United States Department of the Interior
Bureau of Land Management

Environmental Assessment

DOI-BLM-CO-S054-2012-0002 EA

June 2012

Relief Ditch Diversion Project

Location: *Gunnison Gorge National Conservation Area*

U.S. Department of the Interior
Uncompahgre Field Office
2465 South Townsend Avenue
Montrose, CO 81401
Phone: (970) 240-5300

U.S. Department of the Interior
Bureau of Land Management
Uncompahgre Field Office
2465 South Townsend Avenue
Montrose, CO 81401

ENVIRONMENTAL ASSESSMENT

NUMBER: DOI-BLM-CO-S054-2012-0002 EA

PROJECT NAME: Relief Ditch Diversion Project

PLANNING UNIT: Gunnison Gorge NCA Resource Management Unit

LEGAL DESCRIPTION: SW1/4 of Section 3 and N1/2 of Section 10, Township 15 South, Range 94 West of the 6th Principle Meridian

APPLICANT: Bureau of Land Management

PURPOSE AND NEED FOR THE ACTION:

The purpose of the proposed action is to remove an existing diversion structure on BLM public lands and replace it with a new diversion structure. The need for the action is to improve fish habitat, reduce recreational boater hazards, improve irrigation diversion efficiency, and restore riparian vegetation.

Decision to be made: The BLM will decide whether or not to allow Trout Unlimited to facilitate the removal of the existing diversion structure and replace the gravel dam with two buried boulder diversion structures.

ISSUES AND CONCERNS:

The Gunnison River is habitat for three Colorado State and BLM sensitive fish species that inhabit this reach: Flannel Mouth Suckers (*Catostomus latipinnis*), Bluehead Suckers (*Catostomus discobolus*), and Roundtail Chubs (*Gila robusta*).

The desert uplands adjacent to the access road to the diversion structure is habitat for a species of cactus classified as threatened under the Endangered Species Act: Colorado Hookless Cactus (*Sclerocactus glaucus*).

The current dam structure poses severe hazards to recreational boaters, fishers, and other users within the Gunnison Gorge National Conservation Area.

The diversion structure is causing erosional problems to the streambed and damage to native riparian areas.

BACKGROUND/INTRODUCTION

The Relief Ditch is a pre-Colorado River Compact water right with the Number 5 priority on the Gunnison River and an 1890 appropriation date. The diversion structure for the Relief Ditch is located perpendicular to flow in the Gunnison River and located on BLM managed public lands within the Gunnison Gorge National Conservation Area (NCA). The ditch company has historically and currently uses a bulldozer several times a year to maintain a gravel "push-up" dam across the river to divert water. The current push-up dam is an inefficient method of diverting water that results in over-diverting flows and creates barriers to fish migration and recreational boating. Three Colorado State and BLM sensitive fish species, Flannel Mouth Sucker (*Catostomus latipinnis*), Bluehead Suckers (*Catostomus discobolus*), and Roundtail Chubs (*Gila robusta*) inhabit this segment.

Recreational boater safety is also a major concern at this site. Railroad irons were driven vertically into the bottom of the river in an effort to hold boulders and rock in place during spring runoff when high flows pummel the structure. The vertical railroad iron protrudes from the river bed and becomes more exposed as flows recede during the summer recreation season. Recreational boaters and fisherman often get caught on this iron as they try to negotiate their boats through the diversion structure. Every year there are numerous near misses as boats are torn and overturned.

Several high flow events in the past two decades have destroyed the diversion structure requiring substantial reworking of the streambed and banks to rebuild it. The farmers and ranchers who rely on the water from this ditch have been frustrated by rebuilding efforts that are unable to withstand flood events and reliably deliver irrigation water.

The Gunnison Gorge Anglers chapter of Trout Unlimited is facilitating a collaborative effort with BLM and other partners to finance and manage the design and construction of a new, permanent diversion structure. This will remove the need for further disturbance of the streambed and riparian areas while providing the irrigators with all the water they are entitled to receive, allow for safe boater passage, and permit riparian area stabilization and revegetation.

In addition to the riparian stabilization adjacent to the structure, the larger floodplain in the area is degraded by invasive species and lack of seasonal flood flows. The Bureau of Reclamation is actively seeking riparian restoration projects along the Gunnison River to offset lost riparian areas when irrigation ditches are upgraded to pipe instead of open ditches. The relief ditch floodplain provides an excellent area to apply restoration. Recent changes to the operation of the Aspinall unit, and the adjudicated water right in the Black Canyon of the Gunnison National Park will provide more natural flood flows, and will help rehydrate the 100-year floodplain and help sustain any riparian restoration efforts.

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

Proposed Action:
Allow Trout Unlimited to facilitate the removal of the existing diversion structure and replace the gravel dam with two buried boulder diversion structures. All work on the new diversion structure would be within previously disturbed areas associated with the existing diversion structure and its historic maintenance. The top of the structure would be completely submerged during high flows and only partially exposed as water levels decrease. A low flow notch in the top of the boulder structure would allow for fish and boater passage when flows are lowest in the late summer and fall. The low flow notch would be located approximately in the lowest elevation or thalweg of the existing channel. Design drawings are presented in Figures 2, 3 and 7. Maps and photos are presented in Figures 1, 4, 5 and 6.

The proposed structure would be buried over 4' below the bottom of the existing channel to ensure high flows would not damage the structure. Another embedded structure in the river bed just below the existing diversion would act primarily as grade control to prevent headcutting back upstream toward the main diversion structure. Each structure would be two boulders wide with footer rocks beneath them and grouted together. Random spaced boulders and fines (gravel and sand) would be placed between the structures to ensure fish have protected areas as they move upstream.

A new concrete headgate would pass the decreed 51 cfs at a resized point of diversion. The new headgate would consist of a sluice gate and trash rack for easier cleaning and maintenance. The access road to the structure would also be reconstructed to allow for maintenance even during a 100 year flood event on the river.

The existing channel, over-widened from decades of excavation, would be filled along both sides of the river below the structure with approximately 7,000 cubic yards of fill to reconstruct the natural morphology of the river. The toe of the new filled area would be protected with boulders and root wads to establish a new river bank. The newly created floodplain would be planted with willow cuttings, cottonwoods and other native riparian vegetation to enhance the floodplain and dissipate flood energies.

The floodplain upstream and downstream of the Relief Ditch is compromised by nonnative plant species and hydrologic alterations caused by large mainstem dams. In an effort to restore the native riparian species and natural wildlife habitat, invasive plant species would be controlled. There are approximately 37 acres of floodplain infested with tamarisk and Russian knapweed. Control measures may include a variety of methods: hand cutting and removal, mechanical cutting and chipping (e.g. hydroaxe, feecon, or hand tools), controlled burning, and treatment with herbicide and biological agents, including the tamarisk beetle.

Once the noxious and invasive species are under control, large trees and shrubs including cottonwoods, willows, skunkbush sumac and others shown in Table 1 below may be planted. Each species would be planted in amounts determined appropriate based on response and recovery of remnant native species. Deeper plantings further from the channel may require

machinery such as a skid steer loader with an auger attachment. A native seed mix of grasses and sedges would be planted in the ratios shown in table 2 below.

Additionally, small areas would be excavated along the streambank near the relief ditch diversion to allow for some inundation of the floodplain during snowmelt driven high flow events. Excavation would be limited to lowering the mouths of abandoned overflow channels to elevations accessible to flood flows, but not to regular flows. Some modification of the old overflow channels within the riparian area may take place to increase distribution across the floodplain. The flow of Lawhead Gulch may also be modified to divert and consolidate highly saline waters into a single channel away from newly planted riparian vegetation.

Design Features

1. All disturbances associated with project implementation, including access to the river project area would be kept at the minimum size necessary, and re-contoured back to the original contour and rough texture so to match the "texture" of the surrounding landscape. Additionally, the disturbances would be reseeded with an adapted mix of native plant species if native vegetation is insufficient to revegetate the site.

2. All storage of materials and equipment would occur out of the riparian zone in the designated and cleared staging areas (Figure 8).

3. All equipment oil and hydraulic leaks would be repaired before use. Any leaks developed during use would be repaired immediately. If leaks into the soil are possible, drip pans would be used to prevent soil contamination.

4. All equipment fueling and lubrication would be supplied by a fuel/lube truck rather than stored onsite. Equipment fueling would not take place within 100 feet of the river or any creek or drainage.

5. During fueling operations the operator would ensure no fuel spillage occurs. Care should be taken to ensure all fuel tanks are capped and spillage is minimized to prevent soil contamination. Should a spill occur, it should be reported to the BLM's Hazardous Materials Specialist immediately for proper response action.

6. Contractors would be prepared to respond quickly to any spill of fuel or other fluids directly into the river (e.g. from burst hydraulic hoses, etc.) Absorbent booms or pads would be stored on site in case a spill occurred in the river. A written spill prevention plan would be prepared and implemented to address this contingency. The Spill Prevention Plan would be approved by the BLM prior to commencement of construction.

7. All soil disturbances would be monitored for the establishment of noxious weeds. Steps would be taken to treat any infestations that result from construction activities.

8. All equipment would be power washed before entering public lands. This would reduce the spread and/or establishment of noxious weeds.

9. An approved burn plan would be completed prior to implementing any phase of a prescribed fire.

10. A Colorado State smoke permit would be obtained prior to implementing any phase of a prescribed fire.

11. All disturbed areas would be seeded with certified seed that is free of noxious weed seed. The seeded species would include those shown in tables 1 and 2.

12. Utilize the least site-disturbing methods necessary to accomplish restoration objectives.

13. As much as possible, preserve the sandbar willow populations that exist on the floodplain banks at the water line.

14. Select and flag access routes and the limb, scatter or pile areas, to minimize vegetation disturbance outside the treatment area.

15. Use herbicides that are selective for the target species to minimize damage to desirable plants.

16. Material hauling activities must be concentrated between July 1 and November 1.

17. Construction activities must be conducted between September 1 and April 1.

18. To minimize impacts on migratory bird populations, it is recommended that surface disturbing activities do not occur from May 15 through July 15. This timeframe encompasses the core breeding season for the majority of migratory birds in the project area.

19. If project activities occur outside the September- April timeframe, biological surveys may be required and mitigation applied to protect species (primarily active nests).

20. To the extent possible, observed reptiles or amphibians would be avoided by treatment activities and would not be intentionally harmed. Additionally, to the extent possible, project activities would avoid disturbing known or potential hibernacula. Any incidental observations of reptile or amphibian or sign during biological surveys would be documented in the project case file(s), and mitigation measures would be applied as necessary.

21. In the event that bald eagles are roosting on cottonwood trees in the project area, the contractor is to avoid the 0.125 mile area near the roosting bald eagles until the eagles voluntarily leave the area. To avoid impacts to bald eagles that may roost at night, all work would take place between one half hour after sunrise to one half hour before sunset.

22. To limit dust deposition, speed control measures on all project-related unpaved roads would also be implemented to reduce vehicle fugitive dust.

23. Should dust deposition exceed 32 g/m^2 as measured at the closest cactus to the road at any point between July 1 and September 1, then the contractor would be required to provide daily dust abatement of the H75 road with water or non-chloride based dust suppressants beginning ½ mile above the southernmost cactus location all the way to the construction site.

24. Do not allow use of vehicles or heavy equipment during times when soil is wet enough for ruts >4" to develop.

No Action Alternative:

The No Action alternative would leave the existing relief ditch diversion structure in place.

Table 1, Riparian Trees and Shrubs to be used for the Project.

Species
Fremont Cottonwood (*Populus fremontii*)
Sandbar Willow *(Salix interior)*
Spearleaf Rabbitbrush *(Chrysothamnus linifolias)*
Skunkbush Sumac (*Rhus trilobata*)
Emory's baccharus

Table 2, Seeded Species for Riparian Area Disturbance within the project area.

	A	B	C	D
Species	Desired % of planting	Multiplier (A x 0.01)	PLS lbs for full stand	PLS lbs *per acre* needed for mix (B x C)
Canada wildrye (*Elymus canadensis*)	30	0.3	12	3.6
Streambank wheatgrass *(Elymus lanceolatus)*	20	0.2	8	1.6
Alkali sacaton (*Sporobolus aeroides*)	30	0.3	2.5	0.75
Inland saltgrass *(Distichlis spicata)*	20	0.2	7	1.4
Totals	100	1.0		6.65

Table 3, Seeded Species for Upland Disturbance within the project area.

	A	B	C	D
Species	Desired % of planting	Multiplier (A x 0.01)	PLS lbs for full stand	PLS lbs per acre needed for mix (B x C)
Western Wheatgrass *(Pascopyrum smithii)* Variety Arriba	35	0.35	10	3.5
Bottlebrush squirreltail *(Elymus elemoides)*	20	0.20	8	1.6
Indian Ricegrass *(Acnatherum hymenoides)* Variety Paloma	15	0.15	8	1.2
Galleta Grass (*Hilaria* or *Pleuraphis jamesii*)	5	0.05	8	0.4
Sand Dropseed (*Sporobolus cryptandra*)	5	0.05	1	0.05
Needle and Thread *(Stipa* or *Heterostipa comata)*	5	0.05	10	0.5
Scarlet Globemallow *(Sphaeralcea coccinea)*	2	0.02	3	0.06
Annual Sunflower (*Helianthus annuus*)	3	0.03	10	0.3
(Penstemon strictus)	2	0.02	2	0.04
Four-Wing Saltbush *(Atriplex canescens)* from western Colorado, E Utah	5	0.05	6	0.3
Basin Big Sagebrush *(Artemisia tridentata wyomingensis)*	5	0.05	1	0.05
Totals	100	1.0		7.95

