

CHAPTER 1

INTRODUCTION/PURPOSE AND NEED

1.1 INTRODUCTION

This Final Environmental Impact Statement (Final EIS) was prepared jointly by the Bureau of Land Management (BLM), Pocatello Field Office and the U.S. Forest Service (USFS) Caribou-Targhee National Forest (CTNF), in cooperation with the Idaho Department of Environmental Quality (IDEQ) and the Walla Walla District of the U.S. Army Corps of Engineers (USACE), in response to the 2011 Mine and Reclamation Plan (Agrium 2011) submitted by Nu-West Industries, Inc., doing business as (dba) Agrium Conda Phosphate Operations (Agrium; the Proponent) for development of the Rasmussen Valley Mine Project Proposed Action (the Proposed Action). Other participating agencies include the Idaho Department of Lands (IDL), the Idaho Department of Fish and Game (IDFG), U.S. Environmental Protection Agency (USEPA), the Idaho Department of Water Resources (IDWR), and the U.S. Fish and Wildlife Service (USFWS). Lead, cooperating, and participating agencies are collectively known herein as Agencies. Agrium has proposed to develop the Rasmussen Valley Mine for the recovery of phosphate ore reserves contained within Federal Phosphate Lease I-05975 (the Lease), as directed by the Mineral Leasing Act of 1920. The Lease conveys to Agrium the exclusive right and privilege, subject to the terms and conditions of the Lease, to explore and develop the federally owned mineral estate and to use the surface within the Lease for related mining activities. As part of the Proposed Action, Agrium also requests to modify and enlarge the Lease area. The Proposed Action is summarized in **Chapter 2**.

The Proposed Action is located within known phosphate leasing area (KPLA) boundaries. Proposed mining and associated activities would occur within the Caribou portion of the CTNF on National Forest System (NFS) land administered by the Soda Springs Ranger District and also on public land administered by the BLM, the Blackfoot River Wildlife Management Area (WMA; state land administered by the IDFG), state land administered by the IDL, and areas of private land. The mineral estate is administered by the BLM Pocatello Field Office. The Proposed Action is development of a new open pit phosphate mining operation on the federal Lease that would include external overburden piles, a haul road, a water management plan, and other ancillary facilities associated with operations (Agrium 2011). Ore would be processed off site. Mining would also employ best management practices (BMPs) for control of releases of sediment and constituents of potential concern (COPCs; such as selenium) to nearby surface water and groundwater.

1.2 LOCATION AND ACCESS

The geographic area considered for the National Environmental Policy Act (NEPA) analysis for this Final EIS is a 2,567-acre area (Study Area) and is located in Caribou County 18 miles northeast of Soda Springs, Idaho, on the southwestern flank of the southern end of Rasmussen Ridge and adjacent to portions of Rasmussen Valley (**Figure 1.2-1**).

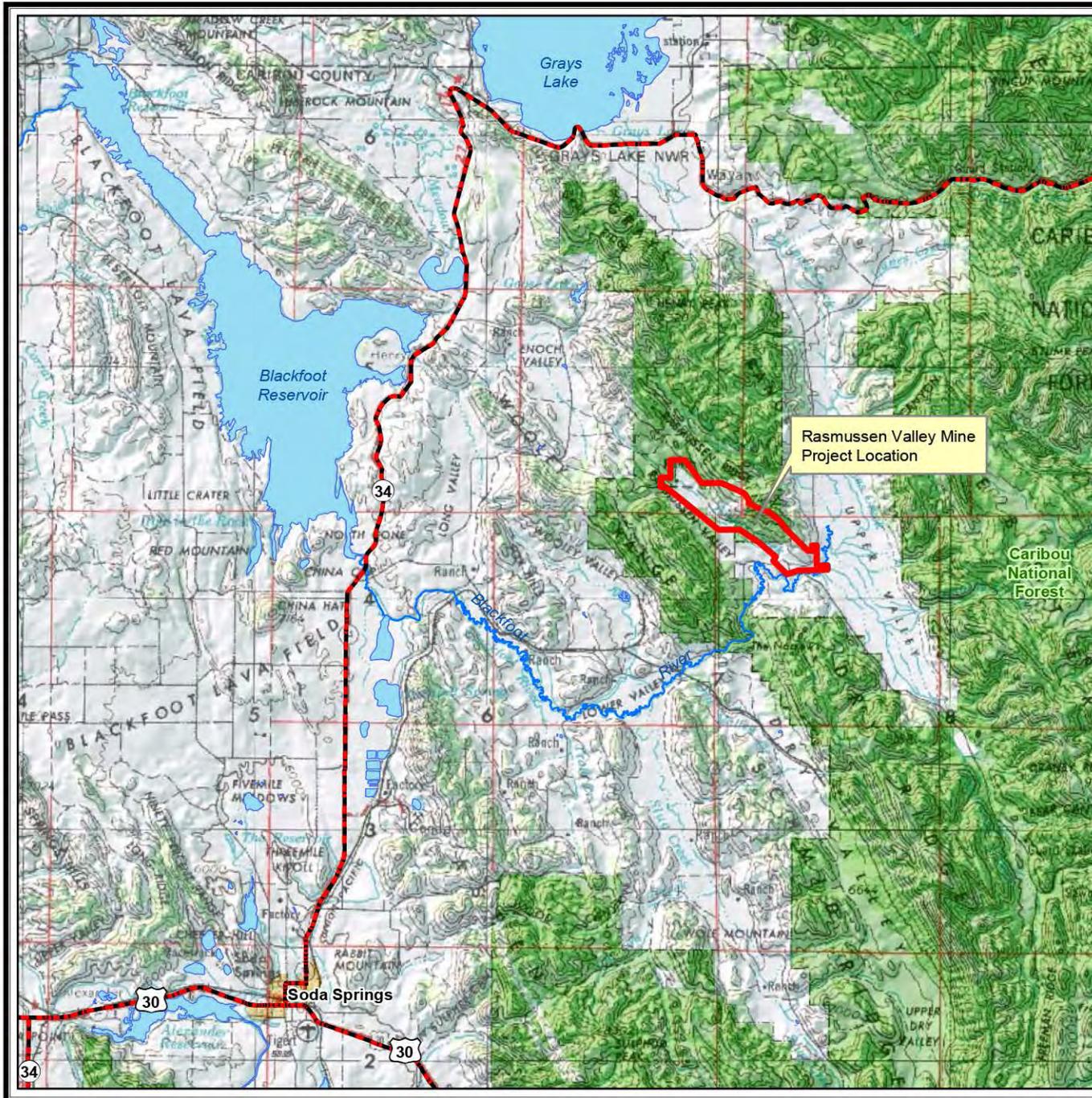
The Proposed Action consists of all areas of proposed surface disturbance including the mine pits, temporary or permanent overburden and overfill piles, growth medium (GM) stockpiles, other stockpiles, access roads, new haul roads from the mine pits to the existing Wooley Valley Tipple Haul Road, and ancillary mine facilities. The mine footprint refers to the area within the

Proposed Action that would be affected by the mine pits and mine access roads, not including the West Side Haul Road, storage piles, stockpiles, or ancillary facilities. The Study Area shown in **Figure 1.2-2** encompasses the Proposed Action and anticipated elements of the alternatives for which baseline studies were conducted. The Study Area is larger than the Proposed Action. In addition, individual resource sections in this document may discuss an analysis area larger than the Study Area.

The Study Area is located on private lands, State of Idaho lands, IDFG lands, public lands administered by the USFS, and public lands administered by the BLM within and outside of the Lease (**Figure 1.2-2**). Proposed mining would occur on the Lease in portions of Township 7 South (T7S), Range 44 East (R44E) Sections 4, 5, 6, 8, and 9. In addition, haul roads, stockpiles, loading areas, and other ancillary facilities would be located in T6S R43E Sections 34, 35 and 36; T7S R43E Section 1; and T7S R44E Section 6.

