

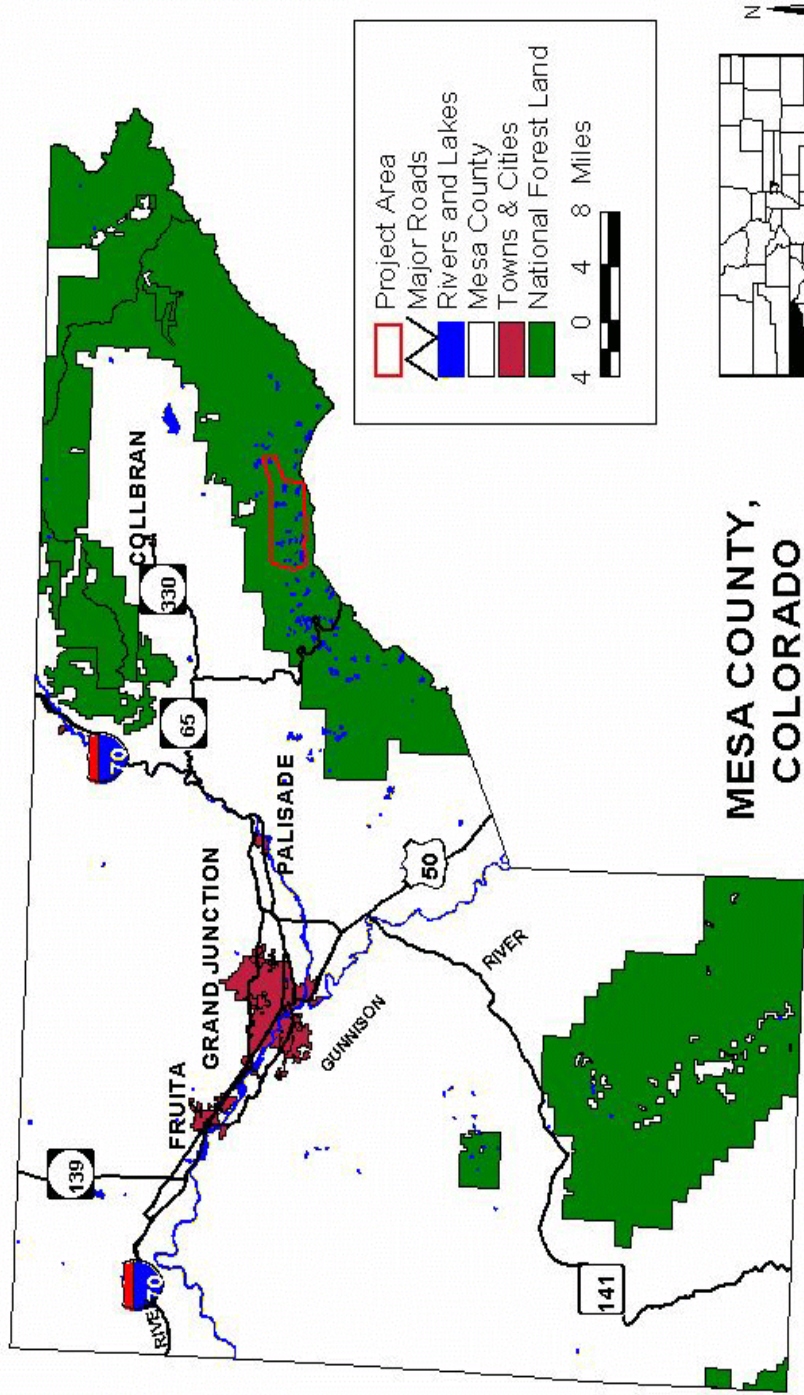
**COLLBRAN PROJECT
ROCK AND SOIL SOURCES**

**PRE-DECISIONAL
ENVIRONMENTAL ASSESSMENT**

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MESA COUNTY, COLORADO

VICINITY MAP - COLLBRAN PROJECT ROCK AND SOIL SOURCE

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CHAPTER 1 - INTRODUCTION

Need for and Purpose of Action

This Pre-Decisional Environmental Assessment (EA) discusses developing four (4) rock and soil sources (borrow pits) by the Bureau of Reclamation (Reclamation) for use in operation and maintenance of fifteen privately owned reservoirs on the Grand Mesa National Forest, Mesa County, Colorado. Reclamation prepared this EA in cooperation with the U.S. Forest Service (Forest Service) to comply with the National Environmental Policy Act (NEPA), Endangered Species Act, and related U.S. Department of Agriculture and Department of Interior policies and regulations. If based on this analysis, the Forest Service concludes the proposed action would have no significant impact on the human environment, preparation of an environmental impact statement would not be required before the action could be implemented.

In 1957 under contracts with the Collbran Conservation District and the reservoir owners, the United States agreed to operate and maintain the private reservoirs associated with the Collbran Project. A need has been identified to provide a long-term (up to 10 years) source of rock and soil material for the operation and maintenance of fifteen private reservoirs. Rock and soil sources need to be close to the reservoirs to allow for easy access and reduce hauling costs. The purpose of the proposed action is to allow for the operation and maintenance of the reservoirs under contract by Reclamation.

The Collbran Project, in west-central Colorado, developed, for multiple purposes, a major part of the unused water in Plateau Creek and its principal tributaries. Supplemental irrigation service is furnished to approximately 21,000 acres. Electrical energy is also generated. Major project works include Vega Dam and Reservoir, two powerplants, two major diversion dams, about 37 miles of canal, and about 18 miles of pipeline and penstock. East Fork Diversion Dam and Feeder Canal, along with the Bonham-Cottonwood Collection System, carry water to Bonham Reservoir, which supplies water to operate the Molina powerplants. The project also rehabilitated and modified the operation of 17 small privately owned storage reservoirs on the Grand Mesa situated in the Cottonwood Creek and Big Creek watersheds. Two of the reservoirs, Blackman and Currier, were subsequently breached. Fifteen reservoirs now provide water for power generation through the exchange of storage water on Grand Mesa for irrigation water from Vega Reservoir.

Authority

Soil and rock fall in the category of mineral materials under Forest Service regulations (36 CFR 228.41(c)). The Forest Service policy is to make mineral materials on National Forest Lands available to the public and to local, State and Federal agencies (36 CFR 228.43). The Forest Service is authorized to dispose of mineral materials under the Materials Act of July 31, 1947, as amended. The proposed development of these sources for borrow and riprap falls under authority given in 36 CFR 228.41(c)(4), Construction Materials. The disposal of the mineral

materials proposed by Reclamation would be handled as a single entry source under 36 CFR 228.42. The disposal of mineral materials on National Forest System Lands occurs at the discretion of the Forest Service.

The GMUG Land and Resource Management Plan (Forest Plan) calls to consider authorizing common variety mineral disposal under terms and conditions to prevent or control adverse impacts on surface resources and uses (Forest Plan, page III-64). The Forest Plan further identifies that reclamation objectives will be to return the land to the planned uses.

Background Information

Forest Service and Reclamation MOU

In 1959, Reclamation and the Forest Service entered into a Memorandum of Understanding (MOU) in regards to the construction of the Collbran Project. The Forest Service granted Reclamation permission to construct, operate and maintain the Bonham-Cottonwood Pipeline, the Upper Molina Penstock, and East Fork Feeder Canal; and reconstruct, rehabilitate, operate and maintain existing reservoirs on the Big Creek-Cottonwood Creek drainages. The Forest Service also granted Reclamation the right to construct access roads where needed to perform construction work and the right to borrow materials where available for construction purposes.

Reclamation agreed to establish contact with the Forest Supervisor for use and occupancy of national forest lands, and obtain review and approval by the Forest Supervisor of proposed location and plans for access roads, borrow areas, or construction work areas.

Scoping

Public input on the proposed development of the rock and soil sources was requested through a scoping letter, a news release and a public notice. A scoping letter was sent to 18 interested parties on August 23, 2000 (project file). A news release appeared in the *Plateau Valley Times* on August 28, 2000 (project file), and a public notice appeared in the *Grand Junction Daily Sentinel* on August 22, 2000 (project file). Each asked for public comments to be submitted on the proposed project. No public comments were received.

The alternatives discussed in Chapter 2 are **No Action** and **Proposed Action**. The proposed action would establish four rock and soil sources (borrow pits) to provide materials for operation and maintenance of the fifteen private reservoirs.

Issues and Concerns

Each issue and concern described below is discussed in Chapter 3. More information on scoping activities is included in Chapter 4.

Recreation Resources

Public Use of the National Forest - The Grand Mesa National Forest provides numerous recreational opportunities including fishing, hunting, camping, hiking, snowmobiling and cross country skiing. The forest is heavily used by the public. The proposed project should limit potential conflicts with recreational uses.

Land and Facility Resources

Timber Harvesting Activities - Coordination is needed with the Forest Service to avoid potential conflicts with timber harvesting activities.

Noxious Weed Control - Weed control activities are needed to prevent the spread of noxious weeds.

Pit Plan - The Forest Service needs to review and approve a “Pit Plan” prepared by Reclamation that specifies how each site will be used and reclaimed.

Fish and Wildlife Resources

Forest Service Sensitive Species - In addition to species listed on the Federal Threatened and Endangered Species list, impacts to species considered sensitive by the Forest Service must be evaluated.

Transportation and Access

Off-Road Usage and Trespass - The use of off-road vehicles is prohibited in most of the Grand Mesa National Forest. The Forest Service has expressed concerns about creating temporary roads that become used by off-road vehicles.

CHAPTER 2 - ALTERNATIVES

This chapter describes the **No Action** and the **Proposed Action** alternatives for providing rock and soil materials for the operation and maintenance of fifteen (15) privately owned reservoirs (reservoirs) in association with the Collbran Project. Alternatives that were eliminated from detailed analysis are also discussed.