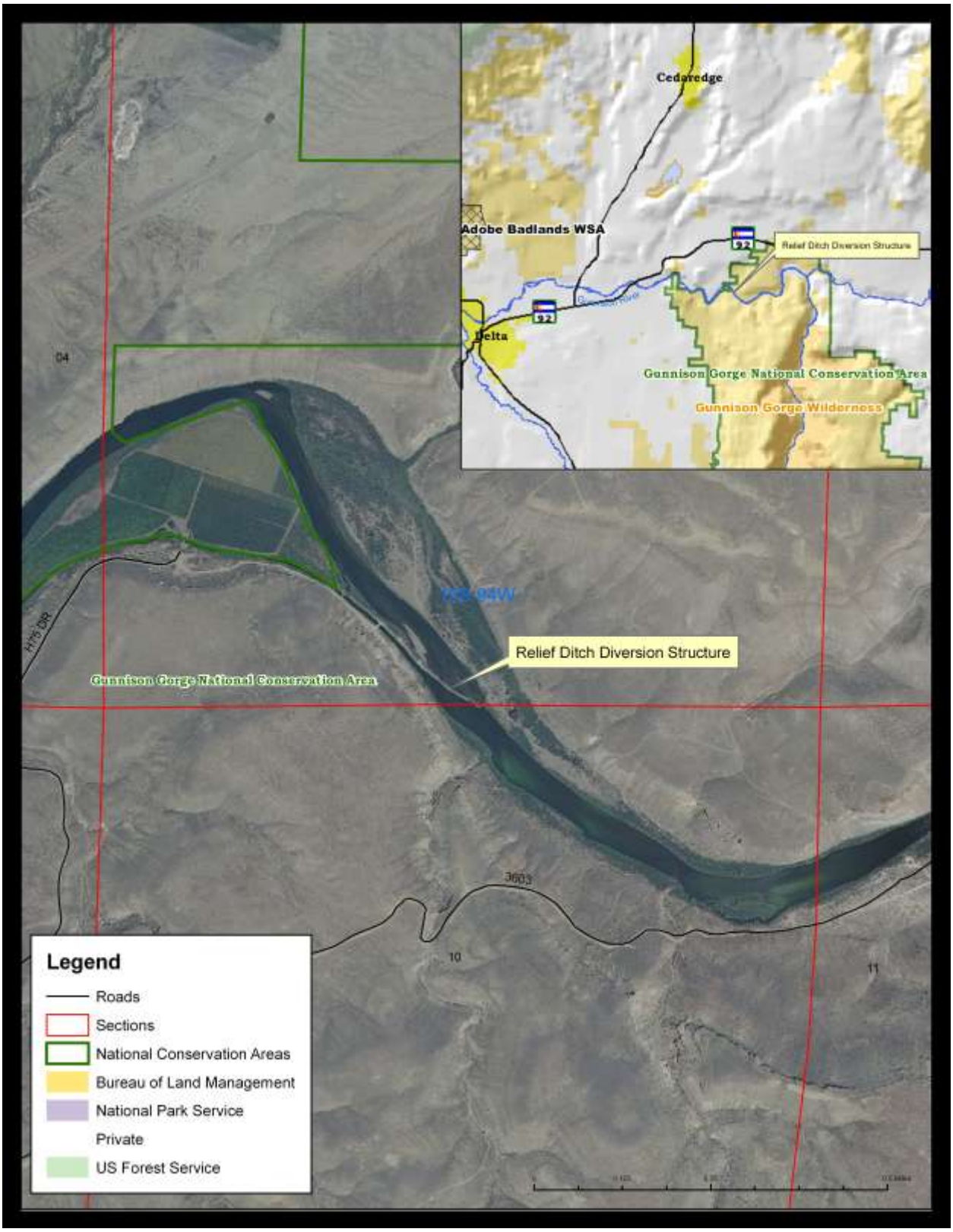

Figure 1: Location Map

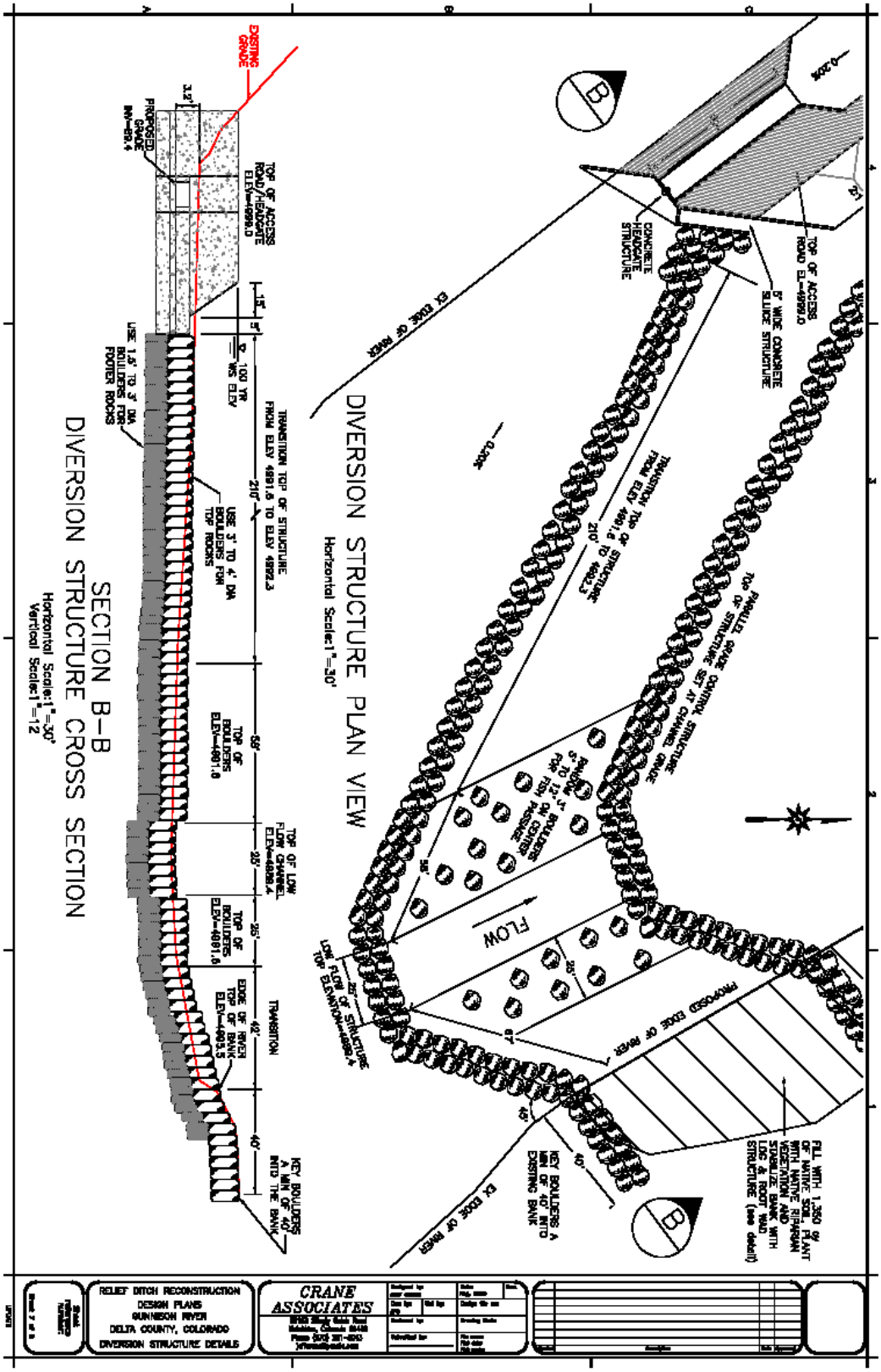

Figure 2: Diversion Cross-section

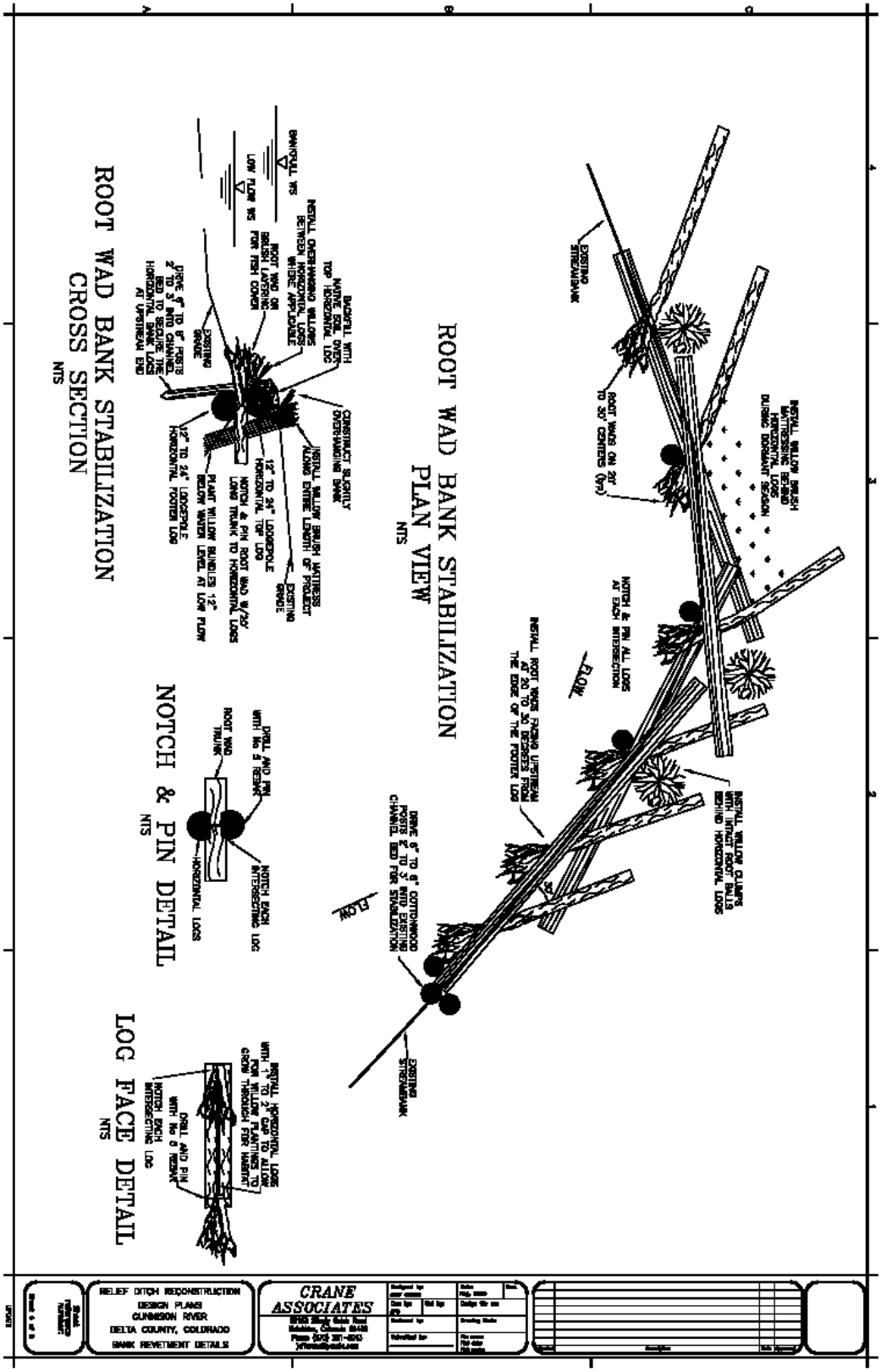

Figure 3: Bank Stabilization

Figure 4: Existing relief ditch diversion structure

Figure 5: Railroad iron protruding from the water surface

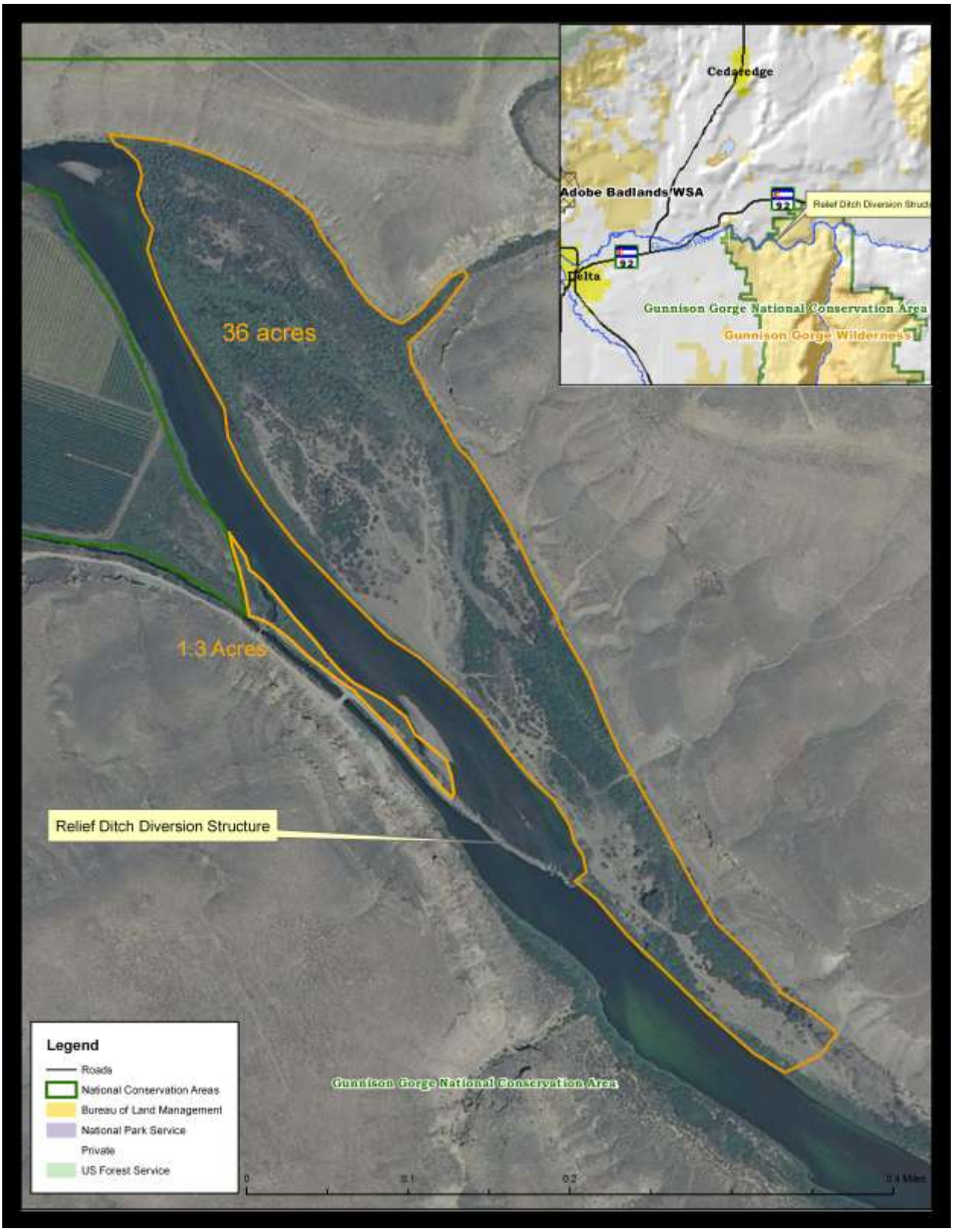

Figure 6: Riparian restoration area

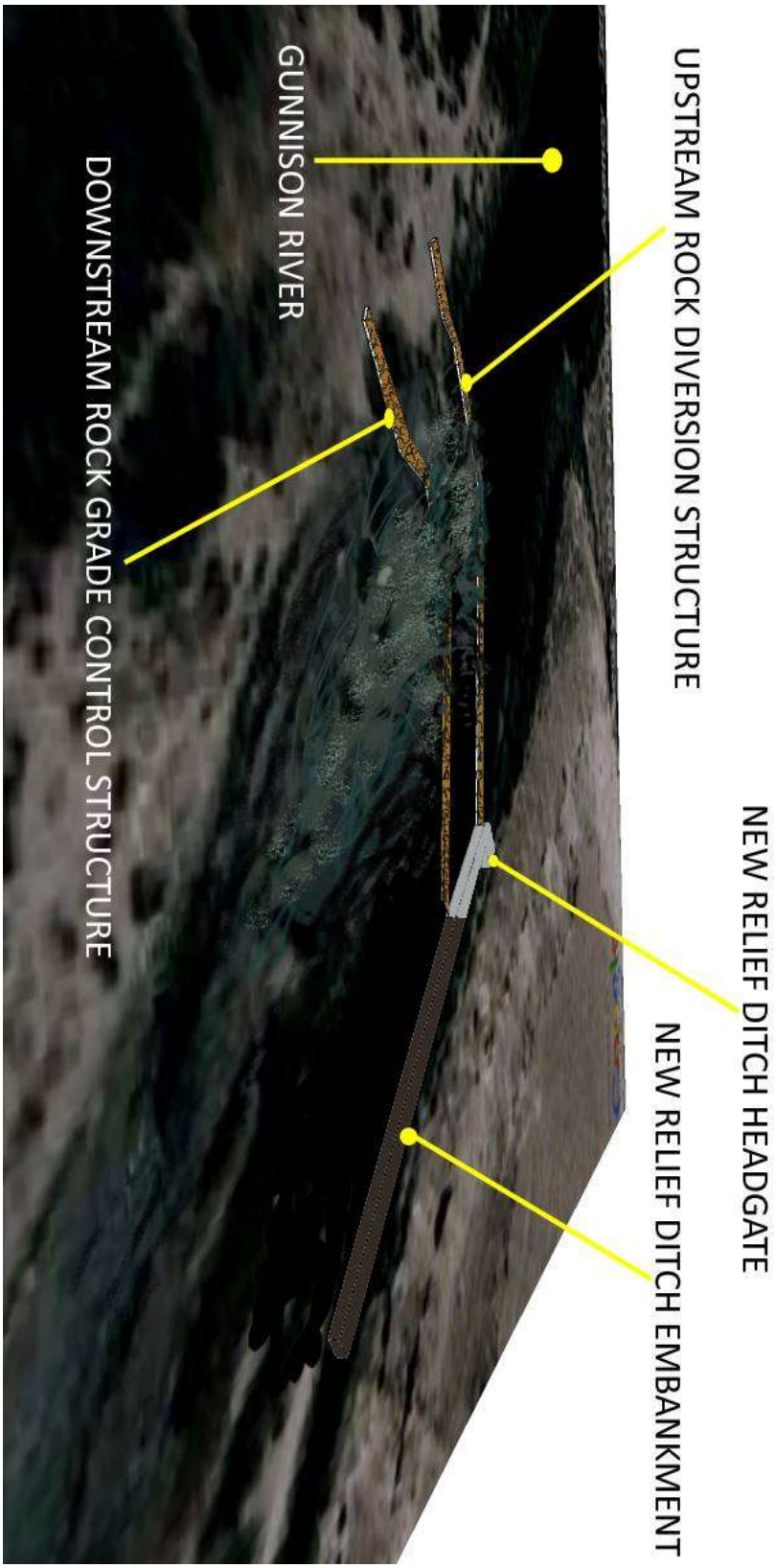

Figure 7: Conceptual Design

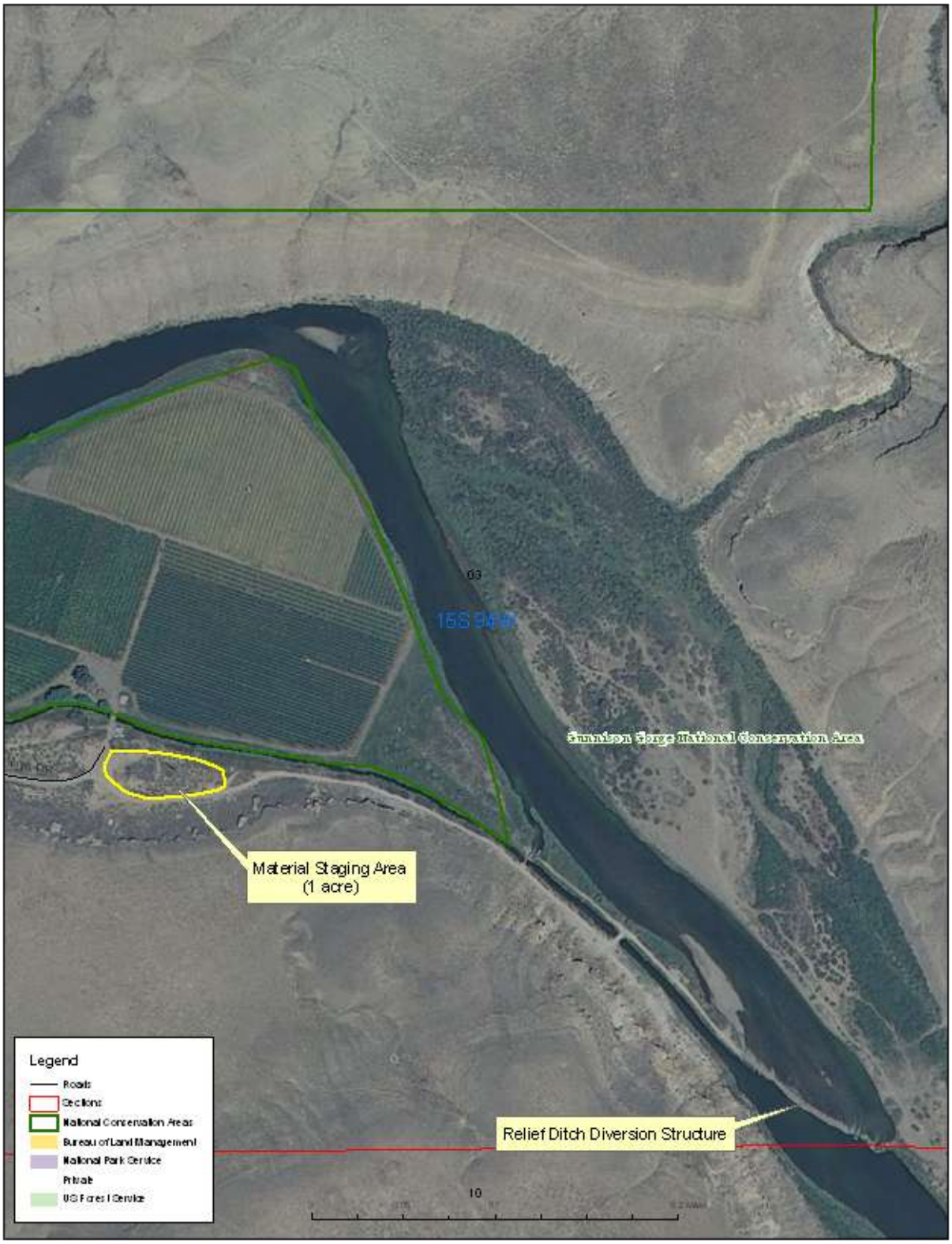

Figure 8: Material staging area

PLAN CONFORMANCE REVIEW: The Proposed Action is subject to and has been reviewed for conformance with the following plan (43 CFR 1610.5-3, BLM 1617.3):

Name of Plan: Gunnison Gorge National Conservation Area Resource Management Plan

Date Approved: November 2004

Decision Number/Page: 20

Decision Language: Protect and enhance riparian and recreation resources (Gunnison and North Fork Rivers Special Recreation Management Area [SRMA])

Standards for Public Land Health: In January 1997, Colorado Bureau of Land Management (BLM) approved the Standards for Public Land Health. Standards describe conditions needed to sustain public land health and relate to all uses of the public lands. A finding for each standard will be made in the environmental analysis (next section).

Standard	Definition/Statement
#1 Upland Soils	Upland soils exhibit infiltration and permeability rates that are appropriate to soil type, climate, land form, and geologic processes. Adequate soil infiltration and permeability allows for the accumulation of soil moisture necessary for optimal plant growth and vigor, and minimizes surface runoff.
#2 Riparian Systems	Riparian systems associated with both running and standing water, function properly and have the ability to recover from major surface disturbances such as fire, severe grazing, or 100-year floods. Riparian vegetation captures sediment, and provides forage, habitat and bio-diversity. Water quality is improved or maintained. Stable soils store and release water slowly.
#3 Plant and Animal Communities	Healthy, productive plant and animal communities of native and other desirable species are maintained at viable population levels commensurate with the species and habitat's potential. Plants and animals at both the community and population level are productive, resilient, diverse, vigorous, and able to reproduce and sustain natural fluctuations, and ecological processes.
#4 Threatened and Endangered Species	Special status, threatened and endangered species (federal and state), and other plants and animals officially designated by the BLM, and their habitats are maintained or enhanced by sustaining healthy, native plant and animal communities.
#5 Water Quality	The water quality of all water bodies, including ground water where applicable, located on or influenced by BLM lands will achieve or exceed the Water Quality Standards established by the State of Colorado. Water Quality Standards for surface and ground waters include the designated beneficial uses, numeric criteria, narrative criteria, and anti-degradation requirements set forth under State law as found in (5 CCR 1002-8), as required by Section 303(c) of the Clean Water Act.

