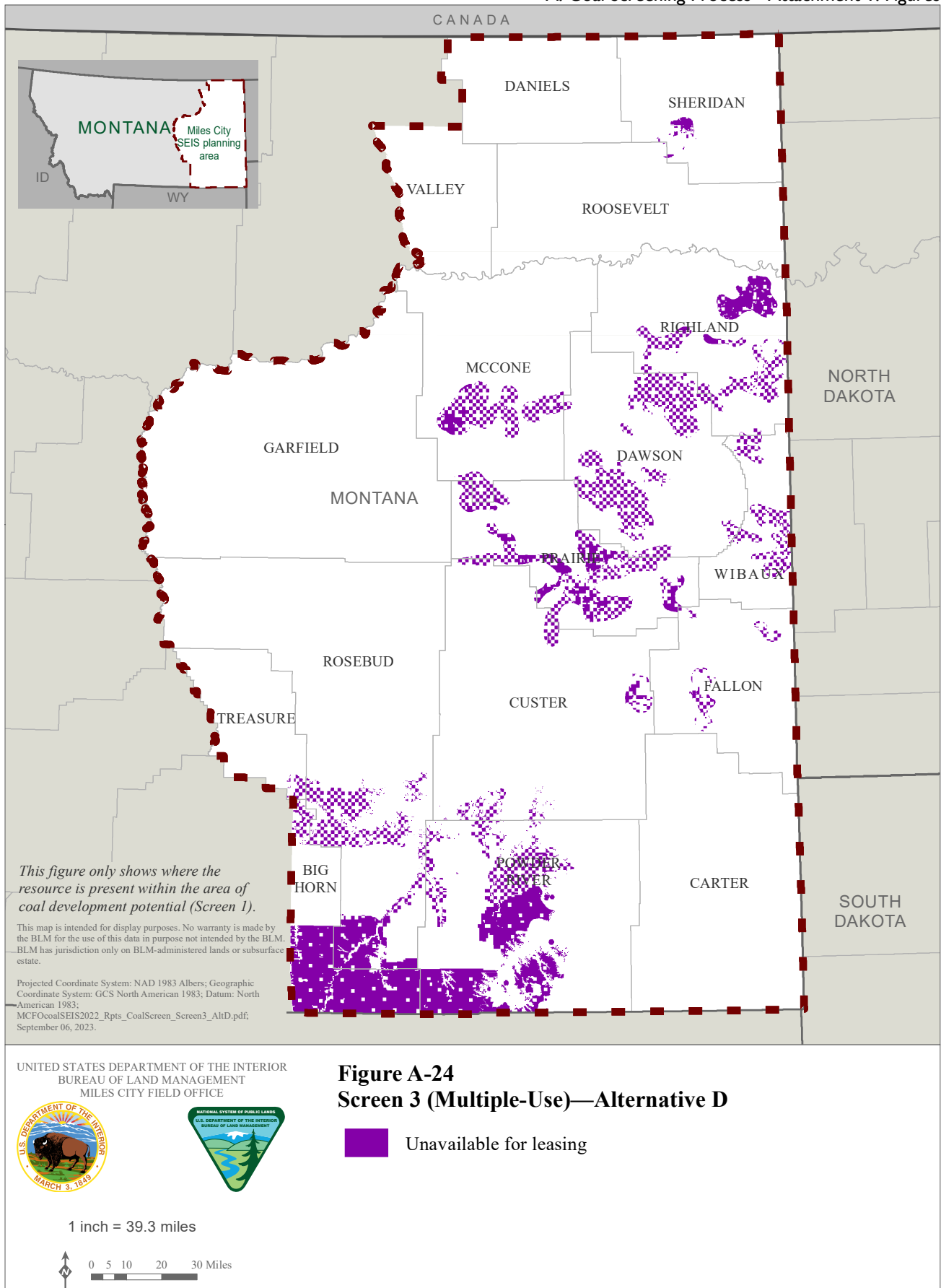




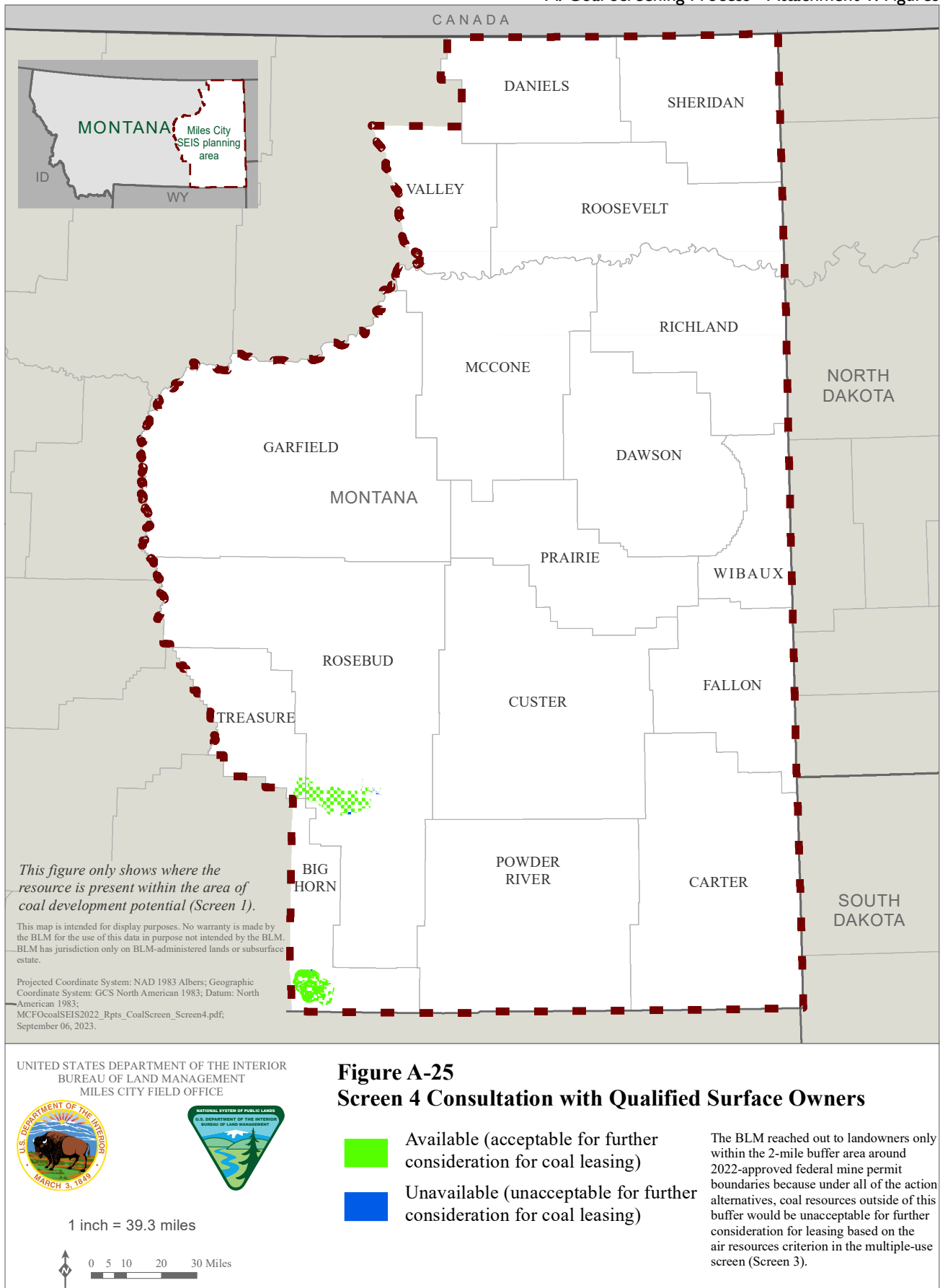












## A. Coal Screening Process - Attachment

This page intentionally left blank.

---

# Attachment 2

Sample Private Landowner Letter

This page intentionally left blank.



# United States Department of the Interior

BUREAU OF LAND MANAGEMENT  
Miles City Field Office  
111 Garryowen Road  
Miles City, MT 59301  
<http://www.blm.gov/montana-dakotas>



September 28, 2022

CERTIFIED MAIL NO.:  
RETURN RECEIPT REQUESTED

Subject: Surface Owner Consultation (Coal Screen 4) -Miles City Field Office Resource  
Management Plan Amendment and Supplemental Environmental Impact Statement

Dear Surface Owner:

The United States Department of the Interior, Bureau of Land Management (BLM), Miles City Field Office (MCFO) is preparing a Supplemental Environmental Impact Statement (SEIS) and potential amendment to the Approved Resource Management Plan (RMP) for MCFO. This potential amendment and associated SEIS are in response to a United States Montana District Court opinion and order (Western Organization of Resource Councils, et al vs BLM; 4:20-CV-00076-GF-BMM; 8/3/2022). As part of this effort, the BLM is required to conduct new coal screening in accordance with the Code of Federal Regulations (CFR), 43 CFR 3420.1-4.

Pursuant to 43 CFR 3420.1-4(e)(4)(i), the BLM is providing you official notification that, based on publicly accessible State of Montana Cadastral data, the BLM has identified your private surface lands, which overlie federal coal deposits, as lands determined to have coal developmental potential. The BLM has identified the legal land descriptions of these lands on *Enclosure 1* of this letter for your review. As part of the planning process, the BLM is required to solicit a preference for surface mining from every qualified surface owner for lands we are considering making acceptable for future consideration for coal leasing. This notification provides you the opportunity to submit your preference.

If you are a “qualified surface owner”, as defined by 43 CFR 300.0-5 (gg) (1) and (2), please respond by completing and returning the *Enclosure 2* using the prepaid envelope. If you are not the “qualified surface owner,” please respond by completing and returning the *Enclosure 3*. Please see *Enclosure 4* and *Enclosure 5* for additional information, definitions, and specific Federal coal regulations. We ask you respond by **no later than Oct 31, 2022**.

This planning effort does not authorize coal leasing. Future leasing of Federal coal would require a company to obtain your written consent prior to submitting a lease application to the BLM for review. Leasing action would be subject to separate additional National Environmental Policy Act review.

