United States
Department of Agriculture

Forest Service
Fishlake National Forest
Richfield Ranger District

May 2014

SUFCO Special Use Permit Modification

Environmental Assessment

Sevier County, Utah

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1.0 Purpose and Need

1.1 Introduction

Canyon Fuel Company, LLC (Canyon Fuel Company) requested the approval of a boundary expansion to add 19.2 acres to their existing special use permit area located adjacent to their SUFCO Coal Mine. The project area is located adjacent to SUFCO's current mine facilities and National Forest Road 006 along Quitchupah Creek in the S1/2 of Section 12, Township 22 South, Range 4 East in Sevier County, Utah **(Figure 1.1)**. The US Forest Service (Fishlake National Forest) manages the surface estate of the project area.

The Forest Service has prepared this Environmental Assessment (EA) in compliance with the National Environmental Policy Act (NEPA) and other relevant Federal and State laws and regulations. The purpose of this document is to evaluate the environmental effects of adding 19.2 acres of lands to SUFCO's existing special use permit. This action would give Canyon Fuel Company/SUFCO the ability to demonstrate right-of-entry to the Utah Division of Oil, Gas and Mining (DOGM) for constructing additional coal handling, storage and support facilities. This document is organized into the five following chapters:

- ***Chapter 1.0 – Purpose and Need*** discusses background information about the proposed action and the decision to be made.
- ***Chapter 2.0 – Alternatives*** provides a detailed description of the alternatives considered for SUFCO Mine's special use permit.
- ***Chapter 3.0 – Affected Environment and Environmental Consequences*** describes the human and natural environmental systems in the study area and evaluates the potential impacts due to implementation of the Proposed Action. This analysis is organized by the following subject areas:
    1. Vegetation
    2. Threatened, Endangered, Sensitive, and Management Indicator Plants
    3. Threatened, Endangered, Candidate and Sensitive Wildlife and Aquatic Species
    4. Wildlife and Aquatic Management Indicator Species
    5. Migratory Birds
    6. Water Resources
    7. Cultural Resources
    8. Land Use
- ***Chapter 4.0 - Agencies and Persons Consulted*** provides a list of agencies, tribes and interested parties that were consulted during development of this EA. A list of preparers is also presented.
- ***Chapter 5.0 – References*** lists sources consulted for the preparation of this document.

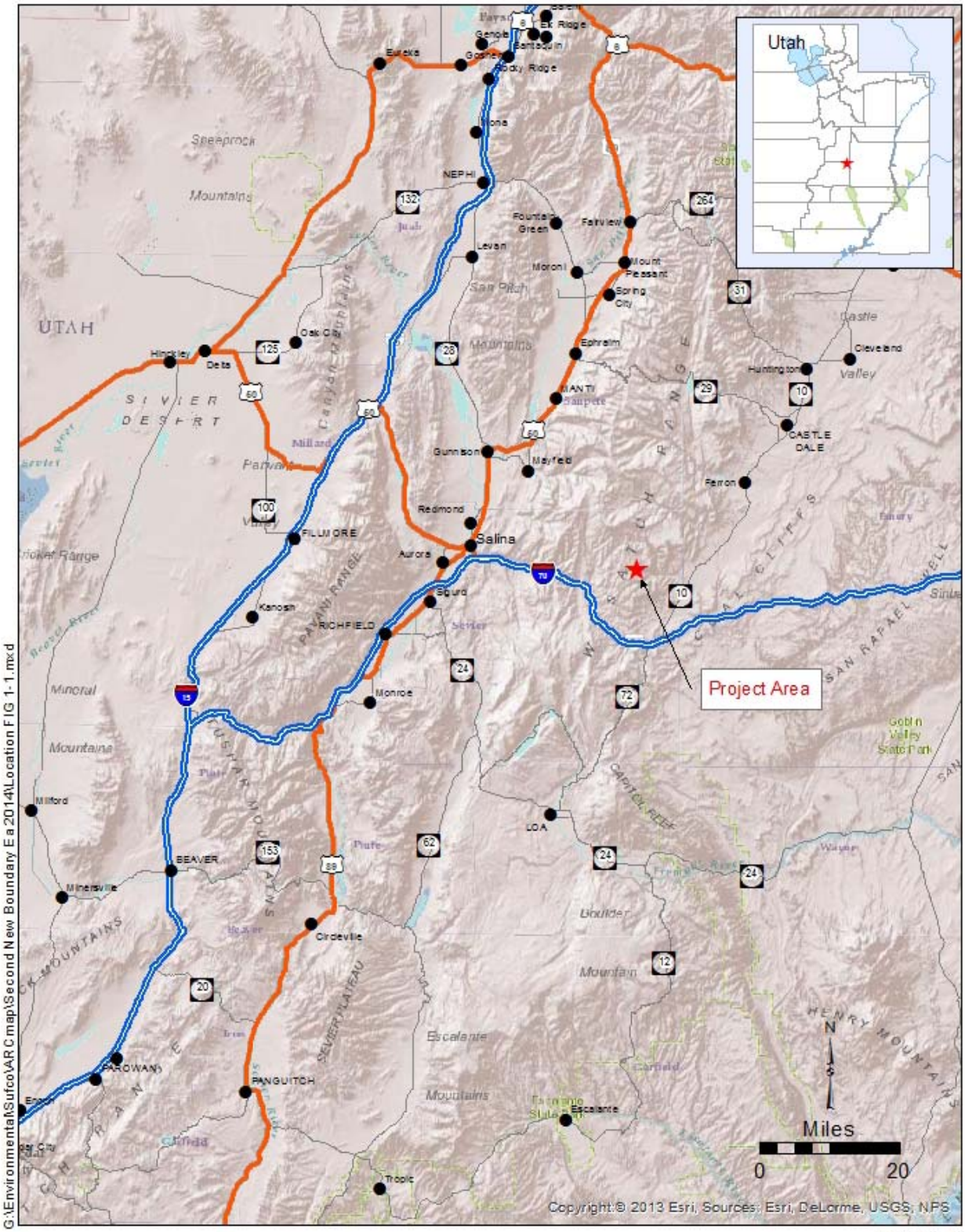


Figure 1-1
SUFCO Special Use Permit Modification
Environmental Assessment
Fishlake National Forest
Sevier County, Utah

1.2 Proposed Action

The Proposed Action is for the Fishlake National Forest to approve the expansion of an existing Special Use Permit (SUP) area by 19.2 acres. If approved, it would establish right-of entry for a future mine permitting action to be taken by the Utah DOGM. If approved by DOGM, the lands would be added to SUFCO's existing State-approved mine permit, and would include authorization to construct coal load out facilities, coal storage areas and support infrastructure. **Figures 1.2** and **1.3** provide an overview of existing features at SUFCO Mine and show the foreseeable development of the coal segregation facilities. Section 2.1 provides a complete description of the proposed action.

1.3 Purpose and Need for Action

The need for the action is for the Forest Service to respond to an application to amend an existing SUP that would establish a right-of-entry onto NFS lands for the purpose of permitting, and if approved, constructing ancillary facilities incident to a coal mine.

The purposes include furthering the direction in the Forest Plan to (1) "encourage mineral exploration, development and extraction consistent with management of surface resources", (2) "manage land uses to insure permit compliance and resource protection" and (3) act on special use applications according to the following priorities: land and land use activities contributing to increased economic activity associated with National Forest resources, e.g., oil and gas, and energy minerals (USFS 1986, Pages IV-5 and IV-38) and to fulfill the Forest Service's obligation under the Mining and Minerals Policy Act of 1970 to foster and encourage private enterprise in the development of economically sound and stable domestic mining minerals and mineral reclamation industries, …{and} "the orderly and economic development of domestic mineral resources…".

In addition, the Forest Service Minerals and Geology 2800-2012-1 Manual states the following objectives: 1. Encourage and facilitate the orderly exploration, development, and production of mineral and energy resources within the NFS in order to maintain a viable, healthy minerals industry and to promote self-sufficiency in those mineral and energy resources necessary for economic growth and national defense (Page 9); 2. Ensure that exploration, development, and production of mineral resources are conducted in an environmentally sound manner and that these activities are considered fully in the planning and management of other NFS resources (Page 9); and 3. Ensure that lands disturbed by mineral and energy activities are reclaimed for other productive uses (Page 10).