AFFECTED ENVIRONMENT and ENVIRONMENTAL CONSEQUENCES

Elements specified by statute, regulation, executive order, or the Standards for Public Land Health are described and analyzed in this section.

Cumulative impacts of the proposed action are shown in the analysis of each element. A description of the past, present, and reasonably foreseeable actions is at the end of this section.

The following elements are considered. Those that could be impacted are brought forward for analysis. Any element not affected by the proposed action or alternatives will not be analyzed in this document; the reasons for no impact will be stated.

Element	Not Applicable or Not Present	Present, But No Impact	Applicable & Present; Brought Forward for Analysis
Air Quality			X
ACEC	X		
Wilderness	X		
Wilderness Characteristics	X		
Wild and Scenic Rivers			X
Cultural			X
Native American Religious Concerns			X
Farmlands, Prime/Unique			X
Soils			X
Vegetation			X
Invasive, Non-native Species			X
Threatened and Endangered Species			X
Migratory Birds			X
Wildlife, Terrestrial			X
Wildlife, Aquatic			X
Wetlands & Riparian Zones			X
Floodplains			X
Surface Water and Groundwater			X
Wastes, Hazardous or Solid			X
Environmental Justice			X

AIR QUALITY

Affected Environment: Class I air-sheds in the vicinity of the proposed project include: the Black Canyon of the Gunnison Wilderness, approximately 10 miles to the south-southwest of the project area; and the West Elk Wilderness, about 20 miles to the west. The Gunnison Gorge Wilderness is a notable Class II air-shed approximately 3 miles south to the project area. Communities in the area include the town of Austin (about 3 miles to the west) and the town of Lazear (about 5 miles to the east) and the town of Hotchkiss (about 9 miles east-northeast). There are also private residences scattered within the surrounding Peach Valley and Scenic Mesa areas. Nearby roadways include Highway 92 approximately 2 miles to the north.
The area complies with federal air quality standards. Air quality concerns in this region primarily are from the impacts of motor vehicles, energy development, and controlled and uncontrolled burns (CDPHE 2011). The Report also sites windblown dust, wildfires, and prescribed fire as other significant sources of air pollution in the Western Slope Region.

During the daytime, winds in the area are generally from the west and flow upslope of the Gunnison River. Nighttime winds are generally calm down slope and tend to flow down valley, into the direction of the Gunnison River.

Environmental Consequences:

Proposed Action – Small scale and short term dust production would be anticipated during operations of heavy equipment for construction and vegetation modification. Any impacts to air quality from prescribed burning would generally be short term (6-12 hours) and by scheduling the burn under appropriate atmospheric conditions, smoke would move away from Class 1 areas, communities, and highways, and would disperse quickly. Inversions that could hold the smoke close to the surface in canyons and valleys are most likely to occur during April and are likely to be of moderate duration, usually ending by 10:00 the following morning. Atmospheric conditions would be analyzed prior to ignition to determine the appropriate smoke management window and would be limited by the conditions determined by the State of Colorado in the required smoke permit. During the burn, smoke would be monitored on site as well on roadways. Residences may smell smoke for short periods of time. Any deterioration in air quality as a result of herbicide, would occur only during herbicide application and thus would be of very short duration and limited to localized areas (within a few feet of the application site). All product label instructions would be adhered to.

Cumulative Impacts – Impacts would generally add incrementally for short periods of time. Smoke could add to other (if any) controlled burns or wildfire in the western US.

No Action Alternative – Under the no action alternative, there would be no impacts to air quality.

WILDERNESS AND WILDERNESS STUDY AREAS

There are no wilderness areas or wilderness study areas in or adjacent to the project site. The project would have no effect on wilderness or wilderness study areas.

WILDERNESS CHARACTERISTICS

There is no roadless area of sufficient size in the project area. There are several constructed and maintained roads on the BLM lands surrounding the project area. The project area itself consists of several constructed and maintained features including the push-up dam, access road (which meets the definition of "wilderness inventory road"), bridge, ditch, and headgate.

Since the area does not meet any of the wilderness characteristics criteria for size, no wilderness characteristics are present, and the project would have no effect on this resource.

WILD AND SCENIC RIVERS

Affected Environment: The segment of the Gunnison River beginning at the transmission lines (just north of the wilderness boundary) and continuing downriver where it terminates at the Relief Ditch diversion structure was determined to be "suitable" for inclusion in the National Wild and Scenic River System (Figure 9) (Gunnison Gorge Resource Management Plan, Appendix I, November 2004). The segment has a classification of "recreational" with scenic and recreational outstandingly remarkable values (ORVs).

The recreational classification applies to rivers or sections of rivers that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past.

The suitable segment terminates at, and does not include, the current Relief Ditch diversion structure.

Environmental Consequences:

Proposed Action – The proposed new structure would be in approximately the same location as the existing structure, which is outside the suitable segment, but within the ½ mile wide study corridor. The level of development and activity during the construction and rehab phases of the project would be consistent with the allowable level of development in river corridors classified as "recreational."

The new structure would not constitute an "impoundment" when completed. People enjoying the Wild and Scenic River (WSR) suitable segment would experience a more fluid transition from the suitable segment to the rest of the river downstream from the structure because there would be less contrast at the transition.

Both the scenic and recreational ORVs would be enhanced within the study corridor upon completion of the project. The new structure would be less visually obtrusive, enhancing scenic values of that part of the study corridor. The recreational values in the project area include fishing and boating. Because the new structure would eliminate the current need for intrusive dam maintenance (using a bulldozer to push the dam back up annually), fish habitat would be less disturbed in the long term, accentuating the quality of fishing in the vicinity of the diversion. The boating experience within the suitable segment ends at the dam structure where boaters are

left trying to find a safe passage through the structure, sometimes facing dangerous and intimidating obstacles such as vertical railroad iron in the passage. The new structure would be submerged and have none of the current hazards, improving the boating experience at the end of the WSR suitable segment.

Cumulative Impacts – No cumulative effects are anticipated

No Action Alternative – There would be no short term effects to the suitable segment or its study corridor. In the longer term, continued scouring of the floodplain on the north side of the river adjacent to the push-up dam would continue to make the river wider and shallower, possibly affecting fish habitat negatively which could have a negative effect on the fishing component of the recreational ORV.

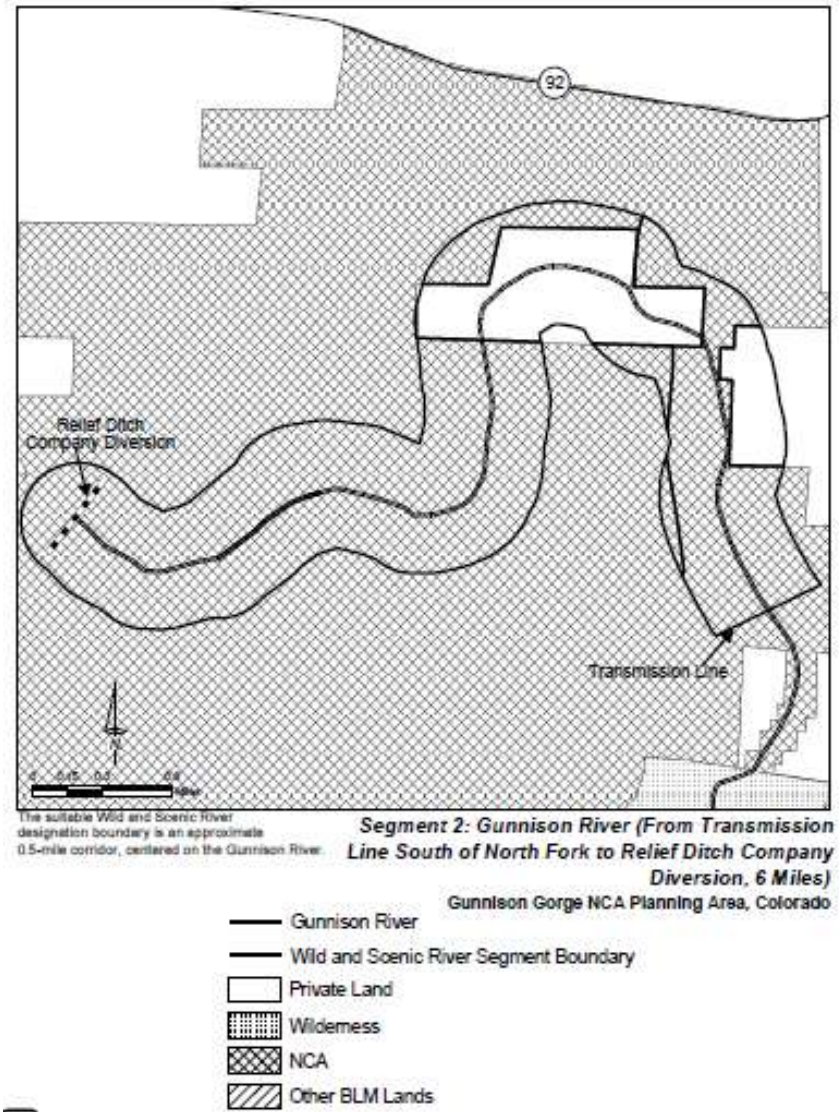

Figure 9: Gunnison River Segment "Suitable" for Inclusion in the National Wild and Scenic River System

CULTURAL RESOURCES

Affected Environment: The entire project is situated within the flood plain of the Gunnison River. Floodplains are areas of regular surface disturbance and archaeological resources are seldom encountered in these environments. In addition, historic diversion dam maintenance and ditch upkeep have regularly disturbed the surrounding river banks and have permanently altered existing surfaces. No cultural resources are anticipated. Further inventory of this project is exempted under the provisions of BLM Cultural Resource Use Manual 8110.23B1 and 8110.23B2.

Environmental Consequences:

Proposed Action – There would be no impacts to any known or anticipated National Register or otherwise eligible historic properties.

Cumulative Impacts **–** No cumulative impacts are anticipated.

No Action Alternative – There would be no impacts to Cultural Resources.

NATIVE AMERICAN RELIGIOUS CONCERNS

Affected Environment: There are known areas of Native American Religious Concern near the project although none are known from the project area itself.

Environmental Consequences:

Proposed Action – The project as proposed would have no impact on any known areas of tribal religious concerns, traditional cultural properties or sacred sites. No such localities are known from the project area, and the ephemeral nature of riparian and stream-flow areas indicates that no such properties should be anticipated. If any such properties, or sacred objects are encountered, the project would be suspended pending consultation with the appropriate tribal entities.

Cumulative Impacts **–** None are anticipated.

No Action Alternative – There would be not be impacts to Native American Religious Concerns.

FARMLANDS, PRIME AND UNIQUE

Affected Environment: The staging area for material storage is located on soils considered "Farmland of Statewide Importance" by the Natural Resources Conservation Service when irrigated. The 1-acre area shown in Figure 8 is not irrigated. The private property adjacent to the staging area is irrigated and appears to be a productive orchard. The staging area is a historical dumping ground for BLM users (photo 1).

Environmental Consequences:

Proposed Action – Prior to storing rock materials, the site would be cleaned of trash and debris. Upon completion of the project, the site would be ripped and seeded with native species. However, continued dumping could occur and revert back to the existing conditions.

Cumulative Impacts **–** This project, when combined with the past, present and reasonably foreseeable actions, could improve the existing soil health in the staging area.

No Action Alternative – The existing dumping of debris and existing weed species would continue to inhibit native species from establishing on these soils.

Photo 1

SOILS (includes a finding on Standard 1)

Affected Environment: The soils on the floodplain at the project site consist of flooded haplaquolls, meaning they are derived in an aqueous environment and have a limited B horizon. They are fine sandy loam in texture and are interspersed with rock cobbles. Reworking of these soils and sediments occurs when flood flows overtop the floodplain and mobilize or deposit new material.

Environmental Consequences:

Proposed Action –

Prescribed Fire

The effects of prescribed burning on soils is directly related to the extent the surface litter layer and soil organic matter (0 to 3 cm) is burned as well as vegetation removal which exposes the soil to wind and water erosion. These factors contribute to increased overland flow during rainfall events and the potential to deliver large amounts of sediment to the stream channel. It is possible that soil erosion could increase for one to three growing seasons post burn due to increased soil surface exposure. In addition, the removal of desirable native vegetation like sandbar willow along banks could increase the erosion forces by removing woody stems, and result in bank failure (Smith, 2004).

Mechanical Treatments

Mechanical treatments by mowing or hydro-ax would generate mulch, providing increased surface cover until native plantings and seedings are established. Hand cutting would generate branches and cut trunks that can also be scattered to provide surface cover. The increased cover would reduce the potential for surface runoff and soil erosion. With mechanical treatments, native vegetation can be left along banks to provide stabilization of the floodplain.

Long term impacts to soils are expected to be neutral or positive, as a native-dominated community replaces the tamarisk-dominated vegetation. Improved soil conditions would result from increased groundcover from native shrubs, forbs, grasses and increased woody mulch on the soil surface. A reduction in salty tamarisk needles on the soil surface and reduced Russian knapweed, which emits allelopathic chemicals into the soil, would improve overall soil health.

Cumulative Impacts **–** The impacts from past, present and reasonably foreseeable actions have decreased the overall soil heath in the riparian corridors. Upstream reservoirs have limited the natural fluvial processes of erosion and deposition on the floodplains of the Gunnison river system. Additional activities in the watershed, including rights of ways, recreation, travel infrastructure, farm cultivation, irrigation, livestock production, residential and commercial land development, and urban runoff have also had impacts on soils and deposition in the floodplains. This project could improve the existing soil health on the floodplain, having a positive cumulative impact. The restoration of native vegetation along the river corridor would increase soil health and improve the overall health of the watershed.

No Action Alternative – There would be no impact to soils under this alternative. Poor conditions would be expected to continue and perhaps increase in some areas as Russian knapweed increases.

Finding on the Public Land Health Standard for upland soils: A complete Land Health Assessment was conducted for the Gunnison Gorge area in 2011. The vast majority of the area "meets" Land Health Standard 1. Some areas were found to be "meeting with problems." Those problems include low plant cover and high amounts of bare soil. Small areas of the land health assessment were found to be "not meeting" the standard. Vegetation treatments on the floodplain surrounding the relief ditch would not alter these findings and could improve soil conditions. Standard 1 would continue to be identified as met until further assessed.

VEGETATION (includes a finding on Standard 3)

Affected Environment: Existing vegetation in the project area includes a narrow band of wetland obligate riparian vegetation along the edge of the river; clumps of mainly wetland facultative riparian vegetation further up the stream bank and along overflow channels and drainages; and saltdesert vegetation on uplands away from the channel and its associated groundwater. The wetland vegetation is discussed in the Wetland section. Drier sites within and adjacent to the project area include a grass community dominated by Indian ricegrass, three-awn and prickly pear cactus, and a saltdesert shrub community dominated by shadscale and galleta grass. Vegetation in this area is somewhat degraded by exotic annual and perennial weeds, and changes to the plant communities from current and historic management practices. Riparian vegetation concerns are discussed under the wetlands section.

Environmental Consequences:

Proposed Action – The Proposed Action would primarily affect the riparian and grass vegetation types. Varying levels of short-term site disturbance would be expected from excavation and fill activities as well as the following restoration techniques: hand cutting and limb scattering and piling, mowing and chipping, burning, herbicide application, excavation, seed application and planting. In these areas, vegetation could be directly weakened, damaged or destroyed. For the targeted, nonnative species, these effects are desired project outcomes. For remnant native species within or adjacent to the restoration areas, these effects would be minimized and mitigated as much as possible. Short term indirect effects from the reclamation activities would include dust, smoke or ash deposition on leaves from nearby mowing and burning activities, increased exposure to sunlight and water availability from hand cutting or mowing the standing tamarisk, and burial under fill, mulch or scattered limbs from the diversion structure work, hand cutting or mowing operations. These indirect effects on desirable native vegetation would also be minimized and mitigated to the extent possible.

Over the longer term (beginning after two years), the combination of measures in the Proposed Action is intended to improve vegetation conditions by reducing the dominance of the nonnative vegetation and enabling native vegetation to increase and take its place. The tamarisk beetles are expected to increase in the area, and prevent significant tamarisk regrowth over the long term. Remnant desirable, native vegetation is expected to recover from the short term, incidental damage as a result of the increased availability of sunlight, nutrients and water. Additional benefits to desirable vegetation would arise from reduced fuel loading and diminished threat of wildfire. Where remnant vegetation is lacking, seeding with native species and direct planting would be used to increase native species diversity, improve vegetation structure, and speed natural recovery processes. These actions should result in long term improvements to vegetation community composition, reduced threats from exotic species, and increased age class and species diversity. The primary area of impact would be the riparian community. Little or no long term impacts are anticipated in the upland plant communities.

The design features to utilize the least site-disturbing methods necessary, select and flag access routes and pile areas, and to use herbicides that are selective for the target species would mitigate vegetation damage.

Cumulative Impacts – Vegetation in the region surrounding the Gunnison River and the proposed project area is subject to many disturbances and natural processes which shape it. Climate and weather patterns are among the most influential, with the drought period of the early 2000s reducing tree and shrub stand vigor and density. Natural and man-caused fires burn a fraction of the landscape every year (probably less than 0.5%), resulting in patches of younger vegetation-typically grass and forb dominated openings—on the landscape. Where drought impacts, fire, and to a lesser extent insect and disease processes are minor, vegetation is aging and slowly shifting toward dominance by trees and shrubs. Invasive plants are increasing in prevalence throughout vegetation communities in this region. New invasive species are appearing, and other species are increasing in abundance, reducing sunlight, water and nutrient availability for native species. Native vegetation is being impacted by other human-related disturbances which are occurring at low levels throughout the region. Most prominent among these are mineral exploration and development, agricultural practices including livestock grazing, recreational impacts mainly associated with travel and hunting, and small scale development. The Proposed Project would substantially reduce the levels of non-native species along one of the Lower Gunnison's largest meanders before it enters the Valley, and reduce the threat of these spreading into upland vegetation. The project would also restore native plant species in this area. While a relatively small proportion of the region would be directly affected, a substantial fraction of the riparian area would experience vegetation improvement.

No Action Alternative – Annual reconstructive work would continue to take place along the Relief Ditch diversion, and associated vegetation disturbance and channel widening would probably continue, further reducing streamside vegetation. The tamarisk beetle would likely continue to defoliate tamarisk, and ultimately reduce it to a small part of the riparian community. Other plants, particularly Russian knapweed and kochia, would be expected to increase as tamarisk reduces its domination of water and sunlight in the riparian community, resulting in continued degraded riparian vegetation. These areas present a threat of increased weed invasion to adjacent upland vegetation. Where beetle-killed tamarisk occurs in thick groves, it is likely that there would be increased fire frequency and severity. This could further degrade the riparian vegetation and could spread into upland vegetation as well.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Wildlife, Aquatic; Wildlife, Terrestrial; and Invasive, Non-native Species): This proposal would help the treated and surrounding river reaches to move towards compliance with Standard 3 by promoting and maintaining the native vegetation community, and reducing the levels of weeds in the community.

