

U.S. Department of the Interior
Bureau of Land Management
Little Snake Field Office
455 Emerson Street
Craig, CO 81625-1129

ENVIRONMENTAL ASSESSMENT

EA NUMBER: DOI-BLM-CO-N010-2010-0115-EA

CASEFILE/ALLOTMENT NUMBER: N/A

PROJECT NAME: Willow Creek Cutthroat Restoration Project

LEGAL DESCRIPTION: T11N, R90W, Section 36

APPLICANT: Colorado Division of Wildlife (CDOW)

PLAN CONFORMANCE REVIEW: The Proposed Action and Alternatives are subject to the following plan:

Name of Plan: Little Snake Resource Management Plan and Record of Decision

Date Approved: April 26, 1989

Results: pg 25. The proposed project is within Management Unit 2: Northern Central. Management Objectives for Unit 2 are to provide for the development of oil and gas resources. Public lands are open to wildlife habitat management. The project would be compatible with these objectives.

NEED FOR PROPOSED ACTION: The CDOW in collaboration with the BLM is proposing a reclamation project to restore pure Colorado River Cutthroat trout (CRCT) within a portion of Willow Creek. The headwaters of Willow Creek support CRCT that occupy four miles of stream. The upper reach from the headwaters downstream for 2.2 miles, supports a core conservation population of genetically pure, native CRCT. Below this reach for at least 1.8 miles, the stream contains nonnative brook trout and hybridized CRCT. The two fish populations are separated by a natural barrier located on USFS lands.

The CDOW and BLM are both signatories to the CRCT Conservation Agreement and Strategy (CRCT Conservation Team 2006). The primary goal of these documents is to assure the long-term prosperity of this cutthroat sub-species. The majority of such efforts are aimed at preserving existing genetically pure populations, expanding the habitat occupied by genetically pure populations and identifying candidate streams for reclamation and re-introduction of

genetically pure CRCT. The following Environmental Assessment will analyze the impacts of restoration on BLM managed lands.

PUBLIC SCOPING PROCESS: The action in this EA is included in the NEPA log posted on the LSFO web site: http://www.blm.gov/co/st/en/BLM_Information/nepa/lsfo.html.

BACKGROUND: A petition to list Colorado River cutthroat trout was reviewed by the FWS in 2004. They concluded in a “90-day finding” that the petition did not present sufficient information to warrant listing or further consideration (Federal Register Document 04-8633). The FWS did concur with the petitioner that the current range of Colorado River cutthroat trout has been greatly reduced from their historic distribution but noted that “State management efforts....continue to improve the outlook for the Colorado River cutthroat trout.”

Willow Creek contains a pure population of CRCT in its headwaters located on USFS lands. The proposed project would expand the range of pure fish approximately 1.8 miles downstream onto BLM and private lands.

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES:

Proposed Action: The Proposed Action is to treat 1.8 miles of Willow Creek (0.25 miles of BLM) with CFT Legumine, more commonly known as Rotenone, a chemical used as a piscicide to kill fish (See Attachment A). The treatment would occur in the lower section of Willow Creek, from a natural barrier located on USFS lands downstream 1.8 miles to the Moffat County Road 38 stream crossing located on private lands. The culvert at this road crossing would serve as the downstream barrier to non-target fish species located below the road crossing.