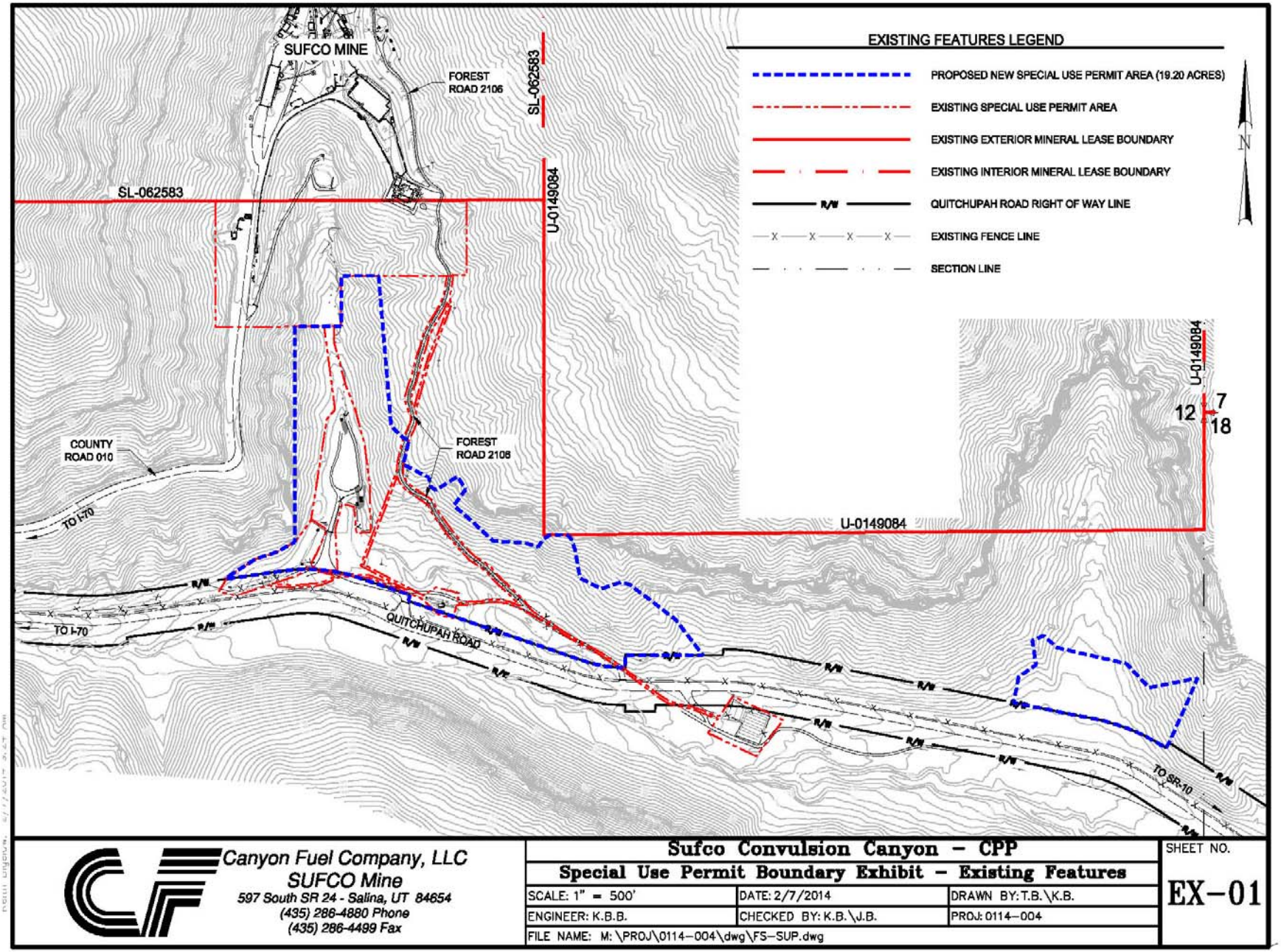
1.4 Forest Plan Direction

The Richfield Ranger District has determined the Purpose and Need for this project is consistent with Fishlake National Forest goals and objectives found in Chapter IV of the Forest Plan. The project area occurs in Forest Plan Management Area 6B. The Richfield Ranger District compared the proposed action described below with the general direction and standards and guidelines listed in the Fishlake Land and Resource Management Plan to determine compliance. The District determined the proposed action is compliant with the general direction and standards and guidelines listed in the Fishlake Land and Resource Management Plan. The District determined a Forest Plan Amendment is not required as part of this project. This review along with supporting rationale is found in the project record.

1.5 Scoping

Under NEPA, agencies must determine the issues to be analyzed in depth and to identify and eliminate from detailed study the issues that are not significant (40 CFR 1501.7). This course of action is known

Figure 1-2. Existing Features



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SUFCO Mine
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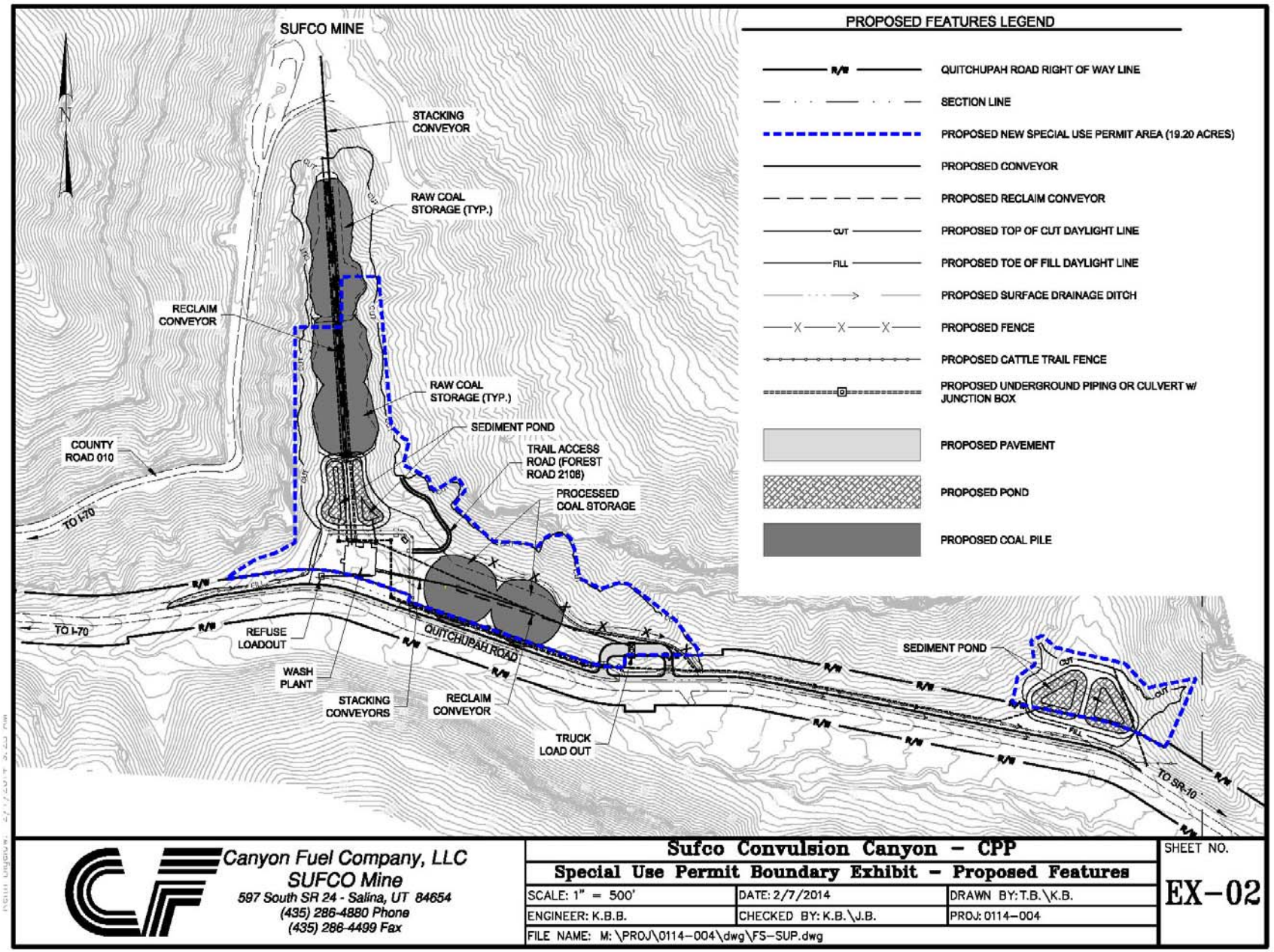
Sufco Convulsion Canyon – CPP		
Special Use Permit Boundary Exhibit – Existing Features		
SCALE: 1" = 500'	DATE: 2/7/2014	DRAWN BY: T.B.\K.B.
ENGINEER: K.B.B.	CHECKED BY: K.B.\J.B.	PROJ: 0114–004
FILE NAME: M:\PROJ\0114–004\dwg\FS–SUP.dwg		

SHEET NO.
EX–01

Figure 1-3. Foreseeable Actions at SUFCO Mine



as scoping and uses public involvement and agency consultation as a means to identify potential issues.

