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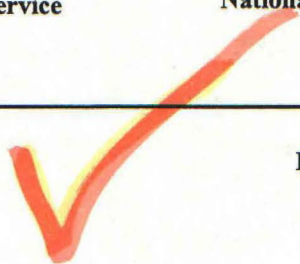


United States  
Department of  
Agriculture

Forest  
Service

Humboldt-Toiyabe  
National Forest

Spring Mountains National  
Recreation Area  
4701 N. Torrey Pines  
Las Vegas, NV 89130  
Phone (702) 515-5400  
Fax (702) 515-5499



File Code: 2350

Date: March 5, 2003

Dear Interested Party,

The Spring Mountains National Recreation Area (Spring Mountains NRA) located on the Humboldt-Toiyabe National Forest is proposing to implement a Motorized Trails Designation Project. The proposed action states that all existing unofficial motorized trails on the Spring Mountains National Recreation Area will remain open to motorized use except where they enter Wilderness. Other exceptions may include riparian areas, cultural resource areas, or biologically significant areas. All other areas which are not designated for motorized use would be closed to motorized vehicle entry (Federal Regulation 36 CFR 261). Signs and information would be placed throughout the Spring Mountains National Recreation Area directing people to trails where they can ride their off-highway vehicles. If you would like information about this proposed action or you are interested in this area, please read this entire packet of information carefully. Specific maps and the entire document may also be viewed on the internet at [www.fs.fed.us/htnf](http://www.fs.fed.us/htnf), or at the Spring Mountains National Recreation Area office in Las Vegas.

The attached Scoping Notice contains maps and information about this project. The Scoping Notice summarizes the Purpose and Need for the action and the Proposed Action. Keep in mind that the Proposed Action is only a proposal, not a final decision. No decision will be made on this project until the District staff and I have reviewed public comments, considered alternatives to the proposed action, analyzed the effects of the alternatives, and prepared an Environmental Assessment.

It is our goal to develop a motorized trail system that provides four-wheel drive and off-highway vehicle experiences and access to favorite destination points, while protecting the environment. This analysis and subsequent decision will be the first step in what may be a multi-step process to reach our goal. Forest Service personnel will continue to inventory existing motorized trails and to monitor their effects on the environment. If needed, further analysis may be conducted and additional National Environmental Policy Act decisions may be required to either designate additional motorized trails or to re-route or eliminate existing trails.

If you have information, concerns or questions, I strongly encourage you to contact us. Your comments should be as site specific as possible, and relate only to the Spring Mountains National Recreation Area Motorized Trails Designation Project.

If you would like to comment, please return the attached comment form or write to me at the address indicated. You may also e-mail your comments to [cmoen@fs.fed.us](mailto:cmoen@fs.fed.us).




Please submit your comments within 30 days. Comments will be accepted after this date, however, it is helpful for us to have them early in the planning process so that we can fully incorporate the information into the environmental analysis.

If you know of anyone else who may be interested in this proposal, please share this letter and ask them to visit our web site or call for a copy of the Scoping Notice.

Please contact Connie Moen, Recreation Planner and Project Leader at (702)-515-0434 if you would like further information.

Sincerely,

  
**STEVE HOLDSAMBECK**  
District Ranger

**Attachments:** Scoping Notice and comment form, Spring Mountains National Recreation Area Motorized Trails Designation Project

*Comments received in response to this solicitation, including names and addresses of those who comment, will be part of the public record on this proposed action and will be available for public inspection.*

**Comments for the  
Spring Mountains National Recreation Area  
Motorized Trails Designation**

This form is provided for your convenience when submitting comments and suggestions. If preferred, you may use your own paper and format. Please include your name, organization (if applicable), and address. Information is most valuable if received within 30 days.

**Name:** \_\_\_\_\_

**Organization:** \_\_\_\_\_

**Address/Phone:** \_\_\_\_\_

**If this is a new address, please check here.**

When the Environmental Assessment is complete, I would prefer to access it on the internet and not receive a paper copy in the mail. Please notify me when it is available on the Forest Service website.

I would prefer a paper copy of the Environmental Assessment mailed to me when it is complete.

**Send your comments to:**

Steve Holdsambeck, District Ranger  
Spring Mountains National Recreation Area  
4701 North Torrey Pines  
Las Vegas, NV 89130

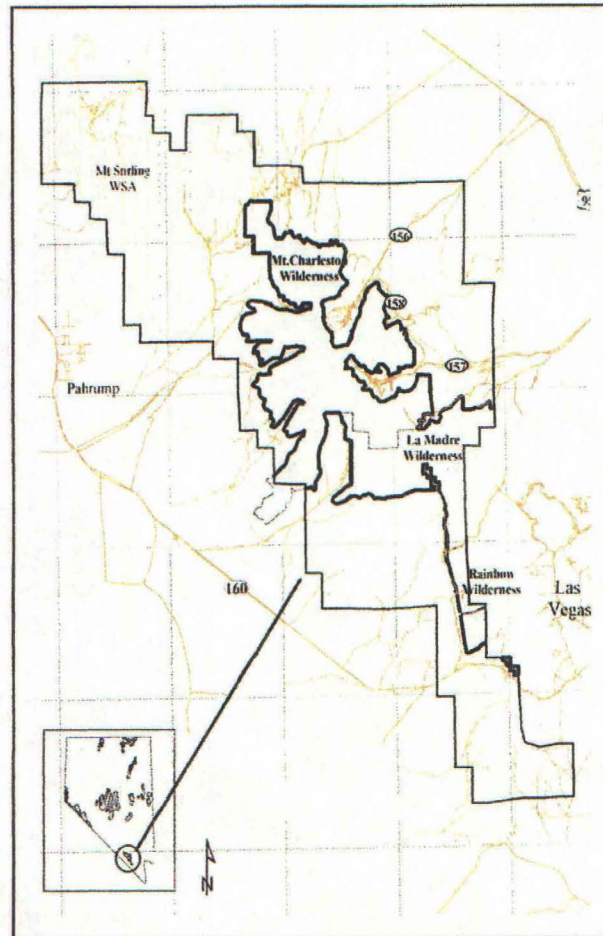
**Thank you!**

Spring Mountains National Recreation Area  
Humboldt-Toiyabe National Forest  
Motorized Trails Designation

Scoping Notice

**Location**

The Spring Mountains National Recreation Area (Spring Mountains NRA) is located in southern Nevada between Las Vegas and Pahrump. It covers 315,648 acres of National Forest land in Clark and Nye Counties and is almost completely surrounded by federal land managed by the U.S. Bureau of Land Management. The following map displays the location of the Spring Mountains National Recreation Area including the Mt. Charleston, La Madre and Rainbow Mountain Wilderness Areas.



## **PURPOSE AND NEED FOR ACTION**

### **Statement of Need for Action**

The Spring Mountains National Recreation Area (Spring Mountains NRA), Humboldt-Toiyabe National Forest has determined the following needs:

- Preventing the creation of new unofficial motorized trails throughout the Spring Mountains NRA.
- Designating where off-highway vehicles can be ridden and providing clear and concise information to the public regarding off-highway vehicle use.
- Protecting over 28 endemic plant and animal species, and 57 plant and animal species of concern from unregulated off-trail vehicle use.
- Protecting areas designated as Biodiversity Hotspots from unregulated off-trail vehicle use.
- Improving water quality and increasing riparian areas (springs and streams) protection by controlling impacts from unregulated off-trail vehicle use.
- Protecting archaeological resources from unregulated off-trail vehicle use.

### **Purpose for Action**

The underlying purpose for this project is to implement direction in the 1996 *General Management Plan for the Spring Mountains National Recreation Area, an Amendment to the Land and Resource Management Plan, Toiyabe National Forest; The Conservation Agreement for the Spring Mountains NRA; and The Clark County Multiple Species Habitat Conservation Plan.*

## **ASSESSMENT OF NEED FOR ACTION**

### **Existing Condition**

#### **Resources**

Years of increasing and relatively unrestricted off-highway vehicle use have resulted in a multitude of unofficial motorized trails throughout the Spring Mountains National Recreation Area. Unofficial motorized trails have also resulted from wildfire suppression efforts and other activities. (Unofficial trails are roads or trails that are not part of the Forest Service Road or Trail System but were generated by vehicles being driven off-road onto undisturbed areas.) Forest Service law enforcement officers estimate that these unofficial motorized trails are expanding at the rate of twenty miles per year on the Spring Mountains National Recreation Area.

Note: Off-highway vehicles (OHV's) include All-Terrain Vehicles (ATV's), jeeps, motorcycles, 4-wheel drive trucks and sport utility vehicles.

Spring Mountains NRA Motorized Trails Designation Scoping Notice



*Unofficial Motorized Trail*

Forest Service resource employees have observed that some of these trails are impacting rare plant and animal species of concern identified in the Clark County Multiple Species Habitat Conservation Plan and their habitat. Unofficial motorized trails travel through areas that are referred to as biodiversity hotspots. These are areas where a high level of endemic or rare species occur. Biodiversity hotspots with unofficial motorized trails through them include the Willow Creek, Cold Creek, Lower Kyle Canyon, Wheeler Well and Lower Clark Canyon areas.



*OHV Damage to Sensitive Plant  
Angelica Scabrada*

## Spring Mountains NRA Motorized Trails Designation Scoping Notice

Forest Service resource employees and law enforcement officers have also observed that some unofficial motorized trails are damaging archaeological sites and are resulting in increased soil erosion.



*OHV Tracks in Prehistoric Roasting Pit*

Forest Service employees have observed unofficial motorized trails in riparian areas. Riparian areas are located on or near the bank of a natural course of water such as streams and springs.



*Soil Erosion  
Resulting  
From OHV Use*

## Spring Mountains NRA Motorized Trails Designation Scoping Notice

### **Recreation Needs**

The southern Nevada metropolitan area continues to grow at a rapid pace with approximately 50,000 people being added to the population each year (2002 Las Vegas Chamber of Commerce report). Recreational off-highway vehicle (OHV) riding is gaining popularity in the Las Vegas area as well as nation wide. A local Las Vegas ATV and dirt bike shop recently provided information to Forest Service personnel that off-highway vehicle sales in the Las Vegas area have increased at the average rate of fifteen percent per year for the past five years.

The Spring Mountains range attracts many off-highway enthusiasts as a result of its scenery, relatively cooler climate and close proximity to Las Vegas. At the present time there are no designated routes designed specifically for off-highway riding. The result of this situation of increasing demand for off-highway riding areas and the lack of designated off-highway trails is a system of unofficial motorized trails throughout the Spring Mountains National Recreation Area. A number of off-highway riders, clubs and organizations have requested that the Forest Service provide them with routes for motorized recreation and to clearly place signs to mark where off-highway vehicles can be ridden.

### **Social Setting**

There are currently no signs or educational materials informing the public about off-highway use locations and how off-highway users can recreate without impacting sensitive plant and animal species. Off-highway users are unclear where and how they can ride their vehicles in the Spring Mountains National Recreation Area.

### **Desired Condition**

The following desired conditions for the Spring Mountains NRA are identified in the 1996 *General Management Plan for the Spring Mountains National Recreation Area, an Amendment to the Land and Resource Management Plan, Toiyabe National Forest (Forest Plan)*. Many of these desired conditions are also described in *The Conservation Agreement for the Spring Mountains NRA, Clark and Nye Counties, Nevada (Conservation Agreement)*, and in *The Clark County Multiple Species Habitat Conservation Plan (Habitat Conservation Plan)*.

### **Resources**

- Sensitive plant and wildlife species are protected (Forest Plan, Conservation Agreement and Habitat Conservation Plan).
- Riparian areas (springs and streams) are protected (Forest Plan, Conservation Agreement, Habitat Conservation Plan).
- Water quality is improved (Forest Plan).
- Areas with high biodiversity and/or a number of species of concern called "biodiversity hotspots" are protected. (Forest Plan, Conservation Agreement, and Habitat Conservation Plan).



## Spring Mountains NRA Motorized Trails Designation Scoping Notice

- There are no impacts to significant archaeological sites from recreation, roads or other uses. (Forest Plan).
- Minimal soil erosion and compaction results from recreation, roads and other uses of the Spring Mountains NRA (Forest Plan).

### **Recreation Needs**

- Motorized vehicle use only occurs on designated roads and trails (Forest Plan).
- The Spring Mountains National Recreation Area is managed for a variety of road types, including routes that offer recreation opportunities for off-highway vehicles (Forest Plan).
- Whenever possible, current recreation uses are protected, and limits are instead placed on new uses or expansion of existing uses (Forest Plan).

### **Social Setting**

- Information is provided to the public on how to recreate without impacting sensitive plant and animal species (Forest Plan, Conservation Agreement, and Habitat Conservation Plan).
- Off-highway vehicle use information and educational materials are developed and distributed to the public (Forest Plan and Habitat Conservation Plan).

## **PROPOSED ACTION**

The USDA Forest Service proposes that all existing unofficial motorized trails, on the Spring Mountains National Recreation Area, will remain open to motorized use except where they enter Wilderness. Other exceptions may include riparian areas such as creeks and springs, cultural resource sites, or biologically significant areas. Unofficial motorized trails consist of motorized trails that have a width of 38 inches or more, have been unofficially created, and are not currently part of the Forest Service's trail or road system. Unofficial motorized trails in designated roadless areas will remain open to off-highway vehicles, but will not undergo maintenance. Some off-highway motorized trails may be less than 60 inches wide and may only accommodate narrow width vehicles such as ATV's and motorcycles.

Public information signs would be installed throughout the Spring Mountains National Recreation Area. They would clearly direct off-highway vehicle users to designated motorized trails where all-terrain vehicles, motorcycles and four-wheel drive vehicles can be ridden.

All other areas on the Spring Mountains National Recreation Area, which are not designated open for motorized use, would be closed to motorized vehicles. All motorized vehicle use would be prohibited in these areas, except by permit, under authority of 36 CFR 261.

## Spring Mountains NRA Motorized Trails Designation Scoping Notice

It is our goal to develop a motorized trail system that provides four-wheel drive and off-highway vehicle experiences and access to favorite destination points, while protecting the environment. This analysis and subsequent decision will be the first step in what may be a multi-step process to reach our goal. Forest Service personnel will continue to inventory existing motorized trails and to monitor their effects on the environment. If needed, further analysis may be conducted and additional National Environmental Policy Act decisions may be required to either designate additional motorized trails or to re-route or eliminate existing trails.

This scoping notice and more detailed maps of this proposal are available on the internet at <http://www.fs.fed.us/htnf>. Maps are also posted for public review at the Spring Mountains National Recreation Area office, located at 4701 N. Torrey Pines Dr., Las Vegas, Nevada.

A decision is expected on this proposal by late August, 2003.