Near the Study Area, surface waters include the Blackfoot River to the south, Lanes Creek to the east at the headwaters of the Blackfoot River, and Angus Creek to the west and southwest. The Blackfoot River is located immediately south of the southern boundary of the Study Area. The Blackfoot River begins where Lanes Creek and Diamond Creek join at the east end of the Study Area. The Blackfoot River bends around the southeast end of the Study Area and then flows south through the Narrows. Angus Creek is located along the western boundary of the Study Area and flows southeast through Rasmussen Valley to the Blackfoot River.

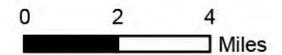
Primary access to the Study Area is along the southwest portion of the Study Area by way of Blackfoot River Road (Forest Road [FR] 095) and Rasmussen Valley Road (FR 121), which branches to the northwest from Blackfoot River Road. Blackfoot River Road (by way of Lanes Creek Road) connects the USFS roads in the Study Area with State Route 34 to the north, and also connects to State Route 34 to the west near the physiographic features called China Cap and China Hat. These roads also connect to other USFS, local, county, and state roads in the area. The Study Area motorized access (as depicted on the Soda Springs Ranger District Motor Vehicle Use Map [USFS 2014a]), includes Trail #322, a trail that branches east from FR 121 (Rasmussen Valley Road) in the NW of T7S R44E Section 6 (**Figure 1.2-2**). This trail is open only to vehicles less than 50 inches wide.



LEGEND

-  PROJECT LOCATION
-  CARIBOU NATIONAL FOREST
-  MAJOR HIGHWAY

Projection:
 North America Datum 1983,
 Universal Transverse Mercator,
 Zone 12 North
Source:
 USA Topo Maps,
 serviced by ESRI ArcGIS Online,
 accessed on 3/16/2016



RASMUSSEN VALLEY MINE

*FIGURE 1.2-1
Project Location*

ANALYSIS AREA: Caribou County, Idaho	
Date: 3/16/2016	Prepared By: MSH & JC
File: KCO15532016_FEIS/Project_Location.mxd	



LEGEND

- STUDY AREA
 - RASMUSSEN VALLEY LEASE (I-05975)
 - STATE P4 SRM LEASE (# 7958)
 - SOUTH RASMUSSEN FRINGE LEASE (I-023868)
 - 095 FOREST SERVICE ROAD DESIGNATION
 - WOOLEY VALLEY TIPPLE HAUL ROAD
 - EXISTING ROAD
 - INTERMITTENT STREAM
 - PERENNIAL STREAM
- FOREST PRESCRIPTION**
- 2.7.2(d) ELK AND DEER WINTER RANGE
 - 6.2(b) RANGELAND VEGETATION
 - 8.2.1 HALF-MILE BUFFER ON INACTIVE PHOSPHATE LEASES
- SURFACE OWNERSHIP**
- BUREAU OF LAND MANAGEMENT
 - STATE (IDAHO DEPARTMENT OF LANDS)
 - U.S. FOREST SERVICE
 - PRIVATE
 - BLACKFOOT RIVER WILDLIFE MANAGEMENT AREA (IDAHO DEPARTMENT OF FISH AND GAME)
- SRM = SOUTH RASMUSSEN MINE

RASMUSSEN VALLEY MINE

*FIGURE 1.2-2
Study Area and
Surface Ownership*

ANALYSIS AREA: Caribou County, Idaho

Date: 6/23/2016

Prepared By: JC

File: K:\C01553\2016_FEIS\Surface_Ownership_v5.mxd

Projection: 22
North America Datum 1983,
Universal Transverse Mercator,
Zone 12 North



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Miles

1.3 PURPOSE AND NEED

The purpose of the proposed federal undertaking for the BLM and USFS is to evaluate and respond to Agrium’s proposed 2011 Mine and Reclamation Plan to recover phosphate ore reserves contained within the Lease IDI-05975 and proposed lease modifications to enlarge the Lease area, as directed by the Mineral Leasing Act of 1920. This effort is called the Proposed Action. The Lease grants Agrium the exclusive right and privilege to explore for, drill for, mine, extract, remove, beneficiate, concentrate, or otherwise process and dispose of the phosphates or phosphate rock and associated or related minerals, also called the “leased deposits.” The Lease gives Agrium the right to construct works, buildings, plants, structures, equipment, and appliances, as well as the use of on-lease rights-of-way, which may be necessary and convenient to exercise the rights and privileges granted by the Lease. To ensure that Agrium’s Proposed Action meets the requirements of the applicable BLM and USFS land use plans and applicable laws and regulations, the Agencies are required to evaluate the Proposed Action and issue decisions related to the method of development of the Lease, including alternative mining approaches and decisions to modify or enlarge the existing Lease, while otherwise authorizing the Proposed Action.

The need for the proposed federal undertaking is to ensure economically viable development of the phosphate resources, in accordance with federal laws and regulations governing federal leases, and to allow Agrium to exercise its right to develop the Lease. The Proposed Action would assure ultimate maximum recovery as required by 43 Code of Federal Regulations (CFR) 3594.1 and the lease modifications would enlarge the lease area to recover additional ore outside the current Lease. The recovered ore would supply phosphate to the Agrium Conda Phosphate Operations (CPO) fertilizer manufacturing plant, located northeast of Soda Springs, Idaho. The BLM authorization is required for operations within the lease boundaries. The BLM is required to evaluate mining proposals and issue decisions related to the phosphate leases.

Because portions of the on-lease operations would also occur on NFS lands, the USFS is a joint lead agency in the analysis of potential effects on those lands, and the BLM has consulted with the USFS in completing the analysis for on-lease operations. USFS Special Use Authorizations (SUAs) are required for operations related to the Proposed Action located on NFS-managed lands outside the phosphate lease boundaries, such as roads, stockpiles, mineral material borrow areas, grazing permit modifications and water management features. If GM or fill material is to be borrowed from NFS-managed lands, the USFS would also need to issue a mineral material permits. A free use permit would be issued for material to be used on federal or state lands and a negotiated sale contract for material used on private lands. The USFS must determine whether and how to authorize the mineral material permits both on and off lease.

1.4 AUTHORIZING ACTIONS

1.4.1 Decisions to be Made

This section outlines key decisions and authorizing actions that may be required for this project. As stated in the **Section 1.1**, the BLM, the USFS, and cooperating and participating Agencies would respond to the Proposed Action and associated applications for authorizations based in part on the impact analysis in which they have participated or on which they have consulted for this EIS. The officials responsible for authorizing on-lease and off-lease mining activities and lease modifications are the BLM Idaho Falls District Manager and the USFS CTNF, Forest Supervisor, or a designated officer acting on their behalf. The BLM, in consultation with the

surface manager, would decide whether or not to issue the lease modifications and approve the 2011 Mine and Reclamation Plan or an alternative to the 2011 Mine and Reclamation Plan. The BLM and the USFS would consider the following: comments and responses generated during the scoping and other opportunities for public comment; the Proponent's rights to recover leased mineral resources; anticipated environmental and socioeconomic consequences discussed in the Final EIS; and applicable laws, regulations, and policies. The BLM, using this Final EIS, would sign a Record of Decision (ROD) to approve or disapprove the proposed 2011 Mine and Reclamation Plan or alternatives within a Lease. The BLM District Manager would also recommend to the Idaho BLM State Office whether or not to approve the proposed phosphate lease expansion modifications.

The USFS authorization is required for all off-lease project-related operations on NFS lands, requiring the USFS to evaluate the Proposed Action and alternatives and issue decisions regarding the terms and conditions for any SUAs, mineral materials permits and grazing permit modifications or other USFS permits for any mine features or activities. These activities may include construction, maintenance, and use of haul roads, access roads, and power lines; vegetation removal; reclamation; use of GM, alluvium, and colluvium borrow and storage areas; or use of GM stockpiles located outside of the phosphate lease boundaries on NFS lands. The USFS would also make decisions regarding the use of mineral materials not associated with ore recovery both on and off lease on NFS lands and off-lease grazing permit modifications. The USFS would decide whether and how to authorize these actions pursuant to applicable laws and regulations. Based on the review of the Final EIS, the USFS would also prepare and sign a ROD to approve or disapprove the proposed 2011 Mine and Reclamation Plan or alternatives on any off-lease SUAs and mineral material permits.