- Notices were directly mailed to individuals and organizations on the Fishlake National Forest mailing list. The mailing list includes state agencies with jurisdictional or regulatory authority, Utah DOGM, Native American tribes, local permittees, Sevier County Commission, Utah Environmental Congress, etc.
- Information was posted on the FS website describing the project location, anticipated schedule, and project contact on the Schedule of Proposed Actions, which has a URL address of http://www.fs.usda.gov/goto/fishlake/projects.

Comments were received from the Sevier County Commission, one livestock grazing permittee, the Hopi Tribe, and the Utah Environmental Congress.

Sevier County expressed support for the project mentioning economic importance and SUFCO's past record as a great land steward.

The livestock permittee expressed concern about the cattle right-of-way and keeping the cattle trail along the haul road open.

The Hopi Tribe suggested some cultural resource protection measures (which have been included) and requested the tribe be notified about the identification of any prehistoric site that may be adversely affected by project activities and any proposed treatment plan.

The Utah Environmental Congress requested an environmental impact statement be completed as they thought the project would destroy 100 acres and be located up to 12 miles from the mine. They were also concerned about carbon dioxide emissions from the burning of coal. The size and location of the project has been clarified and updated maps provided.

Notice of Proposed Action

Subsequent to the above scoping process, expansion of SUFCO Mine's Special Use Permit was clarified and reduced from an estimated 102 acres to the current 19.2 acres. A second public legal notice was published in the *Richfield Reaper*, on Wednesday, March 19, 2014. The notice described the proposed action, detailed the Forest Service's decision–making process and invited comments on the proposed permit expansion project. Additionally, a Notice of Proposed Action, Opportunity to Comment was posted on the Fishlake National Forest public web page (http://www.fs.usda.gov/goto/fishlake/projects). During the 30-day notice and comment period following the legal notice publication, the Fishlake National Forest received no additional comments concerning the permit expansion project.

1.5.1 Issues

Issues identified during scoping include potential direct, indirect, and cumulative impacts for Vegetation; Threatened, Endangered, Candidate and Sensitive Species; Management Indicator Species; Migratory Birds; Water Resources; Cultural Resources; and Land Use. These issues were used to direct the impact analysis. No issues indicated that an alternative needed to be developed.

Climate change will not be discussed in this EA as the proposed project would not contribute to any degree necessary to justify a detailed analysis. The proposed activities are extremely small in scope and magnitude. It may be possible to quantify the direct amount of greenhouse gas emissions during the construction phase; however, there is no way to analyze the intensity of the effects on climate

change. Effects from the project's greenhouse gas emissions would not be noticeable at the local, regional, or global scale.

1.6 Related Actions and Other Projects

Sevier County Special Service District (SSD) submitted right-of-way applications to the Forest Service and Bureau of Land Management (BLM) for construction of Quitchupah Creek Road as a public, county-maintained road (USFS and BLM, 2006). The right of way applications were approved and the new Quitchupah Creek Road has been completed. The new road is used by SUFCO Mine to transport coal and to ensure the competitive productivity of the SUFCO Mine.

SUFCO Mine has been in production since 1941 and has permits governing operations (**Table 1.1**).

Table 1.1. Other SUFCO Permits

Permit/Lease	Number
Utah Department of Oil, Gas and Mining (DOGM)	C/041/0002
Utah Pollution Discharge Eliminating System UPDES	UT-0022918
Forest Service	00-MU-11041000-017 Rock Shelter MOA
	4078-2 Water System
	4078-3 Duncan Draw Road
	4109-1 Overflow Pond Area
	4109-2 Water Weirs
Federal Coal Lease	U-47080
Federal Coal Lease	U-28297
Federal Coal Lease	U-62453
Federal Coal Lease	U-149084
Federal Coal Lease	U-63214
Federal Coal Lease	UTU-76195
Federal Coal Lease	SL-062583
State Coal Lease	ML 49443-OBA

The State of Utah oversees coal mining through the Utah DOGM whose rules were developed to implement the federal Surface Mine Control and Reclamation Act (SMCRA) of 1977 through a cooperative agreement (30 USC 944.30). As the coal is located under a surface managed by the US Forest Service, the Fishlake National Forest permits the use of the National Forest Lands through a special use permit or on a coal lease. As the action reviewed in this EA does not involve the leasing of federal coal (just the modification to the existing special use permit), it falls under the review procedures provided in Article VI (B). DOGM is responsible for making decisions on the mine facilities that may be constructed within the special use permit area boundary *"with the concurrence of any Federal agency involved".*

1.7 Forest Service Decision to Be Made

The Responsible Official for this decision is the Fishlake Forest Supervisor, Allen Rowley. The decision to be made is whether or not to amend the existing Special Use Permit area by adding 19.2 acres. If the decision is approved to add 19.2 acres to SUFCO's permit, Canyon Fuel Company will have

established a right-of-entry to then apply for a coal mine permit from the Utah DOGM for the purpose of developing coal load out facilities and coal storage piles.

2.0 Alternatives

This chapter presents a detailed description of the Proposed Action and a discussion of what would be reasonably expected to occur in the project area if the Proposed Action did not occur (No Action alternative).

2.1 Proposed Action

The Proposed Action for the Fishlake National Forest is to approve the addition of 19.2 acres to the current Special Use Permit area. This permit expansion would grant right-of entry for Canyon Fuel to use the specified NFS lands for a subsequent coal permitting action subject to the State of Utah, DOGM and 30 CFR 944. See Figure 1.2 for an overview of the existing features; coal related facilities, Quitchupah Road right of way, lease boundaries and existing special use permit area.

Foreseeable activities that DOGM would review are considered in this environmental analysis as a connected action. Foreseeable activities include the construction of coal load out facilities including crushers, conveyor systems, coal bins, truck scales and an office; coal storage pile facilities in the form of linear stackers, reclaim feeders and conveyor systems. These additional storage piles may increase temporary storage capacity to 100,000 tons that would allow for coal segregation and blending for achievement of optimum coal quality for customer needs. Other foreseeable activities include construction of sediment ponds.

Road upgrades would be completed to facilitate all weather coal loading and transport. Upgrades would include paving the truck turnaround road (13,612 square feet outside the Quitchupah Road right-of-way) and surfacing the interior of the truck turnaround with gravel, roto-mill, or other suitable material. Additionally, a lane would be added to turn into the truck turnaround and to exit the turnaround onto Quitchupah Creek Road. Construction and drainage control would be designed consistent with DOGM requirements. All foreseeable activities would be subject to approval by DOGM and other permitting actions required by Federal, State, and county agencies. See **Figure 1-3** for an overview of the proposed additional 19.2 acres of special use permit area and an overview of the foreseeable activities. Following completion of the mining operations, the special use permit area would be reclaimed.

2.2 No-Action Alternative

Under the No Action alternative, the 19.2 acre expansion would not be approved. Canyon Fuel Company would not have right-of-entry onto the National Forest System lands. Canyon Fuel Company would continue their current operations at SUFCO mine. Mine productivity and saleable coal reserves would maintain at their current levels and not increase or decrease under the No Action alternative.

3.0 Affected Environment and Environmental Consequences

This chapter discusses the existing conditions associated with the resources that may be affected. Impacts of the Proposed Action and No Action are evaluated for each resource. The existing special permit boundary **(see Figure 1.2)** includes a spring collections system, a water transmission line, a sanitary drain field, a powerline, a pump house, a storage yard (including part of the sediment pond dam), an access road, a guard shack, and a temporary trash storage area.

3.1 Vegetation

3.1.1 Analysis Area

The analysis area for impacts on vegetation is the proposed 19.2 acre special use permit boundary (see **Figure 1.2**). This analysis area is adequate for evaluating direct and indirect effects because the project will not disturb or remove vegetation outside this boundary. The cumulative effects analysis area is also bounded by the proposed special use permit boundary because impacts are minor and do not extend beyond the boundary.

3.1.2 Existing Conditions

Four plant communities were mapped in the 19.2 acre project area in November-December 2012 and in April 2013 (Collins, 2013). These communities include pinyon-juniper, oak brush, sagebrush, and grassland (native and seeded). Generally, pinyon-juniper and oak brush dominate the slopes of the project area, while sagebrush occupies the valley bottom. Grasslands exist above the confluence of East Spring Canyon and Convulsion Canyon. All of the vegetation communities in the project area have experienced some level of prior disturbance associated with mining activity (Collins, 2013).

Noxious and invasive weeds are limited in the proposed special use permit boundary; weed species include whitetop (*Cardaria draba*) and musk thistle (*Carduus nutans*) (Tuttle, 2013). Currently, the Forest Service maintains an aggressive weed control program, practicing early detection and rapid response. Weeds are not an issue in the area and are not expected to become an issue due to current weed management (Tuttle, 2013); therefore, noxious and invasive weeds will not be discussed in further detail in this document.