### Responsible Official and Decision to Be Made

The responsible official for this project is the District Ranger for the Spring Mountains National Recreation Area. The District Ranger will decide whether or not to approve the proposed action or a modification of the proposed action.

### How You Can Become Involved

If you would like to be on the mailing list to receive further information regarding this project, or if you would like to comment on the proposed action, please send the attached form with your comments to:

Steve Holdsambeck, District Ranger  
Spring Mountains National Recreation Area  
4701 N. Torrey Pines Dr.  
Las Vegas, NV 89130

If you have questions or would like to discuss this project please contact:

Connie Moen  
Project Leader  
(702) 515-0434

Please submit your comments within 30 days after the postmarked date. Comments will be accepted after this date, however, it is helpful for us to have them early in the planning process so that we can fully incorporate the information into the environmental analysis.

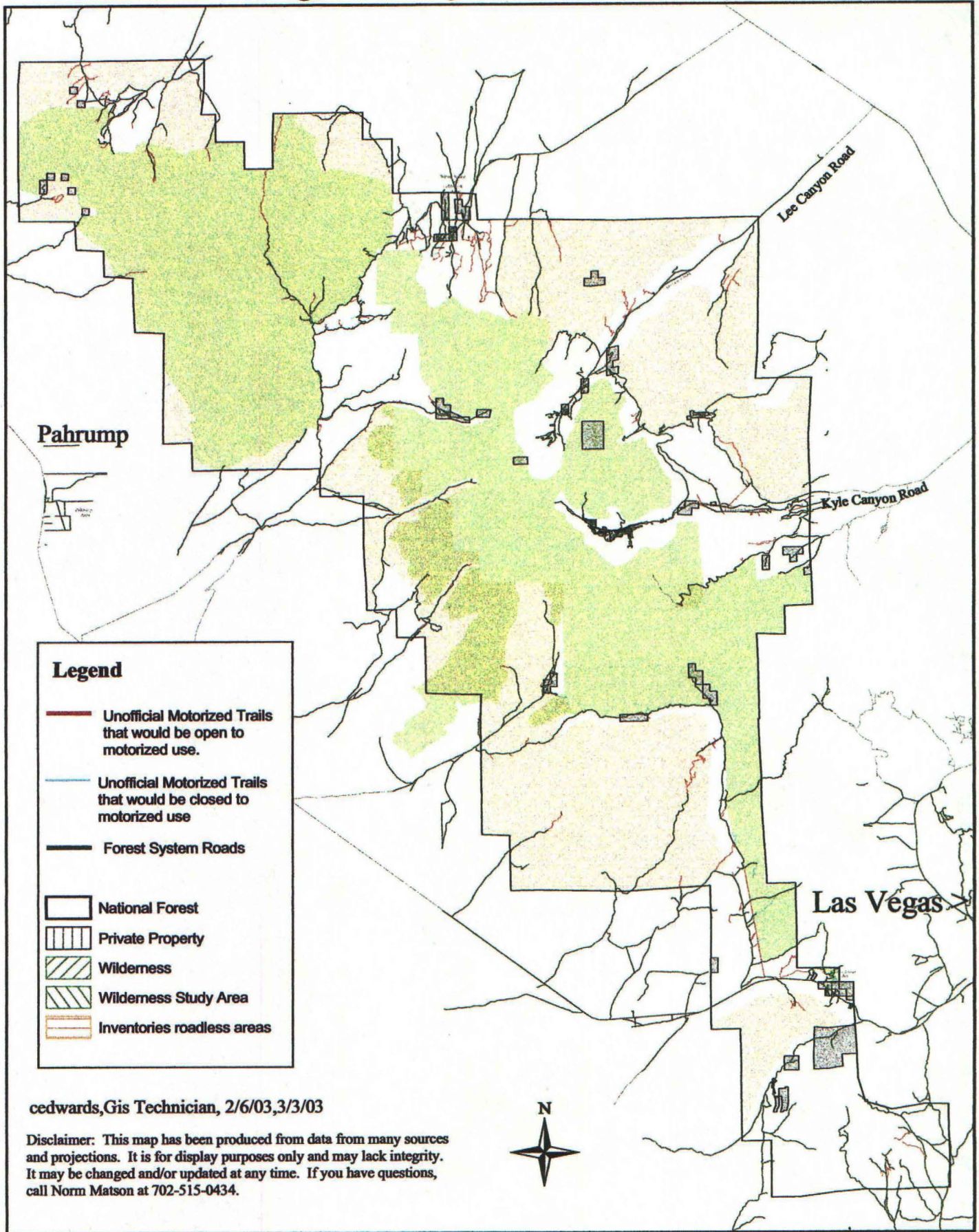
## Spring Mountains NRA Motorized Trails Designation Scoping Notice

In an effort to save taxpayers dollars, we are trying to minimize the cost of copying and postage. After the Motorized Trails Designation Environmental Analysis is completed it will be available on the internet at <http://www.fs.fed.us/htnf>. Paper copies will also be available. Please indicate your preference on the enclosed comment form. Only those who respond to this Scoping Notice will receive additional information as this planning process continues.

Thank you for your interest and we appreciate your input regarding this project.

# Motorized Trails Designation Project

Spring Mountains National Recreation Area  
Humboldt-Toiyabe National Forest



### Legend

- Unofficial Motorized Trails that would be open to motorized use.
- Unofficial Motorized Trails that would be closed to motorized use
- Forest System Roads
- National Forest
- ▨ Private Property
- ▧ Wilderness
- ▩ Wilderness Study Area
- ▭ Inventories roadless areas

cedwards, Gis Technician, 2/6/03, 3/3/03

Disclaimer: This map has been produced from data from many sources and projections. It is for display purposes only and may lack integrity. It may be changed and/or updated at any time. If you have questions, call Norm Matson at 702-515-0434.



## **Cathy Barcomb**

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**From:** Cathy Barcomb  
**Sent:** Friday, April 04, 2003 12:26 PM  
**To:** 'cmoen@fs.fed.us'  
**Cc:** 'julilevt@wizard.com'; 'mstng\_lvr@yahoo.com'  
**Subject:** Spring Mountain Proposed Motorized Trails Designation

Commission for the Preservation of Wild Horses  
885 Eastlake Blvd  
Carson City, NV 89704

Steve Holdsambeck, District Ranger  
Connie Moen, Recreation Planner and Project Leader  
Spring Mountains National Recreation Area  
4701 N. Torrey Pines  
Las Vegas, NV 89130

Dear Mr. Holdsambeck,

The State of Nevada Commission for the Preservation of Wild Horses appreciates the opportunity to review and comment on the Spring Mountains National Recreation Area (NRA) proposed Motorized Trails Designation. We are encouraged that you are starting the process to try to meet the needs of recreationalists but at the same time protecting the resources. Education of the public is largely a part of asking for their help in protecting areas.

As a scoping notice I am disappointed to find inadequate information provided in the presentation and maps which results in lacking presentation of potential issues to the public. How would the public determine that you have wild horses in the Spring Mountain NRA and realize to comment if we weren't intimately familiar with the area? I realize a scoping document is to flush out issues not initially identified but am surprized that wild horses are not mentioned anywhere in this document. The attached maps show no designation of the Wild Horse Territory to enable the reader to determine that wild horses are in this area and are subject to potential impacts. Especially where either previously unauthorized or proposed trails lead past waters that the horses are dependant on to survive.

I would appreciate a map designating the Wild Horse Territory portion of the NRA showing existing and proposed trails. Issues of tremendous concern would be access to water and usage by recreationalists. Wild horses, especially in the summer months, must be insured free access to waters in their Territory boundaries. This right is guaranteed them by law. Problems ensuing from recreational use would be people going through (fouling) or "camping" on water sources either overnight or even just stopping to have lunch which would prohibit access from wild horses and wildlife.

Another great concern that we have would be any access of any kind during foaling season. Foaling season, unless documented to vary, has been established in Nevada from March 1 though June 30th every year. BLM and FS restrain from gathering horses during those times to avoid stressing the animals and causing aborted fetuses and dead foals. Wild horses are frightened easily and a mare with a newborn foal might easily abandon her foal if scared by motorized use. They would be separated and the foal would die.

I would appreciate your inclusion and discussion of our concerns in your future planning process documents. We look forward to working with your office in establishing criteria that will allow public use but at the same time the protection of the wild horses inhabiting the area. If you have any questions, please contact me at 775-849-3625.

Sincerely

CATHERINE BARCOMB  
Administrator

cc: Julie Von Tobel Gleason, Commissioner  
Wild Horse Commission

2-10-78

United States  
Department of  
Agriculture

Forest  
Service

Humboldt-Toiyabe  
National Forests

Spring Mountains  
National Recreation Area  
2881 S. Valley View, #16  
Las Vegas, NV 89102

box  
222-1599

Reply to: 1950

Date: Febraury 10, 1998

Dear Friend:

The Spring Mountains National Recreation Area, Humboldt-Toiyabe National Forests, has completed an environmental assessment (EA) to evaluate the restoration of eight springs on the Spring Mountains (Macks Canyon Spring, Mummy Spring, CC Spring, Cave Spring, Trough Spring, McFarland Spring, Whiskey Spring, and Sawmill Spring).

In accordance with the National Environmental Protection Act (NEPA), a 30 day scoping period is now open. A copy of the EA is enclosed for your review and comment. Please provide your input to Sara Mayben at the above address or at (702) 873-8800 by March 13, 1998.

This is your opportunity to be involved. The scoping process provides the public with an opportunity to review and respond to management activities proposed on public lands. Your issues, concerns, or comments on the above proposal are appreciated and will allow the Forest Service to adequately analyze the environmental and social impacts of this proposal.

Thank you in advance for your continued cooperation, input, and support.

Sincerely,

ALAN S. PINKERTON  
Assistant Forest Supervisor

Fw

Enclosure

C. in no way agreed to  
water Establin's Arm in h/d  
no rationale in Elk either  
until you have advised your  
target letter in both h/d  
we object to all of  
these projects.

SPS

**ENVIRONMENTAL ASSESSMENT  
for proposed  
SPRING RESTORATIONS**

**SPRING MOUNTAINS NATIONAL RECREATION AREA  
HUMBOLDT-TOIYABE NATIONAL FOREST  
UNITED STATES FOREST SERVICE  
1998**

**I. PURPOSE AND NEED FOR ACTION**

The Spring Mountains National Recreation Area, Humboldt-Toiyabe National Forests (hereinafter referred to as the Forest Service), has proposed to restore eight springs, including:

Macks Canyon Spring (30 miles northwest of Las Vegas in the SW 1/4 of Section 27, T18S, R56E, MDBM);

McFarland Spring (35 miles northwest of Las Vegas in the SE 1/4 of Section 13, T18S, R55E, MDBM);

Whiskey Spring (35 miles northwest of Las Vegas in the SE 1/4 of Section 13, T18S, R55E, MDBM);

Sawmill Spring (35 miles northwest of Las Vegas in the SW 1/4 of Section 12, T18S, R55E, MDBM);

Mummy Spring (30 miles northwest of Las Vegas in the Mount Charleston Wilderness in the SW 1/4 of Section 18, T19S, R57E, MDBM);

Trough Spring (40 miles northwest of Las Vegas in the Mt. Charleston Wilderness in the NW 1/4 of Section 23, T18S, R55E, MDBM);

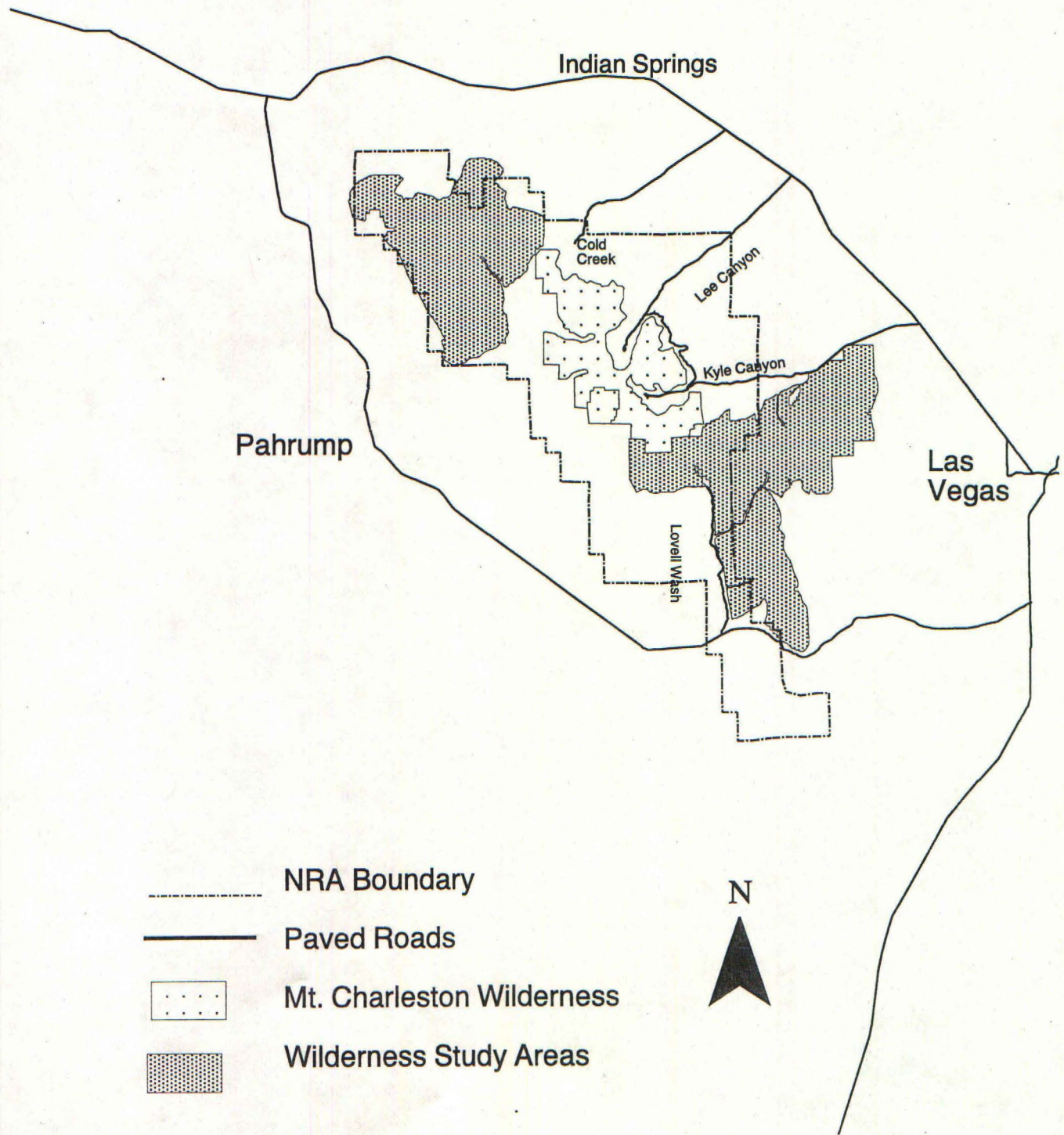
CC Springs (15 miles west of Las Vegas in the NW 1/4 of Section 9, T21S, R57E, MDBM); and

Cave Spring (16 miles west of Las Vegas in the SW 1/4 of Section 32, T20S, R57E, MDBM)

See Figure 1 General Vicinity Map; Figure 2 Map of Trough Spring, McFarland Spring, Whiskey Spring, and Sawmill Spring; Figure 3 Map of CC Spring and Cave Spring; and Figure 4 Map of Macks Canyon Spring and Mummy Spring.