1.4.2 Permits and Approvals

The proposed mining operations must comply with all laws and regulations for mining on public lands. In addition to the BLM, USFS, IDEQ, IDL, IDFG, and USACE, other federal, state, and local agencies and private landowners have independent and unique authorities or ownership over specific elements of the mining operations and certain aspects of the Proposed Action and Alternatives. **Table 1.4-1** lists the Agencies and identifies the authorizing responsibilities of each. This table includes regulatory requirements and authorizations that could affect project implementation under any action alternative. This list is not exhaustive, and additional approvals, permits, and authorizing actions could be necessary as the project develops.

Agrium would be required to obtain the appropriate permit(s) for discharges of stormwater from the project. Discharge of stormwater to surface water requires the operator to obtain a permit under Section 402 of the Clean Water Act (CWA). As authorized by the CWA, the National Pollutant Discharge Elimination System (NPDES) permit program controls water pollution by regulating point sources that discharge pollutants into waters of the U.S. (WOUS). In Idaho, the USEPA is the permitting authority for NPDES permits. Stormwater discharges associated with mining would require Agrium to obtain coverage under the NPDES Multi-Sector General Permit for Industrial Activities (MSGP).

The USACE may also require a Section 404 of the CWA (33 United States Code [U.S.C.] 1344) permit. The USACE would provide independent and separate decisions in response to any application the Proponent submits. At the end of the permit review, the USACE would issue a permit, issue a permit with required modifications, or deny the application for permit. Any decision to issue a permit would include approving measures to mitigate impacts to affected WOUS including wetlands.

Table 1.4-1 Major Permits, Approvals, and Authorizing Actions Potentially Required

Issuing Agency - Permit/Approval Name	Nature of Permit/Approval	Authority	Applicable Project Component	Timing of Submittal of Permit/Approval	Status of Permit/Approval
Bureau of Land Management (BLM)					
Mine and Reclamation Plan	Compliance with 43 CFR 3590.2(a), 3592.1(a); and the Pocatello BLM Approved Resource Management Plan (ARMP)	43 CFR 3590.2(a), 3592.1(a)	Activities affecting federal leased mineral resources	Required before beginning operations.	Pending signing of BLM ROD.
Mine Plan Modification – P4, LLC (P4)/South Rasmussen Mine	Compliance with 43 CFR 3590.2(a), 3592.1(a); and the Pocatello BLM ARMP	43 CFR 3590.2(a), 3592.1(a)	Activities affecting federal leased mineral resources. The Mine Plan for P4's South Rasmussen Mine on Federal Phosphate Lease IDI-23658 would need modification approval under the Rasmussen Collaborative Alternative (RCA)	Required before beginning operations.	Pending implementation of RCA.
Lease Modification	Authorize expanding existing lease boundaries	Mineral Leasing Act of 1920 (30 U.S.C. 181 et seq.); 43 CFR 3510	Boundary expansion of existing Federal Phosphate Lease I-05975	Approval must be obtained before commencement of mining activities on land covered by lease modification.	Pending Final EIS and District Manager recommendation.
U.S. Forest Service (USFS)					
Special Use Authorizations (SUAs)	Surface disturbance or activities on USFS managed lands	Organic Act; 36 CFR 251	Use and occupancy of NFS land including roads, stockpiles, and water management systems	Approval must be obtained before commencement of mining associated activities on USFS managed lands.	Pending issuance of the USFS ROD.

Table 1.4-1 Major Permits, Approvals, and Authorizing Actions Potentially Required

Issuing Agency - Permit/Approval Name	Nature of Permit/Approval	Authority	Applicable Project Component	Timing of Submittal of Permit/Approval	Status of Permit/Approval
Use Permits	Removal of mineral materials such as GM, alluvium, colluvium, or aggregate from USFS managed lands for use on federal or state lands	36 CFR Part 228, subpart C – Disposal of Mineral Materials	Removal of mineral materials such as GM, alluvium, colluvium, or aggregate from borrow areas on USFS managed lands for use on federal or state lands	Approval must be obtained before commencement of borrow of material from USFS managed lands.	Pending issuance of the USFS ROD.
Negotiated Sale Contract	Removal of mineral materials such as GM, alluvium, colluvium, or aggregate from USFS managed lands for use on private lands	36 CFR Part 228, subpart C – Disposal of Mineral Materials	Removal of mineral materials such as GM, alluvium, colluvium, or aggregate from USFS managed lands for use on private lands	Approval must be obtained before commencement of borrow of material from USFS managed lands.	Pending issuance of the USFS ROD.
U.S. Army Corps of Engineers (USACE)					
CWA Section 404 Permit	Authorizes placement of dredged or fill materials into WOUS, including adjacent wetlands	Section 404 of the CWA of 1972 (33 U.S.C. Part 1344)	Disturbances to WOUS including wetlands	Permit must be obtained and approved before commencement of construction.	Pending Final EIS. A permit would be obtained before the project commences, if required.
U.S. Fish and Wildlife Service (USFWS)					
Endangered Species Act (ESA) Compliance (Section 7)	Protects threatened and endangered species	Section 7 of the ESA of 1973, as amended (16 U.S.C. et seq.)	Any activity, such as displacement or habitat disturbance, that may affect listed or proposed threatened and endangered species	Federal agencies must ensure that actions would not jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Mitigation measures will be developed before commencement of construction.	No designated critical habitat is present in the Study Area. Analysis and mitigation measures for listed species are addressed in the Threatened, Endangered, and Sensitive Species sections of Chapters 3, 4, and 5.

Table 1.4-1 Major Permits, Approvals, and Authorizing Actions Potentially Required

Issuing Agency - Permit/Approval Name	Nature of Permit/Approval	Authority	Applicable Project Component	Timing of Submittal of Permit/Approval	Status of Permit/Approval
Migratory Bird Treaty Act	Protects migratory birds	Migratory Bird Treaty Act (16 U.S.C. 703-711)	All surface-disturbing activities	Impacts to migratory birds must be analyzed and, if applicable, mitigation measures developed before commencement of construction.	Analysis and mitigation measures are addressed in the Wildlife sections of Chapters 3, 4, and 5.
Bald and Golden Eagle Protection Act	Protects bald and golden eagles	Bald and Golden Eagle Protection Act (16 U.S.C. 668)	All surface-disturbing activities	Impacts to eagles must be analyzed and mitigation measures developed before commencement of construction.	Analysis and mitigation measures are addressed in the Wildlife sections of Chapters 3, 4, and 5.
U.S. Environmental Protection Agency (USEPA)					
NPDES Permit	Authorizes the discharge of stormwater or water generated from mining activities including pit dewatering	Section 402 of the CWA of 1972 (33 U.S.C. Part 1342)	Exploration, construction, active mining, and reclamation activities	Permit must be obtained and approved before discharge of stormwater or project-generated water.	Pending. Agrium would submit a Notice of Intent (NOI) for coverage under an MSGP Stormwater Permit for Industrial Activity or an individual NPDES Permit if required by the USEPA.
Spill Prevention Control and Countermeasures (SPCC) Plan	Provides management direction for potential spills	SPCC Rule (40 CFR 112)	Bulk petroleum products storage	Must be prepared and implemented before beginning operations that require bulk storage of petroleum products.	Pending. SPCC Plan would be developed and implemented before storage of regulated quantities of petroleum products.
Bureau of Alcohol, Tobacco, and Firearms (ATF)					
High Explosives Permit	Possession of Explosives	18 U.S.C. 40; 27 CFR 555	Blasting in open pits	Must be obtained before acquiring and storing explosives on site.	Pending. Required high explosives permit would be obtained before commencement of storage of regulated high explosives.

