



Air, Energy & Mining Division

Navajo Transitional Energy Company, LLC

SURFACE MINING PERMIT C1979012

SPRING CREEK MINE

AMENDMENT 6

DECKER, MT

August 17, 2026

Final Environmental Assessment

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ACRONYMS

A-D	Anderson-Dietz Coal Seam
AM6	Amendment 6
AQB	Air Quality Bureau
ARM	Administrative Rules of Montana
ATSM	<i>Artemisia tridentata/Agropyron smithii</i>
ATSP	<i>Artemisia tridentata/Agropyron spicatum</i>
ATSV	<i>Artemisia tridentata/Sarcobatus vermiculatus</i>
AVF	Alluvial Valley Floor
BACT	Best Technology Currently Available
BGEPA	Bald and Golden Eagle Protection Act
BLM	United States Bureau of Land Management
BMP	Best Management Practice
CAA	Clean Air Act
CHIA	Cumulative Hydrologic Impact Assessment
CPRG	Community Planning Reduction Grant
DEQ	Montana Department of Environmental Quality
DNRC	Montana Department of Natural Resource and Conservation
DSL	Department of State Lands
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	United States Environmental Protection Agency
ESA	Endangered Species Act
FAS	Federal-Aid Secondary Route
FWP	Montana Fish, Wildlife, and Parks
GHG	Greenhouse Gases
GWIC	Montana Groundwater Information Center
HRRP	Habitat Recovery and Replacement Plan
iPAC	Information for Planning and Consulting
LBA	Lease by Application
LMA	Lease by Modification
LOM	Life of Mine
MAAQs	Montana Ambient Air Quality Standards
MAQP	Montana Air Quality Permit
MBMG	Montana Bureau of Mines and Geology
MBOGC	Montana Board of Oil and Gas Conservation
MCA	Montana Code Annotated
MDT	Montana Department of Transportation
MEPA	Montana Environmental Policy Act
MPDES	Montana Pollution Discharge Elimination System
MQAP	Monitoring and Quality Assurance Plan

MSHA	Mine Safety and Health Administration
MSUMRA	Montana Strip and Underground Mine Reclamation Act
MTNHP	Montana Natural Heritage Program
NAA	Non-attainment Area
NAAQS	National Ambient Air Quality Standards
NRCS	United States Department of Agriculture, Natural Resource Conservation Service
NRHP	National Register of Historic Places
NTEC	Navajo Transitional Energy Company, LLC
OSMRE	Office of Surface Mining Reclamation and Enforcement
PHC	Probable Hydrologic Consequences
PM	Particulate Matter
PMT	Postmine topography
R2P2	Resource Recovery and Protection Plan
RCRA	Resource Conservation and Recovery Act
RHMA	Restoration Habitat Management Plan
SCM	Spring Creek Mine
SHPO	Montana State Historic Preservation Office
SIT	State Inventory Tool
SMCRA	Surface Mining Control and Reclamation Act
SOC	Species of Concern
TDS	Total Dissolved Solids
TSS	Total Suspended Solids
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service

UNITS

ac	acre
BTU	British Thermal Unit
cfs	Cubic feet per second
ft	Feet
lb	Pound
L	Liter
mg	Milligram

PROJECT OVERVIEW

COMPANY NAME: Navajo Transitional Energy Company, LLC
EA DATE: August 17, 2026
PROJECT: Spring Creek Mine
PERMIT: C1979012
Revision#: AM6

Location

(Lat: 45.112308N /Long: -106.905766W)

County: Big Horn County

PROPERTY OWNERSHIP: FEDERAL ☒ STATE ☒ PRIVATE ☒

Compliance with the Montana Environmental Policy Act

Under the Montana Environmental Policy Act (MEPA), Montana agencies are required to prepare an environmental review for state actions that may have an impact on Montana's environment. The proposed action is considered to be a state action that may have an impact on Montana's environment and, therefore, the Department of Environmental Quality (DEQ) must prepare an environmental review. This Environmental Assessment (EA) will examine the proposed action and alternatives to the proposed action and disclose potential impacts that may result from the proposed and alternative actions. DEQ will determine the need for additional environmental review based on consideration of the criteria set forth in Administrative Rules of Montana (ARM) 17.4.608. DEQ will decide whether to issue the pending amendment to permit C1979012 pursuant to the requirements of the Montana Strip and Underground Mine Reclamation Act (MSUMRA). DEQ may not withhold, deny, or impose conditions on the permit based on the information contained in this Environmental Assessment. § 75-1-201(4), Montana Code Annotated (MCA).

Proposed Action

DEQ would approve Amendment 6 (AM6) to permit #C1979012 if DEQ has determined that Navajo Transitional Energy Company, LLC (NTEC) has met the criteria set forth in Section 82-4-221, MCA. If approved, the amendment to the permit would be granted to expand surface mining operations within and outside of the current Spring Creek Mine permit area, add 520 acres to the existing reported permit area, add 479 acres to the permitted Life of Mine disturbance within the permit area, and add 318 acres of additional coal cuts within the permitted disturbance area of the mine permit. See **Figure 2** for an overview of the proposed permit area, proposed Life of Mine (LOM) disturbance area, and proposed coal mine cuts.

Proposed Action Alternatives

No Action Alternative: In addition to the analysis above for the Proposed Action, DEQ considered the "No Action" alternative. The "No Action" alternative would deny the approval of the proposed permitting action and NTEC would then lack the authority to conduct the proposed activity. Any potential impacts that would result from the Proposed Action would not occur. The No Action alternative forms the baseline from which the impacts of the Proposed Action can be measured and compared to.

If NTEC demonstrates compliance with all applicable rules and regulations as required for approval, the “No Action” alternative would not be appropriate. Pursuant to 75-1-201(4)(a), MCA, DEQ “may not withhold, deny, or impose conditions on any permit or other authority to acted based on” an environmental assessment.

Incorporate By Reference

Due to the availability of Environmental Impact Statements (EIS’s) completed by DEQ for SCM permitting actions within the last five years, DEQ is incorporating by reference relevant portions of the Spring Creek Mine TR1 EIS, dated March 2020, and the Spring Creek Mine AM5 EIS, dated August 2023, for the analysis of this Proposed Action. The 2023 AM5 EIS is considered the most recent EIS for non-mining related surface disturbance impacts, and the 2020 TR1 EIS is considered the most recent EIS for mining related impacts. In the analysis that follows, one or both previous EIS’s are referenced when relevant. The impacts discussed in the TR1 EIS and the AM5 EIS are presumed to still be present, unless otherwise noted. Accordingly, only updates to the impact analysis from those contained in TR1 EIS and AM5 EIS will be discussed in this EA.

Purpose and Need

DEQ’s purpose and need in conducting this environmental review is to act upon Navajo Transitional Energy Company, LLC’s (NTEC) application for a permit amendment for expanded Spring Creek Mine (SCM) coal mining operations in compliance with the Montana Strip and Underground Mining Reclamation Act (MSUMRA). On May 14, 2025, NTEC submitted an application for Amendment 6 (AM6), seeking approval for expanding their SCM permit area, expanding their surface disturbance boundary within the permit area, and expanding their permitted mineable coal. DEQ sent a completeness deficiency to NTEC on July 2, 2025, with a response from NTEC to DEQ on August 27, 2025. DEQ sent a second completeness deficiency to NTEC on September 25, 2025, with a response from NTEC to DEQ on October 3, 2025. Pursuant to ARM 17.24.401(2), DEQ determined, on November 5, 2025, that the deficiency responses and application updates provided were administratively complete and met the requirements for amendments in ARM 17.24.401.

The applicant’s purpose and need in proposing this action is to expand SCM production. The SCM is a surface mine in SE Bighorn County, MT, with a current permit area of 13,517 acres (**Figure 1**). The surface and mineral ownership within the current permit boundary is a mix of private, state, and federally owned land and coal (**Figure 3, Figure 4**). The LOM plan, approved by DEQ as Major Revision No. 3 (TR1) on March 27, 2020, was most recently updated via Minor Revision 272 (MR272) as a mine sequence update that extended the estimated end of mining from 2030 to 2039. The proposed Amendment 6 (AM6) would update the mine sequence to end in 2040, add additional coal cuts in Pits 1, 2, 4, and 7 that already lie within the existing permit boundary and LOM disturbance boundary, and add 39.4 million tons of mineable coal to the permit. In order to mine the coal in the proposed coal cuts, additional surface disturbance would be necessary, and result in permit and disturbance boundary expansion. The permit area is proposed to increase from 13,517 acres to 14,037 acres, an increase of 520 acres (3.8 %). The amendment would also add 479 acres to the disturbance boundary, resulting in a total of 8,745 acres proposed LOM disturbance, an increase of 5.8%. **Figure 2** shows an overview of proposed permit area, disturbance area, coal mine cuts, and additional proposed surface disturbance. Of the 479 acres of proposed new LOM disturbance, 130 acres exist within the current permit boundary, and 349 acres lie within the proposed expanded permit boundary. All surface acreage proposed to be added to the permit boundary is owned by NTEC. The acreage associated with the proposed mine cuts involves private, state,

and federal surface ownership, as well as a mix of private, state, and federal mineral ownership (**Figure 3, Figure 4**).

The changes proposed under AM6 would allow NTEC to mine previously leased coal in Pit areas 1, 2, 4, and 7, which were most recently approved under BLM’s Resource Recovery and Protection Plan (R2P2), on October 25, 2019. The 39.4 million tons of coal proposed to be added to the mine permit under AM6 are located in four different federal coal leases, one state coal lease, and one private coal lease (**Table 1**) and would represent a 6.5% increase in the amount of Anderson-Dietz coal approved for removal.

Table 1: Recoverable Coal Reserves Added by AM6¹

Coal Lease	Acreage	Coal Ownership	Recoverable Coal Reserves Added (tons)
C-1099-00, C-1100-00, C-1101-00	480	State	0
C-1088-05	641	State	22,048,000
MTM-069782	1122	Federal	3,100
MTM-069782-MJR (LBM)	500	Federal	3,348,700
MTM-088405	150	Federal	0
MTM-094378	690	Federal	10,867,500
MTM-110692	1374	Federal	0
MTM-110693	422	Federal	2,365,600
Scrutchfield Fee Coal	200	Private	800,200
TOTAL			39,433,100

¹ Recoverable coal reserves based on 93% recovery rate. This table is modified from Table 322-2 and Table 322-1 in the Coal Conservation Plan of SCM’s permit.

Mining at the SCM consists of surface coal mining methods and facilities. Prior to any surface disturbance by mining and after removing larger woody vegetation, suitable topsoil and subsoil are removed to predetermined depths using scrapers, dozers, or other equipment. The soil substrates are either distributed on reclamation or stockpiled for future use. Overburden removal is accomplished by a combination of dragline, cast blast, dozer, and truck/shovel methods. Overburden is placed as backfill in the mined-out pits with a dragline, dozer, or by cast blasting from the adjacent pit area to be mined. Coal removal is accomplished by a blasting process, followed by truck and shovel type removal and haul systems. The coal mined at SCM is from the Anderson-Dietz (A-D) coal seam, which averages 80 feet thick. After pit backfilling occurs, spoil topography is achieved by re-grading spoiled material with dozers and/or scrapers. Final grading of overburden will follow the contours specified by the postmine topography (PMT).

In addition to the proposed new coal cuts, the proposed expansion also includes the addition of topsoil stockpile footprints within the disturbance boundary, revision of hydrologic and sediment control plans for affected disturbance areas, revision of flood control plans, and updates to the PMT. See **Figure 2** for the major proposed changes to mine operations under the proposed action.

Table 2: Summary of Activities Proposed in Application

Summary of Proposed Activities in Application	
General Overview	The SCM is a surface mine in SE Bighorn County, MT owned by NTEC. Through AM6, NTEC proposes to expand their permit area, their LOM surface disturbance boundary within the permit area, and their permitted mineable coal. The proposed AM6 would update the mine sequence to end in 2040 (from 2039) and add 318 acres of additional coal cuts in Pits 1, 2, 4, and 7 that already lie within the existing permit boundary and LOM disturbance boundary. As a result of the proposed mining, AM6 would also include a revision of topsoil stockpile footprints within the revised disturbance boundary, revised hydrologic and sediment control plans for affected disturbance areas, revised flood control plans upstream of proposed mining, and updates to the PMT.
Proposed Dimensions	
Proposed Additional Permit Area (acres)	520 acres
Total new permit area (acres)	14,037
Current surface disturbance, as of the end of 2024 (acres)	6,148.4 (Navajo Transitional Energy Company, LLC, 2025b)
Current approved LOM surface disturbance (acres)	8,266
Proposed Additional LOM surface disturbance (acres)	479
Total new LOM disturbance (acres)	8,745
Total new mine cuts (acres)	318 acres (across Pits 1, 2, 4, and 7)
Total new mine cuts (tons)	39.4 million
Specific Proposed Activities	
Duration and timing	Surface disturbance proposed in AM6 would be estimated to begin immediately upon approval of the amendment. The mining proposed with AM6 would be estimated to begin in 2027 and extend through 2039, as part of a revised mining sequence in Pits 1, 2, 4, and 7. The mine sequence across all pits (1, 2, 4, and 7) would be revised and would extend to 2040. Concurrent reclamation would continue to occur and would utilize the revised PMT. Reclamation may be completed no earlier than 10 years after the last seeding, planting, fertilizing, or

	irrigating of appropriately re-graded postmine land has occurred, in accordance with bond release rules and statutes.
Equipment	The major equipment currently used on the mine site includes: 2 walking draglines (52-90 yd capacity), 8-12 haul trucks (120-240 ton capacity), 5-9 crawler dozers (D9-D11 class), 4 rotary blasthole drills (9-12"), 3 electric rope shovels (25-50 yd capacity), 3 front end loaders (5-40 yd capacity), 3 motor graders, 3 scrapers, 2 water trucks (38,000 gallon capacity), 1 water truck (7,000 gallon capacity), 1 hydraulic excavator (20-36yd capacity), 2 seed drills, 1 broadcast seeder, 1 D6 dozer, and 1 tractor with disc, chain harrow, and cultipacker. The AM6 revision would not require any changes to the equipment fleet because this revision would not change the mining rate.
Location and analysis area	The proposed permit expansion areas are a 280-acre parcel south of Pit 1 and a 240-acre parcel south of Pit 2 (520 acres total). The proposed LOM disturbance boundary expansion areas are south of Pit 1, 2, and 7. The coal cuts proposed in AM6 lie within Pit 4 (45 acres of new coal), Pit 1 (62 acres of new coal), Pit 2 (202 acres of new coal) and Pit 7 (9 acres) and total 318 acres of new coal cuts. See Table 1 for a breakdown of new mining per coal lease, see Figure 2 for an overview of the proposed expansion areas, and see Figure 4 for coal lease boundaries.
Personnel on-site	The AM6 proposal would not change the number of employees or contractors working at the mine. NTEC employs 263 staff and a seasonally variable number of contractors at SCM. Typically, there are an average of 30 contract workers onsite at the mine, but it can vary from 12 to 70.
Structures	The AM6 proposal would not change the current structures and facilities at the mine site. Facilities and structures at the mine include: roads, office buildings, fuel islands, fueling pads, bulk fuel storage facilities, waste storage facility, explosives storage facilities, wash bay, maintenance shop, plant shop, coal handling facilities, conveyors, crusher, a rail loop and loadout facilities, and powerlines.
Project water source	The AM6 proposal would not change the potable, fire suppression, or the dust control water systems and water sources on the mine site. The mine would continue to use surface water and ground water collected in sediment control ponds, traps, and pits for dust control purposes on haul roads throughout the mine and firefighting purposes at the facilities plant and shop. Surface water sources include: water pumped to ponds/traps on the mine site from Tongue River Reservoir water rights; and surface water runoff collected in sediment control ponds, traps and mine pits. Ground water sources include: mine pit dewatering; and industrial water supply wells TR2 and TR2-D2 (Water Right 42B 73493-00) located at the West Decker Mine. The mine would continue to use potable water system MT0003952, which primarily supplies water to the restrooms and is sourced from a well near the mine entrance (Water Right 42B 30050786). The mine would also continue to use potable water system

	MT0002009, which supplies water for consumption and is sourced from the City of Sheridan (Wyoming) public drinking water system.
Supplemental lighting	The AM6 proposal would not change the lighting system used at the mine. The mine currently uses approximately a dozen mobile light plants to provide illumination to the current work area in the pit. The mine also currently uses fixed lights on poles to provide illumination around the office, shop, and plant areas. Mobile light plants are used during all periods of darkness/low light. Fixed lights operate with light sensors that allow them to turn on/off automatically and only operate during periods of darkness/low light.
Air quality	Under the Proposed Action, controls on fugitive dust and other emissions would be the same as under current mine operations. The Proposed Action would increase the acreage mined by 520 acres, with 479 acres of new disturbance. As a result, SCM would apply for a revised Montana Air Quality Permit # 1120-12 Air Permit. MAQP #1120-12 contains conditions requiring SCM to employ best available control technology (BACT) and take reasonable precautions to control emissions of airborne particulate matter (PM) including treatment of all unpaved roads and general plant areas with water and/or chemical dust suppressant, as necessary, to maintain compliance with the reasonable precautions' requirement. Air quality would continue to be monitored and addressed in accordance with the approved Air Quality Permit. The applicant is required to comply with the applicable local, county, state, and federal requirements pertaining to air quality.
Water quality	Water quality would be monitored and addressed in accordance with the currently approved Permit including the Monitoring Quality Assurance Plan (MQAP) and the Hydrologic Control Plan. The applicant is required to comply with the applicable local, county, state, and federal requirements pertaining to water quality. This amendment would not incur disturbance in any previously undisturbed drainages. New and existing sediment ponds and flood control reservoirs would be utilized to impound and treat any stormwater.
Erosion control and sediment transport	The primary change with AM6 would be the movement of the South Fork Pearson Creek Flood Control Reservoir up valley to mine coal beneath the present reservoir. An additional sediment control pond and sediment control ditch would be added within the disturbance area for the purposes of managing runoff. See Figure 2. Sediment control would be monitored and addressed in accordance with the currently approved Permit and Hydrologic Control Plan. The applicant is required to comply with the applicable local, county, state, and federal requirements pertaining to erosion control and sediment transport. New and

	existing sediment control ponds would be used to capture and treat runoff from the mine site.
Solid waste	The proposed expansion of surface mining and surface disturbance would be a continuation of current site activities that may include the generation, management, and disposal of solid waste. Garbage and other debris are collected in onsite dumpsters for Class II waste and shipped off-site to a permitted municipal landfill. Class III wastes are collected in a designated staging area within the facilities area and transported to the in-pit spoil dump. Class III wastes include used tires, concrete with rebar cut off, and non-greasy wood/steel/aluminum. All other non-hazardous waste is shipped offsite to a permitted landfill. No solid wastes will be deposited within 8 feet of any coal outcrop or coal storage area, at least 8 feet below the final postmine land surface, and at a stratigraphic level above the projected post-mining spoil water table. Solid waste would be contained and disposed of in accordance with the currently approved Permit. The applicant is required to comply with the applicable local, county, state, and federal requirements pertaining to solid waste.
Cultural resources	The proposed expansion of surface disturbance would disturb three unevaluated cultural resource sites and one undetermined cultural resource site. Any sites found eligible for the National Register of Historic Places (NRHP) would be properly mitigated prior to disturbance in order to recover any information important to the interpretation of history and prehistory. The applicant is required to comply with the applicable local, county, state, and federal requirements pertaining to cultural resources. Cultural uniqueness and diversity are not expected to be impacted.
Hazardous substances	The proposed expansion of surface mining and surface disturbance would be a continuation of current site activities that may include the generation, management, and disposal of hazardous substances. At the SCM, materials that may be classified as hazardous include some greases, solvents, paints, flammable liquids, and other combustible materials determined to be hazardous by the EPA under the Resource Conservation and Recovery Act (RCRA). These types of wastes are sent offsite for final safe disposal or recycling according to RCRA requirements. SCM complies with MSHA safety standards regarding storage and accumulation of combustible and flammable materials. The proposed expansion would be a continuation of current equipment usage, which has the possibility of generating leaks or spills. SCM manages and will continue to manage three soil treatment facilities (3 landfarms) at appropriate site locations within the permit area and with appropriate hydrologic controls. NTEC uses the landfarms for the aeration and remediation of petroleum hydrocarbon contaminated soils originating from spills/leaks on the mine site. These soils will not contain over 5% by weight (50,000 ppm) TPH (total petroleum hydrocarbons) or a quantity of other contaminants which may be

	toxic to soil microbes or cause leaching into sub-soils. Petroleum hydrocarbon contaminated soils are comprised primarily of the following components: gear oil, engine oil, hydraulic oil and diesel fuel. When testing of a landfarm cell shows TPH results at or below 100 ppm, the material is taken to a pit area for final placement at least 8 feet below PMT and above the elevation of postmine ground water re-saturation elevation. No waste that meets the definition of hazardous waste would be stored, treated or disposed of at any of the soil treatment facilities. SCM does not produce coal processing waste. Any overburden spoiled during the mining process at SCM is not acid, or acid forming material. The applicant is required to comply with the applicable local, county, state, and federal requirements pertaining to hazardous substances.
Reclamation Plans	The proposed surface disturbance and mining activity would necessitate revisions to SCM's reclamation plan, specifically the PMT. SCM's reclamation plan includes the establishment of post mine topography that approximates pre-mine topography, approved post mine land uses, re-establishment of native vegetation, and the re-creation of ephemeral drainages, all of which must meet bond release requirements. The state and federal requirements that apply to the existing reclamation plan would continue to apply to the reclamation plan approved within the permit; and the bond release (Phases I-IV) requirements that apply to the reclamation process will continue to be implemented on future reclamation. SCM's performance bond has been established to cover the cost of reclamation in the event SCM discontinues to manage their permitted obligations. The performance bond is evaluated and adjusted annually to ensure bond accuracy.
Cumulative Impact Considerations	
General setting	The proposed AM6 area consists of rural rangeland that is similar to rangeland found throughout SE Bighorn County, MT, west of the Tongue River Reservoir. The areas of the proposed permit boundary expansion would include portions of the headwaters of two ephemeral drainages (Pearson Creek and South Fork Pearson Creek) with gentle to steep slopes and predominantly native upland shrub-grassland vegetation. The areas of proposed disturbance boundary expansion that are within the existing permit boundary and disturbance boundary would include headwater areas of small ephemeral drainages with varied topography and predominantly upland riparian vegetation. Two-track roads are common across the current rangeland landscape with livestock management.
Past actions	Coal mine production at SCM began in 1980, with permit expansions for additional mining approved in 1992 (AM1), 2001 (AM2), 2008 (AM3), and 2011 (AM4). The most recent major revision for the addition of mining within the existing permit boundary was approved in 2020 (TR1); this major revision involved an approximate 15% increase in approved mineable coal and an approximate 16% increase (977 acres) to the LOM disturbance boundary and involved the completion of an EIS. The most recent permit amendment for the addition of a haul road to Wyoming was approved in 2023 (AM5); this

	amendment involved an approximate 32% increase (4,334 acres) to the approved permit boundary and involved the completion of an EIS. The most recent Minor Revision increased the LOM disturbance boundary by 144 acres for non-mining activity, was approved in 2024 (MR296) and involved the completion of an EA. DEQ is incorporating, by reference, relevant portions of the Spring Creek Mine TR1 EIS, dated March 2020, and the Spring Creek Mine AM5 EIS, dated August 2023, for the analysis of this Proposed Action. At the federal level, the Office of Surface Mining Reclamation and Enforcement prepared a Final Environment Impact Statement (EIS) for the Spring Creek Mine Mining Plan Modification for Federal Coal Leases MTM 94378 and MTM 110693 in January 2025.
Present actions	Mining and reclamation are occurring at SCM in accordance with the current permit. As of the end of 2025, 1,613 acres have received Phase I bond release. Of that acreage, 1,265 acres have received Phase II bond release and 592 acres have received Phase III bond release. SCM's Facilities discharge permit MT0024619 has been administratively continued since November 2023. The permit is under review by DEQ. NTEC has an approved air quality permit (MAQP) #1120-12, issued by DEQ on October 16, 2014, for Spring Creek Mine. The nearby Decker Mines are undergoing reclamation and are no longer mining. West Decker Mine's discharge permit, MT0000892, and East Decker Mine's discharge permit, MT0024210, have both been administratively continued since 2017. Decker Coal Company has an approved air quality permit (MAQP) #1435-07.
Related future actions	Mining and reclamation in accordance with the existing mining permit for SCM would continue as permitted. No other proposed mining actions exist for SCM or nearby Decker Coal Mine at this time at the state level. At the federal level, NTEC has been working with BLM to lease the adjacent coal covered by Lease by Application (LBA) MTM-105485 and a Lease Modification Application (LMA) MTM-094378. These two federal lease applications were submitted to BLM in 2012 and are still pending. These BLM leases include a total of approximately 177.1 million tons of federal coal and would require a major revision or amendment to the current permit. Neither of these actions have been submitted to DEQ.