The new General Management Plan for the Spring Mountains National Recreation Area and the Conservation Agreement between the Forest Service and the US Fish and Wildlife Service identify the need to restore ecologically sensitive riparian areas that provide habitat for sensitive species, species of concern, and neotropical migratory birds. Riparian areas are important habitat

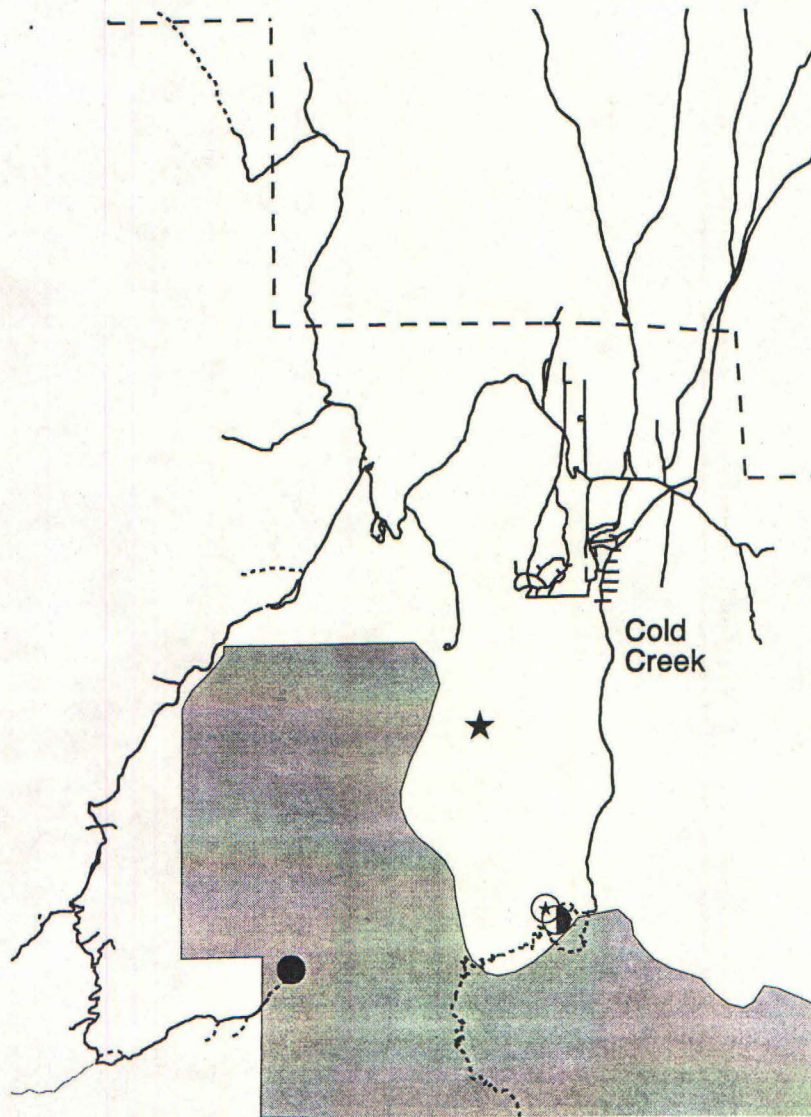
# Figure 1 General Vicinity Map





# Figure 2

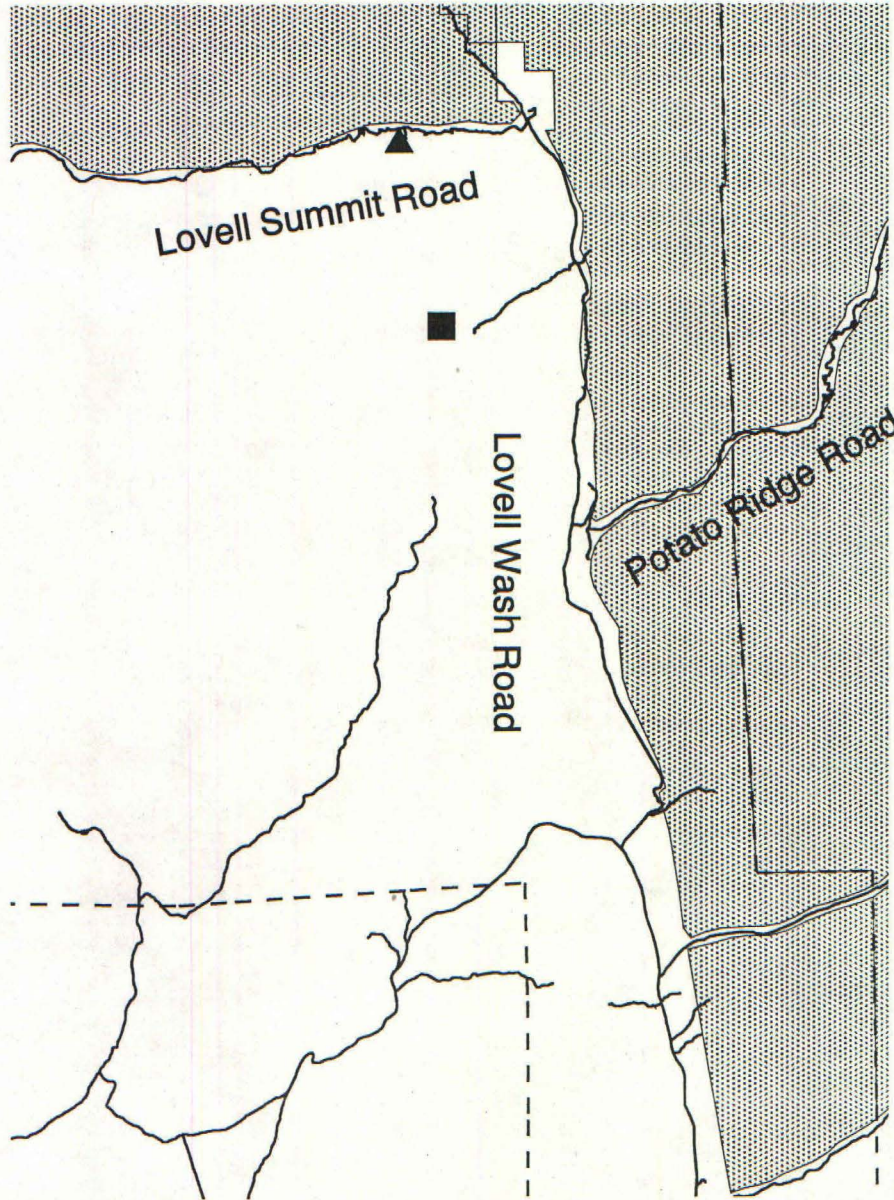
## Trough Spring, McFarland Spring Whiskey Spring, and Sawmill Spring



- NRA Boundary
- Roads
- ..... Trails
- Trough Spring
- McFarland Spring
- ⊙ Whiskey Spring
- ⊙ Whiskey Spring
- ★ Sawmill Spring
- Mt. Charleston Wilderness Area



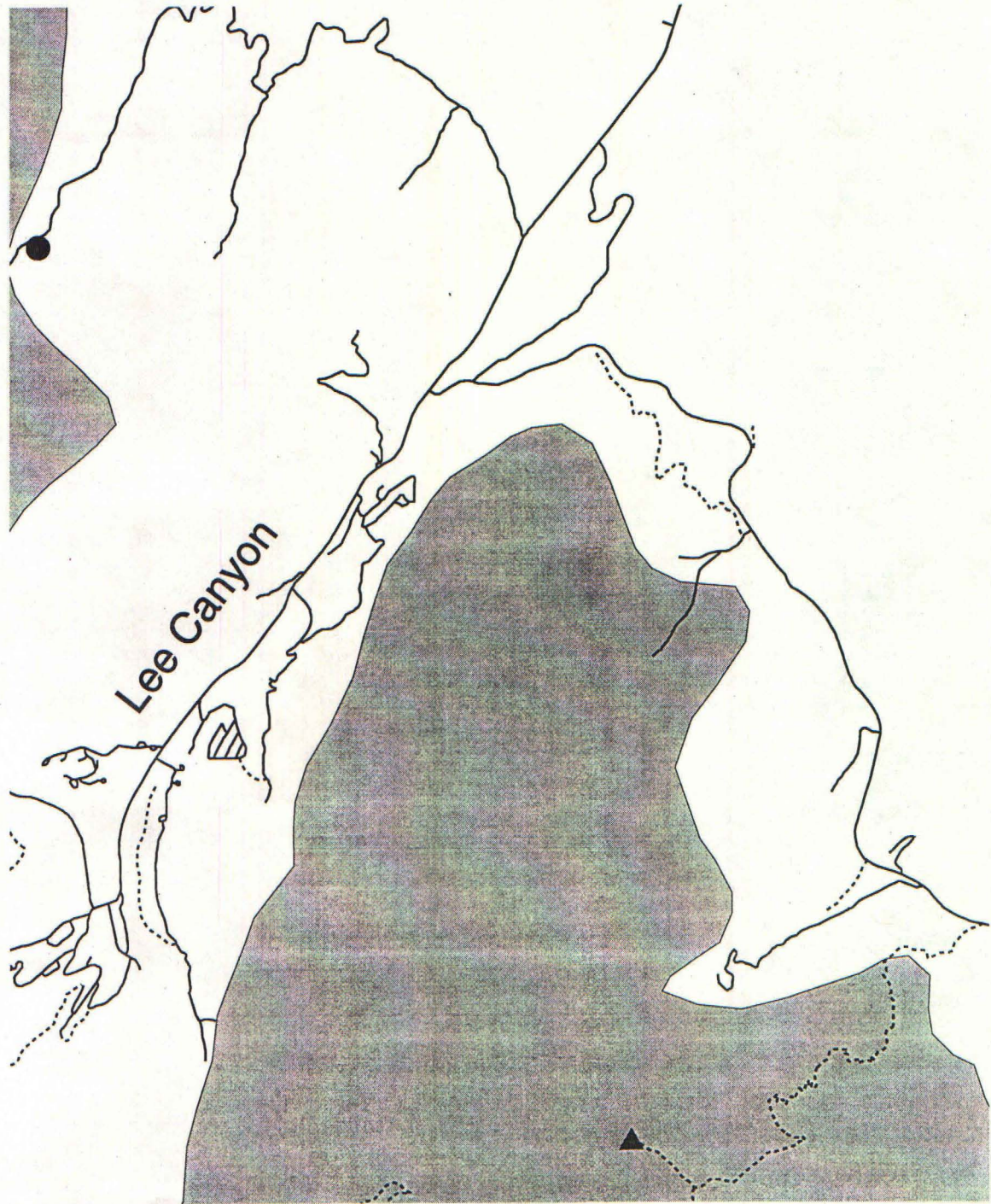
# Figure 3 CC Spring and Cave Spring



- NRA Boundary
- Roads
- CC Spring
- ▲ Cave Spring
- ▨ Wilderness Study Area



**Figure 4**  
**Macks Canyon Spring and Mummy Spring**



— Roads

..... Trails

■ Mt. Charleston Wilderness Area

● Macks Canyon Spring

▲ Mummy Spring



features, especially in the desert. They provide surface water, habitat, and forage for wildlife species and habitat for plants that only grow in moist or wet soils.

The springs listed above have been identified as springs that are "Functioning Properly, but At Risk of becoming Non-Functioning" if management is not changed. Once a spring becomes non-functioning, the water source and any associated wet meadows may dry up, making them difficult to restore in the future. This information was provided by the Smithsonian and The Nature Conservancy in their 1996 Spring Vulnerability Report.

Nevada Revised Statute 503.660 prohibits camping within 100 yards of all water sources. The public needs to be informed about this law. Several of the riparian areas have camping within 100 yards of the source. This use needs to be "redesigned" to allow wildlife access to these water sources and to help the public comply with this law.

Many different uses have impacted the resources in these riparian areas. People have created roads into CC and Cave Springs with their vehicles. The parking area at Cave Spring has compacted the soil and removed vegetation within the riparian area. The road into CC Springs was closed several years ago. This closure has been effective at keeping full-size vehicles out of the riparian area. However, All Terrain Vehicles (ATVs) may still access this area. CC Springs has an historic water trough that is larger than 0.5 meters in diameter, and has excellent bat access. This trough was built by the Civilian Conservation Corp in the 1930s and will not be removed. Butterfly species of concern that occur in these areas include comma skipper (*Hesperia comma ssp.*), Nevada admiral (*Limenitis weidemeyeri nevadae*), Carol's silver spot (*Speyeria zerene carolae*), Boisduvals blue (*Icaricia icarioides ssp.*), Dark Blue (*Euphilotes enoptes*), and acastus checkerspot (*Chlosyne acastus ssp.*)

Wild horse grazing has reduced the vegetation and compacted the soils at Sawmill and Trough Springs. Both of these springs are outside the Spring Mountains Wild Horse Territory. However, wild horse access is not restricted in these areas. Both of these springs are important habitat for the sensitive species, Palmers chipmunk, and various bats that are species of concern. Though not seen during surveys, both of these springs are potential habitat for the plant, dainty moonwort (*Botrychium crenulatum*), a species of concern.

There is an existing wild horse enclosure at McFarland Spring, however, the entire riparian area was not fenced to exclude wild horses. Wild horses have removed the vegetation and compacted the soils just outside the existing enclosure that is within the riparian area. Elk have also developed a wallow within the wild horse enclosure at this spring. This wallow has created a headcut that is eroding soil and reducing riparian vegetation. This spring is within Palmers chipmunk habitat. And though not seen during surveys, this spring is also potential habitat for dainty moonwort (*Botrychium crenulatum*), a species of concern.

The public appears to be cutting the existing enclosure fence at McFarland Spring. This is either to allow wild horses access to the water, or to water recreational pack and saddle stock. There is an existing pipeline from McFarland Spring that has several troughs along it. Wild horses and elk access these troughs for water and do not need to go to the spring for water. However, equestrians cannot access water at McFarland Spring and may not know the locations of the existing troughs.

Mummy Spring is adjacent to North Loop Trail, within the Mt Charleston Wilderness. Visitors have created trails at Mummy Spring that lead to Mummy Mountain. These trails have reduced the riparian vegetation and compacted the soils. They are also impacting habitat for dainty moonwort (*Botrychium crenulatum*) and Clokey thistle (*Cirsium clokeyi*), both species of concern. Mt. Charleston blue butterfly, another sensitive species, has also been observed at this spring.

Macks Canyon Spring was fenced several years ago to reduce recreational and wild horse impacts to the spring source and wet meadow. This enclosure did not incorporate the entire riparian area or spring flow. The spring flows approximately 100 feet beyond the current enclosure. Once the flow leaves the fence, the soil is compacted and the riparian vegetation has been removed. This is impacting habitat for dainty moonwort (*Botrychium crenulatum*), and Palmers chipmunk. Bats have access to the water outside the enclosure and within the trough. However, vehicle parking may impact their access to the water since bats water in flight.

Whiskey Spring was the potable water source at Camp Bonanza, an old Boy Scout Camp. The spring was dredged and the water piped to a cement tank where it was treated. The dredged area was back-filled with gravel. Large groups continue to camp in this area, further compacting the soil and removing the riparian vegetation. Many bats that are species of concern would be able to utilize this spring if it were restored and open pools were created. This spring is also within Palmers chipmunk habitat. Currently, water is stored in a covered cement tank. Bats cannot access this water.

Several bat species of concern occur on the Spring Mountains including pale Townsends big-eared bat (*Plecotus townsendii pallescens*), small-footed myotis (*M. cilioabrum*), long-legged myotis (*M. volans*), long-eared myotis (*M. evotis*), fringed myotis (*M. thysanodes*), cave myotis (*M. velifer*), and Allens big-eared bat (*Idionycteris phyllotis*). All the bat species require access to water on a regular basis. Their habitat is improved if the water is close to their roost sites and areas where they forage. Riparian areas also produce more insects than drier sites, so they will also forage in riparian area.

Restoration of these springs would include eliminating the impact, restoring the native vegetation, and wildlife habitat features, such as open pools for bats. Any restoration plan would also accommodate the needs of the users (wild horses, elk, and people).

Spring Name	Acreage Protected	Proposed Protection
McFarland Spring	0.5 acres	Elk and Wild Horse Enclosure
Whiskey Spring	0.5 acres	Wild Horse Enclosure
Sawmill Spring	4.0 acres	Wild Horse Enclosure
Mummy Spring	1.0 acres	Reroute trails outside of riparian
Trough Spring	0.5 acres	Wild Horse Enclosure
Macks Canyon Spring	0.5 acres	Wild Horse Enclosure/Parking Area Closure
CC Spring	0.5 acres	Road Closure

Cave Spring

0.5 acres

Road Closure

A. Linkage To Management Plans

The proposal is designed to restore eight riparian areas on the Spring Mountains National Recreation Area in accordance with regulations and policies as shown in various land use plans. The following goals, objectives, and standards have been developed from land use planning documents, including the Toiyabe National Forest Land and Resource Management Plan (LMP), the General Management Plan (GMP) for the Spring Mountains National Recreation Area, and the associated clauses within the Conservation Agreement between the Forest Service and the US Fish and Wildlife Service.

The State of Nevada prohibits camping within 100 yards of all water sources (NRS 503.660). However, we cannot enforce Nevada State laws on National Forest System lands. In order to protect wildlife habitat the Forest Service needs to consider prohibiting camping within specific distances of springs and incorporating this into forest management on the Spring Mountains NRA (through a Closure Order).

1. Toiyabe National Forest LMP

Goals:

(1) The Forest will improve water quality and manage riparian areas to satisfactory condition. All riparian area-dependent resources will be maintained or enhanced. Water resource improvement projects and other projects will be designed to improve and maintain the quality of water and soil resources.

Standards for Riparian Areas:

5- Manage riparian areas to achieve or maintain a medium or high ecological status.

13- Move inventoried water developments out of riparian areas when and where feasible.

2. Spring Mountains National Recreation Area GMP

Goals:

(0.1) Conserve the health, diversity, integrity, and beauty of the ecosystem.

Objectives:

(0.1) Maintain or enhance ecosystem health, function, sustainability, and diversity (plant, animal, and community).

(0.2) Maintain or restore the health and size of riparian areas at natural water sources, and at human-made water sources where native and desired non-native species have become accustomed to using them (e.g. broken pipelines).

(0.7) Maintain historic conditions of water chemistry, temperature, clarity, and surface flow.

(0.10) Increase populations of threatened, endangered, and sensitive species, and species of concern, and their suitable habitat over the long-term.

(0.11) Provide sufficient habitat to support the continued existence of all native resident and migratory species throughout the planning area.

(12.7) Restore water sources to historic flows.

#### Standards and Guidelines for riparian areas:

Standards are items that identify specific management actions that will or will not be taken in an area. Guidelines are items offered as suggestions to improve management of an area.

(0.1) Use native species when retoring riparian areas. (Standard)

(0.3) Prohibit parking and camping within riparian areas. (Standard)

(0.8) When developing water sources, pipe water from a point downstream of the source if snails or other sensitive species are present, or if the spring source has not been previously developed. (Standard)

((0.13) Remove existing water developments and debris from springs, providing they no longer serve their original purpose, are not critical to wildlife, and the items are not of historical significance. (Standard)

(0.29) Limit negative impacts to all species of concern due to management activities. (Guideline)

(0.63) Close all undesignated spur roads in riparian areas. (Guideline)

(0.64) Relocate existing roads outside of washes, riparian areas, and 50-year floodplains, if relocations will result in better resource conditions. Priority should be given to relocating roads when major maintenance is required and to roads that: (Guideline)

1. Are located in vital habitat for plant or animal species of concern.
2. Receive a higher level of use.

(0.140) Provide alternative parking sites, road alignments, and fencing where feasible to allow for continued recreation use outside of riparian areas. (Guideline)

(12.5) Allow fences and other barriers to be constructed in the Wilderness to prohibit wild horses and burros access into the Wilderness, and Kyle and Lee Canyons.  
(Guideline)

Proposed and Probable Management Practices:

(2) Restore the riparian area at Trough Spring. Remove improvements and, if necessary, restore native vegetation. Rebuild fence, if necessary, to restrict wild horse access. Create an open pool (0.5 meter diameter) for bat access. Block access road to Trough Spring at the Wilderness boundary.

(12) Enlarge fence around spring in upper Macks Canyon to enclose the entire surface flow of water.

(13) Restore riparian area and pools at Whiskey Spring.

(20) Eliminate vehicle access on the unnumbered spur road to CC Springs (off of FS 538), in coordination with appropriate state and local authorities.

(21) Eliminate vehicle access on the unnumbered spur road to Cave Spring off Lovell Summit Road (FS 536), in coordination with appropriate state and local authorities.

Conservation Agreement:

Planning -

Adhere to goals, objectives, standards, and guidelines detailed in the Plan Amendment which promote protective management of the species of concern and other ecological resources.

Protection -

Manage wild horses and burros in the NRA such that damage to rare and sensitive species habitats is alleviated.

Control dispersed, primitive camping in the NRA by prohibiting camping within 100 yards of springs and riparian areas.

Restoration -

Develop a list of habitat restoration priorities to be accomplished in the first three years of implementation of this CA. Funding is provided for habitat restoration in accordance with Interagency Agreement # 14-48-001-94605 between the Forest Service and the US Fish and Wildlife Service for the Spring Mountains NRA. Individual projects will be implemented beginning FY 1998 by the Forest Service. Priorities identified to date are as follows:



Very High Priorities

- Mummy Spring
- McFarland Spring

High Priorities

- CC Spring
- Trough Spring
- Lost Cabin Spring
- Big Timber Spring
- Little Falls Spring

Medium Priorities

- Middle Mud Spring and East Mud Spring
- Cave Spring
- Buck Spring
- Macks Canyon Spring
- Yount Spring
- Santa Cruz Spring
- Niney-nine Spring
- Mexican Spring
- Cougar Spring

Education -

Implement the terms of the Interagency Agreement #14-48-0001-94605 and future agreements between the Forest Service and the Fish and Wildlife Service for the Spring Mountains NRA, for development of information and education signs. Signs including information on low impact recreation and species of concern will be developed for all riparian areas.

B. Decision To Be Made

The decision to be made is whether or not to restore these riparian areas and whether or not to enforce NRS 503.660. This could include several options.

1. Do not restore these riparian areas or enforce NRS 503.660.
2. Prohibit camping within specific distances of springs and restore approximately 10 acres of riparian areas including:

<b>Spring Name</b>	<b>Acreege Protected</b>	<b>Proposed Protection</b>
McFarland Spring	0.5 acres	Elk and Wild Horse Exclosure

Whiskey Spring	0.5 acres
Sawmill Spring	4.0 acres
Mummy Spring	1.0 acres
Trough Spring	0.5 acres
Macks Canyon Spring	0.5 acres

CC Spring	0.5 acres
Cave Spring	0.5 acres

Wild Horse Exclosure
Camping Area Closure
Reroute trails outside of riparian
Wild Horse Exclosure
Wild Horse Exclosure/Parking
Area Closure
Road Closure
Road Closure

3. Prohibit camping within specific distances of springs and restore approximately 9.0 acres as described above but do not construct elk exclosure at McFarland Spring.

4. Restore approximately 9.0 acres as described above but do not change public access into these riparian areas. This alternative would not prohibit camping within specific distances of any of the springs.

## II. ALTERNATIVES INCLUDING PROPOSED ACTION

This section describes the public involvement, the proposed action, and alternatives to the proposed action,

### A. Alternative Development

The Proposed Action and the alternatives were developed through public input gathered during the scoping processes for the Environmental Assessment.

#### 1. Public Involvement

Pre-scoping was conducted by the Forest Service to determine the issues and concerns related to the proposed action. On February 14, 1997, 132 letters asking for public input, concerns, and issues regarding these actions were mailed to interested and affected parties representing 28 federal, state, county, and city representatives, 16 American Indian tribes and individuals, 14 agencies, 52 organizations, and 21 individuals.

#### 2. Significant Issues Determined from Scoping

##### a. *Wildlife and Wild Horses*

Wildlife utilize these springs for water, forage, and habitat features. Elk, an introduced species are impacting the riparian areas by creating wallows. These wallows have removed vegetation and create headcuts that erode the soil. Fencing to exclude elk may discontinue the impacts, and allow the riparian area to recover. Excluding elk may also eliminate important habitat features.

Wild horses use these springs for water and forage. They have removed vegetation and compacted the soils. This could eventually reduce spring flow, riparian area size, habitat for rare, native species. These springs are also outside the Spring Mountains

**Wild Horse Territory.** Excluding wild horses from springs may reduce the quality of the wild horse habitat making so that it cannot support the current population size.

Indicator - The number of wild horses and elk that would be able to utilize the riparian area.

b. *Threatened, Endangered, Sensitive Species and Species of Concern*

A biological survey of all these spring have been completed. Several springs have unique species that could benefit by removing the impacts (foot and vehicle traffic, grazing and trampling) and restoring the springs. Any fence or pipeline construction would need to avoid all populations of sensitive species.

Indicator - The number of sensitive species and species of concern with improved habitat..

c. *Public Access/Recreational Impacts*

People enjoy being in riparian areas, especially during the summer, when the influence of water and elevation create cool, moist escapes from the desert heat. Constructing fences around springs could inhibit public access to the riparian area. Closing roads into CC and Cave Springs would eliminate vehicle access into these areas. Physically disabled individuals may not be able to enjoy these riparian areas if vehicle access were eliminated.

The public, especially large groups such as local boy scout troupes, enjoy camping in Macks Canyon. This area can accomodate groups as large as 150 people. Closing a portion of Macks Canyon parking area may reduce the group size that would be able to visit this area at one time.

Whiskey Spring is adjacent to Camp Bonanza, an old boy scout camp. This is a favorite tent camping area used by large groups (up to 100 people at one time). Fencing Whiskey Spring could eliminate approximately 4 flat areas where people pitch tents.

The visitor-created trails at Mummy Springs were developed by people walking through the riparian area to access Mummy Mountain. Rerouting these trails could increase the trail length to Mummy Mountain by approximately 0.25 miles.

Indicator - Expected number of visitor days that would be changed for individual and group recreational activities.

c. *Heritage Resources*

A heritage resource survey was conducted in the areas and numerous sites were located at these springs. Any fence or pipeline construction would need to avoid all the heritage resources. Sawmill Spring is named for the historic sawmill located adjacent to the riparian area. The sawmill was built in the 1890s. The old boiler

remains today. Fencing this spring would protect this site from vehicle traffic and wild horse trampling.

The trough and pipeline at CC Springs was constructed in the late 1930s by the Civilian Conservation Corp. Prohibiting vehicle traffic in this area would protect this historic structure.

The Civilian Conservation Corp also constructed a spring development at Whiskey Spring. This development provided potable water to Camp Bonanza. The only thing historic element remaining is the cement dam. The rest of the development is recent. The Boy Scout camp is no longer being used and the development has fallen into disrepair. Fencing Whiskey Spring and stabilizing the dam would protect this heritage resource.

Indicator - The number of heritage sites protected.

### 3. Non-significant Issues

a. *Wild Horses and Spring Developments* - All of the springs described above are outside the Spring Mountains Wild Horse Territory. Wild horse population levels are not based upon using these resources. Therefore, no pipelines need to be constructed to move water out of the riparian areas.

b. *Visual Resources* - Constructing fences and pipelines may detract from the scenic qualities of these areas. Closing roads and utilizing heavy equipment may create a scarred appearance for the first couple of years. However, the construction of fences and the obliteration of roads and trails within riparian areas will enhance the scenic quality of the riparian areas in the long-term, returning these areas to a more lush, green landscape.

c. *Soil* - Soil compaction is considered a non-significant issue because overall soil compaction in the riparian areas would be improved by the construction of fences, the obliteration of roads, and rerouting of trails.

d. *Air Quality* - This is considered a non-significant issue because the fence construction, or road/trail obliteration activities at these riparian areas would not create nor add to fugitive dust.

### B. Alternatives

This section describes the proposed action and alternatives to the proposed action, and defines the differences among the alternatives and their environmental consequences. These descriptions will include how each alternative relates to the issues raised during the scoping process. A comparison of alternatives and environmental consequences will be provided.

Four alternatives were fully developed in response to the above listed issues. An alternative that included piping water out of the riparian area for wild horses was considered but not fully developed. All the springs described above are outside the Spring Mountains Wild

Horse Territory. These areas were not used in determining resource availability and wild horse population levels. Other water sources that are close by are within the Territory and were used in allocating resources and determining population levels.