No Action

Under this alternative, the Forest Service would not take action to permit Reclamation to develop four (4) rock and soil sources to provide material for the operation and maintenance of the reservoirs. Rock and soil materials would be acquired from other sources and transported considerable distances to the project sites and would significantly increase operation and maintenance costs.

Proposed Action

Under this alternative, the Forest Service would issue a “minerals use permit” to Reclamation to develop four rock and soil sources to provide materials for the operation and maintenance of the reservoirs.

Reclamation proposes to develop four rock and soil source sites (See Figure 1) including the following:

1. Cottonwood #5 Rock and Soil Source Site
2. Bonham Pipeline Rock and Soil Source Site
3. East Fork Rock and Soil Source Site
4. Lambert Rock and Soil Source Site

With exceptions to the Lambert Rock and Soil Source Site, each site was previously used as a rock and soil source in the 1970s during the construction of the Collbran Project. Each rock and soil source is described in greater detail below.

Cottonwood #5 Rock and Soil Source Site:

The Cottonwood #5 Rock and Soil Source Site was used in the 1970's to provide materials for various construction activities on the Grand Mesa associated with the Collbran Project. The site is located about 0.1 mile northwest of Cottonwood #5 Reservoir. The site is located at the end of and would be accessed using Forest Service Road 258.1B. The proposed action would to remove up to 5,000 cubic yards of soil material from a 1.4 acre site within a 10 year period.

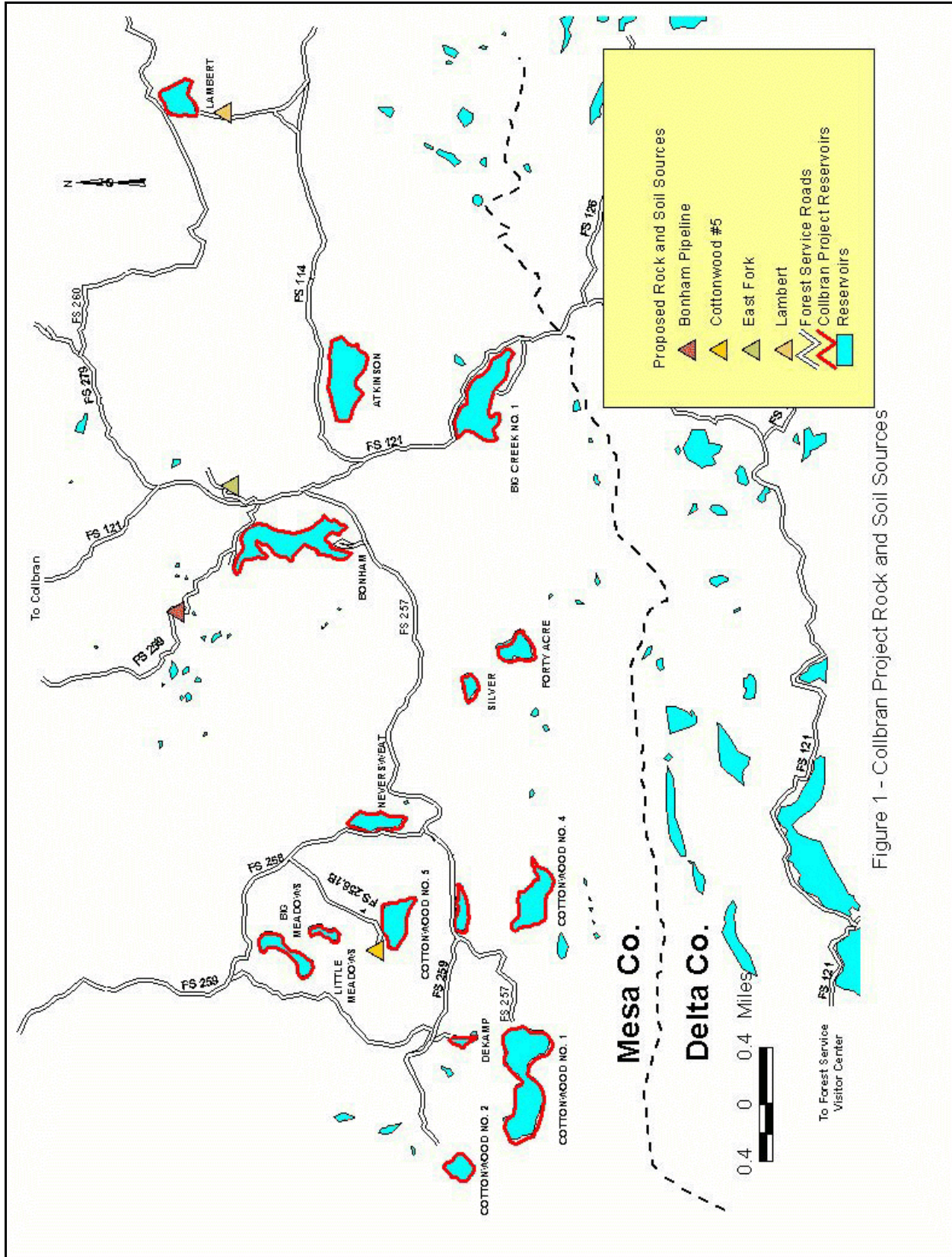


Figure 1 - Collbran Project Rock and Soil Sources

Bonham Pipeline Rock and Soil Source Site:

The Bonham Pipeline Rock and Soil Source Site was used in the 1970's for various construction activities on the Grand Mesa associated with the Collbran Project.. The site is approximately ½ mile northwest of Bonham Reservoir. The site is located along the south side of and would be accessed using Forest Service Road 259. The proposed action would remove up to 5,000 cubic yards of rock riprap and 2,500 cubic yards of soil material from a 2.75 acre site within a 10 year period.

East Fork Rock and Soil Source Site:

The East Fork Rock and Soil Source Site was also used in the 1970's in conjunction with the Collbran Project. The site is approximately ½ mile east of Bonham Reservoir along a gated dirt road used to access the East Fork Diversion Dam and Feeder Canal from Forest Service Road 121. The proposed action would remove up to 5,000-cubic yards of soil material and 1,000 cubic yards of rock riprap material from a 0.5 acre site within a 10 year period.

Lambert Rock and Soil Source Site:

The Lambert Rock and Soil Source Site would be a new site. The area has been previously disturbed for timber harvesting. The site is approximately 1/8 mile southwest of Lambert Reservoir. The site is located on the south side of a logging road developed for timber sale activities. The site would be accessed using Forest Service Road 114 to the logging road. An existing skid trail approximately 1/8-mile long would be used to haul material as needed to Lambert Reservoir. The proposed action would remove 5,000-cubic yard of material from a 2.75 acre site within a 10 year period.

Alternatives Eliminated from Analysis

The Forest Service and Reclamation considered the following alternatives to provide rock and soil materials for operation and maintenance of the reservoirs, but eliminated them from detailed analysis for the following reasons:

1. Acquiring rock and soil sources from private sources.

There are currently no private sources of rock and soil material on the Grand Mesa that could provide the needed materials. Using private sources would require long hauling distances and make the operation and maintenance of the reservoirs financially infeasible.

2. Developing rock and soil sources in other locations on the National Forest.

This alternative was eliminated because the National Forest is managed for multiple use and could result in conflicts with other uses of the forest (fishing, hiking, etc.).

Environmental Commitments

The proposed action includes measures as needed to:

- reduce soil erosion and protect water quality
- control of noxious weeds
- road closures as prescribed by the Forest Service

Reclamation would develop a “Pit Plan” approved by the Forest Service which would outline pit reclamation requirements including recontouring and revegetation.

CHAPTER 3 - AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

General

This chapter discusses resources that may be affected by actions taken to provide rock and soil source material for operation and maintenance activities associated with fifteen private reservoirs on the Grand Mesa. During the preparation of this Draft EA, information on issues and concerns was received from affected users, resource agencies, private interests, recreation interest groups and citizens, and other parties (see Chapter 4, Consultation and Coordination, for further details).

For each resource, the potentially affected area and/or interests are identified, existing conditions are described, and impacts expected under the No Action and Proposed Action alternative are discussed. The chapter concludes with a summary comparison of the alternatives and a list of mitigation measures.

Mesa County has a population of about 110,000. Grand Junction, the largest city in Mesa County, was founded in 1881. The closest community to the project is the town of Collbran, Colorado which was incorporated in 1908. Collbran is a farming/recreation community with a population of around 228.

Grand Mesa National Forest

The project is in Mesa County, Colorado within the Grand Valley Ranger District of the Grand Mesa, Uncompahgre, and Gunnison National Forests. The Grand Mesa National Forest was originally established in 1892 by President Benjamin Harris as the Battlement Mesa Forest Reserve. The forest covers 351,705 acres and features the world’s largest flat-top mountain. The forest is managed for multiple use and supports about 13,000 cattle and provides about 58,000-acre-feet of water from 300 lakes (USDA 2000). The Grand Mesa National Forest is managed using the Forest Plan. The plan was adopted in 1983 and amended in 1991. A new Forest Plan for the Grand Mesa, Uncompahgre, and Gunnison National Forests is currently being developed by the Forest Service (USDA 2000).

Collbran Project

Reclamation constructed the Collbran Project in the 1960's and 1970's. The project includes both irrigation and hydropower components. Project features include Vega Dam and Reservoir, Leon-Park Feeder Canal, Southside Canal, rehabilitation of Bonham Dam and Reservoir, East Fork Diversion Dam and Feeder Canal, Bonham-Cottonwood Pipeline, Upper Molina Penstock and Powerplant, Lower Molina Penstock and Powerplant, and Substations and Transmission Lines (U.S. Department of Interior 1981). In 1957, the Bureau of Reclamation entered into agreements with the Collbran Conservancy District and private reservoir owners to exchange water from 17 private reservoirs on the Grand Mesa for water in Vega Reservoir. Under these agreements, Reclamation assumed the operation and maintenance of the reservoirs to produce electricity at the Upper and Lower Molina Powerplants.