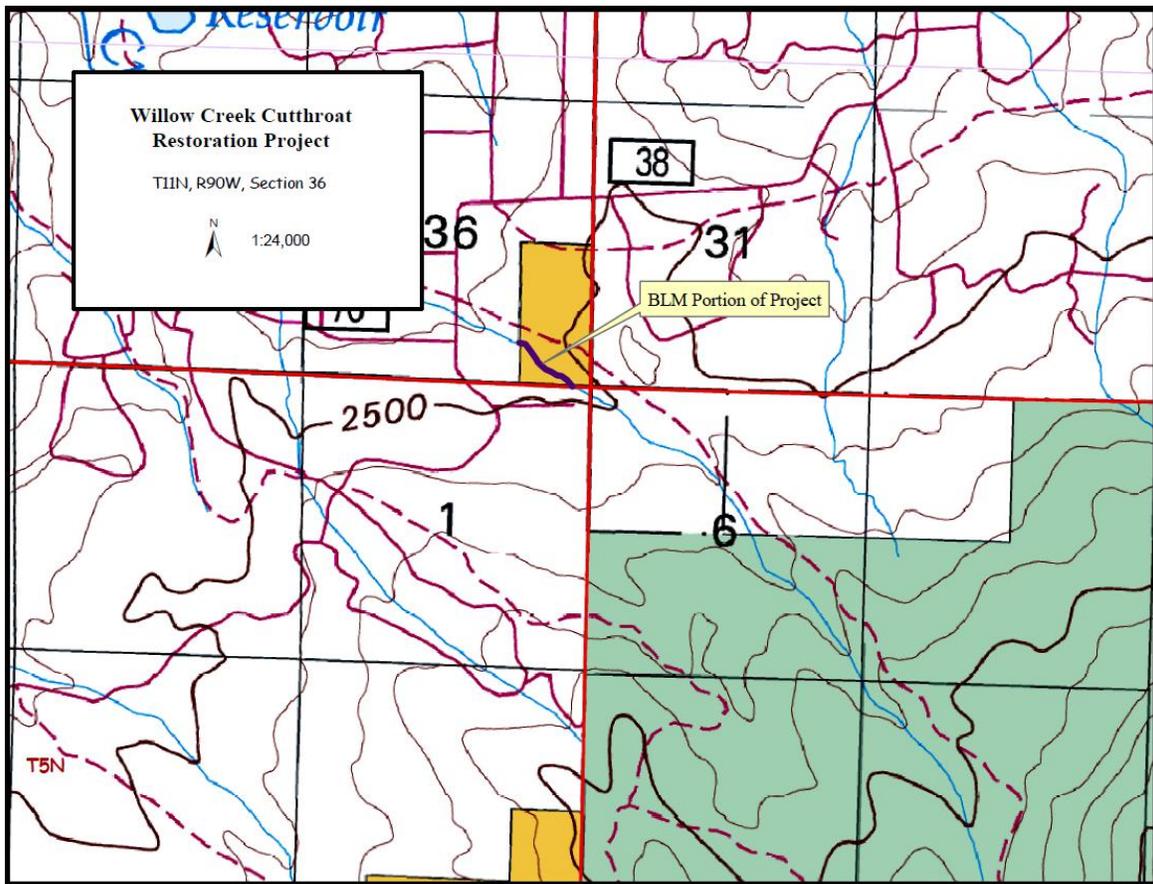
Willow Creek would be treated during the late summer during low/base flow conditions. It is estimated that flow rates at that time will be 3 cfs or less. Synergized, liquid Rotenone (2.5%) would be applied to flowing waters and seeps within the project area at 2.0 ppm (assuming 100% product activity). All applications would occur in one day. Only the amount of chemical necessary for one day of treatment would be brought to the project area. Rotenone would be applied via small drip stations consisting of small containers placed in the stream that drip measured amounts of Rotenone into the water. Up to 4 drip stations would be placed within the stream on the BLM reach. Each station would be monitored by CDOW personnel. If needed, other qualified personnel would spray Rotenone via backpack sprayers to reach side channels, seeps, springs, and other hard to treat areas not connected to the mainstem creek. The creek would be accessed via existing roads and work would be done by personnel on foot hiking the creek. No ground disturbance would occur.

At the end of the treatment reach just below the County Road 38 road crossing, a manned detoxification station would be set up and potassium permanganate would be applied to the water to neutralize and eliminate further downstream effects of Rotenone to non target areas and aquatic resources. At this site, sentinel fish would be held in cages to monitor toxicity levels and

detoxification performance. This site would be downstream from BLM lands. Application of all chemicals would be conducted by CDOW personnel certified as Non-commercial Pesticide Applicators by the State of Colorado. A Pesticide Use Proposal would be completed prior to releasing chemicals on BLM managed lands. See Attachment B for the CDOW's chemical treatment plan. Compliance with the treatment plan and pertinent SOPs for chemical treatments on BLM lands (See Attachment C) would mitigate negative impacts to non target resources.

Upon the successful kill of all target fish, fish carcasses would be collected and bagged for proper disposal. All drip stations would be removed, and all other equipment collected and removed from the site. Upon completion of the treatment, pure CRCT located upstream of the treatment area would be allowed to naturally recolonize the treatment area, or to facilitate faster occupancy, would be stocked with pure fish by CDOW personnel.

Figure 1. Map of treatment area



Standard Operating Procedures: The following procedures would be implemented in order to mitigate impacts.