For additional information please contact Irma Nansel, Project Manager, at 406-233-3653 or [inansel@blm.gov](mailto:inansel@blm.gov).

We appreciate your interest in our planning efforts and look forward to hearing from you.

Sincerely,

Eric Lepisto  
Miles City Field Manager

# **ENCLOSURE 1**

## **LEGAL LAND DESCRIPTION**

Unique ID

*Legal Land Descriptions and land parcel information was obtained from the State of Montana Cadastral Website. This data was used to identify private lands with split estate federal coal rights. To view the original source of this parcel information, please visit The State of Montana Cadastral website: <https://svc.mt.gov/msl/mtcadastral/>*

## ENCLOSURE 2

### QUALIFIED SURFACE OWNER

---

Unique ID

**Return no later than October 31, 2022**, using the self-addressed, stamped envelope provided.

Dear BLM Field Manager:

In response to your letter soliciting each qualified surface owner's "preference in favor of" or "preference against" mining federally owned coal deposits underlying split estate by other than underground mining techniques (surface coal mining) within the Miles City planning area, I submit the following written response **as the legal qualified surface owner**, as defined by 43 CFR 300.0-5 (gg) (1) and (2):

Note: if you are **NOT** the legal qualified surface owner, please complete Enclosure 3.

☐ After reading and considering the provided references, I submit that I have **a preference in favor of** mining coal deposits underlying my surface estate by other than underground mining techniques (surface coal mining).

☐ After reading and considering the provided references, I submit that I have **a preference against** mining coal deposits underlying my surface estate by other than underground mining techniques (surface coal mining).

☐ After reading and considering the provided references, I submit that I am **undecided** on my preference in regard to mining coal deposits underlying my surface estate by other than underground mining techniques (surface coal mining).

Sincerely,

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Your Name (printed)



**ENCLOSURE 3**  
**NOT A QUALIFIED SURFACE OWNER**

---

Unique ID

**Return no later than October 31, 2022**, using the self-addressed, stamped envelope provided.

Dear BLM Field Manager:

In response to your letter soliciting each qualified surface owner's "preference in favor of" or "preference against" mining federally owned coal deposits underlying split estate by other than underground mining techniques (surface coal mining) within the Miles City planning area, I am notifying you that, as defined by 43 CFR 300.0-5(gg) (1) and (2):

☐

I am **NOT** the "legal qualified surface owner"

**Qualified Surface Owner Information, if available:**

Below, I have provided the name and address of the qualified surface owner:

Name:

\_\_\_\_\_

Address:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_  
Your Name (printed)

## **ENCLOSURE 4**

### **FREQUENTLY ASKED QUESTIONS**

#### **1. What are you doing and why?**

The 2015 Miles City Resource Management Plan (RMP) was challenged by the Western Organization of Resource Councils (WORC) in the U.S. District Court of Montana in March 2016 (WORC I). An Order was issued on March 26, 2018, finding that BLM violated National Environmental Policy Act (NEPA) and required BLM to complete new coal screening and remedial NEPA analysis by November 29, 2019. The BLM signed the Record of Decision on November 25, 2019.

On August 27, 2020, WORC challenged the 2019 the Miles City Supplemental EIS (WORC II). An Order was issued on August 3, 2022. It found that BLM violated NEPA and ordered BLM to complete within 12 months new coal screening and remedial analysis. As part of this effort, the BLM will complete a Supplemental EIS and is required to conduct coal screening in accordance with the Code of Federal Regulations (CFR), 43 CFR 3420.1-4. Coal screening requires consultation with the qualified surface owner (Coal Screen 4).

#### **2. What is a qualified surface owner? (43 CFR 3400.0-5(gg))**

The natural person or persons (or corporation, the majority stock of which is held by a person or persons otherwise meeting the requirements of this section) who:

- Hold(s) legal or equitable title to the surface of split estate lands;
- Have their principal place of residence on the land, or personally conduct farming or ranching operations upon a farm or ranch unit to be affected by surface mining operations; or directly receive a significant portion of their income, if any, from such farming and ranching operations; and
- Have met the conditions of paragraphs (1) and (2) of this section for a period of at least 3 years, except for persons who gave written consent less than 3 years after they met the requirements of both paragraphs (gg) (1) and (2) of this section. In computing the three-year period, the authorized officer shall include periods during which title was owned by a relative of such person by blood or marriage if, during such periods, the relative would have met the requirements of this section.

#### **3. What are split estate lands?**

Land in which the ownership of the surface is held by persons, including governmental bodies, other than the Federal government and the ownership of underlying coal is, in whole or in part, reserved to the Federal government.

#### **4. What is surface coal mining?**

Surface coal mining (also referred to as: “other than underground mining techniques”) operations means activities conducted on the surface of lands in connection with a surface coal mine or surface operations and surface impacts incident to an underground mine, as defined in section 701(28) of the Surface Mining Control and Reclamation Act (30 U.S.C. 1291(28)).

## **ENCLOSURE 4**

### **FREQUENTLY ASKED QUESTIONS**

**5. Why do you own my minerals? Do I own my minerals?**

Using GIS (a mapping program) analysis and based on best available data at least a portion of your parcel(s) identified in this letter have federal coal minerals. These minerals were most likely reserved when the land was homesteaded. You can look up more information regarding the land by visiting [glorerecords.blm.gov/](https://glorerecords.blm.gov/). Copies of the original land patents can be found by clicking on “Land Patents” and searching for the parcel by land description or using the second tab to search by location using a map. The master title plats can be found by clicking on “Land Status Records” and performing a similar search to find the parcel of land.

**6. How does this affect me?**

This step does not have an impact on you or your lands. We are asking your opinion to be considered in the coal screen process which will determine what lands may be made available for further consideration for leasing. Written surface owner consent would be needed to lease the lands and they would also need surface owner consent to issue a permit to mine. No lands are being leased for coal during this review.

**7. Does this mean my land will be developed?**

No. Land use planning will determine if lands are available for consideration. Written surface owner consent is needed to lease the lands and to issue a permit to mine. You will be involved if anyone is interested in leasing and developing your land.

**8. What comes next?**

Writing of the draft RMP/SEIS will occur this winter, with the documents available for public review and comment this spring/summer 2023. Unless otherwise requested, your address will be added to the project mailing list to receive notification of public meetings and the availability of draft documents for public review and comment. Additional, information will be posted on the BLM e-Planning website at <https://eplanning.blm.gov> by searching for NEPA number: DOI-BLM-MT-C020-2022-0086-RMP-EIS.

## **ENCLOSURE 5**

### **FEDERAL REGULATIONS**

#### **43 CFR 3420.0-2 - Objectives.**

The objectives of these regulations are to establish policies and procedures for considering development of coal deposits through a leasing system involving land use planning and environmental assessment or environmental impact statement processes; to promote the timely and orderly development of publicly owned coal resources; to ensure that coal deposits are leased at their fair market value; and to ensure that coal deposits are developed in consultation, cooperation and coordination with the public, state and local governments, Indian tribes and involved Federal agencies.

#### **43 CFR 3420.1-4 - General requirements for land use planning.**

(a) The Secretary may not hold a lease sale under this part unless the lands containing the coal deposits are included in a comprehensive land use plan or land use analysis. The land use plan or land use analysis will be conducted with public notice and opportunity for participation at the points specified in § 1610.2(f) of this title. The sale must be compatible with, and subject to, any relevant stipulations, guidelines, and standards set out in that plan or analysis.

(b)

- (1) The Bureau of Land Management shall prepare comprehensive land use plans and land use analyses for lands it administers in conformance with 43 CFR part 1600.
- (2) The Department of Agriculture or any other Federal agency with surface management authority over lands subject to leasing shall prepare comprehensive land use plans or land use analyses for lands it administers.
- (3) The Secretary may lease in any area where it is found either that there is no Federal interest in the surface or that the coal deposits in an area are insufficient to justify the costs of a Federal land use plan upon completion of a land use analysis in accordance with this section and 43 CFR part 1600.

(c) In an area of Federal lands not covered by a completed comprehensive land use plan or scheduled for comprehensive land use planning, a member of the public may request the appropriate Bureau of Land Management State Office to prepare a land use analysis for coal related uses of the land as provided for in this group.

(d) A comprehensive land use plan or land use analysis shall contain an estimate of the amount of coal recoverable by either surface or underground mining operations or both.

(e) The major land use planning decision concerning the coal resource shall be the identification of areas acceptable for further consideration for leasing which shall be identified by the screening procedures listed below:

- (1) Only those areas that have development potential may be identified as acceptable for further consideration for leasing. The Bureau of Land Management shall estimate coal development potential for the surface management agency. Coal companies, State and local governments and the general public are encouraged to submit information to the

## **ENCLOSURE 5**

### **FEDERAL REGULATIONS**

Bureau of Land Management at any time in connection with such development potential determinations. Coal companies, State and local governments and members of the general public may also submit non-confidential coal geology and economic data during the inventory phase of planning to the surface management agency conducting the land use planning. Where such information is determined to indicate development potential for an area, the area may be included in the land use planning for evaluation for coal leasing.

