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**NATURAL RESOURCES ASSESSMENT
TROUT CREEK RESERVOIR
ROUTT COUNTY, COLORADO**

Prepared for—

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ERO Project #4569

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NOVEMBER 24, 2009

Introduction

Peabody Energy is proposing to construct a dam and reservoir on Trout Creek in Routt County, Colorado. On October 27 and 28, 2009, Leigh Rouse and Moneka Worah, ecologists with ERO Resources Corporation (ERO), visited the proposed Trout Creek Reservoir site to determine potential natural resource concerns (2009 site visit). During this preliminary assessment, ERO completed a review of potential wetlands, identification of potential federally threatened and endangered species habitat, and identification of other natural resources that might affect the proposed project. Jurisdictional wetland delineations were not conducted during the 2009 site visit.

Site Location

The project area is located within Sections 1 and 12, Township 5 North, Range 86 West; and Sections 6 and 7, Township 5 North, Range 85 West of the 6th Principal Meridian in Routt County, Colorado (Figure 1). The UTM coordinates of the approximate center of the project area are 332398mE and 4475413mN, Zone 13 North. The latitude/longitude is 40.41248°N/106.97535°W. The elevation of the site is 6,600 feet above sea level.

Wetlands and Waters of the U.S.

Regulatory Background

The Clean Water Act (CWA) protects the physical, biological, and chemical quality of waters of the U.S. The U.S. Army Corps of Engineers' (Corps) Regulatory Program administers and enforces Section 404 of the CWA. Under Section 404, a Corps permit is required for the discharge of dredged or fill material into wetlands and waters of the U.S. The Corps defines waters of the U.S. as all navigable waters and their tributaries, all interstate waters and their tributaries, all wetlands adjacent to these waters, and all impoundments of these waters. As a result of the 2001 ruling by the Supreme Court in the matter of *Solid Waste Agency of Northern Cook County vs. U.S. Army Corps of Engineers*, 531 U.S. 159 (S.Ct. 2001), the Corps' regulatory jurisdiction over isolated, nonnavigable,

intrastate waters has been eliminated if the sole nexus to interstate commerce was use of the waters by migratory birds. In 2006, the Supreme Court ruled in the consolidated cases of *Rapanos v. United States* and *Carabell v. U.S. Army Corps of Engineers* (Rapanos), which questioned the scope of the Corps' jurisdiction over wetlands associated with ephemeral and intermittent drainages and man-made ditches and canals. On June 5, 2007, the Corps issued guidance on the Supreme Court ruling stating that the Corps would consider traditionally navigable waters (TNWs), wetlands adjacent to a TNW, and tributaries to TNWs that are relatively permanent waters (RPWs), and their abutting wetlands, to be jurisdictional waters. Other wetlands and waters would require a determination that the wetland or tributary would have an effect that is more than speculative or insubstantial on the chemical, physical, or biological integrity of a TNW to be jurisdictional (significant nexus determination). A significant nexus evaluation assesses the flow characteristics and functions of a tributary and its adjacent wetlands to determine if they significantly affect the chemical, physical, or biological integrity of downstream TNWs.

Site Conditions and Recommendations

Trout Creek, a perennial stream shown on the U.S. Geological Survey Cow Creek topographic quadrangle, flows south to north within the project area (Figure 1). Middle Creek, an intermittent stream shown on the U.S. Geological Survey Routt topographic quadrangle, is in the western portion of the project area and has its confluence with Trout Creek in the center of the project area. Trout Creek has a connection to the Colorado River, a known jurisdictional water of the U.S.; both streams are jurisdictional waters of the U.S. subject to Corps' jurisdiction.