Archeology: The following standard stipulations apply for this project:

1. The operator is responsible for informing all persons who are associated with the operations that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are encountered or uncovered during any project activities, the operator is to immediately stop activities in the immediate vicinity of the find and immediately contact the authorized officer (AO) at (970) 826-5000. Within five working days, the AO will inform the operator as to:

- Whether the materials appear eligible for the National Register of Historic Places;
- The mitigation measures the operator will likely have to undertake before the identified area can be used for project activities again; and
- Pursuant to 43 CFR 10.4(g) (Federal Register Notice, Monday, December 4, 1995, Vol. 60, No. 232) the holder of this authorization must notify the AO, by telephone at (970) 826-5000, and with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), you must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the authorized officer.

2. If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation costs. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the operator will then be allowed to resume construction.

No Action Alternative: The project would not take place on BLM lands and restoration of native CRCT in select portions of Willow Creek would not occur.

AFFECTED ENVIRONMENT/ENVIRONMENTAL CONSEQUENCES/MITIGATION MEASURES

CRITICAL RESOURCES

AIR QUALITY

Affected Environment: There are five federal Class I areas within 100 kilometers of the Little Snake Resource Management Area (LSRMA) boundary, all of which occur in Colorado. There are no federal Class I areas in Utah or Wyoming within 100 km of the LSRMA boundary.

Environmental Consequences, both alternatives: There are no non-attainment areas nearby that would be affected by either alternative.

Mitigative Measures: None

Name of specialist and date: Emily Spencer, 7/27/10

AREA OF CRITICAL ENVIRONMENTAL CONCERN

Affected Environment: Not present

Environmental Consequences, both alternatives: Not applicable

Mitigative Measures: Not applicable

Name of specialist and date: K. Shane Dittlinger, 8/5/10

CULTURAL RESOURCES

Affected Environment: Cultural resources, in this region of Colorado, range from late Paleo-Indian to Historic. For a general understanding of the cultural resources in this area of Colorado, see *An Overview of Prehistoric Cultural Resources, Little Snake Resource Area, Northwestern Colorado*, Bureau of Land Management Colorado, Cultural Resources Series, Number 20, *An Isolated Empire, A History of Northwestern Colorado*, Bureau of Land Management Colorado, Cultural Resource Series, Number 2 and *Colorado Prehistory: A Context for the Northern Colorado River Basin*, Colorado Council of Professional Archaeologists.

Environmental Consequences: The proposed project, Willow Creek Cutthroat Restoration Project, has not undergone a Class III cultural resource survey. The project involves chemical treatment of water and no ground disturbance

The proposed project may proceed as described with the following mitigative measures in place.

Mitigative Measures: See Proposed Action

Name of specialist and date: Robyn Watkins Morris, 8/4/10

ENVIRONMENTAL JUSTICE

Affected Environment: The proposed action is located in an area of isolated dwellings. Recreation, and ranching are the primary economic activities.

Environmental Consequences, both alternatives: The project area is relatively isolated from population centers, so no populations would be affected by physical or socioeconomic impacts of either alternative. Neither alternative would directly affect the social, cultural or economic well-being and health of Native American, minority or low-income populations.

Mitigative Measures: None

Name of specialist and date: Louise McMinn, 8/3/10

FLOOD PLAINS

Affected Environment: There are no 100-year floodplains present on public lands within the proposed project area.

Environmental Consequences, both alternatives: None

Mitigative Measures: None

Name of specialist and date: Emily Spencer, 7/27/10

Source: USDA-NRCS Soil Data Viewer version 5.2.0016: <http://soildataviewer.nrcs.usda.gov/>

INVASIVE, NONNATIVE SPECIES

Affected Environment: Invasive species and noxious weeds occur within the affected area. Downy brome (cheatgrass), yellow alyssum, blue mustard and other annual weeds are common along roadsides and on other disturbed areas. Canada thistle and several species of biennial thistles are known to occur in this area. Russian knapweed, Dalmatian toadflax, oxeye daisy and hoary cress (whitetop) have been found in the vicinity of these projects. Other species of noxious weeds can be introduced by vehicle traffic, livestock and wildlife. The BLM cooperates with the Moffat County Cooperative Weed Management program and private landowners to employ the principals of Integrated Pest Management to control noxious weeds on public lands.

