

**United States Department of the Interior  
Bureau of Land Management**

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**Finding of No Significant Impact and Decision Record**

**Environmental Assessment  
DOI-BLM-C010-2018-0021-EA**

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**October 25, 2018**

**Cedar City Field Office  
Riparian Restoration and Wetland Enhancement**

***Location:*** Iron, Beaver, and Washington Counties, Utah

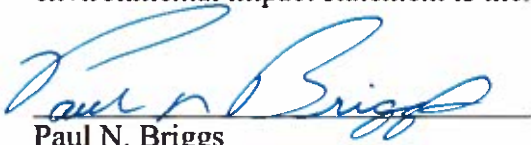
***Applicant:*** Bureau of Land Management Cedar City Field Office  
176 East DL Sargent Drive  
Cedar City, UT 84721

**U.S. Department of the Interior  
Bureau of Land Management  
Cedar City Field Office  
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**FINDING OF NO SIGNIFICANT IMPACT**  
**Environmental Assessment**  
**DOI-BLM-C010-2018-0021-EA**  
***Cedar City Field Office***  
***Riparian Restoration and Wetland Enhancement***

Based on the analysis of potential environmental impacts contained in the attached environmental assessment, and considering the significance criteria in 40 CFR 1508.27, I have determined that the Cedar City Field Office Riparian Restoration and Wetland Enhancement Project will not have a significant effect on the human environment. An environmental impact statement is therefore not required.



Paul N. Briggs  
Cedar City Field Manager

10/26/2018

Date

**DECISION RECORD**  
**Environmental Assessment**  
***DOI-BLM-C010-2018-0021-EA***  
***Cedar City Field Office***  
***Riparian Restoration and Wetland Enhancement***

**Authorities**

The authority for the Cedar City Field Office Riparian Restoration and Wetland Enhancement Project is contained in the FLPMA of October 21, 1976 as amended and implementing regulations (90 Stat. 2743; 43 U.S.C. 1701, et seq.). Language specific to this decision is contained in Section 102 (a) and (b) and Section 307 (a).

**Compliance and Monitoring**

All treatments associated with the Cedar City Field Office Riparian Restoration and Wetland Enhancement Project will be monitored by BLM personnel to determine compliance with the proposed action and the need for maintenance.

**Terms / Conditions / Stipulations**

All design features and other measures to reduce impacts described in the proposed action of the attached environmental assessment (EA) will be followed.

**Plan Conformance**

The proposed action is subject to the Cedar Beaver Garfield Antimony Resource Management Plan, approved in 1986 and the Pinyon Management Framework Plan approved in 1983. The proposed action conforms to wildlife objectives, which direct the BLM to improve habitat in poor condition as well as improve riparian/fisheries habitat in areas currently in poor condition.

**Alternatives Considered**

The attached environmental assessment focuses on the proposed and no action alternatives. Other alternatives were not considered because the issues identified during scoping did not indicate a need for additional alternatives beyond those contained in the proposed action. The no action alternative was considered and analyzed to provide a baseline for comparison of the impacts from the proposed action. The no action alternative was not selected because it would not meet the purpose and need and is not supported by the analysis contained within the environmental assessment.

**Public Involvement**

The proposed action was entered into the BLM ePlanning website on December 5, 2017. A public comment period was offered starting September 20, 2018. One comment letter was received from the Utah Public Lands Policy Coordinating Office. They requested that state and county plans be included in Chapter 2 and that other methods to protect riparian areas be considered before requiring the use of an enclosure. These changes have been made to the EA.

### **Decision**

It is my decision to approve the Cedar City Field Office Riparian Restoration and Wetland Enhancement Project as described in the proposed action of the attached EA. This decision was made after careful consideration of the proposal, specialist input, and the project record.

### **Rationale for Decision**

Approval of the proposed action will meet of the purpose and need of the EA and will not cause unnecessary and undue degradation of public land. The proposed action is needed to improve the hydrologic condition and riparian/wetland vegetative health/diversity where appropriate throughout the Cedar City Field Office. Several of the proposed areas described in the EA have been identified by multiple agencies, including the Utah Division of Wildlife Resources and the Natural Resource Conservation Service, as high priority areas for riparian/wetland and vegetation enhancement through Utah's Watershed Restoration Initiative (WRI).

### **Protest/Appeal**

Any appeal of this decision must follow the procedures set forth in 43 CFR Part 4. Within 30 days of the decision, a notice of appeal must be filed in the office of the Authorized Officer at the Cedar City Field Office, 176 East D.L. Sargent Drive Cedar City, UT 84721. If a statement of reasons for the appeal is not included with the notice, it must be filed with the Interior Board of Land Appeals, Office of Hearings and Appeals, U.S. Department of the Interior, 801 North Quincy St., Suite 300, Arlington, VA 22203 within 30 days after the notice of appeal is filed with the Authorized Officer.

If you wish to file a petition for stay pursuant to 43 CFR Part 4.21(b), the petition for stay should accompany your notice of appeal and shall show sufficient justification based on the following standards:

1. The relative harm to the parties if the stay is granted or denied;
2. The likelihood of the appellant's success on the merits;
3. The likelihood of irreparable harm to the appellant or resources if the stay is not granted;  
and
4. Whether the public interest favors granting the stay.

If a petition for stay is submitted with the notice of appeal, a copy of the notice of appeal and petition for stay must be served on each party named in the decision from which the appeal is taken, and with the IBLA at the same time it is filed with the Authorized Officer.

A copy of the notice of appeal, any statement of reasons and all pertinent documents must be served on each adversely effected party named in the decision from which the appeal is taken and on the Office of the Regional Solicitor, U.S. Department of the Interior, 6201 Federal Building, 125 South State Street, Salt Lake City, Utah 84138-1180, not later than 15 days after filing the document with the Authorized Officer and/or IBLA.



Paul N. Briggs  
Cedar City Field Manager

10/26/2018  
Date

**Attachment: DOI-BLM-C010-2018-0021-EA**



**United States Department of the Interior  
Bureau of Land Management**

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**Environmental Assessment  
DOI-BLM-C010-2018-0021-EA**

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**October 2018**

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**Cedar City Field Office  
Riparian Restoration and Wetland Enhancement**

***Location:*** Iron, Beaver, and Washington  
Counties, Utah

***Applicant/Address:*** Bureau of Land Management Cedar City Field Office  
176 East DL Sargent Drive  
Cedar City, UT 84721

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**U.S. Department of the Interior  
Bureau of Land Management  
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**Cedar City Field Office  
Riparian Restoration and Wetland Enhancement  
DOI-BLM-C010-2018-0021-EA**

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**Cedar City Field Office  
Riparian Restoration and Wetland Enhancement  
DOI-BLM-C010-2018-0021-EA**

## **1.0 INTRODUCTION AND PURPOSE AND NEED**

### **INTRODUCTION**

This Environmental Assessment (EA) has been prepared to disclose and analyze the environmental consequences of the Cedar City Field Office (CCFO) Riparian Restoration and Wetland Enhancement as proposed by Bureau of Land Management (BLM) CCFO. The EA is an analysis of potential impacts that could result with the implementation of the proposed action or no action alternative, including but not limited to a phased approach to the installation of in-stream structures and watershed enhancement structures (Zuni pools/bowls, induced meandering structures, media lunas, one rock dam structures, filter weir structures, check-dams, beaver analogs, log and filter structure, etc.) for riparian restoration, wetland enhancement, and wet meadow promotion.