- (2) The Bureau of Land Management or the surface managing agency conducting the land use planning shall, using the unsuitability criteria and procedures set out in subpart 3461 of this title, review Federal lands to assess where there are areas unsuitable for all or certain stipulated methods of mining. The unsuitability assessment shall be consistent with any decision of the Office of Surface Mining Reclamation and Enforcement to designate lands unsuitable or to terminate a designation in response to a petition.
- (3) Multiple land use decisions shall be made which may eliminate additional coal deposits from further consideration for leasing to protect other resource values and land uses that are locally, regionally, or nationally important or unique and that are not included in the unsuitability criteria discussed in paragraph (e) of this section. Such values and uses include, but are not limited to, those identified in section 522(a)(3) of the Surface Mining Reclamation and Control Act of 1977 and as defined in 30 CFR 762.5. In making these multiple use decisions, the Bureau of Land Management or the surface management agency conducting the land use planning shall place particular emphasis on protecting the following: Air and water quality; wetlands, riparian areas, and sole-source aquifers; the Federal lands which, if leased, would adversely impact units of the National Park System, the National Wildlife Refuge System, the National System of Trails, and the National Wild and Scenic Rivers System.
- (4)
  - (i) While preparing a comprehensive land use plan or land use analysis, the Bureau of Land Management shall consult with all surface owners who meet the criteria in paragraphs (gg) (1) and (2) of § 3400.0-5 of this title, and whose lands overlie coal deposits, to determine preference for or against mining by other than underground mining techniques.
  - (ii) For the purposes of this paragraph, any surface owner who has previously granted written consent to any party to mine by other than underground mining techniques shall be deemed to have expressed a preference in favor of mining. Where a significant number of surface owners in an area have expressed a preference against mining those deposits by other than underground mining techniques, that area shall be considered acceptable for further consideration only for development by underground mining techniques. In addition, the area may be considered acceptable for further consideration for leasing for development by other than

## **ENCLOSURE 5**

### **FEDERAL REGULATIONS**

underground techniques if there are no acceptable alternative areas available to meet the regional leasing level.

- (iii) An area eliminated from further consideration by this subsection may be considered acceptable for further consideration for leasing for mining by other than underground mining techniques if:

- (A) The number of surface owners who have expressed their preference against mining by other than underground techniques is reduced below a significant number because such surface owners have given written consent for such mining or have transferred ownership to unqualified surface owners; and

- (B) The land use plan is amended accordingly.

(f) In its review of cumulative impacts of coal development, the regional coal team shall consider any threshold analysis performed during land-use planning as required by § 1610.4-4 of this title and shall apply this analysis, where appropriate, to the region as a whole.

---

# Appendix B

Coal Reasonably Foreseeable Development  
Scenario

This page intentionally left blank.



---

## TABLE OF CONTENTS

Section

Page

---

### APPENDIX B. COAL REASONABLY FORESEEABLE DEVELOPMENT SCENARIO ..... B-I

B.1	Unconstrained Coal Reasonably Foreseeable Development Scenario.....	B-3
B.1.1	Introduction .....	B-3
B.1.2	Existing Coal Mining Activity.....	B-3
B.1.3	Forecast of Existing Mining Activities .....	B-11
B.2	Constrained Coal Reasonably Foreseeable Development Scenario .....	B-15
B.2.1	Forecast Coal Production.....	B-15
B.3	Reasonably Foreseeable Development Scenario with No New Leasing.....	B-16
B.3.1	Forecast Coal Production.....	B-17
B.4	References .....	B-19

---

## TABLES

Page

---

B-1	Summary of RFD Scenario by Alternative .....	B-2
B-2	Federal and Nonfederal Coal Acres within MT DEQ Permits by Mine .....	B-3
B-3	Summary of Tons by Mine at the End of Fiscal Year 2021 .....	B-4
B-4	Recent Coal Production at the Rosebud Mine.....	B-7
B-5	Spring Creek Annual Production for the Last 10 Years: 2012–2021 .....	B-10
B-6	Spring Creek Domestic Energy Customers and Planned Closures.....	B-11
B-7	Montana Production as Compared with Mine-Specific Production in 2021 .....	B-11
B-8	Unconstrained Coal RFD Production Forecast: Rosebud and Spring Creek Mines .....	B-14
B-9	Forecast Coal Production: Rosebud and Spring Creek Mines.....	B-18

---

## FIGURES

B-1	Mineral Ownership in Proximity to Rosebud Mine.....	B-6
B-2	Mineral Ownership near the Spring Creek and Decker Mines .....	B-9

This page intentionally left blank.

## Appendix B. Coal Reasonably Foreseeable Development Scenario

This reasonably foreseeable development (RFD) scenario describes anticipated coal resource development within the administrative boundaries of the United States (US) Department of the Interior, Bureau of Land Management (BLM) Montana Miles City Field Office (MCFO; planning area) through 2088, based on development trends and expected changes to those development trends. The RFD scenario for this effort has been updated from the RFD scenario used in the analysis for the 2015 Proposed Resource Management Plan (RMP)/Final Environmental Impact Statement (EIS) and 2019 Proposed RMP Amendment (RMPA)/Final Supplemental EIS because market conditions have changed; therefore, the BLM has updated the RFD scenario accordingly. The geographic scope of this RFD scenario is limited to federal coal within the planning area.

This supplemental environmental impact statement (SEIS) decision area encompasses approximately 1.7 million acres of federal coal mineral estate with development potential in the MCFO.

Estimating the level of future coal development in the decision area has a high amount of uncertainty; this is because coal development depends on the continued operation of power plants, global coal markets, the ability to bring coal to market, and mining technologies. Energy policies can also shape demand by influencing the incentives and disincentives for coal development; these policies are often less foreseeable than the above-listed factors. Nevertheless, reasonable estimations of baseline future conditions can be forecast based on existing mine operations, expected changes in power plant operations, and coal mines actively under planning.

The BLM provided mining companies an opportunity to submit current mine-specific data to be considered for the RFD scenario. Two companies submitted data, including confidential and proprietary information. The BLM compared the data with publicly available information from the US Energy Information Administration (EIA), the Mine Safety and Health Administration (MSHA), the Montana Department of Environmental Quality (MT DEQ), and other public sources. The BLM deemed the proprietary figures comparable with publicly available data. Therefore, the BLM has used publicly available data or aggregated internal and proprietary data to protect all companies' confidential data. The RFD scenario does not account for scenarios based on uncertain or speculative assumptions.

**Table B-1** provides the summary of the RFD scenarios by alternative. The RFD scenarios are primarily driven by the multiple-use climate change criterion for air resources; this is because it is the most restrictive screening criterion that reduces lands available in each alternative. The results of applying the multiple-use climate change criterion for air resources are further described in **Sections B.1** through **B.3**, below.

**Table B-1**  
**Summary of RFD Scenario by Alternative**

Alternative	Total Federal and Nonfederal Production 2022–2038 (million tons)	Total Federal Production from Existing and Pending Leases/ Applications 2022–2038 (million tons)	Total Federal Production for Mine Life (million tons)	Pending <sup>1</sup> Federal Lease Applications (acres/million tons)		Life of Mine Extension by Adding Pending Federal Leases (years) <sup>2</sup>		Potential Future Subsequent Federal Leases (acres/million tons)		Life of Mine Extension by Adding Subsequent Lease Decisions (years) <sup>2</sup>	
				Spring Creek Mine	Rosebud Mine	Spring Creek Mine	Rosebud Mine	Spring Creek Mine	Rosebud Mine	Spring Creek Mine	Rosebud Mine
A and B	<b>274.97</b>	<b>165.18</b>	335.18	1,410/167.9	0/0	26 (2036–2061)	0 (2060)	1,300/170	0/0	27 (2062–2088)	0 (2060)
C	<b>274.97</b>	<b>165.18</b>	165.18	810/95	0/0	15 (2036–2050)	0 (2060)	0/0	0/0	0 (2050)	0 (2060)
D	<b>248.40</b>	<b>140.61</b>	140.61	0/0	0/0	0 (2035)	0 (2060)	0/0	0/0	0 (2035)	0 (2060)

<sup>1</sup> Rosebud Mine does not have any pending applications, and existing reserves would provide mining through 2060. See the assumptions in the respective RFD scenario below. Spring Creek Mine has two pending federal lease applications, and the mine forecasts a need for future subsequent leasing of approximately 1,300 acres/170 million tons.

<sup>2</sup> Estimated life of mine is based on the BLM projected production rate for each mine.

## B.1 UNCONSTRAINED COAL REASONABLY FORESEEABLE DEVELOPMENT SCENARIO

### B.1.1 Introduction

The unconstrained RFD scenario, or baseline RFD, provides information about the level of coal mining and associated disturbance necessary to analyze temporal and spatial effects that could result from possible leasing and/or production of coal in the planning area during the life of a plan without land use management constraints on future actions (that is, resource conflicts and mitigation requirements). An RFD is not a decision; it was developed for analysis purposes for this planning effort.

Under Alternatives A and B, the unconstrained RFD is not restricted due to the projected amount of federal coal acres/tons being made available in and around the existing mines and existing authorized federal and nonfederal leases at each mine. Therefore, the unconstrained RFD would be carried out in both Alternatives A and B, as projected in **Section B.1.3**. See the alternative's maps in **Chapter 2** and **Section B.1.2** below.

### B.1.2 Existing Coal Mining Activity

#### *Current Conditions and Recent Changes in Coal Mining Activity*

The MCFO has authorized federal leases for Savage Mine (Richland County), Rosebud Mine (Rosebud County), Spring Creek Mine (Big Horn County), and Decker Mine (Big Horn County) totaling approximately 34,542 acres (BLM 2022). **Table B-2** discusses the acres of federal and nonfederal surface involved in the permits at each mine. Mine-specific conversion factors are included to approximate the tonnage of coal available per acre when data are not otherwise available.

**Table B-2**  
**Federal and Nonfederal Coal Acres within MT DEQ Permits by Mine**

Mine	Permitted Federal Acres	Permitted Nonfederal Acres	Tons per Acre Conversion
Savage	292	875	34,848
East Decker	3,575	786	139,392
West Decker	6,677	680	139,392
Spring Creek	7,859	1,324	139,392
Rosebud	15,994	24,092	38,333
<b>Total for MCFO</b>	<b>34,397</b>	<b>27,757</b>	

Data Sourced from MT DEQ permits; the conversion factor is calculated by the coal seam thickness and density.

**Table B-3** provides a summary of total tons leased (as described in the original lease estimates), tons mined out, and tons remaining to be mined for the planning area. This table provides an overview of the leased federal reserves remaining to be mined at each mine; remaining tonnages at Savage, East Decker, and West Decker will not be produced, as described later in this section.

