U.S. Department of the Interior
Bureau of Land Management
Colorado River Valley Field Office
2300 River Frontage Road
Silt, Colorado 81652

ENVIRONMENTAL ASSESSMENT

NUMBER: DOI-BLM-CO-N040-2012-046-EA

PROJECT NAME: Trapper Creek Cutthroat Trout Habitat Enhancement Project

PLANNING UNIT: Roan Plateau

LEGAL DESCRIPTION: T5S, R94W, Sections 5, 7, 8

APPLICANT: Colorado Trout Unlimited and BLM

BACKGROUND/INTRODUCTION:
Trapper Creek is a small creek located on the Roan Plateau in west central Colorado. The upper third of the stream is intermittent but could support cutthroat trout year round if adequate holding habitat (pools) were created. Good quality holding habitat has been identified as a limiting factor for this portion of this creek. Pool creation efforts, if approved, would be done in association with other measures already completed including exclosure fencing, riparian planting, and changes in livestock grazing. As riparian vegetation improves and pools are created, the upper reaches of Trapper Creek may become perennial and expand occupied habitat for Colorado River cutthroat trout (CRCT) in the stream.

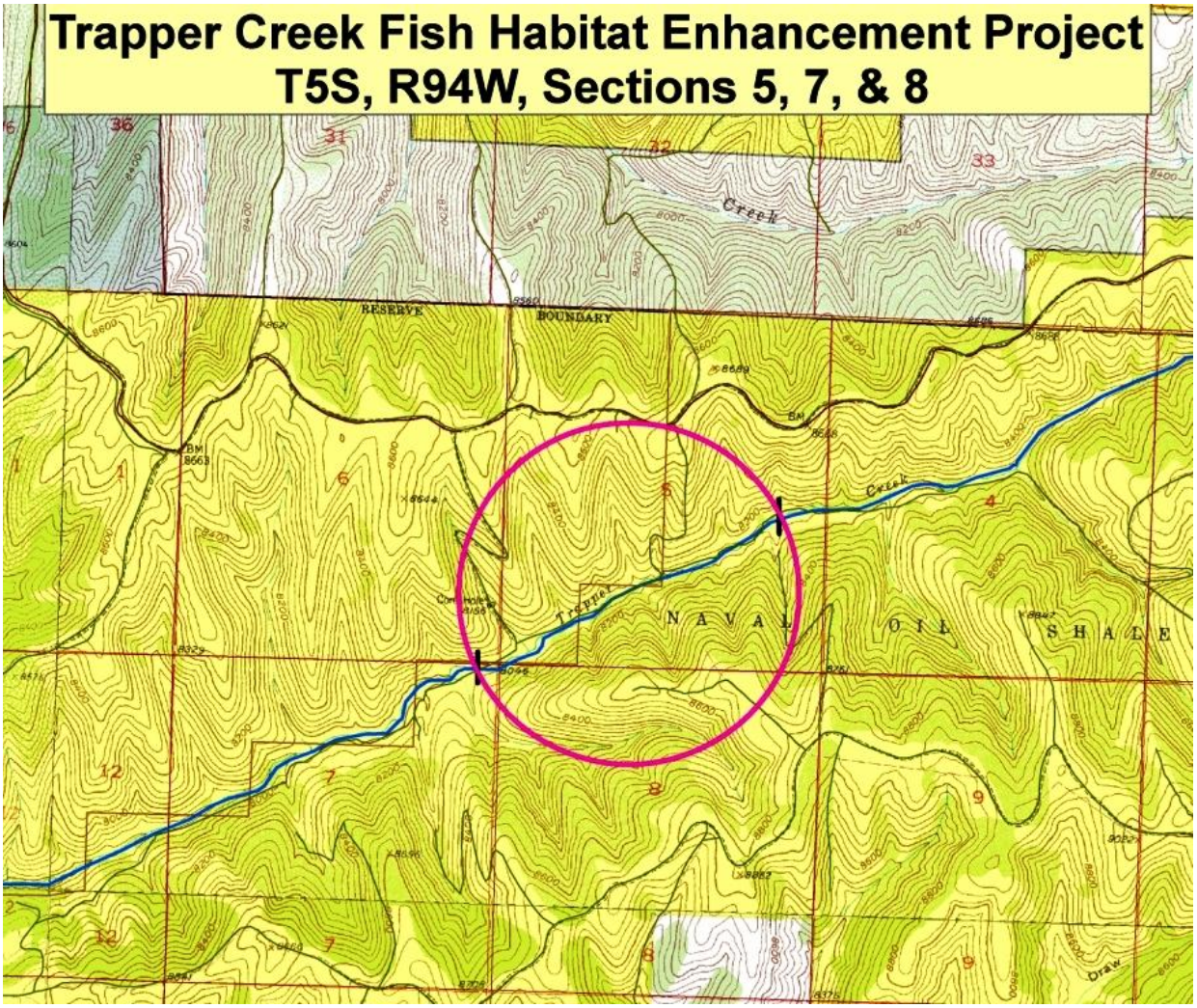
PURPOSE AND NEED FOR THE ACTION:
The Colorado River cutthroat trout (*Oncorhynchus clarkii pleuriticus*), is a native trout species of the Colorado River Basin. This species is designated as a special status species by the states of Colorado, Utah, and Wyoming. In addition, the CRCT is classified as a Sensitive species by Regions 2 and 4 of the USFS and by the BLM in Colorado and Utah. This fish historically occurred in portions of the Colorado River drainage in the states of Wyoming, Colorado, Utah, Arizona, and New Mexico (Behnke 1992). In Colorado, this species was found on the western slope in most of the larger rivers including the White, Yampa, and Colorado. Today, remaining CRCT populations are primarily limited to small headwater streams and lakes within their historic range. Declines in CRCT distribution have been documented in a number of reports (Behnke and Zarn 1976, Binns 1977, Martinez 1988, Young 1995). Young (1995) determined most lotic populations reside in streams with average daily flows less than 0.85 m3/s (30 cfs). Stream gradients usually exceeded 4%, and all populations were found above 2,290 m (7,500 ft). Behnke (1979) stated that CRCT occupy less than one percent of its historical range, though a more rigorous assessment indicates that the true number lies closer to 14 percent (Hirsch et al. 2006).

Reasons for the decline of this species are many and threats include introduction of non-native trout species, reduced habitat quality, and water diversions, among others. In the case of Trapper Creek, limited flow, and habitat alteration are the main causal factors influencing the resident cutthroat population.

To help improve and protect populations of CRCT a range-wide document titled: **"Conservation Agreement and Strategy for Colorado River Cutthroat Trout (*Oncorhynchus clarkii pleuriticus*) in**

the States of Colorado, Utah, and Wyoming, June 2006" was completed for this species. The document is not regulatory, but does provide direction with regard to objectives and strategies to improve habitat and maintain and enhance populations. This proposed project would implement ***Objective 2: Secure and enhance conservation populations*** via ***Strategy 7: Improve habitat conditions for CRCT***.

Trapper Creek contains two riparian/stream exclosures that exclude livestock use along approximately 1.5 miles of stream. Habitat in the upper exclosure has improved in recent years due to new fencing. The stream reach between the two exclosures, approximately 0.5 miles in length, has also improved some with changes in grazing management but is still accessible by livestock and would benefit from increased holding (pool) habitat that is limited in this section of the creek. In addition, the upper exclosure would benefit from increased pool habitats in a few select locations. Increasing pool densities will provide additional summer and winter thermal refugia areas for resident cutthroat trout and will help fish persist under varying environmental conditions including drought. The upper exclosure is where the stream typically goes intermittent most years but does contain and sustain fish where pools are present.



DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

Proposed Action:
Using the proposed methodologies discussed in detail below, create up to 15 pools in the 1.25 mile stream reach encompassing the area between the two livestock exclosures and within the upper exclosure on Trapper Creek. The majority of pools would be created by creating a riffle-pool sequence by excavating the stream substrate within the creek to create pools and then compacting the substrate upstream and downstream of the pool to create a hardened riffle. This would increase stream velocities to create scour and maintain the pool. Other pools would be created by constructing a single wing deflector or log weir anchored into one bank and projecting out into the stream channel at an angle and elevation that would facilitate increased stream velocity over the log and create scour and a pool below the log feature. Specifics of each method are discussed in detail below.

Created Riffle-Pool Sequence
Pools would be excavated via hand labor using a shovel and/or digging bar, or via a mini excavator working directly in the channel. Streambed material would be sorted so that 3 to 6 inch sized substrate or larger if available could be spread upstream of the pool and then compacted using a jumping jack jackhammer to compact and harden the substrate/riffle and increase water velocities entering the excavated pool. Remaining size classed substrate would be spread along the streambed and the adjacent bank within the bankfull channel width. Riffles would be a minimum of 10 feet long in the direction of flow and would be tied into the streambanks to protect against flanking. In some instances, the stream channel could need to be slightly reshaped in order to direct water flow into the created pools. Larger rock material would be placed in the bottom of each pool to optimize pool scour. See Attachments for illustration of proposed riffle-pool sequence.

Single Wing Deflector - Log Weir
Logs cut from local source trees (downed trees on the north-facing slope of Trapper Creek adjacent to the stream) would be cut and sized for the stream width. No more than two trees would be needed. A small trench would be cut into one streambank and the log would be secured via rock and rebar and placed at an angle projecting out into the channel a few inches below bankfull stream elevation. This would allow water to pour over the log and scour a small pool below. This work would be done by hand using shovels, digging bars, and a sledge hammer. It is possible that excavation may be completing using a mini excavator. Upstream and downstream armoring with locally sourced rock may be incorporated with this application to limit bank erosion that may result from the redirection of flow. See Attachments for illustration of proposed Single Wing Deflector – Log Weir.

Bank Cover and Submerged Shelters
Locally sourced logs, tree tops shrubs, brush piles, and/or small boulders will be placed strategically in or along the channel to provide overhead cover. Cover material will be secured as necessary and appropriate using rocks and rebar. Cover and shelters will provide hiding habitat for fish and help support invertebrate communities. See Attachments for illustration of proposed Bank Cover and Submerged Shelters.

All work would be done within a one-week timeframe likely beginning in early August under base flow conditions during daylight hours. Labor would consist of Trout Unlimited (TU) members, Young Outdoor Volunteers supervised by TU, and BLM and Colorado Parks and Wildlife (CPW) personnel. Project oversight would be done by Ecological Resource Consultants, Inc. (ERC) as they designed the proposed work. They would ensure quality control and make sure all structures are built to pre-determined specifications.

Volunteer Labor Camping
Trout Unlimited is proposing to have personnel as well as the Youth Corps folks camp in tents near the BLM's A-Frame Cabin located on the 8009 Road. The cabin would be used as a "base station" and campers would use the cabin for cooking, cleaning, and obtaining drinking water and for restroom facilities. Use of the cabin would be under the supervision of the Project Leader, who would be staying at the cabin and facilitating proper use of the facilities. Camping would occur with up to 15 people up to one week in duration within previously disturbed portions of the facility footprint. All trash would be hauled away.

Post-treatment activity
All equipment would be cleaned up and removed from the site. Post treatment monitoring would be conducted to determine success and, depth and longevity of pools as well as use by fish over time.

Design Features:
The following design features would be implemented and included in the BLM authorization:

- Pending a site visit by the FO Archaeologist, specific areas within the 1.25 mile treatment reach may be precluded from proposed work to avoid potential impacts to cultural resources. Those sites would be identified prior to commencement of activities.

- All work will be performed after the spring spawning season (August) for resident cutthroat trout to avoid impacts to eggs, fry, and spawning habitat.