### **PURPOSE OF THE PROPOSED ACTION**

The purpose of the proposed action is to improve the hydrologic/riparian conditions, promote more wetland meadow habitat, increase native riparian/wetland plant and wildlife diversity, improve fish and wildlife habitat, increase recreational opportunities, and enhance multi-agency cooperation where possible on public lands managed by the BLM CCFO.

### **NEED FOR THE PROPOSED ACTION**

The need to conduct the proposed action is established under the Federal Land Policy and Management Act of 1976 (FLPMA) (Section 103(c)), which requires the BLM to manage public lands on the basis of multiple use, and to take any action necessary to prevent avoidable or undue degradation of lands (Section 302(b)). In addition, the need for the action exists because the natural hydrologic functions of many riparian/wetland areas in the CCFO are in varying states of degradation and in need of intervention.

### **CONFORMANCE WITH BLM LAND USE PLANS**

The proposed action and alternatives described below are subject to the Cedar Beaver Garfield Antimony Resource Management Plan (RMP), approved in 1986 and the Pinyon Management Framework Plan (MFP), approved in 1983. Soil/Water/Air Objective A in the RMP states, "Improve watershed conditions on areas identified with significant erosion condition problems and on other sensitive watershed areas (riparian areas). Avoid the deterioration of or improve watershed condition on all other Federal lands." Watershed Objectives W-1 and W-2 in the MFP call for decreasing erosion in watersheds and protecting water quality and yield.

### **RELATIONSHIP TO STATUTES, REGULATIONS, OR OTHER PLANS**

The proposed action is consistent with federal, state and local laws, regulations, and plans to the maximum extent possible, including the following:

- Federal Land Policy and Management Act of 1976
- Title 54 U.S.C. § 300101 et seq. National Park Service and Related Programs (formerly known as the National Historic Preservation Act of 1966)
- Public Rangeland Improvements Act
- Clean Water Act
- Fish and Wildlife Conservation Act
- Endangered Species Act
- Migratory Bird Treaty Act
- Carlson-Foley Act
- Utah's Standards for Rangeland Health Executive Order 13112 (invasive species)
- Executive Order 11990 (wetlands)
- Iron County Plan
- Beaver County Plan
- Utah State Resource Management Plan

## **TIERING TO OTHER NEPA DOCUMENTS**

This EA is tiered to the following EISs:

- BLM's Final Programmatic Environmental Report (PER): Vegetation Treatments on BLM Lands in 17 Western States Programmatic Environmental Report, June 2007.
- Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States Programmatic Environmental Impact Statement (PEIS), June 2007.

These documents analyze the environmental consequences of vegetation treatment and the herbicide Tebuthiuron (among others) in the 17 Western States and established mitigation measures and design features to minimize the environmental effects of implementation to all resources and established conservation measures specifically to minimize or eliminate effects to Threatened, Endangered and species of management concern. The proposed action and alternatives incorporate all applicable mitigation measures, design features and conservation measures from the EISs.

## **IDENTIFICATION OF ISSUES**

Public notification was initiated by entering the project information on EPlanning, a BLM environmental information site, on December 5, 2017. To date, no comments have been received concerning the project. The proposed action was reviewed by an interdisciplinary team (Appendix A). Resources which may be affected to a degree needed analysis include fish and wildlife, invasive species, livestock grazing and rangeland health standards, watershed (hydrologic conditions, soils, water resources, wetlands and riparian areas), and wild horses.

## **2.0 DESCRIPTION OF ALTERNATIVES**

### **INTRODUCTION**

This environmental assessment focuses on the proposed action and no action alternatives. Other alternatives were not considered because the issues identified during scoping did not indicate a need for additional alternatives or mitigation beyond those contained in the proposed

action. The no action alternative is considered and analyzed to provide a baseline for comparison of the impacts of the proposed action.

## **PROPOSED ACTION**

The BLM CCFO proposes a series of multi-phase projects that would remove noxious vegetation where applicable, improve the hydrological/riparian condition, increase native plant and wildlife diversity, improve fish and wildlife habitat, increase recreational opportunities, and enhance multi-agency cooperation where possible on public lands managed by the BLM CCFO. In particular, in-stream and/or spring flow structures would be used in riparian corridors to strategically alter water levels and flow regimes similar to natural beaver structures. To promote wet meadows and watershed health, watershed enhancement structures would be implemented for erosion control, water retention, and mesic vegetation facilitation in washes, springs, and/or ponding areas.

The BLM would work with cooperating agencies through Utah's Watershed Restoration Initiative to identify riparian and wetland areas most in need of restoration/enhancement that would also benefit wildlife. The improvements proposed by the BLM CCFO would be completed in coordination with Utah Division of Wildlife Resources (UDWR), Utah State Trust Lands Administration (SITLA), county governments, livestock permittees, and other interest groups.

Design features to reduce impacts to other resources are included in Appendix B.

### **Phase 1 - Vegetation Removal**

The project would utilize an integrated noxious vegetation management approach involving a variety of tools to achieve project objectives where appropriate. A combination of mechanical and chemical methods would be used to remove invasive plants, particularly tamarisk (*Tamarix* spp.), Russian olive (*Elaeagnus angustifolia*), and cheatgrass (*Bromus tectorum*), from public lands located within the project area. Pinyon pine (*Pinus* spp.) and juniper (*Juniperus* spp.) trees may be systematically targeted for a phased removal approach to retain some shade trees and aesthetics while desirable vegetation reestablishes. Noxious vegetation would be removed using hand cutting, mowers, herbicide application and/or a combination of these methods. Seeding and transplanting of desirable plant species would be determined on a case-by-case basis and contain diverse, desirable seed mixes with preference given to native vegetation.

### **Herbicide Treatment**

All chemicals proposed are registered and approved by the BLM for use near, over and in water to control a wide variety of noxious plants. Herbicide appropriate and condoned for wetland and/or upland use may include, but not be limited to, dicamba + 2-4D, glyphosate, triclopyr, imazapyr, metsulfuron methyl, picloram, tebuthiuron, and imazapic. Additionally, potential non-ionic surfactants, seed oils, and colorants that may be used would include the following: induce, spec 90/10, spreader 90, NIS-EA, methylated spray oil (MSO) Conc., alligare MSO, hi-light, turftrax, and mark-it blue. Herbicide would be utilized for any future retreatments within the project area to ensure the control of noxious/undesirable vegetation. Some Russian olive trees would be girdled around the base of the tree and a systemic root killer applied to the girdled area. These trees would be left in place for aesthetics, stream shading, and to ensure that woody debris is available for future streambank soil bioengineering treatments. All stipulations from the Record of Decision (ROD) for the Programmatic Environmental Impact Statement (PEIS) for Vegetation Treatments Using Herbicides on BLM lands in 17 Western States would apply.

### **Mechanical Treatment**

Chipping/shredding, pile burning, or completely removing Russian olive, tamarisk, and other noxious vegetation would be utilized. Stumps would be immediately treated with one of the chemicals identified above to control re-sprouting. Chipping/shredding is expected to be the preferred method of redistributing biomass. Chips would be re-broadcast along project sites to provide for soil stabilization, moisture retention, and run-off mitigation while seedings and plantings are established. Following the removal of noxious species, seedings and plantings would occur to provide for an overall restoration approach. A phased-in approach would also reduce the short-term public aesthetic impacts and allow for public education opportunities as to the importance of such restoration projects.