#### *Decker Mine*

The Decker Mine, comprising East Decker and West Decker permit areas and owned by Lighthouse Resources, filed for bankruptcy on December 3, 2020. Decker Mine requested to relinquish and reclaim the East Decker permit as part of the bankruptcy plans. On April 28, 2021, MT DEQ approved a permanent cessation on the East Decker permit. West Decker has remained in temporary cessation and is awaiting reclamation. Decker Mine ceased mining operations in January 2021, and shipping of stockpiled

**Table B-3**  
**Summary of Tons by Mine at the End of Fiscal Year 2021**

<b>Mine</b>	<b>Total Tons Leased</b>	<b>Tons Mined Out</b>	<b>Tons Remaining</b>
Savage	26,166,900	18,720,477	7,446,423
East Decker	274,357,500	149,903,464	124,454,036
West Decker	329,347,453	301,535,492	27,811,961
Rosebud	405,760,000	349,620,139	56,139,861
Spring Creek	367,106,000	237,161,325	129,944,675
Total for MCFO	1,441,105,447	1,095,308,491	345,796,956

Source: ONRR 2022a

coal was completed within the first quarter of that year. Currently, Decker Mine has completed bankruptcy proceedings and has transitioned into the reclamation phase for both permit areas. In addition, Decker Mine has requested relinquishment of all its federal leases at West Decker.

Even though mining has ceased, and reclamation efforts are underway, formal closure of the mine permits and federal leases has not occurred to date. The Decker Mine has not produced coal in over a year, it is not in compliance with the BLM lease terms, and it is now subject to cancellation of all its federal leases; in accordance with 43 Code of Federal Regulations 3452, the BLM is pursuing the cancellation or relinquishment of all federal Decker Mine leases. The BLM was not provided information for any current proposals to buy out or acquire the Decker Mine. Therefore, the BLM considers any projections of future development at the Decker Mine speculative and uncertain. While mining and production was forecast for the Decker Mine in the 2019 Final SEIS, it is not considered in this RFD.

#### *Savage Mine*

The Savage Mine in Richland County served the Lewis and Clark Station and the Sidney Sugars Processing Plant. The Lewis and Clark Station was closed in March 2021. The Sugar Plant remains burning approximately 50,000–70,000 tons of coal supplied annually from the Savage Mine. However, this plant is planning to convert to natural gas in the near future. The Savage Mine ceased mining on its only federal lease in September 2017, and it is now in reclamation status. All current production comes from nonfederal leases and only occurs for a few weeks a year. Savage Mine plans to close and complete reclamation when the Sidney Sugars Plant no longer requires coal as a fuel source. Savage Mine has no plans to pursue any future mining of federal coal. Therefore, future production from Savage Mine is not considered in this RFD.

#### *Domestic License*

MCFO has one domestic coal license for an individual to mine coal for personal heating needs. This domestic license can produce up to 20 tons annually. The license is currently for an 80-acre tract in Fallon County, Montana, with disturbance less than 2 acres at a time. The BLM anticipates the license to be renewed every 2 years during the term of the planning period. The quantity produced is a negligible fraction of the production at the other mines (less than a day's production of either operating mine); therefore, it is not included in the RFD scenario.

#### *Rosebud Mine*

The Rosebud Mine was owned and operated by Western Energy Company, a subsidiary of Westmoreland Coal, until the company filed bankruptcy in late 2018. The Rosebud Mine was sold to Westmoreland

Rosebud Mining LLC as part of the bankruptcy resolution in March 2019. The leases were transferred to Westmoreland Rosebud Mining, but a pending lease modification application was not pursued by the new owners. There are no current pending applications to lease federal coal at the Rosebud Mine.

The Rosebud Mine consists of five MT DEQ permit areas (A, B, C, D, and F). **Figure B-I** shows the mineral ownership near the mine to be a checkerboard land pattern of federal and nonfederal coal. Approximately 40 percent (15,994 acres) of all the Rosebud Mine MT DEQ mine permits consist of leased federal coal. About 0.08 percent (33 acres) of the mine permits contain BLM-administered surface estate.

Most of the MT DEQ permits are mined out. By 2025, Area A, Area C, and Area D will be mined out. Area B will also be mined out, except for the new amendment area AM5. Future mining in Area B will not include federal surface or federal coal and is permitted to mine until 2040. Area F contains approximately 48 percent federal minerals and no federal surface (MT DEQ 2022) and is currently permitted to mine until 2039. Production throughout the planning period, therefore, would occur at Area F and Area B AM5. However, the MT DEQ mine permit dates for Area B (2040) and Area F (2039) could be extended depending on the rate of mining used to determine the life of mine.

For the MT DEQ, Area B permit is currently under litigation; this includes AM4 and AM5. However, the mine is authorized to operate during litigation. AM4 has federal coal, but AM5 does not contain federal coal. The expansion for AM5 does not include federal coal and therefore is not included in the Office of Surface Mining Reclamation and Enforcement (OSMRE) federal plan boundary used in analyses.

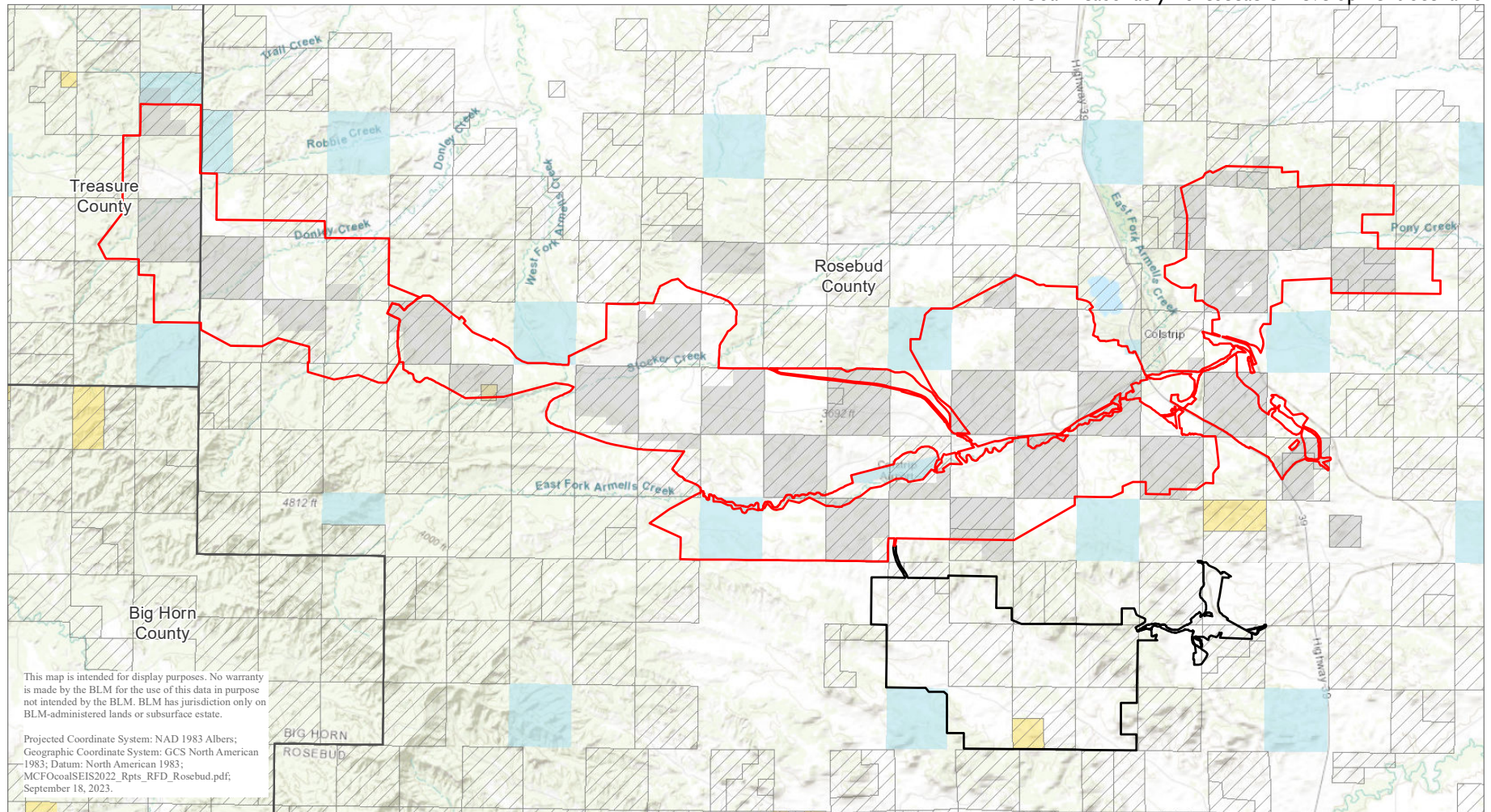
The OSMRE federal mine plan for Area F is under litigation. Area F is 48 percent federal minerals. As directed by the court order, OSMRE is required to complete supplemental analysis under the National Environmental Policy Act (NEPA) by April 30, 2024. The current record of decision would be vacated by the court on April 30, 2024. If the new EIS is not prepared by then, the federal mine plan decision would no longer be valid, and mining would stop, pending resolution of the litigation.

Currently, the Area B AM5 and Area F expansions have sufficient leased federal and nonfederal coal to supply their customers. If access to the Area B amendment or Area F is denied, Rosebud Mine could shut down within the planning period or could need new leases and permits to continue operating to meet contracts. However, it is uncertain at this time if any of these litigations would stop the mining short of its permitted life of the mine. Rosebud Mine indicated no plan or need for additional federal coal leases during the planning period. The Rosebud Mine provides coal to the Colstrip Power Plant, Colstrip Energy Limited Partnership (CELP) Power Plant, and domestic users in the local area. The Colstrip Power Plant had four operating units prior to 2020. In 2020, Units 1 and 2 were permanently shut down. Units 3 and 4 continued operating to produce up to 1480 megawatts of energy annually. The life of the Colstrip Power Plant is uncertain due to ongoing litigation and bankruptcy of Talen Energy, a co-owner of the Colstrip Power Plant. Current operating plans keep both units operating until 2042.