#### 1. Alternative 1 (No Action)

Alternative 1 would not restore any of the riparian areas. Wild horses and elk would be able to access these riparian areas for forage, water and other habitat features, such as elk wallows. Riparian vegetation would not be restored and soils would remain compacted.

A trough from the existing McFarland Spring pipeline would not be constructed adjacent to Bonanza Trail. Equestrian would not have access to water outside the McFarland Spring riparian area.

Habitat for the sensitive species and species of concern would not be restored or improved. The populations of dainty moonwort at Macks Canyon and Mummy Springs could be further impacted. Mt. Charleston blue butterfly and Clokey thistle habitat at Mummy Spring would not be changed. Populations of dainty moonwort would not be able to establish themselves at McFarland, Sawmill, Trough, and Whiskey Springs. Habitat and access to water for Palmers chipmunk and bat species would not be improved at any of the springs.

Roads and trails would not be closed or rerouted. Public access would not be impacted. The public would continue to access CC and Cave Springs via existing undesignated roads. The trail to Mummy Mountain would remain in the Mummy Spring riparian area. The parking lot at Macks Canyon would remain the same size. Camping at Whiskey Spring would be allowed. Nevada Revised Statute 503.660 would not be enforced so the public could continue to camp within 100 yards of any water source.

Heritage resources would not be protected from vehicle traffic or wild horse trampling. Vehicle traffic could run into the trough at CC Spring. The boiler foundation at Sawmill Spring could be trampled by wild horses, or vehicles driving on it. The foundation could deteriorate and the boiler could eventually fall over. The dam at Whiskey Spring is deteriorating and would not be stabilized. It would continue to be used as a picnic bench. This could eventually cause the dam to fall apart.

##### a. Management Requirements

Riparian areas would need to be signed to explain to the public their importance in a desert environment and to ecosystem health, and to ask for the public's help in protecting these fragile areas.

Develop an interpretive plan to sign the historic sites associated with these springs.

b. Monitoring Requirements

Populations of rare species would need to be monitored to determine if population trends are declining and warrant listing under the Endangered Species Act.

Monitor the condition of historic structures and determine the need to stabilize in the future.

2. Alternative 2 (Proposed Action)

Alternative 2 would allow the restoration of all the riparian areas as described below:

Construct four strand barbed wire fences at McFarland Spring, Sawmill Spring, and Trough Spring to exclude wild horses. These fences would incorporate the entire riparian area at each of these springs. This would restore approximately 5.0 total acres of riparian habitat and restore habitat for dainty moonwort, Palmers chipmunk, and bat species. A closure order would prohibit camping 100 yards of these springs.

Construct a six foot tall fence at McFarland Spring along the existing fenceline to exclude elk. This would restore approximately 0.5 acres and restore habitat for dainty moonwort, Palmers chipmunk, and bat species.

Construct a pipeline and trough from existing pipeline at McFarland Spring. Place the trough adjacent to Bonanza Trail for equestrian use. Providing water outside the riparian area and advertising the location to equestrians may stop the public from cutting the enclosure fence, further protecting habitat for sensitive species and species of concern. Ensure that the trough is at least 0.5 meters in diameter and allows for easy bat access.

Close the undesignated spur roads into CC Springs and Cave Springs. This would eliminate vehicle traffic into these riparian areas. The public would be able to access these areas by walking approximately 0.25 mile. Highlight the existing parking area above Cave Spring for public use. Habitat would improve for the following butterfly species of concern: comma skipper, Nevada admiral, Carol's silver spot, Boisduvals blue, Dark Blue, and acastus checkerspot. A closure order would prohibit camping 100 yards of these springs.

Fence off the remaining portion of the water flow from Macks Canyon Spring. This would reduce the existing parking area approximately 0.5 acres eliminate parking for 8-12 vehicles. This would increase the habitat for dainty moonwort, Palmers chipmunk, and bat species. A closure order would prohibit camping 100 feet of this spring.

Wild horses occasionally access Macks Canyon Spring for water, primarily during the week. On weekends, wild horse use is likely precluded by the high recreational use in the area. There is also a small wildlife drinker outside the existing enclosure that could be extended to provide water to wild horses outside the new enclosure. If

the trough is moved. ensure that the trough is at least 0.5 meters in diameter and allows for easy bat access.

Restore Whiskey Spring to a "naturalized" condition by cutting the existing headbox flush with the ground, removing the first six inches of gravel, and creating underground dams with bentonite to slow the water movement and reduce erosion in the riparian area. The area would be covered with top soil to replace the soil that was removed when the spring was dredged and the soil that has since eroded away. The cement treatment tank would be removed. A pipe fence would be constructed to eliminate trampling by people and wild horses. This would improve habitat for dainty moonwort, Palmers chipmunk, and bat species. When implementing this restoration, ensure that there is open pool of water at least 0.5 meters in diameter and allows for easy bat access. A closure order would prohibit camping within 50 feet of this spring.

Reroute the trail to Mummy Mountain outside the riparian area at Mummy Spring. This would restore approximately 0.5 acres of the riparian area. This could add approximately 0.25 miles of trail to the overall Mummy Mountain trail length. This would improve habitat for dainty moonwort, Clokey thistle, Mt. Charleston blue butterfly, Palmers chipmunk, and the bat species of concern. A closure order would prohibit camping within 100 yards of this spring.

The sawmill at Sawmill Spring would be protected from vehicle traffic and wild horse trampling. The boiler and it's foundation would remain intact and offer an opportunity to educate the public on the historic uses of the forests in the Spring Mountains. The historic trough at CC Spring would be protected. Vehicles would not be able to run into it. Signs could be posted at the site to explain the historic significance of the site. The dam at Whiskey Spring would be stabilized. The public would not be able to access it and use it as a picnic bench. Signs could be placed at the dam to explain existance of the old Boy Scout camp and the historic significance of the area.

a. Management Requirements

Management requirements would include constructing fences at McFarland Spring, Whiskey Spring, Sawmill Spring, Trough Spring, and Macks Canyon Spring. These fences would have to avoid heritage resources, and populations of sensitive species and species of concern.

Use smooth wire on the top and bottom strand of the 4-strand barbed wire fences.

Signs would need to be installed informing the public of the purpose of the exclosures, and the importance of riparian areas in the desert and to ecosystem health.

Post signs along the Bonanza Trail to inform equestrians where to access water.

Conduct annual maintenance on the fences, pipelines, and open pools.

Develop an interpretive plan to sign the historic sites associated with these springs.

b. Monitoring Requirements

Photo points would need to be set up at each spring site to document the restoration of the riparian area. Photos would be retaken every 2 years. Seeding with native species would need to occur if natives did not reestablish in the disturbed areas after 2 years. Water flows, temperature, and clarity would be monitored every 2 years to determine if flows have increased and if temperature and clarity have changed.

Monitor the open to pools to ensure they are being maintained and not overgrowing with vegetation.

Conduct annual visits to each spring to check maintenance requirements.

Monitor the condition of historic structures and determine the need to stabilize in the future.

3. Alternative 3 (No Elk Exclosure)

Alternative 3 would allow the restoration of all the riparian areas as described in Alternative 2, except an elk exclosure would not be constructed at McFarland Spring.

Construct 4 strand barbed wire fences at McFarland Spring, Sawmill Spring, and Trough Spring to exclude wild horses. This would restore approximately 5.0 acres of riparian habitat and restore habitat for dainty moonwort, Palmers chipmunk, and bat species. A closure order would prohibit camping 100 yards of these springs.

Elk would not be excluded at McFarland Spring. The elk wallow would remain and the headcut would not be restored. If the headcut erodes into the spring source, the wet meadow (lentic site) could be changed into a small stream. The hydric soils of the wet meadow are highly erosive and would not be able to withstand the higher energy erosion associated with moving water. The wet meadow could eventually disappear, along with the soil. Once the soils are gone, the water table would drop. Without hydric soils and water close to the surface, this area would not be able to support riparian vegetation (and wildlife habitat). Water quality would be reduced because of the sediment from the erosion. At this point, the system would be non-functional and would be difficult to restore.



Dainty moonwort, Palmers chipmunk, and bat species habitat would not be restored at McFarland Spring. As the headcut moved toward the spring source, the wet meadow would begin to dry up, further reducing the habitat for these species. If the wet meadow were converted to a small stream, the habitat for dainty moonwort would be completely removed. Palmers chipmunk and bat species would still be able to access water at the source. However, the forage provided to the Palmers chipmunk by the wet meadow would be eliminated. The bats forage on the insects that are attracted to wet meadow. The bats would have a reduced forage source, if the wet meadow were reduced or eliminated.

Construct a pipeline and trough from existing pipeline at McFarland Spring. Place the trough adjacent to Bonanza Trail for equestrian use. Providing water outside the riparian area and advertising the location to equestrians may stop the public from cutting the exclosure fence, further protecting habitat for sensitive species and species of concern. Ensure that the trough is at least 0.5 meters in diameter and allows for easy bat access.

Close the undesignated spur roads into CC Springs and Cave Springs. This would eliminate vehicle traffic into these riparian areas. The public would be able to access these areas by walking approximately 0.25 mile. Highlight the existing parking area above Cave Spring for public use. Habitat would improve for the following butterfly species of concern: comma skipper, Nevada admiral, Carol's silver spot, Boisduvals blue, dark blue, and acastus checkerspot. A closure order would prohibit camping 100 yards of these springs.

Fence off the remaining portion of the water flow from Macks Canyon Spring. This would reduce the existing parking area approximately 0.5 acres eliminate parking for 8-12 vehicles. This would increase the habitat for dainty moonwort, Palmers chipmunk, and various bat species. A closure order would prohibit camping 100 feet of this spring.

Wild horses occasionally access Macks Canyon Spring for water, primarily during the week. On weekends, wild horse use is likely precluded by the high recreational use in the area. There is also a small wildlife drinker outside the existing exclosure that could be extended to provide water to wild horses outside the new exclosure. If the trough is moved, ensure that the trough is at least 0.5 meters in diameter and allows for easy bat access.

Restore Whiskey Spring to a "naturalized" condition by cutting the existing headbox flush with the ground, removing the first six inches of gravel, and creating underground dams with bentonite to slow the water movement and reduce erosion in the riparian area. The area would be covered with top soil to replace the soil that was removed when the spring was dredged and the soil that has since eroded away. The cement treatment tank would be removed. A fence would be constructed to eliminate trampling by people and wild horses. This would improve habitat for dainty moonwort, Palmers chipmunk, and bat species. When implementing this restoration,

ensure that there is open pool of water at least 0.5 meters in diameter and allows for easy bat access. A closure order would prohibit camping 50 feet of this spring.

Reroute the trail to Mummy Mountain outside the riparian area at Mummy Spring. This would restore approximately 0.5 acres of the riparian area. This could add approximately 0.25 miles of trail to the overall Mummy Mountain trail length. This would improve habitat for dainty moonwort, Clokey thistle, Mt. Charleston blue butterfly, Palmers chipmunk, and the bat species of concern. A closure order would prohibit camping 100 yards of this spring.

The sawmill at Sawmill Spring would be protected from vehicle traffic and wild horse trampling. The boiler and it's foundation would remain intact and offer an opportunity to educate the public on the historic uses of the forests in the Spring Mountains. The historic trough at CC Spring would be protected. Vehicles would not be able to run into it. Signs could be posted at the site to explain the historic significance of the site. The dam at Whiskey Spring would be stabilized. The public would not be able to access it and use it as a picnic bench. Signs could be placed at the dam to explain existence of the old Boy Scout camp and the historic significance of the area.

a. Management Requirements

Management requirements would include constructing fences at McFarland Spring, Whiskey Spring, Sawmill Spring, Trough Spring, and Macks Canyon Spring. These fences would have to avoid heritage resources, and populations of sensitive species and species of concern. Signs would need to be installed informing the public of the purpose of the exclosures, and the importance of riparian areas in the desert and to ecosystem health. Structures may need to be put in to slow the movement of the headcut at McFarland Spring.

Use smooth wire on the top and bottom strand of the 4-strand barbed wire fences.

Post signs along the Bonanza Trail to inform equestrians where to access water.

Conduct annual maintenance on the fences, pipelines, and open pools of water.

Develop an interpretive plan to sign the historic sites associated with these springs.

b. Monitoring Requirements

Photo points at McFarland Spring would need to be set up to document the movement of the headcut.

Photo points would need to be set up at the other springs to document the restoration of the riparian area. Photos would be retaken every 2 years. Seeding

with native species would need to occur if natives did not reestablish in the disturbed areas after 2 years. Water flows, temperature, and clarity would be monitored every 2 years to determine if flows have increased and if temperature and clarity have changed.

Monitor the open to pools to ensure they are being maintained and not overgrowing with vegetation.

Conduct annual visits to each spring to check maintenance requirements.

Monitor the condition of historic structures and determine the need to stabilize in the future.

#### 4. Alternative 4 (No Change in Public Access)

Alternative 4 would allow the restoration of all the riparian areas as described in the Alternative 2, except the roads into CC and Cave Spring would not be closed to vehicle traffic. The trail to Mummy Mountain would not be rerouted outside of Mummy Spring riparian area. The fence at Macks Canyon Spring would not be expanded. Whiskey Spring would not be fenced. Camping would not be prohibited within specific distance of any of the springs.

Construct four strand barbed wire fences at McFarland Spring, Sawmill Spring, and Trough Spring to exclude wild horses. This would restore approximately 5.0 acres of riparian habitat and restore habitat for dainty moonwort, Palmers chipmunk, and bat species.

Construct a six foot tall fence at McFarland Spring along the existing fenceline to exclude elk. This would restore approximately 0.5 acres and restore habitat for dainty moonwort, Palmers chipmunk, and bat species.

Construct a pipeline and trough from existing pipeline at McFarland Spring. Place the trough adjacent to Bonanza Trail for equestrian use. Providing water outside the riparian area and advertising the location to equestrians may stop the public from cutting the enclosure fence, further protecting habitat for sensitive species and species of concern.

The undesignated spur roads into CC Springs and Cave Springs would not be closed. Vehicle traffic into these areas would continue. The bare soils would remain compacted and the riparian vegetation would not be restored.

Over the last five years, vehicle traffic has expanded into these riparian areas. If these roads are not closed, the parking areas could continue to expand until the entire riparian area is bare of all vegetation and all the soils are compacted. The wet meadow (lentic site) could be changed into a small stream (lotic site). The hydric soils of the wet meadow are highly erosive and would not be able to withstand the

higher energy erosion associated with moving water. The wet meadow could eventually disappear, along with the soil. Once the soils are gone, the water table would drop. Without hydric soils and water close to the surface, this area would not be able to support riparian vegetation (and wildlife habitat). Water quality would be reduced because of the sediment from the erosion. This would impact the butterfly species of concern found at these springs. At this point, the system would be non-functional and would be difficult to restore.