In areas where noxious vegetation has out-competed native vegetation (areas of high density), plantings via seeding and transplantation would be required to establish desirable and/or native vegetation communities. Plantings would primarily be completed by utilizing bare-root stock from the area; however, it is expected that cottonwoods (*Populus* spp.), willows (*Salix* spp.), maples (*Acer* spp.), boxelder (*Acer negundo*), water birch (*Betula occidentalis*), red stem dogwood (*Cornus sericea*), and other native woody vegetation may need to be utilized from areas outside of project sites where appropriate. Additionally, seed mixes composed of desirable herbaceous species would be developed for mesic sites where understories are lacking or degraded. It would be expected that plantings and seedings would occur throughout the duration of the project.

### **Phase 2 – Hydrologic Enhancement**

In addition to noxious vegetation removal, the BLM is proposing to design, construct, and monitor the strategic implementation of a variety of water structures designed to alter existing hydrologic conditions for the benefit of plants, wildlife, and the public. Riparian restoration efforts would include but are not limited to Bear Creek, Beaver River, Big Twist Creek, Birch Creek, Braffits Creek, Cottonwood Creek, Duncan Creek, Hicks Creek, Indian Creek, Little Creek, Little Pinto Creek, Mineral Creek, Parowan Creek, Pine Grove, Pinto Creek, Quichapa Creek, Ranch Canyon Creek, Rice Canyon Creek, Shirts Creek, South Creek, and Willow Creek.

Mesic meadow habitat would be prioritized within Greater Sage-Grouse Priority Habitat Management Areas (PHMA) and existing vegetation treatment areas throughout the Field Office. These areas would focus on planting desirable perennial forbs, grasses, wetland obligates, pollinator, and other vegetation conducive to mesic meadow sites in the Great Basin area. The exact location of riparian/wetland restoration and watershed enhancement promoting actions would be determined after further coordination with other federal, state, county, and private entities.

To ensure that streambank erosion is minimized, soil bioengineering treatments would be implemented as determined necessary. Stream channel restoration techniques from the *Streambank Soil Bioengineering Field Guide for Low Precipitation Areas*, NRCS would be utilized to minimize soil erosion. Streambank soil bioengineering methods that may be utilized would include, but not be limited to, pole plantings, brush or tree revetment, brush mattress, fascines, vertical bundles, brush layering, brush packing, log cribwalls, crimping and seeding, wattle siltation fence, wattle siltation fence as an erosion stop, stone sill with live joint plantings, live brush sills, brush trench, brush spurs, and stone in bioengineering. In-stream structures designed to reduce sediment loads, induce stream meandering, and expand riparian habitat may include the aforementioned techniques in addition to check-dams, beaver dam analogs

(BDA), post-assisted log structures (PALS) methods described in *Let the Water Do the Work: Induced Meandering, and Evolving Method for Restoring Incised Channels*.

Mesic meadow habitat may be promoted by constructing structures (i.e., Zuni pools/bowls, media lunas, rock dams, and check-dams to slow the flow and infiltration of water in strategic locations. In addition, most of the previously mentioned structures may be implemented by manpower and hand tools (i.e., shovels, rakes, picks, buckets, etc.), but heavy equipment may be used to install rock vanes, random rock clusters, large logs, root wads and other woody debris for stream bank stabilization and improved aquatic habitat.

### ***Riparian Exclosures***

Where appropriate within the project area, sites sensitive to grazing and trampling from livestock and wildlife would have temporary and/or permanent exclosures constructed to allow beneficial vegetation and hydrologic enhancements a chance to establish. The exclosures would consist of mesh wire, 4-wire fencing or with post-and-pole materials where necessary for longer-term exclusions. Riparian areas identified as fishery and waterfowl streams would have access gates/ladders upgraded or new ones installed to allow for public use while maintaining the integrity of the exclosures providing for non-use by livestock where necessary. Water would be made available for livestock, wildlife and wild horses if an exclosure was constructed.

Other methods, such as offsite watering sources, livestock herding or other grazing management techniques may be utilized before determining if an exclosure is necessary.

### **Monitoring**

Monitoring data would be collected to assess the success/failure of noxious vegetation removal and in-stream/watershed structures to ensure treatment effectiveness and long-term integrity of the treatments. Additionally, monitoring may include Fisheries Assessment and Stream Monitoring, Proper Functioning Condition Assessments, Multiple Indicator Monitoring Assessments, photo points, etc. to ensure that hydrological enhancing structures were in fact benefiting hydrologic processes. Mesic meadows would be monitored using a combination of appropriate vegetation inventory/monitoring methods (i.e., stubble height, line-point intercept, ocular cover macroplots, droop height, etc.) and repeat photography.

### **NO ACTION**

Under this alternative, no noxious vegetation removal actions would occur as it relates to mesic sites. Areas with the potential to develop wet meadow habitat would not be identified, and remain in their current condition. Improvements to riparian areas would be addressed on a case-by-case basis when the need became a priority and funding was available.

## **3.0 AFFECTED ENVIRONMENT**

### **INTRODUCTION**

The affected environment of the proposed action and no action alternative were considered and analyzed by an interdisciplinary team as documented in the Interdisciplinary Team Analysis Record Checklist, Appendix A. The checklist indicates which resources of concern are either not present in the project area or would not be impacted to a degree that requires detailed analysis. Resources which could be impacted to a level requiring further analysis are described in this chapter and impacts to these resources are analyzed in Chapter 4.

No areas of the CCFO are generally excluded from the proposal because all resources and resource uses within the field office are potentially affected in some manner by water. The field office is typical of the Great Basin and Range Province and is composed of north to south trending mountain ranges with closed drainage basins between them. The geology, flora, and fauna of the area is relatively diverse and water is a scarce and limiting factor. All of the field office is subject to water related improvement projects.

## **Fish and Wildlife**

There are numerous fish and wildlife species which occur in the CCFO, including federally protected and sensitive status species. Wildlife species which may be affected are included in Appendix C. Several species occurring in the CCFO are highly dependent upon riparian/wetland areas throughout the duration of their annual cycles.

### *Fishes*

Several aquatic species (see Appendix C) could be impacted by the proposed action; however, impacts are expected to be beneficial in the long-term by expanding and/or enhancing aquatic habitats throughout the field office. Temporary impacts may include disturbance and displacement during construction efforts. Turbidity and sedimentation would be increased during construction periods but would be expected to be limited to local disturbance and dissipate quickly following construction efforts. Some downstream areas may experience reduced water flow in the short term as upstream structures take time to fill and overflow. Permanent impacts could be alterations to hydrologic flows and regimes, but as previously stated, the overall goal of this project is to enhance and expand aquatic areas within the CCFO. Therefore, project design features would be implemented to minimize impacts to aquatic life, while planning for overall species benefit.