Table 1.4-1 Major Permits, Approvals, and Authorizing Actions Potentially Required

Issuing Agency - Permit/Approval Name	Nature of Permit/Approval	Authority	Applicable Project Component	Timing of Submittal of Permit/Approval	Status of Permit/Approval
Mine Safety and Health Administration (MSHA)					
MSHA Registration Notice of Legal Identity Notice of Mine Opening or Closing MSHA Approval Mine Health & Safety Training Plan	Filings required	30 CFR Part 41; 30 CFR Part 46	Mine installation	No formal permitting requirements; however: – Notification is required to establish legal identity and mine opening and closing. – Notice must be filed within 30 days after mine opening. Mine Health and Safety Training Plan must be developed and approved before operation. Mandatory federal regulations for work safety must also be met (assumes that the Revised Mine Plan is approved). Routine mine inspections must be established.	Pending. MSHA notification for legal identity to be submitted to the MSHA before commencement of construction. Mine opening notification would be made to the MSHA before commencement of operations. Mine Health and Safety Training Plan to be developed and implemented before commencement of operations. Mandatory federal regulations for worker safety would be complied with during construction and operations.
Idaho Department of Environmental Quality (IDEQ)					
Air Quality Permit(s)	Controls release of air pollutants	Idaho Administrative Procedures Act (IDAPA) 58 – Department of Environmental Quality 58.01.01 - Rules for the Control of Air Pollution in Idaho	Elements that contribute to air quality issues such as blasting, hauling, or crushing	Permit to construct must be obtained before commencement of construction, unless requirements of IDAPA 58.01.01 Section 213 are met. Tier I or Tier II Operating Permit may be required before beginning operations depending on emissions levels.	Pending. Required permits would be obtained before commencement of construction.

Table 1.4-1 Major Permits, Approvals, and Authorizing Actions Potentially Required

Issuing Agency - Permit/Approval Name	Nature of Permit/Approval	Authority	Applicable Project Component	Timing of Submittal of Permit/Approval	Status of Permit/Approval
Resource Conservation and Recovery Act program (adopted federal standards) Generator Status: Conditionally Exempt Small Quantity Generator	Management of hazardous waste	Idaho Hazardous Waste Management Act, Idaho Code Title 39 Chapter 44 (39-4401) and IDAPA 58.01.05, Rules and Standards for Hazardous Waste	Temporary storage and off-site disposal of hazardous wastes No treatment, disposal, and storage facilities would be required	Waste generator status must be determined before generation of hazardous wastes on site.	Pending. Waste generator status would be determined before generation of hazardous wastes.
Certification of Water Quality (CWA, Section 401)	Protects quality of navigable waters from discharges	Section 401 of the CWA of 1972; 33 U.S.C. Part 1341; Idaho Code Parts 39-101 et seq.; Idaho Code Parts 39-3601 et seq.	Required for any permit issued by a federal agency for any activity that may result in a discharge to navigable waters to ensure state water quality standards would be met	Certification must be received before approval of a federal permit that may result in discharge to navigable waters. Federal permit and certification required before commencement of construction.	Pending. The Certification of Water Quality will be obtained before issuance of a USACE 404 Permit and an USEPA NPDES Permit, if required.
Ground Water Quality Rules, Point of Compliance (POC) determination	Protects beneficial uses of groundwater	IDAPA 58.01.011 Ground Water Quality Rule	Excavation and disposal of mining overburden and the potential for percolating precipitation to leach deleterious constituents into groundwater	Based on EIS analysis of groundwater impacts, the mine operator has a POC which requires that BMPs must be used throughout the life of the mine to the maximum extent practical.	IDEQ has issued POC determinations for the proposed Rasmussen Valley Mine and P4's South Rasmussen Mine in accordance with the Ground Water Quality Rule.
Individual/Subsurface Sewage Disposal Rules	Protects human health and the environment	IDAPA 58.01.03 Individual/Subsurface Sewage Disposal Rules	Construction of a septic system	Permit application must be filed at least 60 days before commencement of construction, and permit must be obtained before construction.	Pending. To be obtained before commencement of construction.

Table 1.4-1 Major Permits, Approvals, and Authorizing Actions Potentially Required

Issuing Agency - Permit/Approval Name	Nature of Permit/Approval	Authority	Applicable Project Component	Timing of Submittal of Permit/Approval	Status of Permit/Approval
Idaho Department of Water Resources (IDWR)					
Stream Channel Alteration Permit	Protection of perennial stream channels	Idaho Code Part 42-3803; IDAPA 37.03.07, Stream Channel Alteration Rules	Haul road crossings	Permit application must be filed at least 60 days before commencement of construction, and permit must be obtained before construction.	Pending. Required permits would be obtained before construction activities affecting perennial stream channels (e.g., haul roads).
Water Rights	Rights to surface water and groundwater rights of appropriation	Idaho Code Parts 42-201 et seq.; IDAPA 37.03.08, Water Appropriation Rules and 37.03.11 Conjunctive Management of Surface and Ground Water.	Mine dewatering, evaporation, and dust suppression	Water rights must be obtained before commencement of regulated consumptive use.	Pending. To be obtained before commencement of regulated consumptive use.
Idaho Department of Lands (IDL)					
Reclamation Plan Approval for Rasmussen Valley Mine	Approval and bonding for reclamation of Rasmussen Valley Mine	Idaho Code Parts 47-1501 et seq., IDAPA 20.03.02.070, 20.03.02.120, 20.03.02.140	Reclamation Plan	Reclamation Plan must be submitted and approved before beginning operations.	Pending. Approval will be obtained before commencement of mining activities.
Operations and Reclamation Plan Modification – P4, LLC (P4) South Rasmussen Mine	Authorizes the P4 South Rasmussen Mine to accept Rasmussen Valley Mine overburden in their South Rasmussen Mine pit, revises the cover for the overburden, and adds haul road	Idaho Code Parts 47-1501 et seq., IDAPA 20.03.02.070, 20.03.02.120, 20.03.02.140	Backfill to the P4 South Rasmussen Mine pit	Reclamation Plan must be submitted and approved before beginning operations.	Pending. Approval would be obtained before commencement of mining activities.

Table 1.4-1 Major Permits, Approvals, and Authorizing Actions Potentially Required

Issuing Agency - Permit/Approval Name	Nature of Permit/Approval	Authority	Applicable Project Component	Timing of Submittal of Permit/Approval	Status of Permit/Approval
Lease Agreement	Authorizes Agrium to build and operate an ore haul road across P4's state lease for the South Rasmussen Mine (Idaho State Lease #7958; the State Lease) and to install POC wells and associated well access roads on the State Lease	Idaho Code Part 47-708, Rights and Liabilities of Lessees	Haul Road and POC wells on the State Lease	Lease agreement must be approved before construction of the wells and/or access roads	Pending. Approval would be obtained before commencement of mining activities.
Idaho Department of Fish and Game (IDFG)					
Agreement for activities on Blackfoot River WMA	Surface owner agreement; temporary use permit	Surface owner rights	Mine activities, water management structures, and access roads	Surface owner agreement must be finalized before the ROD is signed.	Pending. Approval for activities would be obtained before signing of the ROD.
Idaho State Historic Preservation Office (SHPO)					
National Historic Preservation Act (NHPA) Compliance, Section 106	Protects cultural and historical resources	NHPA, Section 106; Idaho Code Parts 67-4113 et seq.; 36 CFR 800 Protection of Historic Properties	All ground-disturbing activities	Consultation with the SHPO required before decision on the Revised Mine Plan.	SHPO approval on the expanded Study Area including alternatives has been obtained.
Caribou County					
Conditional Use Permit	Approval of facilities within an approved land use	Caribou County Zoning Ordinance, Chapter 13	Required if landfill or petroleum remediation pad is constructed	Permit must be obtained before commencement of construction.	Any required conditional use permit will be obtained before commencement of construction.
County Road Realignment Approval	Compliance with the Caribou County Comprehensive Plan, Element 3	Caribou County Zoning Ordinance	Required for modifications to county roads	Must be approved before construction.	Any required permit or approval will be obtained before construction.
Other					
Surface landowner agreement	Land use agreement	Surface owner rights for any non-proponent owned land	Mine activities, water management structures, haul roads, and access roads	Surface owner agreement must be finalized before the ROD is signed.	Agreement will be finalized before issuing the ROD.

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If Agrium's Mine and Reclamation Plan is approved, the Proponent would be required to obtain a reclamation performance bonds for the Rasmussen Valley Mine before conducting any land-disturbing activities. The bond calculation would be based on the Selected Alternative as identified in the BLM and USFS RODs. The reclamation bond will be calculated by Agrium and approved by the BLM, the USFS, and the IDL, after both the BLM and USFS RODs are signed.

