

**FINAL RESTORATION PLAN AND ENVIRONMENTAL ASSESSMENT ADDENDUM**

**for the Upper Arkansas River Watershed**

June 2019 Addendum Revised from the April 2010, Final Restoration Plan and Environmental Assessment for the Upper Arkansas River Watershed

Prepared by:

U.S. Fish and Wildlife Service  
on behalf of the  
U.S. Department of the Interior  
U.S. Fish and Wildlife Service  
U.S. Bureau of Land Management  
U.S. Bureau of Reclamation

and

State of Colorado  
Department of Natural Resources  
Department of Public Health and Environment  
Department of Law

June 24, 2019

## Preamble

This addendum to the 2010 Final Restoration Plan and Environmental Assessment for the Upper Arkansas River Watershed (Final RP/EA; Stratus 2010) has been developed to summarize a new restoration alternative that has been selected by the Trustees. Evaluation of this new alternative is necessary because it was not a project at the time the 2010 Final RP/EA was completed and the public must be given an opportunity to review this restoration plan, as required under the Comprehensive Environmental Response Compensation and Liability Act Natural Resource Damage Assessment regulations (43 CFR Part 11.93). The Trustees are now proposing an alternative that will fund the Sands Lake State Wildlife Area Restoration project.

## Introduction

In 2008, the U.S. Department of the Interior (DOI) represented by the U.S. Fish and Wildlife Service, the U.S. Bureau of Land Management, and the Bureau of Reclamation; and the State of Colorado represented by the Colorado Department of Natural Resources, Colorado Department of Public Health and Environment, and Colorado Department of Law (collectively, the “Trustees”) settled a natural resource damage claim with the Resurrection Mining Company/Newmont USA Limited and ASARCO LLC for the California Gulch Superfund Site (the Site) located near Leadville, Lake County, Colorado.

The Trustees sought this settlement as compensation to for injuries to natural resources due to the release of hazardous substances from the Site. The Trustees are required to use settlement funds to restore, replace, or acquire the equivalent of lost resources and/or services provided by the injured natural resources. Authority to act on behalf of the public is given to trustees in the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) [42 USC §§ 9601 et seq.] and the Clean Water Act [33 USC §§ 1251 et seq.].

In early 2010, the Trustees held a public meeting and presented information about the restoration process and the projects described in the Draft RP/EA. The Draft RP/EA was available for public comment for 45 days. In April 2010, the Final RP/EA was published (<https://www.fws.gov/mountain-prairie/contaminants/upperArkansasRiver.php>).

## Background

The Site extends over a large area including more than 15 square miles in and around the town of Leadville, Colorado. Extensive historic mining activities in and around Leadville generated more than 2,000 on-site waste rock piles and resulted in past and ongoing releases of heavy metals and acid mine drainage into California Gulch and, subsequently, to the upper Arkansas River Basin. In particular, the Yak Tunnel, which was constructed to dewater mines in the area, was a significant source of contamination to California Gulch from the time of its construction in 1895 until the Yak Tunnel Water Treatment Plant began operation in 1992. Before construction of the treatment plant, more than 200 tons of metals were discharged into California Gulch each year by the Yak Tunnel (Industrial Economics, 2006).

Releases from California Gulch moved downstream into the upper Arkansas River Basin, resulting in downstream injuries to surface water, aquatic biota, and terrestrial resources, including terrestrial biota, riparian habitat, irrigated meadows, and fluvial mine-waste deposits (Redente et al., 2002; Industrial Economics, 2006; Lipton, 2007). A preliminary estimate of damages developed for the Site (Industrial Economics, 2006) determined that releases of hazardous substances from the Site, including heavy metals and acid, have resulted in injuries to groundwater resources, aquatic resources, and terrestrial resources. Injured terrestrial resources include both upland areas associated with mine waste deposits and floodplain areas associated with contaminated riparian areas, irrigated meadows, and fluvial deposits. The proposed Sand Lake project described in this document will provide compensation to the public for these natural resource injuries. Further information on Site can be found in Chapter 2 of the Final RP/EA (Stratus 2010).

