

## Proposed Collbran Rock and Soil Source Project

### **WILDLIFE REPORT**

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This Biological Assessment and Evaluation documents the review of the proposed action(s) associated with the Collbran Rock and Soil Source Project and documents determination of what effects these actions may have on any species which are listed under the Endangered Species Act, proposed for such federal listing, or designation in Region 2 of the US Forest Service as sensitive.

#### **Existing Situation**

A proposal has been made to reopen four (4) and develop one (1) new rock and soil sources (borrow sites) within the Cottonwood and Big Creek drainages on the Grand Mesa. About 1/8 mile of closed road will be reopened to transport material to Lambert Reservoir. The rock and soil sources would provide material for routine maintenance of fourteen reservoirs within these drainages.

Human activity within the analysis area is primarily reservoir regulation, angling, commercial timber harvesting, firewood gathering, livestock grazing by cattle, hunting, off-road recreation, picnicking, hiking, snowmobiling, mountain biking and cross-country skiing. Under current and proposed travel management plans, motorized travel will be on designated routes.

The Cottonwood area has a history of reservoir construction/regulation, livestock grazing and commercial timber sale activities. Previous cutting of trees has been done under individual tree selection and three-step shelter wood prescriptions. The most recent timber sales are within this and the adjacent watershed are Horse Mountain (1990), Benchmark (1991), Big Creek (1992), Blossom (1993), Atkinson (1994), Cottonwood/Tanker (1995), Bonham (1996), Neversweat (1999), and Primrose (2000).

#### **Forest Management Plan Indicators**

#### **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
Humpack 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. Nest 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 (6<sup>th</sup> 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 effect 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 (6<sup>th</sup> 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 affect 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 (6<sup>th</sup> 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 (6<sup>th</sup> 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 affect 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 effect for Federally candidate, threatened and endangered species, and Forest Service sensitive species.

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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
<b>Plants</b>					
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

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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
<b>Mammals</b>					
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
<b><u>SPECIES</u></b>	<b><u>HABITAT DESCRIPTION</u></b>	<b><u>ELEVATION</u></b>	<b><u>STATUS</u></b>	<b>Habitat Present or Absent</b>	<b>Affected by the proposed project</b>
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

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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
<b>Birds</b>					
Common Loon ( <i>Gavia immer</i> )	Conifer lakes, tundra ponds, open lakes, bays, sea		USFS Sensitive	Absent	No
Northern Goshawk ( <i>Accipiter gentilis apache</i> )	Aspen, conifer and cottonwood stand	>10,000 ft.	USFS Sensitive	Absent	No
<b><u>SPECIES</u></b>	<b><u>HABITAT DESCRIPTION</u></b>	<b><u>ELEVATION</u></b>	<b><u>STATUS</u></b>	<b>Habitat Present or Absent</b>	<b>Affected by the proposed project</b>
Ferruginous Hawk ( <i>Buteo regalis</i> )	Grasslands and shrublands with varied topography including hills, ridges and valleys		USFS Sensitive	Absent	No
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

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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
<b><u>SPECIES</u></b>	<b><u>HABITAT DESCRIPTION</u></b>	<b><u>ELEVATION</u></b>	<b><u>STATUS</u></b>	<b>Habitat Present or Absent</b>	<b>Affected by the proposed project</b>
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
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
<b>Fishes</b>					
Colorado Pikeminnow ( <i>Ptychocheilus lucius</i> )	Colorado River and its Tributaries		Federally Endangered	Absent	No

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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
<b>Amphibians</b>					
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
<b>Invertebrates</b>					
Regal Fritillary Butterfly ( <i>Speyeria idalia</i> )	Tall-grass prairies.			Absent	No