This estimate would be refined as a condition of the ROD when all conditions of approval are known. At that time, Agrium would post actual-cost bonds in accordance with the BLM and the USFS policy to ensure compliance with reclamation requirements.

The BLM has adopted a performance bond guidance policy (Bond Requirement for Phosphate Mining Operations, September 10, 2013) that prescribes the procedures for ensuring that an accurate actual-cost reclamation bond is in effect for phosphate mines in Idaho. The policy prescribes that a bond will be required after the ROD has been signed and an alternative selected. This ensures that the bond is based on an accurate bond scenario from which to calculate the cost of reclamation. It is only then that the final mine and reclamation plan is known, and that the environmental monitoring and other details would be known upon which to calculate a reclamation bond.

The policy ensures that the bond:

- Covers an appropriate reclamation scenario that meets the requirements in the ROD or Decision Record (DR) and approved reclamation plan or plan modification.
- Uses unit costs, production factors, quantity take-off, tasks, and calculation methods that are reasonable and appropriately accurate to support development of an "actual-cost" estimate. Quantity take-off consists of using engineering drawings and figures to determine the quantities and types of materials that need to be handled or procured.
- Is equitable among operators (i.e., that one operator does not gain a competitive advantage by using more favorable, but unsupported unit costs, factors, or methodologies to calculate their bond).

The status of planned and actual mining and reclamation would be formally reviewed every 3 years by the BLM, and as required by policy by the USFS, or more often if there are substantive changes to the mine plan. These reviews, and information provided by Agrium, would provide the BLM and the USFS with a basis to revise the required reclamation bond amounts if necessary. As reclaimed areas are approved for release by the BLM and the USFS, or as actual-cost calculations demonstrate, Agrium may request a lower bond amount for these areas. Thus, it is not necessary for the federal government to require a bond for the entire life-of-mine reclamation scope of work; rather, there should always be enough bond in place to cover the maximum reclamation liability for the time period used for the bond calculation, but not less than 3 years unless the remaining mine reclamation obligation period is shorter. The bond would be reviewed and adjusted at any point in time where unanticipated impacts might be predicted to occur. The bond would be increased in order to ensure adaptive measures are implemented to comply with established requirements.

1.5 LAND USE PLAN CONFORMANCE

The Proposed Action must comply with agency policies, plans, and programs. The Revised Forest Plan (RFP) for the Caribou National Forest (CNF; USFS 2003) and the BLM Pocatello Field Office (PFO) ARMP (BLM 2012a) guide land use development on federal lands where the

Proposed Action is occurring. The BLM ARMP also applies to “split-estate land” (non-federally owned surface where the mineral estate is federally owned). The CNF RFP includes desired future conditions (DFCs), goals, objectives, standards, and guidelines for mineral operations, including reclamation and hazardous substance management, and lists a management prescription specific to phosphate mine areas. The PFO ARMP specifically addresses goals, objectives, actions, standards, and guidelines that aim to develop mineral resources consistent with other resources and uses. Goal ME-2 of the PFO ARMP for minerals and energy specifies that mineral resources are to be developed “as part of an ecologically healthy ecosystem.” Goals and management direction for other resources in the PFO ARMP also emphasize management as part of an ecologically healthy system. CNF RFP forest-wide standards and guidelines for general mining, drastically disturbed lands, and phosphate mine areas, and PFO ARMP operational standards and guidelines for minerals and energy, would apply during implementation of the ROD-approved action as appropriate. The Proposed Action has been reviewed for compliance with forest-wide goals, objectives, standards, and guidelines stated in the CNF RFP and with the PFO ARMP for specific resources. The compliance review is discussed in appropriate resource sections in **Chapter 4** of the Final EIS.

Management prescriptions have been developed and are applied to specific areas of the NFS lands to attain multiple-use and other goals and objectives. The Study Area includes three management prescriptions (**Figure 1.2-2**): Prescription 2.7.2 (d) – Elk and Deer Winter Range, Prescription 6.2 (b) – Rangeland Vegetation Management, and Prescription 8.2.1 – Inactive Phosphate Leases (USFS 2003).

Almost all the Study Area is within the 8.2.1 Management Prescription. This management prescription area is shown on Map 11 of the RFP (USFS 2003). It is basically a 0.5 mile buffer around KPLAs and inactive leases that existed at the time the RFP was prepared, and it was intended to include phosphate mining operations and ancillary facilities needed for development of mines within the 8.2.1 management prescription area. This same area is also covered by other management prescriptions shown on Map 8 of the RFP. Those are the prescriptions that guide USFS management until a site-specific, phosphate mine development plan is submitted to the USFS. Then the area of the specific mine plan is intended to only be managed under prescription 8.2.2, Phosphate Mine Areas. Thus, the RFP management prescription that applies to this Study Area is 8.2.2, with the exception of components that occur outside the 0.5-mile buffer area (e.g. haul road segments). In these areas, the appropriate prescription would be in effect.

The management prescriptions are not designed to stand alone and are part of the management direction package presented in the RFP. Where a management prescription allows an activity, such as the development of existing phosphate leases, the standards and guidelines in the prescription in the Forest-wide direction (explained below) would provide specific parameters within which the activity must be managed. In land areas where prescriptions are applied, direction provided under each prescription would override Forest-wide direction if there were a conflict. Under Prescription 8.2.2 (USFS 2003), site-specific mining and reclamation plans developed by the mining industry will be jointly reviewed and evaluated by the USFS, BLM, and other regulatory agencies with jurisdiction through the environmental analysis process. One of the goals of this prescription is to “Provide for phosphate resource development with consideration given to biological, physical, social, and economic resources” (USFS 2003).

The RFP also provides Forest-wide guidance for DFCs for each resource. From these DFCs, Forest-wide goals have been formulated, and, for some resources, objectives have been developed to help measure the progress in meeting these goals and achieving DFCs. Standards and guidelines, by resource, are presented in the RFP and are used to promote the achievement of the DFCs and to assure compliance with laws, regulations, executive orders

(EOs), or policy direction established by the USFS. Disclosure of and compliance with these Forest-wide Standards and Guidelines and the applicable prescriptions listed above are discussed within this EIS (**Chapter 4**).

The CNF RFP specifically addresses the requirements of the National Forest Management Act. The PFO ARMP conforms to the planning regulations and guidance of the Federal Land Policy and Management Act (FLPMA) and the BLM's Land Use Planning Handbook, H-1601-1. However, both the CTNF and the BLM planning and actions must also comply with other applicable state and federal laws, EOs, and the associated implementing regulations including but not limited to: FLPMA, the Multiple Use and Sustained Yield Act, the NEPA, the ESA, the CWA, the Clean Air Act, EOs 11988 (Floodplain Management) and 11990 (Protection of Wetlands), and Idaho Air and Water Quality Standards. In addition, as part of the CTNF and the BLM responsibility in the management of unoccupied public lands in Idaho, these agencies must comply with the conditions and responsibilities of the Fort Bridger Treaty of 1868.

1.6 PUBLIC INVOLVEMENT

Public involvement is an important requirement of the NEPA process. Regulations published by the Council on Environmental Quality (CEQ), the BLM, and the USFS provide several opportunities for the public to participate. These include public and internal scoping of the Proposed Action, a comment period for the Draft EIS, and comments and objection periods for the Final EIS and BLM and USFS RODs.

1.6.1 Scoping

Public scoping for the Draft EIS formally began on March 1, 2011. On that date, the BLM published a NOI to prepare an EIS in the *Federal Register* (Vol. 76, No. 40, page 11,259). The notice announced the Agencies' intent to conduct an environmental analysis of phosphate ore mining at the proposed Rasmussen Valley Mine.