Environmental Consequences, Proposed Action: Rotenone is not harmful to plants and therefore won't affect the weeds species in the treatment area. The treatment area is limited to the stream channel having little to no influence on upland invasive species.

Environmental Consequences, No Action Alternative: There would be no impacts to invasive species under the No Action Alternative.

Mitigative Measures: None

Name of specialist and date: Christina Rhyne, 7/28/10

MIGRATORY BIRDS

Affected Environment: Plant communities in the Willow Creek area are comprised of riparian vegetation. A variety of migratory birds may utilize these habitats during the nesting period (May through July) or during spring and fall migrations. Riparian vegetation along Willow Creek provides potential habitat for the willow flycatcher, a species listed on USFWS Birds of Conservation Concern List.

Environmental Consequences, Proposed Action: The Rotenone treatment would occur in late August, outside of the migratory bird nesting season. There would be no risk of nest destruction or nest abandonment from the project. Any bird using the general area may be displaced by an increase in human presence, but this impact would be short in duration and birds would return to the area once the project is complete. Overall, there would be very few impacts to migratory bird species from the Proposed Action.

Environmental Consequences, No Action Alternative: There would be no impacts to migratory birds from the No Action Alternative.

Mitigative Measures: None

Name of specialist and date: Desa Ausmus, 7/28/10

NATIVE AMERICAN RELIGIOUS CONCERNS

A letter was sent to the Eastern Shoshone, Uinta and Ouray Tribal Council, Southern Ute Tribal Council, Ute Mountain Ute Tribal Council on May 26, 2009. The letter listed the FY2010 projects that the BLM would notify them on and projects that would not require notification. A followup phone call was performed on July 26, 2009. No comments were received (Letter on file at the Little Snake Field Office). This project requires no additional notification.

Name of specialist and date: Robyn Watkins Morris, 8/4/10

PRIME & UNIQUE FARMLANDS

Affected Environment: No Prime and/or Unique Farmlands are present in the vicinity of the proposed project.

Environmental Consequences, both alternatives: None

Mitigation Measures: None

Name of specialist and date: Emily Spencer, 7/27/10

Source: USDA-NRCS Soil Data Viewer version 5.2.0016: <http://soildataviewer.nrcs.usda.gov/>

T&E AND SENSITIVE ANIMALS

Affected Environment: There are no ESA listed, proposed or candidate species that inhabit or derive important benefit from habitats in the general area. Willow Creek provides potential habitat for two BLM sensitive species, Colorado River cutthroat trout and northern leopard frogs. Willow Creek contains a pure population of Colorado River cutthroat trout in the headwaters on USFS lands downstream to a natural barrier near the USFS/ private land boundary. It is likely that some fish move downstream over the barrier and reside on BLM lands within the treatment area.

Although there are no documented occurrences of northern leopard frogs in the project area, this species is known to occupy riparian habitats within the LSFO. Riparian habitat along Willow Creek provides potential habitat for this species.

Environmental Consequences, Proposed Action: It is possible that the proposed action would result in the killing of a few pure Colorado River cutthroat trout that have moved below the existing natural barrier. The majority of fish below the barrier have been shown to be hybridized but some pure fish may be mixed in the population. The loss of these fish is considered incidental to the larger action and the entire treatment reach will be stocked and/or naturally repopulated with pure fish to expand the range of the pure population.

Rotenone can impact juvenile amphibian species. However, due to the timing of the treatment, there would be no impacts to juvenile northern leopard frogs. By the end of August, most young frogs should be developed to more terrestrial stages and would be less vulnerable to rotenone.

Environmental Consequences, No Action: Under the No Action alternative, no treatment would occur and no incidental killing of pure Colorado River cutthroat trout would result. The range of pure Colorado River cutthroat trout would not be expanded.

Mitigative Measures: None

Name of specialist and date: Desa Ausmus, 7/28/10 and Tom Fresques, 7/13/10

T&E AND SENSITIVE PLANTS

Affected Environment: There are no federally listed threatened or endangered or BLM sensitive plant species within or in the vicinity of the proposed project.

Environmental Consequences, Both Alternatives: None

Mitigative Measures: None

Name of specialist and date: Hunter Seim, 7/30/10

WASTES, HAZARDOUS OR SOLID

Affected Environment: Rotenone, an EPA approved chemical would be used to treat Willow Creek. No other chemical or hazardous materials are present within or in the vicinity of the proposed project area.

