United States
Department of Agriculture

Forest Service

Intermountain
Region

General Management Plan

For the Spring Mountains National Recreation Area

An Amendment to the Land and Resource Management Plan, Toiyabe National Forest

Humboldt-Toiyabe
National Forests

INTRODUCTION

The Spring Mountains National Recreation Area (SMNRA) covers 315,648 acres of national forest system land in Clark and Nye counties in Southern Nevada, between Las Vegas and Pahrump (see Map 1). The SMNRA is one of five districts of the Toiyabe National Forest, and was designated in August, 1993, as a national recreation area.

This document contains the full detail of the General Management Plan for the Spring Mountains National Recreation Area, including goals, objectives, desired future conditions, and standards and guidelines for the SMNRA as a whole, and for each of four management areas (see Map 2). This direction:

supplements Forest-wide standards and guidelines found in the existing Toiyabe Forest Plan; and

replaces direction for management areas 11 and 12 found in the existing Toiyabe Forest Plan.

MERGING THE AMENDMENT WITH THE TOIYABE FOREST PLAN

The Toiyabe Forest Plan establishes forest-wide goals and objectives and desired future conditions on pages IV-1 through IV-12. Forest-wide standards and guidelines are set on pages IV-13 through IV-68, and management area direction is established on pages IV-71 through IV-155. Suitability for resource use, including timber production, is discussed in Appendix C, and a monitoring plan is laid out in Chapter V. The Forest Plan discusses recommendations for Wilderness on pages IV-72, IV-151, and VI-41, and pages III-11 through III-13 of the Final Environmental Impact Statement. Copies of the Forest Plan are available for review in the Forest Supervisor's Office in Reno, or in the Spring Mountains National Recreation Area office in Las Vegas.

Since this Forest Plan amendment would not change forest-wide direction (Forest Plan standards which apply to the entire Toiyabe National Forest), much of the existing plan would remain relevant to the Spring Mountains. General protective measures for soil, water, and wildlife, and general direction for management of special uses, mining, and recreation would remain in place. The amendment can be incorporated into the Forest Plan by:

- Replacing pages IV-142 through IV-155 of the Forest Plan with the new goals, objectives, desired condition, and standards and guidelines for the Spring Mountains National Recreation Area.

- Inserting the determinations of suitability for resource use at the end of Appendix C. These determinations would replace the Forest Plan's findings on suitability for the SMNRA. Totals for the Toiyabe National Forest would need to be adjusted slightly.

- Inserting the monitoring program for the SMNRA after page V-17 of the Forest Plan. Monitoring proposed in the management plan for the National Recreation Area would supplement monitoring carried out on the Toiyabe National Forest as a whole.

- Inserting recommendations for Wilderness and Research Natural Area designation between Chapter V and Chapter VI of the Forest Plan. Note that the current Forest Plan scatters recommendations for Congressional designations among several chapters.

- Inserting proposed and probable management practices for the SMNRA after page V-37 of the Forest Plan. These would replace the portions of the "Action Plans" on pages V-18 through V-37 which refer to the Las Vegas Ranger District.

DEFINITIONS OF COMMON PLANNING TERMS

Throughout this document, we refer to different components of forest plans - to goals, objectives, standards, guidelines, desired future condition, proposed and probable management practices, and so forth. Many of these terms will be unfamiliar to the lay reader. For the purposes of this amendment to the Toiyabe Forest Plan, we will rely on the following definitions (references are from the Code of Federal Regulations (CFR), the Forest Service Manual (FSM), and the Forest Service Handbook (FSH)):

Goal - "A concise statement that describes a desired condition to be achieved sometime in the future. It is normally expressed in broad, general terms and is timeless in that it has no specific date by which it is to be completed" (36 CFR 219.3).

Objective - A concise statement of planned results that respond to pre-established goals. (36 CFR 219.3).

Desired Future Condition - Describes "what the forest should be like after implementation of the management direction contained in the plan" (FSH 1909.12, Sec. 4.24d) - our vision of the SMNRA in text format. Provides more detail and fine resolution than the goals.

Standards and Guidelines - "State the bounds or constraints within which all practices are to be carried out in achieving the planned objectives" (FSH 1909.12, Sec. 4.24c). Some key legal requirements are repeated as Forest Plan standards for the sake of completeness, but many laws and regulations also constrain land management activities and are not repeated. Where important to aid in public understanding, we have also included as guidelines some operational advice on how to achieve desired future conditions.

"Standards" and "guidelines" are not distinguished in current regulations. We will use "standards" to include constraints or mitigation measures which must be followed, and "guidelines" to mean preferred or advisable courses of action with more operational flexibility. Deviation from a standard would require a Forest Plan amendment; deviation from compliance with a guideline could simply be documented in project-level analysis.

Suitability - "The appropriateness of applying certain resource management practices to a particular area of land, as determined by an analysis of the economic and environmental consequences and the alternative uses foregone" (36 CFR 219.3). Regulations require the Forest Service to determine which lands are suitable for timber production (36 CFR 219.14), grazing of domestic livestock (36 CFR 219.20), and recreation use and development (36 CFR 219.21). The determination of suitability in the Forest Plan limits management activities (e.g., timber may only be sold on lands determined to be unsuitable for timber production when needed to achieve non-timber purposes). This proposed amendment would constitute the 10-year review of lands not suited for timber production required by 36 CFR 219.14(d).