## Proposed Restoration Project

The purpose of the proposed restoration actions is to compensate the public through environmental restoration for injuries to natural resources that have been caused by releases of hazardous substances into the environment. The Trustees favor “in-kind” restoration, which means that the restoration project(s) focus on restoring the same types of resources as the ones that were injured. The proposed restoration project is needed to restore natural resources equivalent to those injured by releases of hazardous substances to the upper Arkansas River Basin. Chapter 3 of the Final RP/EA (Stratus 2010) describes the criteria utilized by the Trustees to evaluate the project.

The Sands Lake State Wildlife Area Restoration project (Project) will enhance natural resources through invasive species control, establishing native plants, controlling erosion/decreasing sedimentation, providing an osprey nesting platform, and enhancing visitor use (interpreting restoration). For a full description of the Project, including budget, see Attachment A.

## Preferred Alternative

The Trustees propose to implement the Project as described. Factors we considered are presented in Table 1.

## Compliance with the National Environmental Policy Act

The DOI's Departmental Manual (DM Part 516 Chapter 8.5) provides a categorical exclusion for natural resource damage assessment restoration plans prepared under CERCLA when only minor or negligible change in the use of the affected areas is planned. Categorical exclusions are classes of actions that do not individually or cumulatively have a significant effect on the human environment.

The Project involves restoring natural habitat on land that is publicly owned. Activities include removal and treatment of invasive plants, seeding and planting of native vegetation, minor earth moving for erosion control/sediment reduction, placing a nesting platform for osprey on an island in the lake, trail enhancement, and interpretation of restoration. Accordingly, this Restoration Plan Addendum qualifies for categorical exclusion under the National Environmental Policy Act. We prepared an Environmental Action Statement (Attachment B) documenting this determination.

In addition, the Trustees will complete additional environmental compliance, such as Endangered Species Act Section 7 consultation requirements and National Historic Preservation Act consultation, as appropriate and necessary. All compliance documentation will be maintained as part of the administrative record.

A Notice of Availability for a 30 day comment period was published in the Leadville Herald-Democrat and several other Colorado newspapers the week of 13 May 2019. Copies of this Addendum were available for review at the U.S. Fish and Wildlife Service's Upper Arkansas River NRDAR website or by request. No comments were received.

Table 1. Analysis of Preferred Alternative against restoration project selection criteria.

Alternative	Project	Restoration Project Selection Criteria
Preferred	Sands Lake State Wildlife Area Restoration	<p><b><u>Threshold Acceptance Criteria – Project meets all</u></b></p> <ol style="list-style-type: none"> <li>1. Project must restore, replace, or acquire natural resources, not merely human services.</li> <li>2. Restoration projects must be subject to a reasonable degree of Trustee management, control, and monitoring.</li> <li>3. Project must have a reasonable likelihood of success. Project should be technically feasible and viable.</li> <li>4. Project must comply with laws and be protective of health and safety.</li> <li>5. Project must be generally acceptable to the public</li> </ol> <p><b><u>Project Evaluation Criteria</u></b></p> <ol style="list-style-type: none"> <li>1. Project consistent existing state, regional, and local resource management and development plans: Yes.</li> <li>2. Project provides higher flows of services throughout its lifetime and provides long-term sustainable service flows: Project will protect and enhance migratory bird and other local wildlife habitat; provide safe wildlife-related recreation and stewardship opportunities; provide restoration interpretation opportunity, and enhance aquatic habitat in the lake and river.</li> <li>3. Project has low operation and maintenance costs: Yes.</li> <li>4. Project will likely benefit more than one resource and one service: Yes.</li> <li>5. Project can be reasonably monitored and have benefits that can be measured: Yes.</li> <li>6. Project provides actual improvement to resources: Yes.</li> <li>7. Project is cost-effective: Yes.</li> <li>8. Project not likely to be fully funded through other mechanisms: Yes.</li> <li>9. Matching funds: \$27,799.</li> </ol>

## Literature Cited

Industrial Economics. 2006. Upper Arkansas River Basin Natural Resource Damage Assessment: Preliminary Estimate of Damages. Prepared for U.S. Fish and Wildlife Service, Bureau of Land Management, Bureau of Reclamation, Colorado Attorney General's Office, Colorado Department of Natural Resources, and Colorado Department of Public Health and Environment. December. Available: <http://www.fws.gov/mountain-prairie/nrda/LeadvilleColo/CaliforniaGulch.htm>.