The remaining portion of the riparian area in Macks Canyon would not be fenced. The parking lot would remain the same size and accommodate the same number of vehicles. Habitat for dainty moonwort, Palmers chipmunk, and bat species of concern would not be increased at this riparian area. Wild horses could continue to access water from the existing trough and small stream.

Whiskey Spring would not be "naturalized". The headbox and cement tank would remain. Camping would be allowed in the riparian area, so public use of the site would not be impacted. Dainty moonwort, Palmers chipmunk, and bat species of concern habitat would not be restored at this riparian area.

The trail to Mummy Mountain would not be rerouted outside the riparian area at Mummy Spring. Public use along the trail would not be changed. Dainty moonwort, Clokey thistle, and Mt. Charleston blue butterfly habitat at Mummy Spring would not be restored. Continued use of these trails could remove more riparian vegetation, including the dainty moonwort and Clokey thistle, and compact and erode the soils, further reducing, if not eliminating, these species' habitat at this spring.

The sawmill at Sawmill Spring would be protected from vehicle traffic and wild horse trampling. The boiler and its foundation would remain intact and offer an opportunity to educate the public on the historic uses of the forests in the Spring Mountains.

Vehicle traffic would continue to have access to CC Spring. The trough would not be protected. Signs could be placed at the site to explain the historic significance of the trough.

The dam at Whiskey Spring is deteriorating and would not be stabilized. It would continue to be used as a picnic bench. This could eventually cause the dam to fall apart. Signs could be placed at the dam to explain existence of the old Boy Scout camp and the historic significance of the area.

a. Management Requirements

Management requirements would include constructing fences at McFarland Spring, Sawmill Spring, and Trough Spring. These fences would have to avoid heritage resources, and populations of sensitive species and species of concern. Signs informing the public on the importance of riparian areas in the desert and to

ecosystem health and discouraging parking and camping within riparian areas would need to be posted at CC, Cave, Macks Canyon, and Whiskey Springs. Signs would need to be installed at the other springs informing the public of the purpose of the exclosures.

Use smooth wire on the top and bottom strand of the 4-strand barbed wire fences.

Post signs along the Bonanza Trail to inform equestrians where to access water.

Conduct annual maintenance on the fences, pipelines, and open pools of water.

Develop an interpretive plan to sign the historic sites associated with these springs.

b. Monitoring Requirements

Photo points would need to be set up at CC and Cave Springs to document the expansion of the parking areas.

Photo points would need to be set up at Macks Canyon Spring to document the impacts of parking and camping on the riparian area. Photo points would need to be set up at Whiskey Spring to document the camping impacts.

Photo points would need to be set up at the other springs to document the restoration of the riparian area. Photos would be retaken every 2 years. Seeding with native species would need to occur if natives did not reestablish in the disturbed areas after 2 years. Water flows, temperature, and clarity would be monitored every 2 years to determine if flows have increased and if temperature and clarity have changed.

Monitor the open pools to ensure they are being maintained and not overgrowing with vegetation.

Conduct annual visits to each spring to check maintenance requirements.

Monitor the condition of historic structures and determine the need to stabilize in the future.

### **III. ENVIRONMENTAL CONSEQUENCES**

This section is the analytic and scientific basis for the comparison of the alternatives. It describes the expected environmental consequences of each alternative on the relevant issues.

#### **ISSUE 1. WILD HORSES AND ELK**

## A. Alternative 1 (No Action)

### 1. Direct and Indirect Effects

Wild horses and elk would have access to all their current water sources. Wild horses would not be excluded from all of McFarland Spring, Sawmill Spring, Trough Spring, Whiskey Spring, or Macks Canyon Spring. Riparian vegetation would continue to be grazed and trampled. The soils would continue to be compacted. In the worse case scenario, these water sources could dry up completely if the soil is compacted to the point of blocking the outflowing water.

Elk would not be excluded at McFarland Spring. The elk wallow would remain and the headcut would not be restored. If the headcut erodes into the spring source, the wet meadow (lentic site) could be changed into a small stream (lotic site). The hydric soils of the wet meadow are highly erosive and would not be able to withstand the higher energy erosion associated with moving water. The wet meadow could eventually disappear, along with the soil. Once the soils are gone, the water table would drop. Without hydric soils and water close to the surface, this area would not be able to support riparian vegetation (and wildlife habitat). Water quality would be reduced because of the sediment from the erosion. This may not be a desirable location for elk, or other wildlife, to water, but the wallow would continue to be an important habitat feature. At this point, the system would be non-functional and difficult to restore.

### 2. Mitigation

Other water sources could be developed for the elk and wild horses. However, the herds have the historical knowledge of these springs and would likely continue using them even if new water sources are developed.

### 3. Moitoring

Monitor populations of rare species to determine if population trends are declining and warrant listing under the Endangered Species Act.

## B. Alternative 2 (Proposed Action)

### 1. Direct and Indirect Effects

Wild horse exclosures would be constructed at McFarland, Sawmill, and Trough Springs. A fence to control parking at Macks Canyon Spring and public access at Whiskey Spring would also exclude wild horses. Wild horses would not be able to access water at these sources. These sources are outside the Spring Mountains Wild Horse Territory and have not been used in determining Appropriate Management Levels (population size) when allocating resources. The current wild horse population, however, is above the Appropriate Management Levels in these areas.

There are several other water sources close by that are within the Territory. These water sources include Cold and Willow Creek, which both run year round, and provide ample water for the current wild horse population. Willow and Cold Creeks are adjacent to the Cold Creek Community. and receive a great deal of recreational use, especially on the weekends. Cold Creek has three ponds that are outside the community and the lowest pond does not receive as much recreational use. Wild horse use at these creeks and ponds may be reduced because of the close proximity to people.

McFarland Spring currently has a pipeline from the source that extends 1.5 miles from the riparian area to a 200 gallon trough. There are also drinkers along this pipeline every 0.25 mile. The trough and the drinkers are in remote locations. Wild horses could continue to access these water sources without being impacted by the presence of people.

Eliminating wild horse access to the springs in the Cold Creek area (McFarland, Sawmill, and Whiskey Springs) could force wild horses to use springs that other herds are currently using. This could increase the herd conflict at the open springs, leading to more injured stallions.

Mud Springs and Deer Creek Seep at in close proximity to Macks Canyon. These springs also run year-round and provide ample water to wild horses. The existing pipeline and trough at Macks Canyon Spring would be moved outside the enclosure extension to provide water to wild horses.

Elk would be excluded from McFarland Spring. They could continue to access water at eight other remote springs in the Cold Creek Area. They could also continue to access water along the McFarland Spring Pipeline. New springs are found on an infrequent but consistent basis in the Cold Creek area. More springs likely exist on Willow Peak.

The elk would not be able to access the elk wallow at McFarland Spring. The wallow is an important habitat feature. The elk could continue to access the wallow at Sawmill Spring, however, this may bring too many animals into one location, increasing conflict among different herds. Other springs on Willow Peak have not been surveyed and may also have wallows. Closing the wallow at McFarland Spring may force elk to create new wallows at relatively undisturbed spring locations.

## 2. Mitigation

Conduct annual maintenance on the fences and pipelines.

Survey other more remote spring sites to determine elk use and wallows.

Conduct emergency gathers if wild horse conditions decline to the point their ability to survive is in question. Conduct water hauling, if necessary, prior to removal of animals.

### 3. Monitoring

Photo points would need to be set up at all the springs to document the restoration of the riparian area. Photos would be retaken every 2 years. Seeding with native species would need to occur if natives are not reestablishing in the disturbed areas after 2 years. Water flows, temperature, and clarity would be monitored every 2 years to determine if flows have increased and if temperature and clarity have changed.

Monitor wild horse conditions to determine if emergency gathers need to be conducted.

Monitor Fence, Sawmill, and Whiskey Springs to determine if new wallows are being created.

Conduct annual visits to each spring to check maintenance requirements.

### C. Alternative 3 (No Elk Enclosure)

#### 1. Direct and Indirect Effects

Wild horse enclosures would be constructed at McFarland, Sawmill, and Trough Springs. A fence to control parking at Macks Canyon Spring and public access at Whiskey Spring would also exclude wild horses. Wild horses would not be able to access water at these sources. These sources are outside the Spring Mountains Wild Horse Territory and have not been used in determining Appropriate Management Levels (population size) when allocating resources. The current wild horse population, however, is above the Appropriate Management Levels in these areas.

There are several other water sources close by that are within the Territory. These water sources include Cold and Willow Creek, which both run year round, and provide ample water for the current wild horse population. Willow and Cold Creeks are adjacent to the Cold Creek Community, and receive a great deal of recreational use, especially on the weekends. Cold Creek has three ponds that are outside the community and the lowest pond does not receive as much recreational use. Wild horse use at these creeks and ponds may be reduced because of the close proximity to people.

McFarland Spring currently has a pipeline from the spring source that extends 1.5 miles from the riparian area to a 200 gallon trough. There are also drinkers along this pipeline every 0.25 mile. The trough and the drinkers are in remote locations. Wild horses could continue to access these water sources without being impacted by the presence of people.



Eliminating wild horse access at these springs in the Cold Creek area could force wild horses to use springs that other wild horse herds are currently using. This could increase the herd conflict at the open springs, leading to more injured stallions.

Mud Springs and Deer Creek Seep are in close proximity to Macks Canyon. These springs also run year-round and provide ample water to wild horses. The existing pipeline and trough at Macks Canyon Spring would be moved outside the enclosure extension to provide water to wild horses.

Elk would not be excluded from McFarland Spring. The elk wallow would remain and the headcut would not be restored. If the headcut erodes into the spring source, the wet meadow (lentic site) could be changed into a small stream (lotic site). The hydric soils of the wet meadow are highly erosive and would not be able to withstand the higher energy erosion associated with moving water. The wet meadow could eventually disappear, along with the soil. Once the soils are gone, the water table would drop. Without hydric soils and water close to the surface, this area would not be able to support riparian vegetation (and wildlife habitat). Water quality would be reduced because of the sediment from the erosion. This may not be a desirable location for elk, or other wildlife, to water, but the wallow would continue to be an important habitat feature. At this point, the system would be non-functional and difficult to restore.

## 2. Mitigation

Conduct annual maintenance on the fences and pipelines.

Survey other more remote spring sites to determine elk use and wallows.

Conduct emergency gathers if wild horse conditions decline to the point their ability to survive is in question. Conduct water hauling, if necessary, prior to removal of animals.

## 3. Monitoring

Photo points at McFarland Spring would need to be set up to document the movement of the headcut.

Photo points would need to be set up at the other springs to document the restoration of the riparian area. Photos would be retaken every 2 years. Seeding with native species would need to occur if natives are not reestablishing in the disturbed areas after 2 years. Water flows, temperature, and clarity would be monitored every 2 years to determine if flows have increased and if temperature and clarity have changed.

Populations of rare species at McFarland Spring would need to be monitored to determine if population trends are declining and warrant listing under the Endangered Species Act

Monitor wild horse conditions to determine if emergency gathers need to be conducted.

Monitor Sawmill and Whiskey Spring to determine if new wallows are being created.

Conduct annual visits to each spring to check maintenance requirements.

D. Alternative 4 (No Change in Public Access)

1. Direct and Indirect Effects

Wild horse exclosures would be constructed at McFarland, Sawmill, and Trough Springs. These sources are outside the Spring Mountains Wild Horse Territory and have not been used in determining Appropriate Management Levels (population size) when allocating resources. The current wild horse population, however, is above the Appropriate Management Levels in these areas.

There are several other water sources close by that are within the Territory. These water sources include Cold and Willow Creek, which both run year round, and provide ample water for the current wild horse population. Willow and Cold Creeks are adjacent to the Cold Creek Community, and receive a great deal of recreational use, especially on the weekends. Cold Creek has three ponds that are outside the community and the lowest pond does not receive as much recreational use. Wild horse use at these creeks and ponds may be reduced because of the close proximity to people.

McFarland Spring currently has a pipeline from the spring source that extends 1.5 miles from the riparian area to a 200 gallon trough. There are also drinkers along this pipeline every 0.25 mile. The trough and the drinkers are in remote locations. Wild horses could continue to access these water sources without being impacted by the presence of people.

Eliminating wild horse access to the spring in the Cold Creek area could force wild horses to use springs that other herds are currently using. This could increase the herd conflict at the open springs, leading to more injured stallions.

Wild horse could continue to access water at Whiskey Spring and Macks Canyon Spring. The existing pipeline and trough at Macks Canyon Spring would not need to be moved.

Elk would be excluded from McFarland Spring. They could continue to access water at eight other remote springs in the Cold Creek Area. They could also continue to access water along the McFarland Spring Pipeline. New springs are found on an infrequent, but consistent basis in Cold Creek. More springs likely exist on Willow Peak.

The elk would not be able to access the elk wallow at McFarland Spring. The wallow is an important habitat feature. The elk could continue to access the wallow at Sawmill Spring, however, this may bring too many animals into one location, increasing conflict among different herds. Other springs on Willow Peak have not been surveyed and may also have wallows. Closing the wallow at McFarland Spring may force elk to create new wallows at relatively undisturbed spring locations.

## 2. Mitigation

Conduct annual maintenance on the fences and pipelines.

Survey other more remote spring sites to determine elk use and wallows.

Conduct emergency gathers if wild horse conditions decline to the point that herds' survival is in question. Conduct water hauling, if necessary, prior to removal of animals.

## 3. Monitoring

Photo points would need to be set up at all the springs to document the restoration of the riparian area. Photos would be retaken every 2 years. Seeding with native species would need to occur if natives are not reestablishing in the disturbed areas after 2 years. Water flows, temperature, and clarity would be monitored every 2 years to determine if flows have increased and if temperature and clarity have changed.

Monitor wild horse conditions to determine if emergency gathers need to be conducted.

Monitor Fence, Sawmill and Whiskey Springs to determine if new wallows are being created.

Conduct annual visits to each spring to check maintenance requirements.

## **ISSUE 2. THREATENED, ENDANGERED, AND SENSITIVE SPECIES AND SPECIES OF CONCERN**

### A. Alternative 1 (No Action)

#### 1. Direct and Indirect Effects

Wild horses would not be excluded from any of the springs. Populations of dainty moonwort would not be able to establish themselves at McFarland, Sawmill, and Trough Springs. Habitat and access to water for Palmers chipmunk and bat species would not be improved at any of the springs. As these riparian areas degrade further,

habitat for these species may eventually be destroyed, especially if soil compaction blocks the spring source, drying it up completely.

Elk would not be excluded from the source at McFarland Spring. The associated headcut would not be restored. Dainty moonwort, Palmers chipmunk, and bat species habitat would not be restored at McFarland Spring. As the headcut moved toward the spring source, the wet meadow would begin to dry up, further reducing the habitat for these species. If the wet meadow were converted to a small stream, the habitat for dainty moonwort would be completely removed. Palmers chipmunk and bat species would still be able to access water at the source. However, the forage provided to the Palmers chipmunk by the wet meadow would be eliminated. The bats forage on the insects that are attracted to wet meadow. The bats would have a reduced forage source, if the wet meadow were reduced or eliminated. As these riparian areas degrade further, habitat for these species may eventually be destroyed, especially if soil compaction blocks the spring source, drying it up completely.

The remaining portion of the riparian area in Macks Canyon would not be fenced. habitat for Dainty moonwort, Palmers chipmunk, and bat species of concern would not be increased at this riparian area.

Whiskey Spring would not be "naturalized". Dainty moonwort, Palmers chipmunk, and bat species of concern habitat would not be restored at this riparian area. As these riparian areas degrade further, habitat for these species may eventually be destroyed, especially if soil compaction blocks the spring source, drying it up completely. Bats would not be able to access water at the spring.

The trail to Mummy Mountain would not be rerouted outside the riparian area at Mummy Spring. Dainty moonwort, Clokey thistle, and Mt. Charleston blue butterfly habitat at Mummy Spring would not be restored. Continued use of these trails could remove more riparian vegetation, including the dainty moonwort and Clokey thistle, and compact and erode the soils, further reducing, if not eliminating, these species' habitat at this spring.

Roads and parking areas at CC and Cave Spring would not be restored. Over the last five years, vehicle traffic has expanded into these riparian areas. If these roads are not closed, the parking areas could continue to expand until the entire riparian area is bare of riparian vegetation and all the soils are compacted. The wet meadow (lentic site) could be changed into a small stream (lotic site). The hydric soils of the wet meadow are highly erosive and would not be able to withstand the higher energy erosion associated with moving water.

The habitat for the comma skipper, Nevada admiral, Carol's silver spot, Boisduvals blue, dark blue, and acastus checkerspot at CC and Cave Spring would not be restored. These species do need small areas of disturbance to drink muddy water in order to get the soil minerals. However, small patches of disturbance occur naturally within riparian areas in higher ecological conditions. As these riparian areas degrade

further, habitat for these species may eventually be destroyed, especially if soil compaction blocks the spring source, drying it up completely.

## 2. Mitigation

Develop other water sources for the elk and wild horses. However, the herds have the historical knowledge of these springs and would likely continue using them even if new sources are developed.

Sign riparian areas to explain to the public their importance in a desert environment and to ecosystem health, and to ask for the public's help in protecting these fragile areas.

## 3. Monitoring

Monitor populations of rare species to determine if population trends are declining and warrant listing under the Endangered Species Act.

# B. Alternative 2 (Proposed Action)

## 1. Direct and Indirect Effects

Wild horses would be excluded from McFarland, Sawmill, and Trough Spring. The fences constructed to keep the public out of Macks Canyon and Whiskey Springs would also exclude wild horse use. The riparian vegetation and soils would be restored. Dainty moonwort would be able to establish itself in these riparian areas. As the wet meadows are restored and increase in size, the Palmers chipmunk and bat habitat and access to water would be improved.

Elk would be excluded from McFarland Spring. The head cut and the riparian area would be restored. Dainty moonwort would be able to establish itself in these riparian areas. As the wet meadows are restored and increase in size, the Palmers chipmunk and bat habitat and access to water would be improved.

A trough from the existing pipeline at McFarland Spring placed adjacent to Bonanza Trail would provide water outside the riparian area for equestrians. This may stop the public from cutting the enclosure fence, further protecting habitat for sensitive species and species of concern.

Fencing off the remaining portion of the water flow from Macks Canyon Spring would increase the habitat for dainty moonwort and Palmers chipmunk. The existing trough would be replaced with a trough that has an opening of at least 0.5 meters in diameter. This would improve bat habitat.

The roads at CC and Cave Springs would be closed. The road surface and parking areas would be restored to riparian vegetation. The soils would be less compacted and erosion would be reduced. Habitat for the comma skipper, Nevada admiral,

Carol's silver spot, Boisduvals blue, dark blue, and acastus checkerspot would be improved.

Restore Whiskey Spring to a "naturalized" condition by cutting the existing headbox flush with the ground, removing the first six inches of gravel, and creating underground dams with bentonite to slow the water movement through the riparian area and reduce erosion. The area would be covered with top soil to replace the soil that has been removed when the spring was dredged and the soil that has since eroded away. A pipe fence would be constructed to eliminate trampling by people and horses. An open pool (at least 0.5 meters in diameter) would be constructed to improve bat access to water at this source. This would also improve habitat for dainty moonwort, Palmers chipmunk, and bat species.

Reroute the trail to Mummy Mountain outside the riparian area at Mummy Spring. This would restore approximately 0.5 acres of the riparian area. This would improve habitat for dainty moonwort, Clokey thistle, Mt. Charleston blue butterfly, Palmers chipmunk, and the bat species of concern.

Prohibiting camping within a specified distance of these water sources would allow wildlife better access to these water sources, including bats and Palmers chipmunk.

## 2. Mitigation

Avoid sensitive species and species of concern when constructing fences at McFarland Spring, Whiskey Spring, Sawmill Spring, Macks Canyon, and Trough Spring.

Post signs informing the public on the importance of riparian areas in the desert and to ecosystem health and discouraging parking and camping within riparian areas at CC, Cave, Macks Canyon, and Whiskey Springs.

Post signs at the all other springs informing the public of the purpose of the exclosures.

Survey other more remote spring sites to determine elk use and wallows.

Post signs along the Bonanza Trail to inform equestrians where to access water.

Conduct annual maintenance on the fences, pipelines, and open pools of water.

## 3. Monitoring

Photo points would need to be set up at all the springs to document the restoration of the riparian area. Photos would be retaken every 2 years. Seeding with native species would need to occur if natives are not reestablishing in the disturbed areas after 2 years. Water flows, temperature, and clarity would be monitored every 2

years to determine if flows have increased and if temperature and clarity have changed.

Monitor Sawmill and Whiskey Spring to determine if new wallows are being created.

Monitor the open to pools to ensure they are being maintained and not over growing with vegetation.

Conduct annual visits to each spring to check maintenance requirements.

### C. Alternative 3 (No Elk Exclosure)

#### 1. Direct and Indirect Effects

Wild horses would be excluded from McFarland, Sawmill, and Trough Spring. The fences constructed to keep the public out of Macks Canyon and Whiskey Springs would also exclude wild horse use. The riparian vegetation and soils would be restored. Dainty moonwort would be able to establish itself in these riparian areas. As the wet meadows are restored and increase in size, the Palmers chipmunk and bat habitat and access to water would be improved.

Elk would not be excluded from McFarland Spring. The elk wallow would not be restored. Dainty moonwort, Palmers chipmunk, and bat species habitat would not be restored at McFarland Spring. As the headcut moved toward the spring source, the wet meadow would begin to dry up, further reducing the habitat for these species. If the wet meadow were converted to a small stream, the habitat for dainty moonwort would be completely removed. Palmers chipmunk and bat species would still be able to access water at the source. However, the forage provided to the Palmers chipmunk by the wet meadow would be eliminated. The bats forage on the insects that are attracted to wet meadow. The bats would have a reduced forage source, if the wet meadow were reduced or eliminated. As these riparian areas degrade further, habitat for these species may eventually be destroyed, especially if soil compaction blocks the spring source, drying it up completely.

A trough from the existing pipeline at McFarland Spring placed adjacent to Bonanza Trail would provide water outside the riparian area for equestrians. This may stop the public from cutting the exclosure fence, further protecting habitat for sensitive species and species of concern.

Fencing off the remaining portion of the water flow from Macks Canyon Spring would increase the habitat for dainty moonwort and Palmers chipmunk. The existing trough would be replaced with a trough that has an opening of at least 0.5 meters in diameter. This would improve bat habitat.

The roads at CC and Cave Springs would be closed. The road surface and parking areas would be restored to riparian vegetation. The soils would be less compacted and erosion would be reduced. Habitat for the comma skipper, Nevada admiral, Carol's silver spot, Boisduvals blue, dark blue, and acastus checkerspot would be improved.

Restore Whiskey Spring to a "naturalized" condition by cutting the existing headbox flush with the ground, removing the first six inches of gravel, and creating underground dams with bentonite to slow the water movement through the riparian area and reduce erosion. The area would be covered with top soil to replace the soil that has been removed when the spring was dredged and the soil that has since eroded away. A pipe fence would be constructed to eliminate trampling by people and horses. An open pool (at least 0.5 meters in diameter) would be constructed to improve bat access to water at this source. This would improve habitat for dainty moonwort, Palmers chipmunk, and bat species.

Reroute the trail to Mummy Mountain outside the riparian area at Mummy Spring. This would restore approximately 0.5 acres of the riparian area. This would improve habitat for dainty moonwort, Clokey thistle, Mt. Charleston blue butterfly, Palmers chipmunk, and the bat species of concern.

Prohibiting camping within a specified distance of these water sources would allow wildlife better access to these water sources, including bats and Palmers chipmunk.

## 2. Mitigation

Avoid sensitive species and species of concern when constructing fences at McFarland Spring, Whiskey Spring, Sawmill Spring, Macks Canyon Spring, and Trough Spring.

Post signs informing the public on the importance of riparian areas in the desert and to ecosystem health and discouraging parking and camping within riparian areas at CC, Cave, Macks Canyon, and Whiskey Springs.

Post signs at all the other springs informing the public of the purpose of the enclosures.

Survey other more remote spring sites to determine elk use and wallows.

Post signs along the Bonanza Trail to inform equestrians where to access water.

Conduct annual maintenance on the fences, pipelines and open pools.

## 3. Monitoring



Photo points at McFarland Spring would need to be set up to document the movement of the headcut.

Monitor the populations of rare species that occur at McFarland Spring to determine if population trends are declining and warrant listing under the Endangered Species Act.

Photo points would need to be set up at the springs to document the restoration of the riparian area. Photos would be retaken every 2 years. Seeding with native species would need to occur if natives are not reestablishing in the disturbed areas after 2 years. Water flows, temperature, and clarity would be monitored every 2 years to determine if flows have increased and if temperature and clarity have changed.

Monitor the open to pools to ensure they are being maintained and not over growing with vegetation.

Conduct annual visits to each spring to check maintenance requirements.

D. Alternative 4 (No Change in Public Access)

1. Direct and Indirect Effects

Wild horses would be excluded from McFarland, Sawmill, and Trough Spring. The riparian vegetation and soils would be restored. Dainty moonwort would be able to establish itself in these riparian areas. As the wet meadows are restored and increase in size, the Palmers chipmunk and bat habitat and access to water would be improved.

Elk would be excluded from McFarland Spring. The head cut and the riparian area would be restored. Dainty moonwort would be able to establish itself in these riparian areas. As the wet meadows are restored and increase in size, the Palmers chipmunk and bat habitat and access to water would be improved.

A trough from the existing pipeline at McFarland Spring placed adjacent to Bonanza Trail would provide water outside the riparian area for equestrians. This may stop the public from cutting the exclosure fence, further protecting habitat for sensitive species and species of concern.

The remaining portion of the riparian area in Macks Canyon would not be fenced. Dainty moonwort, Palmers chipmunk, and bat species of concern habitat would not be increased at this riparian area. The existing trough could be replaced with a trough that has an opening of at least 0.5 meters in diameter. This could improve bat habitat.

Whiskey Spring would not be "naturalized". Dainty moonwort, Palmers chipmunk, and bat species of concern habitat would not be restored at this riparian area. As these riparian areas degrade further, habitat for these species may eventually be destroyed, especially if soil compaction blocks the spring source, drying it up completely. Bats would not have access to this water source.

The trail to Mummy Mountain would not be rerouted outside the riparian area at Mummy Spring. Dainty moonwort, Clokey thistle, and Mt. Charleston blue butterfly habitat at Mummy Spring would not be restored. Continued use of these trails could remove more riparian vegetation, including the dainty moonwort and Clokey thistle, and compact and erode the soils, further reducing, if not eliminating, these species' habitat at this spring.

Roads and parking areas at CC and Cave Spring would not be restored. Over the last five years, vehicle traffic has expanded into these riparian areas. If these roads are not closed, the parking areas could continue to expand until the entire riparian area is bare of riparian vegetation and all the soils are compacted.

The habitat for the comma skipper, Nevada admiral, Carol's silver spot, Boisduvals blue, dark blue, and acastus checkerspot at CC and Cave Spring would not be restored. These species do need small areas of disturbance to drink muddy water in order to get the soil minerals. However, small patches of disturbance occur naturally within riparian areas in higher ecological conditions. As these riparian areas degrade further, habitat for these species may eventually be destroyed, especially if soil compaction blocks the spring source, drying it up completely.

Camping within any distance of a water source would be allowed. Wildlife would not have improved access to water, especially at Macks Canyon and Whiskey Springs.

## 2. Mitigation

Sign CC, Cave, Macks Canyon, and Whiskey Springs to explain to the public their importance in a desert environment and to ecosystem health, and to ask for the public's help in protecting these fragile areas.

Avoid sensitive species and species of concern when constructing fences at McFarland Spring, Sawmill Spring, and Trough Spring.

Post signs at McFarland Spring, Sawmill Spring, and Trough Spring informing the public of the purpose of the enclosures.

Survey other more remote spring sites to determine elk use and wallows.

Post signs along the Bonanza Trail to inform equestrians where to access water.

Conduct annual maintenance on the fences, pipelines, and open pools.

## 3. Monitoring

Monitor the populations of rare species that occur at CC, Cave, Macks Canyon, and Whiskey Springs to determine if population trends are declining and warrant listing under the Endangered Species Act.

Monitor the open to pools to ensure they are being maintained and not over growing with vegetation.

Photo points would need to be set up at the other springs to document the restoration of the riparian area. Photos would be retaken every 2 years. Seeding with native species would need to occur if natives are not reestablishing in the disturbed areas after 2 years. Water flows, temperature, and clarity would be monitored every 2 years to determine if flows have increased and if temperature and clarity have changed.

### **ISSUE 3. PUBLIC ACCESS**

#### **A. Alternative 1 (No Action)**

##### **1. Direct and Indirect Effects**

The undesignated spur roads into CC Springs and Cave Springs would not be closed. Vehicle traffic into these areas would continue.

The remaining portion of the riparian area in Macks Canyon would not be fenced. The parking lot would remain the same size and accomodate the same number of vehicles.

Whiskey Spring would not be "naturalized". The headbox and cement tank would remain. Camping would be allowed in the riparian area, so public use of the site would not be impacted.

The trail to Mummy Mountain would not be rerouted outside the riparian area at Mummy Spring. Public use along the trail would not be changed.