Management Area - A management area is "an area with similar management objectives and a common management prescription" (FSM 1905).

Management Prescription - "A composite of the specific multiple-use direction applicable to all or part of a management area that generally includes, but is not limited to goals, objectives, standards and guidelines, and probable management practices" (36 CFR 219.3). The direction for each management area of the Spring Mountains constitutes the management prescription for that area. For the purposes of Regional consistency, we have identified the following management prescriptions to apply to the SMNRA:

6.5 National Recreation Areas
6.5.1 Wilderness within National Recreation Areas

Proposed and Probable Management Practices - A management practice is "a specific activity, measure, course of action, or treatment" (36 CFR 219.3). Since forest plans do not generally make site-specific decisions for specific activities, the list of management practices included in the Forest Plan are those which are "proposed and probable." These projects are not Forest Plan commitments or decisions. Actual project proposals and decisions are based on site-specific analysis, and may be different; funds may not be available; priorities may change. Proposed and probable management practices do provide readers with a picture of what activities might be forthcoming in implementation of the Forest Plan.

SUMMARY OF FOREST-WIDE MANAGEMENT DIRECTION

The Spring Mountains National Recreation Area Act directs the Forest Service to prepare a "general management plan" for the Spring Mountains National Recreation Area as an amendment to the Toiyabe Forest Plan. Ordinarily, forest plan amendments focus on changes to be made in the forest plan - direction which would remain unchanged is not repeated. However, in order to provide a comprehensive picture of management of the Spring Mountains, we briefly review here those parts of the Forest Plan which would not be changed by the amendment.

Please note that this is not a complete listing of direction in the Forest Plan. Sections which apply primarily to other areas of the Toiyabe National Forest are not repeated here. In addition, direction applicable to the Spring Mountains is heavily abridged and summarized, and broad administrative direction is not repeated. Altogether, 66 pages of Forest Plan direction are condensed to 3 pages here; the complete Forest Plan is available in Forest Service offices in Las Vegas and Sparks.

1. Key Forest-wide Goals with Application to SMNRA

- Increase recreation opportunities, especially in the Spring Mountains.
- Provide an effective fire management program.
- Plan prescribed burning to meet management objectives.
- Protect wilderness values and provide quality wilderness experiences.
- Improve water quality and manage riparian areas to satisfactory condition.
- Recognize and protect threatened, endangered, and sensitive species.
- Enhance fish and game populations.
- Identify, evaluate, and protect significant cultural resources.
- Provide special uses when in the public interest and private land not available.
- Adjust land ownership to optimize public benefits and administration.
- Provide a safe and efficient transportation network.
- Develop or improve facilities for resource management and health and safety.
- Preserve and protect research values in research natural areas.
- Provide goods and services within capacity of environment.
- Minimize epidemic outbreaks of pests and/or diseases.

2. Key Forest-wide Standards and Guidelines with Application to SMNRA

a) Recreation

- Achieve designated visual quality objectives.
- Harden sites where occupancy greater than 40% and resource damage is occurring.

- Require "pack-out" of refuse from undeveloped recreation areas.
- No new recreation residence permits will be issued.

b) Fire and Fuels Management

- All wildfires will receive suppression response (confine, contain, or control)
- Vegetation manipulation may be required to meet protection objectives.
- Use planned, prescribed fire to improve or enhance resource outputs.
- Use planned and unplanned ignitions to restore natural ecosystems in Wilderness.
- Prepare a fire rehabilitation plan for all fires larger than 300 acres.

c) Range Management

- Require supplemental feed for recreational livestock use, as necessary.
- Achieve or maintain rangeland in satisfactory condition.
- Manage wild horses, burros to populations compatible with resource capability.

d) Timber

- Protect bristlecone, including deadwood, for aesthetic and scientific value.
- Treatments in pinyon-juniper will not promote invasion by cheatgrass.
- Clearings in pinyon-juniper will generally be limited to fewer than 40 acres.
- Treat pinyon-juniper for livestock, deer and elk, habitat diversity, or sustained yield of pinyon-juniper.

- Implement "Best Management Practices" for protection of water quality.
- Meet or exceed state water quality standards.
- Soil disturbing activities, except construction, will not exceed soil loss tolerance limits (500 lbs/ac/yr).
- Protect and secure water rights necessary for National Forest System management.
- Assert federal reserved water rights for watershed management, fire protection.

f) Riparian Areas

- Give preference to riparian area-dependent resources over other resources.
- Manage riparian areas to achieve or maintain medium or high ecological status.
- Use fencing for protection only where no viable alternative exists.
- Maintain or improve riparian areas to a "good" or "excellent" condition where Lahontan cutthroat trout (LCT) are present.
- Maintain at least 90% natural bank stability where LCT present; 80% otherwise.
- Avoid support of floodplain development wherever a practical alternative exists.
- Preserve the natural and beneficial values served by floodplains.
- Provide fish passage at all crossings of known fish habitat.
- Prohibit stream channel changes contiguous to recreation areas.
- Streams will not be channelized to protect recreation structures from flooding.

g) Wildlife and Fish

- Retain minimum of two snags per acre in mixed conifer.
- Retain minimum of four snags per acre in riparian areas.
- Retain 60% of naturally occurring snags in pinyon-juniper.
- Manage ten percent of mixed conifer as old growth habitat.
- Manage ecosystems containing sensitive species to maintain or increase populations and achieve recovery.

