

**U. S. Department of the Interior  
Bureau of Land Management**

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**Final Environmental Assessment**

**DOI-BLM-NV-L030-2012-0029-EA**

June 20, 2012

Condor Canyon Restoration Project

*Lincoln County, Nevada*

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# 1.0 Introduction

This document identifies issues, analyzes alternatives, and discloses the potential environmental impacts associated with the Condor Canyon stream restoration project. We prepared this environmental assessment to determine whether effects of the proposed activities may be significant enough to prepare an environmental impact statement. By preparing this environmental assessment, we are fulfilling agency policy and direction to comply with the National Environmental Policy Act (NEPA) and other relevant Federal and state laws and regulations.

## 1.1 Background

Located in east-central Nevada, the Meadow Valley Wash drains approximately 2.4 million acres of Lincoln County and is ultimately a tributary to the Colorado River. Within historic memory, Meadow Valley Wash has undergone significant hydrologic alternations and intensive uses that have resulted in both direct degradation and indirect modifications of habitat potential for terrestrial and aquatic wildlife species. These impacts have led to a preponderance of state and federal listed species within the Meadow Valley Wash that includes the only known populations of Big Spring spinedace (*Lepidomea mollispinis pratensis*).

The Big Spring spinedace is a member of the minnow family (Crypinidea) that is endemic to Meadow Valley Wash. The entire known range of the species lies within an 8-km reach of the wash, flowing through a mosaic of public and private land and mostly within the confines of Condor Canyon, near Panaca, Nevada. Due primarily to habitat modifications and the introduction of nonnative fish, the Big Spring spinedace was thought to be extirpated until a healthy population was found in 1977 at the base of a 40 foot waterfall (“Delmue Falls”) in Condor Canyon. The species was listed as threatened under the Endangered Species Act in March 1985.

Two plans have been written to address management needs of the Big Spring spinedace. In 1990, the Bureau of Land Management (BLM) and Nevada Department of Wildlife (NDOW) signed the Condor Canyon Habitat Management Plan (HMP), and in 1994 the US Fish and Wildlife Service (USFWS) issued the Big Spring Spinedace Recovery Plan (RP). In 2004, the Ely District BLM submitted the “Meadow Valley Wash T&E Habitat Restoration/Noxious Weed Control” project proposal with objectives to implement some portions of the Condor Canyon HMP (BLM 1990) and Big Spring Spinedace RP (USFWS 1994). The proposal was funded as a Round 6, Southern Nevada Public Land Management Act (SNPLMA) Conservation Initiative (CI) (BL44-6-20). The proposed action (PA) contained herein is related to implementation of this CI.

Because only one population of Big Spring spinedace is known to exist, this species is particularly vulnerable to catastrophic events, human-induced habitat modifications, and non-native species introductions. Significant infrastructure development within Condor Canyon appears to have begun in 1872 with construction of a silver ore mill. Railroad operation was initiated not long after, with varying degrees of activity in the canyon from 1873 through 1983. Current primary land uses are grazing, recreational use by off-road vehicles and dispersed camping.

In 1999, a wildfire directly eliminated the canopy cover of mature trees in Condor Canyon. As a result, the canyon is currently characterized by an early regenerating state of native willows, with a few stands of mature box elder and black willow. Despite successful efforts to reduce salt cedar densities, the species remains in very small pockets and has lessened native diversity of woody and herbaceous vegetation and decreased perennial stream flow. There is evidence that the post-fire loss of a healthy population of black willow has resulted in increased presence of cattails as well. Resulting monotypic cattail stands have created impregnable blockades to natural fish movements, created substrates for non-native predatory

crayfish, impeded natural stream flow channels, and severely reduced native submerged aquatic diversity and available aquatic fish spawning habitats.

In 2007, a geomorphic assessment of Condor Canyon was conducted by PBS&J. Ten distinct stream reaches totaling approximately 4.4 miles were identified during the assessment. Reach segments were distinguished from one another by differences in one or more of the following factors: degree of entrenchment, degree of floodplain development, channel gradient, sinuosity, bank stability and differences in riparian vegetation.

Later, in 2008, fisheries researchers from the U.S. Geological Survey (USGS) were contracted to address the following objectives: (1) assess the stream-habitat conditions of MVW within Condor Canyon; (2) determine abundance and distribution of native and non-native fish within Condor Canyon, with emphasis on Big Spring spinedace; (3) assess age structure, growth rate, and movement of native and non-native fishes within Condor Canyon, with emphasis on Big Spring spinedace; and (4) summarize findings to assist managers with options for restoration efforts and management actions that are most likely to increase the probability of persistence of the native fish species in Condor Canyon (USGS 2011). Current threats to spinedace include but are likely not limited to: nonnative species (rainbow trout (*Oncorhynchus mykiss*) and signal crayfish (*Pacifastacus keniusculus*) in particular), water manipulation due to railroad activities in Meadow Valley Wash, water impoundment (natural and man-made), fine sediment accumulation and floods.

The proposed action has been developed based on professional judgment of fisheries and wildlife biologists associated with the Recovery Implementation Team (RIT – USFWS, NDOW, BLM, and TNC), the best available science and findings from the geomorphic assessment (2007) and USGS Condor Canyon spinedace and other fisheries habitat study (2011), and recent (August 2011) on the ground assessments of the feasibility of different components of the proposed action.

### ***1.1.1 Location of the Proposed Action***

First, Condor Canyon is located in Lincoln County Nevada approximately 2.5 miles NE of the city of Panaca (Appendix I - Maps). The action area would include the Condor Canyon corridor from the culvert near the Delmue ranch on the NE end (NAD83 UTM Zone 11 - 735855/4194375) to the mouth of the canyon on the SW end (NAD83 UTM Zone 11 - 730844/4190235). The riparian area in Condor Canyon encompasses approximately 50 acres and is located within the Dry Valley and Panaca Valley Watersheds (#207 and #210).

#### **General Project Location:**

T.01 S. R. 68 E. Sections 13, 23, 27, and 28

## **1.2 Purpose and Need for Action**

The purpose of the proposed action is to restore and enhance portions of Big Spring spinedace habitat in the Condor Canyon area to increase the probability that the spinedace population will improve. The long-term goal is to delist the species, and this project would be one of the steps in working toward that goal. The proposed action is needed to mitigate some of the aforementioned effects of natural (fire) and human (mining infrastructure, non-native trout and crayfish, cattail and weed introduction) disturbance. Through these efforts the BLM would implement: 1) objectives from the Big Spring spinedace recovery plan (1994) and the Endangered Species Act (1973), 2) portions of the Condor Canyon HMP (1990), 3) group suggestions from the Recovery Implementation Team (USFWS, NDOW, BLM, TNC), portions of the Ely District Approved Resource Management Plan/Final Environmental Impact Statement (November 2007),

and complete the final phase of the Southern Nevada Public Land Management Act (SNPLMA) Conservation Initiative (CI) (BL44-6-20).

## 1.3 Scoping, Public Involvement, and Issues

On August 2, 2011, an internal meeting was held in coordination between the Caliente Field Office and the Ely BLM District Office. The Condor Canyon stream restoration project was presented and scoped by resource specialists to identify any relevant issues. Three potential early issues were identified: cultural site eligibility of the railroad grade, water rights of the perched spring, and protection of the Big Spring spinedace during project implementation.

BLM also worked with Nevada Department of Wildlife (NDOW) and the U.S. Fish and Wildlife Service (USFWS) to create the proposed action, to minimize effects to the spinedace and critical habitat, and to take into account the multiple use nature of the project area.

On April 20, 2012, a letter was sent to local Native American tribes requesting comments by May 21, 2012 regarding the Condor Canyon stream restoration project.

## 2.0 Proposed Action and Alternatives

### 2.1 Proposed Action

The Bureau of Land Management (BLM) Caliente Field Office proposes to restore and improve Big Spring spinedace habitat in the Condor Canyon area. There would be five different components of the proposed action, and they are detailed below.

1. Remove cattails (*Typha spp.*) and bulrushes (*Carex spp.*) from the waterway by hand in reaches A, B, 1, 2, 3, 4, 6, and 7 (Appendix III).
  - a. The intent of this component of the proposed action would be to improve stream flow, decrease coverage of cattails to promote the possible increase of natural vegetation (i.e. willows and watercress), decrease hiding cover for the non-native predatory crayfish, and reduce siltation and aggregation of particulates throughout the stream channel.

Removal would occur by hand, using shovels in the stream channel and at the side of the bank. As the estimated spawning period likely occurs from April to June (pers. comm. Jon Sjoberg – NDOW – Dec. 2011), no in-stream work would occur until July 1. All efforts would be made to minimize the spread of current year's seeds. No herbicides would be used due to the sensitive nature of the spinedace.

2. Plant sandbar (*Salix exigua*) and black willow (*Salix gooddingii*) in reaches A, B, 1, 2, 3, 4, 5, 6, and 7 (Appendix III).
  - a. The intent of this component of the proposed action would be to increase native vegetative cover, to increase shading of the stream both to cool water temperatures and to shade out cattails and bulrushes, to stabilize the bank during daily and high flow events, and to restore the area to a more natural state post-fire.

Sandbar and black willow plantings would occur at the edges of both sides of the stream in the reaches mentioned above. Spacing would depend upon existing willows/trees along

the riparian corridor. Plantings would come from willows found within the Condor Canyon drainage and would be planted in groups to insure better success.

3. Reconnect the perched spring in Reach 2 to the main channel (Appendix III).
  - a. The intent of this component of the proposed action would be to rejoin a spring to the main stream channel after it was likely cut off due to creation of the railroad bed sometime in the late 1800s or early 1900s. In a desert ecosystem, any additional perennial or ephemeral spring water to the main channel could potentially increase or maintain habitat, stream flow conditions, and water temperatures. It would also ensure that the historic railbed is protected from future erosion by providing a place for the water to escape without eroding through the bed.

The perched spring would be reconnected to the main channel through a culvert that runs below the railroad bed and via an excavated small channel that would lead to the main channel. The list of tasks needed to accomplish the proposed action, as well as preliminary quantities are in a bulleted list below.

- Existing area of spring is approximately 9000 sq ft.
- Remove cattails and bulrushes from around and in the spring. Replace them with sandbar willow plantings.
- Connect spring to the main channel by installing a culvert, 3-4 ft in diameter culvert through the railroad grade.
- Set gradient of the culvert at a similar grade to the existing main channel.
- Restore the railroad bed, as closely as possible, to its original form.
- Excavate a small channel, approximately 3-5 ft wide and 200 ft in length, to the main channel.
- Approximately 100 cu yds of material would be moved for channel construction and floodplain contouring.
- Approximately 10 cu yds of rock products would be brought in to minimize siltation and erosion and maximize long-term site stability.
- Plant sandbar and black willow along the stream margins up to the bank full elevation along the constructed channel and floodplain.
- Construct a small fence around the spring to protect it from livestock, wildlife, and people.

4. Restore floodplain, channel width, and channel location in a portion of Reach 7 (Appendix III).
  - a. The intent of this component of the proposed action was born of recommendations by the RIT to restore part of the channel, in a "test section." All agreed that it would be good to attempt to restore an area to a more natural state, especially if the test section would likely have minimal impacts to the fish. As most spinedace are above the falls, and because this section was straightened out and moved, it appears to be a good candidate for habitat improvement.

This section of Reach 7 would be modified to increase and create a more natural floodplain area and to reduce channel erosion. This is also an attempt to improve spinedace habitat in Condor Canyon. The tasks needed to complete this portion of the proposed action are bulleted in a list below.

- Use Reach 6 as a reference for the designed channel pattern and dimension of the reconstructed channel.

- Increase channel length by relocating the channel to its previous location north of the exiting channel and along the existing railroad bed.
  - The reconstructed channel along the railroad bed would have a bank full ledge or buffer to reduce erosion of the railroad bed during high floods.
  - Reconstructed channel length would be approximately 1000 ft (existing channel length = 725 ft).
  - Additional channel length or instream habitat gained is approximately 275 ft.
  - Reduce high flood impacts by reducing berm (Photo 1) height down to the bank full elevation.
  - Fill old channel up to the bank full elevation and re-contour floodplain.
  - Approximately 1000 cu yds of material would be moved for channel reconstruction and floodplain contouring.
  - Plant sandbar and black willow along the stream margins up to the bank full elevation along the constructed channel and floodplain.
5. Construct an informational kiosk about Condor Canyon, the Big Spring spinedace, and the proposed work to improve the area.
- a. The intent of this component of the proposed action is to reach out to the interested public who want to know more about what has happened, what currently happens, and what is proposed to occur in the canyon to improve threatened species habitat.

The two panel kiosk would be placed on public land in Condor Canyon. It would require three post holes to be dug. It would be assembled on site. We would not place the kiosk on or near any cultural sites or near any other sensitive areas.

## 2.2 No Action Alternative

The No Action Alternative would reflect the status quo. Nothing would change in Condor Canyon, and current conditions, as described below (3.0 Description of the Affected Environment), such as a lack of native willows, cattail and bulrush choked waterways, a perched spring, and current conditions of the main channel, would remain the same.

## 2.3 Conformance

The proposed action is in conformance with the Ely District Record of Decision and Approved Resource Management Plan signed August 20, 2008, wherein the goal for special status species states that the BLM will, “Manage public lands to conserve, maintain, and restore special status species populations and their habitats; support the recovery of federally listed threatened and endangered species; and preclude the need to list additional species (p. 37).”