Private reservoirs which were covered under those agreements included (See Figure 1):

1. Cottonwood Lake Reservoir #1
2. Cottonwood Lake Reservoir #2
3. Cottonwood Lake Reservoir #4
4. Cottonwood Lake Reservoir #5
5. Parker Basin Reservoir #1 (known as Neversweat)
6. Parker Basin Reservoir #2 (known as Little Meadows)
7. Parker Basin Reservoir #3 (known as Big Meadows)
8. Dawson Reservoir (known as Lambert)
9. Big Creek Reservoir #1
10. Big Creek Reservoir #3 (known as Atkinson)
11. Big Creek Reservoir #4 (known as Forty Acre)
12. Big Creek Reservoir #5 (known as Silver Lake)
13. Big Creek Reservoir #7 (known as Bonham)
14. Fred DeCamp Reservoir
15. T.E. Kitson Reservoir (known as Kitson)
16. Blackman Reservoir (breached and abandoned)
17. Currier Reservoir (breached and abandoned)

Because the private reservoirs are located within the Grand Mesa National Forests and many of the reservoirs predated the establishment of the Forest, Reclamation and the Forest Service entered into a Memorandum of Understanding. The MOU entered in 1959, addressed procedures on how the two Federal Agencies would cooperate with regards to the construction, operation, and maintenance of the Collbran Project.

Recreation Resources

The Grand Mesa National Forest was first established in 1892 to set aside timber for the United States. Over the years, the role of the National Forest has changed to become "multiple use". Recreation has become a major focus of the Forest Service providing such recreational

opportunities such as fishing, hunting, camping, picnicking, hiking, boating, swimming, skiing snowmobiling and wildlife viewing. In 1999, the Grand Mesa provided 1.1 million recreation-based-days (RBD) of recreation (USFS 2000).

In the project area, recreation is primarily dispersed with fishing at the reservoir sites, and hunting and snowmobiling in the general area. The closest developed campground is located at Cottonwood #1 Reservoir, which is about 1.5 miles from the Cottonwood #5 Rock and Soil Source Site.

The No Action alternative would limit or restrict Reclamation's ability to operate and maintain the reservoirs which over time could degrade the reservoirs and impact recreation associated with the reservoirs and potentially develop dam safety concerns which could possibly endanger the downstream public. Under the proposed action, the rock and soil sources would be used as needed, primarily during the summer months, to provide materials for general maintenance activities associated with the fifteen reservoir sites. The major recreational uses (hunting and snowmobiling) occur in the fall and winter, therefore, no conflict between recreational use and the proposed action is projected.

Land and Vegetation Resources

Timber Harvesting

The proposed borrow sites are within active or future planned timber sale areas. According to the Forest Plan, five timber sales within the project area have either occurred, are currently active, or planned in the near future. The timber sales are as follows:

Table 1. - Timber Sales within the Collbran Project Area

<u>Name</u>	<u>Dates of Sale</u>	<u>Acres</u>	<u>Harvest Prescription</u>
Leon Peak	1989-1994	854	5.4 MMBF
Englehart	1985-1994	1,300	9.8 MMBF
Big Creek	1990-1992	505	3.5 MMBF
Bonham	1995-?	700	3 to 5 MMBF
Cottonwood	1993-?	125	0.5 MMBF

The No Action alternative would have no affect on timber resources. Under the proposed action, coordination with the Forest Service may be necessary if one of the rock and soil sources is being used during an active timber sale. The Forest Service expressed concerns with heavy equipment used to transport borrow material interfering with timber hauling trucks.

Coordination with the Forest Service should address this concern and the proposed action is not projected to affect timber harvesting activities. In addition, Reclamation would be required to obtain a free timber use permit to remove about 4 trees at the Lambert site and a small group of young aspen trees and seedlings at the Bonham Pipeline site to allow heavy equipment to access each site.

Noxious Weeds

Noxious weeds are and will continue to be a major challenge for land managers in the west. The Forest Service expressed concerns about the potential to spread noxious weeds on the Forest. Reclamation has active integrated pest management programs to control noxious weeds on Reclamation lands to comply with Title 35 Article 5.5 (Colorado Noxious Weed Act). Currently noxious weeds are not a problem at the four proposed rock and soil source sites; however with increased activity, the potential for noxious weed invasion is possible. If noxious weeds become established, Reclamation will work with the Forest Service to develop appropriate control methods.

Fish and Wildlife Resources

Wildlife

The Grand Mesa National Forest supports diverse populations of fish and wildlife. The Forest provides excellent fawning, calving and summer habitat for mule deer (*Odocoileus hemionus*) and elk (*Cervus americanas*). The No Action alternative would have no affect on wildlife. Under the proposed action, wildlife may be temporarily displaced when heavy equipment is being operated; however the use of equipment will be infrequent and in short duration. The proposed action is not projected to significantly impact wildlife resources.

Fisheries

The Colorado Division of Wildlife through stocking programs has developed numerous sport fisheries of rainbow trout (*Oncorhynchus mykiss*), Colorado River cutthroat trout (*Oncorhynchus clarki pleuriticus*), Snake River cutthroat trout (*Oncorhynchus clarki* subsp.), brown trout (*Salmo trutta*), brook trout (*Salvelinus fontinalis*), splake (*namaycush* x *Salvelinus fontinalis*) and Arctic grayling (*Thynallus arcticus*) (Colorado Outdoors ND).

Table 2 shows the reservoirs within close proximity to the project area and the primary sport fisheries. The No Action alternative would limit or restrict Reclamation's ability to operate and maintain the reservoirs which over time could degrade the reservoirs and impact fish habitat associated with the reservoirs and potentially develop dam safety concerns which could possibly endanger the downstream public. The proposed action is not projected to impact fisheries resources.

Table 2 - Sport Fisheries Reservoirs

<u>Reservoir</u>	<u>Distance to Borrow Site</u>	<u>Sport Fisheries</u>
Bonham Reservoir	0.3 mi. from East Fork site	Snake River cutthroat and rainbow trout
Atkinson Reservoir	0.9 mi. from East Fork site	rainbow, cutthroat, and brook trout

Big Creek Reservoir	1.7 mi. from East Fork site	Colorado River cutthroat trout
Lambert Reservoir	0.2 mi. from Lambert site	not stocked
Cottonwood No. 5 Reservoir	0.1 mi. from Cottonwood No. 5 site	Snake River and Colorado River cutthroat, and brook trout.
Neversweat Reservoir	0.8 mi. from Cottonwood No. 5 site	rainbow and brook trout
Big Meadows Reservoir	0.5 mi. from Cottonwood No. 5 site	rainbow and brook trout
Little Meadows Reservoir	0.3 mi. from Cottonwood No. 5 site	not stocked
Cottonwood No. 4 Reservoir	1.0 mi. from Cottonwood No. 5 site	rainbow trout
Cottonwood No. 1 Reservoir	1.1 mi. from Cottonwood No. 5 site	rainbow, cutthroat, and brook trout, and splake
DeCamp Reservoir	0.8 mi. from Cottonwood No. 5 site	brook trout
Silver Lake	2.5 miles from Cottonwood No. 5 site	Colorado River cutthroat
Forty-Acre Lake	3.25 miles from Cottonwood No. 5 and Bonham Pipeline sites	brook trout
Lily Lake	1.75 miles from Cottonwood No. 5 site	rainbow and brook trout
Kitson Reservoir	0.6 mi. from Cottonwood No. 5 site	rainbow and brook trout, and Arctic grayling

Forest Service Sensitive Species

The Forest Service provided a list of 45 sensitive species that may occur within the project area or be affected by the proposed project. Each species was evaluated based on habitat type and the projects potential to affect the sensitive species (Appendix B). Both the No Action alternative and the proposed action are projected to have no affect on sensitive species.

Threatened and Endangered Species

Threatened and endangered species are plants and animals legally protected under the Endangered Species Act (ESA). This EA is designed to serve as the Forest Service's biological assessment under Section 7 of ESA. The U.S. Fish and Wildlife Service (2000) provided a list of threatened and endangered species that might be affected by the proposed project or might occur within the project area. The list is as follows:

Bald eagle	<i>Haliaeetus leucocephalus</i>	Threatened
Canada lynx	<i>Lynx canadensis</i>	Threatened
Colorado pikeminnow	<i>Ptychocheilus lucius</i>	Endangered
Razorback sucker	<i>Xyrauchen texanus</i>	Endangered
Humpback chub	<i>Gila cypha</i>	Endangered
Bonytail	<i>Gila elegans</i>	Endangered
Boreal Toad	<i>Bufo boreaus boreas</i>	Candidate

Inventories were conducted by Reclamation biologists in July/September 2000. Literature research and personal communications were also used to evaluate proposed project effects on listed and candidate species. Each species was evaluated in terms of potential project impacts and the proposed action is projected to have no affect on threatened, endangered or candidate species. The known distribution and status of these species are discussed below.

Bald Eagle

The bald eagle (*Haliaeetus leucocephalus*) was classified as endangered in 43 of the 48 contiguous states on February 14, 1978. The species was reclassified threatened by the U.S. Fish and Wildlife Service August 11, 1995 (U.S. Fish and Wildlife Service 1995b).