- Browse utilization by wild horses on key winter ranges will not exceed 30%.
- Limit predator control to specific problem animals and/or areas.
- Use timber sales and pinyon-juniper management to improve wildlife habitat.
- Retain an average of three down logs per acre as wildlife habitat.

h) Threatened, Endangered, and Sensitive Plant Species

- Manage habitats to achieve recovery of listed species, and ensure that sensitive species do not become threatened or endangered.
- Prohibit taking of threatened and endangered species except under USF&WS permit.

i) Heritage Resources

- Conduct Forest-wide programmatic inventory and a heritage resource overview.
- Conduct a heritage resource inventory prior to ground disturbing projects.
- Evaluate all heritage resources for National Register eligibility.
- Use avoidance, data recovery, when significant resources may be affected.
- Protect significant resources from disturbance or natural deterioration.
- Encourage academic research.

j) Lands

- Retain existing ownership, and acquire available lands within Congressional designations [including National Recreation Area].
- Locate land lines by survey, and identify by posting and marking line.

k) Transportation System and Facilities

- Provide user safety, convenience, and land management efficiency.
- Build roads to minimize resource impact, and reclaim unless needed for future.
- Aggressively acquire rights of way.
- Maintain buildings, utilities to protect investment, ensure health and safety.
- Acquire all district office buildings and support complexes in fee title.
- Manage water systems to preserve water quality, protect public health.

l) Minerals

- Encourage exploration, development [applies only to area not withdrawn].
- Minimize adverse impacts to surface resources, and provide for reclamation.
- Minimize need for access, and close roads after use, unless needed.
- In areas withdrawn from entry, conduct validity exams on mining proposals.
- Develop new common variety areas only when no reasonable alternative sites are available off-Forest.

m) Special Uses

- Select new commercial permittees through a competitive process.
- First priority for utilities will be existing corridors.
- National Forest System land will not be available to uses that can be accommodated on private lands.
- Utility lines generally will be buried.

n) Air Quality

- Cooperate with regulatory agencies to prevent deterioration of air quality.

o) Research Natural Areas

- Permit only management practices necessary to preserve natural vegetation.
- Discourage or prohibit public uses that modify RNA's.
- Do not permit physical improvements.
- Protect from fires, insects, diseases, animals not part of natural processes.
- Wildfires will be allowed to burn, unless they threaten persons or property outside RNA.
- No cleanup or reforestation following wildfires.
- Take no action against endemic insects, diseases, or animals.
- Where RNA's occur within a Wilderness, the most restrictive guidelines apply.

MANAGEMENT AREAS

This plan divides the Spring Mountains into four management areas (see Map 2). Each management area is comprised of contiguous lands with similar topography, geology, ecology, public uses, and land and resource issues. While all the goals and many objectives, standards, and guidelines apply to the SMNRA overall, each area has additional specific direction for that particular area.

Management Areas in the Spring Mountains National Recreation Area include:

Area Number	Name	Acres
11	Developed Canyons	72,151
12	Mt. Charleston Wilderness	42,420
13	West-side SMNRA	129,220
14	Mt. Stirling	71,855

More detail is provided under each management area.

SMNRA Wide

SMNRA WIDE

The Spring Mountains National Recreation Area includes 315,648 acres of national forest system land in Clark and Nye Counties. The SMNRA is divided into four distinct management areas. The following emphasis, goals, objectives, standards, and guidelines apply to the entire SMNRA.

a) Emphasis

Under the Spring Mountains National Recreation Area Act, the SMNRA is managed to achieve six general purposes, which provide themes for organization of more specific goals, objectives, and standards and guidelines:

- The conservation of scenic, scientific, historic, cultural, and other values contributing to public enjoyment;
- The conservation of fish and wildlife populations and habitat, including the use of prescribed fire to improve or maintain habitat;
- The protection of watersheds and the maintenance of free flowing streams and the quality of ground and surface waters in accordance with applicable law;
- Public outdoor recreation benefits, including, but not limited to, hunting, fishing, trapping, hiking, horseback riding, backpacking, rock climbing, camping, and nature study;
- Wilderness areas as designated by Congress; and
- The management and use of natural resources in a manner compatible with the purposes for which the Recreation Area is established.

b) Goals

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

The Spring Mountains are an ecological island between the Mojave and Great Basin deserts. The isolation, physical diversity, and cooler, less arid conditions support a unique ecosystem of plants and animals, some found nowhere else in the world. In addition to plants and animals, this ecosystem includes air, soil, water, and humans. This diverse ecosystem is a community, of which we are a part.

This goal recognizes the importance of the ecosystems of the SMNRA, and their contribution to our quality of life. Their richness reflects the power, majesty, and wonder of our world. Many people, including American Indians, find inherent value in natural ecosystems and processes, and are linked to the land through spiritual and cultural ties. Loss of ecological diversity puts our heritage at risk and narrows our options in the future. Sustaining ecological processes and functions will allow the next generations to enjoy the SMNRA as we do.

Ecosystems occur at many scales. This goal includes the protection and management of rare and unique plant and animal species and their habitats, as well as the sustainable management of larger communities occurring across landscapes. Restoration of native communities and natural processes is an important part of this goal.

(0.2) Protect American Indian cultural uses and heritage resources.

American Indians value the Spring Mountains as an important spiritual and cultural area that they use to carry on traditional cultural practices and to maintain a link with their ancestors. They recognized early on the need to protect the ecosystems they lived in. This goal recognizes their rights to continue to use traditional areas, to practice traditional beliefs according to their culture, and to participate in management of the SMNRA.