Management Action SS-1 states, “Prioritize conservation, maintenance, and restoration actions for special status species based on the following order of importance: 1) federally listed endangered species, 2) federally listed threatened species, 3) federal proposed species, 4) federal candidate species, and 5) BLM sensitive species.”

Management Action SS-3 states, “Participate on interagency recovery implementation teams to identify and address implementation of management actions for the recovery of listed species in the Ely planning area.”

Management Action SS-17 states, “Manage Big Spring spinedace habitat by implementing those actions and strategies identified in the Big Spring Spinedace Recovery Plan that the Ely District Office has the authority to implement, and in accordance with the Condor Canyon Habitat Management Plan.”

All project design features including management actions from the Ely District Record of Decision and Approved Resource Management Plan signed August 20, 2008, Best Management Practices, and Terms and Conditions and Conservation Recommendations from the RMP Biological Opinion (District Manager File Nos. 84320-2008-F-0078, 84320-2008-I-0079, and 84320-2008-TA-0080) that are applicable to this project can be found in Appendix II.

### ***2.3.1 Tiering***

This document is tiered to the Ely Proposed Resource Management Plan/Final Environmental Impact Statement (November 2007).

### ***2.3.2 Relationship to Other Laws, Regulations, and Plans***

The proposed action is consistent with the following Federal, State, and local plans to the maximum extent possible.

- Endangered Species Act of 1973 (as amended)
- Migratory Bird Treaty Act (1918 as amended) and Executive Order 13186 (1/11/01).
- Federal Land Policy and Management Act (FLPMA – 1976)
- National Environmental Policy Act (1969)
- State Protocol Agreement between the Bureau of Land Management (BLM), Nevada and the Nevada State Historic Preservation Office (1999).
- Big Spring spinedace recovery plan (1994)
- Condor Canyon Habitat Management Plan (1990)

## **3.0 Affected Environment and Environmental Effects**

### **3.1 Project Area Description**

Condor Canyon is located in Lincoln County Nevada approximately 2.5 miles NE of the city of Panaca (Appendix I). The project area would include the Condor Canyon corridor from the culvert near the Delmue ranch on the NE end (NAD83 UTM Zone 11 - 735855/4194375) to the mouth of the canyon on the SW end (NAD83 UTM Zone 11 - 730844/4190235). The riparian area in Condor Canyon encompasses approximately 50 acres and is located within the Dry Valley and Panaca Valley Watersheds (#207 and #210).

None of Condor Canyon is located within a Wild Horse Herd Management Area (HMA), Wilderness or Wilderness Study Area or within desert tortoise habitat. However, most of the project is located within critical habitat of the Big Spring spinedace.

### **3.2 Resources/Concerns Considered for Analysis**

The following items have been evaluated for the potential for significant impacts to occur, either directly, indirectly, or cumulatively, due to implementation of the proposed action. Consideration of some of these

items is to ensure compliance with laws, statutes or Executive Orders that impose certain requirements upon all Federal actions. Other items are relevant to the management of public lands in general and to the Ely BLM in particular.

<b>Resource/Concern Considered</b>	<b>Issue(s) Further Analyzed</b>	<b>Rationale for Dismissal from Analysis or Issue(s) Requiring Additional Analysis</b>
Air Quality	No	The State of Nevada has classified Lincoln county as meeting, exceeding, or being unclassifiable for the pollutants they monitor. Effects of the proposed action on air quality would be minor and ephemeral, not measurable in the project area. Therefore no effects analysis is necessary.
Cultural Resources	Yes	There would likely be impacts to some cultural resources due to implementation of the proposed action. Therefore a detailed analysis and reference to the cultural report (secured on file in the Caliente Field Office) are found below in section 3.3.
Paleontological Resources	No	No currently identified paleontological resources are present in the project area.
Native American Religious Concerns and other concerns	No	Tribal coordination occurred in August 2011. No concerns were identified.
Noxious and Invasive Weed Management	Yes	Implementing the proposed action has a low likelihood to spread noxious and invasive weeds. Detailed effects analysis can be found in section 3.4 below and in the noxious and invasive weed risk assessment found in Appendix V.
Vegetative Resources	Yes	There would be effects to the vegetative community in the riparian area. This is one of the major components of the proposed action, to improve and restore the riparian vegetative community to a more natural state. Further analysis can be found below in section 3.5.
Rangeland Standards and Health	No	No changes would occur to rangeland standards or health, therefore there would be no impact.
Forest Health <sup>1</sup>	No	There are no Pinyon-juniper woodlands located within the project area.
Wastes, Hazardous or Solid	No	No hazardous or solid wastes exist on the permit renewal area, nor would any be introduced by the proposed action or alternatives.
Wilderness	No	The project area is not located within a Wilderness or Wilderness Study Area.
Lands with Wilderness Character	No	The initial 1979/1980 wilderness inventory found wilderness character lacking for the unit including the project area. The implementation of this project would alter naturalness in the short term, with a benefit in the long term, should an update to the Lands with Wilderness Character inventory occur in the future.
Special Designations other than Designated Wilderness	No	The Condor Canyon ACEC was designated in the Ely Proposed Resource Management Plan/Environmental Impact Statement (November 2007) and ROD (2008) to protect, conserve, and enhance Big Spring spinedace and its critical habitat. As the purpose of this project is to improve spinedace habitat and thereby recover or improve the population over time, no adverse effects to the Condor Canyon ACEC would occur. Therefore no additional analysis is needed.
Wetlands/Riparian Zones	Yes	As there would be short and long-term effects, both negative and positive associated with the proposed action, additional analysis can be found below in section 3.6.
Water Quality, Drinking/Ground	No	The proposed action may increase short-term turbidity levels approximates 100 feet below construction activities. However, these effects would be negligible, and over a short period of time, water quality would return to normal. No further analysis is necessary.
Water Resources (Water Rights)	No	The Proposed Action would not affect existing or pending water rights in the project area. The proposed action would permit reconnection of a detached spring, due to the creation and reconstruction of the railroad bed (1870s and early 1900s respectively), back to the main channel.  Protection would be provided as necessary on a case-by-case basis to maintain

<b>Resource/Concern Considered</b>	<b>Issue(s) Further Analyzed</b>	<b>Rationale for Dismissal from Analysis or Issue(s) Requiring Additional Analysis</b>
		aquatic habitat for special status aquatic species (page 4.3-7). Therefore no additional analysis is necessary.
Floodplains	No	No floodplains have been identified by HUD or FEMA within the project area. Floodplains, as defined in Executive Order 11988, may exist in the area, but would not be affected by the proposed action or alternatives.
Migratory Birds	Yes	Migratory birds occur in the area and a detailed analysis can be found below in section 3.7.
U.S. Fish and Wildlife Service (USFWS) Listed or proposed for listing Threatened or Endangered Species or critical habitat.*	Yes	The Big Spring spinedace is a known Threatened species that occurs only in Condor Canyon. Critical habitat encompasses 4 miles of Meadow Valley Wash and a 50-foot riparian zone along each side of the stream as it flows through Condor Canyon. A full analysis is contained in section 3.8 below.
Special Status Plant Species, other than those listed or proposed by the USFWS as Threatened or Endangered	No	There are no BLM Special Status Plant Species known to occur within the project area.
Special Status Animal Species, other than those listed or proposed by the USFWS as Threatened or Endangered	Yes	There are three known BLM Special Status Animal Species or their habitat known to occur within Condor Canyon or the project area: Meadow Valley Wash desert sucker, Meadow Valley Wash speckled dace, and unoccupied desert bighorn sheep habitat. An analysis of effects are detailed below in section 3.9.
Fish and Wildlife	Yes	The following species or their habitat may occur in the project area: marsh snail, fingernail clam, American badger, bobcat, coyote, and mule deer crucial winter habitat. Additional analyses can be found below in section 3.10.
Wild Horses	No	The project area is not located within a Wild Horse Herd Management Area (HMA).
Soil Resources	Yes	Soils Resources, within the project area, have been disturbed during the past 100+ years due to activities related to the railroad, recreation, flood events, and grazing. The proposed action would disturb less than 5 acres within Condor Canyon, most of which is already disturbed. Soils moved in reach 7 as part of the proposed action, would be an attempt to rebuild a small flood plain and to improve spinedace habitat, making it look more like reach 6 wherein more native fish are found. It is expected that the Proposed Action would not lead to measureable effects within the project area. Therefore, no additional analysis is necessary.
Mineral Resources	No	There would be no modifications to mineral resources through the proposed action; therefore, no direct or cumulative impacts would occur to minerals.
VRM	No	The proposed action is consistent with the VRM classifications 3 and 4 for the area; therefore no direct or cumulative impacts to visual resources would occur.
Recreation Uses	No	The proposed action would result in no direct or cumulative impacts to recreational activities.
Grazing Uses	No	No changes to livestock grazing would occur as a result of the proposed action; therefore no direct or cumulative impacts would occur.
Land Uses	No	There would be no modifications to land use authorizations through the proposed action, therefore no impacts would occur. No direct or cumulative impacts would occur to access and land use.
Environmental Justice	No	No environmental justice issues are present at or near the project area. No minority or low income populations would be unduly affected by the proposed action.

## 3.3 Cultural Resources

### 3.3.1 *Affected Environment*

Condor Canyon is rich in pre-historical and historical use. The project area is located within the traditional territory of the Southern Paiute. The Matiabits or Panaca, a subgroup of the Southern Paiute occupied portions of southeastern Nevada and western Utah and are thought to have resided in this area less than 800 years B. P. until Euro-American settlement. The cultural life ways of the Southern Paiute generally followed a seasonal round of plant food collection, hunting and horticulture. Problems for this group arose when settlers/miners began to set claim on the area due to the amount of silver found near Pioche. Due to this mining boom, the area saw rapid development, including development of a railroad bed and infrastructure throughout Condor Canyon to get ore to the mills. Remnants of some of these pre-historical and historical uses can be found throughout the canyon.

### 3.3.2 *Environmental Effects*

Impacts from vegetation management and noxious and invasive weed management on Cultural Resources are analyzed on page 4.9-2 and 4.9-6 of the Ely Proposed Resource Management Plan/Environmental Impact Statement (November 2007). In addition, in the Ely District Approved Resource Management Plan, August 2008, (RMP) it is the goal of the Ely District to identify, preserve, and protect significant cultural resources and ensure that they are available for appropriate uses by present and future generations. The BLM is supposed to protect and maintain these cultural resources on BLM-administered land in stable condition. To accomplish this the BLM is to seek to reduce imminent threats and resolve potential conflicts from natural or human-caused deterioration or potential conflict with other resource uses by ensuring that all authorizations for land use and resource use will comply with the National Historic Preservation Act, Section 106. In accordance with this act, “any material remains of past human life or activities which are of archaeological interest” shall be assessed and secured “for the present and future benefits of the American People”. Therefore, all ground disturbing activities related to this proposed action would be subject to Section 106 review and SHPO consultation.

#### 3.3.2.1 Proposed Action

In August 2011, a class III inventory was completed in order to identify cultural and historic properties and to assess whether due to the proposed action there would be any adverse effects to said properties. A report was finalized in January 2012 (secured within the project record). As the railroad bed is eligible for listing on the National Register of Historic Places, digging through it to reattach a perched spring to the main channel would affect this historic property. The BLM through consultation with SHPO determined that this effect would not be adverse. SHPO agreed with these findings, and a letter of concurrence was received on April 16, 2012 (please see Appendix IV). No additional effects to cultural properties would occur as a result of implementation of the proposed action. To ensure this would occur, an archaeological monitor would be placed at the sites were implementation was occurring.

#### 3.3.2.2 No Action Alternative

Under the No Action Alternative effects to cultural properties within Condor Canyon would remain the same as the status quo. If the No Action Alternative was selected, there would not be any disruption of a small piece (3-5 feet wide) of the railroad bed.

## 3.4 Noxious and Invasive Weed Management

### 3.4.1 Affected Environment

The project area was last formally inventoried for noxious weeds in 2008, but informal weed surveys have been conducted during project site visits during 2010 and 2011. No specific field weed surveys were completed for this project. Instead, we consulted the Ely District weed inventory dataset. The following species are found within the boundaries of the project and may also be found along roads leading to the project area:

Bull thistle (*Cirsium vulgare*)

Hoary cress (*Lepidium draba*)

Salt cedar (*Tamarix spp.*)

It is also probable that other undocumented weeds could be found in the project area and scattered along roads in the area.

### 3.4.2 Environmental Effects

#### 3.4.2.1 Proposed Action

This project would involve some ground disturbance which would open up areas to weed establishment. However, a major component of this project involves the control of cattails, salt cedar, and any other undesirable plants. Because so much emphasis is placed on establishment of a desirable vegetation community, the chances of weeds spreading into the project area are low.

In addition, the project area has already been highly impacted by weeds and undesirable plants that have altered the ecological function of the area. A major component of the project is restoring and enhancing the ecological function that has been lost or degraded.

The design features of the proposed action in addition to the vigilant practices described in the Noxious Weed Risk Assessment (Appendix V), and implementation of the best management practices listed in Appendix F, Section 1 of the Ely Proposed Resource Management Plan/EIS (November 2007) would help prevent further spreading of noxious and non-native, invasive weeds.