Life History:

The bald eagle is distinctive by its white head, white tail plumage, dark brown to charcoal black wing and body plumage, and massive yellow bill. The bald eagle ranges from 30-43 inches (75-108 cm) in height and has a wing span between 7-8 ft. Males often appear darker than females. Females are larger than males. Immature bald eagles (6 months to 2 years old) have a dusky head and tail plumage (Peterson 1990; U.S. Bureau of Reclamation 1994).

Feeding habitats are eclectic, reflecting the opportunistic behavior of large raptors. Prey include fishes, ground dwelling scuirids, waterfowl, ungulate carrion and lagomorphs (U.S. Bureau of Reclamation 1994).

Age of first breeding is commonly assumed to be coincident with acquisition of definitive adult plumage. Breeding commonly occurs between ages 6 and 7 years old. Nest building and repair occur every year. Both male and females build stick nests used over many years. Nests can be as large as 3 m (10 ft.) high and 2.1 m (7 ft.) wide. Alternate nests may be present in the breeding area, but pairs usually use one nest until it either falls from the tree or the tree is lost (U.S. Bureau of Reclamation 1994).

Egg laying normally occurs in early February to mid-April depending on elevation. Average clutch size is two eggs. Incubation averages 31 to 35 days. Eggs hatch in mid-March to mid-May and the nesting period lasts 11 to 14 weeks. Both genders incubate, brood and feed young but the female performs most of the tasks. Fledglings are dependent on adults for 6 to 10 weeks and adults will feed juveniles other than their own (U.S. Bureau of Reclamation 1994).

Habitat Preference/Detail:

Bald eagles occupy riparian or lacustrine habitats almost exclusively during the breeding season, but occasionally exploit upland areas for food and roost sites, especially during the winter. Nests sites are mostly commonly distributed around the periphery of lakes and reservoirs larger than 80 acres in size. Nesting also occurs linearly along forested corridors of major rivers, usually within 1 mile of shore; however, cases have been reported of birds nesting as far as 9.3 miles from water while exploiting locally abundant prey such as prairie dogs (U.S. Bureau of Reclamation 1994).

Distribution and Abundance:

The bald eagle is the only species of *Haliaeetus* occurring in and restricted to North America. Historic bald eagle distribution included every state (except Hawaii) and Canadian province and portions of northern and eastern Mexico (Brown 1976). Populations became depressed in the 1960's from effects of use of the pesticide DDT.

The Colorado Division of Wildlife considers the Colorado River and portions of Plateau Creek to be bald eagle winter range. Eagles have been observed in concentrations at the mouth of DeBeque Canyon and usage observed throughout the riparian corridor. The closest known nest site is Westwater (CDOW 2000). A major roosting site was recorded on the south side of Plateau Creek approximately 20 miles northwest of the project site (Bureau of Land Management 1996).

Impacts from the Proposed Action:

No known roosting or nesting habitat occurs with the project area; however, bald eagles may incidentally use the area during migration. According to Reclamation personnel stationed at the Bonham Field Office, bald eagles are rarely seen in the project area. Three birds were seen at project reservoirs for approximately one week in February 1999 (USBR 2000). No birds have been seen using the project area in the spring, summer or fall. The proposed action is projected to have no affect on bald eagles.

Canada lynx

The Canada lynx (*Lynx canadensis*) was listed as threatened by the U.S. Fish and Wildlife Service on March 24, 2000 (U.S. Fish and Wildlife Service 2000). The listing applies to the contiguous United States Distinct Population Segment.

Life History:

Lynx are medium-sized cats, specialized predators that are highly dependant on snowshoe hares (*Lepus americanus*) for food. Long legs and large feet make lynx highly adapted for hunting in soft deep snow where snowshoe hares spend the winter (Quinn and Parker 1987). Canada lynx

inhabit primarily the boreal, sub-boreal, and western montane forests of North America (Koehler and Aubry 1994).

In the north, Canada lynx breed through March and April (Quinn and Parker 1987). It is assumed that females only breed with one male but this assumption has not been tested. Gestation is about 70 days. During periods when hares are most abundant, yearling lynx give birth. Male lynx are thought to be incapable of breeding during the first year (Mowat et al 1999).

Habitat Preference/Detail:

Lynx habitat in the Southern Rockies is likely found within the subalpine and upper montane forest zones, typically between 2,450 - 3,650 m (8,000 and 12,000 feet) in elevation. Depending on latitude and moisture gradients; however, the lower range of suitable lynx habitat may begin at lower or higher elevations (Ruediger et al 2000). The Canada Lynx Conservation Assessment and Strategy (Ruediger et al 2000) recommends that lynx habitat be thought of in terms of a habitat mosaic with the forest landscapes, rather than as simple vegetation types. Spruce-fir, lodgepole pine, white fir, aspen, and mesic Douglas-fir may all provide foraging and/or denning habitat for lynx. High elevation sagebrush, mountain shrub, riparian, and wetland shrub communities may also be important in providing alternative prey resources. Lynx relocated in Colorado in 1999 are frequently located in well developed riparian and valley wetland shrub habitats of the upper montane and subalpine zones.

Denning habitat in the Southern Rockies is likely to occur most often in late-successional spruce-fir forest with a substantial amount of large diameter woody debris on the forest floor, frequently found on north to northeast exposures. Younger forests may, in some cases, provide similar characteristics. Fires, blowdowns, and certain timber harvesting practices can leave considerable stacked and jack-strawed large-diameter woody debris under forest canopies, providing excellent denning potential. For the denning habitat to be functional, it must be in or adjacent to large areas of quality foraging habitat. Denning habitat should provide multiple quality den site options to female lynx (Ruediger 2000).

The Forest Service (2000) conducted habitat analysis using vegetation maps for the Grand Mesa. Eight habitat units containing denning, winter foraging, summer foraging, and capable habitats were mapped. The management units include Kannah Creek, Mesa Lakes, Cottonwood Lakes, Island Lakes, Green Mountain, the Flat Tops, Ruth Mountain, and South Mann Peak.

Suitable habitat was mapped using the following criteria:

A. Denning Habitat

- **Spruce-fir:** Crown cover >40% only with tree size classes large or very large.
- **Cool Moist Douglas-fir (<11% pine):** Crown cover >70% only with tree stands with tree size classes large or very large.

- **Aspen with Crown Cover >40% and >40% Conifer:** Only stands with tree size classes large or very large.
- **Lodgepole:** Same as spruce-fir criteria.

B. Summer Foraging Habitat

- **Spruce-fir:** Crown cover >40% including all tree size classes.
- **Cool Moist Douglas-fir (<11% pine):** Crown cover >40% including all tree size classes.
- **Lodgepole:** Stands with small tree size classes.
- **Aspen with Crown Cover >40% and >40% Conifer:** All stands with medium, large and very large trees plus stand with small individuals.
- **Willow Riparian:** Within 400 meters of the above cover types plus alpine willow riparian corridors above 11,500 feet.
- **Upland Mountain Shrub Communities:** Does not include oakbrush.

C. Winter Foraging Habitat

- **Spruce-fir:** Crown cover >40% including all stands with all tree size classes.
- **Cool Moist Douglas-fir (<11% pine):** Crown cover >40% including all stands with all tree size classes.
- **Lodgepole:** Stands with small individuals.
- **Aspen with Crown Cover >40% and >40% Conifer:** All stands with medium, large and very large tree size classes plus all stands with small individuals.
- **Willow Riparian:** Within 400 meter of the above cover types.

D. Capable Habitat (Currently Unsuitable)

- 3A structural stages of spruce-fir and Douglas-fir.
- Conifer invaded aspen with <40% conifer.
- All lodgepole which does not meet the suitable criteria.

E. Non-Habitat

- 4A structural stages of spruce-fir, aspen, Douglas-fir; all stages of oakbrush, pure aspen, ponderosa pine, pinyon pine-juniper, grasses, and forbs, along with rock and water.

Distribution and Abundance:

The North American distribution of lynx and their two most important prey species, snowshoe hares and red squirrels, roughly coincide (Hall 1981). During the 1800's and early 1900's, lynx occurred in Colorado, Idaho, Maine, Michigan, Minnesota, Montana, New Hampshire, New York, Utah, Washington, Wisconsin, and Wyoming. Relatively few records occur in other

states. Lynx are scarce in New Hampshire and were thought to be extinct in New York, Colorado and Utah. The status of lynx in the remaining states is unknown (Ruggiero et al 1999).

In 1969, three lynx species were taken in adjacent counties (Pitkin, Eagle, and Lake Counties) in the central core of the Southern Rockies. In 1972, two lynx were trapped in Clear Creek County. During the 1973-74 winter, two lynx were illegally trapped within the Vail Ski Area boundaries. No specimens have been collected since that time but lynx tracks were documented in 1989 in the vicinity of the Vail Ski Area and in 1991 at a proposed ski area site south of Wolf Creek Pass in the eastern San Juan Mountains. In recent years, probable lynx tracks or sightings have occurred in Summit, Park, Montezuma, Costilla, and Eagle Counties.

In 1999 and 2000, the Colorado Division of Wildlife transplanted 96 lynx from Canada and Alaska into the San Juan Mountains. Of these a majority have established or appear to be establishing in the Southern Rockies. Other individuals have taken up residence as far east as Cuchara Pass in Huerfano County, and as far north as Rocky Mountain National Park (Ruediger et al 2000).