INVASIVE, NON-NATIVE SPECIES (includes a finding on Standard 3)

Affected Environment: Noxious weeds in the proposed project area include Russian knapweed (*Acroptilon repens*), whitetop (*Cadaria draba*), Tamarisk spp. (Tamarix spp.), Canada thistle (Cirsium arvense), with potential weeds including oxeye daisy (*Chrysanthemum leucanthemum*), yellow toadflax (*Linaria vulgaris*), and halogeton (*Halogeton glomeratus*) in the uplands surrounding the site.

Environmental Consequences:

Proposed Action – The proposed action has the potential to introduce new noxious weeds into the area from construction equipment. However, if the equipment is cleaned and free of foreign debris before entering public land then introduction of new noxious weeds to the area would be substantially decreased. Noxious weed establishment could also be enhanced through soil disturbance. The weeds stated above have the ability to reproduce vegetatively as well as through seed. With the proposed soil disturbance the root systems of these weeds could be transported down river to establish new noxious weed patches or with the equipment as it leaves the area. Treatment of the proposed project area prior to and 3 years post construction should decrease the opportunity for noxious weeds spread and compromise the project area.

Cumulative Impacts **–** This project, when combined with the past, present and reasonably foreseeable actions could, if weeds are not taken as a priority on the project, promote the spread and could potentially introduce new noxious weeds into the area. However, this action would add little to the spread of noxious weeds when combined with the irrigation return flows from up river, and marginal agricultural practices in terms of noxious weed control.

No Action Alternative – The no action alternative would leave the old structure in place which requires reconstruction and maintenance of the diversion every year with a bull dozer. This type of maintenance without mitigation would in the long term promote noxious weed enhancement and establishment along the river corridor.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Wildlife, Aquatic; Wildlife, Terrestrial; and Vegetation): Standard 3 would partially be met for noxious weed with the design features.

THREATENED, ENDANGERED, AND SENSITIVE SPECIES (includes a finding on Standard 4)

Affected Environment: The Uncompahgre Field Office utilizes the U.S. Fish and Wildlife Service *Information, Planning, and Conservation System* (IPaC) to generate the most current species list to analyze the effects of a proposed action on threatened, endangered and candidate species and designated critical habitat for these species (USFWS 2012). In accordance with *BLM Manual 6840*, the goal of management is to prevent a trend toward federal listing or loss of viability for sensitive species.

Appendix A lists potentially occurring federally listed species within the UFO and provides assessments for their occurrence within the project area (BLM 2012). No threatened, endangered, or federally protected species or habitats occur in the proposed action area. Only those species where the project is within the known range of the species and with potential habitat or known occurrences are discussed below.

Federally Listed Fish, BLM Sensitive Fish & Amphibians

The Gunnison River is designated as critical habitat for Colorado pikeminnow and Razorback sucker from the confluence with the Uncompahgre River down to the confluence with the Colorado River. Colorado pikeminnow also have been found in the Gunnison River upstream

from the confluence with the Uncompahgre River as far as the Hartland Diversion Dam (approximately 4 miles from the confluence). Few wild razorback suckers are known to occur in the Gunnison River; however, the population is being augmented by stocking both in the Colorado and Gunnison Rivers. Colorado Parks and Wildlife and USFWS have both suggested that numbers of these two species appear to be low in the immediate reach below Hartland dam in part due to the Gunnison River above Hartland dam being too cold (cold water fishery) for these warm water fish to inhabit.

The Humpback chub is not known to occur in the UFO. However, one individual was recently captured in the Gunnison River in a canyon-bound reach at river mile 22, approximately 5 miles north of the UFO planning area boundary. Based on this information, there is a possibility the species occurs within the Gunnison River, or may spend part of its life cycle in the river well below the project site. The project would not occur within designated critical habitat.

The Gunnison River is known to contain populations of flannelmouth sucker, bluehead sucker, and roundtail chub. The Gunnison River is a popular sport fishery which the Colorado Division of Wildlife has stocked with rainbow trout for many years. Amphibians (including substantial leopard frog populations), reptiles, invertebrates, and other species may depend on aquatic habitats for "welfare factors" (i.e., life stages, cover, food, water, etc.). The diversion and canal infrastructure poses a barrier to fish migration and has altered stream morphology and riparian vegetation communities, thereby altering habitat quality for fish and other aquatic species.

Western yellow-billed Cuckoo
Suitable habitat (mature cottonwood stands) for this species is not present at or near the project area with the closest known occupations occurring, primarily on private lands in the North Fork Valley area near Hotchkiss and Paonia. Since 2003, this species has been confirmed every year in the North Fork of the Gunnison Valley. In 2008, Rocky Mountain Bird Observatory conducted surveys for yellow-billed cuckoo within the UFO. Survey areas included the San Miguel River, North Fork Valley, and several drainages on the east slope of the Uncompahgre Plateau. Based on broadcast call surveys, yellow-billed cuckoos were detected in the North Fork Valley on private land near Hotchkiss in Delta County. Breeding was also confirmed that year in the same area. There have also been reports of this species on private lands along the Uncompahgre River in the Montrose, Colorado area.

Federally Listed Plants
The Colorado hookless cactus ("Sclerocactus") is one of a group of closely related cacti listed by the USFWS as threatened under the name Uinta Basin hookless cactus (*Sclerocactus glaucus*) on October 11, 1979 (USFWS 1979, 1990a). The basis for the decision to list the species included habitat loss; overutilization for commercial, sporting, scientific, or educational purposes; and the inadequacy of existing laws and regulations to protect the species. Recent genetic studies, common garden experiments (Hochstatter 1993, Welsh et al. 2003), and a reevaluation of the morphological characteristics of *Sclerocactus glaucus* (Hochstatter 1993, Heil and Porter 2004) have led to a reclassification of the genus, including splitting *S. glaucus* into three species: Colorado hookless cactus (*S. glaucus*), Uinta Basin hookless cactus (*S. wetlandicus*), and Pariette hookless cactus (*S. brevispinus*) (USFWS 2007). In the UFO area, Sclerocactus occurs on gravelly or rocky surfaces on river terrace deposits, lower mesa slopes, and alluvial benches in

salt desert shrub communities dominated by shadscale (*Atriplex confertifolia*), within adobe Mancos shale, and in piñon-juniper communities, within an elevation range of approximately 4,500 to 6,000 feet. This species occurs in Mesa, Delta, and Montrose Counties. It is most abundant in the lower Uncompahgre and Gunnison River Valleys, especially in the Olathe-Delta region. Surveys near Delta, Colorado, found approximately 6,000 cacti (BIO-Logic 2008, 2009), suggesting a larger population than the original estimate of 15,000 individuals for the Gunnison River segment (FWS 1990). Additionally, surveys conducted by BLM in 2011 identified numerous individuals between Lawhead Gulch and Smith Mountain within the Gunnison Gorge NCA that were not previously documented. Currently, Sclerocactus has been documented in excess of 300 distinct populations and over 1600 individual locations within the UFO, primarily centered on the Delta area.

The river cobble outcrops along H75 road seemingly offer suitable habitat for Colorado hookless cactus as slopes, aspects, associated plant communities, soil and geologic formations are all the same along the county road. Survey conducted for this project identified previously unidentified cacti populations.

Appendix B identifies species of special management concern that are known or have potential to occur within the UFO along with occurrence assessments for the area (BLM 2012). Several sensitive species are known or have the potential to occur in the project area. Only those species where the project is within the known range of the species and with potential habitat or known occurrences are discussed below.

BLM Sensitive Raptors (Bald Eagle, Golden Eagle)
The project area is identified as bald eagle winter range, but does not contain any other mapped crucial habitats. Lack of large diameter cottonwood galleries could be the reason why this portion of the river does not contain winter concentration or roosting habitat for bald eagles.

There is one historic golden eagle nest site in the cliffs above the Gunnison River approximately 0.6 river miles upstream from the project site which was first identified in 1997. The site is likely still active as courtship behavior has been observed every near the site as recently as February 2012. If the nest site is not active then the area is certainly a territory for a pair of nesting eagles as the pair has been observed in the area for two consecutive years.

BLM Sensitive Plants
During surveys for Colorado hookless cactus nearly all the uplands surveyed for cactus also had robust populations of Colorado (Adobe) desert parsley (*Lomatium concinnum*) with total number of individuals conservatively estimated at well over fifty thousand. This species is doing very well in the salt desert shrub communities along H75 road. Due to healthy population presence and limited potential for impact the proposed action would have no effect on this species.

Environmental Consequences:
Proposed Action –
Federally Listed Fish
Because the Colorado pikeminnow and Razorback sucker do not inhabit the river upstream of Hartland dam, there is not an expected direct impact from the proposed action.

Reconstructing and operating the Relief Ditch would continue to deplete the decreed 51 cfs of water from the Gunnison River. However, there would be a net positive effect from reconstructing the diversion structure by reducing the unintentional diversion of flow that must then be returned to the river in an open channel. The current diversion point allows much more than 51 cfs to flow through open ditch before flowing back to the river in a return ditch and effectively dewatering a ¼ mile of river channel. The new diversion would divert only 51 cfs keeping all remaining flows above 51 cfs in the river channel.

A Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin was initiated in January 1988. The Recovery Program was intended to be the reasonable and prudent alternative for individual projects to avoid the likelihood of jeopardy to the endangered fishes from impacts of depletions to the Upper Colorado River Basin, including the Gunnison River. In order to further define and clarify the process in the recovery program, a section 7 agreement was implemented in October 1993, by the Recovery Program participants. Incorporated into this agreement is a Recovery Implementation Program Recovery Action Plan (RIPRAP) which identifies actions currently believed to be required to recover the endangered fishes in the most expeditious manner.

On December 4, 2009 the USFWS issued a final Gunnison River Basin Programmatic Biological Opinion (PBO). The USFWS determined that projects that fit under the umbrella of the Gunnison River PBO would avoid the likelihood of jeopardy and/or adverse modification of critical habitat for depletion impacts. The PBO states that in order for actions to fall within the umbrella of the PBO and rely on RIPRAP to offset its depletion, the following criteria must be met:

- A Recovery Agreement must be offered and signed prior to conclusion of section 7 consultation.
- A fee to fund recovery actions will be submitted as described in the proposed action for new depletion projects greater than 100 acre-feet/year. The Fiscal Year 2012 fee was established at $19.21 per acre-foot.
- Reinitiation stipulations will be included in all individual consultations under the umbrella of this programmatic.
- The Service and project proponents will request that discretionary Federal control be retained for all consultations under this programmatic.

The Recovery Agreement would be signed and in place between Relief Ditch Company and the USFWS prior to final approval for reconstruction of the diversion structure. The historic depletions, decreed at 51 cfs associated with this project do not require contributions to fund recovery actions. The BLM would reinitiate section 7 consultation for future actions associated with this project should it be warranted. Therefore the proposed project meets the criteria to rely upon the Gunnison PBO to offset depletion impacts and is not likely to destroy or adversely modify designated Critical Habitat.

BLM Sensitive Fish & Amphibians

The proposed action would help restore stability to this section of stream and enhance habitat

quality for BLM sensitive fish and other aquatic species and perhaps in the future federally protected fish species. Reconstruction of the diversion and establishing more natural channel morphology would facilitate better fish migration, particularly during low flows, and enhance habitat quality and connectivity. The proposed project would reconnect historic riverine habitat that has been fragmented by the diversion particularly during low flows and assist in restoring declining native flannelmouth sucker, bluehead sucker, and roundtail chub populations. Ecologically, the proposed action would reestablish and/or maintain population connectivity and potentially increase fish numbers above and below the diversion, as well as increase macroinvertebrate species diversity, and improve ecosystem health within this river reach. Furthermore, construction during the low-water period would minimize impacts on all aquatic species.

Restoring the floodplain opposite the Relief Ditch would provide greater habitat opportunity for all five fish species discussed by reconnecting floodplain and riverine habitats. In spring, adults of these species may utilize restored floodplain habitat during high flows. Such environments are particularly beneficial because these riverine fishes gather in floodplain habitats to exploit food and temperature resources. Additionally, greater seasonally wet areas on this floodplain would offer greater habitat opportunity for northern leopard frog and other amphibians.

Federally Listed Plants

A survey conducted on 4/11/2012 found 17 individual cacti along the access road (H75) for the project. All suitable habitats within a 200 meter buffer on both sides of the H75 road were investigated. Based on this survey the closest construction related activities to cactus would be 750 meters away. All construction would occur within the floodplain for the river and all cacti were observed on elevated river cobble terraces no less than 100 vertical feet above the floodplain. The closest occurrences of cactus to the H75 access route is 25 meters and the occurrences are all on elevated river cobble terraces where physical impact from construction related vehicles potentially parking off of the road would not occur. No cacti were observed within the identified material stockpiling areas nor are the identified riparian areas considered suitable habitat for cactus and spot checking of the riparian areas found no evidence of cacti occupation. A survey conducted on 5/24/2011 found 5 individual cacti on the bench above the confluence of Lawhead Gulch and the Gunnison River. These individuals would be within 100 meters of the 36 acre riparian habitat restoration portion of the project. These individuals occur on the bench above the river approximately 140 feet up from the proposed flood plain restoration. No cacti were observed adjacent to the access road to the flood plain where equipment would be needed for tamarisk removal and replanting. Therefore, there would be no effect to cactus from implementing this portion of the project.

The only plausible indirect impact to cactus from the proposed reconstruction would be from fugitive dust generated by contractors utilizing the H75 road which is a maintained high use road that has roadbase and gravel applied as necessary to facilitate access by low clearance vehicles. High concentrations of dust has known detrimental effects on gas exchange and water budgets in plants (e.g., Farmer 1993, Padgett *et al*. 2007) and through stigma clogging which may affect the ability of pollen grains to germinate, penetrate the stylar tissue and fertilize ovules.

The table below summarizes how much vehicle traffic is expected to occur as a result of the diversion reconstruction. As previously stated the H75 road is a Delta county road that has

extensive maintenance preformed on it regularly in order to maintain it as a low clearance road. It has been graveled and adequately crowned and ditched to facilitate proper drainage.

Truck Traffic Estimate on H75 Road Related to Relief Ditch Modification

Heavy Truck and Tractor Trailer Traffic

Description	Number of Round Trips
Materials hauling including fill and boulders 7/1 - 10/20	112
Concrete deliveries and pump trucks	20
Mobilization for Construction 9/1 - 9/20	6
Mobilization post construction 3/1 - 3/20	6
Total	**144**

Light Truck Traffic

Description	
Labor and management 4 vehicles per day	**360**

There is no current vehicle use information available to suggest what baseline traffic is on the H75 road to analyze what the level of traffic increase the proposed action would cause. Because the H75 road is a well maintained gravel road dust generation is far less than what is observed on native surface roads in the project area. Because H75 road is a well maintained road and all construction activities are planned to begin after July 1 and after the cacti have completed flowering and fruit development, it is unlikely that dust generated would have a measurable impact on cactus reproduction. It is uncertain how much dust would be generated and thus deposited on individual cactus. Upekala et. al. 2009 found that dust deposition on high traffic native surface roads in the field was well below experimental levels in which federally protected study plants expressed impact from dust deposition. Considering 1) the study results relative to cactus with a thick waxy cuticle, 2) the closest observed cactus was 25 meters from the road, 3) that the road surface is graveled, and 4) the relatively short duration (approximately 100 vehicle trips) of dust generation during the growing season, it is reasonable to assume that dust deposition would not be substantial enough for cacti to be detrimentally affected as a result of the proposed action.

The majority of the expected vehicle traffic (> 80%) would begin after October 1 when cacti are beginning to go dormant or draw down beneath the soil surface. Thus approximately 400 of the anticipated 500 vehicle trips would occur when the cactus is not actively growing; when the greatest amount of dust deposition potentially generated as a result of the project would occur when the plants are dormant. To limit dust deposition speed control measures on all project-related unpaved roads would also be implemented to reduce vehicle fugitive dust. Should dust deposition exceed 32 g/m^2 as measured at the closest cactus to the road at any point between July 1 and September 30 then the contractor would be required to provide daily dust abatement of the H75 road with water or non-chloride based dust suppressants beginning ½ mile above the southernmost cactus location all the way to the construction site. Based on the timing of construction, level of traffic anticipated during the growing season, graveled road surface, and reduced vehicle caused fugitive dust measures the proposed action “may affect, but is not likely to adversely affect” the federally threatened Colorado Hookless Cactus (*Sclerocactus glaucus*).

BLM Sensitive Raptors (Bald Eagle, Golden Eagle)
Based on project timing, the proposed action "may affect, but is unlikely to result in a trend toward federal listing" of these species. Potential impacts are similar to those as described in the Migratory Birds section of this document. Over the long term, special status species' habitat would be improved as a result of the proposed action. Design features have been incorporated into the proposed action to limit disturbance to bald eagle potentially utilizing this portion of the river during winter months.

Cumulative Impacts – See also Vegetation, Weeds, and Wetland & Riparian Zones sections. The proposed project would incrementally reduce the level of nonnative species along the Gunnison River riparian area, reduce the threat of non-native species spreading into upland vegetation, and restore native plant species in areas where they are reduced along the river, increasing vegetation diversity along the river corridor. Increased native vegetation diversity would increase wildlife diversity (Smith et al. 2008). While a very small proportion of the region would be directly affected, this small fraction of the riparian area would experience vegetation improvement and floodplain restoration, which would provide better quality habitat potentially for federally protected fish as well as BLM sensitive fish along this stretch of the Gunnison. Restoring the floodplain adjacent to the ditch diversion could potentially create the necessary back water environments that native flannelmouth sucker, bluehead sucker, and roundtail chub populations depend upon for reproduction incrementally adding to improved habitat suitability along the Gunnison River as realized by other cumulative improvements such as Hartland fish ladder and other restoration efforts likely to be implemented into the future. This project would add cumulatively to the previous riparian restoration projects that have been implemented along this stretch of the Gunnison River by the Uncompahgre Field Office over the last 5 years. Without such treatments, the trend of declining native warm water fish populations and continued domination by non-native fish would eventually exclude such species and result in continued population declines.

Past and current impacts to Colorado Hookless cactus on BLM-managed land within the occupied range include: major utility line rights-of-way (ROW); natural gas development; water developments, especially check dams and irrigation projects; military training; road construction and highway expansion; livestock grazing; ORV use and other recreational activities. As impacts from the proposed action are unlikely to result in measurable affects, reconstructing the Relief Ditch is not expected to cumulatively add to the ongoing impacts that currently threaten Colorado Hookless cactus.

No Action Alternative – The current diversion structure would continue to pose a barrier to fish migration. Riparian habitat adjacent to the diversion dam is unstable and is in relatively poor condition. Under the current management scenario, these conditions would be expected to continue and perhaps worsen over time. Ongoing activities in the proposed action area include agriculture, canal/ ditch use and maintenance, vehicle traffic, river recreation, and others. These and similar activities would continue to have minor impacts on aquatic species and habitat. There would be no impacts to listed plant species from the proposed action.

Finding on the Public Land Health Standard for Threatened & Endangered species: Implementation of the proposed action is likely to improve population trends for Colorado pikeminnow and razorback sucker (federally listed species), flannelmouth sucker, bluehead sucker, roundtail chub, and northern leopard frog(BLM sensitive species) under this standard. Therefore, the proposed action would meet or result in a trend toward meeting the criteria for this Land Health Standard.