Environmental Consequences, Proposed Action: Rotenone is only toxic to fish, larval amphibians and some aquatic insects. Attachments A and C address spill scenarios for this chemical. Vehicles would be used to access Willow Creek via two tracks or county roads. Fuel, oil, and coolant are potential hazardous materials that could be introduced into the general area by vehicles. Release of hazardous or solid wastes would be very unlikely during project implementation due to the short duration of the project. If a release does occur, the environment affected would be dependent on the nature and volume of material released.

Environmental Consequences, No Action Alternative: None

Mitigative Measures: None

Name of specialist and date: Desa Ausmus, 8/5/10

WATER QUALITY - GROUND

Affected Environment: Four domestic water wells have been identified and are located within 600 feet of the project area. Ground water depths range from 35 to 50 feet.

Environmental Consequences, both alternatives: The mobility of Rotenone in soil is low, only 2 cm in most soils. Rotenone breaks down quickly into temporary residues that would not persist as pollutants of groundwater. Ultimately, Rotenone breaks down into carbon dioxide and water.

Potassium permanganate would be used to detoxify Rotenone during treatments at some of the project waters. Drinking waters would not be affected by the use of potassium permanganate because it rapidly breaks down into potassium, manganese and water.

Mitigative Measures: None

Name of specialist and date: Marty O'Mara, 8/4/10

WATER QUALITY - SURFACE

Affected Environment: Water quality for all tributaries to the Little Snake River from its first crossing of the Colorado/Wyoming border to a point immediately below the confluence with Fourmile Creek (which includes Willow Creek) must support Aquatic Life Cold 1, Recreation P,

and Agricultural beneficial uses. There are no existing water quality impairments or suspected water quality issues for Willow Creek (CDPHE 2010).

Environmental Consequences, Proposed Action: There would be short-term direct effects to water quality as a result of the chemical treatment with Rotenone. The primary direct effect would be the toxicity of Rotenone to aquatic organisms including fish and invertebrates, which is the purpose of the proposed project. Numbers of aquatic invertebrates important to the aquatic ecosystem would be temporarily suppressed; however, untreated areas both up and downstream from the targeted reach would provide refugia for aquatic invertebrates and therefore a source for the rapid recolonization of the treated reach (Hynes 1972, UDWR 2007).

Rotenone has a half-life of 14 hours at 75°F, and 84 hours at 32°F, meaning that half of the Rotenone is broken down and is no longer toxic within that time. As temperature, sunlight, alkalinity (>170 ppm), and pH (>9.0) increase, the rate at which Rotenone is broken down also increases. Rotenone binds to and reacts with organic molecules rendering it ineffective, so higher concentrations are required in streams with large amounts of organic debris (MDFWP 2007).

Potassium permanganate would be used to detoxify Rotenone during treatments at the project waters. The expected concentration of potassium permanganate (KMnO_4) needed to neutralize Rotenone will be 3 ppm. Detoxification is not immediate in space, but requires a short mixing zone where the potassium permanganate is in contact with and oxidizes the rotenone. Below this mixing zone both fish and aquatic macroinvertebrates would survive (UDWR 2007). Without detoxification, Rotenone in the streams would be reduced to non-toxic levels in 24-72 hours due to its natural breakdown and dilution in the aquatic environment. Rotenone is being constantly diluted in a stream environment and factors such as turbulence, exposure to sunlight, and contact with organic material all aid in its rapid breakdown (MDFWP 2007).

Rotenone is non-toxic to mammals, including humans. Even though Rotenone has been shown to be safe to humans, as a matter of policy the U.S. Environmental Protection Agency (EPA) does not set tolerances for pesticides in potable water. At the same time, the EPA has exempted Rotenone from tolerance requirements when applied intentionally to raw agricultural commodities (UDWR 2007). The EPA lists the chronic toxicity of KMnO_4 breakdown products to be of no health concern based on the fact that they are naturally occurring and common in surface waters. The safety of KMnO_4 is further demonstrated its routine use in drinking water treatment to achieve: oxidation of iron and manganese, oxidation of taste and odor compounds, and the control of nuisance organisms such as bacteria and viruses (U.S. EPA 1999). Even though domestic water supply is not a designated use classification for Willow Creek (CDPHE 2010), drinking water supplies would not be affected by the use of potassium permanganate.