- No disturbance of riparian vegetation is anticipated. However, if trampling or removal does occur, native, locally adapted willows or narrowleaf cottonwood trees will be planted to replace lost habitat values and to help stabilize streambanks.

No Action Alternative:
Under the No Action alternative, work associated with the creation of additional pool habitat in Trapper Creek would not be authorized.

ALTERNATIVES CONSIDERED BUT NOT CARRIED FORWARD

Other Pool Creation Structure Types
Several types of structures could be used to create desired pool habitat. ERC has designed the proposed structures based on literature review and their experience with stream restoration techniques, and recommendations from the project team. Consideration was given to cost, ground disturbance, stream channel type, feasibility, and equipment needed. Other pool creation structures were considered but eliminated from further consideration and will not be analyzed in detail.

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

Name of Plan: Glenwood Springs Resource Management Plan.

Date Approved: Jan. 1984, revised 1988, amended in November 1991 – Oil and Gas Leasing and Development – Final Supplemental Environmental Impact Statement; amended Nov. 1996 – Colorado Standards and Guidelines; amended in August 1997 – Castle Peak Travel Management Plan; amended in March 1999 – Oil and Gas Leasing & Development Final Supplemental Environmental Impact Statement;

amended in November 1999 – Red Hill Plan Amendment; amended in September 2002 – Fire Management Plan for Wildland Fire Management and Prescriptive Vegetation Treatment Guidance; amended in June 2007 – Record of Decision for the Approval of Portions of the Roan Plateau Resource Management Plan Amendment; and amended in March 2009 – Record of Decision for the Designation of Areas of Critical Environmental Concern for the Roan Plateau Resource Management Plan.
Decision Number/Page: The proposed action is within the Trapper/Northwater Creek Area of Critical Environmental Concern (ACEC).

Decision Number/Page: Goal and Management Action 2, page 7 of the Record of Decision (ROD) Designation of ACECs for the Roan Plateau Resource Management Plan.

Decision Language: "Apply specific management actions that will protect relevant and important values in the aforementioned ACEC's".

Decision Number/Page: SSFW-7, page 27 of the Record of Decision (ROD) for the Roan Plateau Approved Resource Management Plan Amendment.

Decision Language: "Consider activities designed to provide long-term habitat improvement or protection, such as culvert or bridge installation or bank stabilization."

The project site is located within the Trapper/Northwater Creek Area of Critical Environmental Concern (ACEC). Given the project location, it is subject to the following resource stipulations and must meet the exception criteria to be considered viable:

- *NGD/NSO High and moderate risk fish habitat*
  The project would meet the exception criteria as it would have short-term negative but non chronic effects (which are disclosed in this document) and long-term benefits to the resident cutthroat trout population. Appropriate mitigation to minimize impacts has been identified and is part of the proposed action.

- *NGD/NSO Riparian and Wetland Habitat*
  The project would meet the exception criteria as it would result in less than 0.1 acres of ground disturbance and less than 100 linear feet of disturbance per mile. Anticipated loss of riparian vegetation would be offset by replacement at a greater than required ratio (3:1 vs. 1:1) of 5-gallon potted plants. Riparian values would expect to be replaced within the two year timeframe required.

- *NSO Wild and Scenic River eligible segment*
  The project would meet the exception criteria because the project would have long-term benefits to the primary Outstanding Remarkable Value (ORV) in this case pure Colorado River cutthroat trout. The project would have short-term negative effects that are disclosed in this document but long-term free flowing criteria would be preserved. In addition, the project site is located in a segment that is classified as Recreational which does allow for some minor alterations while still complying with the act. Recreational preliminary classification is defined as those 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.

- *SSR/CSU within 500 feet of the outer edge of the wetland or riparian area.*
  The project would comply with this CSU and any special design, construction, mitigation, or reclamation measures identified in this NEPA document would be required as part of the

construction action and included in the construction contract. In addition, the planned mitigation under the Riparian and Wetland NGD/NSO would help to mitigate short-term negative effects.

- *SSR/CSU Parachute Creek High-Value Watershed and Watershed Management Area (WMA)* The project would comply with this CSU as short-term but non chronic negative effects of the action will be disclosed in this NEPA document. The project would have long-term benefits to important resource values (Colorado River cutthroat trout) that reside within the WMA and appropriate mitigation is incorporated into the proposed action.

Standards for Public Land Health: In January 1997, Colorado Bureau of Land Management (BLM) approved the Standards for Public Land Health. The five standards cover upland soils, riparian systems, plant and animal communities, threatened and endangered species, and water quality. Standards describe conditions needed to sustain public land health and relate to all uses of the public lands.

A Land Health Assessment was completed for the Roan Cliffs Area in 1999. The report summarizing the findings of the assessment stated the following; "*Trapper Creek sampling in 1992 showed that CRCT were limited to the lower 0.5 miles of the creek. Historically, CRCT have been observed in Trapper Creek several miles upstream from its confluence with Northwater Creek. However, in 1992, the middle and upper sections of the creek were intermittent and the fish were confined to the lowermost 0.5 miles of the stream. In response to management changes, revegetation projects, and a return to normal precipitation levels, Trapper Creek has regained perennial flow through its middle section and CRCT were sampled two miles upstream from the confluence in 1998. The CRCT sampled in 1998 represented several age classes (indicating successful reproduction) and had an average length of 20 cm and a maximum length of 32 cm*".

The impact analysis must address whether the proposed action or any alternatives being analyzed would result in impacts that would maintain, improve, or deteriorate land health conditions for that specific parameter. These analyses are located in specific elements listed below.

AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This section provides a description of the human and natural environmental resources that could be affected by the proposed action and no action alternative. In addition, the section presents comparative analyses of the direct and indirect consequences on the affected environment stemming from the implementation of the various actions.

A variety of laws, regulations, and policy directives mandate the evaluation of the effects of a proposed action and alternative(s) on certain critical environmental elements. Not all of the critical elements that require inclusion in this EA are present, or if they are present, may not be affected by the proposed action and alternative (Table 1). Only those mandatory critical elements that are present and affected are described in the following narrative.

In addition to the mandatory critical elements, there are additional resources that would be impacted by the proposed action and alternative. These are presented under **Other Affected Resources.**

Critical Elements

Table 1

Table 1. Critical Elements of the Human Environment									
Critical Element	*Present*		*Affected*		*Critical Element*	*Present*		*Affected*	
	Yes	No	Yes	No		Yes	No	Yes	No
Air Quality		X		X	Prime or Unique Farmlands		X		X
ACECs	X		X		Special Status Species*	X		X	
Cultural Resources	X			X	Wastes, Hazardous or Solid	X		X	
Environmental Justice	X			X	Water Quality, Surface and Ground*	X		X	
Floodplains	X			X	Wetlands and Riparian Zones*	X		X	
Invasive, Non-native Species	X		X		Wild and Scenic Rivers	X		X	
Migratory Birds	X			X	Wilderness/ WSAs	X		X	
Native American Religious Concerns		X		X					

* Public Land Health Standard

AREAS OF CRITICAL ENVIRONMENTAL CONCERN

Affected Environment:
The proposed action would be conducted in Trapper Creek which is included in the Trapper/Northwater Creek ACEC. The streams in this ACEC originate near the eastern rim of the Roan Plateau and extend westward to the BLM/private land boundary. The resource values found within the Trapper/Northwater Creek ACEC are Colorado River cutthroat trout; the Roan Cliffs blazing star; and five significant plant communities. The plant communities include: 1) hanging garden sullivantia, a Green River Shale endemic plant; 2) a Colorado blue spruce/red osier dogwood riparian community; 3) a boxelder-narrowleaf cottonwood/red-osier dogwood riparian community; 4) a Great Basin wild rye grassland community; and 5) an Indian ricegrass/shale barrens community.

Within the influence zone of the project area are the following select resource values:

- Colorado River cutthroat trout

The 2008 ROD for the Designation of Areas of Critical Environmental Concern for the Roan Plateau RMP Amendment and EIS (page ROD-35) prescribed protective measures (NSO/NGD for fish habitat) to preserve the identified relevant and important values within the affected portion of the ACEC.

Environmental Consequences/Mitigation:
Proposed Action:
Colorado River cutthroat trout

Short-term and site-specific effects and long-term benefits are addressed in detail in the Special Status Aquatic Wildlife Species section. In summary, the proposed creation of pool habitats in Trapper Creek would have short-term adverse effects to resident fish via the compaction of stream substrates which could impact macroinvertebrate food sources for a short time in small areas, as well as reduce spawning habitat is these same areas. In-channel work would likely suspend fine sediment available for transport for short distances until it would settle back out. In the long-term, resident cutthroat trout would benefit from the creation of additional pool habitats that serve as summer and winter thermal refugia areas. These holding habitats would help to protect these fish against environmental stressors such as drought and climate change, and would allow for occupation of otherwise limited flow reaches of stream.

The project would meet the exception criteria for the NSO because the project would have long-term benefits to the Colorado River cutthroat trout which is the primary resource value protected by the NSO.

No Action:
Colorado River cutthroat trout
Under the No Action alternative, no enhancement work would be constructed and no short-term site specific impacts or long-term benefits to Colorado River cutthroat trout would result.

CULTURAL RESOURCES

Affected Environment:
A records search of the general project area, and a Class III inventory of the Area of Potential Effect (APE), as defined in the National Historic Preservation Act (NHPA), was completed by a Colorado BLM permitted cultural resource contracting firm within a total of three separate cultural resource inventories (CRVFO CRIR 786, 1047, and 8396-1a&b). Conditions of the existing cultural environment are incorporated by this reference but the following briefly summarizes cultural resources in the APE. A total of 7 cultural resources were identified and recorded during inventory. Three sites are prehistoric open camps (5GF90, 5GF92, and 5GF970) that are eligible for the National Register of Historic Places (NRHP). Four sites are prehistoric open camps (5GF91, 5GF93, 5GF, 95, and 5GF96) that are not eligible for the NRHP. The project inventory and evaluation is in compliance with the NHPA, the Colorado State Protocol Agreement, and other federal law, regulation, policy, and guidelines regarding cultural resources.

Environmental Consequences/Mitigation:
Proposed Action
Based on the proposed action, surface disturbance will be limited to areas right along the creek edge which has low potential for cultural resources. Three cultural resources (5GF90, 5GF92, and 5GF970) fall within the APE of the project. These sites will be avoided during project activity and therefore no adverse effect will occur during implementation.

No Action Alternative
Under this alternative, direct and indirect impacts to cultural resources would be reduced based on the absence of the permitted action and no related surface disturbing activities.

Mitigation
Historic properties will be avoided during surface disturbing activities. Although all sites will be avoided, archaeological monitoring of construction activities is recommended and will be conducted by the BLM-CRVFO archaeologist. No ground disturbing construction activities will begin prior to the archaeologist's arrival. The CRVFO archaeologist will be on site as long as the BLM deems necessary.

NATIVE AMERICAN RELIGIOUS CONCERNS

Affected Environment:
American Indian religious concerns are legislatively considered under several acts and Executive Orders, namely the American Indian Religious Freedom Act of 1978 (PL 95-341), the Native American Graves Environmental Assessment Protection and Repatriation Act of 1990 (PL 101-601), and Executive Order 13007 (1996; Indian Sacred Sites). In summary, these require, in concert with other provisions such as those found in the NHPA and ARPA, that the federal government carefully and proactively take into consideration traditional and religious Native American culture and life and ensure, to the degree possible, that access to sacred sites, the treatment of human remains, the possession of sacred items, the conduct of traditional religious practices, and the preservation of important cultural properties are considered and not unduly infringed upon. In some cases, these concerns are directly related to "historic properties" and "archaeological resources". In some cases elements of the landscape without archaeological or other human material remains may be involved. Identification of these concerns is normally completed during the land use planning efforts, reference to existing studies, or via direct consultation. The Ute have a generalized concept of spiritual significance that is not easily transferred to Euro-American models or definitions. As such the BLM recognizes that they have identified sites that are of concern because of their association with Ute occupation of the area as part of their traditional lands.