Figure 1: General Location Map

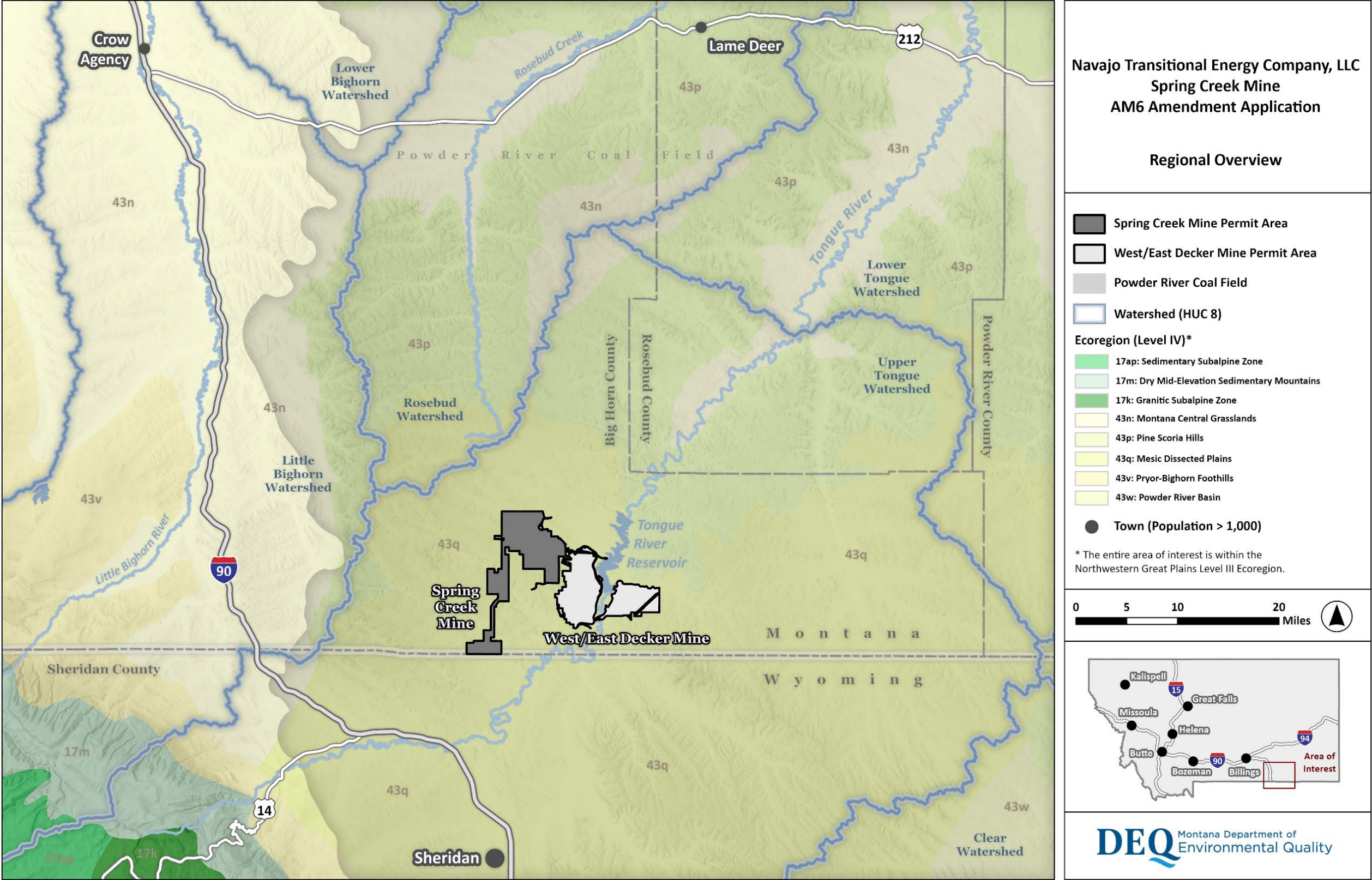


Figure 2: Amendment 6 Proposed Action

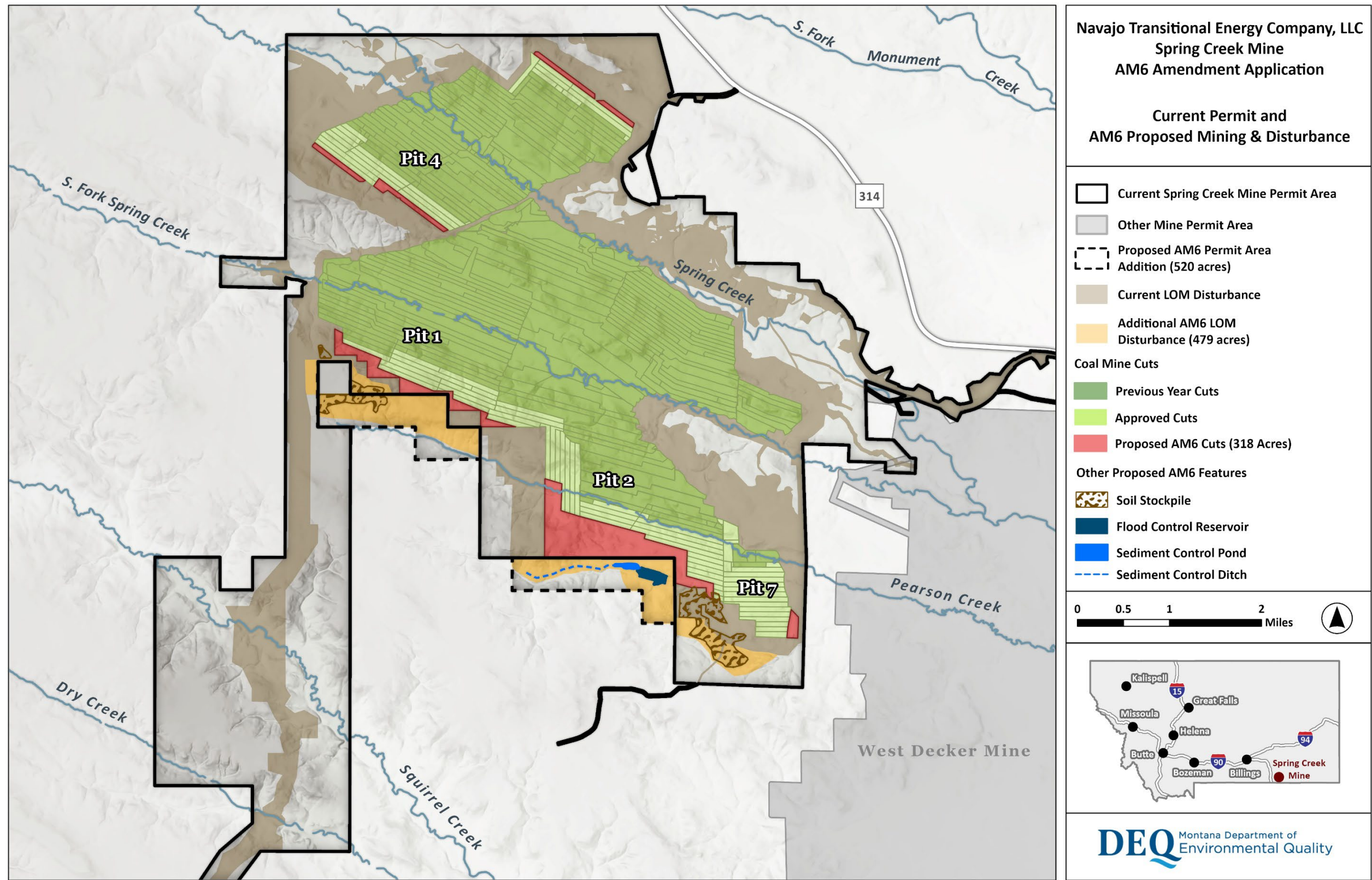


Figure 3: Mineral and Surface Ownership at Spring Creek Mine

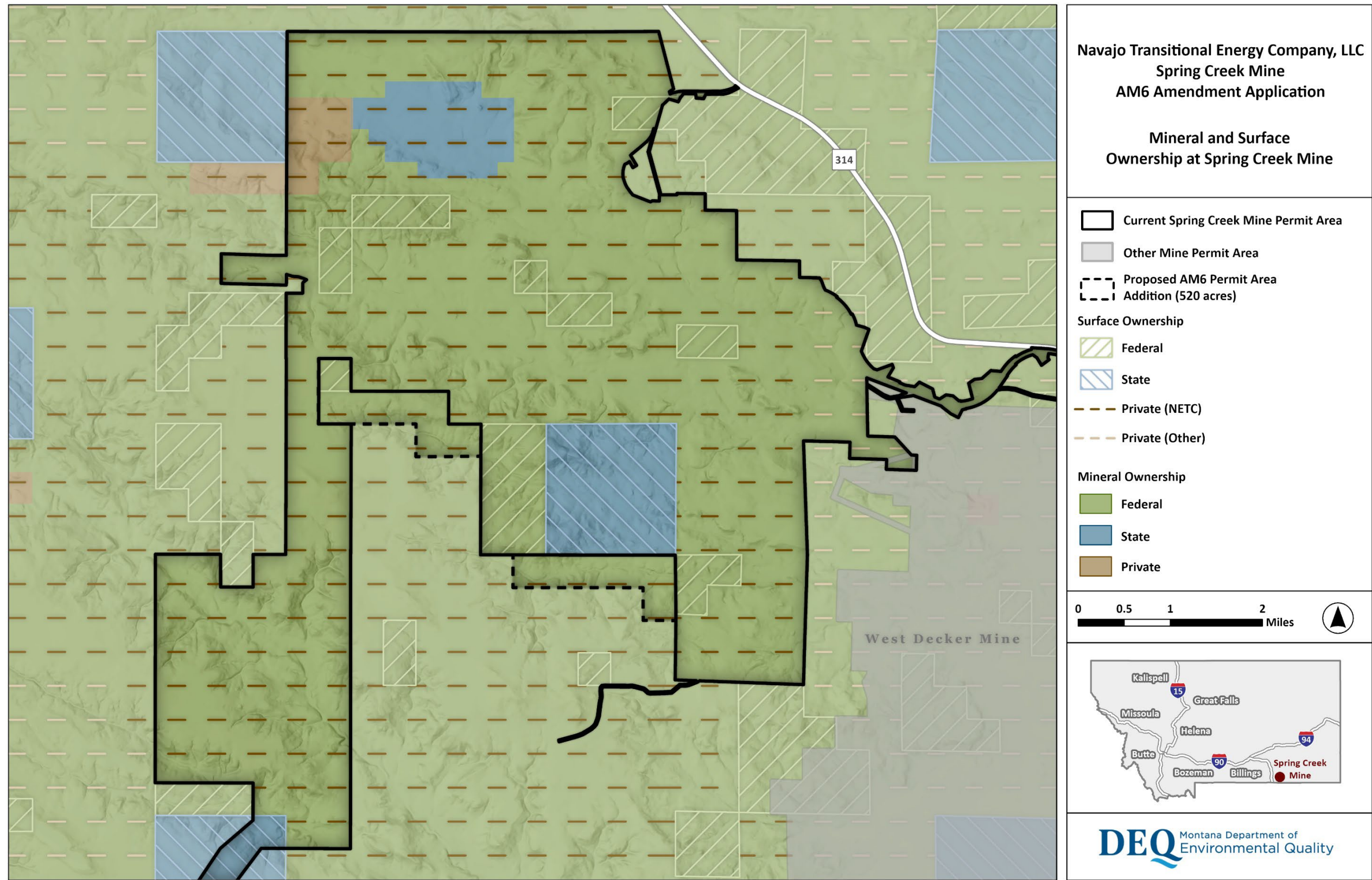
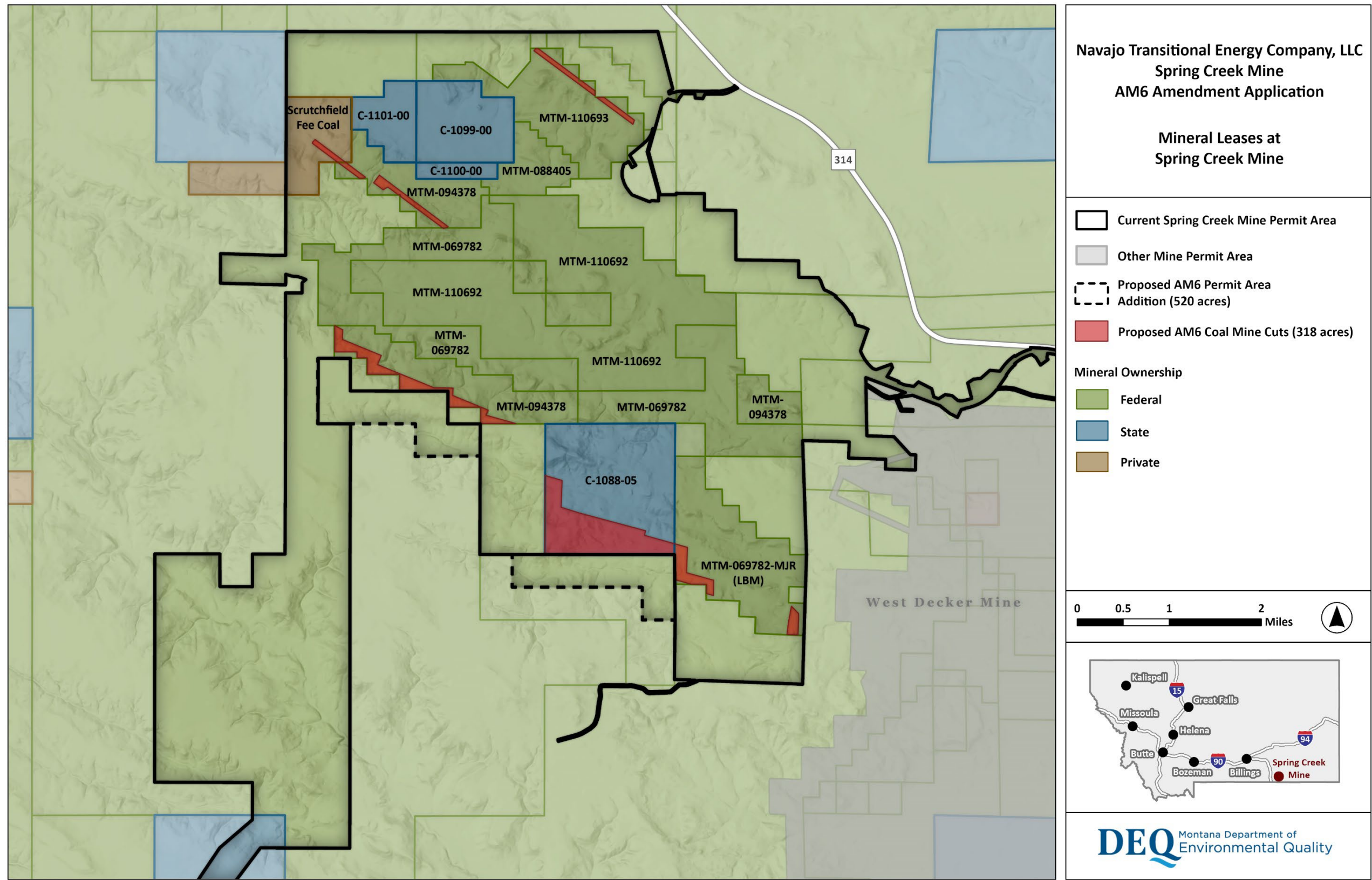


Figure 4: Mineral Leases at Spring Creek Mine



SUMMARY OF POTENTIAL IMPACTS

The impact analysis will identify and estimate whether the impacts are direct or secondary impacts. Direct impacts occur at the same time and place as the action that causes the impact. Secondary impacts are a further impact to the human environment that may be stimulated, or induced by, or otherwise result from a direct impact of the action (ARM 17.4.603(18)). MEPA excludes upstream, downstream, or other indirect actions that occur independently or are caused in part or exclusively by the proposed action per 75-1-220(10)(b)(i), MCA. Where impacts would occur, the impacts will be described.

Cumulative impacts are the collective impacts on Montana's environment within the borders of Montana of the Proposed Action when considered in conjunction with other past and present actions related to the Proposed Action by location or generic type. Related future actions must also be considered when these actions are under concurrent consideration by any state agency through pre-impact statement studies, separate impact statement evaluation, or permit processing procedures. The projects identified in

Table 1 were analyzed as part of the cumulative impacts assessment for each resource.

1. **Geology and Soil Quality, Stability, and Moisture**

Extensive documentation and discussion of the geologic and soils resources can be found in permit documents and previous environmental impact statements. Geologic resources are identified in baseline description of Overburden and Mineral Materials for the existing permit area (Spring Creek Mine, 2025b) and the baseline study for the proposed AM6 area (Spring Creek Mine, 2025a). Soil resource baseline studies are carried out during every expansion, with the AM6 baseline soil survey covering an additional 520 acres completed in 2025 (BKS Environmental Associates, Inc., February 2025). The acres include the 479 acres proposed as new disturbance for the AM6 proposed action. Environmental impact statements for TR1 (Montana Department of Environmental Quality, 2020) and AM5 (Montana Department of Environmental Quality, 2023) document previous permit expansions and include complete descriptions of these resources and the associated impacts. The mine permit's reclamation plan is developed toward best approximating local conditions, allowing geologic spoils and soils, once replaced, to resume natural processes.

SCM would remove any large vegetation that would interfere with soil removal activities and then would use heavy equipment for the soil salvage operations. Suitable soil would be stripped and segregated into two lifts. Lift 1 would include soils from the A, E, and possibly upper B or C horizons and would be from the approximate upper 6 inches; this material would be placed into "A-soil" stockpiles. Lift 2 would include soils from deeper but still suitable soil horizons and would be placed in "B-soil" stockpiles.

Salvaged soils could be immediately redistributed if regraded areas would be ready for soil placement. Concurrent direct-haul redistribution of salvaged soil eliminates the need to stockpile the soil. Most salvaged soil would be placed in soil stockpiles and the stockpiles would be seeded to minimize erosion. First-lift soil would be stockpiled separately from the deeper Lift

2 soil. SCM would salvage all Lift 2 soil to balance soil coverage requirements that is suitable for serving as plant growth media.

The volumes for Lift 1 and Lift 2 salvaged soils would be updated after actual volumes have been determined and the information would be provided in the Annual Mining Reports. Substitute plant growth media, including scoria and other coarse-textured (alluvium) materials, would also be salvaged for special revegetation substrate media to create shrub mosaic areas and reclamation features. Results from SCM revegetation test plots have shown scoria to be a suitable plant growth media for some shrubs (big sagebrush) and warm-season grasses and can help increase species diversity. Scoria would be salvaged from natural deposits for use in reclamation to promote shrubs in certain areas as well as for road and other borrow materials. Suitable alluvial and colluvial materials would also be used as plant growth media for reclaiming channels and floodplains.

Direct Impacts:

The applicant proposes to continue current methods of mining and soil handling. Geology and soils would continue to be impacted as permitted under the current mine plan with this action adding 479 acres to the LOM disturbance boundary. The proposed mine plan would increase the area and duration of impacts. While geology is permanently altered down to the floor of the coal seam, current reclamation results have shown homogenization of the soil texture toward “loam” with mixing during salvage and redistribution. Following soil reapplication, soils would return to a natural state of development.

Direct impacts are expected to continue with the same severity as detailed in Spring Creek Mine’s EIS documents for TR1 and AM5 referenced above. Soils would be disturbed with long-term and minor to moderate impacts to soil physical properties, loss of soil structure, soil compaction, and potential soil erosion. However, soils begin redevelopment upon redistribution for reclamation and the establishment of predominantly native vegetation. The significance assessment is presented in **Table 11**.

Secondary Impacts:

Secondary impacts are expected to continue with the same severity as detailed in Spring Creek Mine’s EIS documents for TR1 and AM5 referenced above. As discussed in the TR1 analysis, secondary soil impacts occur after the soil has been redistributed but before the soil has reestablished biological activity, nutrient cycling, soil structure, or soil productivity which could be expected to take up to 10 years while vegetation and root structure in reclamation re-establishes.

Cumulative Impacts:

If approved, AM6 would add 479 acres of additional disturbance and 10 years of additional mining to the cumulative mining impacts to soil resources beyond what was assessed in the TR1 EIS. The impacts would continue with the severity detailed in Spring Creek Mine’s EIS documents for TR1 and AM5 referenced above, which was long-term and minor to moderate impacts.

2. Water Quality, Quantity, and Distribution

The SCM and proposed AM6 area is located within the Upper Tongue River watershed, near the Tongue River Reservoir, in the Southern Montana Great Plains ecoregion (**Figure 1**). The proposed AM6 action would increase surface disturbance of the drainages in the area, as well as disturbance to ground water aquifers in the mine permit area. An overview of the surface water and ground water systems, as well as an evaluation of the environmental impacts to these systems was completed for the TR1 project and is provided in the Environmental Impact Statement (Montana Department of Environmental Quality, 2020). Since minor additions to the mining and disturbance areas are associated with AM6, only updates to the analysis provided in TR1 EIS, including additional supplemental analysis, will be covered in this section.

Existing Surface Water Conditions

The proposed amendment would add disturbance within the drainage basins of Spring Creek (specifically South Fork Spring Creek) and Pearson Creek (including South Fork Pearson Creek); (**Figure 5**). Both drainages have been disturbed by existing SCM operations and are also disturbed and impounded down gradient of the SCM as a result of the West Decker Mine. When unimpeded, these drainages flow into the Tongue River Reservoir located along the Tongue River.

Precipitation has been measured at the SCM and adjacent West Decker Mine since 1975 and 1980, respectively. The 30-year average precipitation between the two mine areas is approximately 12 inches a year, with SCM averaging slightly more precipitation and the Decker mines averaging slightly less. Precipitation at the SCM generally occurs in two pulses during the year with spring rainstorms around May and again, albeit to a lesser extent, around October. An additional common source for flow in the ephemeral drainages in winter and early spring are snowmelt runoff events which can occur as a result of rapid warming and/or with rain on snow. Spring Creek, South Fork of Spring Creek, Pearson Creek, and South Fork of Pearson Creek meet the hydrological definition for ephemeral drainageways (ARM 17.24.301(39)) with flow only as a result of rainfall and snowmelt runoff (Navajo Transitional Energy Company, LLC, 2026). Surface water has been sampled and tested for various analytes. Premine Total Dissolved Solids (TDS) values for the ephemeral drainages range from a low of 30 mg/L to a high of 3,350 mg/L with medians for each drainage ranging from 180 to 580 mg/L. The Tongue River Reservoir has similar water quality with TDS values ranging from a low of 203 mg/L to a high of 740 mg/L with a median of 231 mg/L. Sampling completed on the same drainages below mine influence show similar TDS values to the baseline values, with median values for the ephemeral drainages and the Tongue River Reservoir ranging from about 138 mg/L to 500 mg/L.

Premine surface water samples frequently contained analyte concentrations (particularly iron, magnesium, manganese, and sulfate) higher than livestock drinking water guidelines. Applicable water quality criteria for specific conductance were routinely exceeded at surface water sites in the Spring Creek Drainage and Rainy Spring in the South Fork Spring Creek drainage. In the Tongue River Reservoir and the Tongue River above and below the reservoir, trace metal concentrations for aluminum, cadmium, lead, mercury, selenium and zinc were seldom exceeded, with the exception of iron which routinely exceeded water quality standards.

The proposed mining at the SCM and current operations at the SCM and West Decker mines contain several drainages where alluvial valley floor (AVF) determinations have been made. In 1979, the Department of State Lands (DSL), the predecessor to DEQ, determined that neither Spring Creek nor Pearson Creek qualify as alluvial valley floors due to insufficient water for subirrigated or flood irrigated agricultural activities within the permit boundary of the West Decker Mine (Montana Department of State Lands, 1979). Similarly, in 1980, DSL determined that Spring Creek, within the SCM permit boundary, was also not an AVF (Montana Department of State Lands, 1980). The DSL also determined that a portion of South Fork Spring Creek was an alluvial valley floor based on flood irrigability and subirrigation (Montana Department of State Lands, 1981). However, this AVF was deemed insignificant to agriculture. Subsequently, in 1988, Spring Creek Coal requested a reevaluation of the 1981 AVF decision for South Fork Spring Creek using updated geomorphic and hydrologic information. In 1988, DSL determined that the 1981 insignificant AVF determination for South Fork Spring Creek was still appropriate (Montana Department of State Lands, 1989).

During the Carbone Amendment at Spring Creek Mine, which expanded mining into Spring Creek and North Fork Spring Creek drainages, DEQ determined that Spring Creek and North Fork Spring Creek within the Spring Creek Mine permit boundary were not AVFs based on lack of flood irrigation or subirrigation (Montana Department of Environmental Quality, 2001). In 2008, NTEC submitted an AVF study for the Pearson Creek Amendment Area. This study found a lack of sufficient subirrigation to benefit or enhance agriculture and flood irrigation was either non-existent or supply is not dependable enough (WWC Engineering, 2008).

Surface water and ground water monitoring networks have been established at the SCM and Decker Mines to observe the effects of mining, mitigation measures, and restoration of the hydrologic system. The results of this monitoring program are submitted semi-annually to DEQ.

Ground Water Existing Conditions

Ground water occurs in various aquifers throughout the area of analysis including in the alluvium, overburden, A-D coal and underlying Canyon Coal, interburden, and underburden. The coal and alluvial aquifers are generally the most important sources of water in the area. Ground water recharge occurs typically to the west of the SCM in outcrops in the Wolf Mountains. Ground water typically flows to the east and discharges to the Tongue River Reservoir east of SCM. The primary shallow aquifer within the SCM permit area is the Anderson-Dietz coal seam. Ground water in the A-D coal is typically a sodium sulfate-bicarbonate type with high sodium absorption ratios.

Ground water monitoring wells have been installed in alluvium, overburden, clinker, Anderson-Dietz (A-D) coal, interburden, Canyon coal, spoil, and underburden stratigraphic units. The existing ground water conditions of the mine area were comprehensively summarized in Spring Creek Mine TR1 EIS, dated March 2020, and Spring Creek Mine AM5 EIS dated August 2023.

Historic mining at SCM has interrupted the flow of ground water in the A-D coal by excavating the coal. In some portions of the SCM, spoil has already been used to backfill the excavation and a new spoil aquifer is beginning to form where the mined A-D coal aquifer was previously. Similarly, the West Decker Mine has disturbed the underlying A-D coal aquifers. The A-D coal

aquifer (which occurs as separate Anderson and Dietz (1 & 2) coal beds in the vicinity of West Decker Mine) have been removed by mining and replaced with spoil in the West Decker permit areas. Ground water that appears in the mined A-D coal is typically collected and used for dust control or other process water. The existing West Decker Mine, located southeast of the SCM between Tongue River Reservoir and SCM, has also mined the A-D coal and interrupted the flow of the ground water in that vicinity.

Direct Impacts:

Surface Water Quantity

AM6 would affect surface water flow in the South Fork Spring Creek and Pearson Creek drainage areas due to increased surface disturbance in those basins. Currently, South Fork Spring Creek and Pearson Creek surface water flows do not directly reach the Tongue River Reservoir because they are intercepted upgradient of the currently permitted mining and downgradient at the West Decker Mine. Regardless of AM6, SCM impounds the annual average stream flows of Spring Creek (142 acre-ft), South Fork Spring Creek (260 acre-ft), and Pearson Creek (2.2 acre-ft) which account for approximately 0.13% of the average annual stream flow from the Tongue River Reservoir's 317,100 acre-ft (Navajo Transitional Energy Company, LLC, 2026). Surface water would continue to be captured in South Fork Spring Creek and Pearson Creek at the current flood control and sediment control locations but would be captured for approximately one additional year compared to the currently approved mining plan and 10 additional years compared to the environmental impact assessment done for TR1. Additional sediment control measures proposed in the Pearson Creek basin headwaters and an additional sediment control pond and ditch system proposed in the South Fork Pearson Creek basin would capture additional flow that is currently captured in flood control reservoirs in their respective drainages. Water captured in flood control reservoirs and sediment ponds are allowed to evaporate, infiltrate, or are used for dust control and other uses on SCM.

There is one surface water right on the South Fork Pearson Creek that could be affected by the attenuation of runoff from the proposed AM6: water right 42B 183675 00. This water right is a stock water right owned by NTEC within the proposed AM6 permit area which may have its quantity reduced as a result of a sediment control ditch along its north edge. The amount of runoff intercepted by the ditch is not anticipated to significantly reduce the water quantity of the pond. If the stock water quantity is negatively affected, the owner, NTEC, may request replacement water as stated in ARM 17.24.648. This water right is owned by NTEC; therefore, potential impacts would not harm other users.

Direct impacts from AM6 could result in less surface water reaching the West Decker Mine flood control impoundments and sediment ponds, and, as a result, possibly less water being discharged from the West Decker Mine sediment control ponds and outfalls to the Tongue River Reservoir. These direct impacts would continue until a future date when the Pearson Creek and South Fork Pearson Creek channels are reconnected through the disturbed area.

Dewatering of spring sources is not anticipated, since decreases in clinker and overburden water levels have not been observed to occur until mining is directly adjacent. Springs with water

rights are located over a mile from proposed AM6 mining. Springs with water rights are not anticipated to experience a reduction in quantity or quality because of their distance from mine cuts and the lack of connectivity of their source aquifers to the dewatering of the Anderson-Dietz.

Water rights outside of permit areas are primarily located on perennial reaches of the Tongue River or Tongue River Reservoir. Diminution or withholding of streamflow from ephemeral flow events in Spring Creek and Pearson Creek will not impact Tongue River water users. No decrease in flow in the Tongue River attributed to mining has occurred from current mining operations. The proposed AM6 operations will only disturb drainages impounded by current mining operations; therefore, impacts to users on the Tongue River from AM6 are not anticipated.