Production at the Rosebud Mine is directly tied to the consumption of coal to make electricity at these two units. Prolonged or unplanned maintenance of the units could result in a decrease in mine production. However, this type of production decrease is unpredictable and was not considered in the RFD scenario. The CELP Power Plant and the direct sales to domestic users have not changed in recent years and are both forecast to remain at current levels.



## B. Coal Reasonably Foreseeable Development Scenario



UNITED STATES DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
MILES CITY FIELD OFFICE

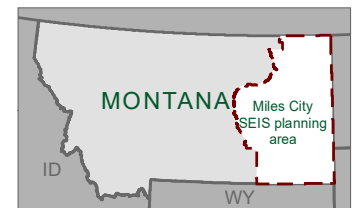


1 inch = 2.47 miles



**Figure B-1**  
**Mineral Ownership in Proximity to Rosebud Mine**

- |  |                             |  |                           |
|--|-----------------------------|--|---------------------------|
|  | Rosebud mine                |  | Bureau of Land Management |
|  | Big Sky mine                |  | State                     |
|  | Existing coal lease         |  | Private                   |
|  | Federal mineral coal estate |  |                           |





The Rosebud Mine decreased production by approximately 2 million tons when Units 1 and 2 shut down in 2020. There are only 2 years of production data for supplying only Units 3 and 4 in 2021 and 2022. These years were also simultaneous with the effects of the COVID-19 pandemic. However, the Rosebud Mine indicated that 2021 approximated what a standard year was anticipated to be with only Units 3 and 4 operating, and the quarterly reports for 2022 thus far are a reasonable match to the quarterly reports of 2021 (MSHA 2022). **Table B-4** shows the 2-year Rosebud Mine reported production only for those shipments to the Colstrip Power Plant. The tonnages shipped to the CELP Power Plant and sold directly at the mine are not included.

**Table B-4**  
**Recent Coal Production at the Rosebud Mine**

Year	Total Production (Tons)
2020	5,315,470
2021	6,498,182

Source: EIA 2022b

Approximately 200,000–250,000 tons of coal will be transported by semitruck annually to the nearby CELP Power Plant, and approximately 200,000 tons will be sold to local residents for home heating needs.

The BLM has determined an aggregate annual production value for the Rosebud Mine based on publicly reported production for the Colstrip Power Plant, along with internal and company data for the other shipments. The BLM anticipates an average of 7.05 million tons a year to be used in the annual RFD calculations.

As stated above, the future of the Colstrip Power Plant is unknown. As a mine-to-mouth operation, that uncertainty produces an uncertain future for the Rosebud Mine. Pending the litigations described above, the mine has enough reserves on existing leases (federal and nonfederal) and approved mine plans to continue operation during the planning period. A decision to close the Colstrip Power Plant early could be issued by the courts or the operators of the Colstrip Power Plant as that litigation proceeds. This could lead the Rosebud Mine to close early.

#### *Spring Creek Mine*

In 2020, Cloud Peak Energy filed bankruptcy. During bankruptcy, the Spring Creek Mine was bought by the Navajo Transitional Energy Company LLC (NTEC). NTEC has assumed the existing federal, private, and state leases for the Spring Creek Mine. NTEC has also resubmitted the federal coal lease applications for a lease modification to MTM 110693, containing 150 acres and 6.9 million tons of minable coal, and a lease by application (LBA) (MTM 10548501) for 1,262 acres containing approximately 161 million tons of recoverable coal. NTEC also purchased the Youngs Creek Mine and is pursuing the development of a haul road to connect the mine to the Spring Creek Mine coal processing and loadout facilities, which would allow operation as one mining complex.

The Youngs Creek Mine (south of the Spring Creek Mine in Wyoming) is projected to produce 2–5 million tons a year. This could augment production at the Spring Creek Mine. The Youngs Creek Mine is 100 percent nonfederal coal estate. However, due to ongoing litigation and uncertainty about when mining would occur, this projected contribution is not included in the RFD for the Spring Creek Mine. Similarly,

production from the proposed Big Metal Mine (west of the Spring Creek Mine on the Crow Indian Reservation) is not being pursued by NTEC; therefore, it is also not included in this RFD.

The OSMRE federal mine plan for Spring Creek is currently under litigation. The court has required OSMRE to complete a supplemental analysis under NEPA with a deadline of April 1, 2023. OSMRE was granted an extension to this deadline. The current decision record could be vacated by the court if OSMRE does not comply with the new deadline. If the decision is vacated, the federal mine plan decision would no longer be valid unless the ongoing NEPA analysis has been completed and supports the previous decision. If the federal mine plan is invalid without a current NEPA decision, then mining would stop, pending resolution of the litigation or further decision by the court.

The Spring Creek Mine consists of one MT DEQ permit with approximately 4,270 acres of existing federal coal leases (BLM 2022). At this time, approximately 85 percent (7,859 acres) of the Spring Creek MT DEQ mine permit is federal coal estate (including unleased federal coal). The publicly available Spring Creek Mine permit documents do not contain a summary of permitted and disturbed acres by ownership (MT DEQ 2022). However, the 2020 TRI Revision to the Spring Creek Permit documents the disturbance and total permit acres in the Final EIS (Table S-1.1-1; MT DEQ 2020). **Figure B-2** shows the mineral ownership near the mine.

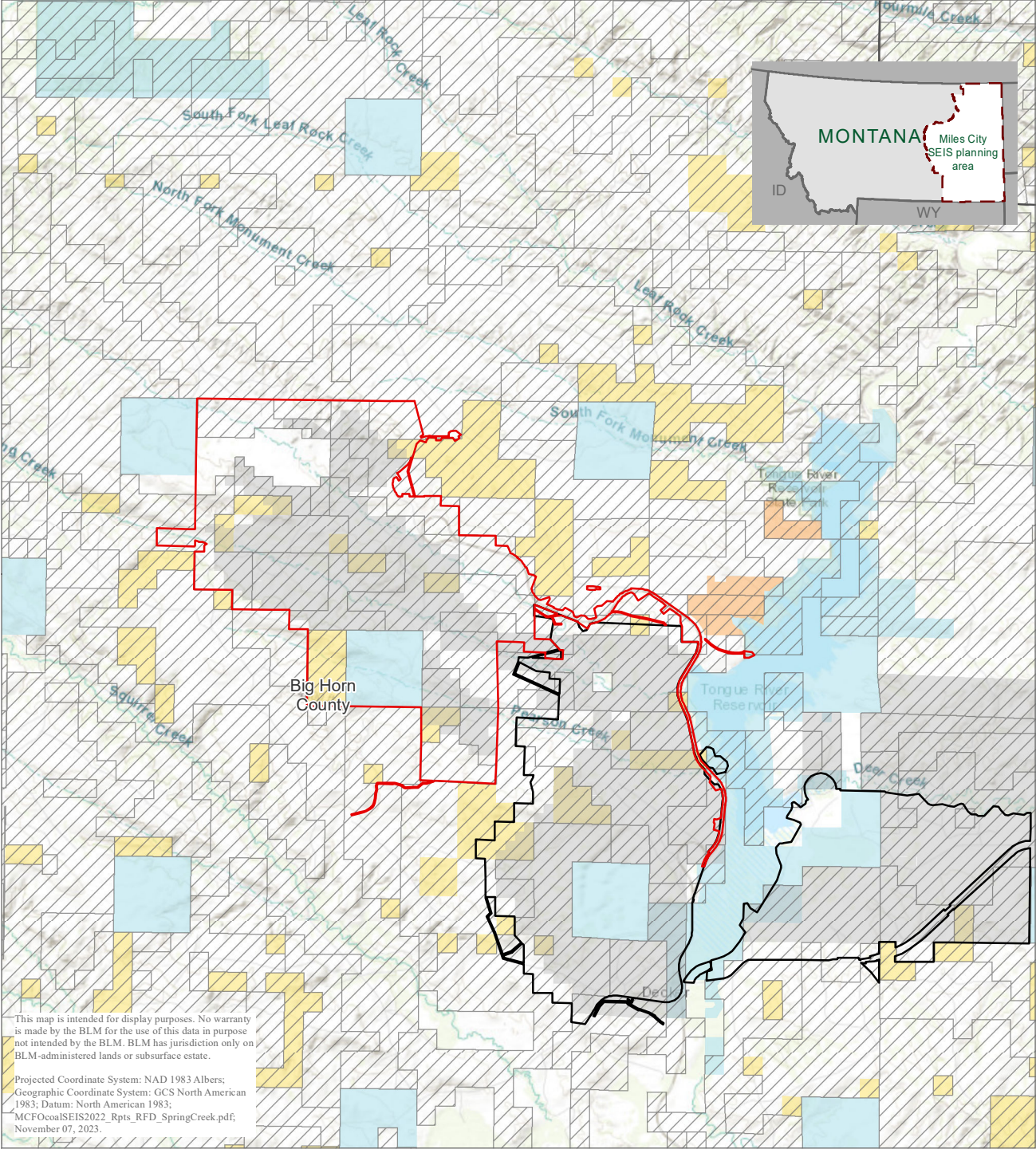
The Spring Creek Mine is currently mining its only private coal lease and anticipates completion within a few years. Upon completing mining of the private lease, the Spring Creek Mine's production would be approximately 80–90 percent federal, with the remainder on state lands. New federal coal leases (pending and forecast) are needed to expand the Spring Creek Mine and to continue operations to meet demand throughout and beyond the planning period. With the exception of state land, and a few private parcels, all future expansions would be primarily on unleased federal coal (See **Figure B-2**). The private parcels south and southwest of the West Decker Permit, many of which are owned by NTEC, are currently identified as part of an alluvial valley floor (AVF) and would be unavailable under Coal Screen 2 (see Appendix A).

**Figure B-2** shows approximately 760 acres of unleased nonfederal coal lands (comprising 640 acres of state lands and 120 acres owned by NTEC) immediately outside the northwest corner of the federal mine plan boundary, where the mine could expand. However, this nonfederal expansion could contain high overburden ratios, which could render the expansion uneconomic. Due to the amount of federal coal in the area, the BLM anticipates that any additional future coal needs would likely be derived from unleased federal coal.