The project area was also examined for wetland areas and none were identified. Jurisdictional wetlands exist outside of the project area and will not be impacted by the Proposed Action; therefore, wetland vegetation will not be discussed in further detail.

3.1.3 Environmental Consequences

3.1.3.1 Direct and Indirect Effects

No Action Alternative

Under the No Action Alternative, current vegetation communities would remain the same through the life of the permit. No additional impacts would occur as the special use permit boundary would not be expanded and the segregation facility would not be constructed.

Proposed Action

Direct effects on vegetation as a result of the Proposed Action include vegetation crushing, cutting, and removal. Removal and cutting of vegetation is considered a long-term impact to an affected community.

About nine acres would be modified across the 19.2 acre project area with sediment ponds, coal piles, and building construction **(see Figure 1.3)**. However, much of this area has already been altered by past mine developments. Impacted sites would be reclaimed at the end of the project; however, some communities may be converted from one vegetation type to another (e.g., oak brush to grassland). Impacts would be minor as project disturbance is small and affected communities are well represented outside the project area across the Fishlake National Forest.

Increased dust from coal piling and mixing, construction activities, and vehicle traffic may indirectly effect vegetation by increased dust accumulation on leaf blades, which, it has been suggested decreases plant vigor and shoot growth (Wijayratne, Scoles-Sciulla, & Defalco, 2009).

Increased dust on plant leaves would fluctuate based on mine activities, local weather conditions, and other factors resulting in minor short-term impacts to individual plant species.

3.1.3.2 Cumulative Effects

Cumulative effects on vegetation have altered existing vegetation communities as a result of past mining and infrastructure development (e.g. road improvement). Mining and infrastructure development would continue to alter vegetation communities in the reasonably foreseeable future. While this disturbance would be reclaimed, it may lead to a conversion of one vegetation type to another (e.g., conversion of oak brush to grassland) changing local vegetation community characteristics.

3.2 Threatened, Endangered, Sensitive and Management Indicator Plants

3.2.1 Analysis Area

The analysis area for TES plants is the proposed 19.2 acre special use permit boundary.

3.2.2 Existing Conditions

Section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 et seq.), directs federal departments and agencies to ensure that actions authorized, funded, or carried out by them are not likely to jeopardize the continued existence of any threatened or endangered species or result in the destruction or adverse modification of their critical habitats.

Chapter 2670 of the Forest Service Manual (FSM) sets objectives for management of threatened, endangered, candidate, and other sensitive species (TES). The objectives include managing habitats and activities for threatened and endangered species to achieve recovery objectives so that special protection measures provided under ESA are no longer necessary, and to implement management practices to ensure that sensitive species do not become threatened or endangered because of Forest Service actions.

One threatened species, one endangered species, 17 sensitive species and one management indicator species (MIS) have the potential to occur on the Fishlake National Forest; these plants are presented in **Table 3.1** which indicates their potential for occurrence in the project area. As of 2013, no candidate

species were identified in Sevier County (Natural Resources Conservation Service 2013). Collins (2013) reviewed the State of Utah Division of Wildlife Resources central database for TES plant species in the analysis area and concluded no TES species were within two miles of the project area. Furthermore, Collins (2013) conducted a field investigation of the analysis area for TES species and no TES species were encountered.

Table 3.1. Threatened, Endangered, and Sensitive Plant Species of the Fishlake National Forest

Species	Status within the Analysis Area
THREATENED	
Last chance townsendia (*Townsendia aprica*)	Potential habitat exists; however, project area surveys occurred and no individuals were found.
ENDANGERED	
San Rafael cactus (*Pediocactus despainii*)	No habitat.
SENSITIVE	
Wonderland Alice flower Aliciella (=*Gilia) caespitosa)*	No habitat.
Bicknell milkvetch (*Astragalus consobrinus*)	Potential habitat exists; however, project area surveys occurred and no individuals were found.
Tushar paintbrush (*Castilleja parvula var. parvula*)	No habitat.
Pinnate spring parsley *(Cymopterus beckii)*	No habitat.
Mt. Belknap draba (*Draba ramulosa*)	No habitat.
Creeping draba (*Draba sobolifera*)	No habitat.
Nevada willowherb (*Epilobium nevadense*)	No habitat.
Maguire daisy (*Erigeron maguirei*)	No habitat.
Elsinore buckwheat (*Eriogonum batemanii* var*. ostlundii*)	No habitat.
Fish Lake naiad (*Najas caespitosa*)	No habitat.
Beaver Mountain groundsel (*Senecio castoreus*)	No habitat.
Little penstemon (*Penstemon parvus*)	No habitat.
Ward beardtongue (*Penstemon wardii*)	Potential habitat exists; however, project area surveys occurred and no individuals were found.
Arizona willow (*Salix arizonica*)	No habitat
Bicknell thelesperma (*Thelesperma subnudum* var. *alpinum*)	No habitat.
Barneby woody aster (*Aster kingii* var*. barnebyana*)	No habitat.
Sevier townsendia (*Townsendia jonesii var. lutea*)	Potential habitat exists; however, project area surveys occurred and no individuals were found.
MANAGEMENT INDICATOR SPECIES	
Rydberg's milkvetch (*Astragalus perianus*)	No habitat

Source: (Tait, 2013) and (Collins, 2013) unless otherwise noted.

3.2.3 Environmental Consequences

3.2.3.1 Direct and Indirect Effects

No Action Alternative

Under the No Action alternative, current direct and indirect effects on special status plants would remain the same through the life of the permit. No additional impacts would occur as the special use permit boundary would not be expanded and the segregation facility would not be constructed.

Proposed Action

No direct or indirect effects are anticipated from expansion of the special use permit boundary and associated mining disturbance because threatened, endangered, sensitive and MIS plants do not occur in the analysis area.

3.2.3.2 Cumulative Effects

No cumulative effects are anticipated on TES plant species as no direct or indirect impacts are anticipated on TES and MIS plant species from implementation of the Proposed Action.

3.3 Threatened, Endangered, Candidate, and Sensitive Wildlife and Aquatic Species

3.3.1 Analysis Area

The following discussion concerns TES wildlife and aquatic species that are known to occur within the Fishlake National Forest, their likelihood of occurring within the 19.2 acre proposed special use permit boundary, and the anticipated impacts (if any) on the species.

3.3.2 Existing Conditions

Table 3.2 lists the TES wildlife and aquatic species of the Fishlake National Forest and the rationale for not considering several of the species for further analysis. Species presented in the table are those that are identified as “known species/habitat” or “suspected/potential habitat” on the Fishlake National Forest by the Intermountain Regional Forester (USFS 2014). Additionally, the US Fish & Wildlife Service (USFWS) Information, Planning, and Conservation System (IPaC) website was used to identify threatened, endangered, proposed or candidate species within the vicinity of the analysis area (USFWS 2014). Only species that have the potential to occur within or near the analysis area are considered and discussed. The review indicated no threatened or endangered species have the potential to occur in the project area.

Table 3.2. Threatened, Endangered, Candidate and Sensitive Wildlife and Aquatic Species

Species / Scientific Name	Status	Species Consideration
Utah prairie dog *Cynomys parvidens*	Threatened	Not Considered. Basic habitat requirements include deep, well-drained soils for burrow excavation, low vegetation that can be seen through or over, and suitable forage (includes cicadas and alfalfa) (Rodriguez 2006). There is no potential habitat for Utah prairie dog within the project area (Rodriguez, 2006).
Bighorn sheep *Ovis canadensis*	Sensitive	Not Considered. The analysis area does not occur within the expected distribution of bighorn sheep (UDWR, 2005).

Table 3.2. Threatened, Endangered, Candidate and Sensitive Wildlife and Aquatic Species