Surface Water Quality

No additional changes in surface water quality would be anticipated from the Proposed Action. Short term increases in Total Suspended Solids (TSS) and TDS would be expected from reclaimed drainages, but elevated concentrations would be expected to decline with the establishment of vegetation in the drainage basin. During mining and until necessary bond release is achieved, all storm water would be impounded in either flood control reservoirs or sediment control ponds with discharges being subject to Montana Pollution Discharge Elimination System (MPDES) discharge permits and MPDES outfall monitoring requirements. As a result, any mine related sediment loading is prevented from reaching the Tongue River Reservoir and potentially affecting surface water quality downstream of the mine.

Ground Water Quantity

Removal of Anderson-Dietz coal requires pumping to keep the active mine pits dewatered. This creates a cone of depression surrounding all mining activities. The new mine cuts proposed in AM6 would increase the size of Pits 1, 2, 4, and 7 by a total of 318 acres (**Figure 2**) and is anticipated to have a minimal increase on the currently modeled ground water drawdown extent for the Anderson-Dietz Coal and Canyon Coal aquifers. The increase in ground water drawdown due to the new coal cuts proposed under AM6 is predicted to be, at most, a few feet in comparison to the 2017 ground water model (Navajo Transitional Energy Company, LLC, 2026). Piezometric measurements taken since the inception of the 2017 model have demonstrated that it is a conservative estimation (predicting high drawdown than what was measured), suggesting that even a modest increase in the ten-foot drawdown contours is unlikely. Under AM6, the timing and duration of drawdown would be anticipated to extend to the proposed end of mining (2040). The proposed end of mining under AM6 (2040) would be a one-year increase from the currently approved mine plan (2039 – approved under MR272) and a ten-year increase from the mine plan approved under TR1 (2030). Mining operations shown to affect the ground water (e.g. dewatering) would also be extended to the new timeframe. While no new ground water model has been created for AM6, by adding 10 years to the LOM beyond what was originally modeled under TR1, the anticipated total time of recovery to premine ground water levels will likely be 15 -20 years longer than was originally estimated in the 2017 ground water model referenced above. In the context of full ground water recovery to premine levels, which is predicted to take over one hundred years, this added timeframe is minimal. In the PHC, the predicted 10-foot drawdown can be seen for both the Canyon Coal and Anderson-Dietz aquifers (Navajo

Transitional Energy Company, LLC, 2026). This model was created in 2017; the additional drawdown from AM6 would not be expected to change the shape or size of the drawdown contours by a meaningful amount.

All active ground water rights within the ten-foot drawdown of the 2017 ground water model are owned by NTEC LLC (of Spring Creek Mine) and, therefore, have NTEC's consent to be impacted. AM6 would not increase the drawdown enough to impact any other ground water rights.

Most drainages in the immediate AM6 area are ephemeral streams which sit above the water table and only flow in response to snow melt and rain events. Because of this lack of connectivity between the ground and surface waters, it is unlikely that AM6 would have a notable effect on any surrounding surface water systems beyond what is directly impacted by surface disturbance into the watershed. Ground water drawdown would not be expected to lead to a reduction in surface flows.

Ground Water Quality

Ground water class is defined by ARM 17.30.1006 and is highly variable in the Tongue River Basin across both vertical aquifer stratification, and horizontal space. Because of this variability, the assessment of ground water classification has typically been limited to the region directly surrounding a given well. In Eastern Montana where high salinity is common, the primary concern is an increase large enough to change the ground water classification from Class II (1,000-2,500 micro siemens per cm) to Class III (2,500-15,000 micro siemens per cm). Anderson-Dietz monitoring well AD-17 lies in the vicinity of potential water quality impacts from AM6. AD-17 currently has a median specific conductance of 1,940 micro siemens per cm. Anderson-Dietz wells have historically increased about 300 micro siemens per cm between pre and post mining, so while the change from Class II to Class III is possible, it is not likely. Anderson-Dietz monitoring well AD-16 would also be in the immediate area and would be likely to see a change in specific conductance as a result of AM6. However, this well has a median conductance of 4,650 micro siemens per cm, meaning it is already in Class III. The difference between these two wells, less than 1.5 miles apart and in the same aquifer, highlights the variability of ground water classification in the area. Other monitoring wells and NTEC-owned ground water rights within AM6's area of potential influence are already impacted by the existing permitted mining and would be unlikely to see a substantial change resulting from the AM6 approval. AM6 will have no effect on ground water rights not owned by NTEC. The significance assessment is presented in **Table 11.**

Secondary Impacts:

Surface Water

AM6 would add 479 acres of disturbance in the Pearson Creek and South Fork Spring Creek drainages for a total of 8,745 acres of LOM disturbance (Navajo Transitional Energy Company, LLC, 2026). These additional 479 acres of reclaimed drainage basin construction are primarily in the Pearson Creek drainage and would be completed by approximately 2050 (Navajo Transitional Energy Company, LLC, 2026).

A secondary impact of AM6 on surface water would be altered reclaimed drainage hydraulics once mining has ceased and the permit area is reclaimed. SCM's reclaimed drainages are designed to exhibit similar hydraulics, such as discharge, velocity, and run-off volume, as the premine landscape. Proposed post mine topography changes in Pearson Creek with AM6 is modeled to reduce runoff approximately 1% compared to the pre-mining landscape from 80.3 to 79.4 ac-ft (Navajo Transitional Energy Company, LLC, 2025c). Proposed post mine topography changes in South Fork Spring Creek with AM6 is modeled to increase runoff approximately 34% compared to the pre-mining landscape from 131.9 to 176.6 ac-ft (Navajo Transitional Energy Company, LLC, 2025c).

A secondary impact would include changes to slope and slope aspect in the reclaimed landscape. Slope and slope aspect (the compass direction of the slope faces) influence local microclimates by affecting the amount of sunlight and wind an area receives. This may impact vegetation, snowpack, and soil temperature of the landscape. Changes in slope aspect between the premine landscape and the AM6 PMT are minor, with about a 5 percentage point decrease in northeast aspect area and up to about 2 percent point increase in the north, east, southeast, west, and northwest aspect areas. The AM6 PMT would have less change than the previously approved PMT with changes being less than 1 percentage point for all aspect directions. The distribution of slope within the permit area from the premine topography and the proposed postmine topography indicates that the proposed postmine topography would increase the area with slopes between 5-15% between about 1 to 4 percentage points and decrease the area with slopes steeper than 15% and between 0-5% between about 0.5 and 2.5 percentage points. The changes in aspect and slope may result in less and shorter snow retention as well as affect the composition of vegetative communities that reestablish during reclamation. Shallower slopes are predicted to lead to less runoff and erosion during storm events; shallower slopes result in lower runoff velocities which allow for more infiltration time and less energy for sediment transport.

Ground Water

Following back-fill of mine pits with spoil, ground water from upgradient recharge areas would be expected to flow into the former mine pits and create new spoil aquifers across the mined area. As spoil re-saturates, oxidizing conditions can occur along with an increased mobilization and flushing of dissolved minerals. The spoil wells show a marked increase in TDS compared to all premine aquifers. Spoil wells typically show TDS levels between 3,800 mg/L and 5,670 mg/L and three times increase to the median TDS over the premine conditions of all aquifers (4,625 mg/L compared to 1,450 mg/L). This TDS is also higher than mining-influenced, but not mined-through, aquifers which have a median TDS of 1,910 mg/L. This suggests that a considerable level of TDS is currently coming from newly freed minerals within the spoil, before flushing out into other aquifers. The spoil wells show a relatively stable TDS over time. The oldest spoil well has measurements spanning almost 25 years and over that time the TDS levels have remained relatively flat. In the spoil well with a low overall TDS, SP-1, there has been a slight upward trend over time. Conversely, in the spoil well with the highest overall TDS, SP-2, the TDS levels have decreased in recent years. It appears that the spoil aquifer is still undergoing homogenization, which means that TDS levels would be expected to continue to align across spoil wells throughout the permit. AM6 will add an additional 318 acres of mine cuts, an 7% increase in surface area of spoil. This amendment will also increase the life of mine by one year, which will slow down re-saturation in the spoils by a similar factor, one to five years.

The mining process removes the geologic layers making up aquitards and aquifers, replacing the once stratified geology with a more uniform mix of spoil. This reduction of stratification affects not only the spoil, but also the surrounding aquifers. The Anderson-Dietz Aquifer shows a dramatic increase in TDS variability as mining progresses. Premine Anderson-Dietz wells have a median TDS of 1,600 mg/L and a standard deviation of 1,977 mg/L. Postmine, the median TDS changes to 1,840 mg/L with a standard deviation of 2,136 mg/L. This increased median is aligned with other aquifer changes. However, Anderson-Dietz has a uniquely high TDS variability postmine with several outlying data points. With the addition of AM6, these trends would be expected to continue. Postmine TDS would likely be higher overall and more homogenized across aquifers.

The pH in existing spoil wells demonstrate a relatively consistent trend. The pH typically starts more neutral, around 7, then within the first two years tends to rise to a more alkaline level as ground water recharges into the area. The pH of the spoil then levels off around 8, which is slightly higher than the median premine pH of all aquifers, 7.9. This slight increase is likely due to the mining process increasing mineral mobilization. Post-mining non-spoil wells in the region show a similar trend, with a median pH of 8.1, a rise of 0.2 from baseline. The AM6 amendment would directly add to this effect by delineating 318 more acres to be mined. This effect on pH appears far reaching across the mine site, but small in impact due to the region's naturally high alkalinity. The increase would be unlikely to diminish the quality of ground water. Since the pH response to mining, resulting in a slightly higher equilibrium pH value, takes several years, AM6 would be expected to delay reaching the new pH equilibrium for the mine area approximately 10 years from what was analyzed in TR1. The effect of this delay would not be anticipated to increase pH values of the area considerably more than what has been previously observed in monitoring data.

Cumulative Impacts:

DEQ has prepared a Cumulative Hydrologic Impact Assessment (CHIA) as part of the written findings of the AM6 final decision. The CHIA process includes the following: 1) evaluating impacts to the hydrologic system, 2) defining the cumulative hydrologic impact area, 3) describing the hydrologic system, the baseline values, and natural variability, 4) identifying hydrologic resources likely to be affected, 5) estimating the impacts of mining on hydrologic resources, and 6) making a material damage determination and preparing a statement of findings. Further discussion of the topics discussed below can be found in the CHIA.

Surface Water

Potential cumulative impacts to surface water would occur for the AM6 disturbance area and the West Decker Mine within the local drainage basins adjacent to the Tongue River Reservoir. Mining related surface water impacts would continue through the life of mine operations in these drainages below the mines but would reduce with successful reclamation. Cumulative mining impacts to surface water resources are anticipated to be minor in the Tongue River Reservoir and Tongue River because of the incorporation of flood control and sediment control ponds upstream and downstream of both the SCM and West Decker Mine during operation, stormwater best management practices by the mines, and the small total area of disturbance

compared to the total drainage area of the Tongue River Reservoir. Collectively, West Decker Mine and SCM impound about 57 square miles of ephemeral drainage area of the 1,784 square miles of the Tongue River Reservoir (or about 3.2% of the total drainage area), from reaching the reservoir. AM6 would not add to the surface water currently impounded by West Decker Mine from reaching the reservoir.

The relatively small amount of water prevented from reaching the Tongue River and Reservoir has not shown a change in the storage of the Tongue River Reservoir or flow characteristics of the Tongue River. A quantitative look at storage of the reservoir over time is complicated by the rise of the storage capacity of the reservoir in 1999. However, outside of the seasonal rise and fall of storage, the minimum and maximum capacity levels gradually increase and decrease throughout the record kept for the reservoir with no apparent direct response to initiation of mining operations in the CIA. In addition, daily average discharge of the Tongue River below the reservoir has not changed over time, with baseline daily average discharge at 428 cfs (849 ac-ft/day) and average daily discharge of 424 cfs (841 ac-ft) during mining influence in the reservoir. Although little change should be expected because of the dam-controlled outlet flow, these daily average discharge values resemble the discharge recorded into the reservoir at the upper USGS station at 439 cfs (871 ac-ft/day) indicating Tongue River flows through the reservoir have not shown an impact as a result of mining and would not due to the addition of mining proposed with AM6.

The cumulative direct and secondary impacts would be expected to increase with the addition of reclamation at the West Decker Mine. The drainage area within the Decker permit (Spring Creek, Pearson Creek, and Pond Creek) will be impounded and prevented from reaching the Tongue River Reservoir until final reclamation. Once final reclamation and necessary bond release has been achieved, impoundments would be removed, and the drainages reconnected to the Tongue River Reservoir allowing flows to reach the reservoir. As a result of constructing more reclaimed drainages, the cumulative impacts of the changes to the drainage basins' hydraulics would add to the changes occurring within the mine areas. Spring Creek runoff is modeled to decrease 8% from 385.1 to 351.7 ac-ft and Pearson Creek runoff is modeled to decrease 23% from 121.3 to 93.3 ac-ft (Decker Coal Company, 2013). Some of the decrease in runoff to the Tongue River Reservoir from Spring Creek would be offset by the increases in runoff from SCM. The modeled change in runoff in Pearson Creek is minor with AM6 and would not negatively affect the beneficial uses and quantity of the Tongue River and Tongue River Reservoir.

The cumulative direct and secondary impacts to Tongue River Reservoir water quality would be expected to increase with the addition of AM6. This increase will be minor as discussed below. AM6 will create more spoils aquifer in place of the Anderson-Dietz coal seam and overburden, and delay recharge recovery of the spoils ground water unit for at least an additional year. Water quality in the Tongue River Reservoir and the Tongue River have not shown a measurable decrease in quality or increased rate of exceedances of livestock guidelines, ARM 17.30.670 standards, or DEQ-7 standards resulting from cumulative effects of area coal mining to-date. A mass-balance model of mine spoil ground water TDS loading to the Tongue River Reservoir indicates the about 5.8% (16,308 kg/day compared to 281,222 kg/day from the Tongue River) of the TDS loading in the reservoir results from mine impacted spoils ground water. Time concentration plots of SC and TDS at the Tongue River below the reservoir do not show any significant increasing trends since data collection started in 1978. The contributions of TDS due to mining are negligible to the Tongue River system. Due to the limited area of proposed

disturbance compared to currently disturbed land, proposed use of the same mining method and sediment and flood controls cumulative effects with AM6 mining are anticipated to be minor at the Tongue River Reservoir and Tongue River.

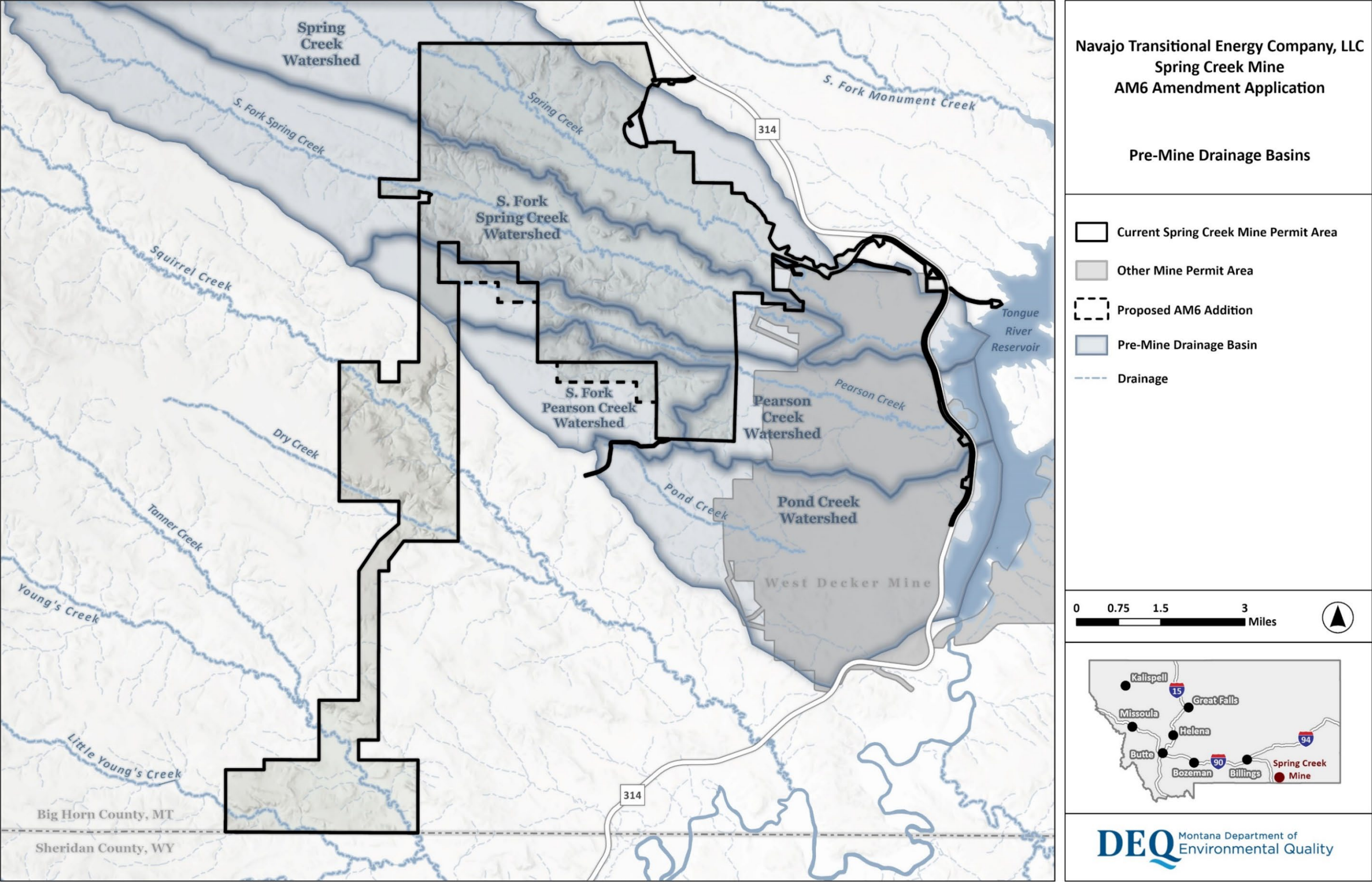
The cumulative impact of mining to the salinity in the Tongue River Reservoir and thereby the Tongue River below the dam, is predicted to continue to meet Northern Cheyenne water quality standards listed in **Section 2.1** (irrigation period (April 1 through November 15) EC average limit of 1,000 $\mu\text{S}/\text{cm}$ and a yearly maximum of 1,500 $\mu\text{S}/\text{cm}$; SAR yearly maximum of 2.0) as discussed in the above paragraph. Additionally, median SC and SAR values on the Tongue River below the dam during mining influence (598 $\mu\text{S}/\text{cm}$ and 0.75, respectively) are similar to baseline median concentrations and have not exceeded Northern Cheyenne water quality standards (**Table 9-4**).

Ground Water

Potential cumulative ground water impacts could occur throughout the 10-foot drawdown and from the mine to the Tongue River Reservoir following the hydraulic gradient, which typically flows from northwest to southeast. The cumulative impact area would be increased further by accounting for the additional impacts to the water table caused by mining at West Decker Mine. Southeast of Spring Creek Mine in the area where drawdown zones overlap, their effects on water quantity and quality would be additive in all aquifers. The extent of ground water drawdown and effects on water quality would increase with the proposed mining, particularly in the overlap region. In this area, the most impactful ground water effect, second only to drawdown, would be the potential for some wells to change from a ground water Class II to Class III. In the primarily ranching community of Southeastern Montana, this could cause some wells to become marginally less suitable for livestock watering. However, as noted, this effect is likely to be small and limited to very specific areas, likely only close to the AM6 mining, an area primarily already in Class III. Other impacts likely to occur would be a slight increase to the pH and arsenic both in and out of the mine footprint.

Coal Bed Methane (CBM) extraction would have cumulative impacts. While no longer active, the CBM pumping in the region has lowered the water table across the entirety of the SCM permit area. Water levels have not yet recovered and are not expected to do so for hundreds of years (Navajo Transitional Energy Company, LLC, 2026). Similar to the Decker mines, the impacts from the Proposed Action would add to the impacts to water quality and quantity in all aquifers.

Figure 5: Premine Drainage Basins



3. Air Quality

SCM currently holds MAQP #1120-12 and is considered a minor source of emissions as defined under Title V of the Federal Clean Air Act (CAA). SCM has monitored particulate matter (PM) levels around the mine site throughout the life of the mining operation. This PM monitoring data demonstrates compliance with all applicable requirements and is on file with DEQ's Air Quality Bureau (aqb).

Under the Federal CAA, 42 U.S.C. § 7501, et seq., an attainment area is a geographic region that meets (or is cleaner than) the National Ambient Air Quality Standards (NAAQS) for a given air pollutant. A nonattainment area (NAA) is a region where air quality does not meet the NAAQS for at least one criteria pollutant. Primary NAAQS provide public health protection, including protecting the health of "sensitive" populations such as asthmatics, children, and the elderly. Secondary NAAQS provide public welfare protection, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings. SCM is located approximately 11 miles north of Decker, Montana. According to 40 CFR 81.327, as of August 23, 2023, air quality in the affected area is unclassifiable/attainment for all NAAQS and Montana Ambient Air Quality Standards (MAAQS) pollutants. The closest NAAQS NAA is the sulfur dioxide (SO₂) NAA in the Laurel, Montana area, which is located approximately 140 miles northwest of SCM. Carbon monoxide (CO) and SO₂ NAAQS maintenance areas (former NAAs that have successfully cleaned up air quality to attainment) also exist in the Billings, Montana area. Applicants are required to comply with all laws relating to air, such as the CAA and NAAQS set by the US Environmental Protection Agency, and the Clean Air Act of Montana. The immediate area, including SCM and Decker mines, are in compliance with the NAAQS.

The air analysis area includes the proposed AM6 Project Area. A component and primary indicator for air quality is the amount of PM with an aerodynamic diameter of 10 microns or less in size (PM₁₀) generated by mine construction activities and road traffic. Common sources of PM in the SCM area are carbon black soot, smoke, and fugitive dust from unpaved roads and construction sites. PM from the Proposed Action would be transient and primarily deposited within a half mile of the fugitive source locations that generate particulates. Primary gaseous pollutants such as nitrogen dioxide (NO₂) may travel farther from their sources. Atmospheric chemistry may cause the formation of secondary gaseous pollutants from primary pollutants.

MAQP #1120-12 contains conditions requiring SCM to employ BACT and take reasonable precautions to control emissions of airborne PM, including treatment of all unpaved roads and general plant areas with water and/or chemical dust suppressant, as necessary, to maintain compliance with the reasonable precautions' requirement (ARM 17.8.308) (MT DEQ, 2014).

Fugitive dust is regulated pursuant to ARM 17.8.308 and in accordance with SCM's MAQP #1120-12. Operations that emit fugitive PM would be subject to DEQ air quality regulations ARM 17.8.304 and 17.8.308(2) and (3). Pursuant to ARM 17.8.304(2), fugitive dust emissions would not be allowed to exceed visible opacity of 20% or greater, averaged over 6 consecutive minutes. Pursuant to ARM 17.8.308(2), SCM would also be required to take reasonable precautions to control emissions of airborne PM from operations. MSUMRA requires that all surface areas associated with SCM's operations be stabilized and protected to effectively control air pollution (§ 82-4-231(10)(m), MCA).

Operators are required to employ fugitive dust control measures in accordance with Section 82-4-231(10)(m), MCA, the operator's air quality permit, and applicable federal and state air quality standards (ARM 17.24.761(1); 17.24.311(1)). Monitoring to evaluate the effectiveness of the fugitive dust control practices must also be conducted (ARM 17.24.761(2)).

Measures used to control fugitive dust according to SCM's Air Pollution Control Plan (Spring Creek Mine, 2015) include:

- Enclosed conveyors;
- Enclosed truck dump stilling shed with a dust suppression system;
- Dust suppression at the crusher operation;
- Dust suppression at the collection system and railcar loadout chute;
- Completely enclosed storage barn for the coal storage pile;
- Minimize fall distances of coal and overburden when loading trucks and stockpiles;
- Prevention of overshooting when blasting;
- Use of vegetation to prevent wind erosion;
- Use of chemical dust suppression and water on haul roads along with removal of loose debris from haul roads;
- Reclamation within one growing season;
- Paved access roads; and
- Baghouse filters on the coal quality analytical laboratory coal sample system exhaust.

Direct Impacts:

Fugitive dust or PM would be produced or become airborne during blasting and materials handling operations and the movement of heavy equipment and machinery over unpaved roads, and continual operation of the facility. Mechanized equipment would also produce exhaust fumes and associated air pollution (CO, oxides of nitrogen (NO_x), SO₂, PM, and hydrocarbons, and trace metals). NTEC would be required to use reasonable precautions to control airborne PM.

Air quality standards are regulated by the CAA (42 U.S.C. 7401 et seq.) and the Montana Clean Air Act (§ 50-40-101, et seq., MCA) and are implemented and enforced by DEQ's AQB. The AQB enforces both Federal NAAQS and DEQ established limits and conditions, which allow for pollutants at the levels permitted within MAQP #1120-12. Emissions of primary concern at SCM include PM species (PM, PM₁₀, PM_{2.5}), NO_x, and greenhouse gases (GHG). GHG emissions are assessed separately in Section 23 of this EA. Given SCM's mandatory compliance with all applicable state and federal laws and all conditions and limits included in the MAQP, any expected direct impacts on air quality from the proposed action would be long-term and minor. This is because SCM's compliance with these stringent standards and the specific, enforceable limits of the MAQP are legally required to prevent major adverse effects. The significance assessment is presented in **Table 11**.

Under the Proposed Action, controls on fugitive dust and other emissions would continue to be through methods currently employed at SCM. The Proposed Action would increase the acreage mined by 318 acres, with 479 acres of new disturbance. As a result, SCM would need to submit an updated air dispersion model to include mining the additional coal reserves from the

Proposed Action and obtain a revised MAQP # 1120-12. Changes to the air permit would undergo a separate Environmental Assessment by DEQ.

Secondary Impacts:

Impacts to air quality from the Proposed Action would be conditioned and limited by the MAQP. A demonstration of compliance with applicable requirements would be necessary for MAQP issuance (see MAQP #1120-12).

The ongoing use of unpaved/paved roads to access AM6 would occur and would be expected to generate fugitive dust. However, SCM would be required to use reasonable precautions to control fugitive dust from vehicle travel on unpaved roads and various material handling operations. Further, operation of heavy equipment would result in the emission of PM and other regulated airborne pollutants. The Proposed Action would not be expected to cause or contribute to a violation of the applicable primary or secondary NAAQS. Therefore, any secondary impacts would be long-term, consistent with existing impacts in the affected area, and minor because SCM's mandatory compliance with stringent state and federal air quality standards and the specific, enforceable limits and conditions of the MAQP (such as reasonable precautions to control fugitive dust) are legally required to prevent major adverse effects.

Cumulative Impacts:

Cumulative impacts to air quality from the Proposed Action would be conditioned and limited by the MAQP and a demonstration of compliance with applicable requirements is necessary for MAQP issuance. The nearby Decker Mines (MAQP #1435-07) also contribute to the air quality of this area. DEQ is unaware of any related future actions that are under concurrent consideration by any state agency through preimpact statement studies, separate impact statement evaluation, or permit processing procedures.