Environmental Consequences/Mitigation:
Proposed Action
No traditional cultural properties, natural resources, or properties of a type previously identified as being of interest to local tribes, were found during the cultural resources inventory of the project area or identified by consultation. There is no other known evidence that suggests that the project area holds special significance for Native Americans. No additional Native American Indian consultation was conducted for the proposed project.

No Action Alternative
Under this alternative, there will be no direct or indirect impacts to cultural resources from project implementation because no related surface disturbing activities will occur. Therefore, areas of concern to Native American tribes would not be affected.

Mitigation
Historic properties will be avoided during surface disturbing activities. Although all sites will be avoided, archaeological monitoring of construction activities is recommended and will be conducted by the BLM-CRVFO archaeologist. No ground disturbing construction activities will begin prior to the archaeologist's arrival. The CRVFO archaeologist will be on site as long as the BLM deems necessary.

ENVIRONMENTAL JUSTICE

Affected Environment:
Review of 2001 data from US Census Bureau indicates the median annual income of Garfield County averages $43,560 and is neither an impoverished or wealthy county. Median annual income of Eagle County averages $51,578 and is not impoverished but is considered a wealthy county. U.S. Census Bureau data from July, 2002 shows the minority population of Garfield and Eagle County comprises less than 3 % of the total population[1].

[1] **Table CO-EST2002-ASRO-02-08-County Population Estimates by Race Alone and Hispanic or Latino Origin: July 1, 2002**
Source: Population Division, U.S. Census Bureau
Release Date: September 18, 2003
03

Garfield County		Eagle County	
Median Household Income		Median Household Income	
Estimate	90% Confidence Interval	Estimate	90% Confidence Interval
$43,560	$40,491 to $46,613	$51,578	$47,958 to $55,177

Environmental Consequences/Mitigation:
Proposed Action:
The proposed action and alternatives are not expected to create a disproportionately high and adverse human health impact or environmental effect on minority or low-income populations within the area.

No Action:
Under the No Action alternative no impacts to minority or low-income populations would occur.

INVASIVE, NON-NATIVE SPECIES

Affected Environment:
To date, limited weed mapping has occurred on the Roan Plateau. Observations by various BLM employees have provided most of the information on weed species composition and distribution. Weed mapping on the Roan Plateau by the BLM was completed in 2011.

Houndstongue (*Cynoglossum officinale*) is the most prevalent weed on the Roan Plateau. It occurs in most drainages and is scattered in the uplands. Biennial thistles including bull thistle (*Cirsium vulgare*), musk thistle (*Carduus nutans*), and plumeless thistle (*Carduus acanthoides*), are frequently found in the uplands and drainages. Canada thistle (*Breea arvense*) occurs along almost every riparian reach, sometimes in dense populations, and both Canada thistle and houndstongue occur along most roads on top of the plateau. Trapper Creek within the project boundary contains large amounts of houndstongue and Canada thistle along the creek and in the uplands adjacent to the creek.

Environmental Consequences/Mitigation:
Proposed Action:
The proposed action calls for very limited ground disturbance. At the log structures a small trench would be cut into the bank. It is possible that these small disturbed sites could provide a niche for weed establishment. However, these areas are small and given the amount of weeds in the larger area, any increases in weeds would be largely undetectable.

To help minimize the potential for spread of invasive non-native species during or after project construction, the project inspector would ensure that equipment involved in surface disturbing actions is clean of noxious weed seeds or propagative parts prior to entry onsite. Post-construction weed monitoring and treatments would be conducted for three years following construction. Any Colorado-listed noxious weeds would be promptly treated and controlled according to the appropriate timing for each particular weed species. Staging of vehicles and equipment would not occur in weed-infested areas.

No Action:
Under this alternative, none of the ground disturbance associated with the proposed action would occur. Noxious and invasive plant species would be expected to continue at current levels.

MIGRATORY BIRDS

Affected Environment:
BLM Instruction Memorandum No. 2008-050 provides guidance toward meeting the Bureau of Land Management's (BLM) responsibilities under the Migratory Bird Treaty Act (MBTA) and the Executive Order (EO) 13186. The guidance directs Field Offices to promote the maintenance and improvement of habitat quantity and quality. To avoid, reduce or mitigate adverse impacts on the habitats of migratory bird species of conservation concern to the extent feasible, and in a manner consistent with regional or statewide bird conservation priorities.

The MBTA prohibits the "take" of a protected species. Under the Act, the term "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The USFWS interprets "harm" and "kill" to include loss of eggs or nestlings due to abandonment or reduced attentiveness by one or both adults as a result of disturbance by human activity, as well as physical destruction of an occupied nest.

The 1988 amendment to the Fish and Wildlife Conservation Act mandates the USFWS to "identify species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become candidates for listing under the Endangered Species Act (ESA) of 1973." The "*Birds of Conservation Concern 2008"* (USFWS 2010) is the most recent effort to carry out this mandate. The conservation concerns are the result of population declines - naturally or human-caused, small ranges or population sizes, threats to habitat, or other factors. Although there are general patterns that can be inferred, there is no single reason why any species was on the list. Habitat loss is believed to be the major reason for the declines of many species. When considering potential impacts to migratory birds the impact on habitat, including: 1) the degree of fragmentation/connectivity expected from the proposed project relative to before the proposed project; and 2) the fragmentation/connectivity within and between habitat types (e.g., within nesting habitat or between nesting and feeding habitats. Continued private land development, surface disturbing actions in key habitats (e.g. riparian areas) and the proliferation of roads, pipelines, powerlines and trails are local factors that reduce habitat quality and quantity for many species.

The Colorado River Valley Field Office (CRVFO) is within the Southern Rockies/Colorado Plateau Bird Conservation Region (BCR). The 2008 list of Birds of Conservation Concern are described in Table 3.

Table 3 - 2008 List of Birds of Conservation Concern within the CRVFO.

Species	Information/Range/Habitat Description	Occurrences/ Potentially Impacted
Gunnison Sage-Grouse *(Centrocercus minimus)*	Sagebrush communities 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. Not found within the CRVFO.	Not Present/No
American Bittern *(Botaurus lentiginosus)*	Inhabits marshes and wetlands; ground nester. Summer resident in Colorado.	Not Present/No
Bald Eagle *(Haliaeetus leucocephalus)*	Bald eagles were removed from the federal threatened and endangered species list in 2007 but are still protected under the MBTA. Bald eagles occasionally summer in this region but usually winter (mid-Nov. to mid-April) along portions of the Colorado, Eagle and Roaring Fork Rivers and their major	Not Present/No

Species	Information/Range/Habitat Description	Occurrences/ Potentially Impacted
	tributaries. Large mature cottonwood trees along the rivers and their major tributaries are used as roosting and perching sites, and these waterways provide the main food sources of fish and waterfowl. Upland habitats adjacent to these waterways are used as scavenging areas.	
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.	Not Present/No
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.	Irregular/No
Peregrine Falcon *(Falco peregrines)*	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.	Irregular in the Anvil Points area/No
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. Spring/summer resident, breeding.	Not Present/No
Snowy Plover *(Charadrius alexandrinus nivosus/tenuirostris)*	Sparsely vegetated sand flats associated with pickleweed, greasewood, and saltgrass. Spring migrant, non-breeding. Spring migrant, non-breeding.	Not Present/No
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.	Not Present/No
Long-billed Curlew *(Numenius americanus)*	Lakes and wetlands and adjacent grassland and shrub communities. Spring/fall migrant, non-breeding.	Not Present/No
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.	Not Present/No
Lewis's Woodpecker *(Melanerpes lewis)*	Open woodland, often logged or burned, including oak, coniferous forest (often ponderosa), riparian woodland, and orchards, less often in pinyon-juniper.	Not Present/No
Willow Flycatcher *(Empidonax traillii)*	Riparian and moist, shrubby areas; winters in shrubby openings with short vegetation. Fairly common summer resident in open valleys and mountain parks, breeding.	Possible/No
Gray Vireo *(Vireo vicinior)*	Uncommon summer resident (primarily Mesa County). In habitats open pinyon-juniper woodlands.	Not Present/No
Pinyon Jay *(Gymnorhinus cyanocephalus)*	Common to abundant resident of pinyon-juniper woodlands. Year-round resident that travels broadly in flocks.	Not Present/No
Juniper Titmouse *(Baeolophus ridgwayi)*	Pinyon-juniper woodlands, especially juniper; nests in tree cavities. Requires mature tree cavities for nesting and roosting. Year-round resident, breeding.	Not Present/No
Veery *(Catharus fuscescens)*	Dense riparian thickets and hillside brush near streams. Uncommon spring/fall migrant in Eastern Colorado.	Not Present/No

Species	Information/Range/Habitat Description	Occurrences/ Potentially Impacted
Bendire's Thrasher *(Toxostoma bendirei)*	Desert, especially areas of tall vegetation, cholla cactus, creosote bush and yucca, and in juniper woodland Possible summer resident.	Not Present/No
Grace's Warbler *(Dendroica graciae)*	Breeds in ponderosa pine forests. Uncommon summer resident in southwest Colorado.	Not Present/No
Grasshopper Sparrow *(Ammodramus savannarum)*	Open grasslands and cultivated fields. Uncommon, non-breeding spring migrant in western Colorado and common summer resident in eastern Colorado.	Not Present/No
Chestnut-collared Longspur *(Calcarius ornatus)*	Open grasslands and cultivated fields. Uncommon, non-breeding spring migrant in western Colorado and common summer resident in eastern Colorado.	Not Present/No
Black Rosy-Finch *(Leucosticte atrata)*	Open country including mountain meadows, high deserts, valleys. Breeds/nests in alpine areas near rock piles and cliffs. Irregular to rare winter resident, non-breeding.	Not Present/No
Brown-capped Rosy-Finch *(Leucosticte australis)*	Summer resident/breeding in alpine meadows, cliffs, and talus and high-elevation parks and valleys. Irregular to rare winter resident in lower mountain areas.	Not Present/No
Cassin's Finch *(Carpodacus cassinii)*.	Open montane coniferous forests; breeds/ nests in coniferous forests. Year-round resident, breeding.	Not Present/No
Yellow-billed Cuckoo *(Coccyzus americanus)*	See Threatened, Endangered and Sensitive Species – Terrestrial Wildlife	
Brewer's Sparrow *(Spizella breweri)*	See Threatened, Endangered and Sensitive Species – Terrestrial Wildlife	

Environmental Consequences/Mitigation:

Proposed Action:

The construction activities may disturb migratory bird species that inhabit the immediate area. The authorized use period is after the nesting/fledging period for birds with a potential to be present. The overall impact is likely short-term, temporary during daylight hours and would only affect individuals immediately in the project area.

No Action:

Under the No Action alternative, no pool structures would be constructed and no disturbance would occur.

SPECIAL STATUS PLANT SPECIES (includes an analysis of Public Land Health Standard 4)

Affected Environment:

Table 4 summarizes the 2010 species list from the U. S. Fish and Wildlife Service for Federally listed, proposed, or candidate plant species (USFWS 2010) and the November 2009 Colorado BLM State Director's Sensitive Species List for BLM sensitive plants (BLM 2009) that may occur within Garfield County and be impacted by the proposed action.