ERO reviewed the project area and mapped approximate wetland boundaries using aerial photo interpretation. ERO mapped 94 acres of wetlands and 12 acres of streams within the project area (Figure 2). The wetlands were mapped based on vegetation and hydrology. A majority of the mapped wetlands are associated with Middle Creek and Trout Creek and would likely be under the Corps' jurisdiction. A portion of the wetlands may be supported by irrigation. Wetlands supported solely by irrigation are not under the Corps' jurisdiction; the burden of proof, however, is on the land owner. Irrigation must be removed long enough

for wetlands to lack wetland indicators, such as hydrophytic vegetation or supportive wetland hydrology.

If the proposed project requires the placement of dredged or fill material into jurisdictional wetlands or other waters of the U.S., authorization under Section 404 of the CWA is required. An Individual Permit for the proposed project would be required under Section 404 of the CWA.

Federal Threatened, Endangered, and Candidate Species

ERO assessed the project area for potential habitat for threatened, endangered, and candidate species listed under the Endangered Species Act (ESA). Federally threatened and endangered species are protected under the ESA. Adverse effect to a federally listed species or its habitat requires consultation with the U.S. Fish and Wildlife Service (Service) under Section 7 or 10 of the ESA. The Service lists several threatened and endangered species with potential habitat in Routt County, or potentially affected by projects in Routt County (Table 1).

Table 1. Federally threatened, endangered, and candidate species potentially found in Routt County or potentially affected by projects in Routt County.

Common Name	Scientific Name	Status [†]	Habitat	Suitable Habitat Present in Project Area
Mammals				
Canada lynx	<i>Lynx canadensis</i>	T	Climax boreal forest with a dense understory of thickets and windfalls	No
Birds				
Yellow-billed cuckoo	<i>Coccyzus americanus</i>	C	Open woodlands with clearings and dense scrubby vegetation, often along water	No
Fish				
Bonytail [†]	<i>Gila elegans</i>	E	Yampa, Green, and Colorado rivers	No, but species may be affected by depletions to the Colorado River
Greenback cutthroat trout [†]	<i>Oncorhynchus clarki stomias</i>	T	Cold, clear, gravel headwater streams and mountain lakes	Yes
Colorado pikeminnow [†]	<i>Ptychocheilus lucius</i>	E	Pools, deep runs, and eddy habitats in the Green River and upper Colorado River basin	No, but species may be affected by depletions to the Colorado River

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Common Name	Scientific Name	Status*	Habitat	Suitable Habitat Present in Project Area
Humpback chub [†]	<i>Gila cypha</i>	E	River canyons in and upstream of the Grand Canyon	No, but species may be affected by depletions to the Colorado River
Razorback sucker [‡]	<i>Xyrauchen texanus</i>	E	Green River, upper Colorado River, San Juan River, lower Colorado River	No, but species may be affected by depletions to the Colorado River

*T = Federally Threatened Species, E = Federally Endangered Species, C= Federally Candidate Species.

†Water depletions in the Upper Colorado River may affect the species and/or critical habitat in downstream reaches in other states and counties.

‡Recent genetic tests identified cutthroat population as greenback lineage; therefore, consultation with the Service is an interim measure until genetic and taxonomic issues are resolved.

Source: Service 2009.

The proposed project would not directly affect the Canada lynx or yellow-billed cuckoo because of the lack of suitable habitat in the project area. Trout Creek is potential habitat for the greenback cutthroat trout, and consultation with the Service is recommended. The bonytail, Colorado pikeminnow, humpback chub, and razorback sucker are species that are affected by water depletions from the upper Colorado River. Because the proposed project includes activities that would deplete water in the upper Colorado River, these species could be affected by the project and a Section 7 consultation with the Service would be required once a project triggers a federal action, such as a Section 404 permit.