Impacts of the Proposed Action:

While lynx have not been documented within the project area, potential suitable habitat occurs throughout the Grand Mesa National Forest. In February of 2000, the U.S. Forest Service and the U.S. Fish and Wildlife Service entered into a Canada Lynx Conservation Agreement (CLCA) to promote the conservation of the Canada lynx on federal lands managed by the signatories. Overlaying the rock and soil source borrow sites with lynx habitat mapping completed by the Forest Service shows all rock and soil source sites within non-habitat about a ½ mile from denning or capable lynx habitat. The CLCA identifies actions to reduce or eliminate adverse effects or risks to the species and its habitats, and to maintain the ecosystem on which the lynx depends including:

To coordinate assessment and planning efforts between the two agencies and with appropriate entities (e.g. Bureau of Land Management, National Park Service, State and Tribal agencies) to assure a comprehensive approach to conserving lynx;

To use the Science Report and LCAS, together with locally specific information as appropriate, as the basis for these actions; and

To use the Science Report and LCAS, together with locally specific information as appropriate, as the basis of streamlining section 7 conferencing and consultation between the FS and FWS should the lynx be listed under ESA.

The LCAS identifies the following conservation measures which are applicable to the proposed project:

Other Human Developments: Oil and Gas Leasing, Mines, Reservoirs, Agriculture

1. If activities are proposed in lynx habitat, develop stipulations for limitations on timing of activities and surface use and occupancy at the leasing stage.
2. Minimize snow compaction when authorizing and monitoring developments. Encourage remote monitoring of sites that are located in lynx habitat, so that they do not have to be visited daily.
3. Develop a reclamation plan (e.g. road reclamation and vegetation rehabilitation) for abandoned well sites, closed mines to restore suitable habitat for lynx.
4. Close newly constructed roads (built to access mines or leases) in lynx habitat to public access during project activities. Upon project completion, reclaim or obliterate these roads.

The proposed action is designed to comply with these conservation measures. The rock and soil sources will only be used in late spring, summer and early fall. The project will utilize only existing forest service roads with the exception of about 1/8 of a mile of skid trail near Lambert Reservoir that was developed during previous timber harvesting activities. Reclamation will attempt to keep this trail closed to vehicles by constructing berms and falling trees across the trail. Reclamation will use the trail for hauling materials from the Lambert Rock and Soil Source site to Lambert Reservoir and close the trail if there are long lapses (more than 5 days) in using the site.

With implementation of the above conservation measures, the proposed action is projected to have no effect on the Canada lynx or suitable lynx habitat.

Razorback Sucker

The Razorback sucker (*Xyrauchen texanus*) was listed as endangered by the U.S. Fish and Wildlife on October 23, 1991 (U.S. Fish and Wildlife Service 1991). Critical habitat was designated on March 21, 1994 (U.S. Fish and Wildlife Service 1999).

Life History:

The razorback sucker is an endemic species unique to the Colorado River Basin. Razorback sucker were historically abundant and widely distributed within warmwater reaches throughout the Colorado River Basin. The species can be identified by its large fleshy subterminal mouth and is the only sucker with an abrupt sharp-edged dorsal keel behind its head. Adults often exceed 3 kg (6 pounds) in weight and 600 mm (2 feet) in length.

Males are smaller and slimmer than females but have larger fins and a more exaggerated predorsal keel. In late winter to spring, both sexes exhibit breeding colors of dark brown to black dorsally and yellow ventrally with a lateral band that can be orange, reddish, or violet.

Riverine spawning is linked to the ascending limb of the hydrograph, generally during May or June in the upper Colorado River Basin (Minckley et al 1991). Spawning appears to be ritual.

Habitat Preference/Details:

Razorback suckers occupy a variety of habitats during their lives. In general, razorback suckers prefer calmer, flatwater reaches over higher velocity whitewater or canyon reaches (Minckley et al. 1991). Adults occupy shoreline and mainline channel habitats including slow runs, shallow to deep pools, backwaters, eddies, and other slow velocity habitats associated with sand substrates (Tyus and Karp, 1990; Osmundson and Kaeding 1991). During spawning, preference appears to consist of gravel and cobble substrates clear of fine materials. The fish create depressions of 20 cm or more for spawning. All documented spawning in rivers occur in broad, flatwater areas (Minckley et al. 1991). Young fish remain along shorelines in embayments and tributaries and then disperse into channels or larger backwaters. Juveniles appear to drift downstream into these habitat types (Minckley 1991). Tyus and Karp (1990) and Osmundson and Kaeding (1991) describes these habitat preferences in greater detail.

Distribution and Abundance:

Historically, razorback suckers were found in the mainstem Colorado River and major tributaries in Arizona, California, Colorado, Nevada, New Mexico, Utah, Wyoming and in Mexico (Minckley 1983). Population declines can be attributed to constructions of dams and reservoirs, introduction of nonnative fishes, and dewatering of the Colorado River system (U.S. Fish and Wildlife Service 1999). Reproduction may also be affected by selenium contamination in the Upper Colorado River.

The current distribution and abundance of razorback sucker has been significantly reduced throughout the Colorado River system (U.S. Fish and Wildlife Service 1999). In the upper Colorado River basin, razorback sucker populations are the largest in the Green River and lower Yampa River. In the Colorado River, most razorbacks are found in the Grand Valley near Grand Junction, Colorado (U.S. Fish and Wildlife Service 1999). In 1991 and 1992, 28 adults were collected from isolated ponds adjacent to the Colorado River near DeBeque, Colorado (Burdick 1992).

Razorback sucker's range in the Colorado River currently extend upstream to Rifle, Colorado. Most razorbacks have been documented in flooded gravel pit ponds adjacent to the river. Razorback suckers have been documented as far upstream as river mile 183.6 and in 1988 as far as river mile 235 near Rifle, Colorado (U.S. Fish and Wildlife Service 1999; Burdick 1992).

To date, the Service has stocked 10,998 4- to 11-inch razorback suckers in the upper Colorado River near Parachute, Colorado. Razorback suckers have been documented drifting over all three diversion structures (Burdick 2000). The Recovery Program approved plans to stock 102,100 6-inch and 30,600 12-inch razorback suckers between Rifle and DeBeque Canyon, Colorado within the next five years (U.S. Fish and Wildlife Service 1999).

Critical habitat was designated for the razorback sucker by the U.S. Fish and Wildlife Service on March 21, 1994. The three designated areas encompass 1) Colorado, Mesa and Garfield Counties, 2) Colorado, Delta and Mesa Counties and 3) Utah, Grand, San Juan, Wayne, and Garfield Counties (U.S. Fish and Wildlife Service 1994).

The project area is within a tributary watershed to designated critical habitat the Colorado River in Colorado, Mesa and Garfield Counties, as follows:

Colorado, Mesa and Garfield Counties. The Colorado River and its 100-year flood plain from the Colorado River Bridge at exit 90 north off Interstate 70 in T. 6 S., R. 93 W., section 16 (6th Principal Meridian) downstream to Westwater Canyon in T. 20 S., R. 25 E., section 12 (Salt Lake Principal Meridian) including the Gunnison River and its 100 year flood plain from the Redlands Diversion Dam in T. 1 S., R. 1 W., section 27 (Ute Meridian) to the confluence with Colorado River in T. 1 S., R. 1 W., section 22 (Ute Meridian).

Impact from the Proposed Action:

The proposed action will not result in additional depletions from the Colorado River and will not affect designated critical habitat.

A Programmatic Biological Opinion issued by the U.S. Fish and Wildlife Service considers implementation of the Recovery Implementation Program Recovery Action Plan as a reasonable and prudent alternative for historic and future depletions and development on the Upper Colorado River (U.S. Fish and Wildlife Service 1999). The Collbran Project was included in the consultation.

Because the proposed action will not require additional depletions from the Colorado River and will not affect designated critical habitat, the proposed action is projected to have no affect on razorback sucker.

Colorado Pikeminnow

The Colorado Pikeminnow (*Ptychocheilus lucius*) was listed as endangered by the U.S. Fish and Wildlife on March 11, 1967 (U.S. Fish and Wildlife Service 1967). Critical habitat was designated on March 21, 1994 (U.S. Fish and Wildlife Service 1994).

Life History:

The Colorado pikeminnow (formerly known as the Colorado squawfish) is an endemic species unique to the Colorado River Basin. It is the largest cyprinid fish native to North America. It is a streamlined riverine fish that can reach lengths of 1.8 m and weights of 45 kg (Minckley 1973). The Colorado pikeminnow is a long-lived (50 + yrs.), large, elongated fish with large nearly

horizontal mouth and long, slender pharyngeal teeth adapted for grasping and holding prey (Minckley 1973, Osmundson et al 1997).

Once Colorado pikeminnows reach a size of 3 or 4 inches, their diet consists almost exclusively of other fishes. Males become sexually mature earlier and at a smaller size than females. All fish mature by age 7 and 500 mm (20 inches) in length (Vanicek and Kramer 1969).

Spawning is linked to the descending limb of the natural hydrograph as waters reach or exceed 20° C (U.S. Fish and Wildlife Service 1999). Spawning generally occurs between late June and late August.

Habitat Preference/Details:

Spawning sites are comprised of clean-cobble substrate with deep interstitial voids (U.S. Fish and Wildlife Service 1999). The Colorado pikeminnow is believed to migrate to pool/riffle areas near the spawning sites. The fish appear to use deep pools, eddies, or mixing zones as resting areas near the spawning sites (Holden 1999). Warm water temperature, discharge, and photoperiod (on or near Spring Solstice) are possible spawning and/or spawning migration cues (Holden 1999).

Young of year Colorado pikeminnow are found most frequently in backwaters. These waters appear to be important nursery habitat until the fish reaches approximately 100 mm total length (Holden 1999).

Adult Colorado pikeminnow have been collected from all habitat types but most frequently from low-velocity areas including runs, eddies, backwaters, and pooled canyon mouths. During spring (pre-runoff and runoff) adults tend to use backwaters, flooded mouths of washes, and other low-velocity habitats that are warmer than main channel habitats. As warm waters and flows recede, they use eddies and other low-velocity habitats associated with the main channel. During the fall and winter they continue to use lower-velocity shoreline habitats (Holden 1999).