Table 4 Special Status Plant Species in Garfield County

Federally Listed, Proposed or Candidate Plant Species		
Species	**Habitat**	**Potential Habitat Present / Absent**
Colorado hookless cactus (*Sclerocactus glaucus*)	Typically found on rocky hills and alluvial benches in xeric fine-textured soils overlain with cobbles and pebbles. It grows in salt desert shrub and pinyon-juniper communities at elevations ranging from approximately 4,500 to 6,600 feet.	**Absent:** The project area is above the elevational range of this species and no rocky, salt desert shrub habitat is present.
DeBeque phacelia (*Phacelia submutica*)	A rare annual plant restricted to expansive clay soils derived from the Atwell Gulch and Shire Members of the Wasatch Formation in Mesa and Garfield Counties, Colorado. The plant grows on sites that are nearly barren of vegetation.	**Absent:** No exposures of Atwell Gulch or Shire Members of the Wasatch formation present
Parachute penstemon (*Penstemon debilis*)	Endemic to steep, talus slopes on the southern escarpment of the Roan Plateau in Garfield County, Colorado. The plants are found only on the oil-shale rich Parachute Creek Member of the Green River Formation between 8,000 to 9,200 feet in elevation.	**Absent:** The Green River Formation is present within the canyons of Trapper, Trapper and Northwater Creeks, but not the specific Parachute Creek Member. No occurrences of this species are known or expected within the project area.
Ute ladies'-tresses (*Spiranthes diluvialis*)	Habitat for this threatened species is found below 6,500 feet along streams, lakes or in wetland areas with seasonally saturated or subirrigated soils.	**Absent**: The project area is above 8,000 feet, well above the upper elevational range for this species.
BLM Sensitive Plant Species		
Species	**Habitat**	**Potential Habitat Present/Absent**
Cathedral Bluffs meadowrue (*Thalictrum heliophilum*)	Known from 18 occurrences in Garfield, Mesa and Rio Blanco Counties. The meadowrue is a narrowly endemic plant found in dry shale barren communities between 6,200 and 8,800 feet in elevation.	**Absent:** No dry shale barrens present in the immediate project area. No occurrences of this species documented here.
DeBeque milkvetch (*Astragalus debequaeus*)	Found only on the Wasatch Formation in the vicinity of DeBeque and Rulison, Colorado. Plants are common on the Atwell Gulch Member of the Wasatch Formation but are rare elsewhere. Elevations of known populations are between 5,100 and 6,400 feet.	**Absent:** The project area is above the elevational range of this species and has no exposures of the Atwell Gulch Member of Wasatch Formation.
Harrington's penstemon (*Penstemon harringtonii*)	Open sagebrush communities on rocky loam or rocky clay loam soils between the elevations of 6,200 to 10,000 feet.	**Absent:** No known populations or suitable soils exist on the Roan Plateau.

Naturita milkvetch (*Astragalus naturitensis*)	Occurs on sandstone mesas, ledges, crevices, and slopes in pinyon-juniper woodlands at elevations from 5,000 to 7,000 feet. It grows in areas of shallow soils over exposed bedrock. Naturita milkvetch has been found in several locations on the western end of the CRVFO.	**Absent:** Site is above the elevational range of this species and no sandstone rimrock or ledges present
Piceance bladderpod (*Lesquerella parviflora*)	A Colorado endemic known only in Garfield, Mesa, and Rio Blanco Counties. It occurs on shale outcrops of the Green River Formation, on ledges and slopes of canyons in open areas at elevations ranging from 6,200 to 8,600 feet.	**Absent:** No exposed shale outcrops of the Green River Formation are present within the project area.
Roan Cliffs blazing star (*Mentzelia rhizomata*)	Found only on steep talus slopes of the Green River Formation in Garfield County. The species occurs on eroding oil shale at elevations from 5,800 to 9,000 feet. In the GSFO, the Roan Cliffs blazing star is known to occur on the cliffs of the Roan Plateau, along Parachute Creek drainage and in Main Elk Creek, near New Castle, Colorado.	**Absent:** This species has been documented along lower Trapper Creek, but no exposed talus slopes are present within the project area.

Significant Plant Communities

Significant plant communities include communities that are (1) globally rare, (2) rare within Colorado, or (3) substantially unaltered by human activity. The first two categories include plant communities in which the individual species may not be rare, but the particular combination of species is rare or uncommon. The third category includes native plant communities that are relatively undisturbed and contain few non-native species. The only significant plant community within the project area or potentially affected by the project is Hanging garden Sullivantia.

Hanging Garden Sullivantia (*Sullivantia hapemanii* var. *purpusii*) – A Colorado endemic, this species is restricted to "hanging gardens" with a substrate of Green River Formation shale. These gardens occur where moisture seeps between layers of shale or in proximity to waterfalls. This species is most abundant along the deeper canyons of lower Trapper Creek and Northwater Creek. The upper end of Trapper Creek does not support seeps or waterfalls that serve as potential habitat for the hanging garden sullivantia.

Environmental Consequences/Mitigation:

Proposed Action:

Due to the absence of any occupied or suitable habitat within the project vicinity, the project would have "No Effect" on any special status plant species or significant plant communities.

No Action:

Under the No Action alternative, the proposed pool habitats would not be constructed and no impacts to any special status plants or plant communities would result.

Analysis on the Public Land Health Standard 4 for Special Status Plant Species**:** (partial, see also Special Status Aquatic and Terrestrial Wildlife): A formal land health assessment was conducted on the landscape which includes the project area in 1999. No special status plants were identified in the project area.

SPECIAL STATUS AQUATIC WILDLIFE SPECIES (includes an analysis of Public Land Health Standard 4)

Affected Environment:
Table 5 summarizes the latest: 1) species list (USFWS 2010a) from the U. S. Fish and Wildlife Service for Federally listed, proposed, or candidate aquatic wildlife species and 2) Colorado BLM State Director's Sensitive Species List for aquatic species; that may occur within the CRVFO and be impacted by the proposed action. The only species present and affected by the proposed action is Colorado River cutthroat trout.

Table 5 – Special Status Aquatic Wildlife Species.

Federally Listed, Proposed or Candidate Aquatic Wildlife Species		
Species	Habitat/Range	Occurrence/ Potentially Impacted
Greenback cutthroat trout *(Oncorhynchus clarkii stomias)*	Federally listed as threatened. The greenback is the subspecies of cutthroat trout native to the Platte River drainage on the Eastern Slope of Colorado, while the Colorado River cutthroat trout is the subspecies native to the Western Slope of Colorado. Historically found in cold, clear, gravely headwater streams and mountain lakes of the Arkansas and South Platte River systems in Colorado and part of Wyoming. The greenback cutthroat trout was not identified on the USFWS list for Garfield County; however, recent surveys have identified a population in Cache Creek.	Absent /No
Bonytail *(Gila elegans)*	Federally listed as endangered. This large chub is a member of the minnow family found in large, fast-flowing waterways of the Colorado River system. Their current distribution and habitat status are largely unknown due to its rapid decline prior to research into its natural history. The bonytail is extremely rare in Colorado and no self-sustaining population exists. Only one has been captured in the state since 1980.	Absent /No
Colorado pikeminnow (formerly Colorado squawfish) *(Ptychocheilus lucius)*	Federally listed as endangered. Primarily exists in the Green River below the confluence with the Yampa River, the lower Duchesne River in Utah, the Yampa River below Craig, Colo., the White River from Taylor Draw Dam near Rangely downstream to the confluence with the Green River, the Gunnison River in Colorado, and the Colorado River from Palisade, Colo., downstream to Lake Powell. Colorado pikeminnow populations in the upper Colorado River basin are now relatively stable or growing. Designated Critical Habitat includes the Colorado River and its 100-year floodplain west (downstream) from the town of Rifle.	Absent /No
Humpback chub *(Gila cypha)*	Federally listed as endangered. Found in deep, clear to turbid waters of large rivers and reservoirs over mud, sand or gravel. The nearest known population of humpback chub is in the Colorado River at Black Rocks west of Grand Junction..	Absent /No

Razorback sucker *(Xyrauchen texanus)*	Federally listed as endangered. The razorback sucker was once widespread throughout most of the Colorado River Basin from Wyoming to Mexico. In the upper Colorado River Basin, they are now found only in the upper Green River in Utah, the lower Yampa River in Colorado and occasionally in the Colorado River near Grand Junction. Because so few of these fish remain in the wild, biologists have been actively raising them in hatcheries in Utah and Colorado and stocking them in the Colorado River. Designated Critical Habitat for the razorback sucker includes the Colorado River and its 100-year floodplain west (downstream) from the town of Rifle.	Absent /No
Colorado BLM Sensitive Aquatic Species		
Species	Habitat/Range	Occurrence / Potentially Impacted
Northern leopard frog (*Rana pipiens)*	Generally found between 3,500 to 11,000 feet, in wet meadows and in shallow lentic habitats. They require year-round water sources, deep enough to provide ice free refugia in the winter. Within the CRVFO, this species has been documented in locales where quality riparian vegetation exists in conjunction with perennial water sources. Larger populations of this species have been documented northwest of King Mountain within the small drainage that feeds King Mountain (Ligon) Reservoir, June Creek and East Divide Creek south of Silt, Colorado, and in portions of the Rifle Creek watershed north of Rifle, Colorado.	Absent/No
Great Basin spadefoot toad (*Spea intermontana).*	This toad is known to occupy a wide variety of habitat including lowlands, foothills, and shortgrass plain. This species generally inhabits and breeds in seasonal pools and ponds in pinyon-juniper woodland, sagebrush, and semi-desert shrubland habitats, mostly below 6,000 feet in elevation.	Absent /No
Boreal Toad *(Bufo boreas boreas)*	The distribution of the boreal toad is restricted to areas with suitable breeding habitat in spruce-fir forests and alpine meadows generally between 7,500 and 12,000 feet elevation. Breeding habitat includes lakes, marshes, ponds, and bogs with sunny exposures and quiet shallow water. The CRVFO has potential habitat but no known populations.	Absent /No
Bluehead sucker (*Catostomus discobolus*) , Flannelmouth sucker (*Catostomus latipinnis), and* Roundtail chub (*Gila robusta)*	Primarily found in larger rivers but may also be found in smaller tributaries with good connectivity to larger river systems. These fish are endemic to the Colorado River basin and reside within the mainstem Colorado River and its major tributary streams. Given their biology, feeding habits, habitat needs, and niche in the ecosystem, these species can persist in the face of actions that increase sediments to streams and rivers containing these species.	Absent /No

Mountain sucker (*Catostomus platyrhynchus*)	The mountain sucker is found primarily in small, low- mid elevation streams in northwestern Colorado with gravel, sand or mud bottoms. They inhabit undercut banks, eddies, small pools, and areas of moderate current. Young fish prefer backwaters and eddies. A population of mature adults is found in Steamboat Lake. Within the CRVFO, only known occurrence is in Piceance Creek.	Absent /No
Colorado River cutthroat trout (CRCT) (*Oncorhynchus clarkii pleuriticus)*	CRCT are one of three subspecies of native trout found in Colorado. CRCT prefer clear, cool headwaters streams with coarse substrates, well-distributed pools, stable streambanks, and abundant stream cover. CRCT have been documented as occurring in Parachute Creek, Abrams Creek, Battlement Creek, Mitchell Creek, North Thompson Creek and Red Dirt Creek. It is likely that all of the perennial waters capable of harboring fish historically contained this native trout species. CRCT have hybridized with non-native salmonids in many areas, reducing the genetic integrity of this subspecies. Rainbow trout hybridize with cutthroat trout. Brook and brown trout tend to replace them in streams and rivers.	Present /Yes

Environmental Consequences/Mitigation:

Proposed Action:

Colorado River cutthroat trout. A population of Colorado River cutthroat trout resides in Trapper Creek above, at, and below the project site. The proposed action would have some short-term effects to this species but long-term benefits. In the short-term (less than one week), excavation associated with trenches to place logs would disturb soils and increase sediment entering the creek. Use of a skidsteer to excavate pools and a jumping jack to compact stream substrates would also result in short-term sediment plumes for a short distance below proposed activity. Increased sediments reduce dissolved oxygen, raise stream temperature, and can cover spawning/rearing areas, thereby reducing the survival of fish embryos and juveniles (USDA Forest Service 2000). Excessive sedimentation can also fill in important pool habitats, reducing their depth and making them less usable by fish and other aquatic organisms. Knopp 1993, in a study of 60 northwestern California streams, found that intensive land use management was correlated to loss of pool volume. High sediment transport can fill pools and cause reduction or loss of essential salmonid juvenile rearing habitat (Frissell 1992). Pool habitats are important as over-summer and over-winter thermal refugia areas and, when coupled with stream flows, are often a limiting factor in many small mountain streams. Impacts associated with sediment would be limited as work would occur after the spawning season.