Species / Scientific Name	Status	Species Consideration
Pygmy rabbit *Brachylagus idahoensis*	Sensitive	Not Considered. Sagebrush habitats within the analysis area are not sufficient to support pygmy rabbits (Rodriguez, 2006).
Spotted bat *Euderma maculatum*	Sensitive	Considered. Surveys conducted at several sites on the Fishlake National Forest have resulted in no documented occurrences of this species (Rodriguez, 2006) but it is assumed they occur on the Forest.
Townsend's western big-eared bat *Corynorhinus townsendii townsendii*	Sensitive	Considered. Townsend's big-eared bats have been identified within an abandoned mine on a portion of the Fishlake National Forest in Millard County (Rodriguez, 2006).
Greater sage-grouse *Centrocercus urophasianus*	Candidate/ Sensitive	Not Considered. Sage-grouse are dependent on large expanses of sagebrush (Dahlgren, Chi, & Messmer)and this type of habitat does not occur in the analysis area.
Yellow-billed cuckoo *Coccyzus americanus*	Candidate/ Sensitive	Not Considered. Obligate riparian nesters; only breed in large patches (25-100 acres) of streamside forests dominated by willow and cottonwood (Rodriguez, 2006). Potential habitat does not occur within the analysis area (Rodriguez, 2006).
Bald eagle *Haliaeetus leucocephalus*	Sensitive	Considered. The analysis area does not contain bald eagle wintering habitat but the project area has potential foraging habitat.
Peregrine falcon *Falco peregrinus anatum*	Sensitive	Considered. The project site provides potential foraging habitat for peregrine falcon. Surveys were conducted and no peregrine falcon eyries occur in the project area.
Northern goshawk *Accipiter gentilis*	Sensitive/MIS	Considered. The project area provides potential foraging habitat for Northern goshawk. Raptor nest surveys, including northern goshawk call-back surveys, were performed in and around the analysis area and no goshawk activity was identified (Tetra Tech, 2012).
Flammulated owl *Otus flammeolus*	Sensitive	Considered. The flammulated owl is thought to be a common species in western montane forests where it breeds in ponderosa pine forests as well as fir and mixed deciduous forests (Marti, 1997). Additionally, flammulated owls occur in pinyon-juniper woodlands (Arsenault, Stacey, & Hoelzer, 2002) and have been found nesting in aspen stands (Powers, et al., 1996).
American three-toed woodpecker *Picoides dorsalis*	Sensitive	Considered. Three-toed woodpeckers nest and forage in spruce, fir, ponderosa pine, tamarack, aspen, and lodgepole pine forests (UDWR, 2005). They require trees infested with bark- and wood-boring insects for foraging (Rodriguez, 2006).
California condor *Gymnogyps californianus*	Endangered	Considered. California condor is not included on the Intermountain Regional Forester's list of TES (USFS, 2013) and review of a more refined area through IPaC also resulted in the absence of the California Condor on the TES list (USFWS, 2014). However, the Fishlake National Forest is on the "flight path" between populations in southern Utah and sightings in the northern part of the state.

Table 3.2. Threatened, Endangered, Candidate and Sensitive Wildlife and Aquatic Species

Species / Scientific Name	Status	Species Consideration
Boreal toad *Bufo boreas*	Sensitive	Not Considered. Neither the current or historic distributions of boreal toads in Utah (Hogrefe, 2001) overlaps the analysis area.
Colorado River cutthroat trout *Oncorhynchus clarki pleuriticus*	Sensitive	Not Considered. This species does not occur in streams within the project area.
Bonneville cutthroat trout *Oncorhynchus clarki utah*	Sensitive	Not Considered. None of the 38 miles of occupied streams within the Fishlake National Forest (Rodriguez, 2006) are within the analysis area.
Southern leatherside chub *Lepidomeda aliciae*	Sensitive	Considered. This small desert fish is endemic to streams within portions of the Bonneville Basin of Utah; introduced populations exist in the Colorado River Basin including Quitchupah Creek (UDWR, 2010). This species can occupy a wide range of varying physical stream conditions; but generally require healthy riparian vegetation and intact streambanks (UDWR, 2010).

3.3.3 Environmental Consequences

3.3.3.1 Analysis Area

The analysis area for TES wildlife and aquatic species is limited to the proposed 19.2 acre special use permit boundary. Methods for assessing impacts include describing direct disturbances to each species, a description of the setting where disturbances would occur (i.e. current land use), and discussion on potential indirect impacts on the species from interruption or degradation of breeding or foraging habitat.

3.3.3.2 Direct and Indirect Effects

No Action Alternative

The effects of the No Action Alternative would be the same for all threatened, endangered, candidate and sensitive wildlife and aquatic species. No additional impacts beyond the existing disturbances associated with the active mining authorized under the current Special Use Permit would occur. Existing disturbances include the converted habitat at the active mine site and ancillary facilities themselves, and the activities associated with an active mine such as noise and vehicle traffic.

Proposed Action

Spotted Bat and Townsend's Big-eared Bat: Disturbance in forest areas could cause a decrease in insect populations. However, the effect on bats would be negligible as the total acreage removed would be minor (see Section 3.3.3) and foraging areas do not appear to be a limiting factor for these bats on the Fishlake National Forest (Rodriguez, 2006).

As no potential roosting habitat is found in the analysis area, disturbances expected from the Proposed Action ***may impact individuals but is not likely to lead to a trend toward federal listing*** for the Spotted bat and Townsend's big-eared bat.

Flammulated Owl and American Three-toed Woodpecker: Disturbance in the pinyon-juniper habitat could cause a loss of nesting habitat. However, the effect would be negligible as the total acres of nesting habitat lost is minor (see Section 3.3.3) and the quality of nesting habitat in the analysis area is already degraded as a result of the existing vegetation disturbance (Collins, 2013) and the high level of mine road traffic.

Both the flammulated owl and American three-toed woodpecker forage in aspen and pinyon pine; disturbance could cause a decrease in foraging abundance. However, the effect would be negligible as the loss of foraging habitat within the analysis area would be minimal (see Section 3.3.3) when compared to the available foraging opportunities.

Disturbances expected from the Proposed Action ***may impact individuals but is not likely to lead to a trend toward federal listing*** for both species.

Bald Eagle, Peregrine Falcon, and Northern Goshawk: These species are found in the general vicinity of the mine and the project area does provide potential foraging habitat for these species. However, field surveys indicate no nesting/roosting of these birds occurs in the project area.

Considering the minimal amount of lost foraging habitat and the absence of species evidence, there would be ***no impact*** on the Bald Eagle, Peregrine Falcon, and Northern Goshawk as a result of implementing the Proposed Action.

California Condor: The Fishlake National Forest is on the "flight path" between condor populations in southern Utah and sightings in the northern part of the state. However, no sightings have been recorded in the Forest and nesting habitat does not occur in the project area. Therefore, ***no impact*** on California condors is anticipated from project activities.

Southern Leatherside Chub: No in-water project related work is proposed, and impacted water runoff from the mine site would be captured, stored, and treated prior to release back into Quitchupah Creek. There are no anticipated effects on water quality from the proposed action, so there would be no direct or indirect effect on southern leatherside chub. Therefore, there would be ***no impact*** on southern leatherside chub from implementation of the Proposed Action.

3.3.3.3 Cumulative Effects

Mining and infrastructure development have slightly altered the nesting habitat and foraging ability of the flammulated owl and American three-toed woodpecker in the analysis area. However, disturbance in the analysis area is considered minor and nearby pinyon pine stands provide sufficient habitat for nesting and foraging activities. Future development may slightly decrease insect populations for the Spotted bat and Townsend's big-eared bat but disturbance is minimal and available forage is nearby.

3.4 Wildlife and Aquatic Management Indicator Species

3.4.1 Analysis Area

This section describes the wildlife and aquatic MIS of the Fishlake National Forest, their likelihood of occurring within the proposed 19.2 acre special use permit boundary, and the anticipated impacts (if any) on the species and/or their habitat.

3.4.2 Existing Conditions

The *Land and Resource Management Plan for the Fishlake National Forest* (USFS, 1986) as amended, identifies 17 wildlife and aquatic species as MIS. **Table 3.3** lists the MIS and describes the rationale for which species are considered for further analysis.

Table 3.3. Management Indicator Species

Species / Scientific Name		Species Consideration
Mule Deer *Odocoileus hemionus*		Considered.
Rocky Mountain Elk *Cervus canadensis*		Considered.
Northern Goshawk *Accipiter gentilis*		Considered. The project area provided potential foraging habitat for Northern goshawk. Raptor nest surveys, including northern goshawk call-back surveys, were performed in and around the analysis area and no goshawk activity was identified (Tetra Tech, 2012).
Sage Nesters	Brewer's sparrow *Spizella breweri*	Not Considered. Small patches of sagebrush within the analysis area they are not adequate to support Brewer's sparrow (Boyle & Reeder, 2005).
	Vesper sparrow *Pooecetes gramineus*	Not Considered. Small patches of sagebrush within the analysis area are isolated from larger tracts of sagebrush and not suitable (Boyle & Reeder, 2005).
	Sage thrasher *Oreoscoptes montanus*	Not Considered. Small patches of sagebrush within the analysis area are not adequate to support sage thrasher (Boyle & Reeder, 2005).
Cavity Nesters	Hairy woodpecker *Picoides villosus*	Considered.
	Western bluebird *Sialia mexicana*	Considered.
	Mountain bluebird *Sialia currucoides*	Considered.
Riparian Guild	Lincoln's sparrow *Melospiza lincolnii*	Not Considered. Riparian habitat does not occur within the project area.
	Yellow warbler *Dendroica petechia*	Not Considered. Riparian habitat does not occur within the project area.
	MacGillivray's warbler *Oporornis tolmiei*	Not Considered. Riparian habitat does not occur within the project area.
	Song sparrow *Melospiza melodia*	Not Considered. Riparian habitat does not occur within the project area.
Colorado River cutthroat trout *Oncorhynchus clarki pleuriticus*		Not Considered. This species does not occur in streams within the project area
Bonneville cutthroat trout *Oncorhynchus clarki utah*		Not Considered. None of the 38 miles of occupied streams within the Fishlake National Forest (Rodriguez, 2006) are within the analysis area.
Rainbow trout *Oncorhyncus mykiss*		Considered.
Cutthroat trout *Oncorhynchus clarkii*		Not Considered. Streams identified as cutthroat trout habitat do not occur in or near the analysis area (Rodriguez, 2006).
Brown trout *Salmo trutta*		Considered.
Brook trout *Salvelinus fontinalis*		Considered.