### *Mammals*

A list of mammals of conservation concern which may be impacted by the proposed action can be found in Appendix C. Bat species could be temporarily displaced due to noise and construction disturbance. Tree roosting areas may be temporarily lost during conversion of riparian corridors from undesirable vegetation communities to more desirable native, riparian communities. Pygmy rabbits may experience the same temporary impacts (e.g., displacement) as bat species during initial proposed action construction efforts. However, similar to impacts to aquatic species, overall impacts are expected to be mostly beneficial to all mammal species in the long-term with increased drinking/foraging habitat being made available.

### *Birds*

While all migratory birds were considered for impact analyses, only birds of conservation concern that may be impacted are listed in Appendix C due to the fact that project actions would be conducted outside of the migratory bird nesting season. Additionally, greater sage-grouse were considered in analyses since brood-rearing habitat is typically limited by mesic areas. Design features would avoid nesting and breeding seasons for migratory and non-migratory species. Impacts outside of these periods could include temporary displacement from noise and human presence during construction activities. Some nesting areas may become unavailable to certain species as the vegetation is converted from undesirable communities to those more desirable and in-line with riparian and mesic meadow areas; however, long-term benefits are expected for most avian species in the CCFO due to the planned expansion and enhancement of currently limited wetland/riparian areas.



### Amphibians

Although limited in diversity, abundance, and range throughout the CCFO, several species of amphibians do occur within the project areas. Temporary impacts may include displacement during project implementation. Permanent impacts could result from alterations to habitat structure and hydrologic regimes, but overall impacts would be beneficial to amphibians due to increased riparian/wetland habitats throughout the CCFO.

### Invasive Species

Noxious weeds and invasive species which may occur in the area include black henbane, perennial pepperweed, bull thistle, knapweed, whorled milkweed, musk thistle, scotch thistle, hoary cress, and houndstongue. Design features include methods to combat and reduce any noxious weeds or invasive species that may benefit from the proposed action.

### Livestock Grazing and Rangeland Health Standards

Approximately 18 livestock grazing allotments contain riparian areas which are non-functioning. There are several allotments which are not meeting Rangeland Health Standards, but actions have been taken on all of these allotments to bring them closer to meeting the standards. At least 11 of these allotments are not meeting the standards for reasons other than livestock grazing.

### Watershed (hydrologic conditions, soils, water resources, wetlands and riparian areas)

The CCFO contains eight Hydrologic Unit Code (HUC) 8 watersheds which contain a variety of soil types and hydrologic conditions. Most of the streams in the CCFO are used for recreation and fish habitat, with one hydroelectric power plant used by Parowan City. Springs are generally utilized by livestock, wildlife and wild horses. Most communities in the area use springs and groundwater for culinary purposes.

The CCFO administers about 143 miles of lotic (streams and rivers) riparian resources and 248 acres of lentic (wetlands, meadows, lakes, and reservoirs) riparian resources. The following table contains information as of 2013 regarding the Proper Functioning Condition (PFC) in the field office.

Functional Rating	Trend	Miles Evaluated	Percent of Miles Evaluated	Acres Evaluated	Percent of Acres Evaluated
Nonfunctioning	Not Apparent	15.2	10.6	15.3	6.3
Functioning At Risk	Downward	16.2	11.3	34.6	14.2
	Static or Not Apparent	23.9	16.7	88.2	36.2
	Upward	10.9	7.6	10.4	4.3
Proper Functioning Condition	Not Apparent	58.9	41.2	42.7	17.6
Unknown	Not Apparent	17.7	12.4	52.1	24.4
<b>Totals</b>		<b>143</b>	<b>100</b>	<b>248</b>	<b>100</b>

Source: BLM 2013e

Note: Proper Functioning Condition ratings are by grazing allotment. Sum of columns may not equal total due to rounding.

Causal factors for riparian/wetland areas not at PFC vary across the public lands in the planning area. These factors are both inside and outside management control. In most cases, no single factor is responsible for conditions less than PFC. Common causal factors include (in no particular order of importance) wild horse, wildlife, and livestock grazing; dewatering; drought; road encroachment; incised channels; excessive erosion/sedimentation because of poor upland conditions (i.e., pinyon-juniper woodland expansion); OHV use; and invasive species.

There are about 355,669 acres of sensitive soils in the CCFO. These soils may have high sodium adsorption ratios or be highly susceptible to water or wind erosion. There are several causal factors that have been associated with less than desirable soil health across the public lands in the planning area. First, in addition to historic livestock grazing, wild horses and wildlife, drought, invasive species, pinyon-juniper woodland encroachment, roads, OHV use, and fires have been identified as contributing to poor soil health. As any of these increase, either singly or in combination, downward trends can be expected.

## **4.0 ENVIRONMENTAL IMPACTS**

### **INTRODUCTION**

The chapter analyses the impacts which could occur to the affected environment from the proposed action and no action alternatives.

### **DIRECT AND INDIRECT IMPACTS**

Direct impacts are caused by the action and occur at the same time and place. Indirect effects are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable.

### **Proposed Action**

#### ***Fish and Wildlife***

The proposed riparian enhancement would likely benefit all wildlife species in the long term. In the short term, impacts from construction could occur to all fish and wildlife species which utilize the riparian area being affected. Turbulence and changes to stream/spring flow and direction would affect aquatic species but impacts would be temporary and beneficial in the long-term since no water is anticipated to be reduced or retained from upstream waterways.

Wildlife species might be temporarily displaced during construction. Short-term take (e.g., harassment) of migratory birds would be expected at any time of construction, but operations outside of the previously mentioned seasons should reduce conflicts (see Design Features, Appendix B. The limitation of structure placement to hand tools and hand-held machinery (e.g., hydraulic post pounder) would reduce potential impacts to fish and wildlife species.

This project has the potential for long-term benefits to greater sage-grouse, as well as other wildlife species, by raising bank-full levels, providing more mesic areas on the landscape and improvement habitat.



***Invasive Species***

Invasive species can out-compete native and desirable vegetation. Removal of invasive and noxious weeds would improve vegetation health by decreasing the spread of these undesirable species and allowing preferred vegetation to increase.

***Livestock Grazing and Rangeland Health Standards***

Water would be made available for livestock if an enclosure is constructed. If practical, grazing in riparian enclosures would be determined on a case-by-case basis by the authorized officer using a rangeland grazing agreement. No loss of AUMS or changes in management places would be required.

The proposed action would work towards attaining or maintaining Rangeland Health Standard 2 by moving riparian and wetland areas toward properly functioning condition and Standard 3 by ensuring desired species, including native, threatened, endangered, and special-status species, are maintained at a level appropriate for the site and species involved. Standard 4 would be met by BLM trying to apply and comply with water quality standards established by the state of Utah (R.317-2) and the federal clean water and safe drinking water acts and support designated beneficial uses described in the Utah water quality standards (R.317-2) for surface and ground water.

***Watershed***

The proposed project would improve hydrologic conditions in the long-term by slowing water flows, raising water tables, dissipating stream energies, increasing stream sinuosity and complexity, and reconnecting floodplains.

Temporary impacts to water quality would be anticipated. Increased siltation could result from projects which disturb soils, especially those close to the river banks. In the long term, more desirable vegetation could help to filter sediments from uplands, thus reducing siltation. Removal of vegetation which is currently shading the water could result in temperature increases in the short-term, while in the long-term, water temperatures could decrease as new overhanging vegetation increased.