A number of sublethal effects on resident trout may also occur as a result of sedimentation, including avoidance behavior, reduced feeding and growth, and physiological stress (Waters 1995). Reduced macroinvertebrate productivity and diversity results when excessive sediment fills in the spaces between stream substrates needed by these aquatic invertebrates. Food webs can be altered as sediment-intolerant macroinvertebrates are replaced by sediment-tolerant species. Reduction in stream productivity can disrupt the food chain and result in reduced food sources for resident fish species. Suspended sediment causes turbidity within streams, which can impact species that need clear water in which to successfully capture prey, such as cutthroat trout. Results from a study on turbidity (Barrett et al. 1992) clearly indicated that wild rainbow trout exposed to increasing levels of suspended sediment are subject to reductions in their ability to detect prey. This in turn may lead to reduced prey capture rates and foraging success, lowering the growth and fitness of individual fish and populations. The longer the duration of high turbidity the more damage is likely to fish and other aquatic organisms (Newcombe and MacDonald 1991). The effects of sedimentation should be reduced as sediment retention devices will be used to

eliminate off site soil movement. The stream would be diverted and all construction would be done in the non-watered stream bed which will minimize sediment loading.

Compaction of stream substrates could result in a slight decrease in macroinvertebrate productivity an important food source for cutthroat trout. However, given the number of pools and size of disturbance, impacts to aquatic insect food sources would be minimal as abundant caddisfly, mayfly, and stoneflies are present. Compaction could also result in a slight reduction in spawning habitat. However, spawning habitats are not considered limited within the project area and abundant spawning areas would remain after project completion.

In the long-term, the project would benefit Colorado River cutthroat trout as the creation of pools within the identified stream reach would provide holding habitat and thermal refugia currently lacking for these fish.

No Action:
Under the No Action alternative, the pool habitats would not be created. The upper third of Trapper Creek would continue to be used only seasonally most years with limited potential for year round occupation or range expansion for this sensitive species.

Analysis on the Public Land Health Standard 4 for Special Status Aquatic Wildlife Species**:** (partial, see also Special Status Plants and Terrestrial Wildlife): This landscape was assessed in 1999. At that time the project area was meeting Land Health Standard 4 for fish. The proposed action would facilitate the improvement of stream habitats and increase pool densities identified as a limiting factor on the project reach.

SPECIAL STATUS TERRESTRIAL WILDLIFE SPECIES (includes an analysis of Public Land Health Standard 4)

Affected Environment:
Table 6 summarizes the latest: 1) species list (USFWS 2010a) from the U. S. Fish and Wildlife Service for Federally listed, proposed, or candidate terrestrial wildlife species and 2) Colorado BLM State Director's Sensitive Species List (Updated November 2009) for terrestrial species; that may occur within the CRVFO and be impacted by the proposed action.

Table 6 – Special Status Terrestrial Wildlife Species.

Federally Listed, Proposed or Candidate Terrestrial Wildlife Species		
Species	Information/Range/Habitat Description	Occurrence/ Impacted
Black-footed Ferret (*Mustela nigripes*)	Federally listed as endangered. Black-footed ferrets have ranged statewide but never have been abundant in Colorado. Their habitat included the eastern plains, the mountain parks and the western valleys – grasslands or shrub lands that supported some species of prairie dog, the ferret's primary prey. State and federal biologists have established two major black-footed ferret colonies: one at Coyote Basin (Colorado-Utah border west of Rangely) and another at the BLM's Wolf Creek Management Area southeast of Dinosaur National Monument.	Absent /No

Canada lynx (*Lynx Canadensis)*	Federally listed as threatened. Canada lynx occupy high-latitude or high-elevation coniferous forests characterized by cold, snowy winters and an adequate prey base. In the western US, lynx are associated with mesic forests of lodgepole pine, subalpine fir, Engelmann spruce, and quaking aspen in the upper montane and subalpine zones, generally between 8,000 and 12,000 feet in elevation. Although snowshoe hares (*Lepus americanus*) are the preferred prey, lynx in also feed on mountain cottontails (*Sylvilagus nuttallii*), pine squirrels (*Tamiasciurus hudsonicus*), and blue grouse (*Dendragapus obscurus*). The Forest Service has mapped suitable denning, winter, and other habitat for lynx within the White River and Routt National Forests. The mapped suitable habitat comprises areas known as Lynx Analysis Units (LAUs) that are the approximate the size of a female's home range. Several LAUs include small parcels of BLM lands.	Absent /No
Mexican spotted owl *(Strix occidentalis lucida)*	Federally listed as endangered. This owl nests, roosts, and hunts in mature coniferous forests in canyons and foothills. The key habitat components are old-growth forests with uneven-age stands, high canopy closure, high tree density, fallen logs and snags. The only extant populations in Colorado are in the Pikes Peak and Wet Mountain areas of south-central Colorado and the Mesa Verde area of southwestern Colorado.	Absent /No
Greater Sage- grouse (*Centrocercus urophasianus)*	Candidate for Federal listing. Sage-grouse, as the name implies, are found only in areas where sagebrush is abundant, providing both food and cover. Sage-grouse prefer relatively open sagebrush flats or rolling sagebrush hills. In winter, sagebrush accounts for 100% of the diet for these birds. In addition, it provides important escape cover and protection from the elements. In late winter, males begin to concentrate on traditional strutting grounds or leks. Females arrive at the leks 1-2 weeks later. Leks can occur on a variety of land types or formations (windswept ridges, knolls, areas of flat sagebrush, flat bare openings in the sagebrush. Breeding occurs on the leks and in the adjacent sagebrush, typically from March through May. Females and their chicks remain largely dependent on forbs and insects for food well into early fall. Within the CRVFO sage-grouse are still present in the northeast part of the Field Office in the Northern Eagle/Southern Routt population, while small (<500 birds), probably has, or had, a relationship with the larger population in Moffat, Rio Blanco and western Routt counties, and probably with the Middle Park population to the east. Additionally a male was collared and found to be using the Anvil Points area in 2011 (additional information provided below).	Absent /No
Yellow-billed cuckoo *(Coccyzus americanus)*	Candidate for Federal listing. This secretive species occurs in mature riparian forests of cottonwoods and other large deciduous trees with a well-developed understory of tall riparian shrubs. Western cuckoos breed in large blocks of riparian habitats, particularly woodlands with cottonwoods (*Populus fremontii*) and willows (*Salix* sp.). A few sightings of yellow-billed cuckoo have occurred in western Colorado along the Colorado River near Grand Junction.	Absent /No

Uncompahgre fritillary butterfly *(Boloria acrocnema)*	Federally listed as endangered. The butterfly has been verified at only two areas in the San Juan Mountains in Colorado. There is anecdotal evidence of other colonies in the San Juans and southern Sawatch ranges in Colorado. The butterfly exists above treeline on north and east facing slopes in patches of its larval host plant, snow willow. The greatest threat is butterfly collecting. Climatological patterns, disease, parasitism, predation, and trampling of larvae by humans and livestock pose additional threats.	Absent /No
Colorado BLM Sensitive Terrestrial Wildlife Species		
Species	Information/Range/Habitat Description	Occurrence/ Impacted
Townsend's big-eared bat (*Corynorhinus townsendii*) and Fringed myotis (*Myotis thysanodes)*	Occur as scattered populations at moderate elevations on the western slope of Colorado. Habitat associations are not well defined. Both bats will forage over water and along the edge of vegetation for aerial insects. These bats commonly roost in caves, rock crevices, mines, buildings or tree cavities. Both species are widely distributed and usually occur in small groups. Townsend's big-eared bat is not very abundant anywhere in its range. This is attributed to patchy distribution and limited availability of suitable roosting habitat (Gruver, J.C. and D.A. Keinath 2006).	Absent /No
Midget faded rattlesnake *(Crotalus viridis concolor)*	A small, pale-colored subspecies of the common and widespread western rattlesnake. The midget faded rattlesnake is endemic to northwestern Colorado, including western Garfield County. Habitats include sandy and rocky areas in pinyon-juniper and semi-desert shrub.	Absent /No
Northern goshawk (*Accipter gentilis)*	An uncommon resident in mountains. Occasional migrant that may winter at lower elevations. Predominantly uses mature stands of aspen, and ponderosa/ lodgepole pines. Goshawks prey on small-medium sized birds and mammals. It breeds in coniferous deciduous and mixed forests. The nest is typically located on a northerly aspect in a drainage or canyon and is often near a stream. Nest areas contain one or more stands of large, old trees with a dense canopy cover. A goshawk pair occupies its nest area from March until late September. The nest area is the center of all movements and behaviors associated with breeding from courtship through fledging.	Unlikely/No
Goldeneye, Barrow's (*Bucephala islandica)*	This bird is an uncommon winter resident and spring/fall migrant. A few may breed in the northern mountains such as the Flat Tops Wilderness Area. Goldeneye's prefer alkaline-freshwater lakes in parkland areas and to a lesser extent subalpine/alpine lakes/beaver ponds for breeding.	Absent /No
Brewer's sparrow (*Spizella berweri*)	Neotropical migrant that summers in western Colorado mountain parks and spring/fall migrant at lower elevations. A sagebrush shrubland obligate with an apparently secure conservation status in Colorado.	Absent /No
American Peregrine Falcon *(Falco peregrines anatum)*	Rare spring and fall migrant in western valleys. Peregrine falcons inhabit open spaces associated with high cliffs and bluffs overlooking rivers. The falcon nests on high cliffs and forages over nearby woodlands.	Absent /No

Ibis, white-faced (*Plegadis chihi)*	The species inhabits primarily freshwater wetlands, especially cattail (*Typha* spp.) and bulrush (*Scirpus* spp.) marshes. This bird is a very rare, non-breeding, summer migrant to western Colorado valleys and mountain lakes This species feeds in flooded hay meadows, agricultural fields, and estuarine wetlands. This species breeds in isolated colonies in mainly shallow marshes with "islands" of emergent vegetation. This species is more commonly found on the eastern slope of Colorado (e.g. San Luis valley).	Absent /No

Environmental Consequences/Mitigation:
Proposed Action:
Due to the unlikely presence of any individuals and the absence of any occupied or suitable habitat, the proposed action would have no effect on any special status terrestrial wildlife species other than the Greater sage-grouse.

Greater sage-grouse – The entire Roan Plateau has been recently mapped as Preliminary General Habitat (PGH). According to Instruction Memorandum No. 2012-043, Greater Sage-Grouse Interim Management Policies and Procedures, intent of these interim conservation policies and procedures in PGH is to reduce and mitigate adverse effects on Greater Sage-Grouse and its habitat to the extent practical. Since the project area does not meet the habitat requirements of the Greater sage-grouse, the proposed action would not have an effect on this species.

No Action:
Under the No Action alternative, the proposed pool habitats would not be constructed and no impacts to any special status terrestrial wildlife would result.