Heritage resources provide important information to all of us on our own past. Sites provide a window into history for us to see how humans have used natural resources and shaped the ecosystems of the SMNRA. By protecting and interpreting heritage resources, we preserve our own heritage and learn more about the people before us and ourselves. These sites also remind us of how important humans are to ecosystems. This goal will continue to protect and preserve heritage resources, while providing opportunities for interpretation and public education.

(0.3) Avoid disruptions to current uses and users of the Spring Mountains.

Just as the SMNRA is uniquely valuable for its ecology, and for its role in American Indian cultural practices, the Spring Mountains are important to the people who use them, love them, and care for them. We must remember that people have a right to use their public land; the challenge is to recognize this right while protecting the values that make the Spring Mountains worth visiting. Many long-time residents of Southern Nevada have enjoyed the Spring Mountains all their lives. Customers and neighbors have come to expect certain experiences, products, and services. Traditional uses include hunting, horseback riding, camping, skiing, and climbing, as well as use of existing organization camps, roads, trails, electronic sites, and summer homes.

This goal respects the expectations of users of the SMNRA to continue current uses in existing locations, where they do not conflict with ecosystem conservation or protection of heritage resources. Wherever possible, current uses are protected, and limits are instead placed on new uses or expansion of existing uses. When conflicts exist, this goal seeks to minimize disruptions to current use, mitigate environmental effects, or to provide opportunities elsewhere for continued use of the SMNRA.

(0.4) Where consistent with the above, provide additional opportunities for recreation.

The SMNRA has always been a popular destination for residents of Southern Nevada and visitors to the area. Cool mountain forests, snow, streams and springs, limestone cliffs, and an abundance of wildlife offer experiences unavailable in the Las Vegas valley. With the explosive growth in the population of Clark County and Pahrump in the past decade, the demand for recreation in the SMNRA has far outstripped the capacity of existing facilities. On summer weekends, campgrounds are full, traffic can be heavy, and use is high.

The SMNRA has the potential to provide additional recreation opportunities and customer service through development of trails, campgrounds and picnic areas, interpretive facilities, and approval of certain commercial developments and uses. These could include extension of existing facilities and uses, or entirely new developments. This goal would encourage new recreation opportunities where consistent with the goals of conserving the health, diversity, integrity, and beauty of the ecosystem, protecting American Indian cultural values and heritage resources, and maintaining current uses and users.

c) Objectives

Conserve the health, diversity, integrity, and beauty of the ecosystem.

(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).

(0.3) Return fire, as a historic ecological process, to the SMNRA. Maintain and improve ecosystem function and health through the management of prescribed fire and prescribed natural fire.

(0.4) Continue to provide firewood and meet ecosystem health goals and objectives by allowing dead and down, and green fuelwood collection.

(0.5) Maintain air quality at a level that is adequate for the protection and use of resources (Air Quality Related Values) and that meets or exceeds air quality standards as set by Clark County Health District.

(0.6) Maintain historic/natural operation of floodplains, where possible.

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

(0.8) Manage for endemic levels of native insects and diseases within the ecosystem.

(0.9) Prevent the destruction or adverse modification of critical TES species habitat, recover populations of TES species, and avoid the listing of additional species as threatened or endangered by maintaining populations and ecological processes necessary to their sustainability.

(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. Restore desert bighorn sheep to their historic range.

(0.12) Provide sufficient habitat to support the continued existence of desired non-native species so long as their presence does not limit the viability of native species.

(0.13) Forage utilization will be 30% or less on any area in the Spring Mountains NRA.

(0.14) The habitat capability (population size in relation to available resources) to support elk will be based upon 15% of available resources: available water and forage; and animal condition. Elk populations will be maintained at current 1996 populations levels until additional habitat is provided through ecosystem and vegetation management.

(0.15) Manage wild horses and burros in a thriving ecological balance with long-term ecosystem health.

(0.16) Appropriate management levels (population size) for wild horses and burros will be based upon limiting factors: available water and forage; area sensitivity; and animal condition. Initial levels will be based upon 7% of available water.

(0.17) Visual quality objectives are used as guidelines to manage the forest landscape. In general, this should include a predominantly natural appearance, especially as viewed from roads, trails, and other areas of high recreational use.

(0.18) Manage cave resources within the SMNRA to protect resources, provide for public safety, and provide recreational opportunities as set forth in the Federal Cave Resources Protection Act of 1988.

(0.19) Limit impacts of new administrative facilities on natural and heritage resources, and visual quality.

Protect American Indian cultural uses and heritage resources.

(0.20) Establish and maintain a governmental relationship with federally-recognized tribal governments.

(0.21) Ensure all activities address and are sensitive to traditional American Indian religious rights, cultural uses, and practices.

(0.22) Use information from sites and oral histories to better understand the influences humans have had on the ecosystem.

(0.23) Protect and interpret heritage and paleontological resources.

Avoid disruptions to current uses and users of the Spring Mountains.

(0.24) Existing roads and trails should remain open to current use unless site specific constraints dictate a need for closure or seasonal restrictions.

(0.25) Protect lives, private property, and public recreation facilities from wildland fires.

(0.26) Increase availability of firefighting and prevention resources.

(0.27) Minimize damage to roads and facilities from floods, and protect public safety in floodplains.