#### 3.4.2.2 No Action Alternative

Under the No Action Alternative no additional risk of spreading would be introduced to the system. However, as already noted, the area is highly impacted by historical and current use. Though selecting the No Action Alternative won't likely increase the abundance or distribution of weeds, it also won't attempt to restore the area to a more native state, wherein native vegetation could compete for the light, water, and resources of non-desirable weedy species.

## 3.5 Vegetative Resources

### 3.5.1 Affected Environment

Condor Canyon is located within the Intermountain Semi-desert and Desert Province. Steep,

north-south trending mountains characterize the region (PBS&J 2007). Climate is characterized by hot summers and cool winters with annual precipitation ranging from 5 to 12 inches in the valleys and 49 inches in the mountains (PBS&J 2007). The primary drainage through the canyon is Meadow Valley wash, a perennial spring fed channel that flows to the southwest by the towns of Panaca and Caliente. The primary tributaries of Meadow Valley Wash are the ephemeral Patterson Wash in Hamlight Canyon and Kill Wash on the north end of the canyon (Jezorek et al. 2011, PBS&J: 2007). Meadow Valley wash meanders on either side of the railroad grade through the canyon and forms a strip of verdant growth in the otherwise arid sage and grass covered landscape. Several springs are located at the north end of the canyon and within Kill Wash, and these contribute the majority of water that flows through the canyon (Jezorek et al. 2011).

Vegetation in the project area appears to be a mix of salt-desert scrub and sagebrush-grass plant communities. Species observed in the canyon are black greasewood (*Sarcobatus vermiculatus*), Nevada ephedra (*Ephedra nevadensis*), rabbitbrush (*Chrysothamnus spp.*), big sagebrush (*Artemisia tridentata*), cheatgrass (*Bromus tectorum*), and Indian ricegrass (*Oryzopsis hymenoides*). The riparian zone along Meadow Valley Wash supports occasional stands of cottonwood (*Populus spp.*) and box elder (*Acer negundo*), black willow (*Salix gooddingii*), sandbar willow (*Salix exigua*), cattail (*Typha spp.*), sedges (*Carex spp.*), rushes (*Juncus spp.*) and watercress (*Nasturtium spp.*) are present within the channel.

### 3.5.2 Environmental Effects

Impacts from manipulation of riparian areas on Vegetation Resources were analyzed on page 4.5-6 and 4.5-7 in the Ely Proposed Resource Management Plan/Environmental Impact Statement (November 2007). Beneficial impacts to vegetative resources are consistent with the need and objectives for the proposed action. Therein it states, "Management actions would focus on achievement of specific desired range of conditions, including related wildlife usage, rather than on just achievement of proper functioning condition. All available tools, techniques, or combinations thereof would be used in selected areas. These treatments may have short-term impacts in terms of surface disturbance, but would be expected to result in long-term benefits to these areas."

#### 3.5.2.1 Proposed Action

Effects of the proposed action on the vegetative resources in the riparian area of Condor Canyon would largely be beneficial. Though there would be short-term negative effects to water quality and turbidity from removing cattails and rushes, the native vegetative community would benefit from the lack of competition and repeated dumping of a significant annual seed source. In addition, as the purpose and need of the proposed action fits squarely with the effects analysis mentioned in the RMP above, therefore no further analysis is needed.

#### 3.5.2.2 No Action Alternative

No change would likely occur if the No Action Alternative was implemented. The most likely scenario of any would be one wherein the invasive or non-native species would await another disturbance and would increase in abundance and distribution throughout the canyon.

## 3.6 Wetland and Riparian Zones

### 3.6.1 Affected Environment

In the Condor Canyon Geomorphic assessment (PBS&J 2007), it states the following: “Meadow Valley Wash (hydrologic unit code 15010013) is the primary drainage feature in Condor Canyon and is responsible for its formation. Meadow Valley Wash is part of the Lower Colorado-Lake Mead subregion, and joins with the Muddy River near Moapa, Nevada. Patterson Wash in Hamlight Canyon is the only major tributary to Meadow Valley Wash in Condor Canyon and is ephemeral. The drainage area of Meadow Valley Wash at the head of the canyon is approximately 320 sq. miles. Discharge in Meadow Valley Wash above Condor Canyon is regulated by three upstream dams.

The base flow in Condor Canyon is sustained by springs found on the Delmue Ranch at the entrance to the canyon, and by Kiln Wash, which flows into Meadow Valley Wash from the southeast just upstream of the canyon mouth. The Delmue springs provide a base flow of approximately 0.45 cfs (Garside and Schilling 1979). It is suspected that these springs are sustained by water draining through fissures in the bottom of Echo Canyon Reservoir (Johnson 2007). Additional springs within Condor Canyon add to the stream’s total discharge. Flow measurements taken during a 1987 aquatic inventory of Condor Canyon ranged from 2.25 cfs to 6.9 cfs. The stream is well confined within steep rock and soil formations, often moderately to deeply entrenched, and averages 12 feet wide and 0.7 feet deep with an average gradient of 1.6 percent. An important feature that is commonly referred to in documents describing Condor Canyon is the waterfall on the Delmue Ranch. The waterfall is approximately 40 feet high and is located approximately one mile downstream of the entrance to the canyon (PBS&J 2007).

Woody riparian vegetation in the canyon is predominantly black willow (*Salix gooddingii*), tamarisk (*Tamarix ramosissima*), box elder (*Acer negundo*) and sandbar (or coyote) willow (*Salix exigua*). Cottonwoods (*Populus sp.*) are also present. Common herbaceous riparian species include cattails (*Typha domingensis* and *Typha latifolia*), redtop (*Agrostis stolonifera*), sedges (*Carex sp.*), and rushes (*Juncus sp.*). Watercress (*Nasturtium sp.*) occurs in patches within the stream channel.”

### 3.6.2 Environmental Effects

#### 3.6.2.1 Proposed Action

The purpose of the proposed action is to improve the functionality of the riparian area and to restore it to a more natural state. There could be minor impacts during implementation, such as compaction of some soils at the streams edge due to the foot traffic related to work in removing cattails and bulrushes and planting willows. However, this may not occur as most of the riparian areas near the stream contain sandy soils. In addition, the recontouring proposed for reach 7 would have a short-term negative effect. It would change the current channel location, while restoring a small floodplain to the stream that was altered due to construction of the railroad bed. It would take time for new vegetation to grow and for willows to fill in and help bring down the temperature of the water in that area. However, over time, stream channel function and riparian quality would be improved above the existing condition.

#### 3.6.2.2 No Action Alternative

Under the No Action Alternative, nothing would change in the riparian zone in Condor Canyon. Conditions would remain the same and no potential habitat for spinedace would be created.

## 3.7 Migratory Birds

### 3.7.1 *Affected Environment*

The migratory bird species that likely occur in or near the project area are listed in Appendix VI. This list includes BLM Sensitive Species (in bold). There may be some effects to their habitat.

### 3.7.2 *Environmental Effects*

#### 3.7.2.1 Proposed Action

The Proposed Action would remove cattails and bulrushes from the edges of and throughout the stream channel for most of the area from reach A to the end of reach 7. This may remove some nesting material and habitat for prey of migratory birds. There would also be use of heavy equipment for a short period of time during recontouring in reach 7 and reconnection of the perched spring in reach 2. However, none of this work would occur until after July 1. The majority of nesting attempts by migratory birds would be concluded by this date. There is always a possibility that the nests, and/or developing young, or renesting attempts of birds could be disturbed or removed due to the proposed action. However, by removing cattails and bulrushes and replacing them with native willows, any effects that would occur would be short-term and negligible. In the long-term the benefits would outweigh any short-term displacement or losses of nests and/or young.

#### 3.7.2.2 No Action Alternative

Under the No Action Alternative, no changes would occur to migratory birds, their habitat, or the habitat for their prey in Condor Canyon.

## 3.8 U.S. Fish and Wildlife Service (USFWS) Listed or proposed for listing Threatened or Endangered Species or critical habitat.

### 3.8.1 *Affected Environment*

The Big Spring spinedace is the only known Threatened or Endangered species known to occur in the project area. Currently the spinedace is listed under ESA as threatened. It only currently occurs in Condor Canyon. In 1994, a 50-foot riparian zone along each side of the stream for 4 miles of Meadow Valley Wash as it flows through Condor Canyon was listed as critical habitat.

The Primary Constituent Elements of the critical habitat included: 1) Clean, permanent, flowing, spring-fed stream habitat with deep pool areas and shallow marshy areas along the shore; and 2) the absence of nonnative fishes. Additional information on the spinedace and its habitat, including recent survey work can be found in the project record and in the Biological Assessment.

### 3.8.2 *Environmental Effects*

#### 3.8.2.1 Proposed Action

A Biological Assessment (BA) and a request to append it to the Ely RMP Biological Opinion (BO) were finalized and sent to the USFWS in January 2012. Therein was described the potential effects (Appendix VII) to spinedace and their critical habitat. We estimated that 4.93 acres of habitat would be disturbed, of which 4.21 acres are in critical habitat. Given the Primary Constituent Elements of critical habitat and the

short duration of proposed project activities, effects would be minor. Therefore we determined that the Proposed Action “may affect, but is not likely to adversely affect” the Big Spring spinedace or critical habitat. On March 13, 2012 we received a letter from the USFWS concurring with our determinations (Appendix VII).

### **3.8.2.2 No Action Alternative**

Under the No Action Alternative there would be no additional threats or potential improvement in ordinary and critical Big Spring spinedace habitat in Condor Canyon.

## **3.9 Special Status Animal Species, other than those listed or proposed by the USFWS as Threatened or Endangered**

### ***3.9.1 Affected Environment***

There are three known BLM Special Status Animal Species or their habitat known to occur within Condor Canyon or the project area: Meadow Valley Wash desert sucker, Meadow Valley Wash speckled dace, and unoccupied desert bighorn sheep habitat. According to the USGS fish and fish habitat study (Jezorek 2011) in Condor Canyon, both sensitive fishes listed above occur in almost every reach, above and below the falls. However both fishes are more abundant above Delmue falls. Habitat exists for this species throughout all of Condor Canyon and most of Meadow Valley Wash. Stretches of stream that contain over-hanging vegetation, watercress, and undercut stream banks provide great hiding cover for the species. Small sandy or gravelly areas are needed during the spawning season for creating a redd.

### ***3.9.2 Environmental Effects***

#### **3.9.2.1 Proposed Action**

Because stream restoration efforts in reach 7 would affect very few fish and because disturbance from removing cattails and bulrushes and reconnecting the perched spring to the main channel of the area would occur over a short period of time, not during spawning, effects to these species would be minimal. Turbidity and small points of light sedimentation may occur, but they would be short-lived. Natural flood events experienced in the last 7-8 years have been tremendously more destructive and powerful, and they had the potential to seriously harm the population, yet the fish have persisted. The effects due to the proposed action would be negligible in the short-term and not lead toward listing the species, and would be beneficial in the long-term as the area recovers and vegetative conditions improve.

#### **3.9.2.2 No Action Alternative**

Under the No Action Alternative BLM sensitive fish or their habitat in Condor Canyon would not be disturbed; however, their habitat would not be improved either.

## **3.10 Fish and Wildlife**

### ***3.10.1 Affected Environment***

The following species or their habitat may occur in the project area: marsh snail, fingernail clam, American badger, bobcat, coyote, and mule deer crucial winter habitat. Unfortunately surveys do not exist

for these species, so a complete knowledge of their presence or absence in the project area is lacking. However, if they do occur in the area, then potential effects due to the proposed action are detailed below.

### ***3.10.2 Environmental Effects***

#### **3.10.2.1 Proposed Action**

The effects or impacts of the Proposed Action have been described and analyzed in the Fish and Wildlife section 4.6 in the Ely Proposed Resource Management Plan/Final Environmental Impact Statement (November 2007). Our analysis tiers to that document. Additionally the Proposed Action would produce long-term beneficial effects to these and many other wildlife species, which meet the goals and objectives of the aforementioned section.

#### **3.10.2.2 No Action Alternative**

Under the No Action Alternative habitat conditions would remain the same.

## **3.11 Soil Resources**

### ***3.11.1 Affected Environment***

The soils found within Condor Canyon are generally the same throughout the canyon. The parent material on the slopes above is calcium based rock. The soil is described as a shallow calcareous loam (8-12" deep). Without vegetation, the soils are easily moved or down cut by the stream or through erosion. Due to the watershed to which these soils are a part, and due to the lotic and dynamic nature of the system, fine soils and sands from above can be and are deposited throughout Meadow Valley Wash. Due to the anthropogenic influences already experienced in Condor Canyon, extreme down cutting and movement of the soils is apparent.

Specifically, within Reach 7, there is a stretch of approximately 700 feet of the stream channel that has been obviously channelized and does not have a well-established floodplain. The soil has been placed into a spoil berm that was left when a channel meander was cutoff presumably to provide flood protection to the road or railroad. While the channel appears stable both vertically and laterally, there is substantial opportunity to restore channel width and channel length through this reach by moving the soil berm back to a more original position.

### ***3.11.2 Environmental Effects***

The soil resources within the project area, have been disturbed during the past 100+ years due to activities related to the railroad, mining, recreation, flood events, and grazing.

#### **3.11.2.1 Proposed Action**

The effects of the proposed action on soils would largely be temporary. Most notably would be moving the already disturbed and bermed soils in reach 7 for the re-creation of a floodplain. These soils would be contoured to provide a natural sinuosity of the stream. In addition to rock being brought in to stabilize the soil, we would plant willows on either side of the newly formed channel. Over time, as vegetation fills in and willows grow, the probability of soil erosion or destabilization would decrease. By bring in rock to stabilize the site, soil movement downstream should be minimal and temporary.