NEPA and Permitting Process

Because the proposed project probably requires authorization under Section 404 of the CWA for placement of dredged or fill material into wetlands and other waters of the U.S. and other federal permits are not foreseen, the Corps will likely be the lead agency for the proposed project. Once a project triggers a federal action, it must comply with the National Environmental Policy Act (NEPA). The U.S. Environmental Protection Agency (EPA) describes the NEPA process as follows (EPA 2009):

The NEPA process consists of an evaluation of the environmental effects of a federal undertaking including its alternatives. There are three levels of analysis depending on whether or not an undertaking could significantly affect the environment. These three levels include: categorical exclusion determination; preparation of an environmental assessment/finding of no significant impact (EA/FONSI); and preparation of an environmental impact statement (EIS).

At the first level, an undertaking may be categorically excluded from a detailed environmental analysis if it meets certain criteria which a federal agency has previously determined as having no significant environmental impact. A number of agencies have developed lists of actions which are normally categorically excluded from environmental evaluation under their NEPA regulations.

At the second level of analysis, a federal agency prepares a written environmental assessment (EA) to determine whether or not a federal undertaking would significantly affect the environment. If the answer is no, the agency issues a finding of no significant impact (FONSI). The FONSI may address measures which an agency will take to reduce (mitigate) potentially significant impacts.

If the EA determines that the environmental consequences of a proposed federal undertaking may be significant, an EIS is prepared. An EIS is a more detailed evaluation of the proposed action and alternatives. The public, other federal agencies and outside parties may provide input into the preparation of an EIS and then comment on the draft EIS when it is completed.

An EA documents potential environmental impacts from a proposed project and assesses whether any design changes are necessary to prevent significant environmental effects. The EA includes a description of the purpose and need for the proposed project, an alternatives analysis, environmental impacts, and a list of all agencies consulted during preparation of the EA. The preparation of the EA and issuance of the FONSI can take several months to more than 1 year.

If the Corps determines the proposed project will have significant environmental effects, then the Corps prepares an EIS. EIS preparation is typically done through a third-party contractor working under the Corps' direction. The EIS provides the Corps with a thorough analysis of environmental impacts, alternatives analysis, and mitigation measures. The EIS must assess direct, indirect, and cumulative effects from the proposed project. The timeline for preparing an EIS is anywhere from 1 year to several years.

An Individual Permit is required for any impacts to jurisdictional wetlands or other waters of the U.S. that exceed the thresholds of Nationwide Permits. The Corps is required to evaluate each Individual Permit application to determine if the proposed plan is the least environmentally damaging, practicable alternative. Once the Corps receives the Individual Permit application, a public notice is distributed to all known interested persons or agencies.