A secondary indirect effect of the treatment would be a temporary increase in the nutrient input to the water as a result of decomposition of fish that are killed. This effect could occur for a period of up to 2 weeks while decomposition occurred, depending on the amount of fish killed. However, natural mortality has always occurred in the target waters and the increase would be

negligible with respect to the ecosystem. Some of the nutrients would likely be rapidly assimilated by rebounding aquatic macroinvertebrate populations (UDWR 2007).

Given the low concentration of chemical to be used (2 ppm), the short duration of the project (from 2-12 hours), and the rapid natural breakdown of rotenone, water quality impacts should be temporary and minimal.

Environmental Consequences, No Action: There would be no direct or indirect, effects to water quality at the project waters under the No Action Alternative. Rotenone would not be used to treat Willow Creek. None of the Beneficial Uses designated for waters in the project area would be affected.

Mitigative Measures: Compliance with the CDOW's treatment plan and pertinent SOP's for chemical treatments on BLM lands (See Attachment C) would mitigate negative impacts to non target resources.

Name of specialist and date: Emily Spencer, 8/3/10

References:

Colorado Department of Public Health and Environment Water Quality Control Commission (CDPHE). 2010. Regulations #33, 37, and 93. <http://www.cdphe.state.co.us/regulations/wqccregs/index.html>

Hynes, H. B. N. 1972. The Ecology of Running Waters. University of Toronto Press, Toronto. 555 p.

Montana Department of Fish, Wildlife and Parks (MDFWP). 2007. Brown Trout Removal from Above Permanent Fish Barrier in Crooked Creek Draft Environmental Assessment. Region 5, Billings, MT. 27 p.

U.S. Environmental Protection Agency. 1999. EPA Guidance Manual on Alternative Disinfectants and Oxidants, Chapter 5: Potassium Permanganate. 15 p.
http://www.epa.gov/ogwdw000/mdbp/pdf/alter/chapt_5.pdf

Utah Division of Wildlife Resources (UDWR). 2007. Final Environmental Assessment and Finding of No Significant Impact for Native Trout Restoration and Enhancement Projects in Southwest Utah. UDWR Southern Region Office (Cedar City, UT) in cooperation with Fishlake National Forest, Dixie National Forest, Bureau of Land Management, and U.S. Fish and Wildlife Service. 65 p.

WETLANDS/RIPARIAN ZONES

Affected Environment: On federal lands, the proposed project will occur in 0.3 miles of Willow Creek (reach 12). There are no wetlands, seeps, or springs on public lands adjacent to the project area.

Environmental Consequences, Proposed Action: There would be no obstructions, such as temporary dams, placed in the creek during the proposed treatments. Rotenone does not affect aquatic or riparian vegetation. Little to no impact to riparian areas would occur as a result of the proposed project.

Environmental Consequences, No Action: None

Mitigative Measures: None

Name of specialist and date: Emily Spencer, 7/28/10

WILD & SCENIC RIVERS

Affected Environment: Not present

Environmental Consequences, both alternatives: Not applicable

Mitigative Measures: None

Name of specialist and date: K. Shane Dittlinger, 8/03/10

WSAs, WILDERNESS CHARACTERISTICS

Affected Environment: Not present

Environmental Consequences, both alternatives: Not applicable

Mitigative Measures: None

Name of specialist and date: K. Shane Dittlinger, 8/03/10

NON-CRITICAL ELEMENTS

SOILS

Affected Environment: This section of Willow Creek occurs on Leaps clay loam (3 to 15% slope). These mountainside soils are well drained; approximately 2% of the surface is stones, which is considered very stony. Permeability is very slow and runoff potential is very high. Available water capacity is high and the soil profile is typically up to 60 inches deep.

Environmental Consequences, Proposed Action: Rotenone would be applied directly to the stream, so there would be little contact with soils. Rotenone is mobile to moderately mobile in soil and sediment and is rapidly broken down in soil and water (See Attachment A). The half-life in both of these environments is between 1 and 3 days. Nearly all of the toxicity of the compound is lost in 5 to 6 days of spring sunlight or 2 to 3 days of summer sunlight (EXTONET). It does not readily leach from soil, and would not be a groundwater pollutant. Given that the project is proposed to occur during summer (August), little to no short or long term impacts to soils would occur.

Environmental Consequences, No Action: The No Action Alternative would have no direct or indirect effects on soils.