(0.28) Provide for public safety in management of recreation. Cooperate with and support other agencies to ensure safety.

(0.29) Develop new relationships/partnerships and strengthen existing efforts with user groups, including hunters, trappers, rock climbers, cavers, trail users, summer home and special use permittees, and American Indians, to help manage the SMNRA and protect resources.

(0.30) Work cooperatively with federal, state, local agencies, tribal governments, and others to increase public education and awareness of resource values and interpretation opportunities throughout the SMNRA.

(0.31) Recognize hunting and trapping as legitimate uses of the SMNRA, and maintain hunting opportunities.

(0.32) Provide for humane treatment of wild horses and burros.

(0.33) Once Appropriate Management Level is achieved, manage for adoptable wild horses and burros.

(0.34) Manage all active claims and abandoned mines to minimize effects on natural, visual, and heritage resources and provide protection for the public.

(0.35) Meet the intent and requirements of Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990 by increasing accessibility of existing recreation sites and providing access at new sites to users with disabilities and senior citizens.

(0.36) Manage for a variety of road types, including limited maintenance roads that offer recreational opportunities for OHV's and other users.

(0.37) Maintain roads to a standard necessary for public safety and as needed to respond to resource management objectives, including resource protection and recreation, through maintenance of road surfaces and minimizing erosion.

(0.38) Cooperate with interested groups, special use permittees, and others to maintain trails and dispose of litter.

(0.39) Survey and post property boundaries with private land.

(0.40) Resolve encroachments so that public land is used for public purposes.

(0.41) Prevent new encroachments through property boundary management and land adjustment.

(0.42) Manage designated group use sites for group activities under permit.

Where consistent with the above, provide additional opportunities for recreation.

(0.43) Manage lands within the SMNRA to provide a range of developed recreation opportunities, with an emphasis on opportunities not available on private lands.

(0.44) New recreational facilities will be located and designed to ensure public safety, ecosystem health, and customer satisfaction.

(0.45) Continue to provide rock climbing opportunities while protecting resource values.

(0.46) Encourage cooperative efforts in management of climbing activities with climbing organizations, commercial guides/schools, and local climbing clubs.

(0.47) Construct and upgrade an interconnected trail system to a consistent standard, including trail condition, signage, and maintenance.

(0.48) Maintain, design, and locate trails with consideration of the needs of people with disabilities. Increase the number of trails accessible to people with disabilities.

(0.49) Provide for additional multiple use trail opportunities, in cooperation with other agencies, with an emphasis on connections between existing trails and between trails on national forest system lands and adjacent public lands. When trails are built or designated, identify appropriate uses, including if it is open to motorized or wheeled travel.

(0.50) Optimize public benefits in commercial and public service opportunities, where consistent with the protection of natural resources and values.

(0.51) Continue existing and encourage new commercial and public service opportunities when appropriate for national forest system lands, when natural resources are protected, and if private lands are not available.

(0.52) Acquire available land within the Spring Mountains National Recreation Area to protect natural resources, provide public recreation opportunities, and increase efficiency of land management.

(0.53) Dispose of small, isolated parcels which cannot effectively be managed as public lands.

d) Desired Future Condition

Conserve the health, diversity, integrity, and beauty of the ecosystem.

Ecosystem health and function are sustained. A mosaic of ecological communities are maintaining plant and animal diversity. All native and desired non-native species have viable populations well distributed throughout the Spring Mountains. Historic disturbances, including fire, continue to operate or are being mimicked to maintain ecosystem health. Plant, animal, and community (combination of plants and animals in an area) diversity is at historic levels. Unique habitats, such as cliffs and caves, are providing habitat for unique species.

Riparian vegetation is healthy, at historic locations, and covers the historic area (size). Soil erosion and compaction are minimized. Impacts to riparian areas from wild horses, burros, and recreation have been eliminated. Water is available to wild horses and burros outside the riparian area. Walk-in public access is provided. No new campgrounds or picnic areas are within the riparian areas. The public is educated to the uniqueness of riparian areas through the use of interpretive signing. Water quality and instream flows are providing habitat for native aquatic invertebrate populations, endemic flora, and for healthy riparian vegetation. Where possible, floodplains have been restored to mimic historic condition/operation.

Fire plays an important role in ecosystem function and health. The historic role of fire is mimicked through prescribed burns, fuelwood areas, shaded fuelbreaks, and prescribed natural fires. Fuel loads are at historic levels. Open travel corridors are created for humans and wildlife, while some down woody material is left for other species of animals and plants. Burned areas are rehabilitated either naturally or through active seeding, and form an important link in the early seral stage in that vegetative community. A seed bank of local native species is being used in rehabilitation of burned areas.

Air quality is adequate for the protection and use of resources, and meets or exceeds standards developed by Clark County Health District and the State of Nevada (for Nye County). Air quality is being monitored in Kyle and Lee Canyons by Clark County Health District. Visual quality is not being impacted by air pollution within control of the Forest Service. Smoke from prescribed fires is within Health District standard or is minimized in smoke sensitive areas, including travel corridors (highways, flight paths), residential areas within the Spring Mountains, developed recreation facilities, and the Las Vegas and Pahrump valleys.