Similar effects would be experienced in the area between the perched spring and the new channel. Again, effects would be short lived and the long-term benefits would largely outweigh the short-term movement of small amounts of soil into the stream.

There would be minor effects to soils due to planting willows. There may be some light compaction of the soil around the stream bank. However, as most of those areas are high in sands and silts, the effects would be temporary. In addition, minor sedimentation would occur during the removal of bulrushes and cattails. Much of this would occur because these plants have choked the waterways and created an impasse that catches soil.

### 3.11.2.2 No Action Alternative

Under the No Action Alternative no changes, beyond those the system experiences annually, would occur to the soil resources in the area.

## 4.0 Cumulative effects

According to the 1997 BLM publication *Guidelines for Assessing and Documenting Cumulative Impacts*, the cumulative analysis should be focused on those issues and resource values where the incremental impact of the Proposed Action results in a meaningful change in the cumulative effect from other past, present and reasonably foreseeable future actions within the Cumulative Effects Study Area (CESA). The National BLM NEPA Handbook (H-1790-1; 2008) states, “determine which of the issues identified for analysis may involve a cumulative effect with other past, present, or reasonably foreseeable future actions. If the proposed action and alternatives would have no direct or indirect effects on a resource, you do not need a cumulative effects analysis on that resource (p. 57).”

A comprehensive cumulative effects analysis can be found in section 4.28-1 through 4.36-1 of the Ely Proposed Resource Management Plan/Final Environmental Impact Statement (November 2007). The CESA for this project is the immediate area around Condor Canyon and 100 feet down stream of the proposed project area.

### 4.1 Past Actions

Past actions that have occurred in Condor Canyon include historical use of the canyon by mining and railroad companies. Those actions have been discontinued for at least 30 years. Most recently, there have been weed treatments (Tamarisk removal), wild horse gathers, recreational use by the public (ATV riding and outdoor recreation), and grazing. Earlier historical actions have likely had the most profound effect on what Condor Canyon looks like now and how and what the stream has done by deeply down cutting the main channel. Though grazing has continually occurred more many years, the area most affected is the area with the largest known concentrations of Big Spring spinedace.

### 4.2 Present Actions

Present actions in Condor Canyon include recreational use by the public, annual surveys for native fishes by state and federal employees, and grazing. Use of the Canyon is minimal because the area is checker-boarded with public and private lands, and because driving access is limited from the north end.

### 4.3 Reasonably Foreseeable Future Actions

The only reasonably foreseeable future actions that would like occur in the canyon would be continued recreational use by the public and grazing. There may be continued efforts to abate and/or remove weeds

in the canyon, but no other major constructions, developments, or actions, to our knowledge, are probable.

## 4.4 Conclusions

The Proposed Action in conjunction with the past, present and reasonable foreseeable future actions would not result in major changes or negative effects to the affected environment. Instead, the Condor Canyon restoration project would enhance the riparian area, improve Big Spring spinedace habitat, and restore the area to an earlier state.

No cumulative impacts of concern are anticipated as a result of the proposed action in combination with any other existing or planned activity.

## 5.0 Proposed Mitigation and Monitoring

### 5.1 Proposed Mitigation

Outlined design features incorporated into the proposed action, as well as the Management Actions, Best Management Practices, Terms and Conditions of the Biological Opinion are sufficient (Appendix II). No additional mitigation is proposed based on the analysis of environmental consequences.

### 5.2 Proposed Monitoring

Appropriate monitoring has been included as part of the Proposed Action. Cultural resources monitoring would occur during sand bar removal in reach 7 and while the culvert is being placed through the railbed to reconnect the perched spring.

## 6.0 Tribes, Individuals, Organizations, or Agencies Consulted

The BLM consulted with individuals from Tribes and from State, Federal, and local agencies regarding this project.

Tribal Coordination letters were sent on April 20, 2012. We are awaiting comments.

Name	Purpose and Authorities for Consultation or Coordination	Findings & Conclusions
Ely Shoshone Tribe	Executive Order 13175: Consultation and Coordination with Indian Tribal Governments	Awaiting Comments

Las Vegas Paiute Tribe	Executive Order 13175: Consultation and Coordination with Indian Tribal Governments	Awaiting Comments
Confederate Tribes of the Goshute Indian Reservation	Executive Order 13175: Consultation and Coordination with Indian Tribal Governments	Awaiting Comments
Paiute Indian Tribe of Utah	Executive Order 13175: Consultation and Coordination with Indian Tribal Governments	Awaiting Comments
Battle Mountain Band Council	Executive Order 13175: Consultation and Coordination with Indian Tribal Governments	Awaiting Comments
Te-Moak Tribe of the Western Shoshone Indians of Nevada	Executive Order 13175: Consultation and Coordination with Indian Tribal Governments	Awaiting Comments
Wells Band Council	Executive Order 13175: Consultation and Coordination with Indian Tribal Governments	Awaiting Comments
South Fork Band Council	Executive Order 13175: Consultation and Coordination with Indian Tribal Governments	Awaiting Comments
Elko Band Council	Executive Order 13175: Consultation and Coordination with Indian Tribal Governments	Awaiting Comments
Kaibab Band of Paiute Indians	Executive Order 13175: Consultation and Coordination with Indian Tribal Governments	Awaiting Comments
Yomba Shoshone Tribe	Executive Order 13175: Consultation and Coordination with Indian Tribal Governments	Awaiting Comments
Moapa Band of Paiutes	Executive Order 13175: Consultation and Coordination with Indian Tribal Governments	Awaiting Comments
Skull Valley Band of Goshutes	Executive Order 13175: Consultation and Coordination with Indian Tribal Governments	Awaiting Comments
Duckwater Shoshone Tribe	Executive Order 13175: Consultation and Coordination with Indian Tribal Governments	Awaiting Comments
Winnemucca Indian Colony of Nevada	Executive Order 13175: Consultation and Coordination with Indian Tribal Governments	Awaiting Comments
Lovelock Paiute Tribe	Executive Order 13175: Consultation and Coordination with Indian Tribal Governments	Awaiting Comments
Timbisha Shoshone Tribe	Executive Order 13175: Consultation and Coordination with Indian Tribal Governments	Awaiting Comments
Confederated	Executive Order 13175: Consultation and	Awaiting Comments

Tribes of the Goshute Reservation	Coordination with Indian Tribal Governments	
Chemehuevi Indian Tribe	Executive Order 13175: Consultation and Coordination with Indian Tribal Governments	Awaiting Comments
Indian Peaks Band	Executive Order 13175: Consultation and Coordination with Indian Tribal Governments	Awaiting Comments
Shivwits Band of Paiutes	Executive Order 13175: Consultation and Coordination with Indian Tribal Governments	Awaiting Comments
Cedar City Band of Paiutes	Executive Order 13175: Consultation and Coordination with Indian Tribal Governments	Awaiting Comments
Jon Sjoberg, Mark Beckstrand	Nevada Department of Wildlife	Cooperation and coordination regarding Big Spring spinedace and other native fishes
Lee Simons, Christiana Manville	U. S. Fish and Wildlife Service	Cooperation and coordination regarding Big Spring spinedace and other native fishes and other land owners
Jim Gatzke	Natural Resources Conservation Service	Cooperation and coordination through the Recovery Implementation Team

## 7.0 List of Preparers

### 7.1 BLM Resource Specialists

Andrew Daniels	Wildlife, Special Status Species (SSS), Migratory Birds
Cameron Boyce	Grazing and Weeds
Nick Pay	Cultural Resources
Lisa Domina	Recreation and Visual Resources
Alan Kunze	Geology
Mark D'Aversa	Soil, Water, Wetlands and Riparian, Floodplains
Travis Young	Planning and Environmental Coordinator
Elvis Wall	Native American Cultural Concerns
Melanie Peterson	Hazardous and Solid Waste/Safety
Erica Husse	ESR
Benjamin Noyes	Wild Horses
Kyle Teel	Fire Ecologist

#### 7.1.1 Additional Preparers

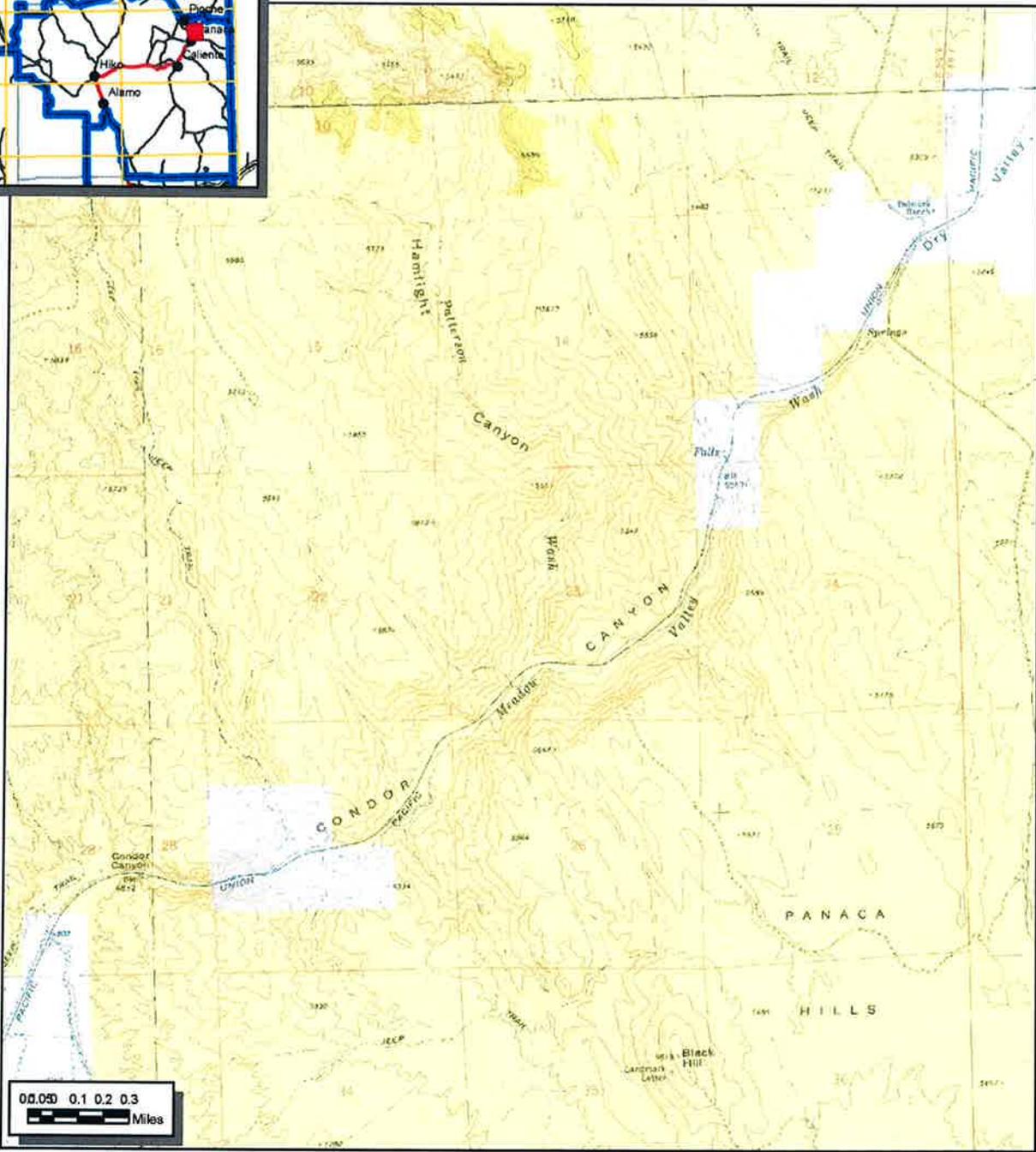
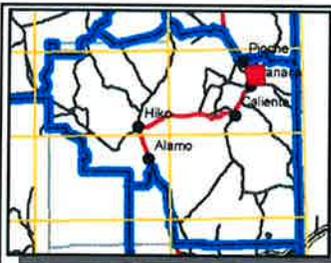
Rick Baxter	Wildlife, SSS, Migratory Birds & IDT Leader – USFS TEAMS EU
Anthony Olegario	Fisheries, Water, and Riparian Restoration – USFS TEAMS EU
Julie Scrivner	Cultural Resources – USFS TEAMS EU

## 8.0 References

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# APPENDIX I

## MAPS



BLM BUREAU OF LAND MANAGEMENT, CALIFORNIA DISTRICT OFFICE  
 It is hereby declared to be the public policy of the State of California to encourage the maximum utilization of the public lands and to protect the lands for the benefit of the people. The public lands shall be managed for the multiple use and enjoyment of the people. The public lands shall be managed for the benefit of the people and for the protection of the environment.