Lipton, J. 2007. Expert Rebuttal Report of Joshua Lipton, PhD, ASARCO LLC Chapter 11 Bankruptcy, Case No. 05-21207, Coeur d'Alene Basin, Idaho. August 10.

Redente, E.F., W. Clements, S. Schumm, A. Archuleta, and S. Werner. 2002. Site Characterization Report for the Upper Arkansas River Basin. October 31.

Stratus Consulting. 2010. Final Restoration Plan and Environmental Assessment for the Upper Arkansas River Watershed. Prepared for U.S. Department of the Interior, U.S. Fish and Wildlife Service, U.S. Bureau of Land Management, U.S. Bureau of Reclamation, Colorado Department of Natural Resources, Colorado Department of Public Health and Environment, and Colorado Department of Law. Stratus Consulting Inc., Boulder, CO. April 10. <https://www.fws.gov/mountain-prairie/contaminants/upperArkansasRiver.php>

## Attachment A



### Sands Lake State Wildlife Area Restoration

Sands Land State Wildlife Area (SWA) is approximately 14-acres of property owned by the State of Colorado, located on the western boundary of the City of Salida. This small gem is a heavily used wildlife area and includes associated improvements (fishing pier, handicapped fishing access, parking, restroom and trail). The trail circles the lake and connects with a larger Arkansas River trail on both the eastern and western ends of the property. The Arkansas River is the boundary to the north. The SWA is managed by Colorado Parks and Wildlife's Mt. Shavano Fish Hatchery located approximately two miles from Sands Lake. The hatchery provides outflow water from the hatchery into Sands Lake, keeping the lake ice free in the majority of winters.

Sands Lake is the second most utilized outdoor site in the greater Salida area, after the white-water park and boat ramp in downtown Salida. Sands Lake is a very popular fishing location, especially for families. The SWA is also used for daily walking, dog-walking, birding, wildlife watching, and education programs.

Located on the edge of Salida, Sands Lake is an amazingly productive wildlife area. Besides rainbow trout, the wildlife area is a significant winter waterfowl area. Counts of over thirty Barrow's Goldeneye have been recorded. Other typical species include Cackling Goose, Gadwall, American Wigeon, Mallard, Green-winged Teal, Ring-necked Duck, Common Goldeneye, Bufflehead, and Common and Hooded Merganser. Other species, including three species of grebes use the lake during migration. Other bird species typically using the wildlife area are: Belted Kingfisher, Great-tailed Grackle, American Dipper, Yellow Warbler, Warbling Vireo, Bullock's Oriole, Black Phoebe, Sharp-shinned Hawk, Osprey, and many more. Unusual bird sightings are common due to both the habitat and number of observers at the site. In the winter of 2016-17, a male Long-tailed Duck spent several months on the lake. The Colorado Field Ornithologists website, Colorado County Birding <https://coloradocountybirding.org>, calls Sands Lake SWA the "hot spot for Chaffee County birds".

Wildlife watching is also popular at Sands Lake. Mule deer and red fox are regular sightings. A family of beaver live in the lake. The protected trail easements east and west of Sands Lake also provide a wildlife corridor for a variety of species.

The SWA is a well-known and popular location for both residents and visitors. No official visitation numbers are kept by Colorado Parks and Wildlife. A conservative estimate is 20 to 30 people

per day, year round. This would be 7,300 to 10,950 people per year, which is a high use rate considering the site size at 14-acres, most of it open water.