On March 4, 2011, the BLM and the USFS issued a public notice in the Caribou County Sun and the Idaho State Journal. The public notice announced the Agencies' intent to conduct an environmental analysis of phosphate ore mining at the Rasmussen Valley Mine and the dates and locations of three public meetings scheduled to solicit and receive comments on the Proposed Action. The public notice also announced that the period for submitting written comments for public scoping would end on March 31, 2011. A public mailing list was also compiled, and scoping letters were sent to federal, state, tribal, and local government agencies and members of the interested public. This Proposed Action was placed into the ePlanning database for the BLM and the Schedule of Proposed Actions (SOPA) database for the USFS at the beginning of the NEPA impact assessment and will remain in the database until after the ROD is signed. This database is updated quarterly and is accessible to the general public. Scoping is detailed in **Chapter 6** of this Final EIS.

Three public meetings were held on consecutive evenings (March 21, 22, and 23, 2011) in Soda Springs, Pocatello, and Fort Hall, Idaho, to discuss the proposal and receive comments from the public. The meetings were conducted in an open house format, with representatives of the Agencies, Agrium, and the third-party EIS contractor (Arcadis) in attendance. Public comments were solicited and then compiled to help define the key issues and alternatives for evaluation in the environmental analysis. Key issues identified from the public scoping process include potential effects of the Proposed Action on water resources; socioeconomic conditions; livestock grazing; reclamation and restoration; wildlife and vegetation; soils; threatened, endangered, and

sensitive species; air quality; aesthetics; land use; scenic resources; hazardous and solid wastes; and public health as identified in **Section 1.6.5**.

1.6.2 Draft EIS Comments

On September 18, 2015, the Draft EIS was published and was sent to government agencies, the Shoshone-Bannock Tribes (Tribes), educational institutions, public media, organizations and businesses, and interested individuals. The public was allowed 45 days to respond with their comments on the Draft EIS. The 45-day comment period was scheduled to end November 2, 2015. In addition, public meetings were held on October 6 and 7, 2015 at the BLM PFO and at the USFS Soda Springs Ranger District in Soda Springs, Idaho.

A total of 1,010 comment letters were received, many of which contained more than one comment, which represented a total of 1,295 comments on the Draft EIS. A list of these comments and associated letters, emails, and handwritten comments received at the public meetings was distributed to Agrium, the Agencies, and subject matter experts for responses. Arcadis processed all of the comments on the Draft EIS received by the close of the comment period on behalf of the BLM. Public input on the Draft EIS was compiled, documented, categorized, and analyzed to ensure capture of the full range of public viewpoints and concerns regarding a plan or project. In addition, in response to public comments, project alternatives were modified and portions of the EIS were revised to clarify issues or add important details. These comments and responses are incorporated into the Final EIS (**Appendix A**).

1.6.3 Final EIS and RODs

This Final EIS will be available for public review after the USEPA publishes its Notice of Availability (NOA) of the Final EIS in the *Federal Register*. The USFS Draft ROD will be available for objection after publication of a legal notice in the newspaper of record (Idaho State Journal) to coincide with the release of the Final EIS. A legal notice of the Final USFS ROD will be published in the newspaper of record no sooner than 5 business days following the end of the 45-day objection period after the Draft USFS ROD has been announced and made available. The BLM ROD will be released and announced separately, and no sooner than 30 days after the Final EIS NOA.

1.6.4 Tribal Treaty Rights and Native American Consultation

The 1868 Fort Bridger Treaty between the United States and the Shoshone and Bannock Tribes reserves the Tribes' right to hunt, fish, gather, and exercise other traditional uses and practices on unoccupied federal lands. In addition to these rights, the Tribes have the right to graze tribal livestock and cut timber for tribal use on those lands of the original Fort Hall Reservation that were ceded to the federal government under the Agreement of February 5, 1898, ratified by the Act of June 6, 1900. Under this treaty and those agreements, the federal government has a unique trust relationship with the Shoshone-Bannock Tribes. BLM has a responsibility and obligation to consider and consult on potential effects to natural resources related to the Tribes' treaty rights or cultural use.

Federal agencies, including the BLM, the USFS, and the USACE, have the responsibility and obligation to consider and consult on potential effects to tribal treaty rights, uses, and interests. Government-to-government or informal staff-to-staff consultation with the Shoshone-Bannock Tribal Council (the Council) is undertaken as requested by the Council or their staff on land management activities and land uses that could affect the exercise of these rights. The PFO ARMP (BLM 2012a) includes goals and actions that recognize tribal treaty rights and tribal involvement in resource and resource use decisions including lands and realty, soil and water,

vegetation, and fish and wildlife. Coordination with tribal staff is ongoing among the Agencies and the Tribes.

BLM staff met several times with tribal staff over the years beginning on January 10, 2011, when they presented an overview of this project. The tribal staff expressed interest in following the project and requested updates on project progress. Consequently, subsequent meetings have been held as discussed in **Section 6.3**, including meetings on October 9, 2015; February 26, 2016; and March 3, 2016, to discuss the Draft EIS. To ensure a thorough assessment of issues and potential impacts to American Indian tribal rights and interests, including reserved treaty rights, coordination with the Tribes will continue throughout the NEPA process. Because the treaty rights are related to surface management and not the mineral estate, the BLM also relies on coordination with the USFS and compliance with the CNF RFP (USFS 2003) to ensure sufficient protection of those resources to which the Shoshone-Bannock people have certain rights.

As managers of unoccupied federal lands, the USFS managers are responsible for managing resources that are essential for the Tribes to exercise their treaty rights. Concerns and objections that the Tribes have with this project are discussed in this Final EIS. The USFS consultation procedures and intergovernmental agreements with the Tribes to guide future cooperative efforts shall comply with the protocols set forth in the CNF RFP (USFS 2003).

The goal of consultation with the Tribes on the part of both the BLM and the USFS is to ensure that tribal governments, Native American communities, and individuals whose interests might be affected have sufficient opportunity for productive participation in NEPA process decisions. Both agencies have made numerous contacts with the Tribes at various levels that have included public meetings and meetings with tribal technical staff. Tribal and community contacts and encouragement of productive participation will continue throughout the NEPA process.

1.6.5 Issues and Indicators

The issues of concern for the Draft EIS were identified during the public and internal scoping process via input from the Agencies and public and from experience with other similar projects in the general area. The issues identified through this process and carried through the EIS analysis are summarized in **Table 1.6-1** and discussed in greater detail at the beginning of each resource section included in **Chapter 4**. This table also provides references to the resource sections in **Chapters 3, 4, and 5** of this Final EIS that contain the analysis of each issue.

In **Table 1.6-1**, the defined issues are presented under components of the human and natural environment (e.g., water resources, air quality, noise, and other issues) that are customarily addressed in impact analysis. The indicators are typically the quantifiable criteria used to judge the intensity, extent, and timing of the impact, although some indicators rely on a discussion evaluation of effects instead of quantifiable indicators to compare impacts or actions. Indicators are based on regulatory requirements, baseline data, trends, and best management technology. A description of the issues and indicators by topic is provided in **Table 1.6-1**.

No issues were identified for the following elements or resources.

- Areas of Critical Environmental Concern (ACECs) or Research Natural Areas (RNAs):
 - There are no ACECs in the general area of the Study Area.
 - The RNA closest to the Study Area is the Horse Creek RNA, 8 miles east of the Study Area.

- Designated Wilderness:
 - There is no Designated Wilderness near the Study Area.
 - The closest Designated Wilderness is the Bridger Wilderness, 73 miles to the east in Wyoming.
- Inventoried Roadless Areas (IRAs):
 - There are no IRAs in the Study Area.
 - The nearest IRA is the Stump Creek IRA, 2 miles east of the Study Area.
- Wild and Scenic Rivers (WSRs):
 - There are no designated WSRs near the Study Area.
 - The nearest WSRs to the Study Area are the Bear River WSR (which is in a different watershed) and the Blackfoot River WSR (which is downstream of the Blackfoot Reservoir).
- Floodplains:
 - No designated floodplains occur in the Study Area.
 - The closest designated floodplain to the Study Area is at the Snake River near the City of Blackfoot, Bingham County, Idaho, 85 miles downstream. The Blackfoot Reservoir, the Equalizing Reservoir near Blackfoot, and the Cove would mitigate any potential effects to the floodplain from the upper Blackfoot River.
- Prime and Unique Farmlands:
 - No Prime and Unique Farmland were identified in the Study Area.
- Wild Horses and Burros:
 - No wild horses or burros occur within the Study Area.