MAQP #1120-12 requires SCM to take reasonable precautions to control emissions of airborne PM as well as to treat all unpaved roads and general plant areas with water and/or chemical dust suppressant in order to maintain compliance with the reasonable precautions' requirement (ARM 17.8.308). The EPA also regulates emissions for on-road and non-road vehicles and engines by regulating fuel and sets emission standards on the amount of pollution a vehicle or engine can emit. This ensures that the vehicles meet federal average fuel economy standards; thus, engine emissions related to on-road and off-road vehicles would be expected to meet regulations and were not addressed in this evaluation. Therefore, any cumulative impacts would be long-term and minor for this permitting action because SCM's mandatory compliance with stringent state and federal air quality standards and the specific, enforceable limits and conditions of the MAQP (such as controls on PM and fugitive dust) are legally required to prevent major adverse effects.

4. Vegetation Cover, Quantity, and Quality

The analysis area for vegetation includes 520 acres surveyed and added to the proposed permit boundary of the SCM AM6 application as well as the existing disturbance boundary. Baseline investigations have been completed throughout the area through several iterations, from a premine investigation to subsequent baseline investigations for each amendment to the existing

permit. The study area for AM6 had a vegetative baseline that was completed in July of 2024 and is included in the Baseline section of the permit (Spring Creek Mine, 2025c). Baseline investigations are required by ARM 17.24.304 with the purpose of determining the vegetative community types within the proposed mining area, associated species of those communities, any potential limiting factors to the communities, and a map delineating where those communities lie in the landscape.

Landuse in the project area varies and is dominantly grazing land and wildlife habitat. Through the baseline iterations, several physiognomic types or vegetation communities have been established for the SCM area to describe premine communities and reclamation objectives. These physiognomic types are most prevalent in unique vegetative communities and have been tied to varying substrates and topography by NTEC. These vegetative communities are described below in reference to the baseline study area.

Artemisia tridentata/Agropyron spicatum (ATSP)

This is the most common community within the study area. This vegetative community is characterized by big sagebrush overstory and bluebunch wheatgrass understory. It also supports the highest species density of any vegetative community. The shrubs densities in this type according to baseline data are 2,428 shrubs/ac. This type is usually found on middle to lower slopes in areas that are losing soil fines.

Artemisia tridentata/Agropyron smithii (ATSM)

This is the second most common sub-type within the study area. Important species include big sagebrush in the overstory and western wheatgrass and green needle grass in the understory. Shrub density within the ATSM was the same as ATSP with woody plant density averaging 2,428 shrubs per acre with the big sagebrush component being the dominant shrub species. Winterfat tends to make up the rest of the shrub component. This sub-type is found on gentler slopes where soil fines tend to accumulate.

Artemisia cana

As mentioned in the 2024 Baseline Study, silver sagebrush community was only present in 4% of the study area and primarily occurred in ephemeral drainages of Person Creek. These particular sites occur on clay and loam textured soil types with western wheatgrass being the common perennial species.

Artemisia tridentata/Sarcobatus vermiculatus (ATSV)

As mentioned in the 2024 Baseline Study, ATSV community was only present in 3% of the study area and was primarily present on upland sites. Western wheatgrass, inland saltgrass, and Sandberg bluegrass are prevalent in the understory.

Drainage Bottom

The Drainage Bottom is a vegetation community type that is outlined in the vegetation survey. It consists of only 3% of the study area. These sites are found along drainages or adjacent benches, on soils with high clay and loam component. Perennial grasses such as western wheatgrass along with a low diversity of forbs are the primary species of this community.

Pine-Juniper Open Canopy Phase

Ponderosa pine and Rocky Mountain juniper are the overstory components, while bluebunch wheatgrass is the primary understory component. There are two phases of this type, one with an open canopy, while the other is closed and is tied to density of junipers. The open canopy phase has a larger proportion of big sagebrush. Bluebunch wheatgrass, big sagebrush, prairie junegrass, needle-and-thread, green needlegrass, fringed sagewort, and creeping juniper are the dominant understory grasses and shrubs. This is the most structurally diverse type within the study area. This type is typically found on middle to upper slopes with cool to slightly warm exposures of both clay and loam with textures of course fragments. Slopes with micro-topographic diversity tend to harvest more water and promote establishment and growth of pines and junipers through protected areas that maintain snow moisture later into the spring.

Shallow Shaley

The presence of tan-shale rocky outcrops and sparse vegetation make the shallow shaley premine type easily recognizable. Dominant species consist of cool season perennial grasses such as bluebunch wheatgrass, needle-and-thread, and prairie junegrass. Perennial forbs include clover and sporadic coneflowers. Shrub species include rubber rabbitbrush and skunkbush sumac. It is common to see ponderosa pine and Rocky Mountain juniper on these sites as well.

Threatened and Endangered Species

No plants listed as threatened or endangered by the U.S. Fish and Wildlife Service were found within the vegetation baseline study area for AM6.

Direct Impacts:

Proposed disturbance of 479 acres would result in the removal of up to 479 acres of vegetation to the grazing land and wildlife land uses. Any surface disturbances would be reclaimed and seeded with an appropriate seed. If the action were approved, weed control during and after the activity would be a requirement. Landuse performance of reclamation is expected to support a higher level of landuse capability and ecological function that may have existed prior to mining. The project area would be subject to the 2022 Montana Noxious Weed Management Plan that is included in Spring Creek Mine's permit. The significance assessment is presented in **Table 11**.

Secondary Impacts:

Land disturbance at the site could result in propagation of noxious weeds. Weed control during and after the activity would be a requirement. The project area would be subject to the 2022 Montana Noxious Weed Management Plan that is included in SCM's permit.

Cumulative Impacts:

The analysis area for cumulative impacts from AM6 would include the currently permitted SCM, as well as the West Decker Mine, just to the east of the Proposed Action. Vegetation communities are very similar in the two mine areas, and the lands adjacent to them. Disturbance from the Proposed Action would contribute to the overall reduction in vegetation diversity and changes in species composition in the area. Reclamation success shows that though there may be a moderate impact to vegetated communities through these actions, overall function of those community types would not be impacted because the land uses would not change.

5. Terrestrial, Avian, and Aquatic Life and Habitats

Background wildlife and habitat information is described in the permit under Baseline Wildlife Survey (ARM 17.24.304(1)(j)) and Baseline Premine Land Use (ARM 17.24.304(1)(l)). A complete list of wildlife species observed in the SCM monitoring areas is included in the Surface Mining Permit and the annual monitoring reports. There are no jurisdictional wetlands that would be affected as a result of the Proposed Action. The majority of the wildlife habitat in the analysis area consists of sagebrush-steppe, lowland/prairie grassland, and conifer-dominated forest and woodlands (Montana Natural Heritage Program, 2025a). The Proposed Action would temporarily disturb 479 acres of terrestrial, avian and/or aquatic habitat and temporarily displace species occurring within the proposed disturbance area. Impacts to wildlife would be minimized by SCM's adherence to the monitoring (ARM 17.24.723) and protection (ARM 17.24.751) requirements. In addition to their Fish and Wildlife Plan (ARM 17.24.312), SCM has implemented a Species of Special Interest (SOSI) Plan to provide broad, long-term direction for management of wildlife species of special interest that occur within the SCM wildlife monitoring area.

Terrestrial Life

Amphibians and reptiles - Baseline and annual wildlife monitoring surveys have documented 6 species of amphibians and 9 species of reptiles in the direct/secondary and cumulative impacts analysis areas. The Great Plains toad (*Bufo cognatus*), a Montana Natural Heritage Program (MTNHP) Species of Concern (SOC), has been observed in the permit area, or permit area perimeter, the past two years. Historically, the Great Plains toad has been observed infrequently within the annual wildlife monitoring area. Another MTNHP SOC, the Greater short-horned lizard (*Phrynosoma hernandesi*), has the potential to occur within the permit area, however, historically, observations inside the SCM annual monitoring area have been rare (Great Plains Wildlife Consulting, Inc., 2025b).

Big game mammals - Baseline and annual wildlife monitoring surveys have documented 4 species of ungulates (also known as 'big game') in the direct/secondary and cumulative impacts analysis areas. In accordance with the SCM Monitoring Plan, big game species are monitored through annual winter surveys. Mule deer (*Odocoileus hemionus*) general/winter habitat and pronghorn (*Antilocapra americana*) general habitat are present in the analysis areas (Montana Fish, Wildlife and Parks, 2023). Historically, elk (*Cervus canadensis*) and white-tailed deer (*Odocoileus virginianus*) have rarely been observed in the SCM wildlife monitoring area (Great Plains Wildlife Consulting, Inc., 2025b). However, in 2024, a herd of 40 to 50 elk was observed in the northern portion of the wildlife monitoring area, and a lone bull was observed in the southern portion of the wildlife monitoring area. The nearest general/winter habitat for white-tailed deer is approximately 2 miles to the east of the analysis area, in the bottomland habitats along the Tongue River (Montana Fish, Wildlife and Parks, 2023). In accordance with the SCM Monitoring Plan, big game species are monitored through annual winter surveys. Mule deer (*Odocoileus hemionus*) general/winter habitat and Pronghorn (*Antilocapra americana*) general habitat are present in the analysis areas (Montana Fish, Wildlife and Parks, 2023). No big game migration corridors have been identified within the analysis area.

Small mammals - Based on annual monitoring data, 16 species of rodents or squirrels have been observed within the SCM wildlife monitoring area (Great Plains Wildlife Consulting, Inc., 2025b). The porcupine, a MTNHP Potential Species of Concern, is expected to occur occasionally in the cumulative impact analysis area. The black-tailed prairie dog, a MTNHP SOC, is expected to be

regularly observed within the SCM wildlife monitoring area (Great Plains Wildlife Consulting, Inc., 2025b). In 2021, seven active black-tailed prairie dog colonies totaling approximately 148 noncontiguous acres were present within or overlapped the AM6 baseline wildlife survey area. However, there are no active prairie dog colonies within the direct impact analysis area (Great Plains Wildlife Consulting, Inc., 2025b). Additionally, all colonies mapped within the cumulative impact analysis area are smaller than 80 acres, which is the size typically considered as the minimum size required to support a black-footed ferret (U.S Fish and Wildlife Service, 2013).

Bats - Baseline and annual wildlife monitoring surveys have documented at least 9 species of bats in the direct, secondary and/or cumulative impacts analysis areas (Great Plains Wildlife Consulting, Inc., 2025b). The northern hoary bat (*Lasiurus cinereus*) and the little brown myotis (*Myotis lucifugus*), both considered Species of Concern by the Montana Natural Heritage Program, were documented within, or on the perimeter of, the permit area in 2024 (Great Plains Wildlife Consulting, Inc., 2025b). Additionally, the eastern red bat (*Lasiurus borealis*), the fringe myotis (*Myotis thysanodes*), and the long-eared myotis (*Myotis evotis*), which are all listed as MTNHP SOC, have the potential to be detected within the cumulative impact analysis area, and have been documented within the SCM wildlife monitoring area in the past (Great Plains Wildlife Consulting, Inc., 2025b).

Avian Life

The Proposed Action could displace wild turkey, gray (a.k.a Hungarian) partridge, and the ring-necked pheasant (Great Plains Wildlife Consulting, Inc., 2025b). Diversity and abundance of waterfowl and shorebirds within the cumulative impact analysis area is low in all seasons because aquatic habitat is limited to man-made reservoirs and widely scattered ephemeral/intermittent streams in the region. Of the 16 diurnal raptor species observed within the wildlife monitoring area, six of those species have been regularly observed and three of those species are typically observed seasonally (Great Plains Wildlife Consulting, Inc., 2025b). Federally protected raptors, such as the golden eagle (*Aquila chrysaetos*), (also considered a MTNHP SOC) and the bald eagle (*Haliaeetus leucocephalus*), are known to nest in the direct, secondary and/or cumulative impacts analysis areas. While there are no active raptor nests within Parcel 1 of the direct impact analysis area, there are two active red-tailed hawk nests within the Parcel 1A direct impact analysis area (Great Plains Wildlife Consulting, Inc., 2025b). Species with active nests documented within the secondary impact area include the turkey vulture (*Cathartes aura*), the prairie falcon (*Falco mexicanus*), the osprey (*Pandion haliaetus*), the red-tailed hawk (*Buteo jamaicensis*), the burrowing owl (*Athene cunicularia*), the sharp-tailed grouse (*Tympanuchus phasianellus*), and the state-protected Greater sage-grouse (*Centrocercus urophasianus*) (Great Plains Wildlife Consulting, Inc., 2025b). See further discussion regarding the Greater sage-grouse in Section 6 (Unique, Endangered, Fragile or Limited Environmental Resources).

Aquatic Life

No perennial streams or fisheries occur within the AM6 amendment area. The proposed disturbance boundary expansion would impact ephemeral drainages such as Pearson Creek and South Fork Pearson Creek, and their tributaries (BKS Environmental Associates, Inc., 2025b). These support seasonal aquatic habitats that provide limited resources for amphibians such as northern leopard frog, and for invertebrates, which in turn support terrestrial and avian foraging. There are no known aquatic biologic communities, as defined by ARM 17.24.651(3), present

within the proposed disturbance areas primarily due to the absence of intermittent or perennial streams.

Direct Impacts:

Direct impacts of the Proposed Action would include 479 acres of disturbance and temporary loss of terrestrial and avian habitats due to vegetation clearing and soil stripping. Mortality would be more likely for species that are less mobile, such as reptiles, invertebrates and burrowing species. Avian species, such as the wild turkey, the gray partridge, the Greater sage-grouse and the ring-necked pheasant, and mammals sensitive to human presence or activity, would likely be temporarily displaced. Potential impacts to Greater sage-grouse would not exceed those discussed in the TR1 EIS, dated March 2020, or the AM5 EIS issued in 2023, but would be extended for another ten years if the proposed action is approved. Powerlines and fences would be/are constructed according to permit standards and would pose minimal risk to terrestrial and avian species. Direct mortality of Greater sage-grouse and direct destruction of Greater sage-grouse leks would not be anticipated as a result of the proposed disturbance boundary expansion.

Secondary Impacts:

Removal of suitable habitat could temporarily reduce the number of wildlife that the analysis area could support, displace wildlife, and increase competition in the remaining habitat. Concurrent reclamation would reduce the impacts of habitat loss in the short term by minimizing the disturbance footprint of the mine. Final reclamation would reduce the overall impact of habitat loss by restoring habitat similar to or enhanced from premine conditions (Montana Department of Environmental Quality, 2020). Additional secondary impacts to wildlife, as a result of the Proposed Action, could include changes to vegetative communities that adversely affect wildlife habitat quality (forage and cover), such as habitat fragmentation, introduction or spread of noxious weeds, and dust causing reductions in plant productivity. Wildlife would be expected to be displaced by noise, blasting, and increased human activity, resulting in potential behavioral changes and/or impacts to reproductive success (Montana Department of Environmental Quality, 2020). Nighttime lighting at facilities and in active operation areas have the potential to disorient migratory birds. Altered habitat and habitat stressors have the potential to contribute to increases in disease transmission and contaminant bioaccumulation, which could affect reproduction and survival rates in higher trophic levels.

Cumulative Impacts:

The Proposed Action would result in the temporary loss of 479 acres of terrestrial and avian habitat. In 2019, the Greater sage-grouse functional habitat loss anticipated as a result of the TR1 revision was calculated to be approximately 615 acres. This was based on 977 additional acres of disturbance, using a functional acre approach that pre-dated the Montana Sage Grouse Conservation program to quantify the impacts (Montana Department of Environmental Quality, 2020). The Montana Sage Grouse Conservation Program's Habitat Quantification Tool calculates that the functional acres for the purpose of mitigation credits or debits due to the Proposed Action would be approximately 6,668 functional acres (Montana Sage Grouse Habitat Conservation Program, 2026). The proposed surface disturbances would contribute to existing landscape-scale habitat loss and fragmentation in the Tongue River Reservoir region. Repeated noise, traffic and human presence due to three active coal mine permits (SCM, East Decker Mine and West Decker Mine) in the region could lead to long-term avoidance of the area by certain

species. However, the proposed action would not add cumulative impacts to wildlife, birds or fish beyond those described in the TR1 EIS, dated March 2020, or the AM5 EIS issued in 2023. The significance assessment is presented in **Table 11**.

6. Unique, Endangered, Fragile, or Limited Environmental Resources

Terrestrial

The U.S. Fish and Wildlife Service's (USFWS) Information for Planning and Consulting (IPaC) tool identified three species protected by the Endangered Species Act (ESA) of 1973 that may have the potential to occur in the impact analysis area. Those three species are the proposed threatened monarch butterfly (*Danaus Plexippus*), the proposed threatened western regal fritillary (*Argynnis idalia occidentalis*) and the proposed endangered Suckley's cuckoo bumble bee (*Bombus suckleyi*). In accordance with 50 CFR 402.10(a), consultation with the USFWS' Montana Ecological Office determined that the Proposed Action was not likely to jeopardize the continued existence of any proposed species. As discussed in the EA, none of these species have been documented within the AM6 baseline wildlife study area or within the SCM wildlife monitoring area. The habitats in the direct, secondary and/or cumulative impact analysis area do not meet specialized habitat requirements. Therefore, direct impacts are unlikely and the general requirements of vegetation re-establishment in reclamation are sufficient for ensuring general habitat protection.

SCM has commitments within their 17.24.312 Fish and Wildlife Plan and 17.24.313 Reclamation Plan to construct wildlife enhancement features, such as wetlands, when opportunities arise during reclamation to replace such features. The 0.4 acres of wetlands affected by the Proposed Action does not contain specialized habitat components required by these species, such as stands of milkweed or violet species. Nor does the mine broadcast spray pesticides or herbicides. The mine's 17.24.312 Fish and Wildlife Plan commits to minimizing surface disturbance activities (e.g., soil salvage, road construction, grubbing, logging, exploratory drilling, etc.) to the extent practicable during the primary breeding season for most avian species in the region (i.e., April 1 through July 31). Although the Proposed Action area lacks specialized habitat, this commitment also benefits the Monarch and the Western Regal Fritillary by reducing the likelihood of any summer breeding habitat being disturbed.

While little is known about the specific winter hibernation sites for Suckley's cuckoo bumble bee, it's possible that they utilize duff or loose soil areas a few inches underground. The Proposed Action area is not comprised of habitats that you would expect to find loose, duffy soils (i.e. coniferous forests, old mixed hardwood forests, peatlands and bogs, and undisturbed woodland ecosystems). The MTNHP Habitat Suitability Model (Montana Natural Heritage Program, 2025b) predicts that bulk densities above approximately 1.2 g/cm³ are associated with substantially reduced habitat suitability. Baseline soil surveys found the Proposed Action area to be primarily comprised of sandy loams and loams (i.e Travessilla Series and Shingle Series) (BKS Environmental Associates, Inc., February 2025). These soil types can reasonably be expected to have a higher bulk density than 1.2 g/cm³ (United State Department of Agriculture, 2018).

None of these species have been documented within the AM6 baseline wildlife study area (Great Plains Wildlife Consulting, Inc., 2025b) or within the SCM wildlife monitoring area (Navajo Transitional Energy Company, LLC, 2025a). Additionally, the habitats in the direct, secondary and/or cumulative impact analysis area do not meet specialized habitat requirements (broad open grasslands, presence of milkweeds [*Asclepias* spp.] and violets [*Viola* spp.]) for any of those

insects (BKS Environmental Associates, Inc., 2025a). The SCM Fish and Wildlife Plan (ARM 17.24.751) provides direction on actions to be taken in the event a threatened or endangered species is encountered, including contacting USFWS and DEQ.

Avian

ARM 17.24.751(1) prohibits mining operations that may jeopardize continued existence of federally listed threatened or endangered species, result in adverse modification of critical habitat, or result in unlawful take of bald or golden eagles including their nests or eggs. ARM 17.24.751(2)(a–g) requires avoidance and minimization measures as well as best management practices (BMPs) for siting and construction of electric power lines, roads, and fencing that minimize adverse impacts on wildlife habitat (Montana Department of Environmental Quality, 2020). One formerly intact but inactive Golden Eagle (*Aquila chrysaetos*) nest site, the GE2 site, which was comprised of only a few sticks as of 2024, was discovered to have fully deteriorated due to natural causes in 2025 (Great Plains Wildlife Consulting, Inc., 2025a). The GE2 site no longer meets the definition of a nest and the area will be eclipsed by the proposed disturbance. Twenty-three (23) raptor nest sites, several of which belong to bald eagles (*Haliaeetus leucocephalus*), remain intact and available within the secondary and cumulative impacts analysis areas (Great Plains Wildlife Consulting, Inc., 2025b).

The SCM Fish and Wildlife (ARM 17.24.312) plan summarizes NTEC’s implementation of a Habitat Recovery and Replacement Plan (HRRP), a plan dedicated to sage-grouse habitat reclamation goals and commitments. The proposed disturbance is located entirely within Core Area for sage grouse and partially on BLM administered lands. The Bureau of Land Management (BLM) classifies the cumulative impact analysis area a Restoration Habitat Management Area (RHMA). A portion of the Proposed Action is within Core Sage-grouse Area. According to SCM’s Annual Wildlife Reports, Greater sage-grouse have not been observed at either lek since 2016, approximately four years prior to the Department’s approval of TR1 in 2020. Furthermore, there were no sage-grouse or signs of sage grouse documented at any confirmed lek sites within the AM6 baseline wildlife survey area or elsewhere in the current SCM wildlife monitoring area during spring 2024 or 2025, according to the Baseline Wildlife Surveys for SCM AM6 (Great Plains Wildlife Consulting, Inc., 2025b). SCM has commenced operations approved under TR1 in 2020, but they have not yet commenced the actions approved by AM5 in 2023. There are three Greater sage-grouse leks within 4.0 miles of the Proposed Action. Two of those three leks, the Playa (BI-006) and the Pasture (BI-005) leks, are within 2.0 miles of the Proposed Action. A third lek (BI-010), is located on tribal reservation land and is not monitored by SCM, but is monitored by Montana Fish, Wildlife and Parks. The Pasture lek (BI-005) officially transitioned to Confirmed Inactive, as defined by Montana Fish, Wildlife and Parks, following the 2025 monitoring season, after 10 consecutive years with no evidence (birds or sign) of sage-grouse attendance. No sage-grouse have been recorded at the only Confirmed Active lek (Playa [BI-006]) in the last 9 consecutive years. (Great Plains Wildlife Consulting, Inc., 2025b). Pursuant to the Greater Sage Grouse Stewardship Act and Executive Orders 12-2015 and 21-2015, SCM consulted with the Montana Sage Grouse Habitat Conservation Program and received a final consultation letter on June 12, 2026 (Montana Sage Grouse Habitat Conservation Program, 2026). The project as proposed, would have created disturbance activities within one No Surface Occupancy (NSO) area around the BI-006 lek. An NSO area is an area of special concern, as described in Executive Order 12-2015. Pursuant to the Mitigation Plan included with Montana Sage Grouse Habitat Conservation Program’s consultation response letter, SCM has agreed to adhere to the NSO area stipulation set forth in Executive Order 12-2015 and will need to seek approval from the

Montana Sage Grouse Habitat Conservation Program prior to disturbance. Additionally, SCM will adhere to the mitigation plan included in Montana Sage Grouse Habitat Conservation Program's final consultation letter and make a contribution to the Stewardship Account. Upon mitigation, the impacts to sage grouse habitat are expected to be temporary and are not considered significant. The actions proposed by AM6 occur under unchanged operational methods and wildlife mitigation commitments and do not introduce new types, intensities or pathways of potential impact to the Greater sage-grouse. Therefore, the potential effects to Greater sage-grouse and their habitat caused by the proposed disturbance are similar to or less than the effects described in the TR1 or AM5 EISs and are considered a continuation of existing, analyzed impacts. The Proposed Action is not anticipated to cause any new substantial impacts to Greater sage-grouse or their habitat

Wetlands

SCM completed an Aquatic Resources Inventory in the proposed expanded AM6 permit areas in 2024. Six sites located in the South Fork Pearson Creek, an unnamed tributary of South Fork Pearson Creek, and Pearson Creek were classified as wetlands in the report (BKS Environmental Associates, Inc., 2025b). These wetlands are adjacent to or abutting ephemeral tributaries. Since these sites are all located upstream of ephemeral tributaries evaluated in the past and determined to be non-jurisdictional by the United States Army Corps of Engineers (USACE), the report concluded that these wetland sites do not appear to meet the definition of jurisdictional waters of the U.S. as defined in 33 CFR § 328.3. Non-jurisdictional waters are not subject to USACE regulatory authority and no permit to section 404 of the Clean Water Act would be required. The aquatic resources identified within the currently approved SCM permit area, excluding the AM5 haul road areas, were determined to be non-jurisdictional by the USACE after review of aquatic resources surveys in 2010, 2017, and 2021 (WESTECH Environmental Services, Inc., 2020).

Direct Impacts:

The general duration and intensity of direct impacts to wildlife from the proposed action are similar to those described in the TR1 EIS (2020) and the AM5 EIS (2023), including direct mortality, temporary displacement and habitat loss, except the impacts would be extended for approximately ten more years (through 2040).

Terrestrial

Direct impacts to the Proposed Threatened Monarch butterfly (*Danaus Plexippus*), the Proposed Threatened Western regal fritillary (*Argynnis idalia occidentalis*) and the Proposed Endangered Suckley's cuckoo bumble bee (*Bombus suckleyi*) would be unlikely as none of these species have been documented within the SCM monitoring area and the disturbance area lacks specialized habitat requirements for these species.

Avian

Direct impacts to federally protected raptors would be possible, but unlikely due to current protection and mitigation measures required by the Bald and Golden Eagle Protection Act (BGEPA) and the permit (ARM 17.24.751). One intact but inactive golden eagle nest (GE2) is adjacent to Parcel 1A and would likely be disturbed by the Proposed Action (Navajo Transitional Energy Company, LLC, 2025a). Under the Bald and Golden Eagle Protection Act, NTEC would need to obtain a permit from the USFWS to remove the remnants of the GE2 nest prior to

disturbance. The SCM Fish and Wildlife Plans states that NTEC will direct requests to mitigate eagle nests to the USFWS and State agencies, as needed.

The Proposed Action would result in the new disturbance of 479 acres, all of which are considered Montana Core Sage Grouse habitat, 40 acres of which are administered by the BLM. Potential impacts to a Confirmed Active Greater sage-grouse lek (BI-006) within 2.0 miles of proposed disturbance were analyzed as part of SCM's TR1 and AM5 EIS's. Greater sage-grouse mortality due to active operation activities from the Proposed Action would be unlikely. Direct impacts to Greater sage-grouse would not be expected to exceed those described in the TR1 EIS, dated 2020, or the AM5 EIS, dated 2023. The Proposed Action would maintain current operational methods and wildlife mitigation commitments. The Proposed Action would not introduce new types, intensities or pathways of potential impact to the Greater sage-grouse. Therefore, the potential direct effects to Greater sage-grouse and their habitat because of the Proposed Action would be similar to or less than the effects described in the TR1 or AM5 EISs and would be considered a continuation of existing, analyzed impacts.

The proposed disturbance (479 acres) would not be anticipated to cause any new substantial direct impacts to Greater sage-grouse or their habitat. All direct impacts expected from the Proposed Action are described in the TR1 EIS, dated 2020, and/or the AM5 EIS, dated 2023.