### Meadow Valley Wash T&E Habitat Restoration & Noxious Weed Control Project

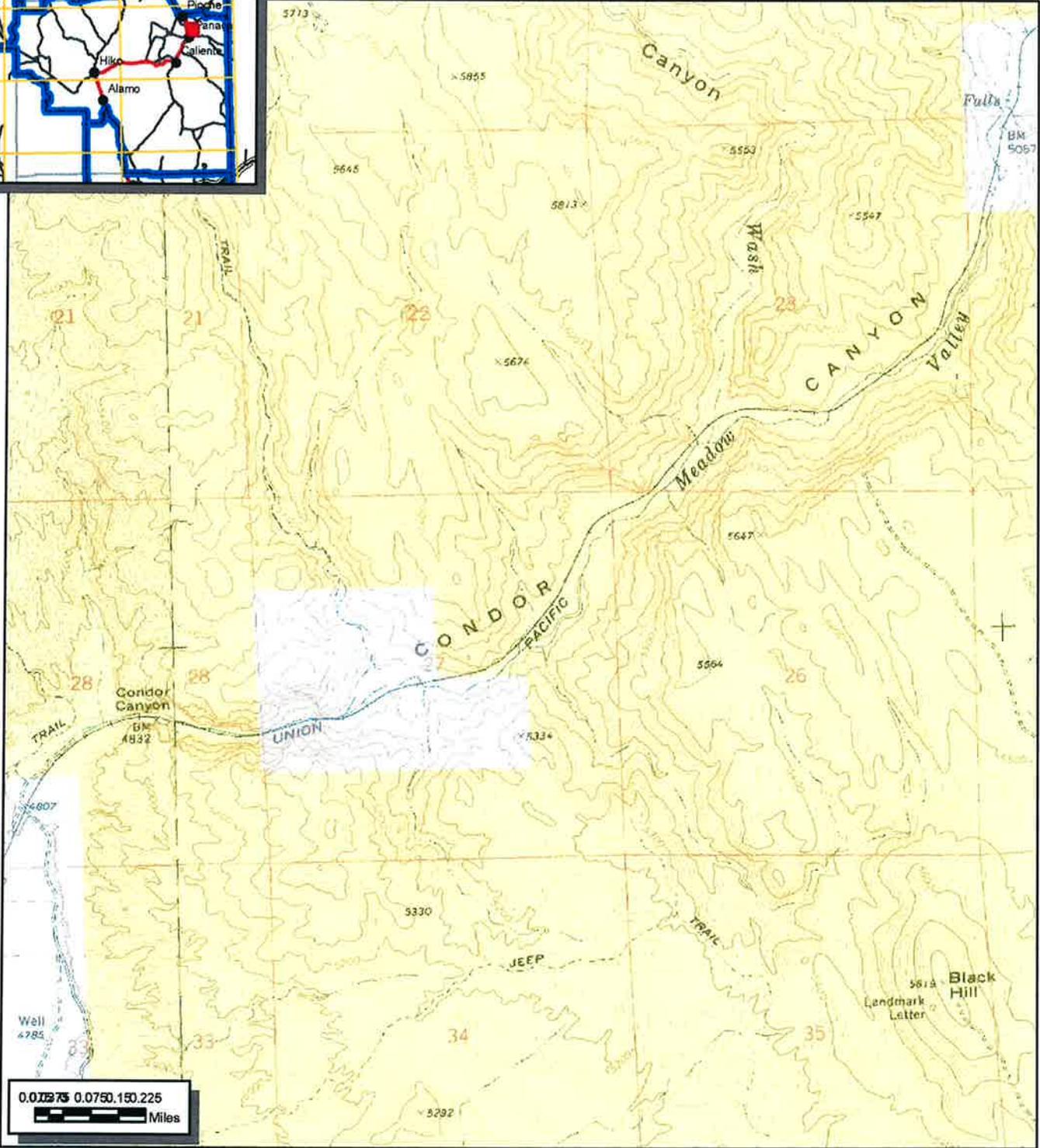
Condor Canyon, NV USGS 1:24,000 QUAD  
 Caliente, NV USGS 1:100,000 QUAD

**LEGEND**

BLM Wilderness Land Status

Agency

- Bureau of Land Management
- Department of Defense
- Forest Service
- Fish and Wildlife Service
- National Parks Service
- Nevada State Lands
- Private
- Water



### Meadow Valley Wash T&E Habitat Restoration & Noxious Weed Control Project

THE PUBLIC LANDS MANAGEMENT ACT, 16 U.S.C. § 1601  
 No warranty is made by the Bureau of Land Management as to the accuracy of data, or compliance with  
 23 and 24 and the adoption of or approval of any other standards.  
 The information may not meet National Map Accuracy Standards.  
 The product was developed by the Bureau of Land Management and may be subject to change without notice.  
 Map Produced by BLM, April 2009 (10/09/09)

Condor Canyon, NV USGS 1:24,000 QUAD  
 Caliente, NV USGS 1:100,000 QUAD

LEGEND	
BLM Wilderness	Land Status
Agency	
	Bureau of Land Management
	Department of Defense
	Forest Service
	Fish and Wildlife Service
	National Parks Service
	Nevada State Lands
	Private
	Water

## APPENDIX II

### DESIGN FEATURES FROM THE RMP TO MINIMIZE EFFECTS TO ALL RESOURCES

#### **Terms & Conditions of the RMP Biological Opinion**

*Big Spring spinedace and Pahrump poolfish*

14. **RPM:** BLM shall implement measures to minimize the incidental take of Big Spring spinedace and Pahrump poolfish that may result from **restoration or habitat enhancement activities, or other recovery actions under the Special Status Species program.**

*Big Spring spinedace and White River springfish*

15. **RPM:** BLM shall implement measures to minimize the incidental take of Big Spring spinedace and White River springfish that may result from **weed removal projects.**

15.a. BLM shall implement measures in the RMP/Final EIS, proposed for Special Status Species (**SS**), Lands and Realty (**LR**), Renewable Energy (**RE**), and Geology and Mineral Extraction (**MIN**) unless modified below or at the projectlevel consultation.

15.b. BLM shall ensure that methods used for weed removal projects and measures to minimize potential effects to aquatic species and their environment are consistent with the standard operating procedures and mitigation measures described in the Final Programmatic EIS for Vegetation Treatments Using Herbicides on BLM Lands in 17 Western States (BLM 2007c), and the best management practices described in the RMP/Final EIS and appendices (BLM 2007b). These methods will be determined during project-specific consultation and appended to the programmatic biological opinion as terms and conditions, at which time take will be exempted.

15.c. BLM shall replace salt cedar removed during weed control projects with appropriate native vegetation as determined during project-specific consultation to ensure no net loss of habitat.

15.d. BLM shall instruct all work crew members to avoid stepping, standing, or walking in the streambed during weed removal activities.

15.e. BLM shall avoid conducting weed removal activities during the peak spawning period (in general, April 1 through May 31).

#### **Conservation recommendations from the RMP BO**

2. We recommend that BLM fully implement Recovery Plans for the desert tortoise, Big Spring spinedace, White River springfish, Pahrump poolfish, and southwestern willow flycatcher and subsequent revisions of these plans within their authority.

4. We recommend that BLM coordinate with NDOW and the Service to develop and implement scientific investigations that would evaluate Condor Canyon and neighboring properties to determine environmental factors that may be managed to enhance Big Spring spinedace populations.

## **Management Actions from the BLM Ely RMP ROD –**

### *Water Resources*

**WR-1:** BLM will ensure authorized activities on public lands do not degrade water quality by complying with the Clean Water Act and Nevada Water Pollution Control Regulations (Nevada Revised Statute 445A). Cooperate with the Nevada Division of Environmental Protection to reduce non-point source water pollution as per the Memorandum of Understanding between the BLM and Nevada Division of Environmental Protection dated September 2004.

**WR-2:** BLM will integrate land health standards, best management practices, and appropriate mitigation measures into authorized activities to ensure water quality meets state requirements and BLM resource management objectives (BLM Manual 7240 Nevada Supplement).

**WR-4:** BLM will maintain or improve watershed conditions by controlling or restricting land uses and utilizing tools, where appropriate, to promote desired vegetation conditions.

### *Soil Resources*

**SR-1:** BLM will Restore and maintain desired range of conditions to increase infiltration, conserve soil moisture, promote groundwater recharge, and ground cover composition (including litter and biotic crusts) to increase or maintain surface soil stability and nutrient cycling.

**SR-3:** BLM will protect soils from high compaction during surface disturbing activities through soil moisture and/or seasonal use restrictions commensurate with soil surface texture or other properties on a case-by-case basis.

### *Vegetation and Weed Management*

**VEG-23:** BLM will promote vegetation structure and diversity that is appropriate and effective in controlling erosion, stabilizing stream banks, healing channel incisions, shading water, filtering sediment, and dissipating energy, to provide for stable water flow and bank stability.

**VEG-24:** Management actions will focus on uses and activities that allow for the protection, maintenance, and restoration of riparian habitat.

### *Special Status Species*

**SS-1:** BLM will prioritize conservation, maintenance, and restoration actions for special status species based on the following order of importance: 1) federally listed endangered species, 2) federally listed threatened species, 3) federal proposed species, 4) federal candidate species, and 5) BLM sensitive species.

**SS-3:** BLM will participate on interagency recovery implementation teams to identify and address implementation of management actions for the recovery of listed species in the Ely planning area.

**SS-17:** BLM will manage Big Spring spinedace habitat by implementing those actions and strategies identified in the Big Spring Spinedace Recovery Plan that the Ely District has the authority to implement, and in accordance with the Condor Canyon Habitat Management Plan.

### *Lands and Realty*

**LR-1:** BLM will retain lands or interest in lands within designated critical habitat for federally listed threatened and endangered species unless the disposal results in the acquisition of land with higher quality habitat.

**LR-2:** BLM will retain lands within ACECs

**LR-5:** Retain all public lands with springs and creeks that contain fisheries in federal ownership unless the disposal of these lands will result in the acquisition of lands with higher quality habitat.

*Travel Management and OHV Use*

**TM-4:** The Ely District is currently open to cross country travel. BLM will complete designation of vehicle routes as open, closed, or limited use within the Ely District. Until route designation is completed, motorized travel will be limited to existing roads and trails, with certain exceptions. These limitations should reduce the amount of disturbance to vegetation, prevent erosion, and increase soil stability, thereby improving habitat for listed species.

*Special Designations*

**SD-3:** BLM will designate the Condor Canyon ACEC, to protect Big Spring spinedace and its designated critical habitat. Management activities and associated prescriptions for the Condor Canyon ACEC is provided in Table 9.

## **Best Management Practices from the Ely RMP ROD –**

*Soil Resources*

2. During periods of adverse soil moisture conditions caused by climatic factors such as thawing, heavy rains, snow, flooding, or drought, suspend activities on existing roads that could create excessive surface rutting. When adverse conditions exist, the operator would contact the BLM Authorized Officer for an evaluation and decision based on soil types, soil moisture, slope, vegetation, and cover.

*Vegetation Resources*

3. Keep removal and disturbance of vegetation to a minimum through construction site management (e.g., using previously disturbed areas and existing easements, limiting equipment/materials storage and staging area sites, etc.).

*Fish and Wildlife*

5. When used to pump water from any pond or stream, screen the intake end of the draft hose to prevent fish from being ingested. Screen opening size would be a maximum of 3/16 inch (4.7 millimeters).

*Special Status Species*

7. For streams currently occupied by any special status species, do not allow extraction of water from ponds or pools if stream inflow is minimal (i.e., during drought situations) and extraction of water would lower the existing pond or pool level.

8. When new spring developments are constructed on BLM lands and BLM has the authority to design the project, the source and surrounding riparian area will be fenced, the spring will be developed in a manner that leaves surface water at the source and maintains the associated riparian area, water will be provided outside the enclosure in a manner that provides drinking water for large ungulates, wild horses, and/or livestock so they are less likely to break into the enclosure.

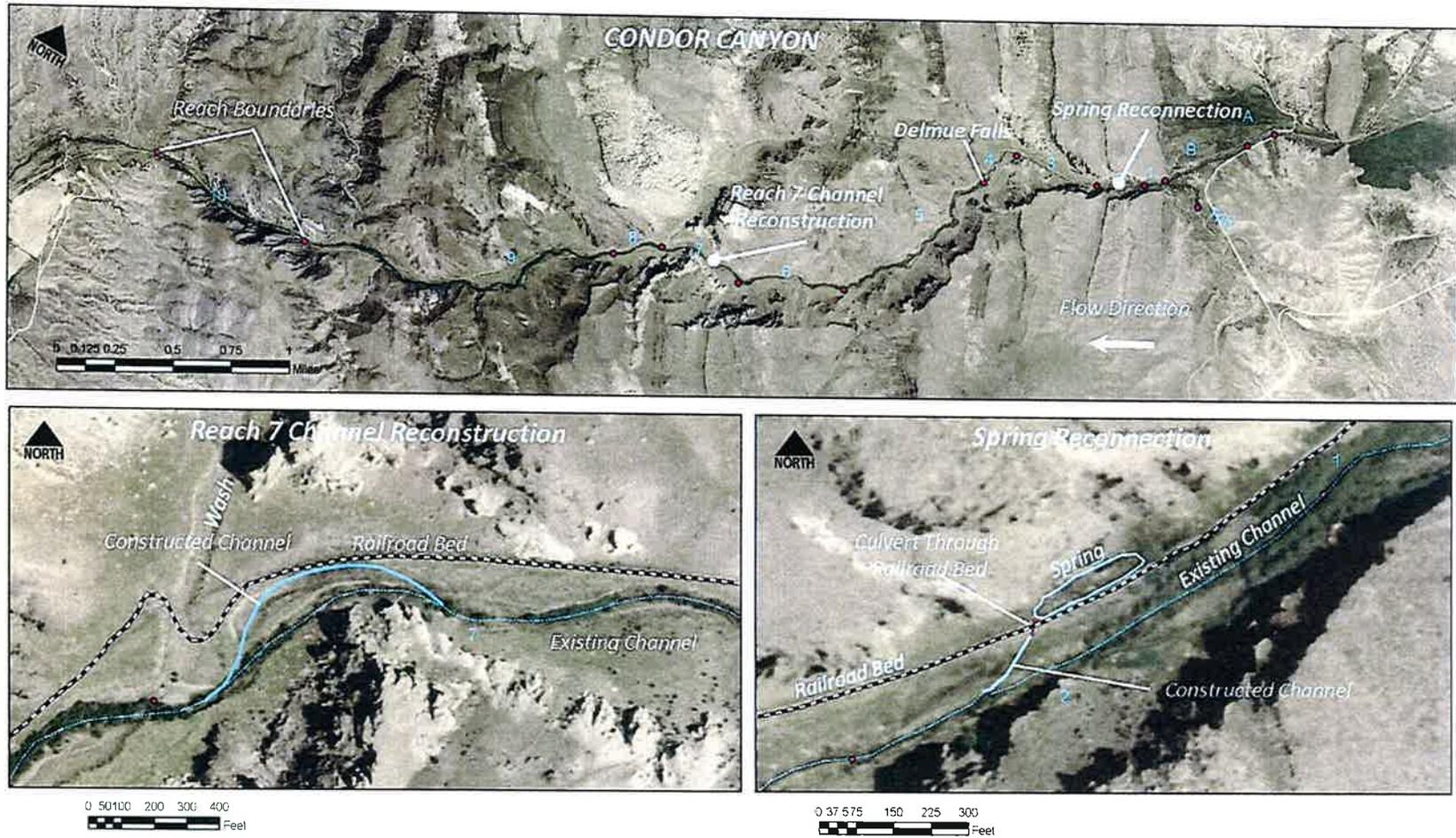


Figure 1. Locator map and channel restoration conceptual design for Meadow Valley Wash through Condor Canyon.