Consequently, these resources are not analyzed in this Final EIS because they are not present or do not occur near the Study Area.

Table 1.6-1 Summary of Issues Carried through for Impact Analysis

Issues	Indicators	Final EIS Resource Sections in Chapters 3, 4, and 5
Geotechnical		
How does apparent geotechnical instability of portions of the Study Area affect the stability of the proposed external overburden piles, GM stockpiles, haul roads, and other mine facilities?	Quantifiable geotechnical stability safety factors or equivalent stability analysis for overburden piles Predicted slope stability Delineation of areas of unstable landforms and soil map units containing unstable landforms	Geology, Soils, Minerals, and Paleontology
How would slope stability downslope of the external overburden piles be affected by the overburden piles?	Predicted slope stability Delineation of areas of unstable landforms and soil map units containing unstable landforms	Geology, Soils, Minerals, and Paleontology
Paleontology		
What are the potential effects on paleontological resources?	Disturbance of significant fossil-producing deposits or covering of potential fossil-bearing areas, and removing them from access for research	Geology, Minerals, and Paleontology
Air Quality		
What is the potential for emission of air pollutants, including those associated with airborne particulate matter from mining operations and mine traffic on haul roads and access roads?	Increased emissions of fugitive dust (airborne particulate matter) from proposed mining activities	Air Resources, Climate, and Noise
Climate Change		
What is the potential to increase emissions from construction and operation and release greenhouse gas (GHG) emissions, which have been implicated in climate change?	Levels of carbon dioxide (CO ₂), nitrous oxide (N ₂ O), and methane (CH ₄) emissions from proposed mining activities; predicted cumulative effects Changes in global climate affecting operations and reclamation including cover performance	Air Resources, Climate, and Noise

Table 1.6-1 Summary of Issues Carried through for Impact Analysis

Issues	Indicators	Final EIS Resource Sections in Chapters 3, 4, and 5
Noise		
What is the potential for noise impacts at sensitive receptors as a result of mine operations, mine traffic on haul and access roads, and blasting?	Predicted noise levels from mining operations, haul truck traffic related to mining, and access road traffic that are experienced 1) at sensitive receptors and residences, and 2) at outdoor areas where people spend widely varying amounts of time.	Air Resources, Climate, and Noise
Water Resources		
What is the potential for changes to the volume and timing of surface water runoff and flow patterns to impact the Lanes Creek, Angus Creek, and Blackfoot River drainages and local intermediate and regional aquifers?	Changes in volume, rates, or timing of runoff; flow patterns; base and peak flows; recharge rates or volume or rates to local, intermediate, and regional aquifers	Water Resources
What is the potential for changes in sediment, turbidity, and COPC loading to impact Lanes Creek, Angus Creek, Blackfoot River, wetlands, ponds, and springs, and the impacts of those changes to surface water quality accessed by humans, wildlife, and aquatic organisms or cause non-compliance of the water bodies with applicable water quality standards?	Predicted changes in sediment loads, turbidity, and concentrations of COPCs in springs, wetlands, and WOUS; ponds; Lanes Creek; Angus Creek; and Blackfoot River	Water Resources
What is the potential for changes in concentrations of COPCs downgradient of the proposed mine facilities to impact the quality of groundwater accessed by humans and create non-compliance of the groundwater with applicable water quality standards?	Changes in concentrations of COPCs in groundwater	Water Resources
What is the potential that reductions in groundwater discharge to Lanes Creek, Angus Creek, Blackfoot River, ponds, springs, and wetlands would affect water availability for humans, wildlife, and aquatic organisms?	Estimated changes to baseflow in streams, pond water levels, spring flows, and wetland areas Increased depth to groundwater	Water Resources

Table 1.6-1 Summary of Issues Carried through for Impact Analysis

Issues	Indicators	Final EIS Resource Sections in Chapters 3, 4, and 5
Soils		
What are the potential impacts to soil services and resources?	Acres of soil disturbance by soil type resulting from mining <ul style="list-style-type: none"> • Estimated volumes of topsoil or other suitable material available for reclamation • Estimated quality of soil salvaged for reclamation • Acres of disturbance not reclaimed at the conclusion of mining • Compliance with PFO ARMP, CNF RFP, and other applicable federal and state management plan direction 	Soils
What is the potential for soil erosion and sediment delivery resulting from mining activity to impact soil quality and surface water?	Acres of soil disturbance with moderate to high erosion hazard	Soils
What are the impacts on soil chemical and physical properties, specifically those related to selenium and other COPCs, and vegetative productivity?	<ul style="list-style-type: none"> • Estimated change in plant-available selenium and other COPCs • Estimated change in soil depth between baseline conditions and final reclamation with GM • Estimated changes in soil loss because of erosion • Changes in soil productivity properties affecting potential vegetative success 	Soils

Table 1.6-1 Summary of Issues Carried through for Impact Analysis

Issues	Indicators	Final EIS Resource Sections in Chapters 3, 4, and 5
Vegetation		
What is the potential for impacts to vegetative productivity?	Changes in the local vegetation communities and relative success of reclamation as related to changes in cover percent and richness	Vegetation, Riparian Areas, and Wetlands
What is the potential for impacts to vegetation patterns?	<p>Acres of disturbed area that are planned for reclamation, the types of vegetation that would be restored, and the number of years it would take for restoration to be completed and mature</p> <p>Potential for bioaccumulation of COPCs (including selenium) in the reclamation vegetation in excess of stated PFO ARMP guidance or CNF RFP prescriptions for phosphate lease areas</p> <p>Acres of vegetation conversion from forest to non-forest cover and predicted re-establishment potential to return to forested condition over time</p> <p>Changes in grassland fuel load related to conversion to non-forest cover and resulting changes in fire regimes</p> <p>Acres of snag habitat and old growth forest removed</p>	Vegetation, Riparian Areas, and Wetlands
What is the potential for the introduction or spread of invasive, non-native, or noxious plant species?	Acres of disturbed land potentially subjected to invasive plant species	Vegetation, Riparian Areas, and Wetlands

Table 1.6-1 Summary of Issues Carried through for Impact Analysis

Issues	Indicators	Final EIS Resource Sections in Chapters 3, 4, and 5
What is the potential for impacts on pollinators?	<p>Acres of disturbance to vegetation types favorable to pollinators</p> <p>Vegetation types that would be re-established by reclamation and balance of plant species in the reclamation seed mixes that would benefit pollinator populations</p> <p>Delay time for complete reclamation of habitat favorable to pollinator populations</p>	Vegetation, Riparian Areas, and Wetlands
Wetlands and Riparian Areas		
What is the potential for construction and surface disturbance to impact WOUS including wetlands?	<p>Acres of direct impact to WOUS, or change in function and value of wetlands disturbed by the mine and related facilities</p> <p>Change in water balance entering and leaving wetlands</p> <p>Changes in the concentrations of contaminants or sediments to WOUS, including wetlands</p>	Vegetation, Riparian Areas, and Wetlands
Wildlife		
What is the potential to impact wildlife through mortality and displacement?	<p>Increase in mining and transportation-related noise levels in wildlife habitat</p> <p>Increased wildlife mortality through vehicle and power line collisions</p> <p>Disruption and displacement of wildlife from high value habitats (e.g., movement corridors, wintering areas, calving areas, nest sites, wetland and riparian habitats)</p>	Terrestrial Wildlife