Wetlands

Six wetland sites, anticipated to be classified as non-jurisdictional by USACE, were identified within the proposed AM6 mine permit boundary expansion. Three of these sites, located along the South Fork Pearson Creek and a tributary of South Fork Pearson Creek, would be within the proposed AM6 LOM disturbance boundary and a total of 0.4 acres of wetlands would be removed due to mining. SCM has commitments within their Fish and Wildlife Plan and Reclamation Plan to construct wildlife enhancement features, such as wetlands, when opportunities arise during reclamation to replace such features disturbed during mining.

The significance assessment is presented in **Table 11**.

Secondary Impacts:

The general duration and intensity of secondary impacts to wildlife from the proposed action are similar to those described in the TR1 EIS (2020) and the AM5 EIS (2023), including direct mortality, temporary displacement and habitat loss, except the impacts would be extended for approximately ten more years (through 2040).

Terrestrial

The proposed action would not be expected to result in secondary impacts to Proposed Threatened Monarch butterfly (*Danaus Plexippus*), the Proposed Threatened Western regal fritillary (*Argynnis idalia occidentalis*) and the Proposed Endangered Suckley's cuckoo bumble bee (*Bombus suckleyi*) because none of these species have been documented within the SCM monitoring area and the disturbance area lacks specialized habitat requirements for these species.

Avian

Secondary impacts to the Greater sage-grouse resulting from the Proposed Action would include approximately 5,466 functional acres of habitat loss, according to the Montana Sage Grouse

Conservation Program's Habitat Quantification Tool. As previously mentioned, potential impacts to a Greater sage-grouse lek (BI-06) within 2.0 miles of proposed disturbance were analyzed as part of SCM's Amendment 5 (AM5).

Potential secondary impacts to all avian species would not be expected to exceed those discussed in the TR1 EIS, dated 2020, or the AM5 EIS, dated 2023.

Wetlands

The Proposed Action would result in the loss of 0.4 acres of wetlands, anticipated to be non-jurisdictional, during mining. SCM has permit commitments to create wetland features, such as small depressions, as a part of final reclamation.

Cumulative Impacts:

Terrestrial

The disturbances caused by Proposed Action have the potential to further reduce habitats for wildlife, fecundity and taxonomic richness as well as further contribute to habitat fragmentation. Additional wildlife would likely be lost during construction/disturbance related activities.

Adhering to recommended timing stipulations for wildlife species of concern, to the extent possible, and/or planning construction activities to occur or move away from areas of highest concern during specific seasons will further reduce potential impacts to wildlife and wildlife habitats in the area.

Avian

Cumulative impacts to raptors would not be expected to be greater than those discussed in the TR1 EIS, dated 2020, or the AM5 EIS, dated 2023. Greater sage-grouse within the cumulative impact analysis area would be disturbed or displaced due to habitat loss/degradation, noise and human presence as described in the TR1 EIS (2020) and the AM5 EIS (2023). The closer a lek is to the proposed disturbance, the more likely chronic noise is to mask signals and reduce females' ability to detect male displays, which has the potential to adversely affect reproductive success. Mitigation (ex. noise control, seasonal timing restrictions, habitat restoration) can greatly reduce adverse impacts but would not fully eliminate impacts. Cumulative impacts to avian species would not be expected to be greater than those discussed in the TR1 EIS, dated 2020, or the AM5 EIS dated 2023.

Wetlands

The disturbance of wetlands, anticipated to be non-jurisdictional, from the Proposed Action would cumulatively add to wetland loss from mining and development in the area. Currently, 29 acres of wetlands are proposed to be disturbed with the currently approved mine plan and the Proposed Action would add an additional 0.4 acres of disturbed wetlands. SCM has permit commitments within their Fish and Wildlife Plan and Reclamation Plan to construct wildlife enhancement features, such as wetlands, when opportunities arise during reclamation to replace features disturbed by mining.

7. Historical and Archaeological Sites

There are three unevaluated sites (24BH1067, 24BH2526, and 24BH3683) and one site (24RB1041) awaiting NRHP eligibility status within the proposed AM6 areas. Fourteen other

cultural sites previously identified within the proposed AM6 area have been determined ineligible for the NRHP.

In 1990, site 24BH1041 was documented as a large site encompassing a ridgetop over one mile long and determined to be eligible for the NRHP. Based on revisits and previous determinations of effects, 24BH1041 is now managed as smaller discrete sites (24BH566, 24BH575, 24BH1039, 24BH1067, 24BH1068, 24BH2526, 24BH2530, 24BH2531, 24BH3401, 24BH3673, 24BH3674, 24BH3675, and 24BH3967) and is no longer considered a discrete resource (ACR Consultants, Inc, 2024). DEQ initiated consultation with the Montana SHPO upon determining the application was complete, requesting concurrence on an NRHP Eligibility status of 'Ineligible' for site 24BH1041. Until SHPO concurrence is received, site 24BH1041 is considered undetermined and the site will remain undisturbed. Sites 24BH1039, 24BH1067, 24BH1068, 24BH3673, 24BH3674, 24BH3675, and 24BH3967 will remain undisturbed until the eligibility status of 24BH1041 is determined.

In addition to the sites named above, sites 24BH2526, 24BH2528, 24BH2534 and 24BH3967 remain "unevaluated". Unevaluated sites require further testing and consultation in order to determine NRHP eligibility and must not be disturbed until final NRHP eligibility status is determined. NTEC is working with consultants to conduct the additional evaluation necessary to receive authorization from DEQ and MT SHPO prior to surface disturbance. In the interim, the sites must be avoided with a 100-foot buffer. A request for consultation on cultural resource protection was initiated by DEQ when the permit application was ruled complete as required under ARM 17.24.401 and ARM 17.24.404 with tribal nations in Montana. DEQ received one request for additional information from the Northern Cheyenne which was provided in December 2025. NTEC initiated ethnographic consultation with the tribal nations for these areas, and representatives from the Crow and Northern Cheyenne tribes visited sites in the AM6 area in 2024. None of the sites were noted as having cultural significance for either tribe.

Upon the completeness determination, interested parties, including but not limited to Montana's tribal reservations, were invited to consult with DEQ regarding potentially unidentified culturally significant sites in the proposed AM6 areas. SCM will contact DEQ and the Montana State Historical Preservation Office (SHPO) if any unrecorded cultural resource site is discovered in the course of mining. All appropriate action will be taken to properly record and mitigate any such site.

Direct Impacts:

Potential direct impacts to cultural resources could result from disturbance of physical elements, such as lithic scatters and rock art sites. The proposed expansion of surface mining and surface disturbance may affect twelve unevaluated cultural resource sites (24BH1039, 24BH1041, 24BH1067, 24BH1068, 24BH3673, 24BH3674, 24BH3675, 24BH3967, 24BH2526, 24BH2528, 24BH2534 and 24BH3967). Additional field investigation and consultation are required for the unevaluated sites so that final NRHP Eligibility status can be determined. If a site is determined eligible for the NRHP, it requires a treatment (avoidance or mitigation) plan. Mitigation work would be completed prior to disturbance in order to recover any information important to the interpretation of history and prehistory. The significance assessment is presented in **Table 11**.

Secondary Impacts:

Potential secondary impacts include changes to the appearance of an area that was excavated/mitigated due to cultural significance.

Cumulative Impacts:

Cumulative mining impacts include fragmentation, habitat loss and diminished access to cultural landscapes, ultimately resulting in the loss of landscape integrity and historical context/meaning. Additional surface disturbances would require cultural resource inventories to avoid impacts to these areas.

The significance assessment is presented in **Table 11**.

8. Aesthetics

The closest public road to the AM6 area is Federal-Aid Secondary Route (FAS) 314, also known as Montana Secondary Highway 314. In the area adjacent to Federal-Aid Secondary Route (FAS) 314, the landscape of the SCM is one of gently rolling sagebrush benches and expanses of mid-to-short grass prairie. Already present within this setting are visible signs of human alteration: agricultural fields, ranchlands, coal mines, transportation corridors, and overhead power lines break the uniformity of vegetation and terrain. Although none of the lands proposed for additional disturbance are identified as uniquely scenic or containing landmark visual resources, existing mining facilities and active extraction areas have encroached toward FAS 314 under the current mine plan, producing visible intrusion from a road used by local residents, those commuting, and recreationists.

Direct Impacts:

The proposed mining and surface disturbance proposed under AM6 would not be directly visible from the nearest public road (FAS 314). The Proposed Action would extend the duration of active mining, thereby prolonging the time during which the landscape would exhibit the industrial, stripped-back character associated with mining activity. During that period, the area would lack aesthetic value beyond the industrial, utilitarian appearance of mining operations.

From limited public viewpoints along FAS 314, the visual contrast between native terrain and mining features would intensify. Over time, more extensive pits, berms, rock piles, topsoil stockpiles, and support infrastructure may become increasingly evident to roadway observers, residents, and recreation users. The significance assessment is presented in **Table 11**.

Secondary Impacts:

Once reclamation is implemented, the post-mining landscape would differ in visual character from the pre-disturbance condition. The native landscape is characterized by irregular landforms, varied textures, and naturally complex transitions. In contrast, reclaimed terrain would tend toward smoother slopes, more uniform transitions, and less visual complexity. The eliminated or reduced presence of gullies, bluffs, and rock outcrops would diminish the landscape's topographic richness and visual storytelling of geological processes.

Because reclamation typically aims for stability and manageability, the resulting aesthetic is likely to appear more engineered and "designed" than the organic forms of the original terrain. Thus, the sense of ecological authenticity and narrative continuity may be weakened.

Cumulative Impacts:

The major cumulative visual impact in this region derives from the overlapping visibility of mine pits, equipment, coal-loading facilities, draglines, and ancillary structures. Although individual mine pits or support areas are often only visible within a limited radius (a few miles), and from limited vantage points from the public road, large equipment and loading structures and overburden stockpiles can project visual presence over greater distances.

As mining expands or continues concurrently on adjacent lands, the additive effect of multiple disturbed areas and associated infrastructure may create a more pervasive industrial imprint on the region's visual environment. From viewing points around the Tongue River Reservoir, highway segments, and local residences, multiple mine-related features may combine into broader visual "clusters" or corridors of intrusion.

In the post-mining phase, even after reclamation, the smoother, simplified form of the terrain will reduce visual variety. Where formerly subtle ridges, minor undulations, or rock outcrops provided visual depth and relief, the reclaimed landscape may appear more uniform and less dynamically engaging. The additional visual alteration from the Proposed Action, when compared to the baseline visual classification of the area and the existing permit area, constitutes an incremental and minor contribution to regional visual change.

The duration of the visual impact is long term: active mining plus the transition period to mature reclamation may span decades. During active operations, visual effects would be considered adverse, with high magnitude in the vicinity of limited segments of the public road and viewer receptors of moderate to high sensitivity (e.g., travelers, residents, recreationists). After reclamation, the residual visual change—the shift from the native, irregular terrain to smoother, managed slopes—represents a permanent alteration of aesthetic character.

The proposed expansion of mining operations would extend the period during which the landscape within the permit area bears a predominantly industrial, stripped appearance—visible to the traveling public and local observers. The contrast with native terrain is material, and the reclamation outcome, though remedial from an ecological standpoint, would not fully restore the original visual richness. Once reclamation and final bond release is achieved, the landscape within the permit boundary would meet the requirements of approximate original contour and postmine land uses and although it may have reduced topographic richness, it would have regained its premine ecological function.

9. Demands on Environmental Resources of Land, Water, Air, or Energy

The AM6 proposal would not change the extent, type of use, or sources of water used on the mine site. Use of existing potable, fire suppression, and the dust control water systems and water sources on the mine site would continue. The mine would continue to use surface water and ground water collected in sediment control ponds, traps, and pits for dust control purposes on haul roads and ramp roads throughout the mine and firefighting purposes at the facilities plant and shop, as discussed in

Table 1. Surface water sources used for dust suppression include: water pumped to ponds/traps on the mine site from Tongue River Reservoir water rights; and surface water runoff collected in sediment control ponds, traps and mine pits. Ground water sources used for dust suppression include mine pit dewatering and industrial water supply wells TR2 and TR2-D2 (Water Right 42B

73493-00) located at the West Decker Mine. SCM would also continue to use potable water system MT0003952, which primarily supplies water to the restrooms and is sourced from a well near the mine entrance (Water Right 42B 30050786). SCM would also continue to use potable water system MT0002009, which supplies water for consumption and is sourced from the City of Sheridan (Wyoming) public drinking water system (Navajo Transitional Energy Company, LLC, 2025d).

The Proposed Action would be a continuation of mining operations at a rate comparable to the current rate of coal extraction and would not change the existing workforce at the mine. Impacts from this water use are described in Spring Creek Mine TR1 EIS, dated March 2020.

The Proposed Action may lead to the creation of additional ramp roads and/or increased length of existing ramp roads. Ramp roads connect active mine pits to the main haul road, both of which are built on a base of mine spoil and surfaced with competent rock material, primarily crushed scoria. The proposed mine cuts under AM6 may lead to a minor net increase in length of ramp roads, which may lead to a minor increase in surface area where dust suppression is needed.

The mine permit expansion would involve approximately 40 acres of BLM land that would be removed from the possibility of leasing for the purpose of grazing. The mine permit expansion would include 480 acres of NTEC land where livestock grazing is currently occurring but would be fenced off and removed from grazing following approval of AM6 (Navajo Transitional Energy Company, LLC, 2025d).

Direct Impacts:

The proposed AM6 expansion would remove 480 acres of grazing leases on NTEC land and 40 acres of grazing leases on BLM land. Use of water for dust suppression may increase slightly due to increased length of ramp roads for accessing active mine pits. The proposed additional mining may lead to extensions and/or rerouting of existing ramp roads on the mine site. The existing energy and resource demands of the mine would otherwise continue as assessed under the Spring Creek TR1 EIS, dated March 2020. The significance assessment is presented in **Table 11**.

Secondary Impacts:

Secondary impacts to demand on land, water, air, or energy are not expected from the Proposed Action. All impacts anticipated under this resource category are anticipated as direct impacts.

Cumulative Impacts:

Cumulative impacts from the Proposed Action to the environmental resources of water, land, air and energy would add to existing impacts from historic and current mining and agriculture in the area. The loss of 520 acres of available grazing acreage would add to the loss of available grazing land in the region due to mining activity and would continue for the life of the mine. That loss of acreage would be long term but temporary. Acreage removed from grazing would become available again after necessary reclamation is completed.

Cumulative impacts on water resources from dust suppression activities on the mine site are not anticipated due to the extension hydrologic control plan on the mine site, which directs mine pit dewatering and surface water runoff into sediment control ponds for reuse in water trucks.

10. Impacts on Other Environmental Resources

DEQ searched the following websites or databases for nearby activities that may affect the project:

- Montana Department of Natural Resource and Conservation (DNRC)
- Montana Department of Environmental Quality
- Montana Fish Wildlife and Parks (FWP)
- Montana Department of Transportation (MDT)
- Big Horn County
- United States Department of Interior, Bureau of Land Management
- United States Department of Agriculture, Natural Resource Conservation Service (NRCS)

Montana FWP has a Statewide Fisheries Management Plan 2023-2026 that includes management tools and techniques and studies that focus on water bodies throughout the state, including the Tongue River Drainage and Tongue River reservoir (MT FWP, 2023). Ongoing fisheries management and monitoring activities does not have any anticipated effects on the proposed action.

Direct Impacts:

Impacts on other environmental resources are not likely to occur as a result of the Proposed Action.

Secondary Impacts:

Secondary impacts to other environmental resources are not expected from the Proposed Action.

Cumulative Impacts:

Cumulative impacts to other environmental resources are not expected from the Proposed Action.

11. Human Health and Safety

The applicant would be required to adhere to all applicable state and federal safety laws. The Mine Safety and Health Administration (MSHA) has developed rules and guidelines to reduce the risks associated with this type of labor.

Direct Impacts:

The general public is restricted from accessing the area during the Proposed Action. Impacts on human health and safety would be short-term and minor as a result of this project. The significance assessment is presented in **Table 11**.

Secondary Impacts:

Continued fugitive dust control would minimize impacts from dust on human health. No secondary impacts are expected from the Proposed Action.

Cumulative Impacts:

No additional cumulative impacts on human health and safety are expected from the proposed action.

12. Industrial, Commercial, and Agricultural Activities and Production

The primary pre-mining land uses in the SCM permit area are wildlife habitat and grazing land. These land uses are the dominant land uses adjacent to SCM and the nearby Decker Mines.

Industrial and commercial activity in the areas surrounding the SCM consist of: Decker Coal Mine, Wolf Mountain Coal Inc, and remnants of coal bed methane activity. Both East and West Decker Coal mines are undergoing reclamation and are no longer mines with active mining. Wolf Mountain Coal Inc. operates a retail coal yard on MT-314 north of SCM. According to Montana Board of Oil and Gas Conservation (MBOGC) online records, there are four coal-bed methane wells drilled in the AM6 project area (Montana Board of Oil and Gas Conservation, 2025), all of which have been plugged and abandoned, with application of abandonment received by MBOGC. Coal-bed methane well information within the permit boundary and disturbance boundary is shown in **Table 3**, based on MBOGC well records (Montana Board of Oil and Gas Conservation, 2025a).

Agricultural activity in the area consists of grazing and grazing leases on private and BLM land. The Proposed Action involves approximately 40 acres of BLM land that would be removed from the possibility of leasing for the purposes of grazing. The mine permit expansion also includes 480 acres of NTEC land where livestock grazing is currently occurring but would be fenced off and removed from grazing following approval of AM6. Generally, NTEC does not allow grazing within the permit boundary. However, grazing continues to be allowed within the AM5 (haul road) permit expansion area, because disturbance has not yet begun in that portion of the permit area.

Direct Impacts:

The Proposed Action would result in an additional 479 acres of disturbance for the expansion of Pits 1, 2, 4, and 7 and the additional proposed surface disturbance, which includes: expansion of hydrologic and sediment controls, the relocation of an upstream flood control reservoir on South Fork Pearson Creek, and the addition of a topsoil stockpile footprints.

The Proposed Action would eliminate livestock grazing on 520 acres inside the proposed permit boundary. Livestock grazing is not currently allowed inside the permit boundary, with the exception of the AM5 (haul road) permit expansion area. Once reclamation is complete (estimated to be about 10 years after mining is completed), livestock grazing could be conducted once again.

Overall, the direct impacts on land use would be moderate, continuing through the time needed to obtain bond release. It is not anticipated that this project would add to the impacts of mining and mineral exploration beyond what was assessed in Spring Creek Mine TR1 EIS, dated March 2020. The significance assessment is presented in **Table 11**.

Secondary Impacts:

It is not anticipated that the Proposed Action would add to the impacts of mining and mineral exploration beyond what was assessed in Spring Creek Mine TR1 EIS, dated March 2020.

Cumulative Impacts:

Cumulative impacts from the Proposed Action on industrial, commercial, and agricultural activities would add to existing impacts from historic and current mining in the area. The loss of 520 acres of available grazing acreage would add to the cumulative loss of available grazing land in the region due to mining activity and would continue long-term, for the life of the mine. Acreage removed from grazing would become available again after necessary reclamation is completed.

Table 3: Plugged/Abandoned Coalbed Methane wells within AM6 proposed permit boundary and proposed LOM disturbance boundary

API Well No.	Operator Name	Well Name	Well Status	Well Type	TWP RNG SEC	Qtr Qtr	Completion Date	Depth (ft)	Inside LOM disturbance expansion
25003210260000	Vessels & Bass	Shell #4 Oscar Cook 1	Plugged/ Abandoned (1971)	Dry Hole	T8S R39E Sec 35	SW NE NW	09/11/1968	254	Yes
25003212200000	Redstone Gas Partners, LLC	Federal 31EW-199	Plugged/ Abandoned (1997)	Dry Hole	T9S R39E Sec 1	NW NE	09/24/1997	763	No, only inside permit boundary expansion
25003216480000	Fidelity Exploration & Production Co.	Spring Creek 0690 23EB	Plugged/ Abandoned (2013)	Coal Bed Methane	T9S R40E Sec 6	NE SW	07/01/2003	1810	Yes
25003216450000	Fidelity Exploration & Production Co.	Consol 2789 14W	Plugged/ Abandoned (2013)	Coal Bed Methane	T8S R39E Sec 27	SW SW	01/07/2003	1850	Yes

13. Quantity and Distribution of Employment

The Proposed Action would be a continuation of mining operations. It would not change the existing workforce at the mine, which includes 263 employees and a seasonally variable number of contractors. Typically, there are an average of 30 contract workers onsite at the mine, but it can vary from 12 to 70. It is not anticipated that this project would create, move, or eliminate jobs (Navajo Transitional Energy Company, LLC, 2025e). The current life of mine extends to 2039 (as approved by MR272). The Proposed Action would extend the life of mine to 2040. It is anticipated that employment at the mine would taper off as reclamation is completed.

Direct Impacts:

The AM6 proposed action would extend the life of mine an additional year, from 2039 to 2040, which would extend the current level of employment for NTEC employees at the mine and contractors at the mine for an additional year. The significance assessment is presented in **Table 11**.

Secondary Impacts:

Secondary impacts on the quantity and distribution of employment are not expected from the Proposed Action.

Cumulative Impacts:

Cumulative impacts on the quantity and distribution of employment are not expected from the Proposed Action.

14. Local and State Tax Base and Tax Revenues

The AM6 proposed action would be a continuation of mining operations on private, federal, and state mineral estates. Annual coal production at SCM is primarily influenced by customer demand. Annual coal production at SCM between 2019 and 2025 has varied between 9.5 million tons and 13.2 million tons, with an average of 12 million tons per year (**Table 4**). The Proposed Action would not change the workforce at SCM or affect annual coal production, which is estimated to average 10 million tons per year moving forward (Navajo Transitional Energy Company, LLC, 2025e). The Proposed Action would add 800,200 tons of private coal, 22 million tons of state coal, and 16.5 million tons of federal coal to the permit.

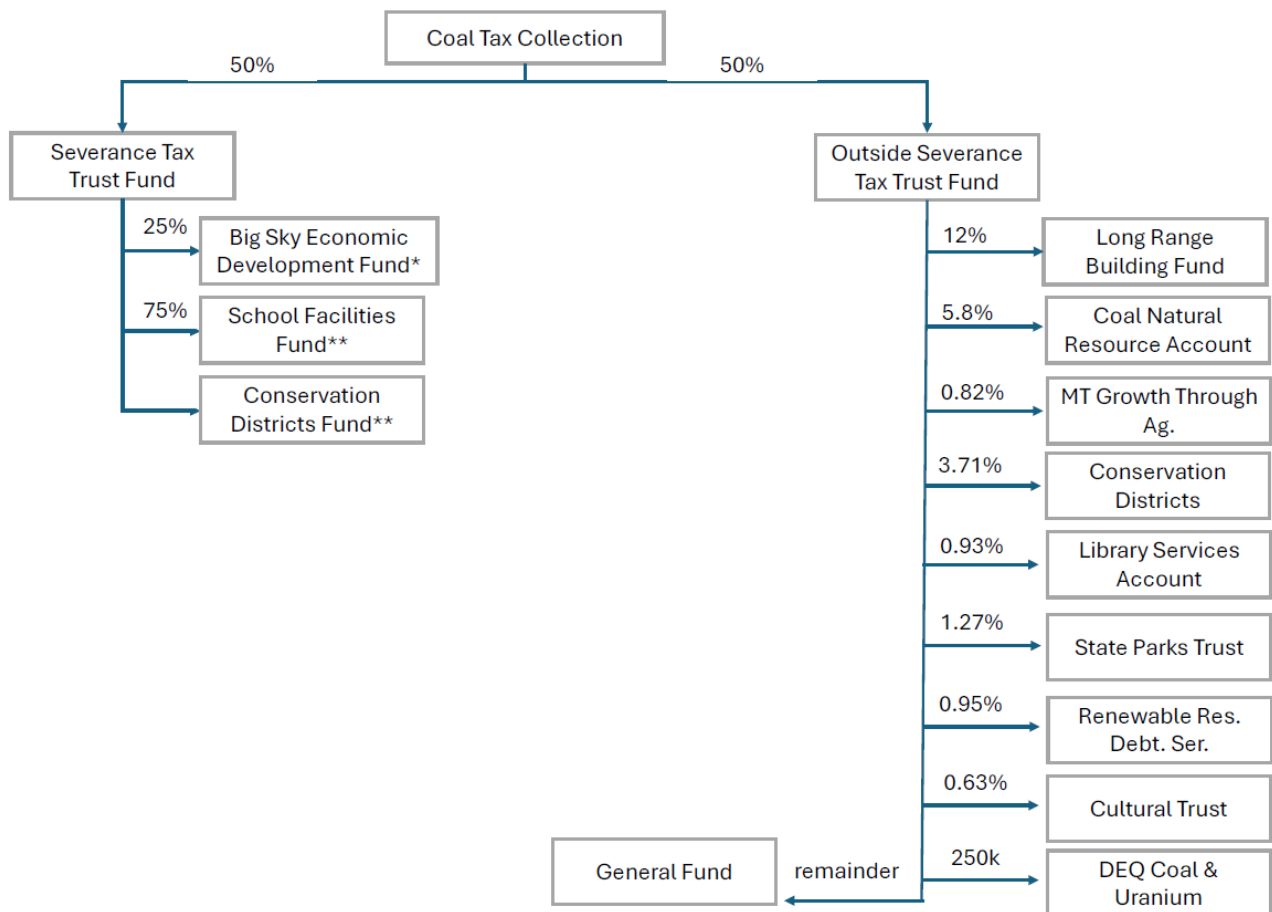
Table 4: Annual Coal Production at Spring Creek Mine

Year	Coal Production (tons)	Data Source
2019	12 million	(Navajo Transitional Energy Company, LLC, 2020)
2020	9.5 million	(Navajo Transitional Energy Company, LLC, 2021)
2021	13.2 million	(Navajo Transitional Energy Company, LLC, 2022)
2022	12.3 million	(Navajo Transitional Energy Company, LLC, 2023)
2023	12.4 million	(Navajo Transitional Energy Company, LLC, 2024)
2024	13.1 million	(Navajo Transitional Energy Company, LLC, 2025b)
2025*	13 million	(Navajo Transitional Energy Company, LLC, 2025b)

* Projected by NTEC

Montana collects a tax on mined coal. Surface mined coal under 7,000 BTUs per pound is taxed at a rate of 10% of contract sale value. Surface mined coal that is 7,000 BTUs per pound or higher is taxed at a rate of 15% of contract sale value (MT Department of Revenue, 2025). The proceeds of the Montana coal severance tax are divided among multiple state funds (**Figure 6**), based on the 2025 distributions. SCM's average BTU per pound of coal that was mined and sold for 2024-2025 year to date is approximately 9,400 BTU and the average BTU per pound for 2023 was approximately 9,350 BTU. The coal cuts proposed under AM6 are expected to produce coal that averages 9,350 BTU/lb (Navajo Transitional Energy Company, LLC, 2025d). The state also receives a portion of federal mineral royalties from the sale of coal that was mined on federal land.

Figure 6: Fiscal Year 2025 Distribution of Montana Coal Severance Tax



Source: (MT Legislative Branch, 2025)

*Deposits of coal severance tax revenue to this fund terminate at the end of FY 2035.

**Beginning in FY 2024, a new Conservation District Fund now receives 65% and contribution to the School Facilities Fund reduced to 10%.