Distribution and Abundance:

Historically, Colorado pikeminnow were distributed throughout warm water reaches of the Colorado River Basin from Wyoming to Mexico. By the 1970's, the fish was extirpated from the lower basin below Glen Canyon Dam and from portions of the upper basin. Colorado pikeminnow are currently restricted to the Upper Colorado River Basin and inhabit warm water reaches in the Colorado, Green, and San Juan Rivers and their associated tributaries. Population declines can be attributed to construction of dams and reservoirs, introduction of nonnative fishes, dewatering of the Colorado River system and the loss of natural hydrology (U.S. Fish and Wildlife Service 1999).

In the Colorado River, Colorado pikeminnow are found in low numbers with recruitment in pulses from infrequent strong year classes (Osmundson and Burnham 1998). In the spring of

2000, sixty-five 14- to 18-inch adult Colorado Pikeminnow were stocked in the upper Colorado River near Parachute, Colorado. These fish were fitted with radio-transmitters to monitor movements. Fish have been documented drifting over the Grand Valley Project Dam. One of the tagged Colorado pikeminnow had recently moved into the Government Highline Canal. This fish passed through the first canal siphon and was located in the canal near Island Acres State Park. Later this fish was located above the Grand Valley Project Dam near the Interstate 70 tunnel. This fish apparently swam back up the canal, through the siphon, and back through the headgates at the diversion dam (Burdick 2000).

Critical habitat was designated for the Colorado pikeminnow by the U.S. Fish and Wildlife Service on March 21, 1994 (U.S. Fish and Wildlife Service 1994). The six designated areas encompass 1) Yampa River, 2) Green River, 3) White River, 4) Gunnison River, 5) Colorado River and 6) San Juan River (U.S. Fish and Wildlife Service 1994).

The project area is within a tributary watershed to designated critical habitat for the Colorado River in Colorado, Mesa and Garfield Counties which reads as follows:

Colorado, Mesa and Garfield Counties; and Utah, Grand, San Juan, Wayne, and Garfield Counties. The Colorado River and its 100-year flood plain from the Colorado River Bridge at exit 90 north off Interstate 70 in T. 6 S., R. 93 W., section 16 (6th Principal Meridian) downstream to North Wash, including the Dirty Devil arm of Lake Powell up to the full pool elevation, in T. 33 S., R 14 E., section 29 (Salt Lake Principal Meridian).

Impact from the Proposed Action:

A Programmatic Biological Opinion issued by the U.S. Fish and Wildlife Service considers implementation of the Recovery Implementation Program Recovery Action Plan as a reasonable and prudent alternative for historic and future depletions and development on the Upper Colorado River (U.S. Fish and Wildlife Service 1999). The Collbran Project was included in the consultation.

Because the proposed action will not require additional depletions from the Colorado River and will not affect critical habitat, it is projected that the proposed action will have no effect on the Colorado pikeminnow.

Bonytail

The bonytail (*Gila elegans*) was classified as endangered by the U.S. Fish and Wildlife Service on April 23, 1980 (U.S. Fish and Wildlife Service 1980). Critical habitat was designated on March 21, 1994 (U.S. Fish and Wildlife Service 1994).

Life History:

Bonytail are considered big or mainstream river species that prefer pools and eddies. It has an elongated body with a thin caudal peduncle, which gives the bonytail its name. Adult bonytail have been described as gray or olivaceous on the back with silvery sides and a white belly. Breeding males exhibit bright red-orange lateral slashes between the paired fins, and small tubercles on the head and anterior of the body. Breeding females are more subdued and tubercles are less well developed. A slight orange coloration at the base of the fins is present in both sexes throughout most of the year (U.S. Fish and Wildlife Service 1990b).

Bonytail generally reach total lengths of 300-350 mm; however, specimens up to 600 mm have been documented (Minckley 1973). Bonytail are closely related to humpback chub (*Gila cypha*) and roundtail chub (*Gila robusta*).

Habitat Preference/Detail:

Bonytail have always been considered big or mainstream species, but little is known about the habitat preferences of the bonytail, primarily because the fish is so rare. Bonytail appear to prefer pools and eddies rather than areas with more current (U.S. Fish and Wildlife Service 1990b). Bonytail in Lake Mohave appear to occupy lacustrine habitat rather than upstream riverine habitat near Hoover Dam. Cold water releases from Lake Mead are believed to limit the use of the riverine habitat (U.S. Fish and Wildlife Service 1990b).

Distribution and Abundance:

Historically, the bonytail was distributed throughout the Upper and Lower Colorado River Basin. Currently the bonytail is restricted to portions of Lake Mohave and Lake Mead and small non-reproducing populations in upper basin in Desolation and Cataract Canyons (U.S. Fish and Wildlife Service 1990b).

Extensive work since 1974 to develop hatchery stock primarily from Lake Mead was conducted by the U.S. Fish and Wildlife Service. Stocking in the Upper Colorado River between Palisade and Loma, Colorado is being considered by the Recovery Program.

Critical habitat was designated by the U.S. Fish and Wildlife Service in 1994 consisting of portions of the Yampa, Green and Colorado Rivers (U.S. Fish and Wildlife Service 1994). The project area is approximately 57 river miles upstream of the critical habitat area. The critical habitat area is describe as:

Utah, Grand County; and Colorado, Mesa County. The Colorado River from Black Rocks (river mile 137) in T. 10 S., R. 104 W., section 25 (6th Principal Meridian) downstream to Fish Ford in T. 21 S., R. 24 E., section 35 (Salt Lake Principal Meridian).

Impact from the Proposed Action:

A Programmatic Biological Opinion issued by the U.S. Fish and Wildlife Service considers implementation of the Recovery Implementation Program Recovery Action Plan as a reasonable and prudent alternative for historic and future depletions and development on the Upper Colorado River (U.S. Fish and Wildlife Service 1999). The Collbran Project was included in the consultation.

The proposed action will have no affect the bonytail or designated critical habitat.

Humpback Chub

The humpback chub (*Gila cypha*) was classified as endangered by the U.S. Fish and Wildlife Service on March 11, 1967 (U.S. Fish and Wildlife Service 1967). Critical habitat was designated on March 21, 1994 (U.S. Fish and Wildlife Service 1994).

Life History:

The humpback chub is a medium-sized fish (<500 mm) that is endemic to the Colorado River Basin. The humpback is closely related to the bonytail (*Gila elegans*) and the roundtail chub (*Gila robusta*). Humpback chub have a laterally-compressed and tapering fusiform body, short narrow caudal peduncle with deeply forked tail fin, and large falcate paired fins. Adults have a narrow flattened head with small eyes and a long fleshy snout and inferior subterminal mouth (Valdez and Rayel 1995).

Humpbacks spawn in March to June depending on locality and water temperature. Spawning has been documented to occur soon after the highest spring flow when water temperatures approach 20° C. Juvenile fish are found in low velocity shorelines and backwaters. Recruitment beyond the 2-year age class is extremely rare. Low water temperatures and predation by non-native fish are believed to be the primary factors influencing recruitment (U.S. Fish and Wildlife Service 1999).

Habitat Preference/Detail:

The humpback chub requires warmer water to induce spawning (>20° C). Adult humpback appear to prefer white-water canyons; however, its original distribution is not known. Data in Black Rocks and Westwater Canyon indicates that young utilize shallow areas (U.S. Fish and Wildlife Service 1999).

Distribution and Abundance:

The original distribution of humpback chub is unknown. Fossil records trace humpback chub to about 4000 B.C. but the species was not described until the 1940's. Until the 1950's, humpback chub was known only to occur in the Grand Canyon. Specimens were later documented from the Upper Green River, the lower Yampa, the White River, and the Colorado River near Moab, Utah.

The largest populations occur in the Little Colorado and Colorado Rivers in the Grand Canyon, and in Black Rocks and Westwater Canyon in the upper Colorado River. Fish have also been documented in DeBeque Canyon and one fish was collected in the Gunnison River (U.S. Fish and Wildlife Service 1999).

Critical Habitat was designated on March 21, 1999 (U.S. Fish and Wildlife Service 1999) and includes a portion of the Colorado River approximately 57 river miles downstream from the project area. The designation is as follows:

Utah, Grand County; and Colorado, Mesa County. The Colorado River from Black Rocks in T. 10 S., R. 104 W., section 25 (6th Principal Meridian) downstream to Fish Ford in T. 31 S., R. 24 E., section 35 (Salt Lake Principal Meridian).

Impact from the Proposed Action:

A Programmatic Biological Opinion issued by the U.S. Fish and Wildlife Service considers implementation of the Recovery Implementation Program Recovery Action Plan as a reasonable and prudent alternative for historic and future depletions and development on the Upper Colorado River (U.S. Fish and Wildlife Service 1999). The Collbran Project was included in the consultation.

Because the proposed action will not require additional depletions from the Colorado River and will not affect critical habitat, the proposed action will have no effect on the humpback chub.

Boreal Toad

The boreal toad (*Bufo boreas boreas*) is currently considered “warranted but precluded” for federal listing under the Endangered Species Act, and is considered a “Sensitive Species” in the Rocky Mountain Region of the USFS. Boreal toad is listed as endangered in the State of Colorado.

Life History:

The boreal toad is a subspecies of the western toad and has dark, brown-black, warty skin with a white to cream-colored dorsal stripe which can be broken or partially missing. Dark spots blotch the light underside over the chest and abdominal area. The adult toads lack cranial crests and have oval parotoid glands. Adults are large in size, with males being 2.4 to 3.2 in. (60 to 80 mm) long and females being 3 to 4 in. (75 to 100 mm) long from snout to vent. Eggs are laid in shallow waters. Round black eggs are linearly spaced in one to three rows within long strings of two-layered jelly. Tadpoles are jet black in color though sometimes turning brown and generally aggregate in shallow water. Toadlets are similar in appearance to adults but have reddish-orange coloration on the toes and often lack the middorsal stripe, especially when small (Stebbins 1985, Loeffler 1998). Boreal toads are primarily insectivores.