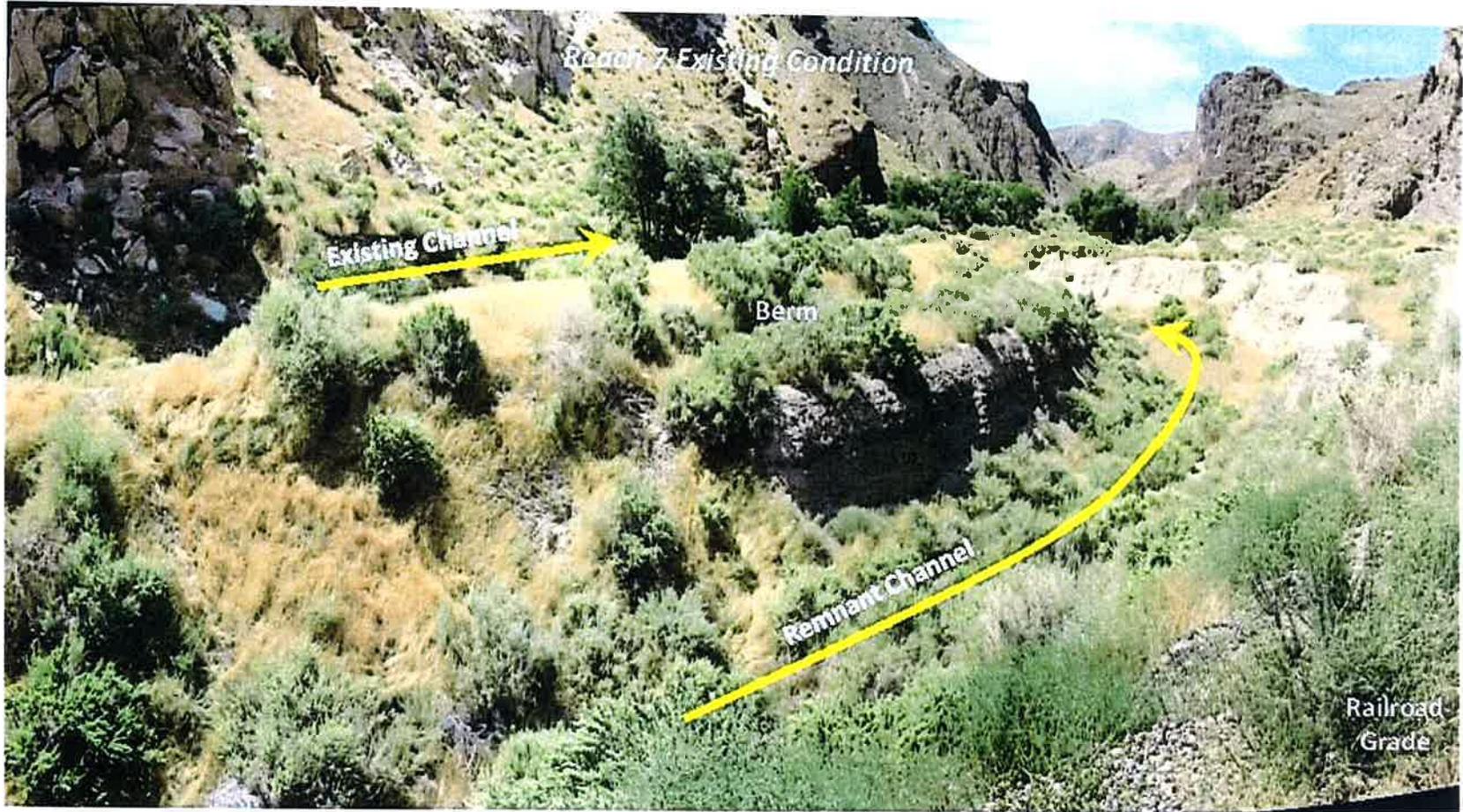


Photo 1. Meadow Valley Wash channel. Facing Downstream (August 2011).

# APPENDIX IV

## SHPO LETTER OF CONCURRENCE

LEO M. DROZDOFF, P.E.  
 Director  
 Department of Conservation and  
 Natural Resources

RONALD M. JAMES  
 State Historic Preservation Officer

BRIAN SANDOVAL  
 Governor  
 STATE OF NEVADA



DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES  
 STATE HISTORIC PRESERVATION OFFICE

April 10, 2012

Address: Reply to:  
 901 S. Stewart Street, Suite 5004  
 Carson City, NV 89701-5245  
 Phone: (775) 684-3448  
 Fax: (775) 684-6147  
 www.nvshpo.org

RECEIVED

APR

Bureau of Land  
 Management

Victoria Barr  
 Bureau of Land Management  
 Caliente Field Office Manager  
 PO Box 237  
 1400 South Front Street  
 Caliente, NV 89008-0237

RE: *Cultural Resources Inventory for the Meadow Valley Wash T&E Habitat Restoration/Noxious Weed Control Project, Lincoln County, Nevada.*  
 BLM Report: 8111 CRR NV040-11-1955/ Undertaking #2012-2032.

Dear Ms. Barr:

The Nevada State Historic Preservation Office (SHPO) has reviewed the subject undertaking in compliance with Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended. The SHPO concurs with the Bureau of Land Management's (BLM) determination that the following properties are eligible for the National Register of Historic Places under the Secretary's criteria noted below:

Site #:	Resource Type (Contributing/Non-contributing):	Eligible National Register Criteria:
26LN6641	Historic: Condor Canyon Mill.	A & D.
26LN6642	Prehistoric: Petroglyph Site.	C.
26LN6643	Historic: Pioche & Bullionville Railroad.	A.
26LN126b	Prehistoric: Rock Art Site.	C.
26LN127	Prehistoric: Rock Art Site.	C.
26LN1539	Prehistoric: Rock Art Site.	C.
26LN1540	Prehistoric: Rock Art Site.	C.
26LN1541/26LN1544	Prehistoric: Rock Art Site.	C.
26LN1542	Prehistoric: Rock Art Site.	C.

Victoria Barr  
Page 2 of 2  
April 10, 2012

26LN6432	Prehistoric: Rock Art Site.	C.
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The BLM is deferring a determination of National Register eligibility for the following properties pending additional research:

26LN128

26LN1539.

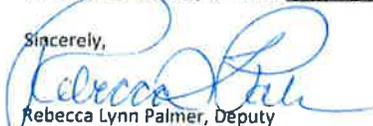
The SHPO conditionally concurs with the BLM's determination that the proposed undertaking will not pose an adverse effect to any historic properties with the stated monitoring plan as well as the use of the Secretary of the Interior's Standards in the development and implementation of the culvert within 26LN6643. We look forward to reviewing the design plan for this aspect of the undertaking and assisting with use of the Secretary's Standards to achieve a No Adverse Effect.

The SHPO reminds the BLM that the agency must consult with affected Native American representatives concerning properties of religious or cultural significance that could be affected by the undertaking (36 CFR Part 800.4.a.4.). What efforts have been made to provide these representatives with an opportunity to comment on this undertaking? Please see BLM Instructional Memorandum No. NV-2011-073 for additional guidance.

If any buried and previously unidentified resources are located during the project activities, the SHPO recommends that all work in the vicinity of the find cease and this office be contacted for additional consultation per 36 CFR 800.13.b.3.

If you have any questions concerning this correspondence, please contact Jessica Axsom by phone at (775) 684-3445 or by e-mail at [jaxsom@shpo.nv.gov](mailto:jaxsom@shpo.nv.gov).

Sincerely,



Rebecca Lynn Palmer, Deputy  
State Historic Preservation Officer

# APPENDIX V

## NOXIOUS WEEDS RISK ASSESSMENT

## RISK ASSESSMENT FOR NOXIOUS & INVASIVE WEEDS

### **Condor Canyon Restoration Project Lincoln, Nevada**

On January 6, 2012 a Noxious & Invasive Weed Risk Assessment was completed for the Condor Canyon Restoration Project in Lincoln County, NV. The objective of this project is to improve the habitat of the Big Spring spinedace within Meadow Valley Wash. Specific objectives are to: reduce sediment entry to Condor Canyon from the Delmue springs and a SW entering tributary at the entrance to the canyon, restore channel width and length along approximately 200 meters in the canyon, reduce in-channel fine sediment, reduce cattail presence within the channel, and increase cover of both black and sandbar willow. No field weed surveys were completed for this project. Instead the Ely District weed inventory data was consulted. The following species are found within the boundaries of the project and may also be found along roads leading to the project area:

<i>Cirsium vulgare</i>	Bull thistle
<i>Lepidium draba</i>	Hoary cress
<i>Tamarix spp.</i>	Salt cedar

There is also probably undocumented weeds found in the area scattered along roads in the area. The project area was last formally inventoried for noxious weeds in 2008, but informal weed surveys have been conducted during project site visits during 2010 and 2011.

A list of species undocumented in the District's follows:

<i>Arctium minus</i>	Common burdock
<i>Bromus diandrus</i>	Ripgut brome
<i>Bromus tectorum</i>	Cheatgrass
<i>Ceratocephala testiculata</i>	Bur buttercup
<i>Convolvulus arvensis</i>	Field bindweed
<i>Elaeagnus angustifolia</i>	Russian olive
<i>Erodium cicutarium</i>	Filaree
<i>Kochia scoparia</i>	Kochia
<i>Halogeton glomeratus</i>	Halogeton
<i>Marrubium vulgare</i>	Horehound
<i>Salsola kali</i>	Russian thistle
<i>Systembrium altissimum</i>	Tumble mustard
<i>Tragopogon dubius</i>	Yellow salsify
<i>Ulmus pumila</i>	Siberian elm
<i>Verbascum thapsus</i>	Common mullein

**Factor 1 assesses the likelihood of noxious/invasive weed species spreading to the project area.**

None (0)	Noxious/invasive weed species are not located within or adjacent to the project area. Project activity is not likely to result in the establishment of noxious/invasive weed species in the project area
Low (1-3)	Noxious/invasive weed species are present in the areas adjacent to but not within the project area. Project activities can be implemented and prevent the spread of noxious/invasive weeds into the project area
Moderate (4-7)	Noxious/invasive weed species located immediately adjacent to or within the project area. Project activities are likely to result in some areas becoming infested with noxious/invasive weed species even when preventative management actions are followed. Control measures are essential to prevent the spread of noxious/invasive weeds within the project area.
High (8-10)	Heavy infestations of noxious/invasive weeds are located within or immediately adjacent to the project area. Project activities, even with preventative management actions, are likely to result in the establishment and spread of noxious/invasive weeds on disturbed sites throughout much of the project area.

For this project, the factor rates as Low (2) at the present time. This project will involve some ground disturbance which will open up areas to weed establishment. However, a major component of this project involves the control of cattails, tamarix, and any other undesirable plants. Because so much emphasis is placed on establishment of a desirable vegetation community, the chances of weeds spreading into the project area are low.

**Factor 2 assesses the consequences of noxious/invasive weed establishment in the project area.**

Low to Nonexistent (1-3)	None. No cumulative effects expected
Moderate (4-7)	Possible adverse effects on site and possible expansion of infestation within the project area. Cumulative effects on native plant communities are likely but limited
High (8-10)	Obvious adverse effects within the project area and probable expansion of noxious/invasive weed infestations to areas outside the project area. Adverse cumulative effects on native plant communities are probable

This project rates as Moderate (4) at the present time. This area has already been highly impacted by weeds and undesirable plants that have altered the ecological function of the area. A major component of the project is restoring and enhancing the ecological function that has been lost or degraded.