Direct Impacts:

The Proposed Action would be a continuation of mining operations on private, federal, and state mineral estates. The Proposed Action would add 800,200 tons of private coal, 22 million tons of

state coal, and 16.5 million tons of federal coal to the permit, which would continue to contribute to the collection of private, state, and federal mineral royalties. Coal production at SCM would continue to contribute to tax revenue the state receives related to payroll taxes, property taxes, Montana coal severance tax, Montana coal gross proceeds tax, Montana resource indemnity trust and ground water assessment tax, federal black lung tax, federal abandoned mine reclamation tax, federal mineral royalties, state mineral royalties, and private mineral royalties (MT Department of Revenue, 2025). The proposed extension of life of mine from 2039 to 2040 would extend the time frame of existing tax contributions by an additional year. The significance assessment is presented in **Table 11**.

Secondary Impacts:

Secondary impacts to local and state tax base and tax revenue are not expected from the proposed action.

Cumulative Impacts:

Cumulative impacts to local and state tax base and tax revenue are not expected from the proposed action.

15. Demand for Government Services

The AM6 proposed action would be a continuation of mining operations at a rate comparable to the current rate of coal extraction and would not change the existing workforce at SCM. The proposed action also would not change the amount, type of use, or sources of potable public water supplies used on the mine site. The mine would continue to use potable water system MT0003952, which primarily supplies water to the restrooms and is sourced from a well near the mine entrance (Water Right 42B 30050786). The mine would also continue to use potable water system MT0002009, which supplies drinking water for consumption and is sourced from the City of Sheridan (Wyoming) public drinking water system (Navajo Transitional Energy Company, LLC, 2025d). The duration of usage of public water supplies would extend an additional 10 years beyond what was assessed in the 2020 TR1 EIS and an additional year beyond SCM's current mine plan, but the Montana-sourced potable water system (MT0003952) is operated by and only supplies potable water to the Spring Creek Mine. Impacts on the extended duration of usage of the Sheridan, Wyoming public drinking water system are outside the scope of this assessment.

Direct Impacts:

The Proposed Action is not expected to have direct impacts on the demand for government services, because of the limited duration of the proposed action and the lack of change to the mine operations and workforce. The duration of usage of public water supplies would extend an additional year beyond SCM's current mine plan, but the Montana-sourced potable water system (MT0003952) is located on the mine and is operated by and only supplies potable water to the Spring Creek Mine, not the general public.

Secondary Impacts:

The Proposed Action is not expected to have any secondary impact on the demand for government services.

Cumulative Impacts:

Cumulative impacts on demand for government services are not expected from the Proposed Action.

16. Locally Adopted Environmental Plans and Goals

The Proposed Action would occur on State of Montana, BLM, and private land. The project area would be subject to the 2019 Montana Noxious Weed Management Plan and any plans or rules set forth by Bighorn County, including the Big Horn County 2022 Montana Noxious Weed Management Plan, which is included in the mine permit.

The Bureau of Land Management has approved two Resource Management Plans: the Billings Field Office Resource Management Plan, which covers the western two-thirds of Big Horn County and has its eastern planning boundary at the eastern boundary of the Crow Reservation (BLM, 2015); and the Miles City Field Office Resource Management Plan, which covers the eastern third of Big Horn County and includes the area of the Spring Creek Mine and Tongue River Reservoir (BLM, 2015a).

The USDA-NRCS developed a Big Horn County Long Range Plan, which includes resource inventories and conservation strategies on agricultural land in the county (USDA-NRCS, 2023).

Direct Impacts:

Impacts from or to locally-adopted environmental plans and goals would not be expected as a result of the Proposed Action.

Secondary Impacts:

Secondary impacts from or to locally-adopted environmental plans and goals are not expected from the Proposed Action.

Cumulative Impacts:

Secondary impacts from or to locally-adopted environmental plans and goals are not expected from the Proposed Action.

17. Access to and Quality of Recreational and Wilderness Activities

The proposed mining and surface disturbance activities would occur on State of Montana, BLM, and private land, on parcels that are within the existing Spring Creek Mine permit boundary. The mine permit boundary and associated land use leases between SCM and BLM limit public access to federal and state lands included in the mine permit areas. No impacts are anticipated beyond those identified and addressed in the Spring Creek Mine TR1 EIS, dated March 2020, and Spring Creek Mine AM5 EIS issued in August 2023.

Direct Impacts:

No direct impact to the access or quality of recreational and wilderness activities would be expected that have not been addressed in the Spring Creek Mine TR1 EIS, dated March 2020, and Spring Creek Mine AM5 EIS issued in August 2023.

Secondary Impacts:

No secondary impacts on the access and quality of recreational and wilderness activities would be expected from the Proposed Action.

Cumulative Impacts:

No cumulative impacts on the access or quality of recreational and wilderness activities would be expected from the Proposed Action.

18. Density and Distribution of Population and Housing

The Proposed Action would be a continuation of mining operations on private, state, and federal land and would not change the existing workforce at the mine. The majority of people employed by the mine reside in Wyoming. The Proposed Action would extend the life of mine an additional year, from 2039 to 2040, which would extend employment for NTEC employees at the mine and contractors at the mine for an additional year.

Direct Impacts:

The Proposed Action would maintain the existing workforce at the mine, which is not anticipated to contribute to any changes to the density and distribution of population and housing in area.

Secondary Impacts:

No secondary impacts on the density and distribution of population and housing would be expected from the Proposed Action.

Cumulative Impacts:

No cumulative impacts on the density and distribution of population and housing would be expected from the Proposed Action.

19. Social Structures and Mores

Surface coal mine operations near the Tongue River Reservoir in Montana began in 1972, when large-scale mining began at the adjacent West Decker Mine. Large-scale mining east of the Tongue River Reservoir, at East Decker Mine, began in 1978. Construction of the Spring Creek Mine began in April 1979, and production began in December 1980. Surface coal mine operations have been a dominant component of the social, cultural, and physical landscape in this region since the early 1970s. The Proposed Action under AM6 would add one year to the currently approved Life of Mine (LOM), extending the LOM from 2039 to 2040, and would add 479 acres of LOM surface disturbance that will need to be reclaimed after mining is complete. Reclamation may be completed no earlier than 10 years after the last seeding, planting, fertilizing, or irrigating of appropriately re-graded postmine land has occurred, in accordance with bond release rules and statutes.

The 479 acres of LOM disturbance that would be added under AM6 would be a 5.8% increase in SCM's LOM disturbance area and would be equivalent to 2.6% of the current LOM disturbance from all permitted coal mines in the region. The currently approved LOM disturbance area of Spring Creek Mine is 8,266 acres and the current total LOM disturbance area of all coal mines in

proximity to the Tongue River Reservoir (Spring Creek Mine, West Decker Mine, East Decker Mine) is 18,295 acres.

Direct Impacts:

Due to the presence of large-scale surface mining in this region since 1972, the presence of mining activity at Spring Creek Mine since 1979, and the minor increase in surface disturbance from the Proposed Action in relation to the currently approved LOM disturbance at SCM, no direct impacts to social structures and mores would be expected from the Proposed Action.

Secondary Impacts:

Due to the presence of large-scale surface mining in this region since 1972, the presence of mining activity at Spring Creek Mine since 1979, and the minor increase in surface disturbance from the Proposed Action in relation to the current total LOM disturbance acreage at SCM and nearby coal mines, no secondary impacts to social structures and mores would be expected from the Proposed Action.

Cumulative Impacts:

Due to the presence of large-scale surface mining in this region since 1972, the presence of mining activity at Spring Creek Mine since 1979, and the minor increase in surface disturbance from the Proposed Action in relation to the current total LOM disturbance acreage at SCM and nearby coal mines, no cumulative impacts to social structures and mores would be expected from the Proposed Action.

20. Cultural Uniqueness and Diversity

The Proposed Action would disturb 479 acres in an area already influenced by mining operations since 1972 and would not introduce new demographic groups to the region. The broad cultural patterns and communities (tribal, ranching, mining) would continue to exist largely as they are. Therefore, it is not anticipated that the Proposed Action would cause a significant shift of cultural uniqueness and diversity.

Direct Impacts:

The Proposed Action would disturb documented, Ineligible cultural resources. Despite a site's Ineligible status (See Section 7. Cultural Resources of this document), the collective degradation of these resources may contribute to the erosion of components of the Power River Basin's cultural uniqueness by damaging or altering sites reflecting long-term Indigenous or historic land use. Insignificant impacts to cultural uniqueness and diversity are expected as a result of the Proposed Action. The significance assessment is presented in **Table 11**.

Secondary Impacts:

Potential secondary impacts to cultural uniqueness and diversity as result of the Proposed Action include visual changes to the landscape. Any visual changes in the Proposed Action area are not anticipated to degrade any significant regional context.

Cumulative Impacts:

Due to multiple tribes maintaining a cultural and spiritual ties to the region, there would be a potential for effects on tribal cultural identity and heritage if multiple projects in the Powder

River Basin were to affect traditional lands, movement corridors, or culturally significant landscape. However, due to intensive field surveys, tribally-engaged consultation, project design modifications, and landscape-sensitive mitigation, it is not anticipated that the Proposed Action would add cumulative impacts to cultural uniqueness and diversity.

21. Private Property Impacts

The proposed project would take place on private land owned by the applicant, as well as state land and federal (BLM) land. DEQ's approval of an amendment to Spring Creek Coal Mine's Permit C1979012, with conditions, would affect the applicant's real property. DEQ has determined, however, that the permit conditions are reasonably necessary to ensure compliance with applicable requirements under MSUMRA and demonstrate compliance with those requirements or have been agreed to by the applicant. Further, if the application is complete, DEQ must take action on the permit pursuant to ARM 17.24.404. DEQ, therefore, does not have discretion to take alternative action that would have less impact on private, state, and federal property. Therefore, DEQ's approval of AM6 to SCM's Permit C1979012 would not have private property-taking or damaging implications. DEQ will prepare a final assessment of private property takings to be included in the final decision documents.

22. Other Appropriate Social and Economic Circumstances

Due to the nature of the proposed mining and surface disturbance activities, and the limited project duration, no further direct or secondary impacts would be anticipated from this project.

23. Greenhouse Gas Assessment

GHG Emission Impacts on Climate Systems

This section assesses the direct, secondary and cumulative impacts from AM6's GHG emissions, and specifically how additional GHGs from AM6 contribute to changes in climate systems. Climate is defined as the long-term weather patterns (typically over a period of 30 years or longer) of a region, and climate change is an identifiable (i.e., statistically significant) and persistent change in long-term climate (IPCC, 2021). Variables such as temperature, precipitation, relative humidity, and sea level are often used to identify climate change trends. In brief, climate change is governed by the relationship between incoming and outgoing heat in the Earth's atmosphere (Denning, June 21, 2017).

The greenhouse effect is the trapping of heat by GHGs, a specific set of gases including carbon dioxide (CO₂) that reflect this radiation emitted by the Earth back to the Earth's surface. While the greenhouse effect occurs naturally and is essential for keeping Earth's temperatures habitable, the intensity of this effect increases with the increase of the GHGs in the atmosphere. Higher concentrations of GHGs mean more infrared radiation gets absorbed and re-radiated back to the surface, leading to enhanced warming and higher global- surface temperatures.

The lifetime of carbon dioxide cannot be represented with a single value because the gas is not destroyed over time. The gas instead moves between air, ocean, and land mediums with atmospheric carbon dioxide remaining in the atmosphere for thousands of years, due in part to the very slow process by which carbon is transferred to ocean sediments. Methane gas remains

in the atmosphere for approximately 12 years. Nitrous oxide has the potential to remain in the atmosphere for about 109 years (United States Environmental Protection Agency, 2025c).

The IPCC's Sixth Assessment Report (Working Group I) finds that human influence on the climate system is "unequivocal" and that observed warming of about 1.1 °C above 1850–1900 is already driving widespread changes in the climate system, including more frequent and intense heat extremes, heavy precipitation, and some types of drought in many regions (IPCC, 2021). The IPCC 2021 Report also explains that human activity led to atmospheric warming of 1.07 ± 0.23 °C from 1850 to 2019 (IPCC, 2021).

The IPCC Working Group II report on impacts, adaptation and vulnerability concludes that climate change has already caused "substantial damages and increasingly irreversible losses" in terrestrial, freshwater, and marine ecosystems, and that risks increase rapidly as warming exceeds 1.5 °C (IPCC, 2022). The report further finds that limits to adaptation are being reached in some ecosystems and human systems, meaning that additional warming can lead to losses that cannot be fully avoided even with adaptation measures (IPCC, 2022). As noted by commenters, it also finds that climate impacts are distributed unevenly, with people and communities that are more exposed and vulnerable—including Indigenous peoples, rural communities, and those with limited resources—experiencing disproportionate risks (IPCC, 2022). Regional analyses, including Climate Change and Human Health in Montana (Adams, 2021) and the Montana Climate Assessment (Whitlock, 2017) conclude that increasing extreme heat, degraded air quality from more frequent and severe wildfires, and changes in runoff and water availability can contribute to premature mortality, hospitalizations, and long-term cardiopulmonary and mental-health outcomes.

The concept of a finite remaining global carbon budget is used in IPCC assessments to describe how much CO₂ can still be emitted while maintaining a given probability of limiting warming to a specified level. Recent analyses assessed in AR6 indicate that, for a 50 percent chance of limiting warming to 1.5 °C, the remaining carbon budget is a few hundred gigatons of CO₂—roughly equivalent to less than a decade of current global CO₂ emissions—subject to substantial scientific uncertainty (IPCC, 2021); (IPCC, 2018). Exceeding this budget increases the likelihood of crossing certain climate "tipping points" (such as large-scale ice-sheet loss or abrupt ecosystem change) and cascading impacts (IPCC, 2022). Though some commenters request that DEQ analyze GHG carbon budgets and tipping points, MEPA does not assign DEQ authority to set or enforce a specific global or Montana-specific "carbon budget share" for individual projects, and this EA therefore evaluates AM6's emissions by disclosing their magnitude and duration, comparing them to Montana and regional emissions, and qualitatively describing how additional emissions fit within the already degraded climate context, rather than by determining whether the project alone is or is not consistent with international temperature-limit goals.

The impacts of climate change throughout the Northern Great Plains include changes in flooding and drought, rising temperatures, and the spread of invasive species (BLM, 2020). Regional assessments for the Northern Great Plains, including eastern Montana, project continued warming, increased evaporative demand, shifts in snowpack and runoff timing, and changes in the frequency and severity of drought, with consequences for surface water and groundwater availability, water quality, agriculture, rangelands, and ecosystems. (Derner, 2015) (Knapp, 2023) (Whitlock, 2017). These regional projections are consistent with concerns raised in public comments regarding hydrology and water quality impacts in Montana.

GHGs are the primary drivers of anthropogenic climate change, and emissions of GHGs are used as an indicator of potential climate change impacts. Climate change can be attributed to both natural and anthropogenic causes but has been largely driven by the significant increase in global GHG emissions from anthropogenic fossil fuel combustion since pre-industrial times. The Intergovernmental Panel on Climate Change's (IPCC) 2021 Sixth Assessment Report reports that human activity led to atmospheric warming of $1.07 \pm 0.23^{\circ}\text{C}$ from 1850 to 2019 (IPCC, 2021).

Scope of GHG Assessment

Consideration of GHG emissions and corresponding climate impacts had previously been prohibited in environmental reviews since 2011 by a provision of MEPA (known as the MEPA Limitation). The MEPA Limitation was amended by the state legislature in 2023 to more explicitly prohibit "an evaluation of greenhouse gas emissions and corresponding impacts to the climate in the state or beyond the state's borders."

In December 2024, the Montana Supreme Court in *Held v. State of Montana*, 2024 MT 312, ruled that the prior prohibition violates Montanans' constitutional right to a clean and healthful environment. In January 2025, *MEIC v. DEQ*, 2025 MT 3, further held that in the absence of a prohibition on DEQ considering GHG emissions under MEPA, it would be arbitrary and capricious for the agency to not consider GHG impacts from a generating station expected to emit a large amount of GHG emissions. The 2025 Montana Legislature responded by passing Senate Bill 221 (SB221), signed into law on May 1, 2025, which requires state agencies to evaluate GHG impacts for fossil fuel projects while limiting analysis to proximate impacts (i.e., close in time and place) on Montana's environment. SB221 language embodies the legal standard long governing MEPA, which does not require agencies to analyze remote and speculative impacts that are not closely tied to the state action that is being approved.

Per 75-1-201(2), MCA, agencies are required to conduct a GHG impact analysis for fossil fuel activities. Fossil fuel activities, defined in § 75-1-220, MCA, as amended by SB221, means a proposed action that authorizes the mining of coal, drilling for oil or natural gas, production of oil or natural gas, compression of oil or natural gas, or burning of coal, oil, or natural gas to generate energy for electricity. Pursuant to SB 221, in January 2026 the Department of Environmental Quality released final guidance for state agencies conducting GHG analyses, titled *Guidance for Greenhouse Gas Impact Assessments Under the Montana Environmental Policy Act* ("GHG Guidance Document") (Department of Environmental Quality, 2026a). The GHG Guidance Document provides a summary of current methods and data sources for evaluating GHG emissions and their immediate and far-reaching impacts, and it is referenced throughout this EA as a key resource for structuring the GHG assessment.

Generally, for purposes of DEQ's MEPA review, as recognized in SB221, ARM 17.4.603(18), and Montana and U.S. Supreme Court precedent, *see, e.g., MEIC v. DEQ*, 2025 MT 3, ¶ 51; *Seven County Infrastructure v. Eagle Cnty.*, 145 S. Ct. 1497 (2025), the scope of impacts DEQ must analyze are limited to those that are caused by the specific project or approval, and do not incorporate separate, downstream impacts caused by different projects, even if those projects may be stimulated or induced by the project or approval before the agency. Important policy considerations underpin this typical scope: those separate projects may be subject to different permitting authorities, making detailed analysis speculative when approvals are uncertain, and

they may be analyzed in their own environmental reviews, which avoids double counting the same emissions across multiple actions.

For purposes of this EA, DEQ's analysis of direct project impacts is focused on the activities that are actually authorized under the AM6 mine-permit amendment—coal mining and associated reclamation within the permit area. In response to public interest in understanding the broader climate implications of coal development at Spring Creek Mine, however, DEQ has also chosen, as a matter of disclosure, to quantify and discuss greenhouse gas emissions from the combustion of coal associated with the Proposed Action. DEQ recognizes there is public interest in understanding the impacts of coal mining and combustion, and therefore has gone beyond what is required under SB221 and current MEPA and National Environmental Policy Act case law by including this combustion emissions discussion in the EA. The inclusion of this combustion analysis should not be construed as a concession that DEQ is legally required in every future permitting decision to broaden the scope of analysis in the same way.

Affected Environment, Analysis Area and Methods

For the purpose of this analysis, DEQ has defined greenhouse gas emissions as the following gas species: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and many species of fluorinated compounds. The range of fluorinated compounds includes numerous chemicals which are used in many household and industrial products. Water vapor is also technically a greenhouse gas, but its properties are controlled by the temperature and pressure within the atmosphere, and it is not considered an anthropogenic species.

The affected environment describes the existing conditions of the GHG emissions in the state of Montana. DEQ has determined the GHG emissions are not a localized impact and have chosen to include an analysis of Montana's GHG emissions. The assessment area for GHG emissions is focused on the activities regulated by the issuance of the coal permit, including construction, operation and reclamation (i.e., mining) of the area encompassed by the request to expand mining operations within and outside of the current Spring Creek permit. Also included in the direct impacts are fugitive emissions from exposed coal. DEQ has determined EPA's Scope 1 GHG impacts as defined in the Inventory Guidance for Greenhouse Gas Emissions are appropriate direct impacts under MEPA for this Proposed Action. Scope 1 emissions are defined as direct GHG emissions that occur from sources that are controlled or owned by the organization (United States Environmental Protection Agency, 2025b). Although not regulated by DEQ's permitting authority, as described in the section "Scope of Environmental Assessment", the combustion of AM6 coal has been identified as a secondary impact. Cumulative impacts are the direct impacts of AM6 (construction, operation, and reclamation), the combustion of AM6 coal and the existing GHGs output of the state of Montana in 2022 (the most recently verified and available data).

DEQ used the EPA Simplified GHG Calculator (ESGC) September 2024 version (Environmental Protection Agency, 2025) for the assessment of GHG emissions. DEQ has calculated GHG emissions using the ESGC September 2024 for the purpose of totaling GHG emissions. This tool totals carbon dioxide (CO₂), nitrous oxide (N₂O), and methane (CH₄) and reports the total as CO₂e equivalent (CO₂e) in metric tons CO₂e. The calculations in this tool are widely accepted to represent reliable calculation approaches.

DEQ used the MAGICC reduced-complexity climate model and RCP/SSP scenarios as a contextual, order-of-magnitude illustration of the relationship between additional emissions and global temperature, not to precisely attribute a specific temperature change to AM6 or to quantify its incremental contribution to climate change. (Department of Environmental Quality, 2026b). (See the *Secondary and Cumulative Impacts* section for additional explanation of MAGICC modeling). Global-scale scenarios are not designed to assign exact temperature contributions to individual projects, and any single project will appear small when compared directly to global totals. The significance of AM6's emissions is therefore evaluated primarily based on total lifecycle emissions, comparison to Montana and facility-scale emissions, and qualitative assessment of climate impacts in Montana and the Northern Great Plains, with MAGICC outputs used only as supporting context.

Some commenters also urged DEQ to monetize AM6's emissions using social cost of greenhouse gases (SC-GHG) metrics. As discussed in DEQ's GHG Guidance Document, Appendix 3, SC-GHG values are derived from integrated assessment models developed for broad regulatory and policy analyses and are sensitive to model structure, damage functions, geographic scope, and discount-rate assumptions, which can produce wide ranges of estimates (Department of Environmental Quality, 2026c). Peer reviewed literature has likewise noted that social cost estimates depend on normative value judgments and uncertain longterm projections and that these limitations can constrain their usefulness as precise projectlevel decision tools (e.g., (Havranek, 2015); (Pindyck, 2013) (Pezzey, 2019)). For this EA, DEQ determined that quantifying AM6's emissions in physical units, situating them within Montana and facilitylevel emissions inventories, and qualitatively describing associated climate risks provides a more transparent and scientifically grounded basis for MEPA review than attempting to express those impacts as a single monetized damage estimate.

Cumulative Impact Considerations

Cumulative impacts are defined as collective impacts on Montana environment from the Proposed Action when considered in conjunction with other past and present actions related to the Proposed Action by location or generic type. GHG emissions sources and trends occur at global, national, and state, and regional scales (Office of Surface Mining Reclamation and Enforcement (OSMRE), 2025). The cumulative impact section of this EA focuses on the Montana environment. **Table 5** and **Table 6** identify the past and present cumulative activities of this analysis area.

The EPA Facility Level Information on Greenhouse Gases Tool (FLIGHT) provides GHG emissions data from large facilities that emit more than 25,000 metric tons of CO₂e per year (United States Environmental Protection Agency, 2025f). This tool includes public information from facilities in nine industry groups that directly emit large quantities of GHGs, as well as suppliers of certain fossil fuels, reported under the EPA's Greenhouse Gas Reporting Program. FLIGHT can provide baseline facility-level GHG emissions data to identify and quantify emissions from existing and past industrial sources within Montana (**Table 5**) (Department of Environmental Quality, 2026d).

Table 5. FLIGHT GHG emissions (metric tons CO₂e) from 2019-2023 for large facilities located in Montana.

Facility Name	Emissions (metric tons of CO ₂ e)				
	2019	2020	2021	2022	2023
Colstrip	14,277,559	8,340,434	10,035,340	10,740,663	10,967,111
Phillips 66 Billings Refinery	966,133	940,006	976,787	834,083	967,045
CHS Inc Laurel Refinery	979,598	976,385	934,398	1,013,794	918,021
Yellowstone Energy Limited Partnership	852,198	871,923	804,628	791,799	830,005
Par Montana, LLC Billings Refinery	726,587	661,227	712,571	621,037	719,769
Hardin Generating Station	212,250	73,621	692,184	730,172	663,072
Colstrip Energy Ltd Partnership	380,050	373,440	491,021	439,647	474,565
Calumet Montana Refining, LLC	311,235	299,723	283,600	260,293	427,371
Dave Gates Generating Station	153,664	126,595	174,370	254,471	330,090
Ash Grove Cement Company – Montana City	301,601	320,046	316,495	342,055	323,958
Graymont Western U.S. Inc. Indian Creek	322,197	304,550	320,028	318,796	276,271
Trident	277,001	251,350	305,309	299,006	250,489
Billings City Landfill	112,979	117,906	132,607	137,524	143,249
Culbertson Station	66,168	25,841	51,892	82,391	137,957
Western Sugar Cooperative	109,378	104,364	117,000	113,595	122,996
Montana Waste Systems - Highplains Sanitary Landfill	73,539	78,011	80,756	83,945	85,786
Basin Creek Plant	76,921	28,344	59,476	69,263	55,610
Gallatin County Logan Landfill	42,027	45,078	47,120	51,204	55,531
Weyerhaeuser Nr- Columbia Falls	35,995	33,020	35,530	36,382	40,706
Rec Silicon	33,499	31,006	32,620	32,753	35,245
Lewis & Clark County Landfill	29,810	31,113	32,419	33,857	34,916
Malteurop North America Inc	31	27,301	30,481	29,063	29,063
Cabin Creek Compressor Station	29,901	22,471	28,283	23,967	28,933
Missoula Landfill	28,316	30,692	18,347	22,770	27,790
Northwestern Energy/GTS	25,356	25,210	25,524	26,051	26,289
Hiland Partners Bakken Gathering Plant	22,545	18,263	-	27,967	26,275
Crusoe Energy Systems - Kraken CDP	-	-	-	35,923	22,915
Lewis & Clark	352,646	317,241	90,127	882	10,054
Northwestern Energy, SD LDC	7,164	7,155	7,191	7,211	7,329
Northwestern Energy NE LDC	4,121	4,071	4,050	3,827	3,835

Table 5. FLIGHT GHG emissions (metric tons CO₂e) from 2019-2023 for large facilities located in Montana.

Facility Name	Emissions (metric tons of CO ₂ e)				
	2019	2020	2021	2022	2023
Sidney Sugars Incorporated	96,553	126,731	109,977	110,570	2,690
Total	20,907,022	14,613,118	16,950,131	17,539,038	18,022,021

Source: (Department of Environmental Quality, 2026d)

DEQ has decided to use the U.S. Environmental Protection Agency State Inventory Tool (SIT) to provide a sector-based statewide GHG emissions inventory. The EPA SIT is an interactive spreadsheet model designed to help states develop and update inventories of GHG emissions and sinks (United States Environmental Protection Agency, 2025e). The EPA SIT provides default data for each state for the most recent years of available data but allows for state-specific customizations in the modules. It enables users to estimate emissions in 11 industry-level modules (Agriculture; CO₂ from Fossil Fuels; Coal; Electricity Consumption; Industrial Processes; Land Use, Land-Use Change, and Forestry (LULUCF); Mobile Combustion; Natural Gas and Oil; Solid Waste; Stationary Combustion; and Wastewater). The methodologies and sectors accounted for in the EPA SIT align with those in the U.S. GHG Inventory and use emission factors from the Inventory of U.S. Greenhouse Gas Emissions and Sinks (United States Environmental Protection Agency, 2025d). SIT (updated January 2025) has default emissions data updated through 2022. DEQ updated Montana's statewide GHG emissions using the EPA SIT with updated LULUCF, stationary combustion, and mobile combustion data (Department of Environmental Quality, 2026d).