Mitigative Measures: None

Name of specialist and date: Emily Spencer, 7/28/10

EXTONET: <http://pmep.cce.cornell.edu/profiles/extoxnet/pyrethrins-ziram/rotenone-ext.html>

UPLAND VEGETATION

Affected Environment: The proposed project is located entirely within an aquatic/wetland/riparian setting.

Environmental Consequences, both alternatives: Adjacent upland plant communities would not be impacted.

Mitigative Measures: None

Name of specialist and date: Hunter Seim, 7/30/10

WILDLIFE, AQUATIC

Affected Environment: In addition to pure Colorado River cutthroat trout addressed above in the T & E and Sensitive Animals Section, Willow Creek contains hybridized cutthroat trout and brook trout. The stream also contains aquatic insects including but not limited to a variety of caddis flies, may flies, and stone flies.

Environmental Consequences, Proposed Action: The application of Rotenone would result in direct mortality of resident fishes in the treatment reach. The use of the detoxification station at the downstream end of the treatment would help to ensure that fish residing in non target areas are not affected by the treatment.

In addition to the killing of fish, Rotenone would also likely result in some loss of aquatic insects within the treatment reach. This would result in a short-term (less than 2 years) impact to the stream as reductions in insect densities would reduce food sources for Colorado River cutthroat trout and some terrestrial bat and bird species. The recolonization of the treatment reach by aquatic insects from both up and downstream reaches would occur quickly and minimize the short-term negative effects to the stream ecosystem.

Environmental Consequences, No Action: No chemical reclamation of Willow Creek would occur on BLM lands. It is still possible that adjacent private and USFS lands would be treated. Restoration of Colorado River cutthroat trout would not occur and increased occupancy of

habitats for this native fish would not occur. No impacts to resident brook trout and hybridized cutthroat trout or aquatic insects would result.

Mitigative Measures: None

Name of specialist and date: Tom Fresques, 7/13/10

WILDLIFE, TERRESTRIAL

Affected Environment: A variety of wildlife can be found along Willow Creek and the surrounding upland habitats. Common small mammals, migratory birds and amphibians likely use the general project area. Elk and mule deer can be found in the area year round.

Environmental Consequences, Proposed Action: The proposed treatment would have minimal impacts on terrestrial wildlife species. Most wildlife species, including birds, mammals, reptiles and adult amphibians are not susceptible to Rotenone at the concentrations that would be used in the treatments. Wildlife may be temporarily displaced into adjacent habitat during project implementation, however this disturbance would be short in duration. It is also possible that the treatment may temporarily decrease the forage base for bats or birds that utilize adult aquatic insects as a portion of their diet. These effects would be short term and are considered minor due to the abundance of terrestrial insects and other alternate prey and the mobility of birds and bats.

Environmental Consequences, No Action: There would be no impacts to terrestrial wildlife from the No Action Alternative.

Mitigative Measures: None

Name of specialist and date: Desa Ausmus, 7/28/10

OTHER NON-CRITICAL ELEMENTS: For the following elements, those brought forward for analysis will be formatted as shown above.

Non-Critical Element	NA or Not Present	Applicable or Present, No Impact	Applicable & Present and Brought Forward for Analysis
Fluid Minerals	EMO 8/4/10		
Forest Management	DA 8/3/10		
Hydrology/Ground		EMO 8/4/10	
Hydrology/Surface		ELS 7/27/10	
Paleontology		EMO 8/4/10	
Range Management		CR 8/4/10	
Realty Authorizations		LM 8/3/10	
Recreation/Travel Mgmt		KSD 8/3/10	
Socio-Economics		LM 8/3/10	
Solid Minerals		JAM 7/27/2010	
Visual Resources		KSD 8/3/10	
Wild Horse & Burro Mgmt	DA 8/3/10		

CUMULATIVE IMPACTS SUMMARY: The Willow Creek CRCT project would have few impacts except to non-native fish species. The project would be beneficial to the native population of CRCT that exist in Willow Creek.

STANDARDS

PLANT AND ANIMAL COMMUNITY (animal) STANDARD: The project area provides habitat for a variety of terrestrial and aquatic wildlife species. The Proposed Action would have minimal impacts to wildlife using this habitat. Neither alternative would preclude this standard from being met.