The Spring Creek Mine's production has varied over the years with a range wider than 8 million tons. On average over the last 10 years, the Spring Creek Mine has produced approximately 14,047,167 million tons a year (**Table B-5**).

The Spring Creek Mine would continue to produce approximately 14 million tons of coal annually and serve domestic and international markets. The Spring Creek Mine's current MT DEQ mine permit allows mining through 2030. However, end-of-mine dates for mine permits are typically calculated using a higher production rate; for the Spring Creek Mine, the permit shows a rate of 18 million tons per year. Since 2011, MSHA production records for the Spring Creek Mine show a range of annual production between 9.5 million tons and 17.7 million tons. Because of the historical trend of producing less than 18 million

B. Coal Reasonably Foreseeable Development Scenario



UNITED STATES DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
MILES CITY FIELD OFFICE



1 inch = 2 miles



**Figure B-2**  
**Mineral Ownership near the Spring Creek and Decker Mines**

- |  |                             |  |                           |
|--|-----------------------------|--|---------------------------|
|  | Spring Creek mine           |  | Bureau of Indian Affairs  |
|  | Decker mine                 |  | Bureau of Land Management |
|  | Existing coal lease         |  | State                     |
|  | Federal mineral coal estate |  | Private                   |

**Table B-5**  
**Spring Creek Annual Production for the Last 10 Years: 2012–2021**

<b>Year</b>	<b>Total Production (Tons)</b>
2021	13,095,744
2020	9,513,255
2019	11,928,834
2018	13,768,055
2017	12,725,656
2016	10,245,081
2015	16,987,420
2014	17,338,424
2013	17,669,717
2012	17,199,485
<b>10-Year Average:</b>	<b>14,047,167</b>

Source: MSHA 2022

tons per year, the life of the mine could be extended, assuming the MT DEQ approves future permit modifications to extend the end-of-mine date. Considering the available reserves and anticipated production rates, the BLM reserves would be exhausted by 2035.

The Spring Creek Mine serves domestic and international markets. Approximately 10 percent of production is transported by rail to industrial markets. The BLM does not have specific information on the industrial uses of Spring Creek’s coal. The coal quality of Spring Creek Coal—specifically from the Smith, Anderson, and Dietz coal beds—does not meet the grade required for metallurgical coal, which prevents its use for coking or making steel (Gunderson and Wheaton, n.d.; Trippi et al. 2021; Haacke et al. 2013). EIA’s Annual Report does not include any metallurgical coal production or mines in Montana (EIA 2022). Approximately 30 to 40 percent of Spring Creek’s annual production is transported by rail to a port in Vancouver, British Columbia, and shipped to Asian markets (EIA 2022a). The BLM was not provided specific information on the customers or uses of Spring Creek’s coal in the international markets. The coal may be used for electricity or industrial uses in Asia. A minimal amount of coal is trucked to the adjacent Wolf Mountain Coal processing plant, which sells to local residents and businesses for heating needs. The Spring Creek Mine ships approximately 50 percent of its coal by rail across the country to several domestic power plants, including but not limited to the Coronado Generating Station (Arizona; fully retired by 2032 [SRP Newsroom 2020]), Clay Boswell Plant (Minnesota; planned retirement of one unit in 2030 and the second unit by 2035 [Kraker 2021]), Hoot Lake Power Plant (Minnesota; retired in 2021 [Otter Tail Power Company 2021]), DTE Energy Belle River Plant (Michigan; retiring or converting to an alternate fuel source by 2028 [DTE 2022]), Karn Coal Plant (Michigan; retiring in 2023 [Consumer Energy 2022]), and Transalta Centralia Generating Station (Washington; retiring by 2025 [Transalta 2022]) (EIA 2022b). **Table B-6** summarizes the list of power plants and closures, and how annual shipments were factored into Spring Creek’s production for RFD calculations.

Information for retirements was found in each plant’s retirement plans and other publicly available documents. All of the Spring Creek Mine’s current domestic energy consumers are anticipated to close or convert to another fuel source by 2035. Power plants have independently announced their plans to stop burning coal by 2035, which is when Spring Creek’s existing reserves are anticipated to be exhausted. Therefore, this market change is forecasted independent of the Spring Creek Mine or BLM decisions in



**Table B-6**  
**Spring Creek Domestic Energy Customers and Planned Closures**

<b>Power Plant Name</b>	<b>Closure Year*</b>
Hoot	2021
Karn	2023
Centralia	2025
Boswell	40% in 2030, remainder by 2035
Coronado	2032
DTE (Michigan)*	2028

\*Data sourced from individual plant's operating plans.

this SEIS. The BLM's RFD projection of total coal production from the Spring Creek Mine shows a decrease as each of the power plants closes.

The power plants listed in **Table B-6** recycle their fly ash for use in concrete. Because these power plants have decided to close or convert to alternative fuels, fly ash would not be made once the plants close. Based on industry practices, any landfilled coal combustion residue at these sites could still be recycled to provide materials for the concrete industry. Additionally, other materials can be used to replace fly ash in concrete.

There would continue to be an industrial and international market for coal during the planning time frame at the BLM-projected rates.

### **B.1.3 Forecast of Existing Mining Activities**

#### **Market Trends in Coal Production**

Total coal production for Montana in 2020 was 26,421,553 tons (EIA 2022b). The Spring Creek and Rosebud Mines have consistently made up over 50 percent of Montana's production. In **Table B-7**, 2021 is used as a model year because that year the Colstrip Power Plant only operated Units 3 and 4; the Decker Mine did not operate, except in the first quarter; and the best data available after the onset of the COVID-19 pandemic are from that year. Without Decker Mine's contributing production, the Spring Creek and Rosebud Mines make up a large portion of Montana's coal production.

**Table B-7**  
**Montana Production as Compared with Mine-Specific Production in 2021**

	<b>Tons</b>	<b>Percentage of Montana Production</b>
<b>Rosebud Mine</b>	6,498,182	23
<b>Spring Creek Mine</b>	13,095,744	46
<b>Montana Total Production</b>	28,579,592	—

Source: EIA 2022b

The national coal market is in a decline; the BLM anticipates this trend to continue throughout the planning period. The EIA forecasts that total US production will drop from over 610 million tons in 2022 to 450 million tons in 2040 (EIA 2022a). Production in the western region (which includes the MCFO) produced 335 million tons in 2022 and is anticipated to decline to 224 million tons in 2040. The decline is associated with the retirement of coal-fired power stations or the conversion from coal to natural gas energy production across the country. According to the EIA (2022a), almost 100 gigawatts of generation capacity

of coal would be replaced by renewable energy and oil and gas in response to both regulatory measures and market factors. In particular, low natural gas prices in the early years of the RFD's time frame could contribute to the retirement of coal-fired plants. All five of Spring Creek Mine's 2021 energy customers have published plans to close or convert by 2035.

Global coal markets are expected to remain steady or possibly see a slight increase throughout the planning period (EIA 2022c). The demand for coal in Europe is declining, but the demand in Asia is increasing. While Asian countries are increasing their production of coal to meet their needs in the short term, there would still be a steady need for imports. Other countries more proximal to Asia (such as Australia and Indonesia) or with better coal quality could be better suited than the US to meet Asian coal needs. Currently, the United States contributes approximately 4.9 percent to the global coal trade (IEA 2021).

Trends between 1990 and 2020 have shown a steady decrease in US coal exports (IEA 2021). The United States' coal quality, regulations, and transportation challenges may play a critical factor in its ability to become a larger player in the global trade of coal. These challenges are not anticipated to be abated during the planning period. Given the global decline in US coal exports, other factors that could make exporting coal more difficult, and no definitive factors permitting a quantification of a further decrease in US coal exports, this RFD scenario considers a continuation in existing export activity during the planning period.

### **Forecast Coal Production**

#### *Spring Creek Mine*

The BLM projects an annual production of 14 million tons per year for the Spring Creek Mine during the planning period. Throughout the planning period, there is an anticipated decrease in annual production due to the closure or conversion of coal-fired power plants; however, industrial uses and exports are assumed to remain steady at approximately 6.5 million tons per year. **Table B-8** shows total, federal, and nonfederal production by year.

NTEC's pending applications for a lease modification to MTM 110693 (containing 150 acres and 6.9 million tons of minable coal) and an LBA (MTM 10548501) for 1,262 acres containing approximately 161 million tons of recoverable coal would be available.

In addition to the pending federal lease applications, the Spring Creek Mine foresees the need to lease a subsequent 170 million tons of federal coal in the planning period. The exact locations of the tracts are unknown; however, the BLM assumes the lease size would be similar to the mine's pending LBA and, therefore, projects 1,300 acres for the 170 million tons. Historically, the review and authorization process for federal coal leasing, federal mine plan approval, and MT DEQ mine permit approval has taken on average 10 years. Therefore, coal mines have to plan ahead before there is an actual need for coal resources. The BLM projects these potential subsequent future federal leases may be authorized during the life of the plan, but no actual mining is anticipated during the life of the plan. These federal leases would be needed to keep operations going after the planning period; they will be needed during the planning period to procure permits in time for their future needs. However, the BLM production forecast does not include expansion of nonfederal coal leasing and development.

As seen in **Figure B-2** and discussed in **Section B.1.2**, there are 760 acres of nonfederal land immediately adjacent to the OSMRE federal mine permit boundary. Due to predominantly federal coal ownership,

there is no other nonfederal coal within 1.5 miles of the Spring Creek OSMRE federal mine permit (excluding the Decker Permit area). Even though nonfederal coal is present in limited quantities in the area, the BLM assumes all 1,300 acres of subsequent future leasing would come from federal coal.

The Spring Creek Mine would have limited options to expand without additional federal coal leases. There are no pending applications or other mine data that consider expanding mining within the existing permits. Therefore, there are no estimates of tonnage that could expand the life of the mine past the current permitted reserves. However, the mine plan for the pending LBA assumes more of the adjacent state lease would be mined for the continuity of the mining operations. Therefore, the forecast production assumes a contribution of nonfederal coal from continuity of the existing state leases despite the BLM federal production forecast not including expansion of nonfederal coal leasing.