Water sources have been developed, outside Wilderness and WSA's, to improve wildlife habitat and distribution, to improve utilization of habitat, where historic sources have gone dry, and where access to historic sources is limited. Water sources have been developed within the Wilderness and WSA's only to improve desert bighorn sheep habitat and protect wilderness character. Human-made water sources have been maintained or alternative sources have been developed where native and desired non-native species had become accustomed to using them. All water rights and instream flows necessary for the management of the ecosystem have been acquired. Water quality meets or exceeds state water quality standards. Forest Service facilities are not adding significant effluent to surface and groundwater systems. Flows at surface waters have been restored to historic levels. Groundwater is the preferred source for public use. All unnecessary improvements at water sources have been removed. All necessary improvements at water sources have been maintained, constructed, or restored to provide habitat for species of concern, and for public use. The Forest Service sets an example for proper water conservation and treatment of groundwater resources.

Floodplains are acting as energy dispersers during flood events. Flooding is achieving the historic mosaic of seral stages within the Upper and Lower Wash communities. The floodplain has returned to its historic function without threatening public safety and private property.

Insects and plant diseases are at endemic levels, help to maintain ecosystem health, and are not threatening private property. Epidemic outbreaks are minimized through the use of risk rating and monitoring, and managing for age and species diversity. Infected trees that do not pose a threat to private property or public safety are providing for small openings in the tree canopy necessary to promote early seral stages and to provide habitat for wildlife. Stand and species management are preferred tools to control insects and disease organisms. Pesticides are only used to avoid and alleviate epidemic outbreaks. A cooperative relationship with NDF helps to keep insects and plant diseases on private property at low levels.

Habitat for threatened, endangered, and sensitive species has been protected, restored, or maintained, and is not fragmented by new development. New recreation developments are located outside sensitive habitat for species of concern. Populations of threatened and endangered species are recovered. No additional species have become threatened or endangered.

Areas with high biodiversity and/or a number of species of concern are protected from development of facilities and trails, and impacts from wild horses and burros. Clokeys eggvetch populations are sustainable and increasing. Large blocks of land remain unfragmented by facilities, roads, and motorized trails.

A seed collection/propagation program is in place for propagation of threatened, endangered, and sensitive plants, and species of concern. Partnerships are in place to study many species of concern, and the ecosystem processes necessary to ensure their continued existence. A partnership has been developed with Clark County to remove feral dogs and cats, and enforce the leash law.

Native and desired non-native animal populations have genetic diversity, are at sustainable levels, and have sufficient habitat to ensure their continued existence. Wildlife species are well distributed over the Spring Mountains. Important habitat (fawning/calving/wintering) is protected. The elk population is at the habitat capability to sustain ecosystem health and genetic viability. Management indicator species are monitored to indicate the success of management (see management indicator species table following).

MANAGEMENT INDICATOR SPECIES

Communities	Early Seral	Mid Seral	Late Seral
Blackbrush LTA	Cheatgrass Elk	Desert Almond	Winterfat
Mixed Conifer LTA	Rough Angelica	Aspen	Palmers Chipmunk Brown-headed Cowbird
Pinyon/Juniper LTA	Elk	Silk Tassel	Bluegrama Grass Phainepepla
Upper Wash LTA	Rough Angelica	Aspen	Golden Currant
Alpine LTA	Hidden Ivesia and Charleston Tansy		
Bristlecone Pine	Jaegers Draba, Lemon Hymenoxsis, and Charleston Indian Paintbrush		
Cliffs	Chuckwalla and Jaeger Ivesia		

Creosote LTA	Desert Tortoise, Red Brome, and Cheatgrass
Lower Wash LTA	Desert Tortoise, Spring Mountain Milkvetch, Bicolored Beardtongue, and Rose Bicolored Beardtongue
Riparian Area	Charleston Draba, Charleston Kittentails, Yellow-rumped Warbler, and Western Tanager

Timber harvest is restricted to fuelwood collection. These fuelwood areas are designated to meet ecosystem health goals and objectives. The location and design of fuelwood areas maintains or enhances visual quality. Livestock allotments are closed to term grazing permits. Livestock grazing is only occurring under livestock use permits and only to meet specific ecosystem health goals and objectives. Applicable visual quality objectives are used as guidelines to manage the forest landscape.

Protect American Indian cultural uses and heritage resources.

We have a government to government relationship with local federally-recognized tribes. American Indians have access to and the ability to use traditional religious and cultural areas and properties and to comment on proposed actions that might affect these uses. A cooperative partnership is established and maintained with American Indian tribes and individuals. They have the opportunity to tend and propagate traditional native plants. Traditional beliefs and rights are protected by following all applicable laws. Human remains and grave goods are dealt with under the Native American Grave Protection and Repatriation Act. Guidelines for inadvertent discovery of human remains and grave goods are established with the appropriate tribe.

Heritage resources that are listed or determined eligible for the National Register of Historic Places are protected from destruction, adverse effects, and vandalism. Resources that have not been determined either eligible or ineligible to the National Register of Historic Places are protected. Ineligible sites are released for other management. Historic structures are maintained and used to the maximum extent possible. Paleontological resources are protected. Oral histories have been collected to aid in the understanding of the prehistory and history of the area. An overview has been written that combines prehistory, history, abiotic, and biotic knowledge based on land type associations to further our understanding of human interactions and influences on the ecosystem. Appropriate methods, such as articles, pamphlets, signs, displays, and excavations, are used for interpretation and education.

Avoid disruptions to current uses and users of the Spring Mountains.