Name of specialist and date: Desa Ausmus, 7/28/10

SPECIAL STATUS, THREATENED AND ENDANGERED SPECIES (animal) STANDARD: Neither alternative would preclude this standard from being met. However the proposed treatment would be beneficial to special status species since it would restore a portion of Willow Creek to a CRCT fishery.

Name of specialist and date: Desa Ausmus, 7/28/10

PLANT AND ANIMAL COMMUNITY (plant) STANDARD: The terrestrial portion proposed project would be located entirely within a riparian setting. None of the proposed activities would result in impacts, either positive or negative, to the existing riparian plant community. Either alternative would meet this standard.

Name of specialist and date: Hunter Seim, 7/30/10

SPECIAL STATUS, THREATENED AND ENDANGERED SPECIES (plant) STANDARD: There are no federally listed threatened or endangered or BLM sensitive plant species within or in the vicinity of the proposed project. This standard does not apply.

Name of specialist and date: Hunter Seim, 7/30/10

RIPARIAN SYSTEMS STANDARD: The riparian standard would continue to be met under the proposed action. Rotenone does not affect aquatic or riparian vegetation. Little to no impact to riparian areas would occur as a result of the proposed project.

Name of specialist and date: Emily Spencer, 7/28/2010

WATER QUALITY STANDARD: The water quality standard would continue to be met under the proposed action. Given the low concentration proposed and the rapid, natural breakdown of Rotenone as well as the short duration of the project, water quality impacts would be temporary and minimal.

Name of specialist and date: Emily Spencer, 8/3/2010

UPLAND SOILS STANDARD: The application of Rotenone directly to the stream would result in little to no contact with soils and is not expected to adversely impact the health or vigor of vegetation in the project area. Soil stability would remain intact. No impact to upland soils would occur as a result of the proposed project.

Name of specialist and date: Emily Spencer, 8/3/2010

PERSONS/AGENCIES CONSULTED: CDOW, Uintah and Ouray Tribal Council, Colorado Native American Commission, Colorado State Historic Preservation Office.

ATTACHMENTS:

Attachment A – Reregistration Eligibility Decision for Rotenone

Attachment B – Willow Creek CRCT Reclamation Plan

Attachment C – BLM Vegetation Treatment EIS Standard Operating Procedures

SIGNATURE OF PREPARER:

DATE SIGNED:

SIGNATURE OF ENVIRONMENTAL REVIEWER:

DATE SIGNED:

Finding of No Significant Impact

The environmental assessment, analyzing the environmental effects of the proposed action, has been reviewed. With the implementation of the attached mitigation measures there is a finding of no significant impact on the human environment. Therefore, an environmental impact statement is not necessary to further analyze the environmental effects of the proposed action.

1. Beneficial, adverse, direct, indirect, and cumulative environmental impacts have been disclosed in the EA. Analysis indicated no significant impacts on society as a whole, the affected region, the affected interests or the locality. The physical and biological effects are limited to the Little Snake Resource Area and adjacent land.
2. Public health and safety would not be adversely impacted. There are no known or anticipated concerns with project waste or hazardous materials.
3. There would be no adverse impacts to regional or local air quality, prime or unique farmlands, known paleontological resources on public land within the area, wetlands, floodplain, areas with unique characteristics, ecologically critical areas or designated Areas of Critical Environmental Concern.
4. There are no highly controversial effects on the environment.
5. There are no effects that are highly uncertain or involve unique or unknown risk. Sufficient information on risk is available based on information in the EA and other past actions of a similar nature.
6. This alternative does not set a precedent for other actions that may be implemented in the future to meet the goals and objectives of adopted Federal, State or local natural resource related plans, policies or programs.
7. No cumulative impacts related to other actions that would have a significant adverse impact were identified or are anticipated.
8. Based on previous and ongoing cultural surveys, and through mitigation by avoidance, no adverse impacts to cultural resources were identified or anticipated. There are no known American Indian religious concerns or persons or groups who might be disproportionately and adversely affected as anticipated by the Environmental Justice Policy.
9. No adverse impacts to any threatened or endangered species or their habitat that was determined to be critical under the Endangered Species Act were identified. If, at a future time, there could be the potential for adverse impacts, treatments would be modified or mitigated not to have an adverse effect or new analysis would be conducted.
10. This alternative is in compliance with relevant Federal, State, and local laws, regulations, and requirements for the protection of the environment.

SIGNATURE OF AUTHORIZED OFFICIAL:

DATE SIGNED: