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Sand Spring and Lone Spring Resource Protection and Enhancement Project

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CHAPTER 1 PURPOSE AND NEED

Purpose and Need

The purpose and need of the project is to provide protection to sensitive resources associated with Sand Spring and Lone Spring. These springs are located, respectively, on the Massacre Lakes and Long Valley Grazing Allotments (see Project Location Map p.3). Watering troughs located at both of these springs have resulted in heavy use of the areas by both cattle and wild horses. A consequence of this heavy use is severe soil churning, denuded vegetation, and soil erosion in the surrounding area, which are causing effects to cultural resources at Sand Spring and Lone Spring and riparian resources at Lone Spring. Also, current transportation routes are impacting cultural resources at Sand Springs. In order to protect and enhance these resources, the Bureau of Land Management is proposing to construct enclosure fences around the sensitive resources, relocate the watering troughs, and reroute current transportation routes to reduce and, or, eliminate impacts to these resources.

Conformance with BLM Land Use Plans

The proposed action is in conformance with the Proposed Surprise Field Office Resource Management Plan (RMP) and Final Environmental Impact Statement issued in May 2007 as adopted by the Record of Decision approved in April 2008 and can be found in the following sections of the RMP.

Section 2.14.4

- Actions would minimize damage to the watershed and its soil, vegetation, air-quality or other resources of the public lands.

Section 2.19.5

- Protecting uplands, springs, streams, riparian areas, and wetlands from grazing by employing and maintaining protective enclosures.

Section 2.2.2

- Protect and preserve significant cultural resources. Ensure that these resources are available to present and future generations for appropriate uses. Manage legitimate activities in a manner that will ensure preservation and provide public benefits through education (including interpretation), research, public uses, and conservation for future generations.

Section 2.2.5

- Cultural resources will be managed in accordance with existing laws, regulations, executive orders, and Nevada and California State Historic Preservation Office protocol agreements (as amended).

Section 2.22.2)

- Locate new livestock watering sites where depletion of natural springs and wetland areas can be avoided. Equip watering troughs with ramps for wildlife access and egress; provide water at ground level, if possible.
- Ensure that sufficient vegetation is retained around springs and other water sources, riparian areas, and wetlands to fulfill the needs of wildlife.

- Remove fencing that is no longer required and replace fencing that is harmful to wildlife. Build all new fencing to wildlife-friendly specifications.
- Close and rehabilitate (when feasible) resource extraction or other temporary roads where needed to reduce disturbance of special status and special interest wildlife.

Relationship to Statutes, Regulations and Other Plans

The proposed action is consistent with the following laws, regulations, and protocols:

National Historic Preservation Act (NHPA) (1966), as amended.

The Federal Land Policy and Management Act (1976), as amended

Archaeological Resources Protection Act (1979), as amended

BLM-California State Historic Preservation Office Protocol Agreement (2004), as amended

Executive Order No. 11,593- Protection and Enhancement of the Cultural Environment, 1971

BLM Manual 8100 – Cultural Resource Management

Taylor Grazing Act (43 U.S.C 315 - 1934)

Federal Land Policy and Management Act (43 U.S.C. 1701, 1976)

Public Rangelands Improvement Act (43 U.S.C. 1901. 1978)

Long Valley & Massacre Lakes Allotment Management Plans (1980s)

Issues and Scoping

On March 26, 2009, the Surprise Field Office sent a scoping letter to all interested parties. A letter of response was received from the Nevada State Historic Preservation Office in support of the project. The Northeast California Resource Advisory Council (RAC) visited Sand Spring during the summer of 2008, and was informed of resources issues associated with the site. The RAC requested future consultation regarding BLM’s proposal for the project. Meetings were held with permittees on the Long Valley and Massacre Lakes Allotments. Issues discussed were project design to ensure that cattle from both allotments would be able to access water and also the placement of watering troughs.

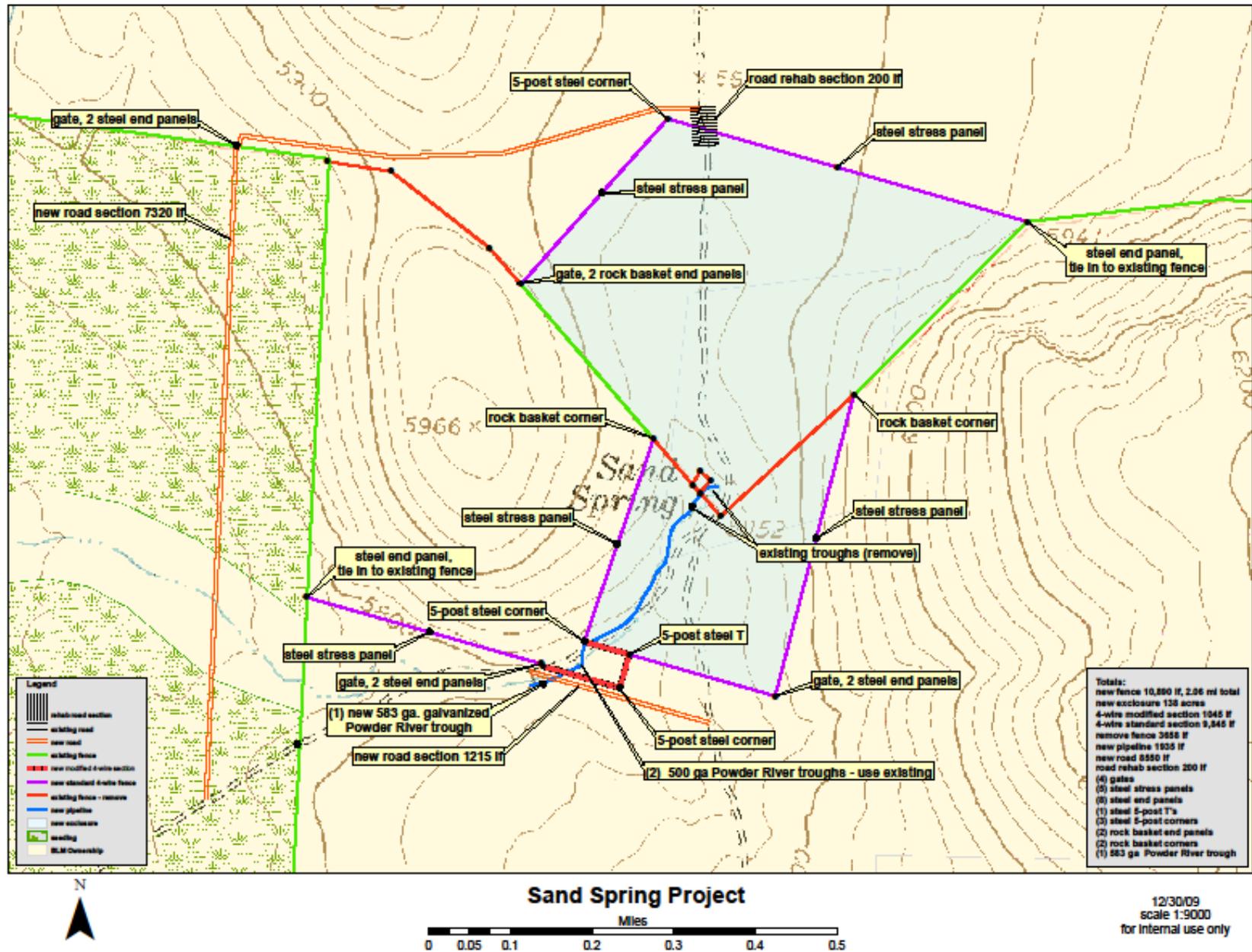
Chapter 2 PROPOSED ACTION AND ALTERNATIVES

Alternative 1: Proposed Action

Sand Spring

The BLM is proposing to construct approximately two miles of new fence (Map 1). The fence would enclose approximately 138 acres for the purpose of resource protection. In addition, a portion of the new fence would result in an adjustment of the allotment boundary fence between the Long Valley and Massacre Lakes Allotments. Approximately 3,658 feet of old allotment boundary fence would be removed. The new fence would be built with four strand design (3 barbed, and bottom smooth wire) according to BLM standards. If the area becomes important to sage-grouse, collision marking (see Lone Springs below) would be added at a later date.

With the addition to the new fence, watering troughs would need to be moved away from the spring and relocated to the southwest on each allotment. In order to provide water to the troughs the current pipeline would also need to be extended. Approximately 1,935 feet of 1.5 inch PE pipeline would be installed. A trencher would be used to construct the pipeline trench from the existing pipeline to just past the area of sandy soil; from this point a backhoe would be used to construct the remainder of the pipeline trench which would be located within the existing road.



The current access route through Sand Spring would be closed and a new access would be routed west using light equipment (mainly driving the route with a vehicle). A 200 foot section of road located at the north end of the enclosure would be rehabilitated to discourage use. In addition, a 1,215 foot section of road just south of the enclosure would be created in the same manner for the purpose of connecting the two southern routes. Directional signs informing the public of the new routes would be placed in strategic locations. Signs informing the public of no vehicular use within the enclosure due to sensitive resources would also be strategically placed around the enclosure.

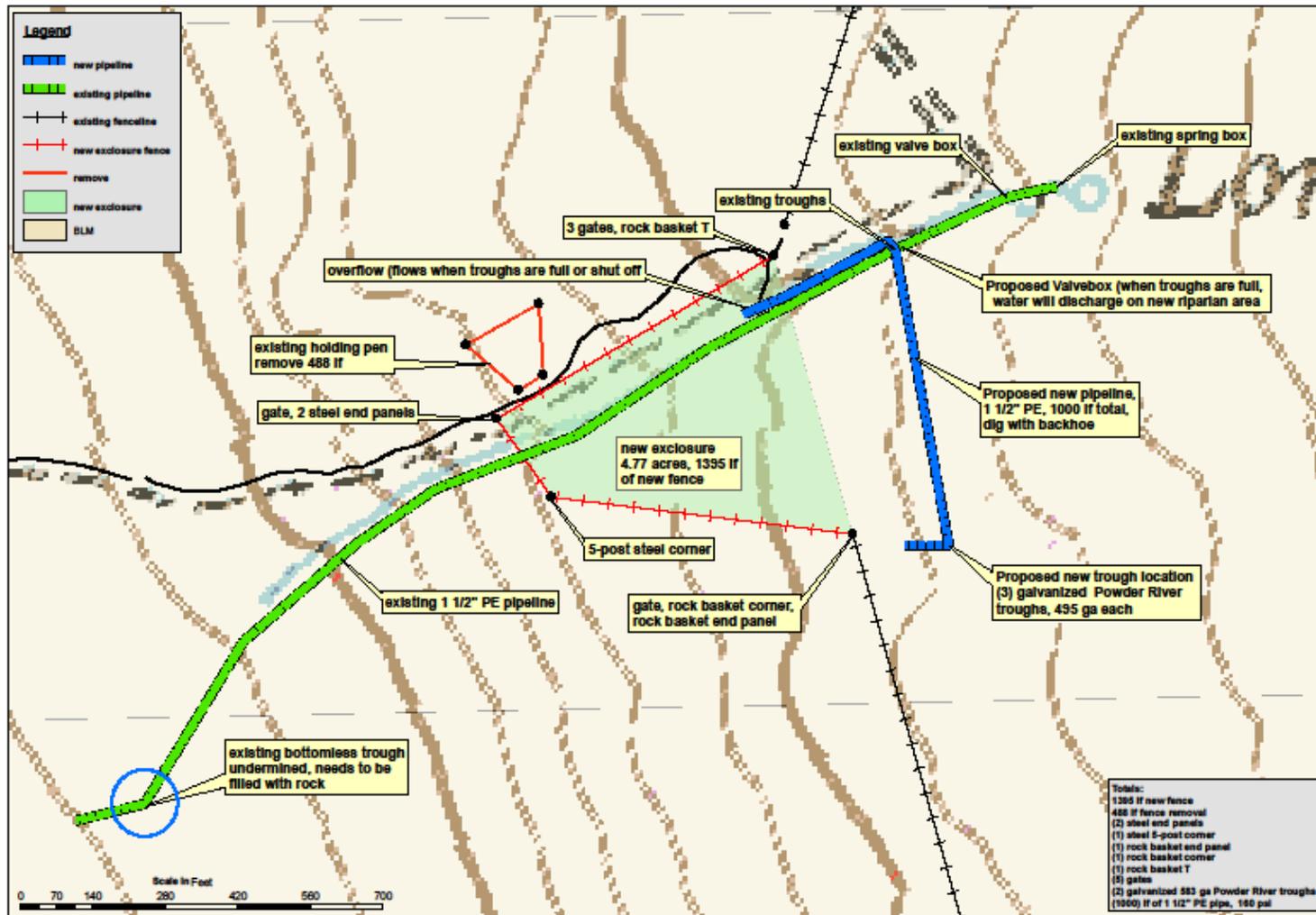
Lone Spring

The BLM is proposing to construct 1,395 feet of new fence, which would enclose approximately 4.7 acres, for the purpose of enhancing riparian habitat (Map 2). The new fence would be built with four strand design (3 barbed, and bottom smooth wire) according to BLM standards. Fence would also be “marked” with vinyl siding strips to reduce potential sage-grouse collisions. The vinyl strips are approximately 2x3 inches in size and hung about four feet apart on the top two wires in an alternating pattern along the field of the fence. An existing wire holding pen which is no longer in use would be removed (488 ft). Watering troughs would be relocated about 600 feet to the south of the current location, and outside of the cultural resource site. A new 1,000 feet pipeline would be installed to provide water to the troughs. This 1.5 inch PE pipeline would be installed using a backhoe. A section of the new pipeline would also overflow into the riparian area on the seeding side when troughs are full. A new valve box would be installed, which would assist in providing overflow to the riparian area. All excavation work occurring within the boundaries of the cultural resource site would be monitored by a qualified archaeologist.

Cultural resources associated with Lone Spring would be monitored at the end of each season of grazing use for 3 years to assess whether impacts to the site have been reduced. A reduction of impacts would be a noticeable decrease in trailing throughout the site and re-establishment (soil stabilization) of vegetation in the area surrounding where the previous water troughs were located.

Standard Operating Procedures

1. The livestock permittees would be responsible for fence maintenance defined in a cooperative agreement. Prior to final inspection all construction trash and excess debris would be removed from the public lands and disposed of at a site approved by the BLM Contracting Officer Representative or Project Inspector.
2. Fence construction activities would occur after the ground is dry.
3. Vehicles and equipment would be cleaned prior to entry to the site for fence work to prevent or the spread or introduction of weeds.
4. Prior to construction, large brush will be completely removed and cleared back to 2' on either side of fence line as necessary to maintain proper fence alignment.
5. All rocks used for rock basket construction shall be gathered as from the project area outside of cultural resource sites.



Lone Spring Project
Map 2

Alternative 2: No Action

Sand Spring

Under the No Action alternative, an enclosure fence would not be built, the current road would not be rerouted, and the watering troughs would not be relocated. Degradation of the cultural resource site would continue to occur from cattle, wild horse, and vehicular activities, which would be in violation of certain statutes and regulations governing cultural resources.

Lone Spring

Under the No Action alternative, an enclosure fence would not be built and the watering troughs would not be relocated outside of the cultural resource site. The riparian area would be further degraded and not enhanced. In addition, the cultural resource site would continue to receive impacts from wild horse and cattle use due to the location of the current watering troughs, which would be in violation of certain statutes and regulations governing riparian and cultural resources.

Alternative Considered But Eliminated From Further Analysis

During the initial scoping period an additional alternative for the Sand Springs project was considered. This alternative would have placed the Massacre Lakes Allotment watering trough north of the enclosure. A solar pump would have been used to pump water to the trough. This alternative would not have required an adjustment to the allotment boundary fence. After further analysis and discussions with the permittees it was decided that due to the rise in elevation and the small flow of water from the spring, a solar pump would not be able to provide an adequate amount of water to the trough. Therefore, this alternative was not considered further.

CHAPTER 3 AFFECTED ENVIRONMENT

Supplemental Authorities of the Human Environment

The following supplemental authorities of the human environment are specifically required by statute, regulation, and executive order and must be considered in the Proposed Action and Alternatives. Supplemental Authorities of the Human Environment are those elements that are subject to the requirements specified in statute, regulation, or executive order, and must be considered in all EAs (BLM H-1790-1, Appendix 5). These authorities have either been analyzed in the Environmental Assessment or are not present or not affected by the Proposed Action or Alternatives.

Consideration of Supplemental Authorities	Supplemental Authorities Review		
	N/A or Not Present	Applicable or Present, No Impact	Discussed in EA
Air Quality		✓	
Areas of Critical Environmental Concern	✓		
Cultural Resources			✓
Climate Change		✓	
Environmental Justice (E.O. 12898)	✓		
Farm Lands (prime or unique)	✓		
Floodplains	✓		
Native American Religious Concerns			✓
Invasive, Non-Native Species			✓
Threatened or Endangered Species	✓		
Wastes, Hazardous Substances or Solid Wastes	✓		
Water Quality	✓		
Wetlands/Riparian Zones			✓
Wild and Scenic Rivers (Eligible)	✓		
Wilderness	✓		
Other Elements Considered			
Wild Horses and Burros			✓
Wildlife			✓
Recreation		✓	
Soils			✓
Vegetation			✓
Livestock			✓

All supplemental authorities and other elements are either not present or will not be affected by proposed action or any of the alternatives and will not be discussed further in this EA.

Cultural Resources

In 2008 the Surprise Field Office (SFO) conducted National Historic Preservation Act (NHPA) Section 106 compliance inventories for the Long Valley Grazing Allotment. The inventories are designed to identify any cultural resources that may be affected by impacts associated with grazing. As a result of the inventories the SFO identified two cultural resource sites that were being impacted by grazing on the Long Valley Grazing Allotment. These two sites are associated with Sand Spring and Lone Spring. Neither of these cultural resource sites has been formally evaluated for eligibility to the National Register of Historic Places (NRHP). However, the BLM, Surprise Field Office assumes that both of these sites are eligible to the NRHP.

Disturbance to the cultural resources at Sand Spring are a result of the watering troughs being located within the cultural resource site. Cattle use in the area is heavy; trampling, trailing, wallowing, and soil churning is evident throughout the site. This has affected cultural resources by causing artifact breakage, horizontal artifact displacement, and erosion to sub-surface deposits

from denuded vegetation and severe soil erosion. In addition to cattle impacts, a two track road runs through the center of the site causing the same effects to cultural resources as discussed above.

At Lone Spring cattle impacts to cultural resources are also a result of the watering troughs being located within the cultural resource site. In addition, wild horses frequent the watering troughs and associated riparian areas year-round. Soil within this area is less fragile than soil at Sand Spring; therefore effects to sub-surface deposits are not an issue. However, heavy use of the area by cattle and wild horses is resulting in trailing and trampling, which is causing horizontal artifact displacement, and artifact breakage within the site.

The proposed project was inventoried at a Class III level for the purpose of identifying cultural resources that may be affected by the project. No additional cultural resources, other than those associated with the two springs, were identified during the inventory of the Area of Project Effect.

Native American Religious Concerns

Since 2008, the Surprise Field Office has been in frequent consultation with the Fort Bidwell Tribe regarding the impacts to cultural resources at Sand Spring and Lone Spring. The tribe expressed concern over the impacts occurring to their ancestral sites at Sand Spring and Lone Spring. The Surprise Field Office solicited from the tribe their thoughts on how to reduce or eliminate impacts to both of the sites. The tribe was in favor of the proposed mitigation measures to protect and preserve the sites.

Invasive and Non-Native Species

Weeds as defined in this EA are non-native plant that disrupts or has the potential to disrupt or alter the natural ecosystem function, composition and diversity of the site it occupies. Weed inventory was conducted in the Sand Spring and Lone Spring areas and no known noxious weed infestations found in the project sites. The closest known weed site was an infestation of Scotch thistle along Highway 8A, near the Massacre Lakes and Nut Mountain Allotments boundary, three miles from Sand Springs. This site was inventoried and weeds were manually removed in 1999, and follow-up inventories have not found any re-infestations. Since both springs were originally developed as a water sites 50+ years ago for cattle (and wild horses) there have been associated impacts to the riparian resources at the springs, including soil disturbance and some soil erosion in the surrounding area. The possibility of invasive weed introduction exists by vehicles if road access and disturbance from livestock continues, although currently this has not resulted in any noxious weed invasion at the springs.

Livestock Management

Sand and Lone Springs were acquired by BLM as part of larger private land acquisition in the 1990s. Sand Spring is located in the Massacre Lakes Allotment at the boundary with the Long

Valley Allotment. It is unclear when the spring was first developed for livestock water, but in 1990s the project was modified to provide water to the Long Valley Allotment. The spring still provides water to livestock for both allotments; however, due to the low flow of the spring and poor condition of the trough, water is not always available to the Long Valley Allotment. In the Massacre Lakes Allotment, Sand Spring is located in the Sand Spring Pasture. Cattle are scheduled to graze this pasture after July 15 annually with use restricted of 40-60% or moderate utilization levels. In the Long Valley Allotment, the Sand Spring trough is located at the north end of the Mountain Pasture. Cattle are generally herded to this pasture in early July and removed by mid August each year.

Lone Spring is located in the Mountain Pasture of the Long Valley Allotment; a pipeline delivers water to a trough in the Lone Spring Seeding Pasture. Lone Spring was redeveloped by BLM in the 1980s under a Range Improvement Easement, prior to the acquisition. Cattle are turned out into the Lone Spring Seeding in early May on alternate years and moved to the Mountain Pasture in early July for about 6 weeks. Cattle are scheduled to be off the mountain pasture by mid-August.

Soils

The soil classification for the Massacre Lakes and Long Valley Allotment is contained in the Washoe County North Part Soil Survey, NV #759 (an Order III soil survey). The soil survey has been updated by the Natural Resources Conservation Service (NRCS) Reno State Office to current standards and can be found on the NRCS web site.

The affected soils at Sand Spring are Davey-Corral association and Zorravista fine sand; both soils are capable of supporting basin big sagebrush plant communities.

Soils at the Lone Spring site are Davey-Corral association (Lone Spring Pasture) and Reywat very stony loam (Mountain Pasture). The Davey-Corral soils can support basin big sagebrush communities, while Reywat series supports Wyoming big sagebrush communities.

Vegetation/Threatened and Endangered Species

Ecological sites and dominant plant communities associated with the soils at Sand Spring include:

Sandy 8-12" P.Z. 023XY051NV – needle-and-thread, Wyoming and basin big sagebrush, Indian ricegrass; Loamy 8-10" P.Z. 023XY006NV – Thurber's needlegrass, Wyoming big sagebrush, Indian ricegrass; Dunes 8-10" P.Z. 023XY011NV – Indian ricegrass, basin big sagebrush, needle-and-thread.

Ecological sites and dominant plant communities at Lone Spring are as follows:

Sandy 8-12" P.Z. 023XY051NV – needle-and-thread, Wyoming and basin big sagebrush, Indian ricegrass; Loamy 8-10" P.Z. 023XY006NV – Thurber's needlegrass, Wyoming big sagebrush, Indian ricegrass; Loamy Slope 10-14" P.Z. – bluebunch wheatgrass, Wyoming big sagebrush, Thurber's needlegrass.

Special Status Plant Species

No threatened or endangered plant species exist on the soils within the project areas.

Wetlands and Riparian

There is less than 1 acre of riparian habitat at Lone Spring and no riparian habitat at Sand Spring therefore Sand Spring will not be discussed further. Riparian habitat at Lone Spring has been altered by the past development of the spring source and subsequent dewatering of the riparian zone at variously times of the year. Due to this alteration, much of the riparian habitat at Lone Spring now consists of a small strip of riparian vegetation that receives water only periodically. Based on field observations, it appears that habitat has been artificially created below the troughs at Lone Spring due to “day lighting” of the overflow pipe and/or leaking troughs. These troughs are located within 100 feet of the riparian zone which leads to concentrations of cattle in the riparian zone.

Currently, water flows from the spring box at Lone Springs to troughs in both the Mountain Pasture and the Lone Springs seeding. When no cattle are in the Mountain Pasture, water is shut off to its troughs, diverted to a valve box, and allowed to run in its original channel where it eventually dries up on the Lone Springs seeding side. When no cattle are in the Lone Springs seeding, water is shutoff to the single trough as well.

Riparian habitat around Lone Spring is severely impacted by cattle and horse use. Signs of current degradation include pocking and shearing of the wetted riparian, deposits of eroding soil in the current riparian zone, and large fluctuations of water flow. Most impacts to riparian habitat occur in the Mountain Pasture side. Impacts are mainly due to horses since this habitat is used yearlong by horses and for about 6 weeks by cattle (see livestock management section). Riparian habitat in the Lone Springs seeding side is less impacted. The seeding is used by livestock for about 2 months in alternate years but most water in the seeding is associated with its single trough more than 1,500 feet away from the riparian habitat at Lone Springs. The riparian in the Lone Springs seeding side does show signs of long-term over- use such as sagebrush in the riparian zone and hummocking along the fence line between the Mountain and Lone Springs Seeding pastures.

Wild Horses and Burros

Neither of the project sites is located within a Herd Management Area (HMA) or Herd Area; however, currently about 30 wild horses occupy the Mountain Pasture in the Long Valley Allotment. These horses likely entered the allotment from the nearby High Rock HMA. Wild horses generally water at Lone Spring year-round. There is no recent evidence of wild horses using Sand Spring in the Massacre Lakes or Long Valley Allotment.

Wildlife

No known T&E species or their habitats are found at either location. Several inventories were conducted for pygmy rabbits around the Sand Spring project in areas that appeared to be suitable

for building burrows but neither pygmy rabbit burrows nor rabbits were found. Suitable areas for burrows do not occur at the Lone Springs site and burrows or rabbits were not seen during survey and design of the project. Greater sage-grouse are the only known BLM sensitive species that occur in or around either project site. Sage-grouse sign was found at both sites. The presence of riparian habitat, surface water, and higher amounts of sign found at Lone Springs indicate that Lone Springs is much more important to sage-grouse, most likely as summer brood rearing habitat. Active sage-grouse strutting grounds are greater than 7 miles from either project.

The area around Lone Spring is considered summer pronghorn antelope habitat and areas around both springs summer habitat for mule deer. Coyote, various rodents, rattlesnakes, and black-tailed jack rabbits or their sign have also been noted in the general area of these projects. Other sagebrush obligate birds are expected to use the general area.

Chapter 4 ENVIRONMENTAL IMPACTS

Cultural Resources

PROPOSED ACTION – Under the proposed action cultural resources at Sand Spring would be protected from cattle impacts. Impacts to soil from cattle activity would cease allowing vegetation to re-establish; stabilizing soils and assisting in the prevention of soil erosion. Vehicular access through the site would no longer be allowed, which would prevent further degradation to areas of the site that are currently used for vehicular access and throughways.

The proposed action would also reduce impacts to cultural resources associated with Lone Spring. Under the action the watering troughs would be located outside of the boundaries of the cultural resource site thereby reducing impacts to the site. Trailing to the new watering location would occur, but trailing patterns would change due to the new trough location. It is expected that there would be less trailing through the cultural resource site under this alternative.

NO ACTION - Under the no action alternative impacts to both of the NRHP eligible sites associated with Sand Spring and Lone Spring would continue to occur, which could result in loss of integrity to the sites.

Native American Religious Concerns

PROPOSED ACTION – Under the proposed action cultural resources associated with Sand Spring would be protected by fencing. Resources associated with Lone Spring would be protected by relocation of the watering troughs. The proposed action would provide protection to cultural resources that the Fort Bidwell Tribe has identified as being important.

NO ACTION - Under this alternative no enclosure fences would be constructed, watering troughs and travel routes would not be relocated. Therefore, resources important to the Fort Bidwell Tribe would continue to be impacted by cattle and wild horse grazing, and use on established roadways.

Invasive and Non-Native Species

PROPOSED ACTION – The proposed action is not expected to increase the establishment or spread of noxious weeds, as there are no known infestations of noxious weeds in the existing project areas to date. Weeds which are introduced or become established in the project areas would be detected early with continued vigilance, and these sites would be expected to be treated under the current weed management program. Construction of enclosure fences around the sensitive resources, relocating watering troughs, and rerouting the current access roads will reduce the likelihood of weed infestations in the future.

Under the proposed action, project construction and vehicles traveling through infested sites into the project areas could provide an opportunity for weeds to become introduced. The cleaning of construction vehicles before entering the project sites would reduce or eliminate this possibility. Implementation of the proposed action would allow disturbed riparian sites to recover and thus, lessen the likelihood of weeds invading the sites.

NO ACTION - Lone Spring and Sand Spring may be at increased risk of weed introduction under the No Action alternative. These riparian areas are used by livestock to water and are at increased risk of soil disturbance and therefore vulnerable to entry by invasive and noxious weeds. Vehicles accessing the spring sites via current access roads would continue to impact the riparian resources, and could increase the potential for weed introduction by inadvertently bringing in weed seeds and other reproductive parts noxious weeds.

Livestock Management

PROPOSED ACTION – Livestock management on both allotments would remain relatively unchanged. Cattle numbers and season of use in the affected pastures would remain the same; however, due to the relocation of the Sand Spring troughs, the newly constructed enclosure and adjustments to the allotment boundary fences, the Massacre Lakes cattle would have to be trailed to the troughs initially to get them adapted to the new location.

NO ACTION - The No Action Alternative would have no effect on current livestock management for either allotment. At Sand Spring, adjustments to the allotment boundary fence and construction of the enclosure would not occur. Cattle would continue to water at the current trough locations in both allotments. However, without the redevelopment of the pipeline, water for livestock may continue to be unreliable to Long Valley unless a new water trough is installed. At Lone Spring, water troughs would not be relocated, therefore cattle would continue to water at the current location.

Soils

PROPOSED ACTION – In the proposed Sand Spring enclosure, organic matter would increase but would not be incorporated into the soil as fast as it would from the hoof action of cattle. In the long term, plant vigor and litter could decline as the amount of standing dead litter is increased but is not being incorporated into the soil. Soils within the enclosure would no longer receive impacts from livestock such as trampling and compaction at watering sites; however, these impacts would occur at the new trough locations and along fencelines.

Soils along the proposed two-track road would be compacted as motor vehicle traffic increases.

Riparian soils within the proposed enclosure at Lone Spring would no longer be impacted by livestock trampling, sheering and compaction. Like Sand Spring, organic matter within the enclosure would increase but would not be incorporated into the soil as fast as it would from the hoof action of cattle. In the long term, plant vigor and litter could decline as the amount of standing dead litter is increased but is not being incorporated into the soil.

Livestock and wild horse use would continue to impact upland soils in the form of trampling and compaction near watering sites and along fencelines in the Mountain Pasture near Lone Spring.

NO ACTION – The protective enclosures would not be constructed and impacts to upland and riparian soils around the current watering sites would continue. Since the proposed two-track road will not be created, new impacts to upland soils from motor vehicles would not occur.

Vegetation, Threatened and Endangered Species

PROPOSED ACTION – There is no known T & E or other special status plants within or near the project area. At Sand and Lone Spring, sagebrush would be mechanically removed at the new trough locations using a wheeled front loader/backhoe. Over time, sagebrush in the immediate vicinity of the troughs would become trampled and otherwise be lost as result of livestock concentrating in the area while watering. Herbaceous vegetation in a localized area around the troughs would also be lost to livestock grazing and trampling. The actual disturbed area is expected to be ¼ acre. The existing trough site and access road at Sand Spring would be located within the proposed enclosure, and therefore vegetation would recover in long term to conditions expected at ecological site potential. At Lone Spring, the new disturbance is expected to be approximately ¼ acre as result of the troughs and associated pipeline being moved to a new location outside the culture resource site.

Some sagebrush may also be mechanically cleared / removed to create the proposed two-track roads around the enclosure in the Massacre Lakes and Long Valley Allotments. Vegetation in the tracks would soon disappear as the frequency of vehicle disturbance and compaction increases. While livestock would continue to graze affected pastures annually, the proposed action is unlikely to change utilization patterns or affect basic plant communities and plant community seral stages within the pastures affected by the project area.

In the short term, perennial grasses within the Sand Spring enclosure would see improved vigor with the absence of grazing. In the long term without some form of disturbance, vigor of perennial grasses could decline as standing dead litter is not removed and incorporated into the soil.

Riparian vegetation within the enclosure at Lone Spring would recover and increase in density and diversity. In the long term, woody riparian species would become established.

NO ACTION - Vegetation (including riparian) in the localized area around the troughs at both project sites would continue to receive impacts from livestock such as heavy grazing and trampling.

Wetland and Riparian Zones

PROPOSED ACTION – At Lone Spring the proposed action would divert water from the water collection system to the troughs, and the overflow would be routed into the proposed enclosure. This would change existing water flow patterns for 500 feet. Currently when water is not piped to the troughs it overflows to a degraded riparian zone in the Mountain Pasture. This action would instead create or maintain about 600 feet of riparian zone. This would occur due to water being diverted from the new troughs back into the enclosure when the troughs are full. Since livestock and horse use is expected to move away from the old riparian channel on the Mountain Pasture side, some amount of riparian habitat is expected to persist and recover within the channel for some time afterwards. Over time this habitat would change to upland species due to the lack of water in the channel. Riparian habitat on the Lone Springs seeding side would benefit by protecting it from any livestock impacts. Riparian vegetation in the enclosure would be expected to spread somewhat, with the loss of sagebrush in the riparian zone eventually occurring.

NO ACTION – The enclosure would not be built in the Lone Spring seeding therefore riparian habitat in this area would not be protected from livestock use. Riparian habitat in the Mountain Pasture would continue to be impacted by both livestock and horses and would never improve.

Wild Horse and Burros

PROPOSED ACTION – The proposed action would not affect the wild horse population because water would remain available year-round at Lone Spring, particularly during the summer and fall periods when other water sources in the pasture may be dry. The riparian enclosure at Lone Spring would be constructed in the Lone Spring Seeding and therefore, would not affect wild horses since they generally do not enter this pasture.

Due to the low flow of water at Sand Spring and poor condition of the Long Valley trough, water availability is unreliable. The redevelopment of the Sand Spring pipeline and new trough in Long Valley may improve water availability and encourage use by wild horses, potentially relieving some impacts to Lone Spring.

NO ACTION - This alternative would have no affect on the wild horse population in the Long Valley Allotment. Wild horses will have access to year-around water and impacts to cultural resources at Lone Spring will continue. Water to Long Valley Allotment from Sand Spring may continue to be unreliable without the installation of a new trough, discouraging use by wild horses as well as livestock.

Wildlife

PROPOSED ACTION- Since pygmy rabbit are not known to occur at either site no effects are expected to pygmy rabbit from this action. Late summer brood rearing habitat for sage-grouse would slightly benefit by expected improvements to riparian habitat in the Lone Springs seeding. Expected improvements include increasing the size of riparian habitat and increased availability of yearlong water on the ground. Increasing yearlong water availability would benefit many other wildlife species as well. When water is present in the troughs (including Sand Springs) they are also expected to be used by big game, birds, small mammals, and to some extent bats. The use of approved escape ramps would reduce chances of wildlife drowning in the troughs and fence placement away from the troughs would reduce the chances of bird or bat collisions. Removal of the old holding pen downhill of Lone Springs would reduce the possibility of wildlife entanglements. Negligible short term negative effects would occur to sage-grouse and other wildlife by blocking access to water during construction activities and the expected limited use of new routes. Effects to sage-grouse and other wildlife from fencing would be mitigated by building fences to BLM specifications including adding permanent markers to fences at Lone Springs to reduce the possibility of sage-grouse or bats strikes.

As perennial grasses within the 134 acre Sand Spring enclosure increased, wildlife use would increase under the Proposed Action. Higher amounts of nesting would occur for sagebrush obligate species such as sage-grouse, sage thrasher sage sparrow, and Brewer's sparrow as well as small mammals. Hiding and thermal cover would be created for larger animals including mule deer and pronghorn antelope.

It is anticipated that ¼ acre of sage-steppe habitat would be lost around the new troughs areas at Sand Springs and Lone Springs due to cattle and wild horses watering at those sites. There would be net increase of .7 miles of unimproved access routes as result of rerouting and decommissioning roads. The overall affect would be a potential loss of about .9 acres of sagebrush habitats. These routes are expected to regain much of their vegetative cover due to the method of initial removal and the limited basis in which they are expected to be used.

It is anticipated that overall, the proposed action would have minor benefits to wildlife species in the area.

NO ACTION – Wildlife including sage-grouse would not benefit from improved riparian habitat in the Lone Springs seeding. The Sand Springs enclosure would not be built therefore wildlife would not benefit from the increased cover and forage from a new enclosure. Additional loss of

habitat from new routes or movement of troughs would not occur and the possibility of impacts such as bird collisions or strikes from the creation of additional fences would not occur.

CUMULATIVE IMPACTS

Cumulative impacts are the “incremental impacts of a proposal when added to other past, present, and reasonably foreseeable future actions, regardless of which agency or person undertakes them” (40 Code of Federal Regulations 1508.7)

Cumulative Impacts to Affected Resources

Past, Present, and Reasonably Foreseeable Future Actions

For the Long Valley and Massacre Lakes Allotments, impacts of past actions include over-utilization of forage resources that resulted in a decrease in the composition and production of native bunchgrass, the loss of riparian vegetation, and degradation of some cultural resources. To implement provisions of the Taylor Grazing Act, and the Massacre Lakes and Long Valley Allotment Management Plans, a variety of range improvements projects were constructed on the allotments. The projects include fences, cattleguards, wells, spring developments, vegetation treatments and reservoirs. Prior to the 1970s, impacts to cultural resources from recreation and grazing had not been addressed on either of these allotments and the NHPA Section 106 processes were not applied to a number of range improvement projects.

Impacts of present actions include the maintenance of existing projects and continued grazing as authorized. Grazing would continue as authorized in both allotments and range improvement projects would be maintained. Authorized grazing and all future range improvement projects would be subject to the NHPA Section 106, all applicable BLM/SHPO protocols, and NEPA requirements. Wild horses in the Mountain Pasture of the Long Valley Allotment are expected to be gathered or returned to the adjacent High Rock HMA. BLM would continue to conduct monitoring and project inspections to determine if the projects accomplished LUP goals and objectives.

Cumulative impacts of the proposed action would be slight, if any. Combined, both exclosures would provide an additional 138 acres of high quality habitat for wildlife. This would have negligible benefits to a variety of birds, small mammals, and big game by providing nesting and hiding cover, forage, and a readily available source of water at ground level. New troughs outfitted with escape ramps would reduce or eliminate wildlife drowning at these water sources and new roads are expected to be used on a very limited basis. Additional fencing would have none to negligible negative impacts to wildlife due to the wildlife mitigations described above and some beneficial cumulative impacts would be provided to wildlife, riparian, and cultural resources. Grazing would continue as authorized on both allotments. Permittees on the Massacre Lakes Allotment may have to manually trail cattle to the new trough location at Sand Spring until tailing habits are established. However, these impacts would be short term and negligible.

Cumulative impacts of the no action alternative would continue to be localized to Sand Spring and Lone Spring, but resources important to the Fort Bidwell Tribe would continue to be impacted by cattle and wild horse grazing, and use on established roadways. Current permitted

livestock management in both allotments would continue. Not adjusting the allotment boundary fence at Sand Spring and not constructing of the enclosure would have less of a cumulative impact on permittees livestock operation when compared with the proposed action. The additional projects would increase their maintenance costs, but the improved water system would improve livestock water availability in the allotments. The overall cumulative impact of the no action alternative would be irrelevant to grazing management.

Since both springs were originally developed as livestock watering sites 50+ years ago, the cumulative impacts of the no action alternative to the riparian resources at the springs, including soil disturbance and some soil erosion in the surrounding area would likely be slight. This period of use has not resulted in any noxious weed invasion at the springs. However, the possibility of invasive weed introduction still exists by vehicles if road access and disturbance from livestock continues. Cumulative impacts are expected to be minor to special status species since sage grouse is the only sensitive species known to use the proposed project areas and their use is infrequent.

Reasonable and foreseeable future actions would include additional fencing of the Lone Spring enclosure if riparian habitat in the proposed enclosure expands. Additional fencing would provide protection to the expanded habitat. With the removal of wild horses from Long Valley, water could be diverted to the valve box higher on the slope at Lone Spring and allowed to “daylight” earlier, into the Mountain Pasture. This would allow riparian habitat to be maintained on the Mountain Pasture side of the Lone Spring development.

Chapter 5 PERSONS, GROUPS, AND AGENCIES CONSULTED

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Project Leader(s): Penni Borghi