Maintenance of recreation facilities and sites prevents deterioration and steadily improves the operation of facilities, visual quality, and customer satisfaction. The need for costly renovation or reconstruction of facilities and sites in the future is reduced. Accessibility of existing and newly developed sites to users with disabilities and senior citizens has increased. Sites are rehabilitated as necessary through temporary closures.

While fires continue to burn in the Spring Mountains, they rarely represent a serious threat to life, private property, or public facilities. Fuel and vegetation management and fire suppression resources are adequate to reduce the risk of danger to acceptable levels.

Partnerships are in place with local, county, and state agencies for fire prevention and suppression. A network of shaded fuelbreaks is in place to interrupt continuous stands of fuel, and is designed to utilize natural barriers and existing road corridors. All recreation and administrative facilities meet defensible space guidelines.

Public education and interpretation opportunities are increased through the development of an active interpretive/volunteer association and cooperative agreements with interested groups. Public information emphasizes the range of opportunities available and is provided at appropriate locations to help direct

visitation and disperse use. Public awareness of the unique environment of the Spring Mountains is increased, and knowledge of low-impact recreation skills is emphasized.

Wild horses and burros have been treated humanely during all management activities. Wild horse and burro populations are at appropriate management levels that are sustainable and in balance with the long-term ecosystem health of the Spring Mountains (thriving ecological balance). Wild horses and burros have sufficient habitat to support viable populations.

Methods, such as sex selective gathers, birth control, gelding of young stallions, and spaying the mares/jennies, are being employed to sustain appropriate management levels and reduce population growth. The populations exhibit sustainable sex ratios and age distributions. Selection is used to promote historic color and confirmation traits to increase adoptability.

The Wild Horse and Burro Territory boundaries are as displayed (see Map 3). Wild horses and burros are excluded from areas outside their territory, riparian areas, highways, and other sensitive areas or areas where their presence poses a threat to public safety or themselves.

Valid and active mining claims are managed to minimize effects to abiotic, biotic, and heritage resources. Mine sites, including saleable sites, are restored after the completion of operations, and meet applicable visual quality objectives. Trespass structures have been removed. Claims that are no longer legitimate have been terminated. Abandoned mines are managed for public safety and abiotic, biotic, and heritage resource protection.

Commercial facilities authorized to be on national forest system lands meet defensible space guidelines. Defensible space guidelines are in place for private property in partnership with Clark County.

Methods and equipment are in place to monitor visitation trends, recreational use levels, and impacts. Partnerships and MOU's are in place to manage recreational resources, such as multi-use trails, developed sites, caves, and rock climbing areas, and provide educational/interpretive opportunities.

Recreation opportunities are maintained for Primitive, Semiprimitive Non-motorized, Semiprimitive Motorized, Roaded Natural, and Rural Classes. Management occurs in coordination with appropriate federal, state, and local agencies and others to provide recreation opportunities and ensure public safety.

All property boundaries involving private property are surveyed, posted, and regularly maintained. Encroachments have been resolved amicably through exchange, removal, or, where necessary, permit.

Where consistent with the above, provide additional opportunities for recreation.

The quality and quantity of developed and general recreation opportunities is increased. Newly developed sites and trails encourage the dispersal of use outside the developed canyons. Alternative sites are developed outside sensitive habitat. The public is educated as to the value of riparian areas. New campgrounds, picnic areas, and administrative facilities are outside the 50-year floodplain.

Available private lands within the SMNRA are acquired through purchase, exchange, or donation, from willing sellers. Purchases and exchanges are made on the basis of fair market value. The two isolated parcels within Mountain Springs have been placed in private ownership through equal value exchange.

e) Standards and Guidelines

Conserve the health, diversity, integrity, and beauty of the ecosystem.

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

(0.2) If a riparian area within a wild horse and burro territory is fenced, pipe water out of riparian areas for wild horse and burro use. (Standard)

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

(0.4) Only interpretive signs and displays may be constructed in riparian areas. (Guideline)

(0.5) Where possible, maintain historic floodplain and channel width, slope, and gradient. (Guideline)

(0.6) Maintain/restore open pools of slow moving water (0.5 meter in diameter) at some historic water sources, well distributed throughout the range. Develop open pools of water at least 0.5 meter in diameter at newly developed/diverted water sources. (Guideline)

(0.7) Develop new perennial water sources, including guzzlers, only to benefit native species, to improve distribution of non-native species, where historic water sources have disappeared, or where access is limited. Only develop water sources in the Wilderness or WSA's to improve desert bighorn sheep habitat. These developments must protect wilderness character. (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)

(0.9) Assert claims to water that benefit recreation development, instream flow, wildlife, threatened, endangered, and sensitive species, species of concern, and wild horse and burro populations. (Standard)

(0.10) Maximize use of water conservation technologies (such as plumbing fixtures, landscape design) and energy conservation in recreation developments, new administrative facilities, and as part of Forest Service authorizations. (Guideline)

(0.11) Divert 25% or less of the surface flow from new developments at springs, seeps, and streams. (Standard)

(0.12) Encourage use of groundwater as opposed to surface water in Forest Service recreation facilities, new administrative sites, and as part of Forest Service authorizations. (Guideline)

(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)

(0.14) Limit the amount of organic waste entering groundwater in new recreation facilities and administrative sites. (Standard)

(0.15) When possible, convert existing recreation facilities to technologies that limit the amount of organic waste entering groundwater resources. (Guideline)

(0.16) Use seed mixtures or seedlings for site rehabilitation, fire rehabilitation, or permit requirement, in order of preference: (Guideline)

1. Native plants;
2. No seeding (only if erosion is not a serious concern and there is no cheatgrass invasion);
3. Non-persistent (sterile) exotics;
4. Persistent exotics.