Soils would be temporarily disturbed, but limited use of motorized equipment would minimize this impact. Improved riparian conditions and raised water tables would help to anchor soils susceptible to wind and water erosion.

**No Action**

***Fish and Wildlife***

Under the no action alternative, riparian and wetland areas would continue to degrade and would therefore remain a limiting factor for all wildlife species.

***Invasive Species***

Noxious vegetation would continue to flourish and reduce the condition of the riparian areas, wetlands, and meadows while negatively impacting native plant and wildlife diversity, available forage.

***Livestock Grazing and Rangeland Health Standards***

Those sites that are not meeting standards due to the Rangeland Health Standard 2 would continue to be degraded. Noxious vegetation encroachment would continue to decrease desired forage values.

***Watershed***

Riparian areas would remain or continue to be degraded through reduced water retention and sediment deposition, increased incision, and elevated soil erosion.

**CUMULATIVE IMPACTS**

Cumulative impacts are those impacts resulting from the incremental impact of an action when added to other past, present, or reasonably foreseeable actions regardless of what agency or person undertakes such other actions.

Past or ongoing actions that affect the same components of the environment as the proposed action include livestock, wildlife and wild horse grazing and watering, drought, wildfire, spread of invasive vegetation and recreation. These same actions would be expected to continue in the future.

***Fish and Wildlife***

Fish and wildlife have been impacted by a decrease in water availability due to the degradation of riparian/wetland resources. Forage availability has been impacted by the increase in invasive species, drought and wildfire. The proposed action would help to off-set these impacts by improving riparian vegetative health and increasing forage availability

***Invasive Species***

Noxious vegetation is a continuing problem which affects forage availability, soil stabilization and the health of native plant species. Large wild-fires and drought have exacerbated this issue. The proposed action would help to off-set these impacts by removing invasive species in and near riparian areas.

***Livestock Grazing and Rangeland Health Standards***

Rangeland health has been impacted by drought, wildfire and the spread of invasive vegetation. All of these variables have reduce forage availability for livestock and decreased rangeland heath. The proposed action would help to off-set these impacts by removing invasive vegetation and improving palatable forage availability.

***Watershed***

Watersheds have been affected by grazing, drought, wildfire, invasive vegetation and recreation. All of the factors have contributed to degraded riparian vegetation, soil erosion and decreased water availability. The proposed action would help to off-set these impacts by removing invasive vegetation, raising water levels, decreasing soil erosion and protecting riparian areas from overuse.

## 5.0 CONSULTATION AND COORDINATION

### INTRODUCTION

The public was informed of the project by entering it into ePlanning, a BLM public NEPA notification site on December 5, 2017. No comments have been received by the public. A 15-day public comment period was offered beginning on September 20, 2018. One comment letter was received from the Utah Public Lands Policy Coordinating Office. They requested that state and county plans be included in Chapter 2 and that other methods to protect riparian areas be considered before requiring the use of an enclosure. These changes have been made to the EA.

### PERSONS, GROUPS, AND AGENCIES CONSULTED

Name	Purpose & Authorities for Consultation or Coordination	Findings & Conclusions
Utah State Historic Preservation Office (SHPO)	Consultation for undertakings, as required by the National Historic Preservation Act (NHPA) (16 USC 470)	No cultural resources would be affected. The project will be reviewed by SHPO as part of the quarterly submittal as per existing protocol.
Paiute Indian Tribe of Utah	Consultation as required by the American Indian Religious Freedom Act of 1978 (42 USC 1531) and NHPA (16 USC 1531)	In accordance with the Memorandum of Understanding between the Paiute Tribe of Utah and the BLM, this project does not require formal consultation.
U.S. Army Corps of Engineers	The project would require a permit from the Corps under authority of Section 404 of the Clean Water Act (33 USC 1251)	The Corps has indicated that the project meets the nationwide permit criteria.
Utah Div. of Wildlife Resources	Consult with UDWR as the agency with expertise on impacts on game species.	Data and analysis regarding big game species incorporated into Chapters 3 and 4.

### LIST OF PREPARERS

See Appendix A.

## Appendix A. Interdisciplinary Team Checklist

**Project Title:** Cedar City Field Office Management Plan for Riparian Restoration and Wetland Enhancement

**NEPA Log Number:** DOI-BLM-UT-C010-2018-0021-EA

**Project Leaders:** C. England

**DETERMINATION OF STAFF:** *(Choose one of the following abbreviated options for the left column)*

NP = not present in the area impacted by the proposed or alternative actions

NI = present, but not affected to a degree that detailed analysis is required

PI = present with potential for relevant impact that need to be analyzed in detail in the EA

NC = (DNAs only) actions and impacts not changed from those disclosed in the existing NEPA documents cited in Section D of the DNA form. The Rationale column may include NI and NP discussions.

### RESOURCES AND ISSUES CONSIDERED:

Determination	Resource	Rationale for Determination	Signature	Date
NI	Air Quality	Air quality either meets NAAQS or the area is unclassified. Nothing in the proposal would affect the rating.	C. England	12/04/2017
NP	Areas of Critical Environmental Concern	There are no ACECs within the CCFO.	D. Jacobson	1-4-2018
NI	Cultural Resources	A Class III Cultural Resources Inventory is required once specific project areas are identified. As long as identified historic properties can be avoided by construction activities and indirect effects mitigated, this project should not adversely affect historic properties.	L. Glidden	1/23/18
NI	Greenhouse Gas Emissions	Construction of the project work would generate emissions of GHG's through operation of internal combustion engines. Emissions would be minor (well below modeling thresholds required for modeling / monitoring) on local, regional, and especially global scales.	C. England	12/04/2017
NI	Environmental Justice	The alternatives would have no disproportionately high or adverse human health or other environmental effects on minority or low-income segments of the population.	C. England	12/04/2017
NP	Farmlands (Prime or Unique)	No Farmlands (Prime or Unique) would be present the proposed action is focused towards riparian and wetland areas categorized separately from farmlands.	M. Bayles	1/23/2018

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Determination	Resource	Rationale for Determination	Signature	Date
PI	Fish and Wildlife	The proposed action has high potential to improve water availability and improve habitat for most wildlife species found within the CCFO. Site considerations should be made in soil types used by semi-fossorial mammals; however design features could likely be altered if deemed necessary due to the overall benefit this project will likely provide.	D. Schaible	1/31/2018
PI	Floodplains	The proposed project could potentially improve floodplain access and water retention. No substantial negative impact is anticipated because the existing vegetation community on the floodplain on many of the proposed sights have been invaded by FAQ-Upland plants due to the disconnection from the water. Instream structures could allow for the water to re-access the floodplain and thereby increasing water retention and allowing for more desirable FAQ-W herbaceous plants that stabilize the floodplain and dissipate energy. However, the stabilizing bio and root masses, which would be mostly likely to affect floodplain function, would not change substantially on the floodplain (the change would be more substantial on the streambanks). It has been determined the proposal is in harmony with Executive Order 11988 for floodplains management. See watershed section of the EA	E. Shotwell	01/24/18
NI	Fuels/Fire Management	Removal of woody vegetation and other noxious vegetation would be beneficial to fire/ fuels management by reducing fuel loads in these areas. Potentially raising the water table would also have a beneficial impact in that the vegetation would stay green longer and create a fuel break if a wildfire should occur. However, these benefits would not be to a level requiring detailed analysis.	M. Mendenhall	1/23/18
PI/NI	Geology / Mineral Resources/Energy Production	NI if enhancement projects are conducted on riparian areas other than the Indian Creek in Beaver County. The large number of placer mining claims located along the Indian Creek drainage by recreational gold miners would likely result in user conflicts as the proposed structures could be incompatible with any waterway open to recreational gold panning.	E. Ginouves	1/8/18
PI	Hydrologic Conditions	The proposed project may be beneficial in the long-term but would affect the existing hydrologic condition by slowing water flows, raising water tables, increasing sediment deposition, increasing water filtration, etc. Tree/vegetation removal would need to be conducted using a phased approach (staggered removal as desirable vegetation	C. England	2/12/18