Breeding generally occurs in late May and early June, but may be as late as July at higher elevations, coinciding with the melting of winter snowpack. Female adults may not breed every year. Egg and tadpole development is temperature dependant. Hatching to metamorphosis takes about 75 days with metamorphosis occurring from late July to mid-August (Loeffler 1998).

Natural predators of the boreal toad include, but are not restricted to common raven, gray jay, western garter snake, tiger salamander, spotted sandpiper, badger, red fox, robin, racoon, and predacious diving beetle larvae. Boreal toad eggs and tadpoles are toxic or distasteful to most predators. Mortality has been estimated as high as 95 to 99 percent through the second year of life. Boreal toads can live to nine years or older and researchers speculate that they may live as long as 20 years (Loeffler 1998).

Habitat Preference/Detail:

The southern Rocky Mountain boreal toad occupies forest habitats between 7,500 and 12,000 feet in Colorado, southeast Wyoming, and north-central New Mexico. Boreal toads occupy three different types of habitats during a one year cycle: breeding ponds, summer range, and overwinter refugia. These specific habitats occur within lodgepole pine or spruce-fir forests (Loeffler 1998).

Distribution is limited to areas with suitable breeding habitat in lodgepole pine, spruce-fir forests, and alpine meadows. Breeding takes place in shallow, quiet water in lakes, marshes, bogs, ponds, and wet meadows, often with egg placement optimizing thermal effects of the summer sun. Breeding has been recorded from large permanent lakes, glacial kettle ponds, man-made ponds, beaver ponds, marshes, and roadside ditches (Loeffler 1998).

Less is known about summer habitats but radio-telemetry studies in Colorado indicate that there is considerable use of upland montane forests and rocky areas, with an affinity for locations with spring speeps (Loeffler 1998).

Distribution and Abundance:

Historically boreal toads occurred from southeastern Alaska south to northern California, and east to Montana, Wyoming, Colorado and New Mexico. In the Rockies of Colorado, Wyoming and New Mexico (Southern Rocky Mountain Population), the boreal toad is found near surface waters along foothills, mountain meadows, and mesic sub-alpine forests. The boreal toad was once considered abundant throughout the higher elevations of Colorado and southwestern Wyoming. Historic range of the boreal toad included the Grand Mesa and Gunnison National Forests in Gunnison, Delta and Mesa Counties. Historic areas of occurrence on the Grand Mesa have no recent confirmed records (Loeffler 1997 and Loeffler 1998).

Impact from the Proposed Action:

The proposed action will not affect habitat types preferred by boreal toad. All four rock and soil source sites are on dry well-drained slopes with a predominance of boulder-size rock. All sites are considerable distances from suitable breeding habitat (>1/8 mile). The proposed action is projected to have no effect on the boreal toad.

Summary of Project Impacts on Threatened and Endangered Species

The proposed action is expected to have no effect on Federally listed or candidate species. Project activities would be stopped if endangered species are encountered, and the Service would be consulted. Appendix B shows the anticipated project affect for Federally candidate, threatened and endangered species, and Forest Service sensitive species.

WATER RESOURCES

Water Rights and Use

Water rights and use were described previously in Chapter 2 as it relates to the Collbran Project. The No Action alternative could potentially affect the ability to store water in the fifteen private reservoirs. Continued maintenance is needed to ensure that adequate water storage is available. The proposed action would provide a reliable source of rock and soil material for the continued maintenance of Collbran Project dams.

Water Quality

Water quality is not expected to be affected by the proposed action.

TRANSPORTATION AND ACCESS

The Grand Mesa National Forest has a well developed transportation system. The Forest Service maintains Forest Service roads for recreation, timber harvesting and other activities. All roads within the project area are bladed and maintained to provide access in the spring, summer and fall. Access to the project area is from the town of Collbran, Colorado using Forest Service Road 121. Rock and soil sources will be accessed using the existing Forest Service Roads shown in Table 3.

Table 3 - Forest Service Access Roads

<u>Rock and Soil Source Site</u>	<u>Access Roads</u>
Cottonwood #5 Site	FS 121, FS 257, FS 258, and FS 258.1B
Bonham Pipeline Site	FS 121, FS 259
East Fork Site	FS 121, East Fork Pipeline Road
Lambert Site	FS 121, FS 114, existing logging road

An existing skid trail will be used to transport rock and soil material from the Lambert Rock and Soil Source Site to Lambert Reservoir. This skid trail has been closed with fallen trees and berms. The skid trail will be reopened when transporting material to Lambert Reservoir. Reclamation would use fallen trees, berms, and reseeded to reclose the road. The trail would only be open during hauling and use will be monitored. If the public begins to use the skid trail, Reclamation would consult with the Forest Service.

Unauthorized off-road use continues to be a problem on the Grand Mesa and Forest Service Regulations provide fines for infractions. Fresh all-terrain vehicles (ATV) tracks have been seen on the closed skid trail indicating that ATVs are using the closed trail to illegally access Lambert Reservoir. Additional enforcement in the Lambert area may be needed to prevent unauthorized access.

CULTURAL AND HISTORIC RESOURCES

No cultural or historic resources were found during cultural resource surveys (USFS 2000 **Sally's Report**); therefore, no impacts are projected under the No Action alternative or proposed action.

INDIAN TRUST ASSETS

Indian trust assets are defined as legal interests in property held in trust by the United States for Indian Tribes or individuals, or property that the United States is otherwise charged by law to protect. No Indian trust assets are known to occur within the project area; therefore, no impacts are projected under the No Action alternative or proposed action.

ENVIRONMENTAL JUSTICE

Executive Order 12898 established environmental justice as a federal agency priority to ensure that minority and low-income groups are not disproportionately affected by Federal actions. The ethnicity of the majority (88 percent) of residents in the project area is white (U.S. Bureau of Census 2000). Other ethnicities of persons in the area include Hispanic (9 percent), and Native Americans, Asians, and Blacks, all less than 3 percent. Under the No Action alternative and proposed action, there are no disproportionate impacts projected on any particular group of individuals.

SOCIAL AND ECONOMIC FACTORS

The Collbran Project is one of the key elements in the social and economic fabric of the Grand Mesa. For about 40 years, it has supported area farmers, provided power generation, recreation and fish and wildlife development, and enhanced the overall quality of life in Mesa County. The proposed action provides support to the Collbran Project by providing economically affordable sources of rock and soil material for the continued maintenance of fifteen private reservoirs associated with the project.

Under the No Action alternative, Reclamation would not be able to use rock and soil material from Forest Service lands which would require transportation of materials from sources off the Grand Mesa. This would increase the reservoir maintenance costs significantly. Under the proposed action, there would be no impact to local employment, schools, public services, or the overall income to the town of Collbran and Mesa County.

SUMMARY AND MITIGATION MEASURES

In summary, the primary effect of the proposed action would allow Reclamation to utilize rock and soil material from Forest Service lands within close proximity to Collbran Project reservoirs. The proposed project is designed to provide reliable and economically affordable rock and soil material for the maintenance of the reservoirs.

The following environmental and social/economic commitments are included in the project plan:

- Disturbed areas would be restored through the replacement of topsoil, preparation of land for seeding, and seeding with grasses and shrub species. Noxious weeds would be controlled. Rehabilitation would comply with an approved pit plan for each site.
- Materials would only be removed from the sites when ground conditions are dry. Hauling activities would be restricted during winter.
- Rock and soil sources would be rehabilitated with an “as you go” philosophy.
- Reclamation would use fallen trees and berms to keep the Lambert skid trail closed when not in use.
- Reclamation would follow all terms and conditions of Forest Service special use permits.
- Reclamation would stop and consult with the Forest Service if endangered species or cultural resources were found during the life of the special use permit.
- Reclamation would provide the Forest Service with the volume of rock and soil material removed from each site on an annual basis as described in the special use permit.

CHAPTER IV - CONSULTATION AND COORDINATION

General

The preferred alternative was developed jointly by Reclamation and the Forest Service. Public input on the proposed development of the rock and soil sources was requested through a scoping letter, a news release and a public notice. A scoping letter was sent to 18 interested parties on August 23, 2000 (project file). A news release appeared in the *Plateau Valley Times* on August 28, 2000 (project file), and a public notice appeared in the *Grand Junction Daily Sentinel* on August 22, 2000 (project file). Each asked for public comments to be submitted on the proposed project. No public comments were received.

Consultation with Other Agencies

What Agencies does the FS want to send the draft EA to?

List of Agencies

U.S. Fish and Wildlife Service

LIST OF PREPARERS

The draft environmental assessment was prepared by the Bureau of Reclamation with the assistance of Forest Service. Listed below are employees involved with the formulation of this document.