Analysis on the Public Land Health Standard 4 for Special Status Terrestrial Wildlife Species**:** (partial, see also Special Status Plants and Aquatic Wildlife): A formal land health assessment was conducted on the landscape which includes the project area in 1999. No special status wildlife species were identified in the project area. Neither the proposed action nor the no action alternative would positively or negatively affect land health conditions or trends for special status terrestrial wildlife species (Land Health Standard 4).

WASTES, HAZARDOUS OR SOLID

Affected Environment:
Fuels and lubricants would be used for the operation of a mini excavator during project implementation. The majority of the proposed activities would occur in Trapper Creek or within close proximity to the stream.

Environmental Consequences/Mitigation:
Proposed Action:
In order to implement the proposed activities, it would be necessary for vehicles and equipment to be in close proximity to Trapper Creek when performing in-channel operations and construction. At times it would be necessary to cross Trapper Creek during project implementation. In the event of a spill, there is the potential for contaminants to be transported to surface water or soils, which could negatively impact water quality and aquatic organisms.

Mitigation:

Fuels and lubricants would be stored in appropriate containers and refueling would occur in designated areas at a minimum of 100 feet from the creek. To minimize the likelihood of spills and the delivery of hazardous materials to surface water, it is essential that equipment be in proper working condition and checked for any leaks. The extent possible, work should be done from the banks out of the wetted channel. Where in-channel work would be required, complete activities quickly and avoid unnecessary time in the creek. Perform work under base flow conditions beginning early August.

When crossing the creek, equipment and vehicles should move quickly and without incident. Appropriate BMPs as outlined in the Proposed Action should be used to minimize the potential transport of fuels and lubricants to Trapper Creek during runoff events. Following daily operations, vehicles and equipment shall be removed from the stream vicinity and stored overnight in a staging area a minimum of 100 feet from the stream bank. In addition, the contractor would be required to have a spill prevention plan on site at all times.

No Action:
No pool habitat would be constructed, and there would be no impacts from fuels or lubricants.

WATER QUALITY, SURFACE AND GROUND (includes an analysis on Standard 5)

Affected Environment:
The proposed action would occur north of I-70 on the top of the Roan Plateau in the Trapper Creek watershed. The water quality of the area has been characterized as generally good quality, and is currently being managed under guidance in the Roan Plateau RMPA/EIS (BLM 2006). The State of Colorado has developed a *Stream Classifications and Water Quality Standards* (CDPHE 2010a, Water Quality Control Commission, Regulation No. 37) list that identifies beneficial uses of water and numeric standards used to determine allowable concentrations of water quality parameters. The proposed project area is located in the Lower Colorado River Basin - segment 8. This segment has been classified as aquatic life cold water 1, recreation N, water supply and agriculture. Aquatic life cold 1 indicates that this water course is currently capable of sustaining a wide variety of cold water biota, including sensitive species, or could sustain such biota but for correctable water quality conditions. Recreation class N refers to waters that are not suitable or intended to become suitable for primary contact recreation. Water supply and agriculture refer to stream segments that are suitable or intended to become suitable for potable water supplies and suitable for irrigation or livestock use.

Trapper Creek is not currently listed on the State of Colorado's *303(d) List of Water Quality Limited Segments Requiring TMDLS* or the *Monitoring and Evaluation List* (CDPHE 2010b, Water Quality Control Commission, Regulation No. 93). During the 1999 Roan Cliffs Land Health Assessment, limited water quality data was collected, but suggested that standards were being met. More recently, due to some concerns with livestock grazing, field parameters were collected on Trapper Creek during the summers of 2008 and 2009. The water quality results are listed below. All water quality parameters were determined to be meeting State standards.

Water Quality sampling results for Trapper Creek 2008-2009.

Date	Discharge (cfs)	Temp. (°C)	Cond. (µS\cm)	pH	Salinity ppt	Dissolved Oxygen		Hardness (mg/L)
						%	mg/l	
6/23/2009	1.35	10.3	343	8.64	0.2	83	8.92	240
8/14/2009	0.74	12.2	395	8.67	0.3	71	7.46	
8/21/2008	0.68	11.2	394-580	-	0.3	65	7.69	-
10/1/2008	0.41	8.9	375	-	0.3	75	8.92	-

Environmental Consequences/Mitigation:
Proposed Action:
The proposed activities would result in the removal of vegetation, bank stabilization and re-contouring, and soil displacement adjacent to Trapper Creek. Some soil compaction may occur during construction of the pools, bank stabilization and staging of heavy equipment. Short term sediment transport and increased turbidity is expected to occur during construction but will be dispersed quickly. As part of this project, a nationwide ACOE 404 permit will be issued to account for any discharge of sediment into the stream.

To minimize sediment transport to Trapper Creek, standard BMPs (as identified in the Proposed Action) will be installed and maintained to ensure that water quality is not impaired by the proposed activities. Construction will take place at low flow or likely no flow conditions. Thus, diverting around the construction activities is not necessary. Downstream water quality changes are expected to be negligible due to the limited disturbance size and short time frame for the enhancement structure construction.

No Action:
There would be no streamside construction and thus no impact to water quality.

Land Health Standard 5 for Water Quality:
Based on the Roan Cliffs Land Health Assessment and recent data, BLM staff concluded that water quality is meeting Standard 5 (BLM 1999). Implementation of the proposed action is not anticipated to degrade water quality from current conditions.

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

Affected Environment:
The proposed pool structures would be located in Trapper Creek. Riparian vegetation at the site consists primarily of dense sedges *Carex spp.*, and riparian grasses including tufted hair grass, red top, and meadow barley. In addition, some willows and cottonwood trees exist in the upper exclosure portion of the project area.

Environmental Consequences/Mitigation:

Proposed Action:
There would be a short term loss of riparian vegetation due to construction activities associated with the placement of log weir structures. Loss of riparian vegetation would be less than 0.01 acres and less than 100 linear feet in total. No willows or cottonwoods would be disturbed and only very small areas of sedges and riparian grasses would be removed to accommodate log weirs. Removal of this riparian vegetation would be undetectable and would quickly reestablish following project completion. Riparian values would be expected to be re-established within a few weeks.

No Action:
No short-term loss of any riparian vegetation would occur.

Analysis on the Public Land Health Standard for riparian systems: Land health conditions for riparian systems would be maintained by both the proposed action and no action alternative.

WILD AND SCENIC RIVERS

Affected Environment:
The proposed pool habitat work would be located within Trapper Creek Segment 2, which was found to be eligible under a Roan Plateau Eligibility Report for the National Wild and Scenic Rivers System in 2002. All eligible segments will be managed to preserve the identified Outstanding Remarkable Values (ORV's) until such a time as a suitability study is completed. The ORV identified for this segment was its core conservation population of Colorado River cutthroat trout). The 2007 ROD for the Roan Plateau RMP Amendment and EIS (page ROD-35) prescribed protective measures (NSO) to preserve the identified Outstanding Remarkable Value (ORV) for fish until such a time as a suitability study is completed. The overall objective is to not allow surface disturbing activities that might impair those identified ORV's or the segments preliminary classification of recreational. This segment has some existing impoundments. These developments were done to enhance the riparian to improve fish habitat. The developments while meeting the free-flowing criteria consist of drop structures, 2 fence exclosures, and bank stabilization. Additional fencing is present along most of this segment and crisscrosses the creek in several places. There is also a road that comes down to the creek from the north directly adjacent to the exclosure fences. Development at the bottom is primitive and limited to a bulletin board and a turnaround space for vehicle. An additional road comes down to the creek at the eastern portion of this segment and ends at bank stabilization improvement project. Both these roads serve as recreational access points. There is evidence of livestock grazing and roads and trails are more visible in the uplands from this section thereby showing evidence of human activity. This segment is readily accessible by three roads.).

Environmental Consequences/Mitigation:
Proposed Action:
The proposed pool habitat work would occur within Trapper Creek. Pool habitat has been identified as a limiting factor in the upper third of Trapper Creek. The Fish ORV would benefit from this action in the long term, although sedimentation from construction efforts may temporarily negatively impact the fish in the short-term in very short reaches of the stream.

The project would meet the exception criteria for the NSO because the project would have long-term benefits to the primary Outstanding Remarkable Value (ORV) of pure Colorado River cutthroat trout. The project would have short-term negative effects that are disclosed in this document but long-term free flowing criteria would be preserved as this project is categorized as a diversion work or other minor structure. Since these structures don't impound water (place it into storage), they would be considered minor structures that do not impact the free flowing nature of the river segment. In addition, the project site is located in a segment that is classified as Recreational which does allow for some minor alterations while still complying with the act. Some minor structures already exists in this segment to improve fish habitat.

No Action:
The no action alternative will have no impact or benefit the ORV.

WILDERNESS

Affected Environment:
The proposed action is within an area that has been proposed by the public for wilderness designation. The Roan Plateau does have areas that contain characteristics associated with wilderness.

Environmental Consequences/Mitigation:

Proposed Action:

The proposed project will have negligible impacts to wilderness characteristics. Development of minor structures would slightly diminish the naturalness of the area in the long term, but not affect solitude or primitive and unconfined types of recreation in the long-term. There may be short-term effects to solitude and primitive and unconfined types of recreation during construction in the small project location. However, the Glenwood Springs Field Office Record of Decision for the Approval of Portions of the Roan Plateau Resource Management Plan and Environmental Impact Statement decided not to specifically manage the areas that contain characteristics associated with wilderness to protect and maintain those characteristics. Therefore, no mitigation is needed for the planned projects.

No Action:
There would be no impact to wilderness characteristics.

Other Affected Resources

In addition to the critical elements, the resources presented in Table 8 were considered for impact analysis relative to the proposed action and no action alternative. Resources that would be affected by the proposed action and no action alternative are discussed below.

Table 8

Other Resources Considered in the Analysis.			
Resource	***NA or Not Present***	***Present and Not Affected***	***Present and Affected***
Access and Transportation		X	
Cadastral Survey	X		
Fire/Fuels Management	X		
Forest Management	X		
Geology and Minerals	X		
Law Enforcement	X		
Paleontology	X		
Noise	X		
Range Management		X	
Realty Authorizations	X		
Recreation		X	
Soils*			X
Vegetation*			X
Visual Resources		X	
Wildlife, Aquatic*			X
Wildlife, Terrestrial*			X

*Public Land Health Standard

SOILS (includes a analysis on Standard 1)

Affected Environment:
According to the *Soil Survey of Rifle Area, Colorado, Parts of Garfield and Mesa Counties* (NRCS 1985), the proposed construction activities would be located on the soil map unit called Parachute-Rhone loams. These gently sloping to steep soils are found on ridges and mountainsides at elevations ranging from

7,600 to 8,600 feet and on slopes of 5 to 30 percent (NRCS 2011). The Parachute soil is derived from sandstone and or marlstone while the Rhone soil is derived from fine-grained sandstone. Approximately 55 percent of this unit consists of the Parachute soil while approximately 30 percent is the Rhone soil. The Parachute soil is moderately deep, well drained, and has a moderate erosion hazard with medium surface runoff (NRCS 2011). The Rhone soil is deep, well drained, and has a slight erosion hazard with slow surface runoff (NRCS 2011). Primary uses for these soils include grazing and wildlife habitat.

Soil health was evaluated in 1999 during the Roan Cliffs Land Health Assessment. BLM staff concluded that soils were meeting land health standards with only slight departures from expected conditions (BLM 1999).