**The Risk Rating is obtained by multiplying Factor 1 by Factor 2.**

None (0)	Proceed as planned
Low (1-10)	Proceed as planned. Initiate control treatment on noxious/invasive weed populations that get established in the area
Moderate (11-49)	Develop preventative management measures for the proposed project to reduce the risk of introduction of spread of noxious/invasive weeds into the area. Preventative management measures should include modifying the project to include seeding the area to occupy disturbed sites with desirable species. Monitor the area for at least 3 consecutive years and provide for control of newly established populations of noxious/invasive weeds and follow-up treatment for previously treated infestations.
High (50-100)	Project must be modified to reduce risk level through preventative management measures, including seeding with desirable species to occupy disturbed site and controlling existing infestations of noxious/invasive weeds prior to project activity. Project must provide at least 5 consecutive years of monitoring. Projects must also provide for control of newly established populations of noxious/invasive weeds and follow-up treatment for previously treated infestations

For this project, the Risk Rating is Low (8). This indicates that the project can proceed as planned as long as the following measures are followed:

- Continue to use integrated weed management to treat weed infestations and use principles of integrated pest management to meet management objectives and to reestablish resistant and resilient native vegetation communities.
- Develop weed management plans that address weed vectors, minimize the movement of weeds within public lands, consider disturbance regimes, and address existing weed infestations.
- When manual weed control is conducted, remove the cut weeds and weed parts and dispose of them in a manner designed to kill seeds and weed parts.
- All straw, hay, straw/hay, or other organic products used for reclamation or stabilization activities, must be certified that all materials are free of plant species listed on the Nevada noxious weed list or specifically identified by the Ely District Office.
- Where appropriate, inspect source sites such as borrow pits, fill sources, or gravel pits used to supply inorganic materials used for construction, maintenance, or reclamation to ensure they are free of plant species listed on the Nevada noxious weed list or specifically identified by the Ely District Office. Inspections will be conducted by a weed scientist or qualified biologist.
- Where appropriate, vehicles and heavy equipment used for the completion, maintenance, inspection, or monitoring of ground disturbing activities; for emergency fire suppression; or for authorized off-road driving will be free of soil and debris capable of transporting weed propagules. Vehicles and equipment will be cleaned with power or high pressure equipment prior to entering or leaving the work site or project area. Vehicles used for emergency fire suppression will be cleaned as a part of check-in and demobilization procedures. Cleaning efforts will concentrate on tracks, feet and tires, and on the undercarriage. Special emphasis will be applied to axels, frames, cross members, motor mounts, on and underneath steps, running boards, and front bumper/brush guard assemblies. Vehicle cabs will be swept out and refuse will be disposed of in waste receptacles. Cleaning sites will be recorded using global positioning systems or other mutually acceptable equipment and provided to the Ely District Office Weed Coordinator or designated contact person.
- To minimize the transport of soil-borne noxious weed seeds, roots, or rhizomes, infested soils or materials will not be moved and redistributed on weed-free or relatively weed-free areas. In areas where infestations are identified or noted and infested soils, rock, or overburden must be moved, these materials will be salvaged and stockpiled adjacent to the area from which they were stripped. Appropriate measures will be taken to minimize wind and water erosion of these stockpiles. During reclamation, the materials will be returned to the area from which they were stripped.
- Determine seed mixes on a site specific basis dependant on the probability of successful establishment. Use native and adapted species that compete with annual invasive species or meet other objectives.
- For soil disturbing actions which will require reclamation, salvage and stockpile all available growth medium prior to surface disturbances. Seed stockpiles if they are to be left for more than one growing season. Re-contour all disturbance areas to blend as nearly as possible with the natural topography prior to re-vegetation. Rip all compacted

portions of the disturbance to an appropriate depth based on site characteristics.  
Establish an adequate seed bed to provide good seed-to-soil contact.

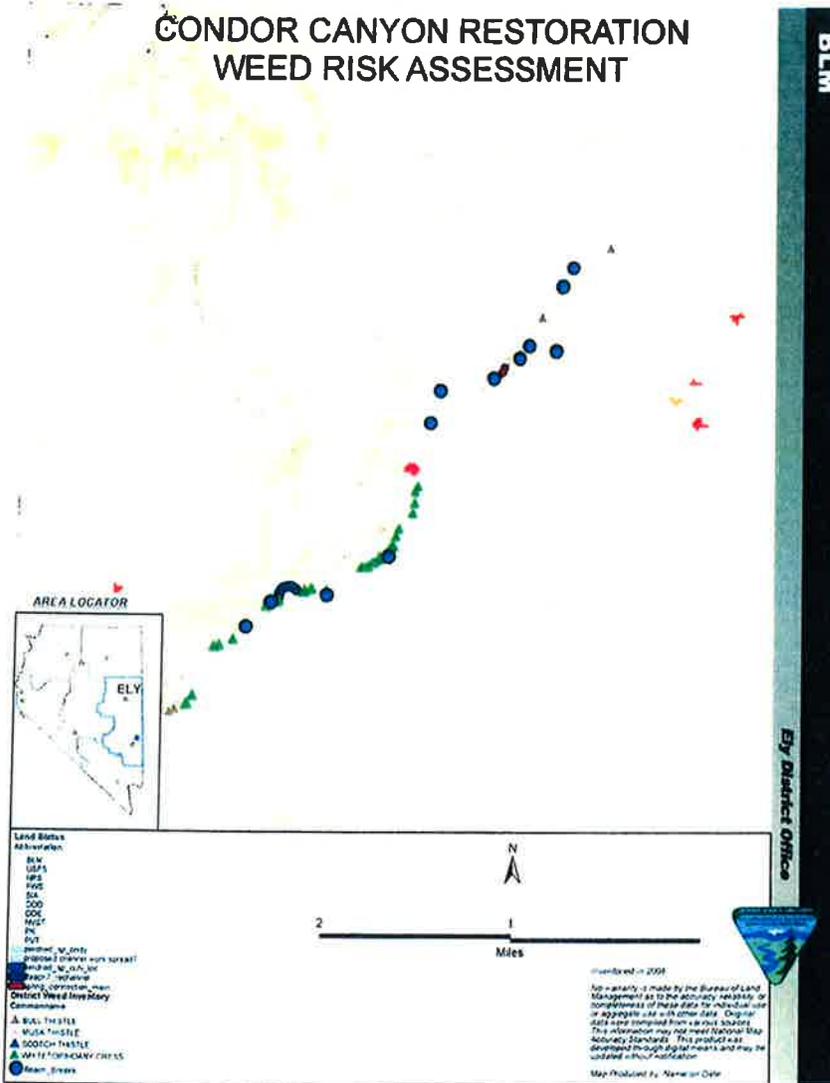
- Conduct mixing of herbicides and rinsing of herbicide containers and spray equipment only in areas that are a safe distance from environmentally sensitive areas and points of entry to bodies of water (storm drains, irrigation ditches, streams, lakes, or wells).
- Keep removal and disturbance of vegetation would be kept to a minimum through construction site management (e.g. using previously disturbed areas and existing easements, limiting equipment/materials storage and staging area sites, etc.)
- Generally, conduct reclamation with native seeds that are representative of the indigenous species present in the adjacent habitat. Document rationale for potential seeding with selected nonnative species. Possible exceptions would include use of nonnative species for a temporary cover crop to out-compete weeds. In all cases, ensure seed mixes are approved by the BLM Authorized Officer prior to planting.
- Certify that all interim and final seed mixes, hay, straw, and hay/straw products are free of plant species listed on the Nevada noxious weed list.
- When managing in areas of special status species, carefully consider the impacts of the treatment on such species. Wherever possible, hand spraying of herbicides is preferred over other methods.
- Consider nozzle type, nozzle size, boom pressure, and adjuvant use and take appropriate measures for each herbicide application project to reduce the chance of chemical drift.
- All applications of approved pesticides will be conducted only by certified pesticide applicators or by personnel under the direct supervision of a certified applicator.
- Prior to commencing any chemical control program, and on a daily basis for the duration of the project, the certified applicator will provide a suitable safety briefing to all personnel working with or in the vicinity of the herbicide application. This briefing will include safe handling, spill prevention, cleanup, and first aid procedures.
- Store all pesticides in areas where access can be controlled to prevent unauthorized/untrained people from gaining access to chemicals.
- Areas treated with pesticides will be adequately posted to notify the public of the activity and of safe re-entry dates, if a public notification requirement is specified on the label of the product applied. The public notice signs will be at least 8 ½" x 11" in size and will contain the date of application and the date of safe re-entry.
- Prior to entering public lands, the contractor, operator, or permit holder will provide information and training regarding noxious weed management and identification to all personnel who will be affiliated with the implementation of the project. The importance of preventing the spread of weeds to uninfested areas and importance of controlling existing populations of weeds will be explained.
- Whenever possible, hand spraying of herbicides is preferred over other methods at heavily used recreation sites (i.e. campgrounds, trailheads, etc.).

Reviewed by:

Cameron Boyce  
Natural Resource Specialist

2/29/2012  
Date

Map



# APPENDIX VI

## MIGRATORY BIRDS

### Condor Canyon Stream Restoration Project

The project area is the Condor Canyon, NE of the city of Panaca, Nevada.

**NOTE:** **Bolded** species names are birds considered BLM Sensitive Species in Nevada.

-----

The following data reflect survey blocks and/or incidental sightings of bird species in or near the project area from the Atlas of the Breeding Birds of Nevada (Floyd et al. 2007) and NDOW Diversity Data. These data represent birds that were confirmed, probably, or possibly breeding within or near the project area. These data are not comprehensive, and additional species not listed here may be present. No survey blocks or incidental sightings occur within the project area. Survey blocks with similar vegetation as this area contained the following bird species:

Ash-throated Flycatcher (*Myiarchus cinerascens*)  
Barn Swallow (*Hirundo rustica*)  
Bewick's Wren (*Thryomanes bewickii*)  
Black-throated Gray Warbler (*Dendroica nigrescens*)  
Black-throated Sparrow (*Amphispiza bilineata*)  
Blue Grosbeak (*Passerina caerulea*)  
Blue-gray Gnatcatcher (*Poliotila caerulea*)  
Brewer's Blackbird (*Euphagus cyanocephalus*)  
Brewer's Sparrow (*Spizella breweri*)  
Broad-tailed Hummingbird (*Selasphorus platycercus*)  
Brown-headed Cowbird (*Molothrus ater*)  
Chipping Sparrow (*Spizella passerine*)  
Cinnamon Teal (*Anas cyanoptera*)  
Common Raven (*Corvus corax*)  
Common Yellowthroat (*Geothlypis trichas*)  
Gambel's Quail (*Callipepla gambelii*)  
Gray Flycatcher (*Empidonax wrightii*)  
Green-tailed Towhee (*Pipilo chlorurus*)  
Lark Sparrow (*Chondestes grammacus*)  
**Lewis's Woodpecker** (*Melanerpes lewis*)  
**Long-billed Curlew** (*Numenius americanus*)  
Mallard (*Anas platyrhynchos*)  
Mountain Bluebird (*Sialia currucoides*)  
Mountain Chickadee (*Poecile gambeli*)  
Mourning Dove (*Zenaida macroura*)  
Northern Flicker (*Colaptes auratus*)  
**Northern Harrier** (*Circus cyaneus*)  
Northern Mockingbird (*Mimus polyglottos*)  
Northern Rough-winged Swallow (*Stelgidopteryx serripennis*)

Northern Pintail (*Anas acuta*)  
**Pinyon Jay** (*Gymnorhinus cyanocephalus*)  
**Red-tailed Hawk** (*Buteo jamaicensis*)  
Red-winged Blackbird (*Agelaius phoeniceus*)  
Rock Wren (*Salpinctes obsoletus*)  
Sage Thrasher (*Oreoscoptes montanus*)  
Spotted Towhee (*Pipilo maculatus*)  
Turkey Vulture (*Cathartes aura*)  
Western Bluebird (*Sialia mexicana*)  
Western Meadowlark (*Sturnella neglecta*)  
Western Scrub-Jay (*Aphelocoma californica*)  
Wilson's Snipe (*Gallinago delicata*)  
Wilson's Warbler (*Wilsonia pusilla*)  
Yellow Warbler (*Dendroica petechia*)  
**Yellow-breasted Chat** (*Icteria virens*)  
Yellow-headed Blackbird (*Xanthocephalus xanthocephalus*)  
Yellow-rumped Warbler (*Dendroica coronata*)

### **Works Cited**

Floyd T, Elphick CS, Chisholm G, Mack K, Elston RG, Ammon EM, and Boone JD. 2007. Atlas of the Breeding Birds of Nevada. Reno: University of Nevada Press.

Nevada Department of Wildlife. 2004. NDOW Diversity Database.

State of Nevada Department of Conservation and Natural Resources. Nevada Natural Heritage Program. 2006. <http://heritage.nv.gov>.

USDOJ. 2008. Ely District Record of Decision and Approved Resource Management Plan. U.S. Department of the Interior, Bureau of Land Management. BLM/NV/EL/PL-GI08/25+1793.