Nevada Revised Statute 503.660 would not be enforced so the public could continue to camp within any distance of a water source.

##### **2. Mitigation**

Sign CC, Cave, Macks Canyon, and Whiskey Springs to explain to the public their importance in a desert environment and to ecosystem health, and to ask for the public's help in protecting these fragile areas.

##### **3. Monitoring**

Monitor the populations of rare species that occur at CC, Cave, Macks Canyon, and Whiskey Springs to determine if population trends are declining and warrant listing under the Endangered Species Act.

B. Alternative 2 (Proposed Action)

1. Direct and Indirect Effects

An enclosure fence at McFarland Spring would be constructed. A trough from the existing pipeline at McFarland Spring placed adjacent to Bonanza Trail would provide water outside the riparian area for equestrians. This may stop the public from cutting the enclosure fence, further protecting habitat for sensitive species and species of concern. Camping would be prohibited within 100 yards of McFarland Spring. Currently, no camping occurs at the source. Camping occurs at the Bonanza Trailhead (approximately 0.3 miles) and would be able to continue.

The undesignated spur roads into CC Springs and Cave Springs and parking areas would be closed. This would eliminate vehicle traffic into these riparian areas. There are parking areas close to both of these springs that would be maintained, or improved if necessary. The public would be able to access these areas by walking approximately 0.25 mile. Camping would be prohibited within 100 feet of the Cave Spring. Camping currently occurs at the source and approximately 150 feet above the source. Prohibiting camping at the source would eliminate one area where the public can camp. No camping occurs at the source of CC Spring. There is a group use area approximately 0.5 miles east of the source. This area would remain open.

The remaining portion of the water flow from Macks Canyon Spring would be fenced off. This would reduce the existing parking area approximately 0.5 acres eliminate parking for 8-12 vehicles. This could reduce the number of people or the size of group that could use this area at one time/ This is one of four sites on the NRA that can accomodate large groups. Camping would be prohibited within 100 feet of the spring source. This would further reduce the available parking and camping areas in this area.

Whiskey Spring would be restored to a "naturalized" condition. A fence would be constructed to eliminate trampling by people and horses. This could eliminate a few flat areas where people pitch tents. Camping would also be prohibited within 100 feet of the spring source. This would eliminate a large area where people pitch tents. These actions could reduce the number of people or the size of group that could use this area. This is one of four sites that can accommodate large groups and is a favorite for tent campers.

The trail to Mummy Mountain would be rerouted outside the riparian area. This could add approximately 0.25 miles of trail to the overall Mummy Mountain trail length. The total trail length is approximately six miles one-way and is a strenous hike. Increasing the length by 0.25 miles would not likely prohibit hikers from visiting this area.

## 2. Mitigation

Signs would need to be installed informing the public of the purpose of the enclosures, and the importance of riparian areas in the desert and to ecosystem health. These signs would also need to inform the public of the closure order that prohibits camping within specific distances of all water sources.

Post signs along the Bonanza Trail to inform equestrians where to access water.

Conduct annual maintenance on the fences and pipelines.

## 3. Monitoring

Conduct annual visits to each spring to check maintenance requirements.

### C. Alternative 3 (No Elk Enclosure)

#### 1. Direct and Indirect Effects

An enclosure fence at McFarland Spring would be constructed. A trough from the existing pipeline at McFarland Spring placed adjacent to Bonanza Trail would provide water outside the riparian area for equestrians. This may stop the public from cutting the enclosure fence, further protecting habitat for sensitive species and species of concern. Camping would be prohibited within 100 yards of McFarland Spring. Currently, no camping occurs at the source. Camping occurs at the Bonanza Trailhead (approximately 0.3 miles) and would be able to continue.

The undesignated spur roads into CC Springs and Cave Springs and parking areas would be closed. This would eliminate vehicle traffic into these riparian areas. There are parking areas close to both of these springs that would be maintained, or improved if necessary. The public would be able to access these areas by walking approximately 0.25 mile. Camping would be prohibited within 100 feet of the Cave Spring. Camping currently occurs at the source and approximately 150 feet above the source. Prohibiting camping at the source would eliminate one area where the public can camp. No camping occurs at the source of CC Spring. There is a group use area approximately 0.5 miles east of the source. This area would remain open.

The remaining portion of the water flow from Macks Canyon Spring would be fenced off. This would reduce the existing parking area approximately 0.5 acres eliminate parking for 8-12 vehicles. This could reduce the number of people or the size of group that could use this area at one time. This is one of four sites on the NRA that can accommodate large groups. Camping would be prohibited within 100 feet of the spring source. This would further reduce the available parking and camping areas in this area.

Whiskey Spring would be restored to a "naturalized" condition. A fence would be constructed to eliminate trampling by people and horses. This could eliminate a few flat areas where people pitch tents. Camping would also be prohibited within 100 feet of the spring source. This would eliminate a large area where people pitch tents. These actions could reduce the number of people or the size of group that could use this area. This is one of four sites that can accommodate large groups and is a favorite for tent campers.

The trail to Mummy Mountain would be rerouted outside the riparian area. This could add approximately 0.25 miles of trail to the overall Mummy Mountain trail length. The total trail length is approximately six miles one-way and is a strenuous hike. Increasing the length by 0.25 miles would not likely prohibit hikers from visiting this area.

## 2. Mitigation

Signs would need to be installed informing the public of the purpose of the enclosures, and the importance of riparian areas in the desert and to ecosystem health. These signs would also need to inform the public of the closure orders that prohibits camping within specific distances of all water sources.

Post signs along the Bonanza Trail to inform equestrians where to access water.

Conduct annual maintenance on the fences and pipelines.

## 3. Monitoring

Conduct annual visits to each spring to check maintenance requirements.

# D. Alternative 4 (No Change in Public Access)

## 1. Direct and Indirect Effects

An enclosure fence at McFarland Spring would be constructed. A trough from the existing pipeline at McFarland Spring placed adjacent to Bonanza Trail would provide water outside the riparian area for equestrians. This may stop the public from cutting the enclosure fence, further protecting habitat for sensitive species and species of concern.

The undesignated spur roads into CC Springs and Cave Springs would not be closed. Vehicle traffic into these areas would continue.

The remaining portion of the riparian area in Macks Canyon would not be fenced. The parking lot would remain the same size and accommodate the same number of vehicles.

Whiskey Spring would not be "naturalized". The headbox and cement tank would remain. Camping would be allowed in the riparian area, so public use of the site would not be impacted.

The trail to Mummy Mountain would not be rerouted outside the riparian area at Mummy Spring. Public use along the trail would not be changed.

Nevada Revised Statute 503.660 would not be enforced so the public could continue to camp within any of a water source.

## 2. Mitigation

Sign CC, Cave, Macks Canyon, and Whiskey Springs to explain to the public their importance in a desert environment and to ecosystem health, and to ask for the public's help in protecting these fragile areas.

Post signs at McFarland Spring, Sawmill Spring, and Trough Spring informing the public of the purpose of the exclosures.

Post signs along the Bonanza Trail to inform equestrians where to access water.

## 3. Monitoring

Monitor the populations of rare species that occur at CC, Cave, Macks Canyon, and Whiskey Springs to determine if population trends are declining and warrant listing under the Endangered Species Act.

# ISSUE 4. HERITAGE RESOURCES

## A. Alternative 1 (No Action)

### 1. Direct and Indirect Effects

Sawmill Spring would be not be fenced. Wild horses and vehicles could continue to deteriorate the boiler foundation. The foundation could eventually crumble and the boiler could fall down.

The undesignated spur road into CC Spring would not be closed. Vehicle traffic into these areas would continue. The trough would continue to be impacted by vehicle traffic. Eventually a vehicle may run into the structure causing it to collapse.

The fence at Whiskey Spring would not be constructed to limit public access or wild horse use. The dam would continue to be used as a picnic bench. Eventually the dam could collapse.

### 2. Mitigation

Develop an interpretive plan to educate the public on the significance of historic features in understanding our environment.

3. Monitoring

Monitor the condition of historic structures and determine the need to stabilize in the future.

B. Alternative 2 (Proposed Action)

1. Direct and Indirect Effects

The old sawmill at Sawmill Spring would be protected from vehicle and wild horse impacts. The fence would provide a barrier to both vehicles and wild horses. The boiler foundation would not be trampled or crushed. A gate would be constructed that would keep the wild horses outside but allow the public to walk in the area and see the old sawmill. Signs could be posted to educate the public on the historic uses that occurred in the forests of the Spring Mountains. These signs may also deter the public from cutting the fence.

The undesignated spur road into CC Springs would be closed. This would protect the old trough from any accidents that may happen, such as a vehicle running into it. Signs could be posted at the trough to explain its historical significance. This may also deter the public from vandalizing the site.

Whiskey Spring would be fenced to prevent any future deterioration to the dam and the riparian area. Signs could be posted at the dam to explain the old Boy Scout Camp and the historical significance of the dam. This may also deter the public from vandalizing the site.

2. Mitigation

Develop an interpretive plan to educate the public on the significance of historic features in understanding our environment.

3. Monitoring

Monitor the condition of historic structures and determine the need to stabilize in the future.

C. Alternative 3 (No Elk Exclosure)

1. Direct and Indirect Effects



The old sawmill at Sawmill Spring would be protected from vehicle and wild horse impacts. The fence would provide a barrier to both vehicles and wild horses. The boiler foundation would not be trampled or crushed. A gate would be constructed that would keep the wild horses outside but allow the public to walk in the area and see the old sawmill. Signs could be posted to educate the public on the historic uses that occurred in the forests of the Spring Mountains. These signs may also deter the public from cutting the fence.

The undesignated spur road into CC Springs would be closed. This would protect the old trough from any accidents that may happen, such as a vehicle running into it. Signs could be posted at the trough to explain its historical significance. This may also deter the public from vandalizing the site.

Whiskey Spring would be fenced to prevent any future deterioration to the dam and the riparian area. Signs could be posted at the dam to explain the old Boy Scout Camp and the historical significance of the dam. This may also deter the public from vandalizing the site.

## 2. Mitigation

Develop an interpretive plan to educate the public on the significance of historic features in understanding our environment.

## 3. Monitoring

Monitor the condition of historic structures and determine the need to stabilize in the future.

### D. Alternative 4 (No Change in Public Access)

#### 1. Direct and Indirect Effects

The old sawmill at Sawmill Spring would be protected from vehicle and wild horse impacts. The fence would provide a barrier to both vehicles and wild horses. The boiler foundation would not be trampled or crushed. A gate would be constructed that would keep the wild horses outside but allow the public to walk in the area and see the old sawmill. Signs could be posted to educate the public on the historic uses that occurred in the forests of the Spring Mountains. These signs may also deter the public from cutting the fence.

The undesignated spur road into CC Spring would not be closed. Vehicle traffic into these areas would continue. The trough would continue to be impacted by vehicle traffic. Eventually a vehicle may run into the structure causing it to collapse.

The fence at Whiskey Spring would not be constructed to limit public access or wild horse use. The dam would continue to be used as a picnic bench. Eventually the dam could collapse.

2. Mitigation

Develop an interpretive plan to educate the public on the significance of historic features in understanding our environment.

3. Monitoring

Monitor the condition of historic structures and determine the need to stabilize in the future.

#### **IV. UNAVOIDABLE ADVERSE EFFECTS**

There are no unavoidable adverse effects related to this action.

#### **V. RELATIONSHIPS OF SHORT-TERM USES AND LONG-TERM PRODUCTIVITY**

The short-term impact of the construction of fences and the extension of existing pipelines would not effect the long-term (i.e., soil, water, wildlife, vegetation, etc.) productivity of the site.

#### **VI. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES**

There are no irreversible and irretrievable commitments of resources related to this action.

#### **VII. LIST OF PREPARERS**

Sara Mayben, SMNRA Ecologist  
BS Ecology (1986), MS Range Ecology (1990)  
Contribution: Ecology/TES Species/NEPA

Kathy Moskowitz, SMNRA Archaeologist  
BA Anthropology (1990), MA Behavioral Science (1994)  
Contribution: Heritage Resources



DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES  
COMMISSION FOR THE  
PRESERVATION OF WILD HORSES

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March 26, 1998

Alan S. Pinkerton, Assistant Forest Supervisor  
Humboldt-Toiyabe National Forests  
Spring Mountains National Recreation Area  
2881 S. Valley View, #16  
Las Vegas, NV 89102

Dear Mr. Pinkerton,

Thank you for consulting the State of Nevada Wild Horse Commission for the Spring Mountains National Recreation Area Humboldt-Toiyabe EA for eight spring developments. I realize we are late in our response but hope you will still consider our concerns.

The Commission nor other State agencies has agreed to appropriate management levels for wild horses or burros being established by water. In addition there is no rationale to establish elk numbers by the same criteria.

This document states positive actions that you're proposing for spring restoration and protection. All proposed actions adversely impact wild horses and wildlife. Throughout the document you have identified many adverse situations for wildlife and wild horses that are a direct result of your proposed actions. "Eliminating wild horse use at these springs....could force wild horses to use springs that other wild horse herds are currently using. This could increase the herd conflict at the open springs, leading to more injured stallions." "Wild horse use at these creeks and ponds may be reduced because of the close proximity to people." You continually identify negative issues restricting wild horse use of their historical waters both inside and outside the wild horse territory.

Additionally you propose to push additional horses back into an already overstressed habitat where you've identified 3 available waters with two of them with restricted use per recreationalists. All of this without identified pre-planning or forethought for mitigation to minimize the impacts of your actions.

Alan S. Pinkerton, Assistant Forest Supervisor  
March 26, 1998  
Page 2

The only mitigation you offer is to "monitor wild horse conditions to determine if emergency gathers need to be conducted." "Conduct emergency gathers if wild horse conditions decline to the point their ability to survive is in questions. Conduct water hauling if necessary, prior to removal of animals."

We strongly urge you to consider pre-planning to minimize the impacts. We recommend that you conduct wild horse habitat suitability studies to establish the needs of the herds. Through monitoring and suitability you need to establish the carrying capacity for establishment of the appropriate management level (AML), to attain healthy horses and protected habitats. After establishment of the AML you need to conduct a gather both inside and outside the territory to place the horse numbers at the established rate for a thriving natural ecological balance. In addition, the developments and protection of the necessary habitat for the herds needs to be completed prior to any removal or relocation of the animals. If you take appropriate precautions first you will not be setting the animals up for an emergency situation. I'm sure you are not intending to purposely make the animals suffer with potential deaths from starvation or lack of water. From the identified public use in the area public scrutiny must be high.

We look forward to working with you on these issues for the protection of both the habitat and the horses. Please feel free to contact me if you have any questions.

Sincerely,



CATHERINE BARCOMB  
Administrator