MIGRATORY BIRDS

Affected Environment: Plant communities within the analysis area provide habitats for a variety of migratory bird species. The U.S. Fish and Wildlife Service list of Birds of Conservation Concern was used to complete this analysis (USFWS 2008). Appendix C identifies the species from this list which are known or have potential to occur in the UFO and which are protected under the Migratory Bird Treaty Act (MBTA), and assesses their potential for occurring in the project area (BLM 2012).

Environmental Consequences:

Proposed Action – The following effects determinations are based on diversion construction activities occurring during the low water seasons of the year (late Fall through early Spring). Due to project timing, construction would have no effect on migrant individuals and minimal, short-term impacts on wintering or resident individuals. Direct impacts to individuals are unlikely to occur as most birds would avoid the project area during construction. Breeding, nesting, and reproduction would not be affected by the proposed activity, with the possible exception of temporary modification of habitats, particularly for those species which select riparian vegetation and habitats for breeding purposes. Over the long term, habitat for birds and their prey/food sources would be improved as a result of the proposed action.

Short-term displacement of individuals may occur during vegetation treatment on the adjacent floodplain. However, such effects are expected to be minimal and short-term. Proposed treatments may coincide with the breeding period for one or more of these species. In order to achieve the desired result, spring treatments may be necessary such as weed erradication. Nests and/or eggs could be crushed or destroyed by project activities, and young could be killed.

Adult birds would most likely avoid areas during treatment. Project design features including the migratory bird seasonal restriction (May 15 – July 15), and raptor nest survey requirements would help protect most breeding birds in the area. In the short-term, the proposed action may impact individual birds, but is not expected to have a measurable impact on migratory bird populations or viability on a landscape scale.

In the long-term, structural diversity and habitat conditions should improve (see Vegetation section). Treatment would reduce the amount of non-native invasive vegetation and should be replaced with increased native riparian vegetation. In addition, restoring the floodplain and removing the non-native invasive vegetation would improve growth and vigor in the remaining native trees and improve understory shrubs and herbaceous vegetation, resulting in improved availability of food and shelter for many bird species. Planting of additional native riparian

species in this area would benefit migratory birds and expand suitable nesting and foraging habitat for many species (see Wetland & Riparian Zones section).

Cumulative Impacts – See also Vegetation, Weeds, and Wetland & Riparian Zones sections. Riparian woodlands, west wide, have undergone large-scale loss or degradation through conversion to agriculture, urbanization, historic overgrazing, and disruption of hydrologic processes. With these losses has been the reduction of native riparian trees by non-native species, particularly tamarisk. Riparian woodlands are important breeding, wintering, and stopover habitat for a variety of birds, especially in the arid southwestern United States. As such, populations of riparian obligate birds in the Southern Rocky Mountain/Colorado Plateau region have been declining over the last decade or more. The proposed project would substantially reduce the levels of non-native species along this portion of the Gunnison River riparian area. The project would also restore native plant species in areas where they are reduced along the river, increasing vegetation diversity along the river corridor. With increased native vegetation diversity would come increased wildlife diversity (Smith et al. 2008). While a very small proportion of the region would be directly affected, this small fraction of the riparian area would experience vegetation improvement, which would provide better quality habitat for migratory birds along this stretch of the Gunnison. This project would add cumulatively to the previous riparian restoration projects that have been implemented along this stretch of the Gunnison River by the Uncompahgre Field Office over the last 5 years. Without such treatments, the trend of increasing spread and domination by non-native vegetation would eventually exclude riparian obligate bird species and result in continued population declines of those species.

No Action Alternative – Riparian habitat adjacent to the diversion dam is unstable and is in relatively poor condition. Under the current management scenario, these conditions would be expected to continue and, perhaps, worsen over time. Ongoing activities in the proposed action area include agriculture, canal/ ditch use and maintenance, vehicle traffic, river recreation, and others. These and similar activities would continue to have minor impacts on native birds.

WILDLIFE, TERRESTRIAL (includes a finding on Standard 3)

Affected Environment: The project area supports a variety of terrestrial wildlife species including reptiles, small mammals, carnivores, birds, and big game. Example species include garter snake, cottontail rabbit, least chipmunk, prairie dogs, coyote, bobcat, black bear, mountain lion, elk, mule deer, possibly Rocky Mountain bighorn sheep, red-tailed hawk, and a large number of songbird species. The Gunnison Gorge Land Health Assessment (BLM 2000) contains a more detailed listing of wildlife species for this area. Terrestrial wildlife species of concern are addressed in the Threatened, Endangered, and Sensitive Species Section.

Riparian areas are amongst the most important habitat for many terrestrial wildlife species, especially as a source of water in an arid environment, and often are the most biologically diverse in terms of terrestrial wildlife. The riparian habitats in this area have been degraded by altered flow regimes, invasion and dominance of tamarisk and Russian knapweed as well as other noxious and invasive species, and are further fragmented by the presence of orchards and other farm lands adjacent to the project. They are all adjacent to cliff and canyon habitat, which

reduces the amount of big game use. The project area has been identified as winter concentration and overall winter range (Colorado Parks & Wildlife) for mule deer (BLM 2012). Similar to other riparian and river canyons, the habitat is used for movement and foraging by bear, mountain lion, birds and a variety of small and medium sized mammals.

Environmental Consequences:

Proposed Action – In the short term, the proposed diversion reconstruction and restoration of riparian floodplain would disperse most terrestrial wildlife in the immediate area due to the presence and noise of the human activity, construction activity/disturbance, and motorized vehicle and flail. However, the disturbance to wildlife should be negligible due to the relatively short duration of this activity (5 months) and the regular disturbance associated with the orchards adjacent to the project area. Tamarisk is not heavily utilized by native wildlife in this area for forage, nesting, or cover. Ultimately this treatment, by allowing native vegetation to recover, would improve habitat conditions in the riparian corridor for the majority of wildlife species. The overall benefit to implementing the proposed action in the winter far outweighs potential impacts to wintering mule deer in the Gunnison river riparian area. The very small acreage impacted by the project would allow deer that traditionally winter in the canyon to disperse into the numerous side canyons and abundant upland habitat that also serves as winter range or winter concentration areas.

Cumulative Impacts **–** Riparian woodlands, west wide, have undergone large-scale loss or degradation through conversion to agriculture, urbanization, historic overgrazing, and disruption of hydrologic processes (see also Vegetation, Weeds, and Wetland & Riparian Zones sections.). The proposed project would incrementally reduce the levels of non-native species and restore native plant species in areas where they are reduced along the river, increasing vegetation diversity along the river corridor. A large fraction of the riparian area has already undergone tamarisk and Russian olive removal and overall native vegetation improvement, which has and would continue to provide better quality habitat for terrestrial wildlife species along this stretch of the river.

No Action Alternative – There would be no short term impacts to terrestrial wildlife from this alternative. Long term moderate declines to terrestrial wildlife habitat quality would be expected as the tamarisk declines with the tamarisk beetle impacts, but Russian knapweed increases with the reduced competition.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation; Invasive, Non-native Species; and Wildlife, Aquatic): Implementation of the proposed action is likely to improve the current status of wildlife species under this standard. Therefore, the proposed action would meet the criteria for this Land Health Standard.

WILDLIFE, AQUATIC (includes a finding on Standard 3)

See Threatened, Endangered, and Special Status Species for analysis regarding aquatic wildlife.

WETLANDS & RIPARIAN ZONES (includes a finding on Standard 2)

Affected Environment: The Lower Gunnison River is the largest river within the Uncompahgre Field Office, and is therefore a high priority riparian area. Channel conditions in the project area are degraded by the Relief Ditch diversion structure and maintenance activities. These have caused over-widening of the channel, and the channel has downcut relative to the floodplain. Existing vegetation in the project area includes a narrow band of wetland obligate riparian vegetation along the edge of the river, clumps of mainly wetland facultative riparian vegetation further up the stream bank and along overflow channels and drainages, and saltdesert vegetation on uplands away from the channel and its associated groundwater. The wetland obligate vegetation is mainly made up of spike rush and wooly and aquatic sedges, with sparse sandbar willow in places. The wetland facultative vegetation includes a community that is dominated by skunkbush sumac, spearleaf rabbitbrush, scouring rush horsetail and other graminoids and has fairly low salt tolerance. A few remnant narrow leaf and Fremont cottonwood are scattered across these sites in the restoration area, with many more skeletons still evident on the ground. Another more salt tolerant community includes tamarisk, inland saltgrass, Russian knapweed, kochia and scratchgrass (*Muhlenbergia asperifolia*). This community dominates much of the riparian area targeted for restoration. Current issues in this riparian zone include the abundance of exotic weeds, beaver impacts on remaining native vegetation, impacts from the tamarisk beetle, and flow alterations from upstream dams affecting the long term persistence of the native riparian communities.

Environmental Consequences:

Proposed Action – Impacts to riparian vegetation are discussed in the vegetation section above. Other wetland and riparian impacts relate to channel, bank, floodplain and hydrologic functions. Direct, short term disturbance of the streambanks is expected to occur where the diversion and control structures are constructed and where fill is being applied to the streambanks. In addition, direct, short term disturbance would occur to streambanks under most of the treatment types. This would include obliteration and reconstruction of the banks in some areas to light trampling or rutting of streambanks and floodplains.

In areas of bank reconstruction, engineered designs would be used to ensure banks are stable and appropriately vegetated. In other areas, damage would be minimized by avoiding treatment during times when the soil is wet, and the effects would probably not be visible after six months. Direct disturbance would also occur in limited areas as a result of excavation and side channel manipulation, and from rerouting of salt-laden drainage channels. Excavation would be limited to digging out shallow notches and short trenches between the upper edge of the active channel and the mouth of the side channel to allow water to enter the side channel during peak flow periods, and to creating a small channel around the periphery of the restoration area. Some areas along the side channel would also be affected through piling debris or adding additional notches. The disturbance would be mitigated by seeding to reduce erosion potential. During high river flows, water would be able to flow through the side channels and access more of the floodplain. This would improve channel morphology and floodplain function, and enhance conditions for revegetation by native riparian species through natural flooding processes over the long term. The peripheral small channel would reduce the level of highly saline groundwater from the

restoration area, and favor reestablishment of native riparian species.

Tamarisk removal through mowing, cutting and burning may indirectly impact channel function in areas where tamarisk growth is thick and the primary vegetation. All management approaches which kill the above ground portion of the tamarisk are likely to lead to root death within 2-5 years. As the roots decay, the channel banks could become destabilized and experience some erosion which may result in channel widening. In these areas, willows would be planted where site conditions are suitable to minimize bank erosion. Long term results of these activities would be improved channel morphology, improved floodplain function, and increased area suitable for native riparian vegetation growth.

Features of the proposed action would mitigate riparian erosion, including: sandbar willow would be used to vegetate collapsing banks where conditions are suitable; vehicles or heavy equipment would not be used during times when soil is wet enough for ruts >4" to develop; and areas disturbed by excavation would be seeded with native, riparian species.

Cumulative Impacts –Natural riparian and wetland areas are limited in the region as a result of the semiarid climate, and further reduced by the diversion of water for human uses. The majority of the streams and rivers in this region are diverted to some degree, but most of those on public lands still maintain a largely functional hydrology, and primarily native riparian/wetland vegetation. The exceptions to this are the few streams which have large amounts of water diverted out of the watershed, and those where flows are heavily regulated by large dams. Within this region, the Gunnison River is heavily affected by such water management practices.

Tamarisk and other invasive species have been particularly damaging to lower elevation riparian and wetland areas in western Colorado, especially on those streams and rivers which are on saline soils, are heavily diverted or where flow is controlled by dams. In many cases, these species have transformed the riparian vegetation into near monocultures of nonnative weeds.

Widespread historic and current livestock grazing has often increased the rate of spread by the unpalatable nonnative species, and has hindered regeneration of native riparian vegetation. Wildlife, and especially beaver are also affecting riparian vegetation, typically selecting the native species for consumption and further giving competitive advantage to the nonnatives. Other factors damaging riparian areas include recreational use and impacts, mineral exploration and development, and other forms of development. These all cause localized disturbance and may introduce new weed species or spread existing weeds but are otherwise minor factors at the regional scale.

The Proposed Action would result in improved hydrologic function and riparian vegetation along ½ mile of the largest river in the Field Office. An improvement of this magnitude should be considered a slight enhancement of overall riparian conditions at the regional scale.

No Action Alternative – There would be no short term impacts to riparian resources under this alternative, other than those caused by the ongoing Relief Ditch diversion maintenance work and the tamarisk defoliations associated with increasing tamarisk beetle levels. These defoliations are expected to cause widespread tamarisk death within five years. Associated root

death and bank sloughing are also expected to occur. In the project area as the tamarisk die, weeds such as Russian knapweed and kochia are expected to increase. These would likely increase to the point of community dominance, and the riparian area would remain in a degraded state. Dying and dead tamarisk would remain a fuel hazard, and increase the likelihood of wildfire, which would further degrade the riparian area. As a result, over the long term, degraded conditions along the Lower Gunnison River would be expected to continue.

Finding on the Public Land Health Standard for riparian systems: The Proposed Action to alter the diversion structure, recreate the eroded streambanks, reduce nonnative species and increase native riparian vegetation would directly address one of the primary land health problems along the Lower Gunnison River. Secondary benefits to channel morphology and floodplain function would also be expected in some areas. As a result, the land health status for riparian systems along the Lower Gunnison River is expected to improve under the Proposed Action.

FLOODPLAINS

Affected Environment: The project area is located within the Gunnison River 100-year floodplain. The BLM is required to meet the objectives of federal floodplain policy. Executive Order 11988 (21), as amended, established this policy and directs agencies to "avoid to the extent possible the long- and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct and indirect support of floodplain development wherever there is a practical alternative." The objectives of avoiding development and modification of floodplains are to 1) reduce the hazard and the risk of flood loss, 2) minimize the impact of floods on human safety, health, and welfare, and 3) restore and preserve the natural and beneficial floodplain values.

The diversion structure for the Relief Ditch is located perpendicular to flow in the Gunnison River. The Relief Ditch Company has historically and currently uses a bulldozer to maintain a gravel "push-up" dam across the river to divert water. The continued reworking of the channel bottom and banks with a bulldozer has removed the natural vegetation leaving the banks exposed to erosional forces during large flood events.

Environmental Consequences:

Proposed Action – Short term alteration of the floodplain and channel would occur during construction of the new diversion structure. A large storm event during construction could erode banks and increase the flood impact downstream. The likelihood of an event occurring would be reduced during the fall months when construction is planned. Also, if an event was to occur, it is unlikely to cause any greater affects during construction than the existing conditions with the disturbed banks and lack of vegetation.

The use of fire, herbicides and mechanical treatments on the adjacent floodplain have the potential to remove woody structure along the banks. The absence of dense, flexible woody stems on the banks of the floodplain can increase the shear stress at the toe of the banks and lead to fluvial erosion, bank undercutting, and mass failure (Vincent and others, 2009). Due to the

presence of a large reservoir upstream from the project area, the potential for a large flood event is reduced. However, the North Fork of the Gunnison could deliver sizeable flows to the mainstem and cause scouring effects in treated areas. Preserving the sandbar willow populations that exist on the floodplain banks at the water line would reduce the damaging effects of a large flood event and the potential impacts to the floodplain.

Cumulative Impacts – This project, when combined with the past, present and reasonably foreseeable actions, would improve the existing floodplain. Upstream reservoirs have limited the natural fluvial processes of erosion and deposition on the floodplains of the Gunnison River system. Additional activities on BLM and Forest Service lands in the watershed include: coal mining, grazing, rights of ways, recreation and travel infrastructure. Impacts associated with private property in the watershed include; cultivation, irrigation, livestock production, residential and commercial land development, urban runoff, coal mining, and oil and gas development. The impacts from all of these activities have decreased the overall ability of the floodplain to mitigate a flood. The removal of the existing diversion and replacing it would a more functional structure and the restoration of native vegetation along the river corridor, would increase the ability of the floodplain to dissipate large floods.

No Action Alternative – The existing impacts, including reworking of the channel bottom with a bulldozer and increasing invasive species would continue to occur under this alternative.

SURFACE WATER AND GROUNDWATER (includes a finding on Standard 5)

Affected Environment:

Hydrology

The Gunnison River is a major tributary in the Upper Colorado River System. It is highly regulated with three mainstem dams located in the Gunnison Gorge. Additional storage reservoirs are located on Muddy Creek (Paonia Reservoir), a tributary to the North Fork of the Gunnison, and off channel in the Smith Fork of the Gunnison basin (Crawford Reservoir).

Unregulated perennial streams draining to the North Fork of the Gunnison River experience high flows from both snowmelt and rainfall events generated in the high elevation headwaters of the Raggeds and West Elk mountain ranges. Intermittent and ephemeral drainages predominantly flow in response to rainfall events associated with the Southwest monsoon in late summer and early fall. Baseflow is a result of reservoir releases and groundwater discharge, originating in the mountains and irrigation return flows in the lower valleys.

Standards and Classifications

The Clean Water Act of 1972 gives the Environmental Protection Agency (EPA), the authority to set effluent limits on discharges of pollutants into waters of the United States and regulate water quality standards for surface waters. The Clean Water Act also gives the EPA the ability to authorize state governments to administer the program while retaining oversight.

The State of Colorado passed the Colorado Water Quality Control Act, revised in 2002, granting

authority to the Colorado Water Quality Control Commission to classify and assign numeric standards to state waters. State waters are classified according to present beneficial uses, or beneficial uses that may be reasonably expected in the future. Beneficial use classifications include aquatic life, recreation, agriculture, and water supplies for various purposes. Numeric standards are assigned in order to define allowable concentrations of various parameters under the following categories: physical and biological, inorganic and metals. Water quality classifications and numeric standards for surface and downstream receiving waters in the planning area are contained in the Commission's 5 CCR 1002-31, Regulation No. 35, Classifications and Numeric Standards for Gunnison and Lower Dolores River Basins (Colorado Water Quality Control Commission 2012).

It is BLM policy that agency projects should meet or exceed water quality standards established by the State of Colorado for all water bodies located on or influenced by BLM-administered lands.

The table below lists the water quality classifications for the surface waters influenced by the Relief Ditch Project:

4th Field Watershed	***Stream Segment***	***Stream Classification [1-5]***
14020002 Lower Gunnison River	Mainstem of the Gunnison River from the outlet of Crystal Reservoir to a point immediately above the confluence with the Uncompahgre River.	Aq Life Cold 1 Recreation E Water Supply Agriculture

1- Waters are designated either warm or cold based on water temperature regime. Class 1 water's are capable of sustaining a wide variety of cold or warm water biota, while class 2 waters are not.
2- Recreation Class E - Existing Primary Contact Use. These surface waters are used for primary contact recreation or have been used for such activities since November 28, 1975.
3-Recreation Class P - Potential Primary Contact Use. These surface waters have the potential to be used for primary contact recreation.
4-Recreation Class N - Not Primary Contact Use
5- Waters that are suitable for irrigating crops usually grown in Colorado.

The Gunnison River is on the 2012 Colorado 303(d) list of impaired waters below the relief ditch site for excessive concentrations of sediment and E. coli (Colorado Water Quality Control Division).

Environmental Consequences:
Proposed Action –

Diversion Structure Construction
Water quality could be impacted by increases in sediment during construction and for a short period after construction. Fuel and lubricants associated with heavy machinery could spill during construction and impair downstream water quality.