Table 1.6-1 Summary of Issues Carried through for Impact Analysis

Issues	Indicators	Final EIS Resource Sections in Chapters 3, 4, and 5
What is the potential to impact wildlife through habitat removal and alteration?	Acres of different wildlife habitats physically disturbed and reclaimed Changes in predator/prey interactions and species composition of wildlife community	Terrestrial Wildlife
What is the potential for toxicity to wildlife from selenium or other COPCs?	Wildlife exposure through uptake of selenium or other COPCs in vegetation Wildlife exposure through release of selenium or other COPCs into surface waters	Terrestrial Wildlife
What is the potential to impact migratory birds?	Reduction in the quality or quantity of habitats used by migratory birds Direct mortality of migratory birds Disturbance to migratory birds from noise and mining activity	Terrestrial Wildlife
Fisheries and Aquatic Species		
What is the potential to impact aquatic habitats and aquatic species?	The length of intermittent and perennial stream channels directly affected by road fill and associated culverts, and comparison with the undisturbed lengths of these stream channels in the analysis area Quantities of suspended sediment and COPCs in fishery resources in the area, with emphasis on compliance with applicable aquatic life water quality standards	Fisheries and Aquatic Resources

Table 1.6-1 Summary of Issues Carried through for Impact Analysis

Issues	Indicators	Final EIS Resource Sections in Chapters 3, 4, and 5
	High selenium or other COPC levels in macroinvertebrates, amphibians, and fish Compliance with the applicable PFO ARMP and CNF RFP Standards and Guidelines	
What is the potential for impacts to the aquatic influence zone (AIZ)?	Reduction in the size of AIZ (acres) Reduction in the quality of the AIZ such that there is a detrimental effect on aquatic resources	Fisheries and Aquatic Resources
Threatened, Endangered, or Sensitive Species		
What is the potential impact to threatened, endangered, or sensitive species through mortality and displacement?	Disruption of movement corridors between habitat areas Disruption and displacement of threatened, endangered, or sensitive species at lek, nest, or roost sites Disturbance to threatened, endangered, or sensitive species from noise and mining activity Mortality of threatened, endangered, and sensitive species through vehicle and power line collisions	Threatened, Endangered, or Sensitive Species
What is the potential to impact threatened, endangered, or sensitive species through habitat removal and alteration?	Acres of habitats for threatened, endangered, or threatened species physically disturbed and reclaimed Changes in predator/prey interactions for threatened, endangered, or sensitive species	Threatened, Endangered, or Sensitive Species

Table 1.6-1 Summary of Issues Carried through for Impact Analysis

Issues	Indicators	Final EIS Resource Sections in Chapters 3, 4, and 5
	Impacts to culturally significant plant species	
What is the potential exposure to toxic substances (such as selenium or other COPCs) to threatened, endangered, or sensitive species?	Expected concentration of selenium or other COPCs in vegetation and surface waters	Threatened, Endangered, or Sensitive Species
Visual Resources		
What are the potential visual impacts on the scenic landscape?	Change in scenic attractiveness from various public and occupied points within the analysis area including post-reclamation changes Compliance with the Visual Quality Objectives of the CNF RFP Compliance with the objectives of Visual Resource Management system per the PFO ARMP Use of mining BMPs regarding light pollution	Visual Resources
Land Use, Grazing		
What are the potential effects to approved range allotments for livestock grazing within and adjacent to the Study Area?	Estimated short- and long-term displacement of range allotments by mine facilities (reduced number of grazing allotments) Calculated changes in forage production, carrying capacity, or rangeland condition of grazing allotments Estimated reduction in acreage suitable for range allotments as a result of insufficient water availability (changes to the number	Land Use, Access, and Transportation

Table 1.6-1 Summary of Issues Carried through for Impact Analysis

Issues	Indicators	Final EIS Resource Sections in Chapters 3, 4, and 5
	<p>of watering points and locations) or unsuitable water quality (high levels of selenium or other COPCs)</p> <p>Reduction in diversity of vegetation or forage value as a result of reclamation species mix (increased occurrence of invasive or noxious species) within grazing allotments</p> <p>Potential for vegetative uptake of COPCs to exceed action levels</p>	
Land Use, Transportation		
<p>What are effects of increased traffic on public roads used for mine access and associated increased potential for traffic accidents?</p>	<p>Estimated increase in average daily traffic on public roads in the analysis area as a result of proposed mining activities</p> <p>Estimated increased number of heavy-duty vehicles and heavy equipment traveling on public roads</p>	<p>Land Use, Access, and Transportation</p>
Land Use, Recreation		
<p>What are the potential effects to existing recreational uses (hunting, fishing, hiking, wildlife viewing, winter recreation, and the Blackfoot River WMA) or other land uses, including effects on public access to recreational areas?</p>	<p>Acres of temporary and long-term impacts to land uses</p> <p>Indirect effects to the Blackfoot River WMA, including displacement of game during hunting seasons and changes to the quality of the recreational experience</p> <p>Displacement of recreational or other land uses by mine-related activities</p> <p>Diminished quality of the recreational experience or indirect</p>	<p>Land Use, Access, and Transportation</p>

Table 1.6-1 Summary of Issues Carried through for Impact Analysis

Issues	Indicators	Final EIS Resource Sections in Chapters 3, 4, and 5
	effects to other land uses Restricted public access to recreational areas or other land use areas	
Cultural Resources		
What are the potential impacts to important cultural resources in the disturbed area?	Number of historic properties (cultural sites eligible for the National Register of Historic Places [NRHP]) impacted by the Proposed Action	Cultural Resources
Tribal Treaty Rights and Interests		
What are the potential impacts on the Shoshone-Bannock Tribal members to exercise their treaty rights in the Study Area?	Changes in the quality and quantity of culturally valued resources on unoccupied public land, including ground and surface water, culturally significant plant species, grazing resources, and wildlife Acres of traditional use areas that would be available or unavailable during mining activities	Tribal Treaty Rights and Interests
What are the potential impacts to natural resources and resources of cultural significance to Shoshone-Bannock Tribal members?	Changes in uptake of COPCs by wildlife and vegetation in mining disturbed areas and areas that are reclaimed Visibility of disturbances to adjoining areas Known historic properties affected Changes in the natural setting of the traditional resources that would diminish their value to traditional	Tribal Treaty Rights and Interests

Table 1.6-1 Summary of Issues Carried through for Impact Analysis

Issues	Indicators	Final EIS Resource Sections in Chapters 3, 4, and 5
	practices Rendering of culturally important natural resources including culturally significant plant species unfit for harvest or consumption	
Socioeconomic Resources		
What are the potential adverse or beneficial socioeconomic impacts including employment, ancillary businesses, agriculture, and tax base?	Changes in employment and personal income; distribution of jobs within industrial sectors Payments to local and regional businesses providing goods and services to current operation/projections of payments Economic value of land in agricultural use (employment, tax, and other revenue) Corporate contributions to local/state tax and other revenues over time Relative change in property values	Social and Economic Conditions
What are the potential impacts on tourism and recreation economy?	Estimated changes in acres open to recreation compared to acres closed to recreation Tourism/recreation value per acre Estimated changes in economic contribution of tourism and recreation in area and changes over time	Social and Economic Conditions
What are the potential impacts of the closure of the mine, resulting in decreased domestic phosphate	Percentage of U.S. phosphate fertilizer market derived from	Social and Economic Conditions

Table 1.6-1 Summary of Issues Carried through for Impact Analysis

Issues	Indicators	Final EIS Resource Sections in Chapters 3, 4, and 5
production; effect of reduced fertilizer supply; increased price on national agriculture; and increased foreign natural resource dependence?	Agrium CPO Plant production and ability of other domestic and foreign sources to satisfy this demand, if necessary	
Environmental Justice		
What disproportionately high and adverse human health or environmental effects on people of race, color, religion, or income (including the Shoshone-Bannock Tribes' population, who exercise treaty rights on federal lands) could be realized?	High or adverse human health effect High or adverse environmental effect Disproportionately high or adverse human health or environmental effect on people of a specific race, color, religion, or income group, including Shoshone-Bannock Tribal members	Environmental Justice
Hazardous Materials and Solid Waste		
What is the potential for accidental spills from generation, handling, use, and storage of fuels, hazardous materials, and wastes?	Compliance with appropriate local, state, and federal standards for handling of fuels and hazardous materials	Hazardous Materials and Solid Waste
Public Health and Safety		
Would the project result in potentially adverse effects to public health and safety?	Changes in levels of dust, selenium, or other COPCs in transport media (air, water, fish, wildlife) and in wild harvestable natural resources that exceed appropriate local, state, and federal standards for public health and safety	Public Health and Safety