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<u>SPECIES</u>	<u>HABITAT DESCRIPTION</u>	<u>ELEVATION</u>	<u>STATUS</u>	Habitat Present or Absent	Affected by the proposed project
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APPENDIX B -USFWS and USFS Species List

Plants					
Gunnison Milkvetch (<i>Astragalus anisus</i>)	Dry gravelly flats & hillsides in sandy clay soils overlaying granitic bedrock, usually among or under low sagebrush.	7,500-8,500 ft.	USFS Sensitive	Absent	No
Molybdenum Milkvetch aka Leadville Milkvetch (<i>Astragalus molybdenus</i>)	Rocky slopes and turf hillsides above timberline. Usually on limestone.	11,400-13,200 ft.	USFS Sensitive	Absent	No
Reflected Moonwort (<i>Botrychium echo</i>)	Gravelly soils, rocky hillsides, grassy slopes and meadows.	9,500-11,000 ft.	USFS Sensitive	Absent	No
Pale Moonwort (<i>Botrychium pallidum</i>)	Open exposed hillsides, burned or cleaned areas, old mining sites.	9,800-10,600 ft.	USFS Sensitive	Absent	No
Round-leaf Sundew (<i>Drosera rotundifolia</i>)	Floating Peat Mats.	9,100-9,800 ft.	USFS Sensitive	Absent	No
Wolly Fleabane (<i>Erigeron lanatus</i>)	Steep alpine scree and talus slopes.	12,500-13,500 ft.	USFS Sensitive	Absent	No
Altai Cotton-grass (<i>Eriophorum brandegei</i>)	Fens.	9,500-14,000 ft.	USFS Sensitive	Absent	No
Beardtongue Gilia aka Black Canyon Gilia (<i>Gilia penstemonoides</i>)	Cracks on vertical walls, narrow ledges and cliff rims. Grows in gneiss, schist and shale.	6,800-9,000 ft.	USFS Sensitive	Absent	No
Colorado Tansy-Aster (<i>Machaeranthera coloradoensis</i>)	Gravelly areas in mountain parks, slopes and rock outcrops up to dry tundra.	8,500-12,500 ft.	USFS Sensitive	Absent	No
Hapeman's Coolwort aka Hanging Garden Sullivantia (<i>Sullivantia hapemanii</i>)	Hanging gardens; wet cliffs and boulders of various geology including limestone, shale and quartzite.	7,000-10,000 ft.	USFS Sensitive	Absent	No
Mammals					
North American Lynx (<i>Felix lynx canadensis</i>)	Dense spruce-fire stands in association with rock outcrops and large boulders. Large snowshoe hare populations.	>9,000 ft.	Federally Threatened	Absent	No
Pygmy Shrew (<i>Microsorex hoyi montanus</i>)	Subalpine forests, clear-cut and selectively logged forests, forest-meadow edges, boggy meadows, willow thickets, aspen-fir forests, and subalpine parklands.	>9,600 ft.	USFS Sensitive	Absent	No
SPECIES	HABITAT DESCRIPTION	ELEVATION	STATUS	Habitat Present or Absent	Affected by the proposed project

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Spotted Bat (<i>Euderma maculatum</i>)	Ponderosa of montane forests, pinyon-juniper woodlands, and open semidesert shrublands. Rocky cliffs are necessary to provide suitable cracks and crevices for roosting, as is access to water.	>10,600 ft.	USFS Sensitive	Absent	No
Townsend’s Big-eared Bat (<i>Plecotus townsendii</i>)	Semidesert shrublands, pinyon-juniper woodlands, and open montane forests. Frequently associated with caves for day roosts and hibernacula but will also use abandoned buildings and crevices on rock cliffs for refuge.	>9,500 ft.	USFS	Absent	No
Ringtail (<i>Bassariscus astutus</i>)	Arid and semiarid habitats throughout the Southwest. In Colorado typically associated with rocky canyon country and foothill areas of pinyon-juniper woodlands, montane shrublands, or mixed conifer-oakbrush. Den in rock crevices, under large boulders, in hollow trees, or in old buildings.	<9,200 ft	USFS Sensitive	Absent	No
Marten (<i>Martens americana</i>)	Subalpine spruce-fir and lodgepole pine forests, alpine tundra, and occasionally montane forests. Generally associated with older growth or mixed-age stands. >30% canopy cover needed. Den in tree cavities, rock piles, and burrows, and frequently rest on trees limbs during the day.	Most areas of coniferous forests in the higher mountains of Colorado	USFS Sensitive	Absent	No
North American Wolverine (<i>Gulo gulo luscus</i>)	Boreal forests and tundra. In Canada and Alaska, prefer marshy areas such as the lowland spruce forests that support extensive wetlands. Large and diverse ungulate populations important.		USFS Sensitive	Absent	No
Birds					
Common Loon (<i>Gavia immer</i>)	Conifer lakes, tundra ponds, open lakes, bays, sea		USFS Sensitive	Absent	No
Northern Goshawk (<i>Accipter gentilis apache</i>)	Aspen, conifer and cottonwood stand	>10,000 ft.	USFS Sensitive	Absent	No
<u>SPECIES</u>	<u>HABITAT DESCRIPTION</u>	<u>ELEVATION</u>	<u>STATUS</u>	Habitat Present or Absent	Affected by the proposed project
Ferruginous Hawk (<i>Buteo regalis</i>)	Grasslands and shrublands with varied topography including hills, ridges and valleys		USFS Sensitive	Absent	No

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Merlin (<i>Falco columbarius</i>)	Open woods, cliffs, adjacent to grasslands, tundra; in migration also foothills, marshes, open country coasts.		USFS Sensitive	Absent	No
Columbia sharp-tail grouse (<i>Tympanachus phasianellus columbianus</i>)	shrublands and mountain shrublands.		USFS Sensitive	Absent	No
American Bittern (<i>Botaurus lentiginosus</i>)	Large wetlands with tall, emergent vegetation, especially cattails.		USFS Sensitive	Absent	No
White-faced Ibis (<i>Plegados chihi</i>)	Wet, marsh type habitat.		USFS Sensitive	Absent	No
Greater Sandhill Crane (<i>Grus canadensis tabida</i>)	Wetland habitats.		USFS Sensitive	Absent	No
Western Snowy Plover (<i>Charadrius alexandrinus nivosus</i>)	Wetland habitats.		USFS Sensitive	Absent	No
Long-billed curlew (<i>Numenius americanus</i>)	shortgrass prairies.		USFS Sensitive	Absent	No
Black Tern (<i>Chlidonias niger</i>)	Marsh complexes > 50 acres.		USFS Sensitive	Absent	No
Western Yellow-billed Cuckoo (<i>Coccyzus americanus</i>)	Old growth riparian woodlands with dense undergrowth.		USFS Sensitive	Absent	No
Bald Eagle (<i>Haliaeetus leucocephalus</i>)			Federally Threatened	Absent	No
Western Burrowing Owl (<i>Athene cunicularia</i>)	Rodent burrows in grasslands, shrublands, deserts and grass urban areas.		USFS Sensitive	Absent	No
Flammulated Owl (<i>Otus flammeolus</i>)	Open Ponderosa Pine or forests similar features, e.g. dry montane conifer or aspen.	6,000-10,000 ft.	USFS Sensitive	Absent	No
Black Swift (<i>Cypseloides niger</i>)	Nest on vertical rock faces, near waterfalls or in dripping caves	6,500-12,000 ft.	USFS Sensitive	Absent	No
Lewis's Woodpecker (<i>Melanerpes lewis</i>)	Open pine forests, burnt-over areas with abundant snags and stumps, riparian and rural cottonwoods, and pinyon-juniper woodlands.		USFS Sensitive	Absent	No
<u>SPECIES</u>	<u>HABITAT DESCRIPTION</u>	<u>ELEVATION</u>	<u>STATUS</u>	Habitat Present or Absent	Affected by the proposed project
Northern Three-toed Woodpecker (<i>Picoides tridactylus</i>)	Subalpine forests, spruce-fir and ponderosa pine with diseased trees.	7,000-12,000 ft.	USFS Sensitive	Absent	No
Olive-side Flycatcher (<i>Contopus borealis</i>)	Conifer forests with snags.		USFS Sensitive	Absent	No
Pygmy Nuthatch (<i>Sitta pygmaea</i>)	Ponderosa or other coniferous forests.		USFS Sensitive	Absent	No

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Golden-crowned Kinglet (<i>Regulus satrapa</i>)	Old growth coniferous forests	7,600-11,600 ft.	USFS Sensitive	Absent	No
Loggerhead Shrike (<i>Lanius ludovicianus</i>)	Shortgrass prairies. Also in lowland riparian and pinyon-juniper woodlands.		USFS Sensitive	Absent	No
Baird's Sparrow (<i>Ammodramus bairdii</i>)	Grassland prairies.		USFS Sensitive	Absent	No
Fox Sparrow (<i>Passerella iliaca</i>)	Riparian willow shrublands and wet willow meadows.	7,500-11,000 ft.	USFS Sensitive	Absent	No
Fishes					
Colorado Pikeminnow (<i>Ptychocheilus lucius</i>)	Colorado River and its Tributaries		Federally Endangered	Absent	No
Razorback Sucker (<i>Xyrauchen texanus</i>)	Colorado River and its Tributaries		Federally Endangered	Absent	No
Humpback Chub (<i>Gila chypa</i>)	Colorado River and its Tributaries		Federally Endangered	Absent	No
Bonytail (<i>Gila elegans</i>)	Colorado River and its Tributaries		Federally Endangered	Absent	No
Amphibians					
Tiger Salamander (<i>Ambystoma tigrinum</i>)	Frequents quiet water of ponds, reservoirs, lakes and temporary rain pools, and streams from arid sagebrush plains and rolling grasslands to mountain meadows and forests.		USFS Sensitive	Absent	No
Western Boreal Toad (<i>Bufo boreas boreas</i>)	Wetlands and alpine forests.	8,000-11,900 ft.	USFS Sensitive	Absent	No
Northern Leopard Frog (<i>Rana pipiens</i>)	Frequents springs, creeks, rivers, ponds, canals, and reservoirs where there is permanent water and growth of cattails or other aquatic vegetation. May forage far from water in damp meadows.		USFS	Absent	No
Invertebrates					
Regal Fritillary Butterfly (<i>Speyeria idalia</i>)	Tall-grass prairies.			Absent	No