Riparian Restoration - Prescribed Fire
In the short term following any prescribed fire, the proposed burn areas pose a risk of increased sediment, nutrient and ash constituent loads transported into surface water systems. Areas susceptible to sediment transport would be sites with high intensity burns where surface litter is

completely consumed. High intensity precipitation events, capable of transporting sediment or ash constituents are most likely to occur during mid to late summer.

Riparian Restoration - Mechanical Treatments
Mechanical treatments result in additional surface cover in the form of ground surface litter or mulch. The increased mulch from mechanical treatments would reduce the potential for surface runoff and soil erosion, minimizing the sediment yield from these areas. The overall increase in cover would begin immediately after the treatment and slowly increase as planted and seeded native species get established.

Riparian Restoration - Herbicides
Treatment of weeds may be needed to help the establishment of native species in mechanical and prescribed fire treatment areas. The herbicides that may be applied are analyzed in detail including the impact to water quality, in the document below:

> Programmatic Environmental Impact Statement: Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States, and Programmatic Environmental Report: Vegetation Treatments on Bureau of Land Management Lands in 17 Western States

Groundwater
There would be no impact to groundwater resources with implementation of the proposed action.

Mitigation
Construction activities would minimize the sediment contributions by diverting flows around the active working areas in the river. A short flush of fine sediment is expected once water is placed on the new structure but limited in duration until the stream bed stabilizes.

Storm driven flooding events could generate increased sediment, nutrient and ash constituent loads from the proposed riparian treatment areas. Planting and seeding of native vegetation would reduce any long term impacts from these disturbances.

A spill prevention plan would be prepared by the contractor and approved by the BLM to limit the risk of any fuels or lubricants in the floodplain or river.

Cumulative Impacts **–** This project, when combined with the past, present and reasonably foreseeable actions, would improve the existing water quality. Additional activities on BLM and Forest Service lands in the watershed include: coal mining, grazing, rights of ways, recreation and travel infrastructure. Impacts associated with private property in the watershed include; cultivation, irrigation, livestock production, residential and commercial land development, urban runoff, coal mining, and oil and gas development. The impacts from all of these activities have decreased the water quality in the Gunnison River. The removal of the existing diversion and replacing it would a more functional structure and the restoration of native vegetation along the river corridor, would decrease the annual sediment contribution from this structure to the river.

No Action Alternative – The exiting impacts, including annual reworking of the channel

bottom with a bulldozer and increasing invasive species would continue to occur under this alternative.

Finding on the Public Land Health Standard for water quality: A complete Land Health Assessment was conducted for the Gunnison Gorge area in 2011. Water quality chemical constituents and macroinvertebrates were sampled above and below the diversion structure. This section of the Gunnison River was found to "meet" Land Health Standard 5 with no constituents exceeding state water quality standards. However, due to cost, sediment was not sampled. Construction of the diversion structure and vegetation treatments on the floodplain surrounding the relief ditch would not alter these findings and could improve long term water quality conditions. Standard 5 would continue to be identified as met until further assessed. The Proposed Action is consistent with meeting Standard 5.

WASTES, HAZARDOUS OR SOLID

Affected Environment: Hazardous wastes are not a part of the natural environment but could be introduced to the environment through implementation of the proposed action. This would be in the form of fuels and lubricants used for machinery.

Environmental Consequences:

Proposed Action – The Design Features address the possible problems of spilled fuel and lubricants. It does not eliminate the possibility of spills but it does provide for rapid response to spills and an overall reduced likelihood of such spills. Impacts would be expected to be minimal and short-term but could include mortality of some aquatic species.

Cumulative Impacts – Negative impacts, if any, would be seen only during the construction phase and would be expected to be short-term. No cumulative impacts would be expected.

No Action Alternative – Impacts could be similar, unmitigated, and cumulative. If the existing structure is not replaced with a structure that doesn't require regular reconstruction, the same types of impacts from equipment working near and on the river increases the possibility of spills into the river with the associated negative impacts.

ENVIRONMENTAL JUSTICE

Affected Environment: While analyzing a federal action, BLM identifies and addresses, as appropriate, disproportionately high and adverse human health and environmental effects of programs, policies, or activities on minority or low income populations. Environmental Justice involves fair treatment, which means that no group of people, including a racial, ethnic, or socio-economic group, should bear a disproportionate share of the negative environmental consequences resulting from a federal action.

Environmental Consequences:

Proposed Action – The proposed action was developed and located based on the need to replace a diversion structure and restore the riparian area along a degraded river. Any short or long-term positive or negative impact would affect all populations equally. The proposed action would not have disproportionate or adverse human health or environmental effect on minority or low-income populations.

Cumulative Impacts – None

No Action Alternative – There would not be impacts to Environmental Justice.

OTHER ELEMENTS

The following elements are considered. Those that could be impacted are brought forward for analysis.

Other Elements	Not Applicable or Not Present	Present, But No Impact	Applicable & Present; Brought Forward for Analysis
Access			X
Transportation		X	
Cadastral Survey	X		
Realty Authorizations			X
Range Management		X	
Forest Management	X		
Fire			X
Noise			X
Recreation			X
Visual Resources			X
Geology and Minerals	X		
Paleontology		X	
Law Enforcement		X	
Socio-Economics		X	

ACCESS

Affected Environment: H75 road is a county road and the only access road to the relief ditch site. Beyond the termination of H75 road, the access road that is built on the relief ditch structure would be rebuilt and improved to provide access to the new diversion structure during flooding events.

Environmental Consequences:

Proposed Action – H75 road would be used as the primary route for haul trucks delivering construction materials and equipment to the relief ditch site. Caution would be taken to ensure no damage to the facility or disruption of use occurs. All right-of-way holders would be contacted to coordinate activities that occur within or near their existing facilities. Delta

County would be notified as to specific project activities and time frames occurring within or near their rights-of-way.

Cumulative Impacts – No cumulative impacts should occur to existing rights-of-way facilities**.**

No Action Alternative – There would be no impacts to existing rights-of-way facilities under the No Action alternative.

REALTY AUTHORIZATIONS

Affected Environment: H75 is the only right-of-way authorization present within the project area.

Environmental Consequences:

Proposed Action – Caution would be taken to ensure no damage to the county road or disruption of use occurs. A permit would be obtained from Delta County, if required. Delta County would be notified as to specific project activities and time frames occurring within or near their rights-of-way.

Cumulative Impacts – No cumulative impacts should occur to existing rights-of-way facilities**.**

No Action Alternative – There would be no impacts to existing rights-of-way facilities under the No Action alternative.

FIRE

Affected Environment: Treatments would target sites with moderate to heavy densities of tamarisk and Russian knapweed in the floodplain upstream and downstream of the Relief Ditch. Primary concerns of this burn include the safety of both the public and fire personnel and the smoke impacts along the State Highway 92 corridor.

Environmental Consequences:

Proposed Action – Units could be ignited using a variety of ignition devices such as drip torches, fusees, or very pistols. In an effort to restore the native riparian species and natural wildlife habitat, the ultimate goal of the burn is to eliminate tamarisk and Russian knapweed material and create a bare soil bed for planting of native species. Short term smoke would be generated during implementation of the burn, but would be managed to minimize impact to private residences and to State Highway 92.

Cumulative Impacts – In the long term, potential risk and subsequent damage from tamarisk supported wildfire to cottonwood and other valuable native plant species would be reduced. Smoke from prescribed fire would be cumulative to smoke from wildfires in the

western US that occur at the same time.

No Action Alternative – Under the no action alternative, there would be no immediate impacts to existing vegetation structure.

NOISE

Affected Environment: The project area is generally characterized as having low levels of noise as a result of light traffic on the adjacent H75 county road, as well as the noise of the river.

Environmental Consequences:

Proposed Action – There would be a short-term generation of noise from equipment used during construction, mechanical treatments and chainsaw use. This noise would be heard in the immediate vicinity, possibly up to a distance of 1 mile. Noise would only be generated during daylight hours during construction or treatment activities using mechanical equipment. The other treatment types are not expected to generate noise above the levels that already exist.

Cumulative Impacts – Noise in the area is generated from a variety of sources. Noise from the project would supplement the low level noises associated with traffic in the area. Project noise would be short term in nature, and would be localized to the work area.

No Action Alternative – There would not be impacts to noise.

RECREATION

Affected Environment: The project is located within the very popular "Forks to Austin" section of the Gunnison River, and the Gunnison and North Fork River Special Recreation Management Area (SRMA). Specifically, it is within Management Unit 3-2, the Lower Gunnison River Corridor, which is the main river corridor from just upstream of Gunnison Forks Day Use Area downstream to the west NCA boundary near Austin.

This area offers day and multi-day walk/wade fishing, float fishing and non-technical boating opportunities. Ten commercial outfitters are permitted for float fishing and walk/wade fishing in the corridor. Due to the productive fishery upstream from the existing Relief Ditch diversion structure, non-technical nature of the boating opportunities and ease of public access, it is also quite popular with private recreationists.

During the past year Hartland Dam, a low-head dam between Austin and Delta, had a fish/boat passage constructed through what had been a structure that was impassable to boats. This is expected to increase the interest in floating from the Lower Gunnison River in the Gunnison Gorge NCA to the town of Delta.

The SRMA offers high quality boating experiences, with the exception of the passage through the Relief Ditch structure. The safest boat passage is on the extreme river-right edge of the

structure, but it is not visible from the river until boaters are upon it. The way the water flows over and through the structure at times can cause boaters to mistakenly choose the wrong passage, and end up in a perilous situation, as these false passages sometimes have railroad iron protruding vertically at the surface. Several boats have been damaged and a few minor injuries have occurred as a result.

Because the current annual maintenance of the Relief Ditch diversion structure necessitates that a bulldozer is operated in the river to push up gravel and cobble to rebuild the structure after spring flows, fish habitat is negatively affected. This affects the quality of fishing opportunities in the SRMA. There is a public easement out onto the dam structure that is utilized by public users who can then fish the water upstream of the structure.

Environmental Consequences:

Proposed Action –The proposed action would greatly improve the boating safety through the structure. Because the new structure would be submerged the experience of floating through would be a seamless continuation of the float, rather than the confusing and potentially dangerous situation at present.

A new diversion would eliminate the need to operate heavy equipment in the river for annual maintenance. This would allow fish habitat to remain undisturbed by this activity, thus improving habitat over the long run. It is anticipated that the quality of the fishing experience would improve. The current public easement on the existing structure would be unusable, as it would be submerged.

Cumulative Impacts **–** Recreation opportunities within the greater area would not be diminished. The elimination of the current boating hazard at the Relief Ditch together with the new boat/fish passage at Hartland Dam would likely increase recreational boating use through the SRMA. This would be consistent with recreation objectives of the SRMA.

No Action Alternative – There would be no effect on recreation.

VISUAL RESOURCES

Affected Environment: The project is within a Class II Visual Resource Management (VRM) area. The Class II objective is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low.

The current diversion structure is a valid existing right and is not subject to compliance with VRM objectives. The structure itself is out of character with the rest of the river due to the human constructed river-wide dam.

Environmental Consequences:

Proposed Action –During pre-construction staging of materials, construction, and post-construction rehabilitation of the project area the existing character of the landscape would be altered. Presence of staged materials, equipment and construction activities would contrast with

the mostly natural setting of the river corridor. This contrast would be apparent during the six-month construction period.

Upon completion of the project the area would appear to be visually consistent with the rest of the river corridor. The diversion structure would be less noticeable because the structure would be located less obtrusively in the contours of the bed of the river rather than a river-wide impoundment above the surface. This would be net improvement to the visual character of the river corridor once the project was completed.

Cumulative Impacts – No cumulative effects are anticipated.

No Action Alternative –No change to visual resources would take place. The existing structure would continue to contrast with the rest of the visual character of the river corridor.

CUMULATIVE IMPACTS SUMMARY

Cumulative impacts for each element or resource are discussed within each of the sections above. Cumulative impacts are the incremental effects caused by management actions considering all other past, present, and reasonably foreseeable future actions taken over time and the effects can be either additive or subtract from the effects of other actions. The proposed action is not expected to contribute appreciably to cumulative impacts.

Past and Present Actions

Historically, fruit orchards along the valley floor and low mesas have been important to the local economy. Sheep and cattle are grazed in pasture and rangeland nearby and also at higher elevations during the summer. There are a number of water storage reservoirs and canals to serve agriculture and domestic uses. Right-of-way development for power lines, roads and domestic uses has occurred. Residential developments in the area around the communities of Hotchkiss, Orchard City and Delta have been growing in population, with new houses being built. There is river boating in the area, and the area is widely used for other dispersed recreational activities, such as hunting, four-wheeling, hiking, picnicking, horseback riding, mountain biking and sight-seeing.

Reasonably Foreseeable Future Actions

Underground coal mining would continue in the North Fork Valley. Oil and Gas exploration and development is expected to continue, although it is difficult to forecast future oil and gas development within the cumulative impact assessment region. Right-of-Way development will continue, as will water developments, irrigation projects and livestock grazing. Current recreation activities are expected to continue. Population in the area is anticipated to increase.

The current dam structure poses severe hazards to recreational boaters, fishers, and other users within the Gunnison Gorge National Conservation Area. The diversion structure is also causing erosional problems to the streambed and damage to native riparian areas. It also impacts sensitive fish species that depend on the reach of the Gunnison River. Replacing the structure,

while generating short duration impacts, would dramatically improve the existing conditions and would reduce impacts cumulatively.

In terms of floodplain disturbance, water quality, soil disturbance, air quality, recreational activities, livestock grazing and vegetation changes, cumulative impacts of the proposed action would be negligible within the larger region or across a longer time period, because the overall affected acreage is small and actual disturbance impacts short term.

INTERDISCIPLINARY REVIEW: The following BLM personnel have contributed to and have reviewed this environmental assessment.

Name	Title
Lynae Rogers	Rangeland and Weed Management
Amanda Clements	Ecologist
Jedd Sondergard	Hydrologist
Missy Siders	Wildlife Biologist
Ken Holsinger	Biologist
Kelly Homstad	Fuels Specialist
Glade Hadden	Archaeologist
Alan Kraus	HazMat Specialist
Edd Franz	Outdoor Recreation Planner
Linda Reed	Realty
Bruce Krickbaum	Environmental Coordinator

References

BIO-Logic, Inc. 2008. East Montrose Electric System Improvement Project Biological Survey Report: 2008 Field Surveys. Report submitted to Delta-Montrose Electric Association, Montrose, Colorado.

BIO-Logic, Inc. 2009. East Montrose Electric System Improvement Project Biological Survey Report: 2009 Field Surveys. Report submitted to Delta-Montrose Electric Association, Montrose, Colorado.

Farmer, A. M. 1993. The effects of dust on vegetation – a review. Environmental Pollution 79: 63-75.

Heil, K., and J.M Porter. 2004. "Sclerocactus" In Flora of North America, pp. 200-201. Oxford University Press. Available at EFloras.org.

Hochstatter, F. 1993. The genus Sclerocactus revised (magnificent, fascinating natural wonder). Mannheim, Germany.

Padgett, P. E., W. M. Dobrowolski, M. J. Arbaugh and S. A. Eliason. 2007. Patterns of carbonate dust deposition: Implications for four federally endangered plant species. Madroño 54: 275-285.

Smith JD (2004) The role of riparian shrubs in preventing floodplain unraveling along the Clark Fork of the Columbia River in the Deer Lodge Valley, Montana. In: Bennett S, Simon A (eds) Riparian vegetation and fluvial geomorphology. Water science and applications, vol 8. American Geophysical Union, Washington, DC, pp 71–85.

Shafroth PB, Beauchamp VB, Briggs MK, Lair K, Scott ML, Sher AA (2008) Planning riparian restoration in the context of Tamarix control in western North America. Restoration Ecology 16:97–112.

Smith, T.A., D.L. Osmond, C.E. Moorman, J.M. Stucky, and J.W. Gilliam. 2008. Effect of vegetation management on bird habitat in riparian buffer zones. Southeastern Naturalist 7(2):277-288.

Upekala C. Wijayratne1, Sara J. Scoles-Sciulla And Lesley A. Defalco, 2009, Dust Deposition Effects on Growth and Physiology of the Endangered *Astragalus jaegerianus* (Fabaceae), Madroño, Vol. 56, No. 2, pp. 81–88.

U.S. Fish and Wildlife Service (USFWS)

1979. Determination that Sclerocactus glaucus is a threatened species. Federal Register 44(198):58868-58870.

1990a. Uinta Basin hookless cactus, Sclerocactus glaucus, Recovery Plan. Region 6, Denver.

2007a. 12-month finding on a petition to list Sclerocactus brevispinus (Pariette cactus as an endangered or threatened species; taxonomic change from Sclerocactus glaucus to Sclerocactus brevispinus, S. glaucus, and S. wetlandicus. Federal Register 72(180):53211-53221.

Vincent, K.R., J.M. Friedman, and E.R. Griffin. 2009. Erosional consequence of saltcedar control. Environmental Management 44(2): 218-227.