Environmental Consequences/Mitigation:
Proposed Action:
The proposed activities would result in loss of vegetation, soil compaction, and soil displacement in proximity to Trapper Creek. The removal of vegetation and soil displacement would occur along the upstream and downstream location of the constructed pools/riffles. Some soil compaction may occur during construction and bank stabilization through the use of heavy equipment along the stream bank. The proposed activities would result in some sediment transport to the stream during project implementation and prior to vegetation establishment during runoff events. To minimize the effects of sediment transport, standard BMPs and mitigation measures be installed and maintained on a frequent basis to ensure that minimal soil loss is achieved.

No Action:
There would be no construction activities and thus, no impact to soils.

Land Health Standard 1 for Soils:
Based on the Roan Cliffs Land Health Assessment, BLM staff concluded that soils are meeting Standard 1 (BLM 1999). Implementation of the proposed action is not anticipated to degrade soil health from current conditions.

VEGETATION (includes an analysis on Standard 3)

Affected Environment:
Vegetation at the project site is riparian in composition and is addressed in the Riparian and Wetlands Section. Upland vegetation adjacent to the project site is mostly grasses and forbs with some noxious weeds, such as houndstongue and Canada thistle.

Environmental Consequences/Mitigation:
Proposed Action:
The project work would be performed by hand crews accessing the site on foot or via a mini excavator. There is likely to be minor trampling of upland vegetation by foot traffic or the mini excavator, but the effects would be short-term and would quickly recover following project completion . Caution should be taken not to transport weed seeds into the project area.

Monitoring and herbicide control of noxious weeds would be implemented for a minimum of 3 years following construction.

No Action:
Under the No Action alternative, the instream structures would not be constructed and no disturbance to upland vegetation would occur.

Analysis on the Public Land Health Standard for plant and animal communities (partial, see also Wildlife, Aquatic and Wildlife, Terrestrial): In 1999, a formal Land Health Assessment was conducted on the landscape which includes the proposed action. At that time, the overall landscape was meeting Standard 3 for plant communities. Most upland plant communities were healthy and diverse. Noxious weeds were present throughout the watershed, particularly in riparian zones and adjacent uplands, but were not a dominant component of the ecosystem. The proposed action would have minimal effect on the condition of plant communities, although the disturbance associated with the project would increase the risk of noxious weed expansion. Active monitoring and control of noxious weeds would occur for a minimum of 3 years after project completion.

WILDLIFE, AQUATIC (includes an analysis on Standard 3)

Affected Environment:
Trapper Creek only contains native Colorado River cutthroat trout addressed in the TES Section above. In addition, a diverse and abundant macroinvertebrate community exists in Trapper Creek.

Environmental Consequences/Mitigation:
Proposed Action:
The proposed action would have some short-term (two weeks) effects to macroinvertebrates. Pool excavation and hardening of the riffles would compact stream substrates and likely reduce macroinvertebrate productivity for a short time in the pool creation areas. In addition, sediment resulting from in-channel work could affect macroinvertebrates by filling in the interstitial spaces between stream substrates important to these insects. Given the size and number of structures, impacts to macroinvertebrates would be minimal and would not alter the food web or reduce prey items available for resident fishes.

No Action:
Under the No Action alternative, no pools or pool creation structures would be constructed. No effects to macroinvertebrates would result.

Analysis on the Public Land Health Standard for Aquatic Wildlife (partial, see also Vegetation and Wildlife, Terrestrial): A formal Land Health Assessment was completed for the area in 1999. At that time the project area was improving and meeting Standard 3 for aquatic wildlife. Conditions at the project site have improved with regard to stream condition and the area is currently meeting the standard. The proposed action would have no bearing on the streams continued ability to meet this standard.

WILDLIFE, TERRESTRIAL (includes an analysis on Standard 3)

Affected Environment:
The CRVFO supports a wide variety of terrestrial wildlife species that summer, winter, or migrate through the area. The habitat diversity provided by the broad expanses of sagebrush, mixed mountain shrub, aspen, pinyon-juniper woodlands, other types of coniferous forests, and riparian/wetland areas support many species. The current condition of wildlife habitats varies across the landscape. Some habitat is altered by power lines, pipelines, fences, public recreation use, residential and commercial development, vegetative treatments, livestock and wild ungulate grazing, oil and gas development, and roads/trails. These factors have contributed to some degradation/fragmentation of habitat as well as causing disturbance to some species.

Reptiles. Reptile species most likely to occur in the areas of proposed use include the western fence lizard (*Sceloporus undulatus*) and gopher snake (bullsnake) (*Pituophis catenifer*) in xeric shrublands or grassy clearings and the western terrestrial garter snake (*Thamnophis elegans*) along creeks/riparian areas. Other reptiles potentially present along creeks, although more commonly found at lower elevations than the site, are the milk snake (*Lampropeltis triangulum*) and smooth green snake (*Opheodrys vernalis*).

Birds. Passerine (perching) birds commonly found in the areas of proposed use include the: American robin (*Turdus migratorius*), pinyon jay (*Gymnorhinus cyanocephalus*) western scrub-jay (*Aphelocoma californica*), and black-billed magpie (*Pica pica*). Two gallinaceous species, the wild turkey (*Meleagris gallopavo*) and the Dusky grouse (*Dendragapus obscures*), are found throughout the CRVFO.

Birds of prey (eagles, falcons, hawks, and owls) may migrate through the area or nest in cottonwoods, conifers, or very tall oaks, while the numerous songbirds and small mammal populations provide the primary prey base. Common raptor species in the CRVFO include the: red-tailed hawk (*Buteo jamaicenis*), golden eagle (*Aquila chrysaetos*) American kestrel *(Falco sparverius),* great horned owl *(Bubo virginanus)*, Cooper's hawk *(Accipiter cooperii),* and sharp-shinned hawk *(A. striatus).*

Numerous streams, rivers, reservoirs, ponds, and associated riparian vegetation provide habitat for a wide variety of waterfowl and shorebirds. Common species include: great blue herons (*Ardea Herodias*), Canada geese *(Branta canadensis),* mallards *(Anas platyrhynchos),* pintails *(A. acuta),* gadwalls *(A. strepera),* and American wigeon *(A. americana)* are common.

Mammals. Numerous small mammals may be found in the areas of proposed use including: ground squirrels *(Spermophilus* spp.*),* chipmunks (*Neotamias* spp.), woodrats *(Neotoma spp.),* weasels, *(Mustela spp.),* rabbits *(Sylvilagus* spp.), skunks *(Mephitis mephitis),* and raccoons *(Procyon lotor)*. Many of these small mammals provide the main prey for raptors and larger carnivores. These species are most likely to occur in and arouse the caves/geologic sites, along the drainages, near the margins of dense oakbrush, in pinyon-juniper woodland, or in the small area of aspen and spruce/fir. Larger carnivores expected to occur include the bobcat (*Lynx rufus*) and the coyote (*Canis latrans*). Black bears (*Ursus americanus*) make use of caves for denning, oaks and the associated brush for cover and food, while mountain lions (*Felis concolor*) are likely to occur during seasons when mule deer (*Odocoileus hemionus*) are present.

Big Game. The mule deer *(Odocoileus hemionus)* is a recreationally important species that are common throughout suitable habitats in the region. Another recreationally important big game ungulate (hoofed animal), the Rocky Mountain elk *(Cervus elaphus nelsonii),* is also present. Mule deer and elk usually occupy higher elevations, forested habitat, during the summer and then migrate to sagebrush-dominant ridges and south-facing slopes at lower elevation in the winter. BLM lands provide a large portion of the undeveloped winter range available to deer and elk.

<u>Environmental Consequences/Mitigation</u>:
Proposed Action:
The construction activities may disturb terrestrial wildlife species that inhabit or use the immediate area. The authorized use period is after the nesting/fledging period for birds with a potential to be present. The overall impact is likely short-term, temporary during daylight hours and would only affect individual animals immediately in the project area.

No Action:
Under the No Action alternative, no pool structures would be constructed and no disturbance would occur.

Analysis on the Public Land Health Standard for Terrestrial Wildlife (partial, see also Vegetation and Wildlife, Aquatic): Neither the proposed action nor the no action alternative would positively or negatively affect land health conditions or trends for terrestrial wildlife species (Land Health Standard 3).

SUMMARY OF CUMULATIVE IMPACTS

The proposed action would result in limited, short-term, site specific impacts to select resources, with long-term benefits to Colorado River cutthroat trout. The area comprises a very small portion of the watershed. No cumulative impacts are anticipated from implementation of the proposed action.

PERSONS / AGENCIES CONSULTED:

Trout Unlimited – David Nickum
Colorado Division of Wildlife – Lori Marin, Matt Kondratieff, Tracy Kittell, Elissa Knox
U.S. Fish and Wildlife Service – Patty Gellatt

INTERDISCIPLINARY REVIEW:

Name	***Title***	***Responsibility***
Tom Fresques	Fish Biologist	NEPA Lead, Aquatic Wildlife, T/E/S Aquatic Wildlife
Everett Bartz	Rangeland Management Specialist	Wetlands and Riparian Zones, Range Management
Isaac Pittman	Rangeland Management Specialist	Grazing, Rangeland Management
Pauline Adams	Hydrologist	Air Quality, Water Quality, Soils, Hazardous Wastes
Carla DeYoung	Ecologist	ACEC, Vegetation, T/E/S Plants, Land Heath Stds
Greg Wolfgang	Outdoor Recreation Planner	VRM, Recreation, Travel Management
Kimberly Miller	Outdoor Recreation Planner	Wild and Scenic Rivers, Wilderness, Recreation
Erin Leifeld	Archaeologist	Cultural Resources and Native American Concerns
Sylvia Ringer	Wildlife Biologist	Migratory Birds, Terrestrial Wildlife and T/E/S Terrestrial Wildlife
Monte Senor	Rangeland Management Specialist	Invasive, Non-native Species

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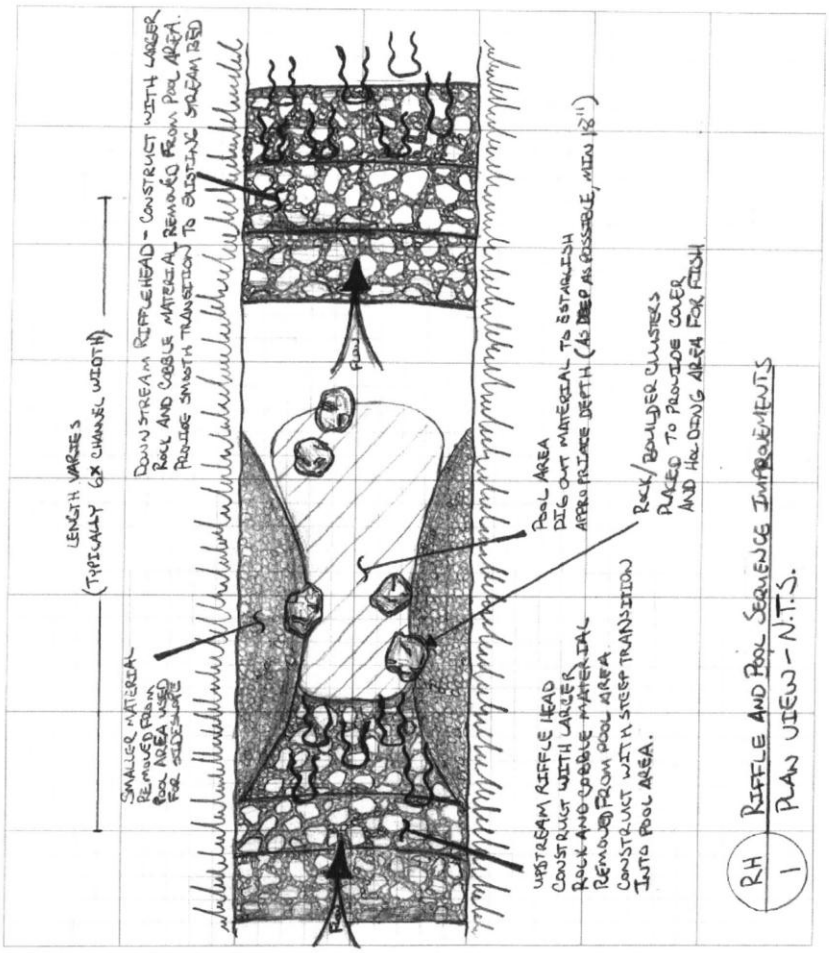
APPENDICES: None