Species / Scientific Name	Species Consideration
Lake trout *Salvelinus namaycush*	Not Considered. Lake trout do not occur in or near the analysis area and are not near Fish Lake.
Aquatic Macroinvertebrates	Considered.

The project area lies within critical mule deer winter range (UDWR, 2008) and substantial elk winter range (UDWR 2008e). Populations of both are considered stable over that last four years (UDWR, 2012).

Population trends of cavity nesting birds are stable and in some instances, an upward trend (Sauer et al., 2012).

Populations of rainbow, brown and brook trout are considered stable and slightly increasing (Rodriguez, 2006).

3.4.3 Environmental Consequences

3.4.3.1 Analysis Area

The analysis area for Wildlife and Aquatic Management Indicator species is bounded by the proposed 19.2 acre special use permit boundary. This analysis area is adequate for evaluating direct and indirect effects because the project will not disturb wildlife or aquatic species outside this boundary.

3.4.3.2 Direct and Indirect Effects

No Action Alternative

The effects of the No Action Alternative would be the same for all wildlife and aquatic MIS and would result in no additional impacts beyond the existing disturbances associated with active mining authorized under the current special use permit. Existing disturbances include the converted habitat at the active mine site and ancillary facilities, and the activities associated with an active mine such as noise and vehicle traffic.

Proposed Action

For the assessment of direct and indirect effects, Rocky Mountain elk and mule deer are analyzed together as they are both big game animals and utilize similar habitats within the Fishlake National Forest. The cavity nesters will be analyzed as a group, as well as fish species **(Table 3.3)**.

Methods for assessing impacts include describing direct disturbances to each species, a description of the setting where disturbances would occur (i.e. current land use), and a discussion on potential indirect impacts on the species from interruption or degradation of breeding or foraging habitat.

Mule Deer and Rocky Mountain Elk: The potential for direct effects on mule deer and Rocky Mountain elk from collision with mine traffic exists. However, the existing road supports a high amount of traffic already and minimal changes to the traffic flow would have no additional impacts on either species.

The entire 19.2 acres of proposed permit expansion is winter range habitat for mule deer and Rocky Mountain elk. Land disturbances within the analysis area would result in a loss of about 9 acres of winter range habitat (see Section 3.1.3.1) and this could have an indirect effect on the species by reducing habitat effectiveness in the area of disturbance. Habitat effectiveness is related to hiding cover

and open road densities (Lyon, 1979). However, the amount of hiding cover being disturbed is minor and this would not impact the ability of the available winter habitat (343,000 acres mule deer and 298,000 acres elk) to support big game herds in the area. Considering the negligible amount of hiding cover being disturbed and the minimal change to road densities, impacts on mule deer and Rocky Mountain elk populations due to a loss of habitat effectiveness would be negligible.

Cavity Nesters: Disturbance in pinyon-juniper vegetation could cause a loss of nests and nesting habitat. However, the effect would be negligible as the total acres of nesting habitat lost is minor (about 9 acres) and the quality of nesting habitat in the analysis area is already degraded as a result of the existing vegetation disturbance (Collins, 2013) and the high level of mine road traffic.

Forage in pinyon-juniper habitats would also decrease with project disturbance. However, the effect would be minimal as the loss of foraging habitat within the analysis area would be slight when compared to the total available foraging opportunities.

Expected project disturbances would result in negligible direct and indirect effects to cavity nesters. Therefore, there would be negligible impacts on the hairy woodpecker, western bluebird, and mountain bluebird.

Trout and Aquatic Macroinvertebrates: No in-water project related work is proposed so there would be no direct effect on trout and aquatic macroinvertebrates. Proposed disturbances occur a couple hundred feet from Quitchupah Creek, not close enough to have effect on prey items or the amount of safety cover in-stream. Impacted water runoff from the mine site would be captured, stored, and treated prior to release back into Quitchupah Creek. There are no anticipated effects on water quality from the proposed action, so there would be no impact on rainbow trout, brown trout, brook trout, and aquatic macroinvertebrates from implementation of the Proposed Action.

3.4.3.3 Cumulative Effects

Direct and indirect impacts on wildlife or aquatic MIS from implementation of the Proposed Action would be negligible or none. No other activities are reasonably foreseeable that would contribute quantifiable cumulative impacts. Cumulative impacts on wildlife or aquatic MIS would also be negligible or none.

3.5 Migratory Birds

To identify species of migratory birds to be addressed in this EA, the Utah Partner's in Flight (PIF) Avian Conservation Strategy (Parrish, Howe, & Norvell, 2002) was reviewed. The Strategy identifies priority species for conservation action. These species are representatives of all other bird species and habitats, and where actions affect a priority species, they will likely affect a myriad of other bird species. Many of the priority species have been addressed under the TES and MIS sections of this EA (e.g. sage-grouse, brewer's sparrow, yellow-billed cuckoo, and American three-toed woodpecker).

Additional PIF priority species with breeding habitat in the analysis area were chosen to represent migratory birds for the purpose of this EA. Gray vireo (*Vireo vicinior*) was chosen to represent the pinyon-juniper habitats, and Virginia's warbler (*Oreothlypis virginiae*) was chosen to represent oak brush habitats. In addition, golden eagle (*Aquila chrysaetos*) is analyzed in the migratory birds section (bald eagle is analyzed as a TES). Information on these birds originates from the North American Breeding Bird Survey (BBS), an effort that monitors the status and trends of North American bird populations.

3.5.1 Analysis Area

The analysis area for migratory birds includes the 19.2 acre proposed special use permit boundary.

3.5.2 Existing Conditions

Gray Vireo: The gray vireo population trend data from the BBS database displays a stable trend for gray vireos in Utah (Sauer, et al., 2012).

Virginia's Warbler: Population trend data from the BBS database for Virginia's warbler displays a significant upward trend for Virginia's warblers in Utah (Sauer, et al., 2012).

Golden Eagle: An individual golden eagle was observed near the analysis area during a raptor nest survey conducted in spring of 2012 (Tetra Tech, 2012). Population trend data from the BBS database displays a stable trend for golden eagles in Utah (Sauer, et al., 2012).

3.5.3 Environmental Consequences

3.5.3.1 Analysis Area

The analysis area for Migratory Birds is limited to the proposed 19.2 acre special use permit boundary. This analysis area is adequate for evaluating direct and indirect effects because the project will not disturb migratory birds outside this boundary.

3.5.3.2 Direct and Indirect Effects

No Action Alternative

The effects of the No Action Alternative would be the same for all migratory birds. It would result in no additional impacts beyond the existing disturbances associated with the active mining authorized under the current special use permit. Existing disturbances include the converted habitat at the active mine site and activities associated with an active mine, such as road and equipment noise and vehicle traffic.

Proposed Action

Impacts to gray vireo and Virginia's warbler would occur in nesting and foraging habitat, but these impacts would be so minor that the effects would be negligible.

No cliff habitat is proposed for disturbance, so there would be no direct effects on golden eagle nesting habitat. Potential indirect effects from the loss of foraging habitat are negligible as the foraging habitat within the analysis area is already degraded by existing disturbances. The Proposed Action would occur adjacent to existing disturbances; however, golden eagles foraging in the area likely already avoid these areas due to high levels of human activity and mine traffic.

It is expected that project disturbances would result in negligible direct and indirect effects to migratory birds. Therefore, there would be negligible impacts on Lewis's woodpecker, Virginia's warbler, broad-tailed hummingbird, and the golden eagle.

3.5.3.3 Cumulative Effects

There are no anticipated cumulative effects to any migratory birds from implementation of the Proposed Action because there are no measurable direct or indirect impacts to migratory birds.

3.6 Water Resources

3.6.1 Analysis Area

An evaluation of water resources was conducted for surface water bodies and stormwater runoff drainages for an area inside and surrounding the proposed special use permit boundary. Groundwater is not considered in the analysis as the Proposed Action involves surface activities. Additionally, floodplains are not discussed as the Federal Emergency Management Agency (FEMA) has mapped no floodplains in the analysis area (FEMA 2014).