Appendix A THREATENED AND ENDANGERED SPECIES OF THE UFO [1]									
SPECIES	STATUS	HABITAT DESCRIPTION [2]	CRITICAL HABITAT? [3]	KNOWN? [4]	RANGE? [5]	HABITAT? [6]	NO EFFECT? [7]	MENLAE [8]	MELAE [9]
FISH									
Bonytail *Gila elegans*	E	Warm-waters of the Colorado River mainstem and tributaries, some reservoirs; flooded bottomlands for nurseries; pools and eddies over rocky substrates with silt-boulder mixtures for spawning	No	None	☒	☐	☒	☐	☐
Humpback chub *Gila cypha*	E	Warm-water, canyon-bound reaches of Colorado River mainstem and larger tributaries; turbid waters with fluctuating hydrology; young require low-velocity, shoreline habitats such as eddies and backwaters	No	None	☒	☐	☒	☐	☐
Razorback sucker *Xyrauchen texanus*	E	Warm-water reaches of the Colorado River mainstem and larger tributaries; some reservoirs; low velocity, deep runs, eddies, backwaters, sidecanyons, pools, eddies; cobble, gravel, and sand bars for spawning; tributaries, backwaters, floodplain for nurseries	No	None	☒	☐	☒	☐	☐

Appendix A THREATENED AND ENDANGERED SPECIES OF THE UFO [1]									
SPECIES	STATUS	HABITAT DESCRIPTION [2]	CRITICAL HABITAT? [3]	KNOWN? [4]	RANGE? [5]	HABITAT? [6]	NO EFFECT? [7]	MENLAE [8]	MELAE [9]
Colorado pikeminnow *Ptychocheilus lucius*	E	Warm-waters of the Colorado River mainstem and tributaries; deep, low velocity eddies, pools, runs, and nearshore features; uninterrupted streams for spawning migration and young dispersal; also floodplains, tributary mouths, and side canyons; highly complex systems	No	None	☒	☐	☒	☐	☐
Greenback cutthroat trout *Oncorhynchus clarki stomias*	T	Cold water streams and lakes with adequate spawning habitat (riffles), often with shading cover; young shelter in shallow backwaters	No	None	☒	☐	☒	☐	☐
MAMMALS									
Black-footed ferret [10] *Mustela nigripes*	E	Prairie dog colonies for shelter and food; >200 acres of habitat with at least 8 burrows/acre	No	None	☐	☐	☒	☐	☐

Appendix A THREATENED AND ENDANGERED SPECIES OF THE UFO [1]									
SPECIES	STATUS	HABITAT DESCRIPTION [2]	CRITICAL HABITAT? [3]	KNOWN? [4]	RANGE? [5]	HABITAT? [6]	NO EFFECT? [7]	MENLAE [8]	MELAE [9]
Canada lynx *Lynx canadensis*	T	Spruce-fir, lodgepole pine, willow carrs, and adjacent aspen and mountain shrub communities that support snowshoe hare and other prey	No	None	☐	☐	☒	☐	☐
North American Wolverine *Gulo gulo luscus*	C	Alpine and arctic tundra, boreal and mountain forests (primarily coniferous). Limited to mountains in the south, especially large wilderness areas.	No	None	☐	☐	☒	☐	☐
Gunnison's prairie dog *Cynomys gunnisoni*	C	Level to gently sloping grasslands, semi-desert shrublands, and montane shrublands, from 6,000'- 12,000 in elevation	No	None	☒	☐	☒	☐	☐
BIRDS									
Mexican spotted owl [11] *Strix occidentalis*	T	Mixed-conifer forests and steep-walled canyons with minimal human disturbance	No	None	☒	☐	☒	☐	☐

Appendix A THREATENED AND ENDANGERED SPECIES OF THE UFO [1]									
SPECIES	STATUS	HABITAT DESCRIPTION [2]	CRITICAL HABITAT? [3]	KNOWN? [4]	RANGE? [5]	HABITAT? [6]	NO EFFECT? [7]	MENLAE [8]	MELAE [9]
Southwestern willow flycatcher [11] *Empidonax traillii extimus*	E	For breeding, riparian tree and shrub communities along rivers, wetlands, and lakes; for wintering, brushy grasslands, shrubby clearings or pastures, and woodlands near water	No	None	☐	☐	☒	☐	☐
Gunnison sage grouse *Centrocercus minimus*	C	Sagebrush communities (especially big sagebrush) for hiding and thermal cover, food, and nesting; open areas with sagebrush stands for leks; sagebrush-grass-forb mix for nesting; wet meadows for	No	None	☐	☐	☒	☐	☐
Western yellow-billed cuckoo *Coccyzus americanus*	C	Riparian, deciduous woodlands with dense undergrowth; nests in tall cottonwood and mature willow riparian, moist thickets, orchards, abandoned pastures	No	None	☒	☐	☒	☐	☐
PLANTS									

Appendix A THREATENED AND ENDANGERED SPECIES OF THE UFO [1]									
SPECIES	STATUS	HABITAT DESCRIPTION [2]	CRITICAL HABITAT? [3]	KNOWN? [4]	RANGE? [5]	HABITAT? [6]	NO EFFECT? [7]	MENLAE [8]	MELAE [9]
Clay-loving wild buckwheat *Eriogonum pelinophilum*	E	Mancos shale badlands in salt desert shrub communities, often with shadscale, black sagebrush, and mat saltbush; 5200' – 6400' in elevation	No	None	☒	☐	☒	☐	☐
Colorado hookless cactus *Sclerocactus glaucus*	T	Salt-desert shrub communities in clay soils on alluvial benches and breaks, toe slopes, and deposits often with cobbled, rocky, or graveled surfaces; 4500' – 6000' in elevation	No	None	☒	☒	☐	☒	☐
INVERTEBRATES									
Uncompahgre fritillary butterfly [11] *Boloria acrocnema*	E	Restricted to moist, alpine slopes above 12,000' in elevation with extensive snow willow patches; restricted to San Juan Mountains	No	None	☐	☐	☒	☐	☐

[1] U.S. Fish and Wildlife Service. 2009. Federally listed species in Colorado. Official correspondence, February.
[2] Van Reyper G. 2006. Bureau of Land Management TES [threatened, endangered, sensitive] species descriptions. Uncompahgre Field Office, Montrose, CO, updated 2009/2010.Unpublished document.
[3] Designated Critical Habitat in Project Area?
[4] Potential and/or known occurrences in Project Area? Assessment based on UFO files and GIS data, partner data, and local knowledge.
[5] Project area is within the current known range of the species?
[6] Project area contains suitable habitat for the species?
[7] Project activities will have "No Effect" to the species or it's habitat
[8] Project activities "May Effect, Not Likely to Adversley Effect" to the species or it's habitat

[9] Project activities “May Effect, Likely to Adversley Effect” to the species or it’s habitat
[10] Black-footed ferret believed to be extirpated from this portion of its range.
[11] Species not known to occur within UFO boundaries, but known to occur in close proximity.

Appendix B BLM SENSITIVE SPECIES OF THE UFO [1]							
SPECIES	HABITAT DESCRIPTION [2, 3]	KNOWN [4]	RANGE? [5]	HABITAT? [6]	NO EFFECT? [7]	MAI[8]	LFL[9]
FISH							
Roundtail chub *Gila robusta*	Warm-water rocky runs, rapids, and pools of creeks and small to large rivers; also large reservoirs in the upper Colorado River system; generally prefers cobble-rubble, sand-cobble, or sand-gravel substrate	None	☒	☒	☐	☒	☐
Bluehead sucker *Catostomus discobolus*	Large rivers and mountain streams, rarely in lakes; variable, from cold, clear mountain streams to warm, turbid streams; moderate to fast flowing water above rubble-rock substrate; young prefer quiet shallow areas near shoreline	None	☒	☒	☐	☒	☐
Flannelmouth sucker *Catostomus latipinnis*	Warm moderate- to large-sized rivers, seldom in small creeks, absent from impoundments; pools and deeper runs often near tributary mouths; also riffles and backwaters; young usually in shallower water than are adults	None	☒	☒	☐	☒	☐
Colorado River cutthroat trout *Oncorhynchus clarki pleuriticus*	Cool, clear streams or lakes with well-vegetated streambanks for shading cover and bank stability; deep pools, boulders, and logs; thrives at high elevations	None	☒	☐	☒	☐	☐
MAMMALS							
Desert bighorn sheep *Ovis canadensis nelsoni*	Steep, mountainous or hilly terrain dominated by grass, low shrubs, rock cover, and areas near open escape and cliff retreats; in the resource area, concentrated along major river corridors and canyons	None	☒	☐	☒	☐	☐
White-tailed prairie dog [14] *Cynomys leucurus*	Level to gently sloping grasslands and semi-desert grasslands from 5,000' – 10,000' in elevation	None	☒	☐	☒	☐	☐
Kit fox *Vulpes macrotis*	Semi-desert shrublands of saltbrush, shadscale and greasewood often in association with prairie dog towns	None	☒	☐	☒	☐	☐

Appendix B BLM SENSITIVE SPECIES OF THE UFO [1]							
SPECIES	HABITAT DESCRIPTION [2, 3]	KNOWN [4]	RANGE? [5]	HABITAT? [6]	NO EFFECT? [7]	MAI[8]	LFL[9]
Allen's (Mexican) big-eared bat *Idionycteris phyllotis*	Ponderosa pine, pinyon-juniper woodland, oak brush, riparian woodland (cottonwood); typically found near rocky outcrops, cliffs, and boulders; often forages near streams and ponds. Thought to be in the West End.	None	☒	☒	☒	☐	☐
Big free-tailed bat *Nyctinomops macrotis*	Rocky areas and rugged terrain in desert and woodland habitats; roosts in rock crevices in cliffs and in buildings caves, and occasionally tree holes	None	☒	☒	☒	☐	☐
Spotted bat *Euderma maculatum*	Desert shrub, ponderosa pine, pinyon-juniper woodland, canyon bottoms, open pasture, and hayfields; roost in crevices in cliffs with surface water nearby	None	☒	☒	☒	☐	☐
Townsend's big-eared bat *Corynorhinus townsendii*	Mesic habitats including coniferous forests, deciduous forests, sagebrush steppe, juniper woodlands, and mountain; maternity roosts and hibernation in caves and mines; does not use crevices or cracks; caves, buildings, and tree cavities for night roosts	None	☒	☒	☒	☐	☐
Fringed myotis *Myotis thysanodes*	Desert, grassland, and woodland habitats including ponderosa pine, pinyon/juniper, greasewood, saltbush, and scrub oak; roosts in caves, mines, rock crevices, and buildings	None	☒	☒	☒	☐	☐
BIRDS							
Bald eagle [5] *Haliaeetus leucocephalus*	Nests in forested rivers and lakes; winters in upland areas, often with rivers or lakes nearby	None	☒	☒	☐	☒	☐
American peregrine falcon [5] *Falco peregrines anatum*	Open country near cliff habitat, often near water such as rivers, lakes, and marshes; nests on ledges or holes on cliff faces and crags	None	☒	☒	☒	☐	☐

Appendix B BLM SENSITIVE SPECIES OF THE UFO [1]							
SPECIES	HABITAT DESCRIPTION [2, 3]	KNOWN [4]	RANGE? [5]	HABITAT? [6]	NO EFFECT? [7]	MAI[8]	LFL[9]
Northern goshawk *Accipiter gentilis*	Nests in a variety of forest types including deciduous, coniferous, and mixed forests including ponderosa pine, lodgepole pine, or in mixed-forests with fir and spruce; also nest in aspen or willow forests; migrants and wintering individuals can be observed in all coniferous forest types	None	☒	☐	☒	☐	☐
Ferruginous hawk *Buteo regalis*	Open, rolling and/or rugged terrain in grasslands and shrubsteppe communities; also grasslands and cultivated fields; nests on cliffs and rocky outcrops	None	☒	☐	☒	☐	☐
Burrowing owl [15] *Athene cunicularia*	Level to gently sloping grasslands and semi-desert grasslands; Prairie dog colonies for shelter and food	None	☒	☐	☒	☐	☐
Columbian sharp-tailed grouse *Tympanuchus phasianellus columbian*	Native bunchgrass and shrub-steppe communities for nesting; mountain shrubs including serviceberry are critical for winter food and escape cover. Thought to be extirpated from UFO.	None	☐	☐	☒	☐	☐
Long-billed curlew *Numenius americanus*	Lakes and wetlands and adjacent grassland and shrub communities	None	☐	☐	☒	☐	☐
White-faced ibis *Plegadis chihi*	Marshes, swamps, ponds and rivers	None	☒	☒	☐	☒	☐
American white pelican *Pelecanus erythrorhynchos*	Typically large reservoirs but also observed on smaller water bodies including ponds; nests on islands	None	☒	☒	☐	☒	☐
Brewer's sparrow *Spizella berweri*	Breeds primarily in sagebrush shrublands, but also in other shrublands such as mountain mahogany or rabbitbrush; migrants seen in wooded, brushy, and weedy riparian, agricultural, and urban areas; occasionally observed in pinyon-juniper	None	☒	☒	☒	☐	☐
Black swift [15] *Cypseloides niger*	Nests on precipitous cliffs near or behind high waterfalls; forages from montane to adjacent lowland habitats	None	☒	☐	☒	☐	☐
REPTILES AND AMPHIBIANS							

Appendix B BLM SENSITIVE SPECIES OF THE UFO [1]							
SPECIES	HABITAT DESCRIPTION [2, 3]	KNOWN [4]	RANGE? [5]	HABITAT? [6]	NO EFFECT? [7]	MAI [8]	LFL [9]
Longnose leopard lizard *Gambelia wislizenii*	Desert and semidesert areas with scattered shrubs or other low plants; e.g., sagebrush; areas with abundant rodent burrows, typically below 5,000' in elevation	None	☒	☐	☒	☐	☐
Midget faded rattlesnake [13] *Crotalus viridis concolor*	Rocky outcrops for refuge and hibernacula, often near riparian; upper limit of 7500'-9500' in elevation	None	☒	☒	☐	☒	☐
Milk snake *Lampropeltis triangulum taylori*	Variable types including shrubby hillsides, canyons, open ponderosa pine stands and pinyon-juniper woodlands, arid river valleys and canyons, animal burrows, and abandoned mines; hibernates in rock crevices	None	☒	☐	☒	☐	☐
Northern leopard frog [14] *Rana pipiens*	Springs, slow-moving streams, marshes, bogs, ponds, canals, flood plains, reservoirs, and lakes; in summer, commonly inhabits wet meadows and fields; may forage along water's edge or in nearby meadows or fields	None	☒	☒	☐	☒	☐
Canyon treefrog *Hyla arenicolor*	Rocky canyon bottoms along intermittent or perennial streams in temporary or permanent pools or arroyos ; semi-arid grassland, pinyon-juniper, pine-oak woodland, scrubland, and montane zones; elevation 1000' - 10,000'	None	☒	☒	☐	☒	☐
Boreal toad *Anaxyrus boreas boreas*	Mountain lakes, ponds, meadows, and wetlands in subalpine forest (e.g., spruce, fir, lodgepole pine, aspen); feed in meadows and forest openings near water but sometimes in drier forest habitats	None	☐	☐	☒	☐	☐
PLANTS							
Debeque milkvetch *Astragalus debequaeus*	Varicolored, fine-textured, seleniferous, saline soils of the Wasatch Formation-Atwell Gulch Member; elevation 5100' – 6400'	None	☐	☐	☒	☐	☐
Grand Junction milkvetch *Astragalus linifolius*	Sparsely vegetated habitats in pinyon-juniper and sagebrush communities, often within Chinle and Morrison Formation and selenium-bearing soils; elevation 4800' – 6200'	None	☐	☐	☒	☐	☐
Naturita milkvetch *Astragalus naturitenis*	Cracks and ledges of sandstone cliffs and flat bedrock area typically with shallow soils, within pinyon-juniper woodland; elevation 5400' – 6700'	None	☐	☐	☒	☐	☐

Appendix B BLM SENSITIVE SPECIES OF THE UFO [1]							
SPECIES	HABITAT DESCRIPTION [2, 3]	KNOWN [4]	RANGE? [5]	HABITAT? [6]	NO EFFECT? [7]	MAI[8]	LFL[9]
San Rafael milkvetch *Astragalus rafaelensis*	Banks of sandy clay gulches and hills, at the foot of sandstone outcrops, or among boulders along dry watercourses in seleniferous soils derived from shale or sandstone formations; elevation 4500'– 5300'	None	☐	☐	☒	☐	☐
Sandstone milkvetch *Astragalus sesquiflorus*	Sandstone rock ledges (Entrada formation), domed slickrock fissures, talus under cliffs, sometimes in sandy washes; elevation 5000' – 5500'	None	☒	☐	☒	☐	☐
Gypsum Valley cateye *Cryptantha gypsophila*	Confined to scattered gypsum outcrop and grayish-white, often lichen-covered, soils of the Paradox Member of the Hermosa Formation; often the dominant plant at these sites; elevation 5200' – 6500'	None	☐	☐	☒	☐	☐
Fragile (slender) rockbrake *Cryptogramma stelleri*	Cool, moist, sheltered calcareous cliff crevices and rock ledges	None	☒	☐	☒	☐	☐
Kachina daisy (fleabane) [15] *Erigeron kachinensis*	Saline soils in alcoves and seeps in canyon walls; elevation 4800' – 5600'	None	☐	☐	☒	☐	☐
Montrose (Uncompahgre) bladderpod *Lesquerella vicina*	Sandy-gravel soil mostly of sandstone fragments over Mancos Shale (heavy clays) mainly in pinyon-juniper woodlands or in the ecotone between it and salt desert scrub; also in sandy soils derived from Jurassic sandstones and in sagebrush steppe communities; elevation 5800' – 7500'	None	☒	☐	☒	☐	☐
Colorado (Adobe) desert parsley *Lomatium concinnum*	Adobe hills and plains on rocky soils derived from Mancos Formation shale; shrub communities dominated by sagebrush, shadscale, greasewood, or scrub oak; elevation 5500' – 7000'	None	☒	☒	☐	☒	☐
Paradox Valley (Payson's) lupine *Lupinus crassus*	Pinyon-juniper woodlands, or clay barrens derived from Chinle or Mancos Formation shales, often in draws and washes with sparse vegetation; elevation 5000' – 5800'	None	☐	☐	☒	☐	☐
Dolores skeleton plant [15] *Lygodesmia doloresenis*	Reddish purple, sandy alluvium and colluviums of the Cutler Formation between the canyon walls and the river in juniper, shadscale, and sagebrush communities; elevation 4000' – 5500'	None	☐	☐	☒	☐	☐
Eastwood's monkey-flower	Shallow caves and seeps on steep canyon walls; elevation 4700' – 5800'	None	☐	☐	☒	☐	☐

Appendix B BLM SENSITIVE SPECIES OF THE UFO [1]							
SPECIES	HABITAT DESCRIPTION [2, 3]	KNOWN [4]	RANGE? [5]	HABITAT? [6]	NO EFFECT? [7]	MAI[8]	LFL[9]
Mimulus eastwoodiae							
Paradox (Aromatic Indian) breadroot *Pediomelum aromaticum*	Open pinyon-juniper woodlands in sandy soils or adobe hills; elevation 4800' – 5700'	None	☐	☐	☒	☐	☐
INVERTEBRATES							
Great Basin silverspot butterfly *Speyeria nokomis nokomis*	Found in streamside meadows and open seepage areas with an abundance of violets	None	☐	☐	☒	☐	☐

[1] Based on Colorado BLM State Director's Sensitive Species List (Last update: April 15, 2011).
[2] Van Reyper G. 2006. Bureau of Land Management TES [threatened, endangered, sensitive] species descriptions. Uncompahgre Field Office, Montrose, CO, updated 2009/ 2010. Unpublished document.
[3] Spackman SB, JC Jennings, C Dawson, M Minton, A Kratz, C Spurrier. 1997. Colorado rare plant field guide. Prepared for the BLM, USFS, and USFWS by the Colorado Natural Heritage Program.
[4] Potential and/or known occurrences in Project Area? Assessment based on UFO files and GIS data, partner data, and local knowledge.
[5] Project area is within the current known range of the species?
[6] Project area contains suitable habitat for the species?
[7] Project activities will have no effect to the species or it's habitat
[8] Project activities may effect individuals of the species or it's habitat, but not likely to result in a trend toward federal listing
[9] Project activities are likely to result in a trend toward federal listing for the species
[10] ESA delisted species.
[11] Federal candidate species; in accordance with BLM policy and Manual 6840, candidate and proposed species are to be managed and conserved as BLM sensitive species. For the Gunnison prairie dog, candidate status includes only those populations occurring in the "montane" portion of the species' range.
[12] Species not known to occur in UFO.
[13] Validity of subspecies designation is in question by taxonomists.
[14] Species was petitioned for listing and is currently under status review by FWS, and a 12-month finding is pending; i.e., listing of the species throughout all or a significant portion of its range may be warranted.
[15] Species not on BLM Colorado State Director's Sensitive List; included at the Field Office level to account for recent sightings, proximate occurrences, and/or potential habitat.