*Cedar City Field Office Riparian Restoration and Wetland Enhancement (DOI-BLM-C010-2018-0021-EA)*

Determination	Resource	Rationale for Determination	Signature	Date
		becomes established) to decrease erosion risks and stream temperatures alterations. See watershed section of the EA.		
PI	Invasive Species/Noxious Weeds	Phase 1 of the proposed action is focused towards removal of noxious weeds through herbicide and mechanical methods. All methods would need to be analyzed within the EA. The proposed action would work to improve vegetation and hydrologic function of riparian and wetland areas by removing invasive and noxious weeds.	M. Bayles	1/23/18
PI/NI	Lands/Access	<p>There are various rights-of-way (ROW) and land use authorization in the area, such as: power lines, roads, pipeline, etc. NI if the valid existing rights are considered and there are coordination, where necessary, with the holders of these rights. Pinto Creek is found within a designated 368 ROW corridor. Contact/ coordination with these ROW holder is required to verify encroachment permit should be obtained when working adjacent to ROWs. (UTU-42519, UTU-47215, UTU-54534, UTU-67784, UTU-68164, UTU-76565, UTU-79766, UTU-83067)</p> <p>There are three parcels of land listed in the current Resource Management Plan (RMP) for disposal. The RMP states that we "assure that no major investments, such as seeding, fences, roads, etc., will be made on land identified for disposal."</p> <p>These parcels are: SLM T. 33 S., R. 08 W., Section 9 NE1/4NE1/4- (Willow Creek)                      SLM T. 35 S., R. 09 W., Section 26 W1/2SW1/4- (Parowan Creek) T. 34 S., R. 10 W., Sec. 25 (Summit Creek)</p> <p>Also, one section of Willow Creek Wah Wah is located within UTU-92242 FD/PT- Utah Test and Training Range (UTTR) and is a legislative land exchange found at SLM T. 28 S., R. 14 W., Sections 3,9, and 10.</p>	B. Cox	1/9/18
PI	Livestock Grazing	Phase 2 of the proposed action implements construction of new Riparian exclosures. This could have impacts on current grazing management plans and access to livestock water. However, maintenance of existing riparian exclosures that should have no livestock use will have positive impacts.	M. Bayles	1/23/18
PI	Migratory Birds	Several avian species occurring in the CCFO are highly dependent upon riparian/wetland areas	C. England	12/04/2017

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Determination	Resource	Rationale for Determination	Signature	Date
		throughout the duration of their annual cycles. Current guidance suggests no surface disturbance during the primary nesting season (April 1 – July 1) for migratory birds. Additionally, the nesting (March 15- July 15) and wintering (Nov 1- March 15) seasons for waterfowl are recommended to be avoided by a buffer of at least 0.25 miles. Although potentially beneficial in the long-term, short-term take (e.g., harassment) of migratory birds would be expected at any time of construction, but operations outside of the previously mentioned seasons should reduce conflicts.		
NI	Native American Religious Concerns	A number of stream locations are found within identified Native American Traditional Collection Areas and areas of Traditional Cultural Importance. Additional consultation with the Tribes is necessary to further identify and address potential concerns.	L. Glidden	1/23/18
NI	Paleontology	The surficial geology of the proposed project areas is Quaternary and Recent alluvium derived from a variety of rock types. Using the Bureau's Potential Fossil Yield Classification system, the unit would fall in Class 1, low potential for scientifically significant invertebrate or vertebrate fossil resources. No impacts to fossil resources would be expected by the road construction and no mitigation measures specific to fossil resources are necessary.	E. Ginouves	1/3/18
PI	Rangeland Health Standards	The proposed action would work towards attaining or maintaining Rangeland Health standard 2: Riparian and Wetland areas are in properly functioning condition. Stream channel morphology and functions are appropriate to soil type, climate and landform. Standard 3: Desired species, including native, threatened, endangered, and special-status species, are maintained at a level appropriate for the site and species involved. Standard 4: BLM will apply and comply with water quality standards established by the state of Utah (R.317-2) and the federal clean water and safe drinking water acts. Activities on BLM lands will fully support designated beneficial uses described in the Utah water quality standards (R.317-2) for surface and ground water.	M. Bayles	1/23/18
NI	Recreation	The proposed action may have a positive effect on recreation opportunities by improving access to fisheries and dispersed water based recreation. Areas may be inaccessible for short periods of time during construction or treatment for recreationists.	D. Jacobson	1-26-2018

Cedar City Field Office Riparian Restoration and Wetland Enhancement (DOI-BLM-C010-2018-0021-EA)

Determination	Resource	Rationale for Determination	Signature	Date
NI	Socio-Economics	This project would increase the riparian areas and proper hydrologic function to several areas in the field office. It is not anticipated that the project would alter the general socio-economics of the area.	C. England	2/8/2018
PI/	Soils	Soils would be disturbed by the proposed action; however, minimally so due to the limited use of motorized equipment. EA should describe the resource, disturbance amounts and mitigation measures to minimize environmental effects. A reclamation plan will need to be developed.	C. England	2/8/2018
PI/NI	Special Status Plant Species	BLM sensitive species <i>Astragalus welshii</i> (Welsh milkvetch) has been known to occur within Lower Bear valley near Bear Creek identified in the proposed action. SS-plant surveys would need to be conducted when working within the Bear Creek area. NI if any plants found were avoided or mitigated.	M. Bayles	1/23/18
PI	Special Status Animal Species	Several of the areas tentatively identified for riparian/wetland enhancement may be utilized by both aquatic and terrestrial SSS, and the same may be said for areas not yet identified. However, the limitation of structure placement to hand tools and hand-held machinery (e.g., hydraulic post pounder) would reduce potential impacts to SSS and their habitats warranting protection under current BLM mandates. Changes to stream flow and direction would potentially impact aquatic SSS where present, but impacts would be temporary and beneficial in the long-term since no water is anticipated to be reduced or retained from upstream waterways.	C. England	12/04/2017
PI	Greater Sage-Grouse	This project has the potential to have a very positive impact on Greater Sage-Grouse. Anything that can potentially raise bank full levels, provide more mesic areas on the landscape and contribute habitat for brood rearing grouse, will be beneficial, long-term.	D. Schaible V. Tyler	1/31/2018 1/28/2018
NP	Wastes (hazardous or solid)	Currently there is no waste concerns in the proposed areas. Any waste created during the project should be cleaned up and managed according to State and Federal Law.	S. Houston	01/16/18
PI	Water Resources/Quality (drinking/surface/ground)	Water quality has the potential to be affected from this project in a variety of ways. Increased siltation could result from projects which disturb soils, especially those close to the river banks. In the long term, more desirable vegetation could help to filter sediments from uplands, thus reducing siltation. Removal of vegetation which is currently shading the water could result in	E. Shotwell	01/24/18