## **APPENDIX VII**

### **APPENDED BIOLOGICAL OPINION AND LETTER OF CONCURRENCE**



## United States Department of the Interior



### FISH AND WILDLIFE SERVICE

Nevada Fish and Wildlife Office

1340 Financial Blvd., Suite 234

Reno, Nevada 89502

Ph: (775) 861-6300 ~ Fax: (775) 861-6301

UB  
3/15/12

March 13, 2012

File Nos. 84320-2012-F-0107 and  
84320-2008-F-0078

#### Memorandum

**To:** Field Manager, Caliente Field Office, Bureau of Land Management,  
Caliente, Nevada

**From:** State Supervisor, Nevada Fish and Wildlife Office, Reno, Nevada

**Subject:** Request to Append the Condor Canyon Habitat Restoration Project to the  
Programmatic Biological Opinion for the Ely District Resource Management  
Plan, Lincoln County, Nevada

This memorandum transmits the Fish and Wildlife Service's (Service) biological opinion based on our review of the restoration proposal and possible adverse effects to the Big Spring spinedace (*Lepidomeda mollispinis pratensis*), a species listed as threatened under the Endangered Species Act of 1973, as amended (Act) (16 U.S.C. 1531 *et seq.*).

A programmatic biological opinion, issued to the Ely District Office on July 8, 2008, addressed potential effects to the Big Spring spinedace in accordance with the Act, and 50 CFR § 402 of our interagency regulations governing section 7 of the Act (File No. 84320-2008-F-0078). This consultation is based on information provided in a memorandum and biological assessment from the Bureau of Land Management (BLM) to the Service received on January 23, 2012, and discussions between BLM and the Service. A complete project file of this consultation is available at the Service's Nevada Fish and Wildlife Office in Las Vegas.

If we can be of further assistance regarding this consultation, please contact Brian A. Novosak in the Nevada Fish and Wildlife Office in Las Vegas at (702) 515-5230. Please reference the file numbers above in future correspondence relating to this consultation.

Edward D. Koch

Attachment

**ATTACHMENT**

**APPENDED ACTION UNDER THE ELY DISTRICT OFFICE  
PROGRAMMATIC BIOLOGICAL OPINION (PBO) (84320-2008-F-0078)**

**Date of Request:** January 20, 2012  
**Date Received:** January 23, 2012  
**Date of Response:** March 13, 2012

**File No. of Action:** 84320-2012-F-0107

**Federal Action Agency:** Bureau of Land Management (BLM), Ely District

**Federal Action(s):** BLM's Caliente Field Office proposes to restore and improve Big Spring spinedace habitat along 8 kilometers (km) (12.8 miles [mi]) of the Meadow Valley Wash in Condor Canyon, Lincoln County, Nevada.

**Species Adversely Affected:** Big Spring spinedace (*Lepidomeda mollispinis pratensis*)

**Programs in PBO that Applies to Proposed Action:** Vegetation Management and  
Special Status Species Management

**PROPOSED ACTION**

BLM's Caliente Field Office proposes to restore and improve Big Spring spinedace habitat in Condor Canyon. Condor Canyon is located approximately 4 km (2.5 mi) northeast of Panaca, Lincoln County, Nevada. The entire Condor Canyon portion of the Meadow Valley Wash is approximately 8 km (12.8 mi) long and varies between 5 to 50 m (15 to 150 feet) wide. The action area would include the Condor Canyon corridor from the culvert near the Delmue ranch on the northeast end (NAD83 UTM Zone 11 - N735855 E4194375) to the mouth of the canyon on the southwest end (NAD83 UTM Zone 11 - N730844 E4190235).

Based on the current delineated critical habitat and the work plan, the total estimated acres of disturbance would be 4.93 acres; of which 4.21 acres would occur in Big Spring spinedace critical habitat. Specific components of the proposed action are listed in Table 1.

**STATUS OF THE SPECIES AND CRITICAL HABITAT RANGEWIDE**

The rangewide status of the Big Spring spinedace and its critical habitat are described in the *Status of the Species/Critical Habitat- Rangewide* sections D.3. and D.4. of the PBO.

**TABLE 1. ESTIMATED ACRES OF DISTURBANCE ASSOCIATED WITH THE COMPONENTS OF THE PROPOSED ACTION.**

Project components	Total estimated acres of disturbance	Total estimated acres of disturbance in critical habitat
Removal of cattails and bulrushes	1.00	0.80
Willow planting	2.50	2.00
Reconnect perched spring	0.10	0.08
Restore floodplain/channel in Reach 7	1.33	1.33
Public outreach kiosk	0.00	0.00
<b>Total</b>	<b>4.93</b>	<b>4.21</b>

**ENVIRONMENTAL BASELINE**

Continual efforts have been made to survey for Big Spring spinedace within the Meadow Valley Wash. Surveys conducted from late 2008 to early 2010 estimated 5,700 and 9,284 Big Spring spinedace in the entire population, of which 18 percent and 19 percent were below Delmue falls, respectively; the remaining fish occurred above the falls.

The environmental baseline of the Big Spring spinedace and its critical habitat are described in the *Environmental Baseline* section E.2. of the PBO and previously appended actions are identified in Table 2.

**EFFECTS ANALYSIS**

The effects of this type of proposed action are described in the *Effects of the Action* section F.2. of the PBO.

Additionally, individual fish are most susceptible to being harmed, harassed or killed from trampling during removal of cattails and bulrushes above Delmue falls. The greatest risk in implementing the proposed action lies above Delmue falls where about 80 percent of the fish are located. Reach 7 was specifically targeted to minimize trampling and other impacts to the species because less than 20 percent of the population has been reported there. To minimize effects to breeding spinedace, project implementation has been reported there. To minimize season, the breeding process, and egg development (July 1).

The primary known constituent elements (PCEs) of Big Spring spinedace critical habitat, according to the recovery plan (Service 1993) include: (1) Clean, permanent, flowing, spring-fed stream habitat with deep pool areas and shallow marshy areas along the shore; and (2) the absence of nonnative fishes.

There likely will be a time during project implementation when habitat conditions are slightly reduced, except in the floodplain along Reach 7. Sediment deposition fills pool habitat and converts gravel substrates to silt, possibly resulting in less suitable habitat for spinedace foraging and reproduction. Though a small amount of habitat will be disturbed to reconnect the perched spring, reattaching it will improve main channel flow with clean, permanent, flowing spring water, which is one of the PCEs for spinedace critical habitat.

Furthermore, BLM proposed 12 programmatic measures to reduce the potential effects to Big Spring spinedace and its critical habitat. Additionally, BLM would adhere to the guidance in the Condor Canyon Habitat Management Plan (BLM 1990), spinedace recovery plan (Service 1993), the Ely Resource Management Plan and Record of Decision (BLM 2007a) and the associated biological opinion (File No. 84320-2008-F-0078), and suggestions from fisheries professionals on the Meadow Valley Wash Recovery Implementation Team.

## CONCLUSION

After reviewing the current status of the Big Spring spinedace and its critical habitat, the environmental baseline for the project area, the effects of the proposed action, and the cumulative effects, it is the Service's biological opinion that the proposed action is within the scope of the PBO and is therefore not likely to jeopardize the continued existence of the Big Spring spinedace or adversely modify its critical habitat.

## INCIDENTAL TAKE STATEMENT

Section 9 of the Act, as amended, prohibits take (harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or attempt to engage in any such conduct) of listed species of fish or wildlife without a special exemption. "Harm" is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, or sheltering (50 CFR § 17.3). "Harass" is defined as actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering (50 CFR § 17.3). Incidental take is any take of listed animal species that results from, but is not the purpose of, carrying out an otherwise lawful activity conducted by the Federal agency or applicant. Under the terms of sections 7(b)(4) and 7(o)(2) of the Act, taking that is incidental to, and not intended as part of the agency action, is not considered a prohibited taking provided that such taking is in compliance with the terms and conditions of this incidental take statement.

The measures described below are non-discretionary and must be undertaken by BLM so that they become binding conditions of the permit, as appropriate, for the exemption in section 7(o)(2) to apply. BLM has a continuing duty to regulate the activity that is covered by this incidental take statement. If BLM (1) fails to require the project proponent to adhere to the action-specific terms and conditions of the incidental take statement through enforceable terms

that are added to the permit or grant document, and/or (2) fails to retain oversight to ensure compliance with action-specific terms and conditions, the protective coverage of section 7(o)(2) may lapse. In order to monitor the impact of incidental take, BLM and must ensure reporting of the progress of the action and its impact on the species to the Service as specified in the incidental take statement (50 CFR§402.14(i)(3)).

**AMOUNT OR EXTENT OF TAKE**

The proposed action is not anticipated to result in any Big Spring spinedace being killed or injured, but would temporarily harass individuals that may occur in the project area during restoration activities and may temporarily cause slightly reduced habitat conditions throughout the Wash with the exception of the floodplain along Reach 7.

**EFFECT OF THE TAKE**

In the PBO issued to BLM, the Service determined that these levels of anticipated take are not likely to result in jeopardy to the species. Incidental take anticipated for the proposed project is within the level of take exempted in the PBO.

**REASONABLE AND PRUDENT MEASURES WITH TERMS AND CONDITIONS**

The Service believes that the following reasonable and prudent measures (RPMs) and Terms and Conditions are necessary and appropriate to minimize take of Big Spring spinedace.

**RPM 1:** *BLM shall implement measures to minimize the incidental take of Big Spring spinedace that may result from restoration or habitat enhancement activities, or other recovery actions under the Special Status Species program:*

Term and Condition:

If translocation, salvage, or other handling of fish is necessary to accomplish restoration, habitat enhancement, or other recovery actions, BLM shall use appropriate fish handling procedures developed with assistance from the Service and the Nevada Department of Wildlife.

**RPM 2:** *BLM shall implement measures to minimize the incidental take of Big Spring spinedace that may result from weed removal projects:*

Terms and Conditions:

2.a. BLM shall implement measures proposed for Special Status Species, Lands and Realty, Renewable Energy, and Geology and Mineral Extraction in the Ely Resource Management Plan and Record of Decision unless modified below.

- 2.b. BLM shall ensure that methods used for weed removal projects and measures to minimize potential effects to aquatic species and their environment are consistent with the standard operating procedures and mitigation measures described in the Final Programmatic EIS for Vegetation Treatments Using Herbicides on BLM Lands in 17 Western States (BLM 2007b), and the best management practices described in the Ely Resource Management Plan and Record of Decision (BLM 2007a).
- 2.c. BLM shall replace salt cedar removed during weed control projects with appropriate native vegetation to ensure no net loss of habitat.
- 2.d. BLM shall avoid conducting weed removal activities during the peak spawning period (in general, April 1 through May 31).

**RPM 3:** *BLM shall implement measures to ensure compliance with the RPMs, terms and conditions, project-reporting requirements, and reinitiation requirements contained in this biological opinion.*

Terms and Conditions:

- 3.a. BLM shall provide a report to the Service within 30 days of completion of the project with the following information: location, date and time of all Big Spring spinedace observations; whether Big Spring spinedace were handled; location they were removed from and location returned to; any actions taken to protect the Big Spring spinedace; and any other information useful to the Service.
- 3.b. BLM shall keep an up-to-date log of all actions taken under this consultation including acreage affected; number of listed species taken and form of take; and fees paid for each action. BLM will provide the log information to the Service on an annual basis due on February 15 of the following year. Information will be cumulative throughout the term of this consultation.

**CONSERVATION RECOMMENDATIONS**

Section 7(a)(1) of the Act directs Federal agencies to use their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

*The Service recommends that BLM and its agents contact Meadow Valley Wash Recovery Implementation Team biologists with any new or unusual information about Big Spring spinedace that is observed or learned during implementation of the subject restoration.*

This concludes formal consultation on the action outlined in your January 20, 2012, request. This consultation document is hereby appended to the PBO issued to the Ely District Office to fulfill their consultation requirements pursuant to section 7(a)(2) of the Act.

#### LITERATURE CITED

- BLM. 1990. Condor Canyon Habitat Management Plan. Caliente Resource Area, Las Vegas District, Nevada. Prepared in cooperation with the Nevada Department of Wildlife, Las Vegas, Nevada. 72 pp.
- BLM. 2007a. Ely Proposed Resource Management Plan - Final Environmental Impact Statement. Ely District Office, Ely Nevada.
- BLM. 2007b. Final Vegetation Treatments on Bureau of Land Management Lands in 17 Western States Programmatic Environmental Impact Statement and associated Record of Decision.
- Service. 1993. Big Spring Spinedace, *Lepidomeda mollispinis pratensis*, Recovery Plan. Portland, Oregon. 42 pp.

**TABLE 2. APPENDED ACTIONS UNDER THE ELY RESOURCE MANAGEMENT PLAN PBO AFFECTING THE BIG SPRING SPINEDACE.**

Date Received	File No.	Date Completed	Program Affected	Project or Action Name	Program Type			
					Special Status Species	Weed Management	Livestock Grazing Management	Fire Management
Take Thresholds →					<b>Harass:</b> Entire population. <b>Harm:</b> Not more than 5 percent of the population during any one salvage event. An unquantifiable number of eggs or larvae may be taken during these events.	<b>Harass or Harm:</b> Not more than 20 percent of habitat (length of stream reach) during any one weed removal project	<b>Harass:</b> <u>Entire population.</u> <b>Harm:</b> <u>Will be considered exceeded if habitat thresholds established in the monitoring plan are reached.</u>	<b>Harass or Harm:</b> Less than 10 percent of the population during any one water drafting event for fire management.
06/02/09	2009-F-0432	08/31/09	Livestock Grazing Management	Condor Canyon Allotment Term Permit Renewal	N/A	N/A	0	N/A

N/A – not applicable  
 NP- not provided  
 RP – report pending

Last update: March 2, 2012