Most of the federal coal produced in the planning area is burned for energy needs. However, the Spring Creek Mine sends up to 10 percent of its production to domestic industrial users, and up to 40 percent of total production is exported. As discussed previously, global markets are assumed to remain constant throughout the planning period (EIA 2022c). Therefore, it can be assumed that approximately 1.3 million tons of annual production are used for industrial uses and up to 5.2 million tons of annual production are exported. Because Spring Creek Mine mineral ownership is about 85 percent federal mineral (MT DEQ permit), it is assumed that about 85 percent or more of these annual shipments would be composed of federal minerals. As the Spring Creek Mine completes mining on its private and state leases.

#### *Rosebud Mine*

At the BLM's forecast production rate, Rosebud Mine's existing permits for Area F and Area B (AM5) would take the mine to 2060. No new federal leases are anticipated during the planning period.

#### **Forecast Assumptions**

Based on the information provided above, the unconstrained RFD coal forecast is based on the following BLM assumptions:

1. Development of a new coal mine would not occur in the decision area during the planning period.
2. Rosebud Mine and Spring Creek Mine would account for all future production of federal coal resources in the planning area.
3. Rosebud Mine and Spring Creek Mine would continue to use existing coal mining production facilities and technologies.
4. Rosebud Mine and Spring Creek Mine would obtain necessary state and federal mine permits and resolve litigation of current permits to continue mining without any disruption in operations.
5. Coal production at Rosebud Mine would remain constant, and coal production at the Spring Creek Mine would decrease.
6. Rosebud Mine would continue to supply the Colstrip Power Plant and the CELP Power Plant.
7. Spring Creek Mine would continue to supply domestic and industrial customers, as well as exports to Asian markets through ports in British Columbia. Any reduction in domestic contracts due to coal-fired power plant closures or conversions would not be made up with new domestic, industrial, or export contracts.
8. The two pending federal coal leasing actions (MTM 110693 lease modification containing 150 acres and 6.9 million tons of minable coal and MTM 10548501 lease application for 1,262 acres

containing approximately 161 million tons of recoverable coal) at the Spring Creek Mine would be authorized and developed.

9. For the Spring Creek Mine, the potential subsequent future federal leasing of approximately 1,300 acres based on logical practices at the mine. This would contain approximately 170 million tons would be authorized for leasing and would be developed beyond the planning period.
10. Rosebud Mine will not seek any new federal leases during the planning period.
11. Production at each mine is forecasted to remain constant at the 2038 production rate until the life of mine is reached. Spring Creek mine will continue to operate past 2038. This is assuming the existing customers in 2038 will remain constant.
12. The estimated life of mine does not consider business decisions for the mine that may impact end of life date.

Considering the annual production of the Rosebud and Spring Creek Mines, relative portion of federal and nonfederal leases in the mine plan, and these assumptions, the unconstrained coal RFD forecast for 2022–2038 is shown in **Table B-8**.

**Table B-8**  
**Unconstrained Coal RFD Production Forecast: Rosebud and Spring Creek Mines**

Year	Total Production (tons)	Federal Production (tons)	Nonfederal Production (tons)
2022	20,847,961	11,046,605	9,801,356
2023	20,789,282	10,517,605	10,271,677
2024	20,789,282	10,929,783	9,859,498
2025	18,722,745	10,781,739	7,941,006
2026	18,722,745	10,665,012	8,057,733
2027	18,722,745	12,299,196	6,423,549
2028	14,996,522	9,318,217	5,678,304
2029	14,996,522	9,318,217	5,678,304
2030	14,607,411	9,006,929	5,600,482
2031	14,607,411	9,006,929	5,600,482
2032	14,131,674	8,626,340	5,505,335
2033	14,131,674	8,626,340	5,505,335
2034	14,131,674	8,626,340	5,505,335
2035	14,131,674	8,980,423	5,151,251
2036	13,548,009	8,971,658	4,576,351
2037	13,548,009	9,231,578	4,316,430
2038	13,548,009	9,231,578	4,316,430

Data compiled by the BLM.

The existing federal and nonfederal permits and leases are anticipated to take Spring Creek Mine until 2035. The pending federal lease applications at the BLM's forecast production would extend the mine's life for another 26 years (2036–2061). Annual production is forecast to remain constant after 2038. Therefore, the potential subsequent future leasing of 170 million tons of federal coal could add an additional 27 years to the life of the mine at the BLM forecast production rate of approximately 6.5 million tons per year. **Table B-1** summarizes how the production from existing leases, pending leases, and future subsequent leases vary by alternatives and the resulting impact of federal leasing on the anticipated life of the mine.



## **B.2 CONSTRAINED COAL REASONABLY FORESEEABLE DEVELOPMENT SCENARIO**

Under Alternative C, the amount of land available for further consideration for coal leasing was reduced, thereby restricting the unconstrained RFD described above. Under Alternative C, leasing would be limited to the pending applications within the federal mine plan boundary. All lands outside of the federal mine plan boundary, as well as unleased federal coal within the federal mine plan boundary but outside of pending federal lease application areas, would be eliminated from further consideration for leasing. See the alternative's maps in **Chapter 2**. This constrained RFD is the result of the BLM's consideration of the changes to factors considered in the *Market Trends in Coal Production* and the *Forecast Coal Production* sections of the unconstrained RFD scenario (**Section B.1.3**). Only the *Forecast Assumptions* would change for the constrained RFD.

### **B.2.1 Forecast Coal Production**

The unconstrained RFD scenario assumptions 1 to 7, listed in **Section B.1.3** (*Forecast Assumptions*), are still valid and apply to this RFD scenario, as described above. However, assumptions 8 and 9 change under Alternative C due to federal coal lands being eliminated from further consideration for coal leasing.

Assumption number 8 regarding the two Spring Creek Mine pending federal coal leasing actions (MTM 110693 lease modification containing 150 acres and 6.9 million tons of minable coal and MTM 10548501 lease application for 1,262 acres containing approximately 161 million tons of recoverable coal) was modified to consider lands eliminated under Alternative C because the pending federal lease areas extend beyond the federal mine plan boundary. The pending LBA (MTM 10548501) would be reduced to 662 acres (357 acres of BLM surface) and 87.85 million tons of federal coal. The pending federal lease modification application (MTM 110693) would be reduced by 10 acres; this would not modify the volume of minable coal (6.9 million tons). The new assumption 8 for the constrained RFD would be:

8. Only the portion of the two pending federal coal leasing actions within the federal mine plan boundary at the Spring Creek Mine would be authorized. The MTM 110693 lease modification would be reduced to 140 acres containing approximately 6.9 million tons of minable coal; MTM 10548501 would be reduced to approximately 662 acres and 87.85 million tons of recoverable coal. It is assumed the portions of the federal lease applications within the federal mine plan boundary would still be developed as currently submitted in the applications.

Assumption number 9, regarding Spring Creek Mine's projection of approximately 1,300 acres containing approximately 170 million tons proposed for future leasing beyond the planning period, was modified to consider lands eliminated under Alternative C. Spring Creek Mine still has a need to obtain the approximately 73.15 million tons severed under Alternative C from the pending application and the additional subsequent 170 million tons for future federal production. However, the BLM does not have the necessary information to determine unleased nonfederal coal resources available near the mine. The new assumption 9 for the constrained RFD would be:

9. No acres outside of assumption 8 would be made available. There would be no federal coal acres available for the 73.15 million tons removed from the pending applications or the 170 million tons anticipated for future production. These federal tonnages would not be available for future production.

Under Alternative C, the Spring Creek Mine would have limited options to expand without additional federal leases. There are no pending applications or other mine data that consider expanding mining within the existing MT DEQ permit. Therefore, there are no estimates of tonnage that could expand the life of the mine past the current permitted reserves. However, the mine plan for the LBA assumes more of the adjacent existing state lease would be mined for the continuity of mining operations. Therefore, the forecast production assumes a contribution of nonfederal coal for continuity of the existing state lease adjacent to the pending applications.

The constrained pending LBA provides enough reserves to meet production throughout the planning period. Therefore, after considering the annual production of each mine, the relative portion of federal and nonfederal leases in the mine plan, and these nine assumptions, the constrained RFD scenario for Alternative C is the same as the forecast production in **Table B-8** for the unconstrained RFD scenario.

The existing federal and nonfederal permits and leases are anticipated to take Spring Creek Mine until 2035. Under Alternative C, the LBA (MTM 10548501) would be reduced to 662 acres (357 acres of BLM surface) and 87.85 million tons of federal coal. With the BLM forecast production, the LBA under Alternative C would extend the mine life for another 15 years (to 2050). Annual production is forecast to remain constant after 2038. Unless other private or state coal is available, the mine would close in 2050.

As seen in **Figure B-2** and discussed in **Section B.1.2**, there are 760 acres of nonfederal land immediately adjacent to the mine permit boundary. This nonfederal expansion could contain high overburden ratios, which could render the expansion uneconomic. Without federal coal resources available for leasing, Spring Creek would need to open new box cuts over 1.5 miles away from the existing OSMRE federal permit boundary to expand beyond the immediately adjacent 760 acres. Even then, as shown in **Figure B-2**, there is a limited amount of nonfederal coal within 2 miles of the OSMRE federal permit boundary.

Specific to the Spring Creek Mine, the limited amount of nonfederal coal within the 2-mile area may impose on the continuity of mining operations. Even though the BLM regulations do not require a setback to protect federal coal, standard mining practices and consideration of Mine Safety and Health Administration regulations may result in an operator implementing a setback to prevent accidental trespass or highwall failures. At the discretion of each mine operation, a new box cut may be a technically feasible approach. However, the mine may determine that a box cut could result in higher mining costs and inhibit a logical mining sequence that allows mining to occur in the most efficient manner, thereby making it less desirable.

Under Alternative C, the Rosebud Mine's existing permits for Area F and Area B (AM5) would take the mine to 2060 at the BLM forecast production rate. No new federal leases would be needed during the planning period.