ATTACHMENTS: Structural Drawings

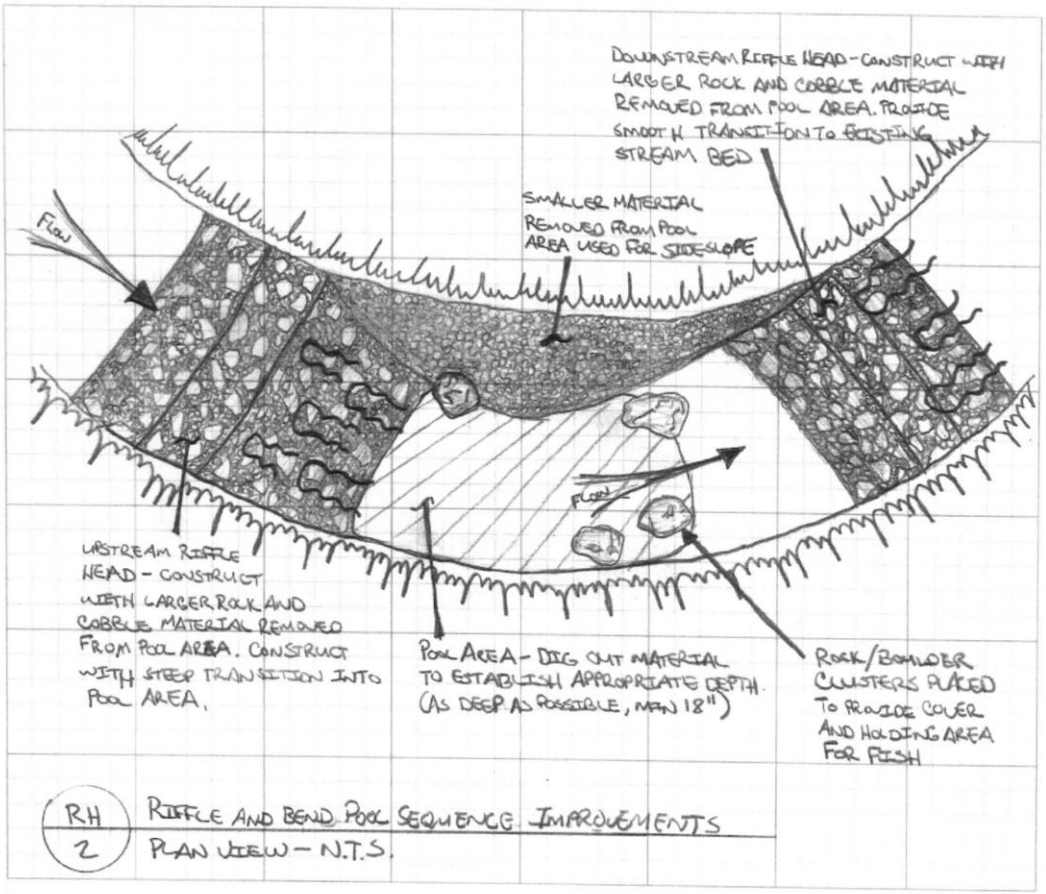
Attachments: Structural Drawings



Trapper Creek Stream Assessment – October 2009 Ecological Resource Consultants, Inc.

Figure 5 – Improvement Concepts, Riffle and Pool Sequence, Plan View

Figure 6 – Improvement Concepts, Riffle and Bend Pool Sequence, Plan View



Ecological Resource Consultants, Inc.
Streams~Wetlands~Water Resources

Client: Trout Unlimited Job No.: 445-093 Sheet No. of
Subject: Trapper Creek Improvement Concepts By: BRD Date: October 2009
Roan Plateau, Colorado Checked By: Date:

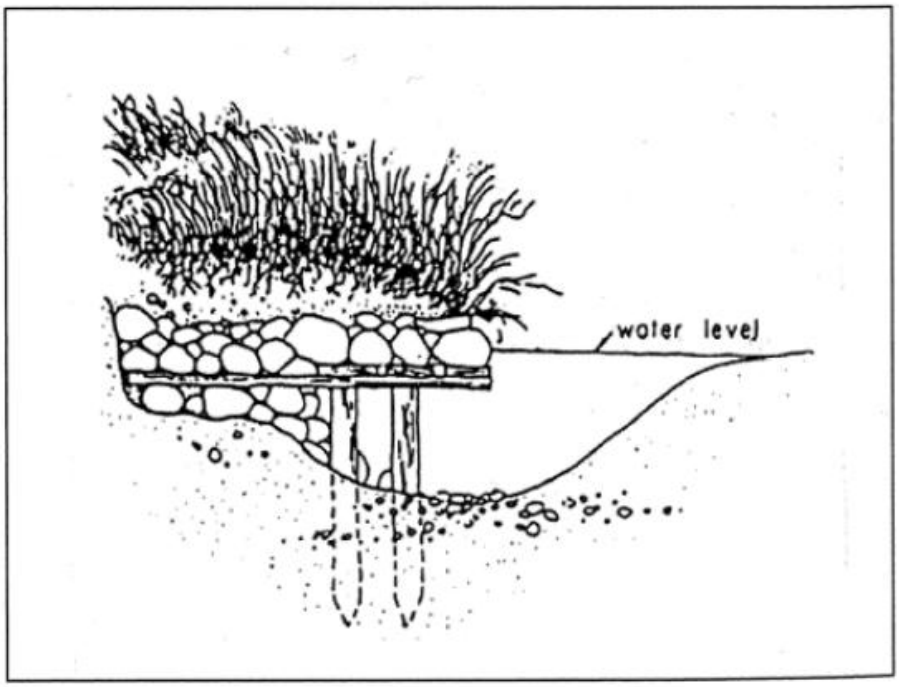


FIGURE 8-15. Bank cover. (*White and Brynildson, 1967*)

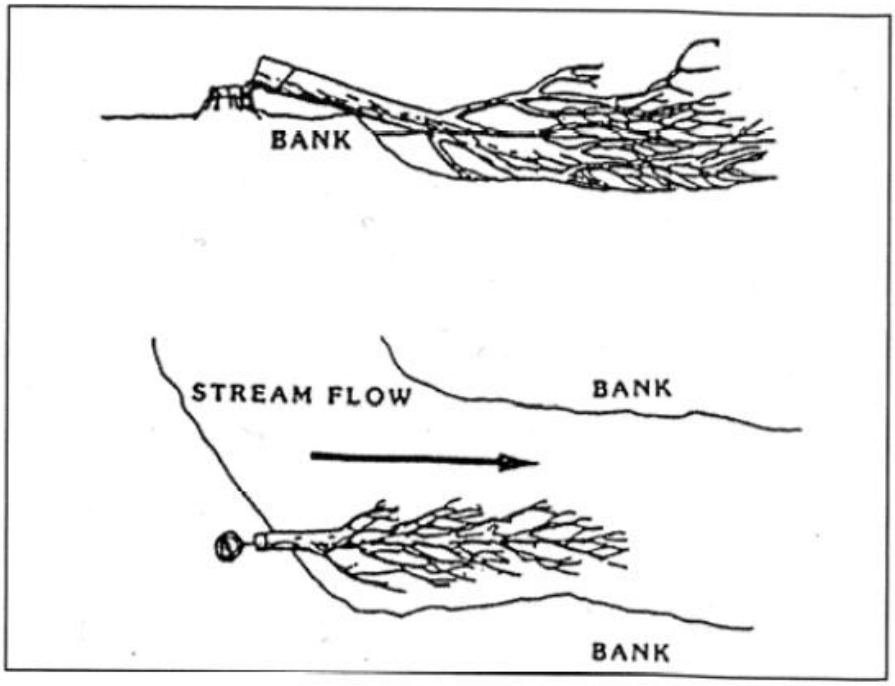


FIGURE 8-17. Submerged shelters. (*Seehorn, 1985*)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
Colorado River Valley FIELD OFFICE

FINDING OF NO SIGNIFICANT IMPACT

Trapper Creek Fish Habitat Enhancement Project

DOI-BLM-N040-2012-0046-EA

The environmental assessment analyzing the environmental effects of the Proposed Action has been reviewed. The Proposed Action with the approved mitigation measures detailed below result in a Finding of No Significant Impact (FONSI) on the human environment. Therefore, an environmental impact statement is not necessary to further analyze the environmental effects of the Proposed Action.

DECISION RECORD

DECISION: It is my decision to authorize the construction of the fish enhancement structures on Trapper Creek and implement the Proposed Action with the mitigation identified below.

RATIONALE: The project would benefit Colorado River cutthroat trout, a BLM Sensitive Species, as the habitat enhancement work would improve stream habitats containing this species

MITIGATION MEASURES:

Cultural Resources and Native American Religious Concerns
Cultural resources
Historic properties will be avoided during surface disturbing activities. Although all sites will be avoided, archaeological monitoring of construction activities is recommended and will be conducted by the BLM-CRVFO archaeologist. No ground disturbing construction activities will begin prior to the archaeologist's arrival. The CRVFO archaeologist will be on site as long as the BLM deems necessary.

Native American Religious Concerns
Historic properties will be avoided during surface disturbing activities. Although all sites will be avoided, archaeological monitoring of construction activities is recommended and will be conducted by the BLM-CRVFO archaeologist. No ground disturbing construction activities will begin prior to the archaeologist's arrival. The CRVFO archaeologist will be on site as long as the BLM deems necessary.

Invasive Non-Native Species
To help minimize the potential for spread of invasive non-native species during or after project construction, the project inspector would ensure that equipment involved in surface disturbing actions is clean of noxious weed seeds or propagative parts prior to entry onsite. Post-construction weed monitoring and treatments would be conducted for three years following construction. Any Colorado-listed noxious weeds would be promptly treated and controlled according to the appropriate timing for each particular weed species. Staging of vehicles and equipment would not occur in weed-infested areas.

Wastes, Hazardous or Solid
Fuels and lubricants would be stored in appropriate containers and refueling would occur in designated areas at a minimum of 100 feet from the creek. To minimize the likelihood of spills and the delivery of hazardous materials to surface water, it is essential that equipment be in proper working condition and checked for any leaks. The extent possible, work should be done from the banks out of the wetted

channel. Where in-channel work would be required, complete activities quickly and avoid unnecessary time in the creek. Perform work under base flow conditions beginning early August.

When crossing the creek, equipment and vehicles should move quickly and without incident. Appropriate BMPs as outlined in the Proposed Action should be used to minimize the potential transport of fuels and lubricants to Trapper Creek during runoff events. Following daily operations, vehicles and equipment shall be removed from the stream vicinity and stored overnight in a staging area a minimum of 100 feet from the stream bank. In addition, the contractor would be required to have a spill prevention plan on site at all times.

Water Quality, Surface and Ground, and Soils
To minimize sediment transport to Trapper Creek, it is essential that standard BMPs (as identified in the Proposed Action) and mitigation measures be installed and maintained on a frequent basis to ensure that water quality is not impaired by the proposed activities.

PREPARER: Thomas D. Fresques

SIGNATURE OF AUTHORIZED OFFICIAL:

Karl R. Mendonca
Associate Field Manager

DATE SIGNED:
6/25/2012

6/25 SLOT