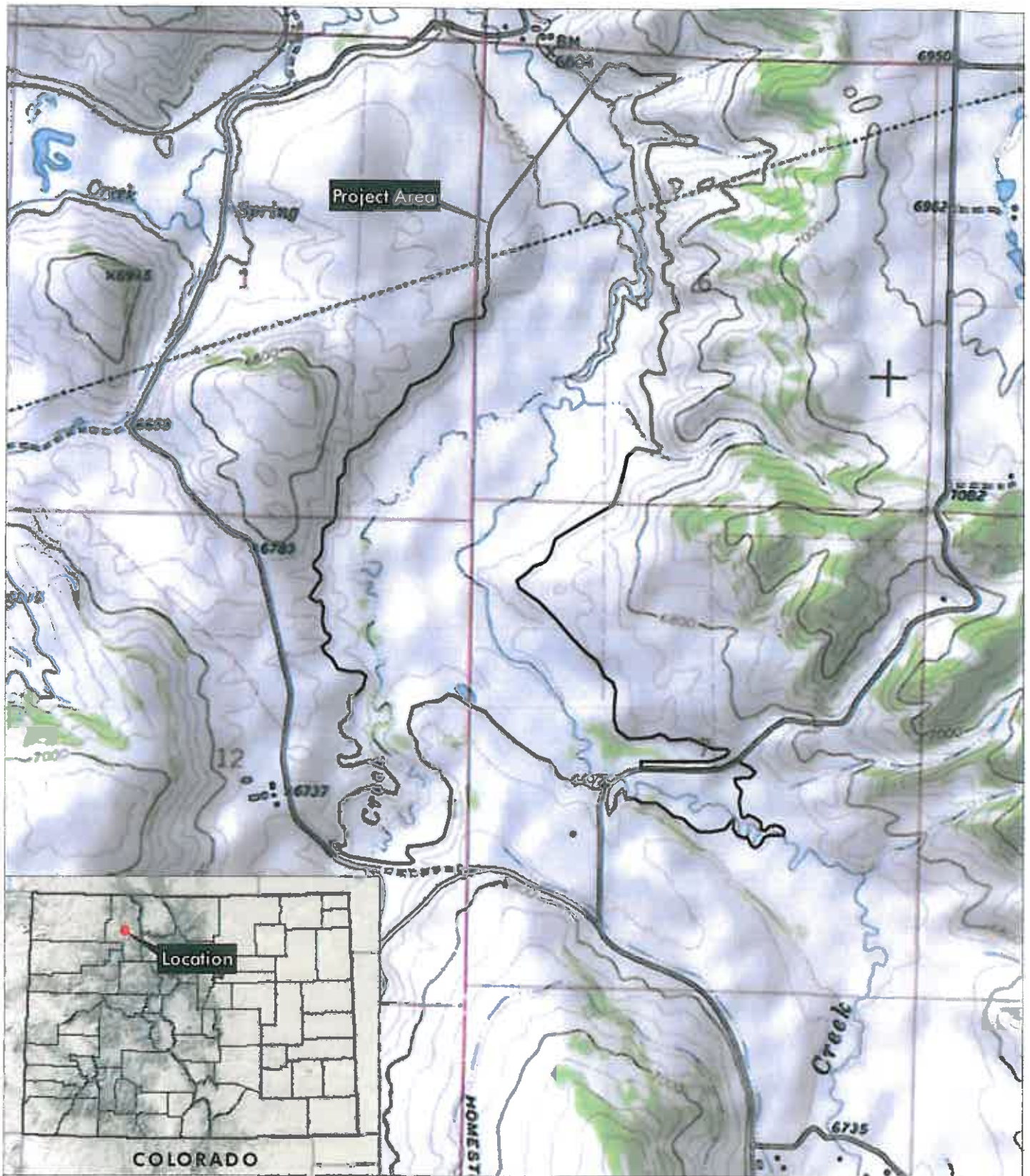
After evaluating all comments and information received, the Corps makes a final decision on the application. The general timeline for an Individual Permit is 4 to 8 months; however, it can take longer if significant issues are associated with the proposed project.

Recommended Actions

ERO recommends meeting with the Corps to evaluate the preliminary mapping of wetlands and other waters of the U.S. and determine what level of NEPA analysis would be required for the proposed project. Once the NEPA process is determined, ERO recommends conducting jurisdictional wetland delineations in the spring, based on Corps recommendations.

References

- U.S. Environmental Protection Agency (EPA). 2009. NEPA Basic Information —The NEPA Process. Available at:<http://www.epa.gov/compliance/basics/nepa.html>. Last updated: March 13, 2009.
- U.S. Fish and Wildlife Service (Service). 2009. Endangered, Threatened, Proposed and Candidate Species, Colorado Counties. Available at: <http://www.fws.gov/mountain-prairie/endspp/CountyLists/Colorado.pdf>. Last updated: June 2009.



Trout Creek Reservoir

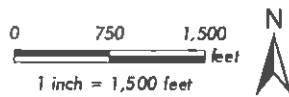
Sections 1 and 12, T5N, R86W; Sections 6 and 7 T5N, R85W; 6th PM

UTM NAD 83: Zone 13N; 332398mE, 4475413mN

Latitude, Longitude: 40.41248°N, 106.97535°W

USGS Cow Creek, CO Quad.; Rout County, Colorado

**Figure 1
Site Location**



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File: ##### figure 1.mxd [d1H]
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