Production at each mine is forecast to remain constant at the 2038 production rate until the life of mine is reached as a result of a constant customer base as described previously in the market trends and forecast for each mine.

### **B.3 REASONABLY FORESEEABLE DEVELOPMENT SCENARIO WITH NO NEW LEASING**

The no-leasing RFD described in this section is needed for Alternative D; this is because Alternative D reduces the lands available to meet some assumptions in the unconstrained RFD. See the alternative's

map in **Chapter 2**. This RFD scenario looks at the impacts on production of no new federal leasing. Valid existing leases would continue under the approved permits.

The *Market Trends in Coal Production* and the *Forecast Coal Production* sections of the unconstrained RFD scenario (**Section B.1.3**) would remain true and accurate with respect to direct and indirect impacts from BLM leasing decisions in this RFD scenario. Only the *Forecast Assumptions* would change for the no-leasing RFD scenario.

### **B.3.1 Forecast Coal Production**

The unconstrained RFD scenario assumptions 1 to 7, listed in **Section B.1.3** (*Forecast Assumptions*), are still valid and would apply to this RFD scenario, as described above. However, assumptions 8 and 9 would change under Alternative D due to federal coal lands being eliminated from further consideration for coal leasing.

Assumption number 8 regarding the two Spring Creek Mine pending federal coal leasing actions (MTM 110693 lease modification containing 150 acres and 6.9 million tons of minable coal and MTM 10548501 lease application for 1,262 acres containing approximately 161 million tons of recoverable coal) was modified to consider lands eliminated under Alternative D. The pending LBA (MTM 10548501) would not be available for leasing under Alternative D; therefore, it would not be leased (that is, the federal lease application would be denied). Without the pending federal lease applications or any new federal leases, the BLM anticipates Spring Creek Mine would mine out its existing federal and nonfederal leases in the mine plan and subsequently close the mine. Given the existing reserves and the forecast production rates, mining would end in approximately 2035. Assumption 8 reads as follows:

8. There would be no further federal leasing. The pending applications would not be approved.

Assumption number 9 (regarding Spring Creek Mine's projection of potential future subsequent leasing of approximately 1,300 acres containing approximately 170 million tons of federal coal for future leasing during the planning period) was modified to consider lands eliminated under Alternative D. Spring Creek Mine would still have a demand for additional coal, but there would be no federal coal available to lease.

9. Potential future subsequent leasing of approximately 1,300 acres containing approximately 170 million tons of federal coal would not be available for leasing beyond the planning period. Therefore, BLM's analyses would assume the mine would close in 2035 under this alternative.

Under Alternative D, Spring Creek Mine would have limited options to expand without additional federal leases. There are no pending applications or other mine data that consider expanding mining within the existing permits. Therefore, there are no estimates of tonnage that could expand the life of the mine past the current permitted reserves. As a result, this RFD scenario cuts off at 2035 because that is when the mine is assumed to close under this alternative. Under Alternative D, the expansion of mining onto leased and unleased nonfederal coal or currently leased federal coal would not be restricted; however, the BLM does not have any indication this would occur to include a forecast beyond 2035. Therefore, the BLM's analyses would assume the mine would close in 2035 under this alternative.

As seen in **Figure B-2** and discussed in **Section B.1.2**, there are 760 acres of nonfederal land immediately adjacent to the mine permit boundary. This nonfederal expansion could contain high overburden ratios, which could render the expansion uneconomic. Without federal coal resources available for leasing, Spring

Creek would need to open new box cuts over 1.5 miles away from the existing OSMRE federal permit boundary to expand beyond the immediately adjacent 760 acres. Even then, nonfederal coal is in limited supply within a reasonable distance of the mine in the Miles City Field Office. Similar to Alternative C in Section B.2.1, under Alternative D a new box cut may also be a technically feasible approach to access nonfederal coal in the area; however, it may result in higher mining costs and inhibit a logical mining sequence that allows mining to occur in the most efficient manner, thereby making it less desirable.

Considering the annual production of each mine, the relative portion of federal and nonfederal leases in the mine plan, and these nine assumptions, the no-leasing RFD scenario from 2022 to 2038 is shown in **Table B-9**.

**Table B-9**  
**Forecast Coal Production: Rosebud and Spring Creek Mines**

<b>Year</b>	<b>Total Production (tons)</b>	<b>Federal Production (tons)</b>	<b>Nonfederal Production (tons)</b>
2022	20,847,961	11,046,605	9,801,356
2023	20,789,282	10,517,605	10,271,677
2024	20,789,282	10,929,783	9,859,498
2025	18,722,745	10,781,739	7,941,006
2026	18,722,745	10,665,012	8,057,733
2027	18,722,745	12,299,196	6,423,549
2028	14,996,522	9,318,217	5,678,304
2029	14,996,522	9,318,217	5,678,304
2030	14,607,411	9,006,929	5,600,482
2031	14,607,411	9,006,929	5,600,482
2032	14,131,674	8,626,340	5,505,335
2033	14,131,674	8,626,340	5,505,335
2034	14,131,674	8,626,340	5,505,335
2035	14,131,674	8,980,423	5,151,251
2036	7,050,000	2,961,000	4,089,000
2037	7,050,000	2,961,000	4,089,000
2038	7,050,000	2,961,000	4,089,000

Data compiled by the BLM.

With no new federal leasing decisions to be made, the BLM would not contribute to further mine expansion. The BLM would project closure of the Spring Creek Mine when the existing permitted reserves are mined through in 2035.

Under Alternative D, the Rosebud Mine's existing permits for Area F and Area B would take the mine to 2060 at the BLM forecast production rate. No new federal leases would be needed for the short term or long term.

## B.4 REFERENCES

- BLM (United States Department of Interior, Bureau of Land Management). 2015. Miles City Field Office Proposed Resource Management Plan and Final Environmental Impact Statement. BLM, Miles City Field Office, Miles City, Montana. Internet website: <https://eplanning.blm.gov/eplanning-ui/project/59042/570>.
- \_\_\_\_\_. 2019. Miles City Field Office Proposed Resource Management Plan Amendment and Final Supplemental Environmental Impact Statement. BLM, Miles City Field Office, Miles City, Montana. Internet website: <https://eplanning.blm.gov/eplanning-ui/project/59042/570>.
- \_\_\_\_\_. 2022. LR2000 database. Internet website: <https://reports.blm.gov/reports.cfm?application=LR2000>.
- Consumer Energy. 2022. Coal. Internet website: <https://www.consumersenergy.com/company/electric-generation/coal>.
- DTE. 2022. 2022 DTE Electric Integrated Resource Plan. Internet Website: [https://dtecleanenergy.com/downloads/IRP\\_Executive\\_Summary.pdf](https://dtecleanenergy.com/downloads/IRP_Executive_Summary.pdf).
- EIA (Energy Information Administration). 2021. “Renewables Will Account for Most Global Generation Increases, but Coal Use Remains High.” Washington, DC. Press release, October 15, 2021. Internet website: <https://www.eia.gov/todayinenergy/detail.php?id=49976>
- \_\_\_\_\_. 2022a. Annual Energy Outlook (AEO) 2022. Washington, DC. Internet website: <https://www.iea.org/reports/renewables-2022/executive-summary>.
- \_\_\_\_\_. 2022b. Coal Data Browser. Internet website: <https://www.eia.gov/coal/data/browser/>.
- Gunderson, J. A., and J. Wheaton. n.d. *Coal Resources of Montana*. Special Publication 122: Geology of Montana, Vol. 2: Special Topics. Montana Bureau of Mines and Geology, Billings Montana. Internet website: [https://mbmg.mtech.edu/pdf/geologyvolume/Gunderson\\_CoalGeologyFinal.pdf](https://mbmg.mtech.edu/pdf/geologyvolume/Gunderson_CoalGeologyFinal.pdf).
- Haacke, J. E., D. C. Scott, L. M. Osmonson, J. A. Luppens, P. E. Pierce, and J. A. Gunderson. 2013, Assessment of Coal Geology, Resources, and Reserves in the Montana Powder River Basin: U.S. Geological Survey Open-File Report 2012–1113. Internet website: <http://digitalcommons.unl.edu/usgspubs/119>.
- IEA (International Energy Agency). 2021. Coal Information: Overview, IEA, Paris. Internet website: <https://www.iea.org/reports/coal-information-overview>.
- Kraker, Dan. 2021. “Minnesota Power Plans to Retire Cohasset Coal Plant, Go Carbon-Free by 2050.” MPR News. Duluth, Minnesota, January 12, 2021. Internet website: <https://www.mprnews.org/story/2021/01/12/minnesota-power-plans-to-be-carbonfree-by-2050>.
- MSHA (Mine Safety and Health Administration). 2022. Mine Data Retrieval System. Mine Employment/Production. Internet website: <https://www.msha.gov/data-and-reports/mine-data-retrieval-system>.

- MT DEQ (Montana Department of Environmental Quality). 2022. Epermit. Internet website: <https://svc.mt.gov/deq/myCOALPublic/>.
- ONRR (Office of Natural Resources Revenue). 2022a. ONRR Report on Annual Mining for Montana–North Dakota.
- \_\_\_\_\_. 2022b. ONRR Mine-Specific Report on Production.
- Otter Tail Power Company. 2021. “Hoot Lake Plant Retires.” Press release, June 1, 2021. Internet website: <https://www.otpc.com/newsroom/posts/hoot-lake-plant-retires/>.
- SRP. 2020. “SRP Selects Operation Plan for Coronado Generating Station.” Press release, January 6, 2020. Internet website: <https://media.srpnet.com/srp-selects-operation-plan-for-coronado-generating-station/>.
- Tansalta. 2022. Centralia. Internet website: <https://transalta.com/about-us/our-operations/facilities/centralia/>.
- Trippi, M. H., L. F. Ruppert, C. F. Eble, and J. C. Hower. 2021. Coking Coal of the United States—Modern and Historical Coking Coal Mining Locations and Chemical, Rheological, Petrographic, and Other Data from Modern Samples: U.S. Geological Survey Open-File Report 2020–1113. Internet website: <https://doi.org/10.3133/ofr20201113>.