Table 6. Montana's statewide CO₂e from the EPA SIT Tool.

Emissions (million metric tons of CO ₂ e)	2020	2021	2022	2020-2022 Average
Energy	28.66	30.81	31.94	30.47
CO ₂ from Fossil Fuel Combustion	26.03	28.20	29.35	27.86
Stationary Combustion	0.17	0.19	0.22	0.19
Mobile Combustion	0.10	0.11	0.11	0.11
Coal Mining	0.42	0.44	0.43	0.43
Natural Gas and Oil Systems	1.93	1.87	1.83	1.88
Industrial Processes	1.41	1.42	1.42	1.42
Agriculture	11.55	10.95	10.00	10.84
Land Use, Land-Use Change, and Forestry	10.03	5.00	7.00	7.34
Waste	0.67	0.68	0.68	0.68
Municipal Solid Waste	0.57	0.58	0.58	0.58
Wastewater	0.10	0.10	0.10	0.10
Indirect CO ₂ from Electricity Consumption	6.37	7.47	7.68	7.18
Gross Emissions	52.32	48.87	51.04	50.74

Note: Emissions from electricity consumption are not included in totals to avoid double counting with Fossil Fuel Combustion estimates. (Department of Environmental Quality, 2026d)

Other Present Cumulative Impacts

Related future actions under cumulative impacts must also be considered when these actions are under concurrent consideration by any state agency through preimpact statement studies, separate impact statement evaluation, or permit processing procedures under MEPA. DEQ would consider projects within the scope of the related future actions that are not part of **Table 5** and **Table 6**, GHG emissions would be the natural gas generating plant proposed by NorthWestern Energy-Laurel Generating Station, now the Yellowstone County Generating Station under the MAQP Application Number 5261-00 issued on September 8, 2021. The Yellowstone County Generating Station annual GHG emissions total from all engines at the facility would be approximately 695,195 metric tons of CO₂e (MT DEQ, 2025).

Direct Impacts:

The combustion of diesel fuel for the Proposed Action would release GHGs primarily being carbon dioxide (CO₂), nitrous oxide (N₂O) and much smaller concentrations of non-combusted fuel components including methane (CH₄) and other volatile organic compounds. For its analysis of direct impacts from GHGs at AM6, DEQ calculates potential GHG emissions and provides a narrative description of GHG impacts rather than assessing GHGs in quantitative economic terms. This approach is consistent with Montana Supreme Court precedent. *See Belk v. Mont. DEQ*, 2022 MT 38, ¶ 29.

The Proposed Action would authorize the use of various equipment and vehicles to mine and process coal and reclaim the site. Surface coal mines typically use large-scale equipment such as draglines, electric or hydraulic shovels, front-end loaders, haul trucks, bulldozers, and drilling and blasting equipment to remove overburden and extract coal efficiently. The expected duration of the Proposed Action is approximately 15 years.

Reclamation timing for the permit area aligns with a 2-year window post mining required in ARM 17.24.501(6)(b) stating, "Backfilling and grading must be completed within two years after coal removal from each pit has been concluded. For the purpose of this provision, 'each pit' means any continuous dragline pass within a particular permit area." Historic annual fuel utilization was assigned entirely to the 2-years after mining has concluded to account for reclamation efforts.

The amount of diesel fuel utilized at this site may be impacted by several factors including seasonal weather impediments and equipment malfunctions. To ensure a comprehensive assessment, DEQ assumed the maximum amount of diesel combusted at the Spring Creek Mine from 2021 to 2024 to calculate an annual average amount (4,118,092 gallons/year) to assess the amount of greenhouse gas emissions resulting from mobile sources from the Proposed Action. This methodology allowed for assignment of diesel gallons necessary per ton of coal extracted (0.328 gallons/ton). To account for impacting factors, DEQ has calculated the range of emissions using a factor of +10% of the estimate calculated using the predicted diesel fuel usage for on-site equipment provided by the Applicant. The emissions from workers' daily commute between the SCM and their residences would be included into the range factor of +10% of the estimate calculated of on-site equipment.

The exposing of the coal seam would produce fugitive methane emissions. Fugitive methane emissions of all AM6 coal mined were included in the analysis utilizing a methane production rate of 33.1 standard cubic feet/ton (U.S. Environmental Protection Agency, 2005) and a

methane density of 0.0477 lb/ft³ (0.7168 kg/m³) at standard temperature and pressure (The Engineering Toolbox, 2025). The Proposed Action would produce 0.0188 CO₂e/short ton.

Blasting emissions were calculated into the overall carbon dioxide equivalent (CO₂e) with nitrous oxide (N₂O) being the primary fugitive gas impacting calculations. An EPA publication for explosive emission factors was used in analyzing overall blasting impacts within the permit areas (United States Environmental Protection Agency, 2025a). Powder factors utilized in calculations for coal and overburden were provided by the applicant (Navajo Transitional Energy Company, LLC, 2025h).

Operation of diesel/gasoline-fueled vehicles throughout the life of the proposed project would produce exhaust fumes containing GHGs. Using data provided by the applicant (Navajo Transitional Energy Company, LLC, 2025f), DEQ estimates that approximately 0.328 gallons of fuel would be utilized per short ton of coal mined. To account for variability, DEQ has calculated the range of emissions using a factor of +10% of the baseline estimate. Using the ESGC mobile sources, approximately 1.729 metric tons (1,729 kilograms) of CO₂e would be produced, by the cumulative sources, per short ton of coal mined.

Table 7 provides a summary of direct impacts and CO₂e associated with each year of AM6 coal production and reclamation for the entire duration of the Proposed Action. The estimates in **Table 7** for coal production were provided by the applicant (Navajo Transitional Energy Company, LLC, 2025g).

Table 7. Summary of direct impacts of CO₂e for each year of AM6 coal production and reclamation.

Year of Active Mining	Coal Production (short tons/year)	Greenhouse Gas Emissions (metric tons/year) (CO ₂ e)				
		Mining Production	Reclamation	Exposed Coal	Blasting	Total Emissions (metric tons/year) (CO ₂ e)
1	2,700,000	10,222	0	50,728	9,551	70,501
2	4,400,000	16,658	0	82,668	15,564	114,891
3	4,000,000	15,144	0	75,153	14,149	104,446
4	2,700,000	10,222	0	50,728	9,551	70,501
5	2,600,000	9,843	0	48,849	9,197	67,890
6	2,600,000	9,843	0	48,849	9,197	67,890
7	2,600,000	9,843	0	48,849	9,197	67,890
8	2,600,000	9,843	0	48,849	9,197	67,890
9	3,200,000	12,115	0	60,122	11,320	83,557
10	3,200,000	12,115	0	60,122	11,320	83,557
11	3,500,000	13,251	0	65,759	12,381	91,390
12	4,200,000	15,901	0	78,910	14,857	109,668
13	1,100,000	4,165	0	20,667	3,891	28,723

14	0	0	47,509	0	0	47,509
15	0	0	47,509	0	0	47,509
Total	39,400,000	149,167	95,017	740,255	139,372	1,123,811

As depicted in **Table 6**, Montana’s statewide Coal Mining contributes about 430,000 metric tons of CO₂e per year, and the Proposed Action would contribute a low of 28,723 metric tons of CO₂e to a high of 114,891 metric tons of CO₂e per year from coal mining depending stage of mining or reclamation specified above (**Table 7**). Coal production numbers fluctuate and would contribute differently each year.

Because the effects of GHG emissions—warming temperatures and accompanying environmental consequences—are necessarily felt later in time and even, potentially, in location, there are no direct impacts expected with the release of GHG emissions.

Secondary and Cumulative Impacts:

As described above, for purposes of this EA, DEQ is including the combustion of the coal from the Proposed Action as a secondary impact; emissions for each year are quantified by CO₂e metric tons in **Table 8**. All coal produced each year of active mining is assumed to be combusted the same year it was mined. For the purposes of this analysis, DEQ is calculating all combustion emissions from the proposed action for public interest, though SCM sales to Montana customers burning coal only totals 0.55% of average yearly sales for the last three years. The total emissions listed in **Table 8** are provided for general interest of the reader, but only 0.55% of the total emissions, or 368,390 metric tons, are anticipated to be consumed and burned within Montana during the life of the project.

Table 8. Secondary impacts of the combustion of coal.

Year of Active Mining	Coal Production (short tons/year)	Greenhouse Gas Emissions (metric tons/year) (CO₂e) Total Combustion of Proposed Action Coal
1	2,700,000	4,590,000
2	4,400,000	7,480,000
3	4,000,000	6,800,000
4	2,700,000	4,590,000
5	2,600,000	4,420,000
6	2,600,000	4,420,000
7	2,600,000	4,420,000
8	2,600,000	4,420,000
9	3,200,000	5,440,000
10	3,200,000	5,440,000
11	3,500,000	5,950,000
12	4,200,000	7,140,000
13	1,100,000	1,870,000

GHG emissions contribute to changes in atmospheric radiative forcing, resulting in climate change impacts. GHGs act to contain solar energy loss by trapping longer wave radiation emitted from the Earth's surface and act as a positive radiative forcing component (BLM, 2020).

A tool used to assist in the analysis of secondary climate impacts from project-level emissions is the Methods for Attributing Climate Impacts of GHG Emissions (MAGICC) (Climate Resource, 2022) model to calculate the secondary impacts of GHGs. The MAGICC model is a peer-reviewed reduced-complexity model created to integrate various climate system interactions, including the carbon cycle, climate feedback loops, and radiative forcing to simulate the effects of changing GHG emissions on atmospheric composition, radiative forcing, and global mean temperature change (Meinshausen, Raper, & Wigley, 2011). MAGICC is particularly advantageous because it emulates the complex and computationally intensive climate models efficiently (Department of Environmental Quality, 2026d).

MAGICC uses representative concentration pathways (RCPs) to emulate future scenarios with varying degrees of GHG emission mitigation that result in predicted future changes in radiative forcing in terms of watts per square meter (W/m²). For example, RCP2.6 is representative of a sustainable GHG mitigation scenario that results in a radiative forcing increase of 2.6 W/m² between the years 1750 and 2100. In contrast, RCP8.5 is representative of a high GHG emission scenario that results in a radiative forcing increase of 8.5 W/m² between the years 1750 and 2100. For this analysis, DEQ chose to evaluate secondary impacts using both the RCP2.6 and RCP8.5 pathways because these scenarios span a range from high to low GHG emission mitigation, respectively. Importantly, testing two scenarios with significantly different GHG mitigation ensures that the nonlinear nature of induced climate impacts is conservatively

estimated. In other words, the variable atmospheric concentration of GHGs over time affects the magnitude of impacts from a new source of emissions, as does the timing of the release of new GHG emissions from the proposed source. For example, the impacts of a GHG emission source are often greater in a sustainable (high mitigation) scenario such as RCP2.6 because the scenario assumes that global GHG emission rates decrease over time to a greater degree than most higher emission scenarios. The proposed source of emissions is therefore more impactful because it may represent an increasingly greater share of global emissions.

To estimate future surface temperature change resulting from the Proposed Action's emissions, DEQ ran the MAGICC model for each RCP using both unmodified (base) emission scenarios and modified emission scenarios with the Proposed Action's emissions subtracted. By comparing the results of the base and modified scenarios, it's possible to estimate the predicted future change in temperature that is attributable to the Proposed Action's emissions.

First, the total CO₂e emissions in **Table 7** and **Table 8** were summed by year and subtracted from the RCP2.6 and RCP8.5 base scenarios. DEQ determined emissions from mining and reclamation (**Table 7**) would be so low relative to emissions from the combustion of the coal (**Table 8**) that it was decided to combine these emission sources rather than evaluate their secondary impacts separately with the MAGICC model. It was assumed that the 13 years of active mining and 2 years of reclamation emissions correspond to the years 2027 to 2041. The emission input files for the online version of MAGICC contain global GHG emissions by GHG species for every decade rather than every year between 2020 and 2100, so the CO₂e emissions in were temporally allocated using a forward-looking 10-year average. For example, the Proposed Action's emissions for 2030 to 2039 were averaged and assumed to be representative of the 2030 emission anchor point in the model.

After the temporally allocated emissions were subtracted from the base scenarios, the model was run using probabilistic mode with the modified RCP2.6 and RCP8.5 emission input files. Running the model in probabilistic mode iterates the model run more than 100 times with slightly different internal parameters, resulting in a distribution of results. The default model output provides the predicted surface temperature increase above the 1850 to 1900 baseline period for every year between 1995 and 2100, and the annual temperature value produced is equal to the median value of the results distribution for that year. The base RCP2.6 and RCP8.5 scenarios (i.e., no emissions subtracted) were also run using probabilistic mode.

For each RCP scenario, the surface temperature results by year in the modified emission scenario were subsequently subtracted from the base emission scenario results, resulting in the increase above baseline future temperature change (ΔT) that can be attributed to the Proposed Action (**Table 9**). The final results for mid-century (2050), end-of-century (2100), and maximum impacts are displayed, indicating that the Proposed Action may result in maximum warming up to 0.000035 °C, or 0.000063 °F. This maximum ΔT value corresponds to the year(s) in each scenario when the difference between the base and modified emission scenarios is expected to be greatest (i.e., when the Proposed Action's emissions have the greatest impact). Due to the extremely marginal differences between base and modified emission scenarios and the probabilistic nature of the results, the maximum ΔT value may occur multiple times over a range of years. Thus, results indicate that the maximum ΔT value may occur as early as 2046 and as late as 2090 (**Table 9**).

Table 9. MAGICC Model Surface Temperature Results

Scenario	ΔT by 2050 (°C)	ΔT by 2100 (°C)	ΔT Maximum (°C)	ΔT Max Year*
RCP2.6	0.000030	0.000025	0.000035	2046-2090
RCP8.5	0.000030	0.000030	0.000030	2033-2100

*The year(s) that the Proposed Action's maximum temperature impacts (ΔT °C) occur

Montana recently used the EPA SIT to develop a greenhouse gas inventory in conjunction with preparation of a possible grant application for the Community Planning Reduction Grant program. This tool was developed by EPA to help states develop their own greenhouse gas inventories, and the tool relies upon data collected by the federal government through various agencies. The inventory specifically includes carbon dioxide, methane, and nitrous oxide and reports the total as CO₂e. The SIT consists of eleven Excel based modules with pre-populated data that can be used with default settings or, in some cases, allows states to input their own data when the states believe their own data provides a higher level of quality and accuracy. Once each of the eleven modules is completed, the data from each module is exported into a final "synthesis" module which summarizes the data into a single file. Within the synthesis file, several worksheets display output data in various formats such as GHG emissions by sector and GHG emissions by type of greenhouse gas.

DEQ has determined that the use of the default data provides a reasonable representation of the GHG inventory for the various state sectors, and of the estimated total annual GHG inventory. The SIT data from EPA is currently updated through the year 2022, as it takes several years to validate and make new data available within revised modules. DEQ maintains a copy of the output results of the SIT. Presently, Montana emits approximately 51.04 million metric tons of CO₂ annually (Department of Environmental Quality, 2026d).

Emissions from the Proposed Action would be expected to contribute a low of 47,509 to a high of 7,594,891 metric tons of CO₂e as shown in **Table 10**, which uses the values and assumptions described for **Table 7**. This contribution results from the continued operation of the mine, which primarily supplies coal markets outside of Montana. Coal combustion already accounts for a large portion of the state's total emissions, contributing approximately 25% (or 12.53 million metric tons) of Montana's annual CO₂e emissions.

Table 10. Cumulative AM5 Greenhouse Gas Impact Summary.

Year of Active Mining	Coal Production (short tons/year)	Greenhouse Gas Emissions (metric tons/year) (CO ₂ e)					
		Mining Production	Reclamation	Exposed Coal	Blasting	Combustion	Total Emissions (metric tons/year) (CO ₂ e)
1	2,700,000	10,222	0	50,728	9,551	4,590,000	4,660,501
2	4,400,000	16,658	0	82,668	15,564	7,480,000	7,594,891
3	4,000,000	15,144	0	75,153	14,149	6,800,000	6,904,446
4	2,700,000	10,222	0	50,728	9,551	4,590,000	4,660,501
5	2,600,000	9,843	0	48,849	9,197	4,420,000	4,487,890
6	2,600,000	9,843	0	48,849	9,197	4,420,000	4,487,890
7	2,600,000	9,843	0	48,849	9,197	4,420,000	4,487,890
8	2,600,000	9,843	0	48,849	9,197	4,420,000	4,487,890
9	3,200,000	12,115	0	60,122	11,320	5,440,000	5,523,557
10	3,200,000	12,115	0	60,122	11,320	5,440,000	5,523,557
11	3,500,000	13,251	0	65,759	12,381	5,950,000	6,041,390
12	4,200,000	15,901	0	78,910	14,857	7,140,000	7,249,668
13	1,100,000	4,165	0	20,667	3,891	1,870,000	1,898,723
14	0	0	47,509	0	0	0	47,509
15	0	0	47,509	0	0	0	47,509
Total	39,400,000	149,167	95,017	740,255	139,372	66,980,000	68,103,811

As identified previously in this section, the MAGGIC model results indicate that the proposed action may result in warming up to 0.000035°C or 0.000063°F by 2046, or approximately 0.000018°C per decade. Montana's temperature has risen by approximately 2.5°F (1.4°C) from 1900 to 2020 (NOAA, 2022), and it's expected to increase approximately another 2.5°F (1.4°C) between 2020 and 2050 (Alder & Hostetler, 2013). This equates to roughly 0.46 °C of warming per decade over this future period in Montana. Therefore, the Proposed Action would account for 0.004% of Montana's warming over the next decade.

In Montana, the BLM Specialist Report states that higher global surface temperatures may result in hotter temperatures, longer growing seasons, decreases in snowpack, and drier forests resulting in increased likelihood of forest fires and insect outbreaks (BLM, 2020). The Fifth National Climate Assessment, which encompasses Montana, Wyoming, North Dakota, South Dakota, and Nebraska states that the Great-Plains states are already experiencing climate impacts such as reduced peak streamflow, more intense spring storms, and increased localized drought (Knapp, 2023). The Montana Climate Assessment (Whitlock, 2017) discussed similar climate impacts, and includes a special report, 2021 Climate Change and Human Health in Montana, that provides comprehensive data on Montana's current health profile, including how populations' health may be impacted (Adams, 2021). Those health-related impacts on Montanans may include increased risk of heat exhaustion, heat stroke, and worsening of chronic

conditions such as respiratory diseases, cardiovascular issues, and kidney disease (Adams, 2021). Poor air quality may result from increased wildfires, creating harmful breathing conditions (Adams, 2021). Additionally, water quality may be impacted due to increased risk of flood that could contaminate water sources, contributing to water-borne illness and decrease in species that communities rely on for subsistence. Changes in temperature, precipitation patterns, and soil moisture may affect both native and reclaimed plant communities which can affect the success of vegetation establishment in reclaimed fields. If monitoring or future evaluations show that additional reclamation measures are needed because areas are not meeting the success targets for reclamation, DEQ will require changes to the permit and adjust the reclamation bond accordingly to provide adequate financial assurance. All areas of reclamation must pass four phases of reclamation prior to the release of full liability and are routinely monitored for reclamation success.

Due to the inherent cumulative and global nature of climate change, it is difficult to link one source of GHG emissions to a specific environmental impact. Carbon dioxide (CO₂) and other GHGs become well mixed in the atmosphere within a year due to atmospheric circulation, meaning that GHG emissions from one region are incorporated worldwide within that timeframe (NOAA, 2025; United States Environmental Protection Agency, 2025b; United States Environmental Protection Agency, 2025c). This global mixing blurs regional signals, making it very difficult to trace atmospheric concentrations back to specific emissions sources and is the reason GHGs cause widespread global climate effects independent of where they are emitted. Therefore, tracing specific local outcomes (e.g., a Montana heatwave) back to any single project is not possible with available technology. Nevertheless, every project's GHG emissions incrementally add to global GHGs and, thus, to cumulative climate impacts.

SIGNIFICANCE OF POTENTIAL IMPACTS FROM GHG EMISSIONS

When determining whether the preparation of an environmental impact statement is needed, DEQ is required to consider the seven significance criteria set forth in ARM 17.4.608, which are as follows:

1. The severity, duration, geographic extent, and frequency of the occurrence of the impact.

The Proposed Action's individual contribution to climate change is determined, under these criteria, to be not significant. As detailed in the cumulative impacts section, the action would account for a negligible fraction of the total warming in Montana over the next decade (roughly 0.46 °C), contributing only 0.004% (or approximately 0.000018°C). At the same time, the EA recognizes that AM6's lifecycle greenhouse gas emissions would incrementally add to cumulative global concentrations and thereby contribute to climate-driven changes that affect Montana's environment and public health, including more frequent and intense heat waves, drought, wildfires, and wildfire smoke, within an already stressed climate system. This is not to downplay the effects of GHG emissions. Rather, given the wide dispersion of greenhouse gas effects, the resulting climate impacts are globally indistinguishable and non-differentiable at the scale of a single project, and significance under MEPA is evaluated in light of context, intensity, and the nature of DEQ's decision rather than the fact that emissions are nonzero. Consequently, the Proposed Action's individual emissions are insufficient to cause a significant impact on climate systems when evaluated under ARM 17.4.608. The severity, duration, geographic extent and frequency of the occurrence of the impacts are addressed in turn:

- **Severity:** The project's contribution of GHG emissions would not be distinguishable on a global or local scale. The estimate of global warming that would result from AM6 is approximately 0.000018°C per decade, or 0.004% of Montana's projected warming over the next decade. GHG emissions incrementally add to global GHGs and, thus, to cumulative climate impacts. Those cumulative impacts include regional stressors in the Northern Great Plains such as increased evaporative demand, changes in runoff, and greater drought and wildfire risk that can affect water resources, ecosystems, and human health in Montana. However, the Proposed Action would not induce attributable climate impacts that can be separated from broader global and statewide emissions, and its incremental contribution does not rise to the level of a significant impact under MEPA.
- **Duration:** While the GHG impacts are long-term (over decades and centuries), the Proposed Action's duration of 15 years is finite. The impact would not be permanent on the global climate system because global emission impacts are continuous and cumulative, and the Proposed Action's commencement or cessation would not meaningfully alter the long-term trend. The EA therefore treats AM6 as one of many contributing sources within an already degraded climate system, rather than as a project that, by itself, determines future climate conditions.
- **Geographic Extent:** The emissions would originate in Montana, but their ultimate impact (change in climate systems) is global in nature. Because the impacts are not concentrated in the immediate AM6 area in Montana, the project's contribution of GHGs would be indistinguishable from the background of statewide and global GHG emissions, and the contribution would not alter the frequency or intensity of climate events in the AM6 area or Montana in a way that can be attributed to this single project. The EA instead uses Montana and facility-scale emissions inventories, together with regional climate assessments, to place AM6's contribution in geographic context.
- **Frequency of Occurrence:** The emission of GHGs would occur continuously for the life of the mine (15 years), as long as coal is mined and combusted. While the activity is frequent, the resulting impact on climate systems would not be significantly increased by the Proposed Action because the project would not alter the frequency or intensity of climate events.

2. *The probability that the impact will occur if the proposed action occurs; or conversely, reasonable assurance in keeping with the potential severity of an impact that the impact will not occur.*

The probability that the proposed project would contribute to GHGs is certain. However, as discussed in the Cumulative Impacts section, the severity of the additional greenhouse gas contributions is low in relation to the overall warming of Montana. The yearly addition of CO₂e from mining and combustion would result in an increase of Montana temperatures by approximately 0.000035°C over the lifespan (15 years) of the Proposed Action.

3. *Growth-inducing or growth-inhibiting aspects of the impact, including the relationship or contribution of the impact to cumulative impacts.*

The proposed mining activities by the applicant would not have any growth-inducing or growth-inhibiting aspects, or significant contribution to cumulative impacts. The Proposed Action's GHG emissions would not induce new regional or national growth. AM6's emissions contribute to cumulative

global GHG concentrations and thus to cumulative climate risks, but the project does not, at the scale of this decision, meaningfully alter regional population, land use, or economic growth patterns that drive long-term emissions trajectories. The Proposed Action's contribution to global GHG concentrations does not meaningfully alter the probability or severity of climate-related events at a scale that would inhibit economic growth either locally or globally.

4. The quantity and quality of each environmental resource or value that would be affected, including the uniqueness and fragility of those resources and values.

The Proposed Action does not impact any resources that are considered unique or fragile within the context of the project area. The area where mining activities occur is part of an existing, long-term operational mine complex and is already subject to current disturbance and reclamation requirements. Regarding climate, the project's contribution to global climate change is marginal (0.000035°C of warming over the lifespan of the Proposed Action). The EA acknowledges that Montana's climate and associated environmental life-support systems are already experiencing stress from cumulative climate change, and that additional emissions contribute incrementally to those stresses, but AM6's marginal contribution does not constitute a measurable, project-specific effect on the quantity and quality of a stable global climate system or on any localized resource that can be distinguished from broader GHG drivers.

5. The importance to the state and to society of each environmental resource or value that would be affected.

Although environmental resources and the value of a stable climate system are of the highest importance to the state and society, the Proposed Action has a marginal impact global GHG emissions. This EA therefore identifies and discloses AM6's lifecycle emissions, places them in the context of Montana and facility-level inventories, and qualitatively describes their implications for climate risks in Montana and the Northern Great Plains, recognizing the importance of these values while finding that the project's incremental contribution is small in that broader context.

6. Any precedent that would be set as a result of an impact of the proposed action that would commit the department to future actions with significant impacts or a decision in principle about such future actions.

Issuance of an operating permit to the applicant does not set any precedent that commits DEQ to future actions with significant impacts or a decision in principle about such future actions. This EA conducted for this specific permitting action, including an analysis of coal combustion emissions, is performed for presumed general public interest in coal mining impacts. This voluntary analysis does not constitute a decision in principle or set a binding precedent requiring DEQ to analyze coal combustion emissions in its review of operating permit applications under the Montana Strip and Underground Mine Reclamation Act (MSUMRA). Specifically, DEQ is not currently required to analyze end-use coal combustion for MSUMRA operating permits, and this action does not commit or require DEQ to conduct such an analysis for other or future permit applications. If the applicant submits another operating permit, amendment, or revision application to conduct additional mining, DEQ is not committed to issuing those authorizations. Pursuant to MEPA, DEQ would conduct an environmental review for any subsequent authorizations sought by the applicant that require environmental review. DEQ would make a permitting decision based on the criteria set forth in the MSUMRA.

7. Potential conflict with local, state, or federal laws, requirements, or formal plans.

The Proposed Action would not have any growth-inducing or growth-inhibiting aspects that would conflict with any local, state, or federal laws, requirements, or formal plans. The Proposed Action is an addition to an operational mine, the scope of the regulatory review focuses primarily on the expansion area, which adheres to the same legally-mandated operational standards as the existing mine.

CONSULTATION

DEQ engaged in internal and external efforts to identify substantive issues and/or concerns related to the proposed project. Internal scoping consisted of internal review of the environmental assessment document by DEQ staff and site visits.