Restoration of Sands Lake SWA will enhance the site for both wildlife and people. The Central Colorado Conservancy has engaged Colorado Parks and Wildlife on discussions about what is needed and how to go about getting it accomplished. The discussions included staff from the Conservancy and the Mt. Shavano Hatchery manager and the Area Wildlife Manager. In addition, the Conservancy walked and photographed the site with the Chaffee County Noxious Weed Specialist. An invasive plant removal plan was drafted from this meeting. The Central Colorado Conservancy has several staff with extensive restoration experience.

The following tasks have been identified for restoration at the site:

- Task A: Removal and control of seven invasive plants.
  - Cut, treatment and removal of approximately 50 Russian olive trees (*Elaeagnus angustifolia*). This species is listed in the B category on the State of Colorado noxious weeds list.
  - Removal and treatment for common burdock (*Arctium minus*). This species is listed in the C category on the State of Colorado noxious weeds list. Common burdock has spread steadily at Sands Lake and covers approximately 60% of the edges of the trail running around the lake. This species is particularly annoying for visitors and their pets because of the barbs on the seed heads catching on clothes or fur.
  - Removal and treatment of common mullein (*Verbascum thapsus*). This species is listed in the C category on the State of Colorado noxious weeds list. Mullein is scattered around the site and has several concentrated patches.
  - Removal and treatment of bull thistle (*Cirsium vulgare*). This species is listed in the B category on the State of Colorado noxious weeds list. Bull thistle is limited on the site at the current time and we hope for complete eradication.
  - Removal and treatment of Canada thistle (*Cirsium arvense*). This species is listed in the B category on the State of Colorado noxious weeds list. Four large patches exist of this plant.
  - Removal of Russian thistle (*Salsola turgus*). The weed is scattered around the site but is not particularly prevalent.
  - Removal of Kochia (*Kochia scoparia*). Three patches of Kochia exist on site, centered around areas of human disturbance including the parking areas.

Long term management of the above invasive species will be through the Conservancy's Conservation Stewards program. Several volunteer stewards will be assigned Sands Lake to keep invasives in check once initial removal and treatment plans are put into effect.

Task B: Planting of native trees and shrubs, spreading of seed for native grasses and forbs. Increase the amount of coverage of showy milkweed as a nectar and larval food plant for monarch butterflies. After removal of invasive species, the Conservancy will plant a variety of species. Plants are obtained from a restoration nursery in Buena Vista, Colorado that specializes in native plants. These species will include:

- Narrowleaf Cottonwood (*Populus angustifolia*)
- Peachleaf Willow (*Salix amygdaloides*)
- Chokecherry (*Prunus virginiana*)
- Red-osier Dogwood (*Cornus alba*)
- Speckled Alder (*Alnus incana*)
- Common Snowberry (*Symphoricarpos albus*)
- Serviceberry (*Amelanchier alnifolia*)
- Wood's Rose (*Rosa woodsii*)
- Rubber Rabbitbrush (*Ericameria nauseosa*)
- Three-leaf Sumac (*Rhus trilobata*)

A native seed mix of grasses and forbs will be used in certain areas. Seed is purchased from Western Native Seed in Coaldale, Colorado.

Task C: Erosion control along the Arkansas River and the lake. There are eight critical areas of erosion, where the banks are adding sediment to the river or lake. Using log structures and plantings we will terrace these banks and reduce sediment in our waterways. Hiring a part-time crew will make this possible because of the physical work involved.

Task D: Colorado Parks and Wildlife has agreed to the placement of an Osprey platform on one of the two islands in the lake. The Osprey is making a comeback in Colorado with nesting nearby. For the last two years, a pair of Osprey have nested on light pole at the ballfields about a mile from Sands Lake. This nest was recently destroyed and the hope is the pair will move to Sands Lake. An island site will reduce potential impacts from human disturbance and land based predators.

Task E: All new plantings and many existing trees will be protected by welded wire from beavers. Sands Lake has lost many trees, including some large cottonwoods to beaver activity. In order to protect the habitat values for birds and people, a percentage of the trees will have to be protected from loss.