Appendix C BIRDS OF CONSERVATION CONCERN OF THE UFO [1]								
SPECIES	HABITAT DESCRIPTION [2]	RANGE/STATUS [2, 3]	KNOWN [4]	RANGE [5]	HABITAT? [6]	NO EFFECT? [7]	MAI [8]	LFL [9]
Gunnison sage grouse *Centrocercus minimus*	Sagebrush communities (especially big sagebrush) for hiding and thermal cover, food, and nesting; open areas with sagebrush stands for leks; sagebrush-grass-forb mix for nesting; wet meadows for rearing chicks	Year-round resident, breeding	See assessment under Sensitive Species Section					
American bittern *Botaurus lentiginosus*	Marshes and wetlands; ground nester	Spring/ summer resident, breeding confirmed in the region but not within the UFO	None	☒	☒	☐	☒	☐
Bald eagle [10] *Haliaeetus leucocephalus*	Nests in forested rivers and lakes; winters in upland areas, often with rivers or lakes nearby	Fall/winter resident, no confirmed breeding	See assessment under Sensitive Species Section					
Ferruginous hawk *Buteo regalis*	Open, rolling and/or rugged terrain in grasslands and shrubsteppe communities; also grasslands and cultivated fields; nests on cliffs and rocky outcrops	Fall/ winter resident, non-breeding	See assessment under Sensitive Species Section					
Golden eagle *Aquila chrysaetos*	Open country, grasslands, woodlands, and barren areas in hilly or mountainous terrain; nests on rocky outcrops or large trees	Year-round resident, breeding	None	☒	☒	☐	☒	☐
Peregrine falcon [10] *Falco peregrinus*	Open country near cliff habitat, often near water such as rivers, lakes, and marshes; nests on ledges or holes on cliff faces and crags	Spring/summer resident, breeding	See assessment under Sensitive Species Section					

Appendix C BIRDS OF CONSERVATION CONCERN OF THE UFO [1]								
SPECIES	HABITAT DESCRIPTION [2]	RANGE/STATUS [2, 3]	KNOWN [4]	RANGE [5]	HABITAT? [6]	NO EFFECT? [7]	MAI[8]	LFL[9]
Prairie falcon *Falco mexicanus*	Open country in mountains, steppe, or prairie; winters in cultivated fields; nests in holes or on ledges on rocky cliffs or embankments	Year-round resident, breeding	None	☒	☐	☒	☐	☐
Long-billed curlew *Numenius americanus*	Lakes and wetlands and adjacent grassland and shrub communities	Spring/ fall migrant, non-breeding	See assessment under Sensitive Species Section					
Snowy plover [11] *Charadrius alexandrines*	Sparsely vegetated sand flats associated with pickleweed, greasewood, and saltgrass	Spring migrant, non-breeding	None	☐	☐	☒	☐	☐
Mountain plover *Charadrius montanus*	High plain, cultivated fields, desert scrublands, and sagebrush habitats, often in association with heavy grazing, sometimes in association with prairie dog colonies ; short vegetation	Spring/ fall migrant, non-breeding	None	☐	☐	☒	☐	☐
Yellow-billed cuckoo [12] *Coccyzus americanus*	Riparian, deciduous woodlands with dense undergrowth; nests in tall cottonwood and mature willow riparian, moist thickets, orchards, abandoned pastures	Summer resident, breeding	See assessment under Sensitive Species Section					
Flammulated owl *Otus flammeolus*	Montane forest, usually open and mature conifer forests; prefers ponderosa pine and Jeffrey pine	Summer resident, breeding	None	☒	☐	☒	☐	☐
Burrowing owl *Athene cunicularia*	Open grasslands and low shrublands often in association with prairie dog colonies; nests in abandoned burrows created by mammals; short vegetation	Summer/ fall resident, breeding	See assessment under Sensitive Species Section					

Appendix C BIRDS OF CONSERVATION CONCERN OF THE UFO [1]								
SPECIES	HABITAT DESCRIPTION [2]	RANGE/STATUS [2, 3]	KNOWN [4]	RANGE [5]	HABITAT? [6]	NO EFFECT? [7]	MAI[8]	LFL[9]
Lewis's woodpecker *Melanerpes lewis*	Open forest and woodland, often logged or burned, including oak, coniferous forest (often ponderosa), riparian woodland, and orchards, less often in pinyon-juniper	Year-round resident, breeding	None	☒	☒	☒	☐	☐
Willow flycatcher [11] *Empidonax traillii*	Riparian and moist, shrubby areas; winters in shrubby openings with short vegetation	Summer resident, breeding	None	☒	☒	☐	☒	☐
Gray vireo *Vireo vicinior*	Pinyon-juniper and open juniper-grassland	Summer resident, breeding	None	☒	☐	☒	☐	☐
Pinyon jay *Gymnorhinus cyanocephalus*	Pinyon-juniper woodland	Year-round resident, breeding	None	☒	☐	☒	☐	☐
Juniper titmouse *Baeolophus griseus*	Pinyon-juniper woodlands, especially juniper; nests in tree cavities	Year-round resident, breeding	None	☒	☐	☒	☐	☐
Veery *Catharus fuscescens*	Deciduous forests, riparian, shrubs	Possible summer resident, observed recently in Gunnison County, possible breeding	None	☐	☐	☒	☐	☐
Bendire's thrasher *Toxostoma bendirei*	Desert, especially areas of tall vegetation, cholla cactus, creosote bush and yucca, and in juniper woodland	UFO is outside known range	None	☐	☐	☒	☐	☐
Grace's warbler *Dendroica graciae*	Mature coniferous forests	Summer resident, breeding	None	☐	☐	☒	☐	☐
Brewer's sparrow *Spizella breweri*	Sagebrush-grass stands; less often in pinyon-juniper woodlands	Summer resident, breeding	See assessment under Sensitive Species Section					

Appendix C BIRDS OF CONSERVATION CONCERN OF THE UFO [1]								
SPECIES	HABITAT DESCRIPTION [2]	RANGE/STATUS [2, 3]	KNOWN [4]	RANGE [5]	HABITAT? [6]	NO EFFECT? [7]	MAI[8]	LFL[9]
Grasshopper sparrow *Ammodramus savannarum*	Open grasslands and cultivated fields	UFO is outside known range	None	☐	☐	☒	☐	☐
Chestnut-collared longspur *Calcarius ornatus*	Open grasslands and cultivated fields	Spring migrant, non-breeding	None	☐	☐	☒	☐	☐
Black rosy-finch *Leucosticte atrata*	Open country including mountain meadows, high deserts, valleys, and plains; breeds/ nests in alpine areas near rock piles and cliffs	Winter resident, non-breeding	None	☒	☐	☒	☐	☐
Brown-capped rosy-finch *Leucosticte australis*	Alpine meadows, cliffs, and talus and high-elevation parks and valleys	Summer residents, breeding	None	☐	☐	☒	☐	☐
Cassin's finch *Carpodacus cassinii*	Open montane coniferous forests; breeds/ nests in coniferous forests	Year-round resident, breeding	None	☒	☐	☒	☐	☐

[1] U.S. Fish and Wildlife Service. 2008. Birds of Conservation Concern 2008. United States Department of Interior, Fish and Wildlife Service, Division of Migratory Bird Management, Arlington, Virginia. 85 pp. [Online version available at <http://www.fws.gov/migratorybirds/>].
[2] Cornell Lab of Ornithology. All about birds: bird guide. < http://www.allaboutbirds.org/guide/> Accessed 05/15/2009.
[3] Status within the UFO. San Juan Institute of Natural and Cultural Resources. Colorado Breeding Bird Atlas. Fort Lewis College, Durango, Colorado. <http://www.cobreedingbirdatlasii.org/> Accessed: 05/15/2009.
[4] Potential and/or known occurrences in Project Area? Assessment based on UFO files and GIS data, partner data, and local knowledge.
[5] Project area is within the current known range of the species?
[6] Project area contains suitable habitat for the species?
[7] Project activities will have no effect to the species or it's habitat
[8] Project activities may effect individuals of the species or it's habitat, but not likely to result in a trend toward federal listing
[9] Project activities are l ikely to result in a trend toward federal listing for the species

[10] ESA delisted species.
[11] Non-listed subspecies/ population.
[12] ESA candidate species.

U.S. Department of the Interior
Bureau of Land Management
Uncompahgre Field Office
2465 S. Townsend Ave.
Montrose, CO 81401

Finding of No Significant Impact (FONSI)

DOI-BLM-CO-S050-2012-0002 EA

Location: SW1/4 of Section 3 and N1/2 of Section 10, Township 15 South, Range 94 West of the 6th Principle Meridian

Project Name: Relief Ditch Diversion Project

Applicant: Bureau of Land Management

Background

The BLM Uncompahgre Field Office has completed a draft Environment Assessment (EA) # CO-S054-2012-0002 EA which analyses the effects of removing an existing diversion structure on BLM public lands and replacing it with a new diversion structure. The construction project would be facilitated by Trout Unlimited to improve fish habitat, reduce recreational boater hazards, improve water diversion, and restore riparian vegetation.

Finding of No Significant Impact

Based on the analysis of potential environmental impacts contained in CO-S054-2012-0002 EA, I have determined that the Proposed Action will not have a significant effect on the human environment. The proposed action includes design features which are necessary to mitigate resource impacts.

Rationale

This FONSI is based on my consideration of the Council on Environmental Quality's (CEQ) criteria for significance (40 CFR 1508.27), with regard to the context and the intensity of impacts described in the EA.

The proposed action is consistent with BLM's policy for managing National Conservation Areas. Improving fisheries habitat, restoring riparian vegetation and improving the quality of recreational experience, including boater safety, are consistent with the legislation establishing the Gunnison Gorge NCA and other applicable law.

Context

The Relief Ditch is a pre-Colorado River Compact water right with the Number 5 priority on the Gunnison River and an 1890 appropriation date. The diversion structure for the Relief Ditch is located perpendicular to flow in the Gunnison River and located on BLM managed public lands within the Gunnison Gorge National Conservation Area (NCA). The ditch company has historically and currently uses a bulldozer several times a year to maintain a gravel "push-up" dam across the river to divert water. The current push-up dam is an inefficient method of diverting water that results in over-diverting flows and creates barriers to fish migration and recreational boating. Three Colorado State and BLM sensitive fish species, Flannel Mouth Sucker (*Catostomus latipinnis*), Bluehead Suckers (*Catostomus discobolus*), and Roundtail Chubs (*Gila robusta*) inhabit this segment.

Intensity

1) Impacts that may be both beneficial and adverse.

Project design features mitigate impacts to soils, water, riparian areas, vegetation, cultural, and other resources. Beneficial long term impacts include improved fish habitat, reduced recreational boater hazards, improved water diversion, and restoration of riparian vegetation on the floodplain near the diversion. Short term adverse impacts during construction include degraded water quality, noise, dust, and reduced recreational opportunities.

2) The degree to which the proposed action affects public health and safety.

Project design features reduce existing impacts to public health and safety to negligible levels.

3) Unique Characteristics of the geographic area, such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.

Because of historical use of the area, no cultural resources are anticipated. This project occurs in wetland and riparian areas, is anticipated to have minor negative short-term impacts and long-term positive impacts The project area is adjacent (downstream) to a "suitable" wild and scenic river segment and located in a Special Recreation Management Area. The project is compatible with, and would improve the values of, the suitable wild and scenic river segment.

4) The degree to which the effects on the quality of the human environment are likely to be highly controversial.

Design features of the proposed action will reduce potential impacts. The project is supported by the Relief Ditch Company and is widely seen as a project that will benefit not only water users but all of the recreational users of the Gunnison River.

5) The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.
Treatment of invasive species with fire, biological and chemical control has a proven history based on similar efforts elsewhere on the Gunnison River. The effects are not unique or uncertain; a similar project was completed last year on the Hartland Diversion located just downstream near the City of Delta. Similar diversion improvements and riparian restoration projects have been conducted upstream towards Town of Paonia by the North Fork River Improvement Association.

6) The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.
This decision is not precedent setting. This decision is not unusual and significant cumulative effects are not predicted. The action does not represent a decision in principle about a future consideration.

7) Consideration of the action in relation to other actions with individually insignificant but cumulatively significant impacts.
There are no other large river/riparian improvement projects near the relief ditch site planned. Other projects, including oil/gas activities, grazing, coal mining, and vegetation treatments are ongoing in the North Fork of the Gunnison region. It is not anticipated that cumulative impacts of this project and any others of any significance would occur. The limited scale of activity creates minimal individual effects, as well as minimal cumulative effects when added to the existing situation and other potential activities.

8) The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historic resources.
The project takes place in the river floodplain, which has a history of regular flood disturbance that has excluded many developments from occurring. This pertains to both historic and current structures. If any unidentified sites are discovered during implementation, they would be avoided or mitigated so that they would not be impacted.

9) The degree to which the action may adversely affect an endangered or threatened species or its critical habitat.
No endangered, threatened, candidate or proposed species would be adversely affected by the project. All listed species occurring within the Uncompahgre Field Office were considered.

10) Whether the action threatens a violation of federal, state, or local law or requirements imposed for the protection of the environment.
The proposed action does not threaten violation of any laws or regulations imposed for the protection of the environment.

Determination

This Finding of No Significant Impact is based on the information contained in the EA and my consideration of criteria for significance (40 CFR 1508.27). It is my determination that: 1) the implementation of the proposed action will not have significant environmental impacts; 2) the Proposed Action is in conformance with the Gunnison Gorge Resource Management Plan; and 3) the Proposed Action does not constitute a major federal action having significant effect on the human environment. Therefore, an Environmental Impact Statement is not necessary.

Approved:

/s/ Barbara Sharrow 6/20/2012

Barbara Sharrow
Field Manager
Uncompahgre Field Office

Date

U.S. Department of the Interior
Bureau of Land Management
Uncompahgre Field Office
2465 South Townsend Avenue
Montrose, CO 81401

Decision Record

(DOI-BLM-CO-S050-2012-0002 EA)

DECISION:

It is my decision to implement the Relief Ditch Diversion Project as described in the Proposed Action of DOI-BLM-CO-S050-2012-0002 EA. Implementation can begin in the Summer/Fall of 2012.

MITIGATION MEASURES:

The following design features are included in the proposed action to mitigate impacts to other resources:

1. All disturbances associated with project implementation, including access to the river project area will be kept at the minimum size necessary, and re-contoured back to the original contour and rough texture so to match the "texture" of the surrounding landscape. Additionally, the disturbances will be reseeded with an adapted mix of native plant species if native vegetation is insufficient to revegetate the site.

2. All storage of materials and equipment will occur out of the riparian zone in the designated and cleared staging areas (Figure 8).

3. All equipment oil and hydraulic leaks will be repaired before use. Any leaks developed during use will be repaired immediately. If leaks into the soil are possible, drip pans will be used to prevent soil contamination.

4. All equipment fueling and lubrication will be supplied by a fuel/lube truck rather than stored onsite. Equipment fueling will not take place within 100 feet of the river or any creek or drainage.

5. During fueling operations the operator will ensure no fuel spillage occurs. Care should be taken to ensure all fuel tanks are capped and spillage is minimized to prevent soil contamination. Should a spill occur, it should be reported to the BLM's Hazardous Materials Specialist immediately for proper response action.

6. Contractors will be prepared to respond quickly to any spill of fuel or other fluids directly into the river (e.g. from burst hydraulic hoses, etc.) Absorbent booms or pads will be stored on site in case a spill occurred in the river. A written spill prevention plan will be prepared and implemented to address this contingency. The Spill Prevention Plan will be approved by the BLM prior to commencement of construction.

7. All soil disturbances will be monitored for the establishment of noxious weeds. Steps will be taken to treat any infestations that result from construction activities.

8. All equipment will be power washed before entering public lands. This will reduce the spread and/or establishment of noxious weeds.

9. An approved burn plan will be completed prior to implementing any phase of a prescribed fire.

10. A Colorado State smoke permit will be obtained prior to implementing any phase of a prescribed fire.

11. All disturbed areas will be seeded with certified seed that is free of noxious weed seed. The seeded species will include those shown in tables 1 and 2.

12. Utilize the least site-disturbing methods necessary to accomplish restoration objectives.

13. As much as possible, preserve the sandbar willow populations that exist on the floodplain banks at the water line.

14. Select and flag access routes and the limb, scatter or pile areas, to minimize vegetation disturbance outside the treatment area.

15. Use herbicides that are selective for the target species to minimize damage to desirable plants.

16. Material hauling activities must be concentrated between July 1 and November 1.

17. Construction activities must be conducted between September 1 and April 1.

18. To minimize impacts on migratory bird populations, it is recommended that surface disturbing activities do not occur from May 15 through July 15. This timeframe encompasses the core breeding season for the majority of migratory birds in the project area.

19. If project activities occur outside the September- April timeframe, biological surveys may be required and mitigation applied to protect species (primarily active nests).

20. To the extent possible, observed reptiles or amphibians will be avoided by treatment activities and will not be intentionally harmed. Additionally, to the extent possible, project

activities will avoid disturbing known or potential hibernacula. Any incidental observations of reptile or amphibian or sign during biological surveys will be documented in the project case file(s), and mitigation measures will be applied as necessary.

21. In the event that bald eagles are roosting on cottonwood trees in the project area, the contractor is to avoid the 0.125 mile area near the roosting bald eagles until the eagles voluntarily leave the area. To avoid impacts to bald eagles that may roost at night, all work will take place between one half hour after sunrise and one half hour before sunset.

22. To limit dust deposition, speed control measures on all project-related unpaved roads will also be implemented to reduce vehicle fugitive dust.

23. Should dust deposition exceed 32 g/m^2 as measured at the closest cactus to the road at any point between July 1 and September 1, then the contractor will be required to provide daily dust abatement of the H75 road with water or non-chloride based dust suppressants beginning ½ mile above the southernmost cactus location all the way to the construction site.

24. Do not allow use of vehicles or heavy equipment during times when soil is wet enough for ruts >4" to develop.

MONITORING:

BLM staff will be on site at least once every week during construction and restoration work. Project implementation will be documented in GIS. Long term vegetation monitoring will be conducted on all vegetation treatments to monitor establishment and invasive species.

RATIONALE:

The Relief Ditch Diversion Project is the last of a series of large diversions to be replaced on the North Fork of the Gunnison River with improved structures. The new structures allow for improved fish passage, safer recreational opportunities, and more efficient irrigation diversions. Riparian restoration work will improve aquatic species habitat as well as reduce the invasive plant species located on the adjacent floodplain.

COMPLIANCE WITH MAJOR LAWS:

The decision is in compliance with applicable laws, regulations and policy, including the Endangered Species Act, Migratory Bird Treaty Act, Clean Water Act, Clean Air Act, and National Historic Preservation Act.

FINDING OF NO SIGNIFICAN IMPACT:

A Finding of No Significant Impact (FONSI) was prepared, based on the information contained in the EA and my consideration of criteria for significance (40 CFR 1508.27). It is my determination that: 1) the implementation of the proposed action will not have significant environmental impacts; 2) the Proposed Action is in conformance with the Gunnison Gorge Resource Management Plan; and 3) the Proposed Action does not constitute a major federal action having significant effect on the human environment. Therefore, an Environmental Impact Statement is not necessary.

PUBLIC COMMENT:

Public comment was carried out by posting the proposed action and preliminary environmental assessment on the Uncompahgre Field Office NEPA website. The project was posted on May 18, 2012. No comments were received.

APPEALS:

Within 30 days of receipt of this decision, you have the right of appeal to the Interior Board of Land Appeals, Office of the Secretary, in accordance with the regulations at 43 CFR 4.400. Appeal and stay procedures are outlined in Form CO-050-1842-1.

NAME OF PREPARER: Jedd Sondergard

NAME OF ENVIRONMENTAL COORDINATOR: Bruce Krickbaum

DATE 6/19/2012

SIGNATURE OF AUTHORIZED OFFICIAL *_/s/ Barbara Sharrow*
Barbara Sharrow
Field Manager
Uncompahgre Field Office

DATE SIGNED 6/20/2012