3.6.2 Existing Conditions

Major drainages include the northern Mud Spring Hollow and East Spring Canyon and the southern Quitchupah Creek/Convulsion Canyon. Perennial water flows south through East Spring Canyon into Quitchupah Creek/Convulsion Canyon. Quitchupah Creek runs east and eventually flows into the Muddy River, approximately 15 miles to the southeast. SUFCO Mine has stormwater facilities to separate unimpacted stormwater from water that has been in contact with mine facilities. This impacted stormwater is stored in sediment ponds, treated and released back into the drainages.

3.6.3 Environmental Consequences

3.6.3.1 Direct and Indirect Effects

No Action Alternative

If the No Action Alternative is chosen, there would be no additional stormwater runoff associated with the Proposed Action and the development of additional pipes and open ditches would not be necessary. Stormwater would continue to be treated as it is today.

Proposed Action

Foreseeable actions include the development of pipes and open ditches to handle project related stormwater runoff. These stormwater facilities would separate unimpacted water from water that may have contacted mine facilities. The mine water may be contaminated with sediment and coal particles. The impacted water would be stored in sediment ponds, treated and released. Separation of unimpacted and impacted waters, and the treatment of potentially contaminated water would maintain the quality of water entering Quitchupah Creek. Therefore, there would be minimal effect to water quality.

3.6.3.2 Cumulative Effects

Currently, stormwater runoff from approximately 46 acres of mine facilities is captured and stored for subsequent release. The proposed action would remove an additional 76 acres from contributing to stormwater runoff. Cumulatively, the impact of these actions is that more and more of runoff from East Spring Canyon would be stored and released subsequent to storm events. This may reduce the magnitude of peak flows following storm events but could result in a longer runoff period as captured flow from mine-impacted areas are released following runoff events. Additionally, the current 46 acres and proposed 76 acres of stormwater runoff is a small percent (about 2%) of approximately 5,000 acres of stormwater runoff that comes from East Spring Canyon.

3.7 Cultural Resources

Cultural resources are sites of past human activity defined by artifacts, features (the non-portable remains of human activity) or architectural structures. The study of these sites can provide a better understanding of the lifeways and behaviors of early societies. Some sites may contain information important for research, public interpretation and use by future generations.

The analysis area for cultural resources is the proposed special use permit boundary depicted on Figure 1.2; this area contains all anticipated surface disturbances associated with the Proposed Action.

3.7.1 Analysis Area

Section 106 of the National Historic Preservation Act requires that an Area of Potential Effect (APE) be defined that is specific to the proposed undertaking. The analysis area or APE for cultural resources is the proposed special use permit boundary.

3.7.2 Existing Conditions

A Class I file search was conducted in December 2012 via the Utah Division of State History (USDH) Historical Data Management System and in March 2013 at the Fishlake National Forest office in Richfield, Utah. The file review identified seven cultural resource inventories previously conducted in the study vicinity **(Table 3.4)**. One previously recorded site, 42SV2348, has been documented within the study area. This site consists of multiple segments of historic roads. Additionally, historic GLO maps from 1891 and 1917 were reviewed to identify possible historic resources. The 1891 GLO map exhibited an unmapped area for the section encompassing the study area. The 1917 GLO map exhibited the main Convulsion Canyon road from Emery, Utah. This historic road is no longer present within the study area due to the several decades of road improvements in Convulsion Canyon.

Table 3.4. Previous Cultural Resource Inventories Conducted within One Mile of the Study Area

Report #	Author	Year	Description	Company
NFS:77-110	Berge, D.	1977	Cultural Resource Evaluation of the Southern Utah Fuel Company Transmission line	BYU
NFS:79-147	Hauck, R.	1979	Archaeological Survey in the Vicinity of Acord Lakes, Sevier County, Utah	AERC
U-94-AF-785f	Hauck, R.	1994	Quitchupah Creek Road	AERC
U-07-FS-0535f	Leonard, R.	2007	Fishlake NFS Tribal Management Plan Survey	NFS
U-08-EP-722f	Billat, S	2008	A Cultural Resource Inventory Of The Proposed West Tract Modifications Coal Lease, Old Woman Plateau Area, Fishlake National Forest, Sevier County, Utah	EarthTouch
U-11-EP-024f	Billat, S	2011	A Cultural Resource Inventory Of Seven Drill Locations Near Convulsion Canyon, SUFCO Mine, Sevier County, Utah	EarthTouch
U-12-FS-0214f	Leonard, R.	2012	Salina Creek Vegetation Manipulation Project	NFS

Source: (Billett, 2013)

A Class III pedestrian inventory was completed by EnviroWest in December 2012 and March 2013 (Billett, 2013). The cultural resource inventory examined 102 acres of land within and around the proposed special use permit boundary. The inventory area contained existing developments from the SUFCO Mine and the upgraded Quitchupah Creek Road, located in the bottom of Convulsion Canyon.

The canyon area exhibits steep slopes of Convulsion Canyon with cliff terraces. Because of the subtle nature of the cultural occupation of Convulsion Canyon, rock outcroppings, terraces, and boulders were examined for the presence of small shelters and/or rock art features which can occur in the canyon. All these areas were inventoried for potential sites. Additionally, soils within rock overhangs and undercut boulders that may contain evidence of prehistoric use were probed for cultural deposits.

The cultural resource inventory of 102 acres did not identify any new sites. The historic road (42SV2348) identified by the Class I work was re-located and site information was updated. Additionally, one isolated feature (IF-1) was found during the inventory which consists of a historic rock art element of several black lines situated on a large boulder on the north slope of Convulsion Canyon. Isolated finds usually do not contain enough information to be eligible for inclusion in the National Register of Historic Places (NRHP) and as such, they are not subjected to the NRHP evaluation process or protected from project activities.

Site 42SV2348 lacks integrity and in Billet's 2013 cultural resource report, Billet recommended this site was not eligible for inclusion in the National Register. Robert Leonard, of the Fishlake National Forest, submitted the 2013 cultural resource report to the Utah State Historic Preservation Office (SHPO) and received a letter in June 2013 that stated SHPO concurred with the determination that site 42SV2348 is not eligible for inclusion in the National Register.

3.7.3 Environmental Consequences

3.7.3.1 Direct and Indirect Effects

No Action and Proposed Action

No significant cultural resources have been identified in the analysis area. One historic road (42SV2348) has been documented; however, this site is recommended as not eligible to the National Register. As mentioned above, this site is no longer present within the study area due to the several decades of road improvements in Convulsion Canyon.

There will be no anticipated direct or indirect effects on cultural resources from expansion of the special use permit boundary and associated mining activities as no significant sites have been identified in the analysis area.

The Hopi Tribe did not identify any potential issues during the project scoping process beyond some recommendations for protection of any prehistoric cultural features or deposits encountered during project activities. Additionally, the tribe expressed a desire to be appraised of any prehistoric cultural resources that may be adversely affected by mining activities.

3.7.3.2 Cumulative Effects

Cultural resources have the potential to be impacted by surface disturbances associated with past and reasonable foreseeable future actions related to mining activity. To date, no eligible cultural resources have been identified in the proposed special use permit area. If any subsurface cultural deposits are exposed during mining activities, action would be taken to determine eligibility to the NRHP. If a site is determined eligible to the NRHP, mitigation (such as excavation) may occur before mining activities continue. Following this strategy, there will be no cumulative effects.

3.8 Land Use

3.8.1 Analysis Area

This section provides a general description of the existing environment in the project area vicinity and then focuses on a variety of land uses that includes range, recreation, and mining.

3.8.2 Existing Conditions

The project area is on National Forest System lands. A checkerboard block of BLM, State and privately owned parcels is located about a mile to the east and a large block of private lands is located two miles to the west of the proposed special use permit boundary. The project area is also situated eight miles west of the town of Emery and 24 miles east of Salina. Major transportation routes in the vicinity include the east-west trending Interstate 70 which is about 10 miles south of the project area. State Highway 10 branches off Interstate 70 and heads northeast to the town of Emery.

Range: The *Fishlake National Forest Land and Resource Management Plan* (USFS, 1986) inventories renewable resources within the forest and develops a program for use of these resources. The Fishlake National Forest is divided into 19 management areas which each have a specific emphasis. The project area falls into Management Area 6B, Intensive Livestock Management.

The Fishlake National Forest has 82 grazing allotments covering 1,803,862 acres. The analysis area is situated within the Quitchupah allotment. Five permittees use this allotment (Christensen, 2013). The grazing allotment season of use extends from June 11th to September 30th and limits head of cattle to 813 plus calves.

Livestock movement within the Quitchupah allotment is directed by fences, natural slope and terrain barriers, and Quitchupah Creek (USFS and BLM, 2006). Within the analysis area, livestock herds are pushed by permittees who are moving their cattle out of Quitchupah Creek to higher elevation Fishlake National Forest lands for the summer. The permittees are ranchers who live in the area and traditionally take turns herding their cattle up the Quitchupah Creek drainage, along the existing dirt road, to the Convulsion Canyon trail. Trailing takes a few days at the beginning and end of the summer season.