Task F: The trail system and shoreline along the lake and river are heavily impacted due to human use. The Conservancy has identified areas to foster willow and other plant growth. These areas will be fenced with a low, discrete system and signed with "habitat restoration in progress, please stay out" signs.

Task G: The project will use several temporary signs during restoration to explain to visitors the work being carried out and its importance. Additional signs will identify restoration sites and restrict access. One permanent sign will be produced interpreting restoration at the site.

**Budget**

Project Director – liaison with Colorado Parks and Wildlife, manage work crew, order plants and materials, schedule and coordinate volunteer work days.

\$25/hour @ 250 hours = \$6,250

Work crew – handle the on-the-ground difficult physical work including erosion control structures, moving materials, and fencing.

Three crew members at \$15/hour @ 180 hours = \$8,100

Materials – including logs, fencing, stakes, and erosion control mats.

\$3,000

Plants and seed – locally sourced native species.

\$1,000

Fencing and tree tubes – protection for plants and sensitive ecological areas.

\$1,000

Signs – public education to identify areas of restoration and important features, includes art design, production and installation.

\$1,500

Public relations – contract with local journalist to write story about project, get the word out about what is happening and why to the public. Includes, local newspapers, radio stations, webpage and Facebook.

\$600

Safety equipment – for use with crew and volunteers, including hard hats, gloves and safety equipment for chain saw use.

\$800

Travel – covers mileage for project director.

Standard Federal rate of 54.5 cents per mile, 642 miles = \$350

Project administration and supplies – includes administration of the project, office space, telephone, office supplies and other support of the project.

10% of total project - \$2,260

Total = \$24,860

The Conservancy will use its professional staff to finalize plans and coordinate the overall project. The organization will also take advantage of its large volunteer program to assist in restoration activities. Funding will be used to hire a crew that can tackle the more physically demanding work. This type of

work requires a crew able to move logs, dig trenches and haul heavy loads. The crew will then be on hand as the need arises to complete various tasks. The Conservancy also has a supply of tools, a work truck and other equipment needed for the project. This equipment is already purchased and is available for use.

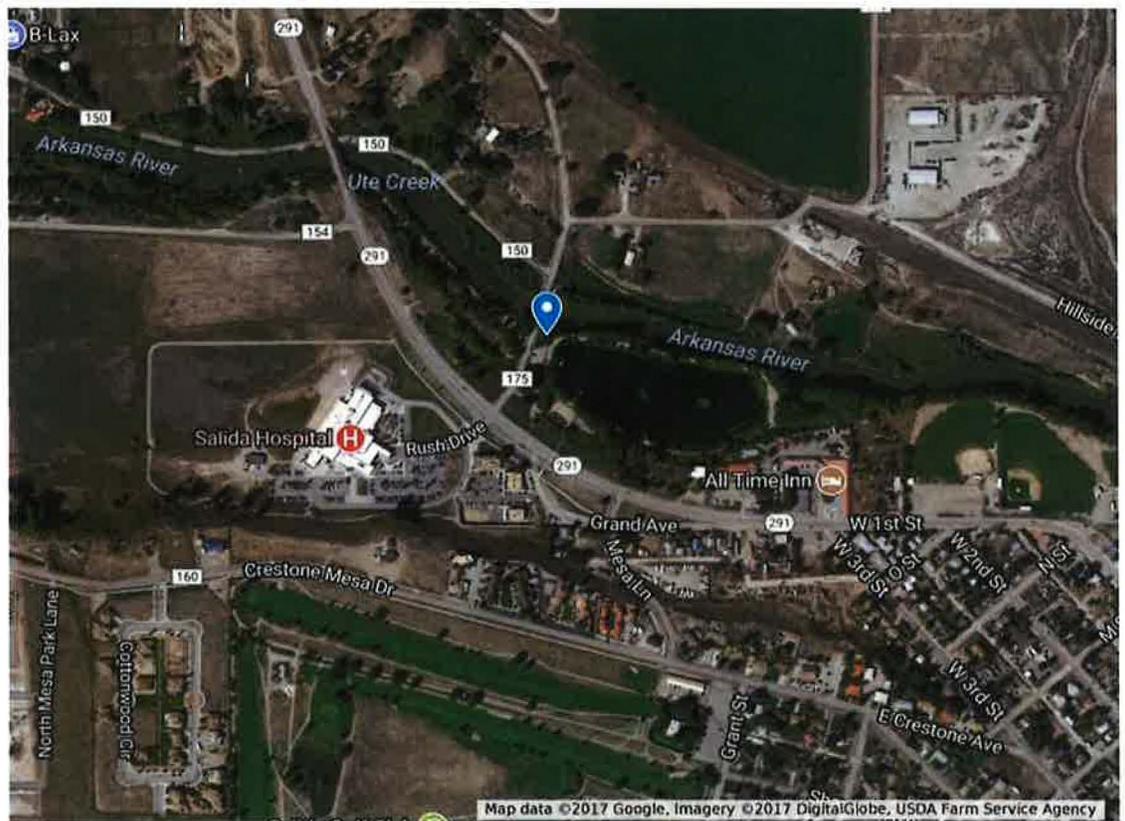
In partnership with Colorado Parks and Wildlife, the Conservancy is developing a plan for monitoring and evaluating the success of the project. All projects involving invasive plant control require on-going stewardship activities. For this project, the Conservancy will recruit, train and manage several volunteers to act as on-going stewards for Sands Lake. The volunteers will become part of the larger Conservancy's Conservation Stewards program. This program includes training and recognition events for volunteers. The Conservancy's Watershed Restoration Specialist already has a database tracking milkweed patches in the region as part of an effort to increase pollinator species.