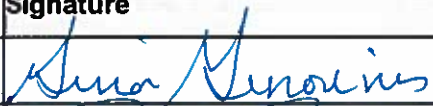

*Cedar City Field Office Riparian Restoration and Wetland Enhancement (DOI-BLM-C010-2018-0021-EA)*

Determination	Resource	Rationale for Determination	Signature	Date
		temperature increases in the short-term., while in the long-term, water temperatures could decrease as new overhanging vegetation increases. Protective measures will be incorporated to prevent unnecessary introduction of herbicide, ash, etc. into the stream systems.		
PI	Wetlands/Riparian Zones	<p>The proposed project action would be expected to have positive impacts on riparian areas by potentially raising bank full levels, dissipating stream energies, increase stream sinuosity and complexity, reconnecting the floodplain which would allow for more frequent inundation (increased FAQ-W plants, see above section "Floodplains") and water storage potential.</p> <p>Monitoring of Riparian areas within the field office has been extensive. The majority being PFC assessments and some MIM monitoring. The data should be used in assisting with prioritization of sights for structures. Sights would be analyzed on a project level basis to determine best design features.</p> <p>To comply with state policy and regulation if there is changes made to the system a stream alteration permit must be obtained through the DNR. There is also a potential that the analogs could possibly affect flow to lower water sources that may have water rights held by individuals. In such cases flow measures should be taken before and after the project to ensure that water rights are not affected.</p>	E. Shotwell	01/24/18
NI	Wild and Scenic Rivers	There are no wild or scenic rivers within the CCFO. The proposed projects would also not impair any stream segments from being eligible or suitable for designation in the future.	D. Jacobson	1-29-2018
NI	Wilderness/WSA	The proposed project does not include any work within or near a wilderness or WSA.	D. Jacobson	1-29-2018
NI	Woodland / Forestry	The majority of stream segments are adjacent to sage/grass/forb or pinyon-juniper areas. Some higher elevation segments are adjacent to mixed conifer areas. Segments adjacent to woodland/forested areas may contain encroaching pinyon, juniper or other conifers that may need to be removed. However, this would be minimal.	C. Peterson	01/10/2018
PI	Vegetation Excluding USFW Designated Species	The proposed action would alter current vegetation by removing noxious and invasive plant species, while promoting native riparian species by implementing in stream structures.	M. Bayles	1/23/18
NI	Visual Resources	The proposed project sites are within various VRM classes. Improvement projects would be designed	D. Jacobson	1-29-2018

Cedar City Field Office Riparian Restoration and Wetland Enhancement (DOI-BLM-C010-2018-0021-EA)

Determination	Resource	Rationale for Determination	Signature	Date
		so as to meet the specific VRM Class objectives in which they reside.		
PI/NI	Wild Horses and Burros	Some of the riparian areas proposed for enhancement are within Wild Horse Herd Management Areas. Some of the enhancements proposed could limit wild horse access to water sources. NI if water sources or gaps are left when exclosures are built in HMAs to provide water for wild horses.	C. Hunter	1/11/18
NI	Lands with Wilderness Characteristics	Only one of the riparian areas is within an area that has been identified as having wilderness characteristics, which is the South Wah Wah unit. The proposed project would not impact naturalness, solitude or un-confined recreation to a degree of eliminating the inventory unit from having wilderness characteristics.	D. Jacobson	1-29-2018

**FINAL REVIEW:**

Reviewer Title	Signature	Date	Comments
Environmental Coordinator		10/26/18	
Authorized Officer		10/26/2018	

## **Appendix B. Design Features to Reduce Impacts**

### **General**

- Monitoring sites including photo plots will be established to determine the success of the treatment. This information will be utilized to determine if follow-up treatments are necessary. Monitoring will be done to evaluate stream proper functioning condition as well as ensuring noxious/undesirable vegetation species do not become established. If noxious/undesirable vegetation species are detected herbicide, biological, and/or manual control methods will be used to control or eliminate those populations.
- All necessary inventories will be completed prior to any ground disturbing activity or as required (wildlife, cadastral, noxious/undesirable vegetation, sensitive plants, etc.).
- Prior to any project implementation, all corners and/or accessories of the Public Land Survey System (PLSS) that fall near to or within proposed treatment areas will be located and protected. PLSS corners include but are not limited to, original rock monuments, original wood corner post monuments; iron, stainless steel, or aluminum post monuments; bearing trees, line trees and reference mounds.
- Motorized equipment will be cleaned to remove noxious/undesirable vegetation and prevent further assisted dispersal/spreading.
- Valid existing rights and current developments such as rights-of-ways and other infrastructure will be protected and landowners contacted.
- Improvements will not prohibit lands from being considered for disposal.
- Special status plant surveys will be completed before ground disturbing actions. Mitigation measures will be implemented as necessary.
- Stream alteration permits will be obtained when necessary to comply with state policy and regulation.

### **Hydrology**

- Silt fencing will be used between upland treatments and the wetland, as necessary to prevent sedimentation and run-off.
- No road building will take place within the riparian zone.
- Appropriate seed mixes will be developed by collaborating agencies for both the wetland and upland components of the project area.
- Plantings will be derived from on-site vegetation whenever feasible.
- Silt fencing will be used between upland treatments and the wetland, as necessary to prevent sedimentation and run-off.
- Design features will be determined by the engineering and design specifications that will adhere to Utah state regulations (Utah Administrative Code R655-11, 2017).
- Design features for dams, dikes, levees, banks, canals, and spillways will be dependent on engineering and design and of proper size for potential downstream impacts in the event of failure.
- Mechanical equipment will be equipped with rubber tires or tracks to the extent practical and will avoid repeated trips over the same route so as to minimize soil compaction except in areas where a hardpan is desired for water retention.
- Work will ideally be conducted on frozen or dry ground to avoid rutting, soil disturbance, sedimentation, and erosion.
- Onsite materials (i.e., plantings, rock structures, fill material, etc.) will be used whenever possible.
- Clearing and grubbing of project sites will occur prior to construction of water control features.

- Tree/vegetation removal will be conducted using a phased approach (staggered removal as desirable vegetation becomes established) to decrease erosion risks and stream temperatures alterations.
- Take flow measurements before and after construction to ensure that down-stream water rights are not affected.
- Prior to attaching any log yarding equipment to a tail-hold tree, precautions to protect the tree from damage will be taken. Examples of protective measures include the use of cribbing (sound green limbs between the attachment strap and the bole of the tree to prevent girdling), tree plates, wide canvas straps, and plastic culvert.
- The following measures will be used during log yarding to minimize damage to riparian habitat including the protection of mature trees, snags, downed woody debris, and the forest floor:
  - 1) Log drag routes will be located and marked on the ground prior to log yarding to minimize the width of the disturbed area;
  - 2) Logs will be yarded with one end suspended whenever practical;
  - 3) In the event any trees must be felled to provide for safe yarding of logs, they will be retained on-site; and
  - 4) All downed wood will be left on-site. To protect water quality and beneficial uses

### **Cultural Resources**

- An intensive class III cultural resource survey will be conducted within all project areas and determinations of eligibility and effect will be made by BLM archaeologists in consultation with the State Historic Preservation Office.
- All cultural resource sites identified within the project area that are determined to be eligible to the National Register of Historic Places will be appropriately marked and avoided by all project management activities and consultation with the State Historic Preservation Officer under Section 106 of the National Historic Preservation Act will occur.
- If it is determined that not treating the upland vegetation on specific eligible sites may increase erosion or promote illegal collection, these sites may be treated. Treatments within the boundaries of eligible sites will need to avoid altering the characteristics that make these sites eligible. The State Historic Preservation Office will be consulted before any eligible sites are treated.