Sevier County has upgraded, realigned and paved USFS Road 006 thus making Quitchupah Creek Road a county road. An underpass has been installed under the road to assist the livestock trailing at the beginning and end of each season; this feature is located west and outside the analysis area.

Recreation: Recreational use of the analysis area has centered around the operation of all-terrain vehicles (ATV) on USFS Road 006, which runs along Quitchupah Creek, and the Forest Service Road that runs north up East Spring Canyon. These roads are used by individual local riders and by organized clubs, including the Southeastern Utah Off-Highway Vehicle Club (USFS and BLM, 2006). Club members have used USFS Road 006 seasonally between April 15th and November 15th. This road is also important to local riders who use the road year-round, weather permitting, and because it is one of the few ways that ATVs can access Forest lands from Emery County.

Sevier County has recently upgraded, realigned and paved USFS Road 006 (Quitchupah Creek Road). This improved road is owned and maintained by the county. The cattle underpass also benefits ATV riders along Quitchupah Road.

Mining: Coal is the only leasable mineral produced on the Fishlake National Forest and the SUFCO Mine has been in continuous operation since 1941. The mine began as a room and pillar operation and switched over to a longwall mining operation in 1985. SUFCO Mine is the largest single coal producer in the state of Utah and supplies coal to major power plants in Utah, Nevada, California and the Midwest (USFS and BLM, 2006). Additionally, the mine is considered an industry leader in efficiency as SUFCO produces coal at the rate of nearly 100 tons per man-shift compared to the industry average in Utah of 50 tons per man shift (SUFCO Mine Information and Data Book). SUFCO Mine is the largest private employer in Sevier County. Currently, the mine employs 360 people and of this number, 224 staff members reside in Sevier County.

SUFCO coal has value due to its low ash and sulfur content; electrical power generating plants buy this coal to mix with lower quality coal (high ash coal) in an effort to reduce emissions of environmentally hazardous materials and maintain compliance with air quality permit requirements (USFS and BLM, 2006). Currently, SUFCO Mine has limited ability to blend low ash and high ash coal to meet customer requirements.

3.8.3 Environmental Consequences

3.8.3.1 Analysis Area

The analysis area for Land Use is restricted to the proposed special use permit boundary.

3.8.3.2 Direct and Indirect Effects

No Action Alternative

Range: If the No Action Alternative is preferred, no development will occur along Quitchupah Creek and cattle will continue to move through Quitchupah Creek drainage as they do today.

Recreation: Under the No Action Alternative, ATV riders would continue to use roads and trails throughout the mine area as they do today as no development associated with permit expansion would occur.

Mining: With the No Action Alternative, SUFCO Mine would not be able to develop coal load out facilities, coal storage piles, and support infrastructure necessary to segregate coal by quality. The mine would not be able to improve the quality of the coal and saleable coal reserves by blending higher ash coal with lower ash coal to meet customer needs.

Proposed Action

Range: With implementation of the foreseeable actions, facility development would occur and facility roads would intersect Quitchupah Creek Road at two locations (**see Figure 1.2**). At these locations, SUFCO Mine plans to install cattle guards to keep livestock from wandering onto facility roads. Additionally, during Quitchupah Creek Road construction, a 20-ft. clear path on the north edge of the road was developed to keep cattle off the road. Any gates introduced along Quitchupah Creek Road would be chained but unlocked. Gates would be closed or left open upon the discretion of individual ranchers. There would be minimal impact on allotment permittees who traditionally move their cattle through Quitchupah Creek drainage as livestock access would still be provided.

Recreation: Under the Proposed Action, the development of coal load out facilities, coal storage piles, and support infrastructure would occur. Along Quitchupah Creek Road, cattle guards would be installed and a path that bypasses the cattle guards would be established. No development would

occur along existing Forest Service Road 2106 that heads north up East Spring Canyon. With implementation of the Proposed Action, there would be minimal impact on the ability of ATV riders to use roads in the proposed special use permit area.

Mining: With modification of the existing special use permit and with approval from DOGM, SUFCO Mine would be able to develop the necessary facilities and infrastructure to segregate coal by quality thus improving the quality of the coal and saleable coal reserves by blending higher ash coal with lower ash coal. Overall, the mine productivity and saleable coal reserves would be maintained at their current levels.

3.8.3.3 Cumulative Effects

SUFCO Mine has been a steady presence in Sevier County for 70 years and it is likely the mine will continue to grow as coal-fired electrical generation plants in the Midwest and East have an increased need for low-sulfur, high-quality coal to meet the requirements of the Clean Air Act (USFS and BLM, 2006).

The potential for vehicle/coal truck-livestock collisions would continue. However, this danger has been, and will undoubtedly continue to be, a risk in the past, present and future. Open range law prescribes compensation for livestock loss so local ranchers would not be overly impacted. Past and proposed livestock improvements reinforce the 100-year old tradition of moving cattle through Quitchupah Creek drainage to high-elevation Forest Service lands in the summer.

Past, present and reasonably foreseeable future actions, including implementation of the Proposed Action, will have minimal conflict with ATV riders using the network of roads around SUFCO Mine. There would be minimal cumulative effects to recreationists, notably ATV riders, who use the roads in the proposed special use permit area.

Coal use in the United States has been a concern for years as over 70% of our electricity comes from burning fossil fuels, mainly coal and natural gas. Of the economic sectors, electricity production accounts for the greatest percent (33%) of all 2011 greenhouse gas emissions (EPA, 2013). However, the Proposed Action is extremely small in scope and magnitude. Construction of the proposed facilities would result in a temporary small-scale increase in greenhouse gas emissions during the construction phase; however, once the facilities are completed, greenhouse emissions would remain at their current level associated with current mining activity, transportation, and sorting of coal. Although, it may be possible to quantify the direct amount of greenhouse gas emissions for this project, there is no way to analyze the intensity of the effects on climate change. Effects from the project's greenhouse gas emissions would not be noticeable at the local, regional, or global scale.

4.0 Agencies and Persons Consulted

The NEPA process requires coordination with other entities to reach mutually agreed upon decisions. The Forest Service consulted with individuals, State and Local agencies, and tribes during the development of this environmental assessment. Consultation took the form of a scoping document, Notice of Proposed Action, and maps that described the proposed project and detailed how to get involved in the NEPA process.

In addition to the scoping document, a legal notice for Notice of Proposed Action - Opportunity to Comment was published in the Richfield Reaper, the FS newspaper of record for the project area, on Wednesday, March 19, 2014. Project information was also posted on the FS's Schedule of Proposed Actions (SOPA) website (http://www.fs.usda.gov/goto/fishlake/projects). Four comments were received from the public in response to scoping. Sevier County expressed support for the project, citing economic importance and SUFCO's past record as a great land steward. A second comment from a Quitchupah Allotment permittee focused on the concern that the cattle trail along the SUFCO haulage road (Quitchupah Creek Road) be kept open to facilitate unhindered movement of cattle to and from Fishlake National Forest lands. A third comment originated from the Hopi Tribe and requested the tribe be kept informed about any prehistoric sites that may be impacted by project activities. Additionally, the tribe recommended that activities be discontinued with the discovery of cultural features, deposits, human remains or funerary objects, and that appropriate agencies be contacted if any discoveries occur. The final comment originated from The Utah Environmental Congress and concerned a request for the completion of an environmental impact statement as they thought the project would destroy 100 acres and be located up to 12 miles from the mine. This group was also concerned about carbon dioxide emissions from the burning of coal. No comments were received from the public in response to the Notice of Proposed Action – Opportunity to Comment.

This EA was prepared by the consultants listed in **Table 4.1.** This table also presents US Forest Service personnel, along with their area of expertise or job title, who reviewed this document.

Table 4.1. List of Preparers and Reviewers

Name	Title/Firm	Responsible for the Following Section(s) of this Document
Thad Jones	Ecologist, Tetra Tech, Inc.	Vegetation, TES Plants
Matt Cambier	Biologist, Tetra Tech, Inc.	TES Wildlife, MIS, and Migratory Birds
Daniel Earnest	Geologist, Tetra Tech, Inc.	Water Resources
Lynn Peterson	Cultural Resource Specialist, Tetra Tech Inc.	Cultural Resources and Land Use
Cameo Flood	NEPA Specialist, Tetra Tech, Inc.	Project Manager
Marianne Orton	US Forest Service	Environmental Coordinator
Sean Kelly	US Forest Service	Wildlife Biologist
Dave Tait	US Forest Service	Botanist
Dave Christensen	US Forest Service	Recreation
Jim Whelan	US Forest Service	Aquatics
Adam Solt	US Forest Service	Hydrology/Soils
Bob Leonard	US Forest Service	Archaeology
Jason Kling	US Forest Service	Richfield District Ranger

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