Sands Lake SWA is an amazing property used by many residents and visitors to Chaffee County. It is a true wildlife haven on the edge of the City of Salida. Funding for this project will make restoration possible benefiting both people and wildlife. Colorado Parks and Wildlife has only a modest maintenance budget for Sands Lake, dramatically insufficient to undertake restoration work on the property. The partnership with the Central Colorado Conservancy is a brilliant strategy of implementing this project bringing the restoration expertise of the organization in to play.

# Sands Lake Restoration Project - Central Colorado Conservancy and Colorado Parks and Wildlife

Restoration site

 Sands Lake SWA



**Central Colorado Conservancy**  
**Sands Lake State Wildlife Area Restoration**  
**Friday, November 16, 2018**

	<b>NRDAR Funds</b>	<b>Match Complete</b>	<b>Match Planned</b>
Project Management (\$25/hour for 250 hours)	\$6,250	\$2,080	\$3,520
Invasive Weed Management (Plan Development, Labor, Chemicals)		\$2,700	\$2,000
Work Crew for erosion control (3 @ \$15/hour for 180 hours)	\$8,100		
Erosion Control Materials (Logs, Mats, Stakes)	\$3,000		\$1,500
Native Trees, Shrubs and Seed	\$1,000	\$275	\$1,500
Fencing and Tree/Shrub Protection	\$1,000	\$475	\$1,300
Signs - Public Education (Design, Art, Fabrication, Install)	\$1,500		\$2,500
Public Outreach (Contractor - working with local media, stories, etc.)	\$600	\$850	\$1,750
Safety Equipment (Hard Hats, Chain Saw Related, Etc.)	\$800	\$400	
Other Equipment (Root Slayers, Etc.)		\$550	\$300
Materials- Consumables (Nails, Screws, Storage Boxes, Tape, Etc.)		\$75	\$200
Travel (Federal Rate - 54.5 cents per mile)	\$350	\$150	\$150
Osprey Platform (Pole, Platform, Concrete)		\$85	\$650
Administration and Supplies (10% of Project)	\$2,260	\$766	\$4,023
<b>Subtotals</b>	<b>\$24,860</b>	<b>\$8,406</b>	<b>\$19,393</b>
<b>Total Match</b>	<b>\$27,799</b>		
<b>Total Project Costs</b>	<b>\$52,659</b>		