### **Fish and Wildlife**

- Utah prairie dog Section 7 surveys and ground level clearances will need to be conducted by a qualified biologist during the active season when permanent ground disturbing activities will fall within 1000 feet of mapped habitat.
- Surface disturbance within Utah prairie dog colonies and/or their 1000ft surface disturbance buffer will occur during the active season (April 1 – August 31) or after Section 7 level protocol surveys determine that mapped Utah prairie dog colonies are not occupied.
- No surface disturbance will occur within areas determined suitable for Mexican spotted owls during the nesting season (March 1- August 31), unless Section 7 level protocol surveys determine owls are absent.
- Any burrows suspected of being actively utilized by BLM sensitive species will be buffered by a 330 foot buffer.
- Avoid impacts during the migratory bird nesting season from April 1<sup>st</sup> – July 31<sup>th</sup> to protect migratory bird breeding and nesting. If the nesting season cannot be avoided,

then a qualified biologist should conduct nest searches to locate active nests within the immediate area of disturbance. Active nests, as indicated by intact eggs, live chicks, or presence of an adult on a nest, will be buffered with a minimum 100 foot buffer or in accordance with the species for which protection is needed.

- Any raptor nest found within a treatment area will be protected and managed according to Best Management Practices for Raptors and Their Associated Habitats in Utah (BLM, August 2006), Utah Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances (U.S. Fish and Wildlife Service, Utah Field Office, Salt Lake City, Jan. 2002) or in accordance with the most current policy in place at the time of treatments. Complete the Site Specific Analysis data sheet outlined in IM UT No. 2006-096 and use this information in the design and location of facilities to minimize impacts to nesting raptors.
- When present, wintering waterfowl will be avoided by a 0.25 mile buffer during the over-winter period (November 1 – March 15).
- These wildlife stipulations may be waived by a qualified wildlife biologist should appropriate clearances and surveys reveal no impact will be expected to a species of interest.
- Water gaps or pipes/troughs will be installed where needed to provide water for livestock, wildlife and wild horses.

***Noxious/Undesirable Vegetation Species Removal***

- All stipulations from the Record of Decision (ROD) for the Programmatic Environmental Impact Statement (PEIS) for Vegetation Treatments Using Herbicides on BLM lands in 17 Western States will apply.

## Appendix C. Affected Fish and Wildlife Species

Federally listed species considered during effects analyses for the Cedar City Field Office Riparian Restoration and Wetland Enhancement Environmental Assessment.

Common Name	ESA Status	Project Area Within Critical Habitat	Habitat Suitability and/or Occurrence in or near Project Area	Effects Determination	Potentially Affected
Virgin River Chub	Endangered	No	There is currently no suitable habitat for the Virgin River chub in the proposed project area.	No Effect	No
Woundfin	Endangered	No	There is currently no suitable habitat for the woundfin in the proposed project area.	No Effect	No
Utah Prairie Dog	Threatened	No	No Utah prairie dog mapped colonies, nor their 1000 foot surface disturbance buffer are located within the proposed project areas.	No Effect	No
Western Yellow-billed Cuckoo	Threatened	No	There are no records of western yellow-billed cuckoo in the project area, nor are there conducive habitat characteristics.	No Effect	No
Southwestern Willow Flycatcher	Endangered	No	There are no records of southwestern willow flycatcher in the project area, nor are there conducive habitat characteristics.	No Effect	No
Mexican Spotted Owl	Threatened	No	Mexican spotted owls utilize steep canyon areas for nesting. Nearest nest locations are approximately 7 miles from the project area.	No Effect	No
California Condor	Endangered*	No	California condors utilizing areas west of I-15 would be considered endangered. Condors may fly over the project area, but use and occurrence would be extremely rare. Nearest known nests are over 20 miles away in Kolob Canyons.	No Effect	No
Jones Cycladenia	Threatened	No	Jones cycladenia does not occur in the project area.	No Effect	No

\*This species is designated as a non-essential, experimental population east of I-15 to SR-191, and south of I-70. California condors occurring outside the designated area are protected as Endangered.

**Sensitive status species considered during effects analyses for the Cedar City Field Office Riparian Restoration and Wetland Enhancement Environmental Assessment.**

Taxon	Common Name	BLM Sensitive Status Species List	UT Wildlife Action Plan Status	UDWR Sensitive Species List	Species Occurrence Based on Available UDWR Data	Species Occurrence Based on REGAP	USFWS IPAC Breeding Season (Migratory Birds)	Potentially Affected
Fishes	Bonneville Cutthroat Trout*	No	S4	Yes	Yes	NA	-	Yes
	Desert Sucker	Yes	S3	Yes	Yes	NA	-	Yes
	Least Chub*	No	S2	Yes	No	NA	-	Yes
	Southern Leatherside Chub*	No	S2	Yes	No	NA	-	Yes
	Virgin Spinedace*	No	S2	Yes	Yes	NA	-	Yes
Mammals	Allen's Big-eared Bat	Yes	S3	Yes	No	Yes	-	Yes
	Big Free-tailed Bat	Yes	SU	Yes	No	Yes	-	Yes
	Fringed Myotis	Yes	S2B	Yes	No	Yes	-	Yes
	Kit Fox	Yes	S3	Yes	Yes	Yes	-	No
	Pygmy Rabbit	Yes	S3	Yes	No	Yes	-	Yes
	Spotted Bat	Yes	S3	Yes	No	Yes	-	Yes
	Townsend's Big-eared Bat	Yes	S4	Yes	No	Yes	-	Yes
	Western Red Bat	Yes	SU	Yes	No	Yes	-	Yes
Birds	American White Pelican	Yes	S3B	Yes	Yes	No	-	No
	Bald Eagle†	Yes	S2B, S4N	Yes	Yes	Yes	Dec 1 to Aug 31	Yes
	Burrowing Owl	Yes	S3B	Yes	Yes	Yes	NA	No
	Ferruginous Hawk	Yes	S3B	Yes	Yes	Yes	NA	No
	Greater Sage-grouse	Yes	S3	Yes	Yes	Yes	-	Yes
	Golden Eagle†	No	S4	No	Yes	NA	Dec 1 to Aug 31	No
	Lewis's Woodpecker	Yes	S3	Yes	NA	No	Apr 20 to Sep 30	No
	Long-billed Curlew	Yes	NA	Yes	Yes	No	Apr 1 to Jul 31	No
Amphibians	Arizona Toad	Yes	S3	Yes	NA	No	-	Yes
	Western Toad*	Yes	S3	Yes	NA	No	-	No

\*Species with existing interagency Conservation Agreements

† Species protected under the Bald and Golden Eagle Protection Act