External scoping efforts also included queries to the following websites/ databases/ personnel:

- Big Horn County
- Montana Bureau of Mines and Geology (MBMG)
- Montana Board of Oil and Gas Conservation
- Montana Department of Environmental Quality
- Montana Department of Natural Resource and Conservation
- Montana Department of Transportation
- Montana Department of Fish, Wildlife & Parks
- Montana Ground water Information Center (GWIC)
- Montana Natural Heritage Program
- Montana State Historic Preservation Office (SHPO)
- United States Department of Interior, Bureau of Land Management
- United States Department of Agriculture, Natural Resource Conservation Service

Notice of completeness and the availability of a draft EA for review was sent to the following agencies, per ARM 17.24.401(5):

- Big Horn Conservation District
- Big Horn County (Montana)
- United States Bureau of Indian Affairs
- United States Bureau of Land Management
- Crow Tribe
- Montana Department of Environmental Quality (Water and Air Bureaus)
- Montana Department of Fish, Wildlife & Parks
- Montana Department of Labor and Industry
- Montana Department of Natural Resources and Conservation
- Montana Association of Counties
- Northern Cheyenne Tribe
- United States Army Corps of Engineers
- United States Environmental Protection Agency
- United States Fish & Wildlife Service
- United States Natural Resources Conservation Service
- City of Sheridan, WY

- Sheridan County (Wyoming)
- Wyoming Department of Environmental Quality
- Wyoming Game and Fish Department

PUBLIC INVOLVEMENT

A draft EA was published on the DEQ website when the AM6 application was ruled complete, and it was available for public comment simultaneously during the MSUMRA completeness public comment period. A final EA will be published when the application is approved by DEQ and will be incorporated into the final written findings.

OTHER GOVERNMENTAL AGENCIES WITH JURISDICTION

The proposed project would be located on private, state, and federal (BLM) land. All applicable state and federal rules must be adhered to, which, at some level, may also include other state, federal, or tribal agency jurisdiction.

This environmental review analyzes the proposed project submitted by the applicant. The majority of impacts from the project would be short term, addressed by best management practices during mine operation, and/or would be fully reclaimed at the conclusion of the project and thus, would not contribute to the long-term cumulative effects of mining in the area. Final reclamation of surface disturbance would be required at a minimum of ten years prior to final bond release.

In Montana, DEQ retains primacy under the Surface Mining Control and Reclamation Act (SMCRA) and thereby enjoys "exclusive" regulatory authority over the environmental effects of surface coal mining (SMCRA, Section 503(a)) in Montana. Exclusive jurisdiction was vested in the states, specifically, "because of the diversity in terrain, climate, biologic, chemical, and other physical conditions" in the mining regions of the country (SMCRA, Section 101(f)). DEQ's program is authorized under The Montana Strip and Underground Mine Reclamation Act (MSUMRA) 82-4-201, Montana Code Annotated (MCA), et.seq. The federal Office of Surface Mining Reclamation and Enforcement (OSMRE) has federal oversight of Montana's program with an obligation to inspect and monitor the operations of Montana's program

NEED FOR FURTHER ANALYSIS AND SIGNIFICANCE OF POTENTIAL IMPACTS

When determining whether the preparation of an environmental impact statement is needed, DEQ is required to consider the seven significance criteria set forth in ARM 17.4.608, which are as follows:

1. The severity, duration, geographic extent, and frequency of the occurrence of the impact;
2. The probability that the impact will occur if the proposed action occurs; or conversely, reasonable assurance in keeping with the potential severity of an impact that the impact will not occur;
3. Growth-inducing or growth-inhibiting aspects of the impact, including the relationship or contribution of the impact to cumulative impacts;
4. The quantity and quality of each environmental resource or value that would be affected, including the uniqueness and fragility of those resources and values;
5. The importance to the state and to society of each environmental resource or value that would be affected;

6. Any precedent that would be set as a result of an impact of the proposed action that would commit the department to future actions with significant impacts or a decision in principle about such future actions; and
7. Potential conflict with local, state, or federal laws, requirements, or formal plans.

The severity, duration, geographic extent and frequency of the occurrence of the impacts associated with the proposed mining activities would be limited. The proposed action would result in the addition of 479 additional acres to the LOM disturbance area, the expansion of mine permit area by 520 acres, an increase of permitted mineable coal by 318 acres and 39.4 million tons. Surface disturbance actions proposed within the expanded LOM disturbance area include pit layback, sediment control features, relocation of a flood control reservoir, and additional soil stockpile footprints. The applicant is proposing to expand mining on lands with private, state, and federal mineral estates. The proposed action would also extend the duration of the life of mine an additional year from the mine's currently approved mine plan, extending the currently approved life of mine from 2039 to 2040, which is an additional 10 years beyond the duration of life of mine assessed under the 2020 TR1 EIS and 2023 AM5 EIS. As discussed throughout this EA in relation to anticipated impacts, the additional duration is not anticipated to add any significant impacts that were not previously discussed in the TRI or AM5 EIS. The land proposed to be disturbed does not contain unique, endangered, fragile, or limited environmental resources. Final reclamation of surface disturbance would be required a minimum of ten years prior to final bond release.

As discussed in this Environmental Assessment, DEQ has not identified any significant impacts associated with the proposed mining activities for any environmental resource that was not previously considered in the EIS for AM5 (2023) or the EIS for TR1 (2020). DEQ does not believe that the proposed mining activities by the Applicant would have any growth-inducing or growth-inhibiting aspects, or significant contribution to cumulative impacts. The proposed operating permit site does not contain unique or fragile resources. Minor impacts to soil would occur through soil salvage, which would disrupt the soil horizon. Where possible, soil would be salvaged and replaced during reclamation, then seeded with a DEQ approved seed mix. The site would be reclaimed to an approved post-mine topography and to provide comparable utility and stability of adjacent undisturbed areas.

All drainages within the proposed disturbance area and proposed permit expansion area are ephemeral and only flow in response to precipitation or snowmelt. Surface water in these drainages is already captured by flood control and sediment control features, which would continue to occur. The expansion and relocation of flood control and sediment control features in Pearson Creek drainage would capture additional flow from reaching flood control impoundments downstream at West Decker Mine; and Pearson Creek drainage accounts for 2.2 acre-feet of the annual 317,000 acre-feet of flow from the Tongue River Reservoir. Ground water in the Anderson-Dietz Coal and Canyon Coal stratigraphic units will continue to experience drawdown as a result of mining the Anderson-Dietz coal seam. There are no non-NTEC private wells within the zone of drawdown. The main impact to water resources would be the replacement of an overburden aquifer with postmine spoil aquifer, which will experience an increased mobilization and flushing of dissolved minerals during aquifer re-saturation. Postmine ground water quality, as measured by TDS, is not anticipated to be significantly impacted. Impacts to ground water resources is anticipated to be minor and long-term.

After mining is complete and rebuilding and reclamation of disturbed drainages progresses, sediment ponds will continue to capture stormwater runoff, which may contain elevated TSS and TDS prior to vegetation re-establishment. The hydraulics, slope, and aspect of reclaimed, postmine drainages is

modeled to be similar to that of premine drainages. Impacts to surface water resources is anticipated to be minor and limited to the duration of the life of mine.

Impacts to air quality would be minor and long-term, due to potential for increased PM emissions from blasting, use of unpaved roads, and exhaust from on-site mobile equipment. NTEC must operate within the confines of the approved air quality permit (MAQP #1120-12).

Impacts to vegetation would be moderate due to land disturbance and reduction in vegetation diversity followed by concurrent reclamation to approved postmine land uses with a DEQ approved seed mix. Weed control would take place and meet state and Big Horn County standards.

There would be moderate impacts to terrestrial, aquatic, and avian life and habitats. Temporary loss of terrestrial and avian habitats and species displacement would occur across the proposed disturbance area due to vegetation clearing and soil stripping. The proposed disturbance would contribute to landscape-scale functional habitat loss and fragmentation. Final reclamation would reduce the impact in the long term by restoring habitat similar to or enhanced from premine conditions. An additional 0.4 acres of wetlands adjacent to or abutting ephemeral tributaries are expected to be impacted. There are no known aquatic biologic communities, as defined by ARM 17.24.651(3), present within the proposed disturbance areas primarily due to the absence of intermittent or perennial streams.

Unique, endangered, fragile, or limited environmental resources have been evaluated. Three species protected by the Endangered Species Act (ESA) of 1973 have the potential to occur in the impact analysis area but have not been documented by wildlife monitoring and are therefore unlikely to be impacted. Those three species are the proposed threatened monarch butterfly (*Danaus Plexippus*), the proposed threatened western regal fritillary (*Argynnis idalia occidentalis*) and the proposed endangered Suckley's cuckoo bumble bee (*Bombus suckleyi*). Impacts to federally protected raptors (golden eagles, bald eagles) would be minimized by best management practices and permit requirements. It is anticipated that SCM will need to obtain the proper permits to remove an intact, but inactive, Golden Eagle nest. Greater sage-grouse within the cumulative impact analysis area would be disturbed or displaced due to habitat loss/degradation, noise and human presence. However, the actions proposed by AM6 occur under unchanged operational methods and wildlife mitigation commitments and do not introduce new types, intensities or pathways of potential impact to the Greater sage-grouse. Therefore, the impacts to sage grouse habitat are expected to be temporary and are not significant.

Cultural resource inventories to date have identified three unevaluated sites that require further field investigation and consultation in order to determine NRHP eligibility and must not be disturbed until final NRHP eligibility status is determined. An additional cultural site currently has undetermined NRHP status. If SHPO determines a site is eligible for the NRHP, a treatment (avoidance or mitigation) plan will be required, and any required mitigation work would be completed prior to disturbance.

There would be moderate impacts to the aesthetic viewshed, as the extension to the life of mine would extend the visible industrial appearance of the mine site for an additional year, plus the additional time necessary for reclamation to be complete. Despite the restoration of ecological function during required reclamation, which must adhere to premine standards for postmine topography, there is also a reduction in landscape complexity from native to reclaimed terrain.

Impacts to human health and safety would be minor as access roads would be closed to the

public. The public is not allowed on the mine site. The applicant would be required to adhere to all applicable state and federal safety laws. The Mine Safety and Health Administration (MSHA) has developed rules and guidelines to reduce the risks associated with this type of labor.

Demands on environmental resources of land, water, air, or energy would be minor to moderate. The mine would continue to use the existing potable and industrial water systems and water sources at the current rate, due to no change in the existing workforce or facilities area. The proposed additional mining may lead to extensions and/or rerouting of existing ramp roads, which may increase the use of water for dust suppression. Water used for dust suppression is sourced from surface water and ground water collected in sediment control ponds, traps, and pits. Other impacts to environmental resources and agricultural activity would be moderate, due to a loss of 520 acres of available grazing land for the remainder of the life of mine.

As more fully explained in the GHG Assessment, Section 23 above, the Proposed Action's individual contribution to climate change is determined, under the criteria in ARM 17.4.608, to be not significant. The action would account for a very small fraction of the total warming in Montana over the next decade (roughly 0.46 °C), contributing only 0.004% (or approximately 0.000018°C) of additional warming over that period. This is not to downplay the effects of GHG emissions. Rather, recognizing that any non-zero emissions incrementally add to cumulative atmospheric greenhouse gas concentrations, DEQ's conclusion reflects the relatively small magnitude of AM6's emissions when considered alongside other sources, their long-term but limited contribution within that broader cumulative context, and the scope of this mine-permit amendment decision.

As discussed in this EA, DEQ has not identified any significant impacts associated with the proposed activities on any environmental resource.

Issuance of an operating permit to the applicant does not set any precedent that commits DEQ to future actions with significant impacts or a decision in principle about such future actions. If the applicant submits another operating permit, amendment, or revision application to conduct additional mining, DEQ is not committed to issuing those authorizations. DEQ would conduct an environmental review for any subsequent authorizations sought by the applicant that require environmental review. DEQ would make a permitting decision based on the criteria set forth in the MSUMRA Act. The level of environmental review decision is made based on case-specific consideration of the criteria set forth in ARM 17.4.608.

Finally, DEQ does not believe that the proposed mining activities by the applicant would have any growth-inducing or growth-inhibiting aspects that would conflict with any local, state, or federal laws, requirements, or formal plans.

Based on a consideration of the criteria set forth in ARM 17.4.608, the proposed permit revision is not predicted to significantly impact the quality of the human environment. Therefore, preparation of an EA is the appropriate level of environmental review for MEPA.

Table 11: Assessment of Significance (ARM 17.4.608)

Affected Resource and Section Reference	Potential Impact	Severity ¹ , Extent ² , Duration ³ , Frequency ⁴ , Uniqueness and Fragility (U/F)	Probability impact will occur ⁵	Cumulative impacts	Measures to reduce impact as proposed by applicant	Significance (yes/no)
1. Geology and Soil Quality, Stability, and Moisture	Additional acres within the permit would sustain impacts identical to those indicated in past EIS and EA assessments. No new impact types are anticipated.	Severity - High: For geologic strata, mining manipulation completely alters its original state. Soil when not direct hauled could be set back in development to a state one step more developed than parent material. This will affect an additional 479 acres that could sustain currently evaluated impact levels. Extent – Low: The extent of the impacts will be no greater than those documented through the life of this mines permitting, EIS, and EA record. Duration - Medium: Geologic impacts are permanent. Soil impacts set the development of soil back the number of years they are removed from production. However, soils continue developing as soon as they are applied to reclamation. Frequency: Geologic impacts occur during all excavation and soil impacts occur at every soil salvage and manipulation event. Unique/Fragile: Unique or fragile soil and geologic types were not identified in the baseline studies.	The entire proposed area will be included within the new LOM disturbance boundary; however, not all acres will be impacted. It is definite that a portion of the acres will be disturbed.	Cumulatively this action will add the additional acres to mining disturbance in the Tongue River Reservoir basin. The percent increase is low compared to the already disturbed area.	Measures that are already in place will continue for this action. These include a plan for suitability testing, salvage and reuse of the soil resource. The methods utilized by NTEC at Spring Creek Mine have been successful since the Mine’s inception.	No
2. Water Quality, Quantity, and Distribution	Decreased runoff to the Tongue River Reservoir Increased ground water drawdown and reduced ground water quality	Severity - Low: Any perceivable impacts would be low since the same drainage area is already impounded downstream by the West Decker permit area. The majority of measurable hydrologic impacts would be mitigated by existing structures and best management practices. Those not mitigated will be exceedingly minor and unlikely to cause impact to the watershed due to the total size of the Tongue River Reservoir drainage. Extent - Low: The extent of the impacts will be confined to the drainage basins of Spring Creek, South Fork Spring Creek, and Pearson Creek. Duration - Will occur for the lifetime of the proposed project, and minor changes in surface water hydraulic characteristics in reclaimed drainages will be permanent. Frequency – Will occur rarely, during high runoff events. Unique/Fragile - Not unique or fragile Severity - Low: Potential impacts would be low as the amendment does not meaningfully add drawdown or reduce water quality. Extent - Low: Water quality and drawdown will only see a noticeable effect near the amendment area. A smaller effect will be present but imperceptible out to the Cumulative Impact Area border. Duration - High: Ground water recharge and analyte dilution will take many decades to bring the ground water back to a premine state. Frequency - Will occur constantly. Unique/Fragile - Not unique or fragile	Certain	The proposed action would not meaningfully add cumulative impacts to water quality, quantity, and distribution beyond those described in the TR1 EIS.	Measures that are already in place will continue for this action including the Operator’s BMPs, Hydrologic Control Plan, and Drainage Basin Reclamation Plan	No
3. Air Quality	Increased Particulate Matter (PM) emissions	Severity - Low: Potential for increased PM emissions from increased access of unpaved roads, material transfer, and fugitive dust emissions Extent – Medium: Likely to occur with activities utilizing unpaved roads and transferring materials	Certain	Cumulative impacts are conditioned and limited by the MAQP and a demonstration of compliance with applicable requirements is necessary	Required dust suppression activities already in place at the mine will continue.	No

Affected Resource and Section Reference	Potential Impact	Severity ¹ , Extent ² , Duration ³ , Frequency ⁴ , Uniqueness and Fragility (U/F)	Probability impact will occur ⁵	Cumulative impacts	Measures to reduce impact as proposed by applicant	Significance (yes/no)
		Duration: Will occur for the lifetime of the proposed project Frequency: Will occur on a daily basis, or whenever activities are ongoing at the facility Unique/Fragile: Not unique or fragile		for MAQP issuance; therefore, should have minor air quality impacts. The nearby area also has the Decker Mine (MAQP #1435-08), that contributes to the air quality of this area. DEQ is unaware of any related future actions that are under concurrent consideration by any state agency through preimpact statement studies, separate impact statement evaluation, or permit processing procedures. MAQP #1120-12 requires Spring Creek Mine to take reasonable precautions to control emissions of airborne PM as well as to treat all unpaved roads and general plant areas with water and/or chemical dust suppressant in order to maintain compliance with the reasonable precautions' requirement (ARM 17.8.308). Therefore, any cumulative impacts would be long-term and minor for this permitting action.		
4. Vegetation Cover, Quantity, and Quality	Disturbed surface.	Severity - Low Extent - Medium Duration - Surface will be disturbed until mining operations are complete in the proposed AM6 areas. Site is to be reclaimed to previous or higher land use. Frequency - Will occur on a daily basis throughout until reclamation begins Unique/Fragile - Not unique or fragile	Certain	Disturbing the AM6 application area would contribute to the overall reduction in vegetation diversity and changes in species composition in the area. Reclamation success shows that though there may be a moderate impact to vegetated communities through these actions, overall function of those community types will not be impacted as the land uses will not change.	Using BMPs to minimize impacts and the control of weeds. Seeding would be performed after mining is complete and reclamation activities begin.	No
5. Terrestrial, Avian, and Aquatic Life and Habitats	Acute rates of mortality, particularly for less mobile species. Temporary displacement of terrestrial and avian	Severity - Medium: Terrestrial, avian and aquatic life are expected to be displaced during the time of operation. Extent - Medium: Potential for 479 acres of temporary habitat loss Duration - Will occur for the life of the mine; Impacts to wildlife would be extended by 10 years Frequency - Will occur daily throughout the life of the mine	Probable	New disturbance proposed by AM6 would contribute to the ongoing temporary displacement of terrestrial and avian species due to the temporary loss of an additional 479 acres of habitat.	Required wildlife monitoring requirements (ARM 17.24.723) at the mine will continue, as well as the inclusion of wildlife enhancement features within concurrent reclamation.	No

Affected Resource and Section Reference	Potential Impact	Severity ¹ , Extent ² , Duration ³ , Frequency ⁴ , Uniqueness and Fragility (U/F)	Probability impact will occur ⁵	Cumulative impacts	Measures to reduce impact as proposed by applicant	Significance (yes/no)
	life. Temporary destruction of 479 acres of terrestrial and avian habitats.	Unique/Fragile - Not unique or fragile				
6. Unique, Endangered, Fragile, or Limited Environmental Resources	Temporary displacement of unique/fragile avian life, particularly ground-nesting birds. Destruction of six non-jurisdictional wetland habitats.	Severity - Medium: Extended temporary displacement of ground-nesting birds, such as the Greater sage-grouse (GSG). Six non-jurisdictional wetlands are expected to be directly affected. Extent – Medium: Approximately 6,668 acres of functional GSG habitat loss is anticipated. 0.4 acres of non-jurisdictional wetlands are expected to be impacted. Duration - Will occur for the life of the mine Frequency - Will occur daily throughout the life of the mine Unique/Fragile – Unique and fragile resources (non-jurisdictional wetlands) are present	Probable	New disturbance proposed by AM6 would result in 0.4 acres of non-jurisdictional wetland habitat loss and approximately 6,600 acres of functional Greater sage-grouse habitat loss.	SCM's permit requires the replacement/construction of wildlife enhancement features and small depressions (future wetlands). SCM's implementation of their HRRP plan, adherence to BLM LUA terms, continued annual monitoring efforts and execution of any mitigation that may be required by the Montana Sage Grouse Conservation Program will minimize impacts to the protected Greater sage-grouse.	No
7. Historical and Archaeological Sites	Three Unevaluated and one Undetermined cultural resource site may be impacted by the proposed disturbance.	Severity - Low: No Eligible cultural resource sites would be disturbed as a result of the proposed disturbances Extent – Small: Four cultural resource sites across 479 acres of proposed disturbance may require a treatment (avoidance or mitigation) plan. Duration - Will occur for the life of the mine Frequency – Once, if it all, at the time of treatment Unique/Fragile – Pending further evaluation	Unlikely	Acute loss of landscape integrity and historical context/meaning.	Any cultural resource site determined Eligible for the NRHP requires a treatment (avoidance or mitigation) prior to disturbance in the area. Until final eligibility status is determined, the site must be avoided and remain undisturbed.	No
8. Aesthetics	Permanent change to aesthetic character.	Severity – Medium: The proposed AM6 expansion would alter landscape aesthetic but would not be visible from the public road. Extent – Medium: 480 acres of NTEC land and 40 acres of BLM land would be altered. Frequency - Will occur daily forever. Duration – Loss of premine topographic richness will be permanent, but ecological integrity of landscape will be restored once reclamation is complete. Unique/Fragile - Not unique or fragile.	Certain	Acute alteration of premine aesthetic character.	Postmine topography must meet standards of approximate original contour and landscape stability, in addition to Phase I-IV bond release requirements.	No
9. Demands on Environmental Resources of Land, Water, Air, or Energy	520 acres would be removed from available grazing leases. Use of water for dust suppression may increase slightly.	Severity – Medium: The proposed AM6 expansion would remove land available for grazing. Extent – Medium: 480 acres of grazing leases on NTEC land and 40 acres of grazing leases on BLM land would be removed from available grazing acreage. Duration – Loss of grazing land will occur for the life of the mine Frequency - Will occur daily throughout the life of the mine Unique/Fragile - Not unique or fragile	Loss of grazing land – Certain Increased use of water for dust suppression - Possible	Loss of 520 acres of available grazing acreage would add to the loss of available grazing land in the region due to mine permit boundaries and would continue for the life of the mine but would become available for grazing again after reclamation.	Grazing continues to be allowed within the AM5 (haul road) permit expansion area, because disturbance has not begun in that portion of the permit area, which allows access to not yet be restricted in that area.	No
10. Impacts on Other Environmental Resources	No anticipated impacts	No change expected from this proposed action.	N/A	N/A	N/A	No

Affected Resource and Section Reference	Potential Impact	Severity ¹ , Extent ² , Duration ³ , Frequency ⁴ , Uniqueness and Fragility (U/F)	Probability impact will occur ⁵	Cumulative impacts	Measures to reduce impact as proposed by applicant	Significance (yes/no)
11. Human Health and Safety	No anticipated impacts	No change expected from this proposed action.	N/A	N/A	N/A	No
12. Industrial, Commercial, and Agricultural Activities and Production	520 acres would be removed from available grazing leases.	Severity – Medium: The proposed AM6 expansion would remove land available for grazing. No impact anticipated on industrial or commercial activity. Extent – Medium: 480 acres of grazing leases on NTEC land and 40 acres of grazing leases on BLM land would be removed from available grazing acreage. Duration – Loss of grazing land will occur for the life of the mine Frequency - Will occur daily throughout the life of the mine Unique/Fragile - Not unique or fragile	Certain	Loss of 520 acres of available grazing acreage would add to the loss of available grazing land in the region due to mine permit boundaries and would continue for the life of the mine but would become available for grazing again after reclamation.	Grazing continues to be allowed within the AM5 (haul road) permit expansion area, because disturbance has not begun in that portion of the permit area, which allows access to not yet be restricted in that area.	No
13. Quantity and Distribution of Employment	Extension of life of mine and current level of NTEC employment for 1 additional year	Severity – Low: The proposed AM6 expansion would extend the life of mine and current level of employment an additional year, from 2039 to 2040. Extent – N/A Duration – Short term. One year added to life of mine Frequency - Will occur daily throughout the life of the mine Unique/Fragile - Not unique or fragile	Probable	None anticipated	N/A	No
14. Local and State Tax Base and Tax Revenues	Addition of 800,200 tons of private coal, 22 million tons of state coal, and 16.5 million tons of federal coal to the permit	Severity – Low: The proposed AM6 expansion would extend the life of mine an additional year, add 39.4 million tons of mineable to the permit, and continue to contribute to the collection of coal-related taxes and mineral royalties. Extent – Medium: The tax revenue associated with continued mining activities would benefit various funds at the local, county, and state levels. Tax revenue will vary based on state and federal tax and royalty rates. Duration – Short term. One year added to life of mine Frequency - Variable, based on different tax collection cycles Unique/Fragile - Not unique or fragile	Certain	None anticipated	N/A	No
15. Demand for Government Services	No anticipated impacts	No change expected from this proposed action.	N/A	N/A	N/A	No
16. Locally Adopted Environmental Plans and Goals	No anticipated impacts	No change expected from this proposed action.	N/A	N/A	N/A	No
17. Access to and Quality of Recreational and Wilderness Activities	No anticipated impacts	No change expected from this proposed action.	N/A	N/A	N/A	No
18. Density and Distribution of Population and Housing	No anticipated impacts	No change expected from this proposed action.	N/A	N/A	N/A	No
19. Social Structures and Mores	No anticipated impacts	No change expected from this proposed action.	N/A	N/A	N/A	No
20. Cultural Uniqueness and Diversity	Minimal impact	Severity – Low: Minimal incremental loss/alteration of regionally important cultural sites; no anticipated shift in demographics	N/A	N/A	N/A	No

Affected Resource and Section Reference	Potential Impact	Severity ¹ , Extent ² , Duration ³ , Frequency ⁴ , Uniqueness and Fragility (U/F)	Probability impact will occur ⁵	Cumulative impacts	Measures to reduce impact as proposed by applicant	Significance (yes/no)
		Extent – Small: Potential impacts are localized to the 479 acres of proposed disturbance Duration - Life of Mine: any incremental loss/alteration of regionally important cultural sites would be permanent Frequency – Infrequent: potential impacts occur only during active operations; consultation, mitigation and monitoring reduces the likelihood of Unique/Fragile – Not fragile or unique				
21. Greenhouse Gas Analysis	Minimal impact	Severity -Low: Minimal permit acre addition and coal cut addition in relation to total permit site. Extent -Small: GHG emissions from permit acre addition and coal cut addition is minimal when compared to the entire permit site. Duration - 0.2665% of Montana’s annual CO ₂ e emissions. Frequency -Single calculated GHG impact. Unique/Fragile -Not unique or particularly fragile.	Certain	127,320 metric tons of CO ₂ e from this project would contribute 0.2665% of Montana’s annual CO ₂ e emissions.	Optimize fleet balance for maximum efficiency, minimize unnecessary equipment utilization within the proposed project area.	No

- 1. Severity describes the density at which the impact may occur. Levels used are low, medium, and high.
- 2. Extent describes the land area over which the impact may occur. Levels used are small, medium, and large.
- 3. Duration describes the time period over which the impact may occur. Descriptors used are discrete time increments (day, month, year, and season).
- 4. Frequency describes how often the impact may occur.
- 5. Probability describes how likely it is that the impact may occur without mitigation. Levels used are: impossible, unlikely, possible, probable, certain

PREPARATION

Environmental Assessment and Significance Determination prepared by:

Zach Ashauer - Mining Environmental Scientist / Hydrologist

Joshua Bridgeman – P.E., Mining Engineer

Troy Burrows – Air Quality Scientist

Julian Calabrese – Mining Environmental Scientist / Soil Scientist

Alli Calkins - Reclamation Specialist / Ecologist

Ric Casteel – P.E., Mining Engineer

Mitch Hoffman – Mining Environmental Scientist / Hydrologist

Theodore Lewis – Mining Environmental Scientist

Alex Mackey – Reclamation Specialist / Ecologist

Gabrielle Ostermayer – Mining Environmental Scientist / Hydrologist

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