Attachment B

**U.S. FISH AND WILDLIFE SERVICE**

**ENVIRONMENTAL ACTION STATEMENT**

**Restoration Plan Addendum (2019) for the Upper Arkansas River Basin Watershed**

Within the spirit and intent of the Council on Environmental Quality's regulations for implementing the National Environmental Policy Act (NEPA) and other statutes, orders, and policies that protect fish and wildlife resources, I have established the following administrative record and have determined that the action of the Final Restoration Plan Addendum for the Upper Arkansas River Watershed near Leadville, CO:

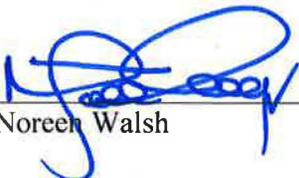
XX is a categorical exclusion as provided by DM Part 516 Chapter 8.5. No further documentation will therefore be made.

\_\_\_ is found to not have significant environmental effects as determined by the attached Environmental Assessment and Finding of No Significant Impact.

\_\_\_ is found to have significant effects, and, therefore further consideration of this action will require a notice of intent to be published in the Federal Register announcing the decision to prepare an Environmental Impact Statement.

\_\_\_ is not approved because of unacceptable environmental damage, or violation of U.S. Fish and Wildlife Service mandates, policy, regulations, or procedures.

\_\_\_ is an emergency action within the context of 40 CFR 1506.11. Only those actions necessary to control the immediate impacts of the emergency will be taken. Other related actions remain subject to NEPA review.

  
Noreen Walsh

Date 9.6.19

Regional Director, U.S. Fish and Wildlife Service, Mountain-Prairie Region  
Department of the Interior Unified Regions 5, 7 and 9  
Authorized Official of the U.S. Department of the Interior, Upper Arkansas River NRDAR

**U.S. Department of the Interior Approval**

**of the**

**Restoration Plan Addendum (2019) for the Upper Arkansas River Basin Watershed and Environmental Assessment**

In accordance with the U.S. Department of the Interior policy regarding documentation for natural resource damage assessment and restoration projects (DM Part 521 Chapter 3), the Authorized Official for the Department must demonstrate approval of draft and final restoration plans and their associated National Environmental Policy Act documentation, with concurrence from the Department's Office of the Solicitor.

The Authorized Official for the Upper Arkansas River natural resource damage assessment case is the Regional Director for the U.S. Fish and Wildlife Service's Mountain-Prairie Region.

By the signatures below, the Final Restoration Plan Addendum for the Upper Arkansas River Basin Watershed and Environmental Assessment is hereby approved.

Approved:

  
for Noreen Walsh \_\_\_\_\_ 9.6.19  
Date

Regional Director, U.S. Fish and Wildlife Service, Mountain-Prairie Region  
Department of the Interior Unified Regions 5, 7 and 9  
Authorized Official, U.S. Department of the Interior, Upper Arkansas River NRDAR

Concurred:

  
Dana Jacobsen \_\_\_\_\_ 08/27/19  
Date

Assistant Regional Solicitor, Parks and Wildlife  
Office of the Solicitor

Upper Arkansas River NRDAR, Concurrence to Approve the May 2019 Addendum to the Restoration Plan and Environmental Assessment for the Upper Arkansas River Watershed and sign the Environmental Action Statement.

\_\_\_\_\_  
U.S. Bureau of Land Management

\_\_\_\_\_  
Date

  
\_\_\_\_\_  
U.S. Bureau of Reclamation

*August 6, 2019*  
\_\_\_\_\_  
Date

Upper Arkansas River NRDAR, Concurrence to Approve the May 2019 Addendum to the Restoration Plan and Environmental Assessment for the Upper Arkansas River Watershed and sign the Environmental Action Statement.

  
\_\_\_\_\_  
U.S. Bureau of Land Management

8-19-19  
Date

\_\_\_\_\_  
U.S. Bureau of Reclamation

\_\_\_\_\_  
Date