(0.17) Develop a seed bank of native species produced from seed sources on the SMNRA. (Guideline)

(0.18) Chaining will not be allowed. (Standard)

(0.19) Suppress all fires within the wildland/urban interface and within the Creosote and Blackbrush Land Type Associations. (Standard)

(0.20) Use prescribed natural fire throughout the SMNRA, where lives and property can be protected and outside the Creosote and Blackbrush Land Type Associations, to achieve ecosystem health goals and reduce fuels when conditions, fuel, weather, and national/local fire seasons allow. (Guideline)

(0.21) Planning for prescribed fires will include community involvement in determining the strategy, timing, and any coordination for fuelwood removal prior to and after the burn. (Standard)

(0.22) Use prescribed fire, silvicultural and mechanical treatments, and shaded fuelbreaks throughout the SMNRA to achieve ecosystem health goals, reduce fuel loads, and protect public safety, developed areas, and private property. (Guideline)

(0.23) Use prescribed fire within known and potential habitat of Clokeys eggvetch to improve habitat suitability when fuel, weather, and local/national fire season allows. (Guideline)

(0.24) Reseed/rehabilitate at a minimum all disturbed areas outside Wilderness and WSA's meeting the following criteria (Standard):

LTA	Size	Slope
Creosote, Blackbrush	>50 acres	any
Creosote, Blackbrush	$\leq$50 acres	20%
Pinyon-Juniper, Mixed Conifer	>100 acres	any
Pinyon-Juniper, Mixed Conifer	$\leq$100 acres	25%

(0.25) Areas disturbed by wildfire, prescribed fire, or other management activities, but not meeting the criteria in Standard 0.24, may also be reseeded, based on site specific analysis. (Guideline)

(0.26) Use stand management (age and species diversity) to avoid epidemic levels of insects and plant diseases. (Guideline)

(0.27) All species listed as candidates for the federal threatened or endangered species list, all species listed as protected rare, endangered, and critically endangered by the State of

Nevada, and all Forest Service sensitive species will be considered "species of concern," and treated as if they were on the Forest Service sensitive species list. (Standard)

(0.28) Collection of threatened, endangered, and sensitive species requires a permit from the Regional Forester, except for traditional use by American Indians. (Standard)

(0.29) Limit negative impacts to all species of concern due to management activities. Enclosed species list is the current (9/96) list of species of concern. (Guideline)

(0.30) Work with Nevada Division of Wildlife, US Fish and Wildlife Service, the Audubon Society, and other interested agencies and organizations to control cowbird populations as monitoring identifies negative impacts to species of concern from this parasitic, non-native species. (Guideline)

(0.31) New roads, administrative facilities, and developed recreation sites other than low-impact facilities (trails, trailhead parking, signs, restrooms, etc.) will be outside a 100 yard buffer zone around known Clokeys eggvetch and rough angelica populations or potential habitat, and outside biodiversity hotspots (defined as areas of particular diversity or sensitivity) (see Map 4 and Map 5). (Standard)

(0.32) Design new roads and motorized trails to maintain a minimum 0.5 mile distance from active or recently active desert tortoise burrows. (Guideline)

(0.33) For organized, motorized events on unpaved roads or trails within 0.5 mile of active desert tortoise burrows, require special permit provisions for desert tortoise protection. (Guideline)

(0.34) Use temporary closures (roads, trails, dispersed areas) to protect important seasonal habitat for species of concern (animals, plants, insects), in coordination with appropriate state and local agencies. (Guideline)

(0.35) New facilities and roads will be sited so as to avoid vital populations or habitats of species of concern. (Standard)

(0.36) Retain all snags that do not pose a threat to public safety or extreme fire danger. Snags are retained to provide habitat for cavity nesting animals and animals that feed upon the insects living within dead trees. Retain a minimum of 5 snags per acre in late seral stages of the Pinyon/Juniper, Mixed Conifer, and Bristlecone Pine Land Type Associations in all cases. (Standard)

(0.37) Retain a minimum of 50 linear feet/acre of downed trees with a minimum 12 inch diameter on sites being managed for late seral stage of the Pinyon/Juniper and Mixed Conifer Land Type Associations, to provide ground cover for small mammals, amphibians, reptiles, and invertebrates. Trim branches and limbs as necessary. Place downed trees in such as way as to not affect drainage patterns; impede traffic or use of recreation facilities; create a public safety problem; and where consistent with "defensible space." (Standard)

(0.38) Provide a minimum of 5 wildlife cover sites per acre within developed or primitive recreation sites by maintaining or adding dead and down wood material or rocks at appropriate locations. (Standard)

(0.39) Permit application of herbicides and insecticides only to avoid or control epidemic outbreaks of insect and plant diseases where there is a threat to public safety, private property, or extreme fire danger. When applied, use only formulations registered by the EPA

for the intended use, at minimum effective rates, and using selective methods. Avoid use in habitat for threatened, endangered, or sensitive species, or species of concern whenever possible. Single tree treatment will be used. (Standard)

(0.40) Do not permit introduction of new non-native species of fish or wildlife. (Standard)

(0.41) Cooperate with NDOW to identify and provide additional suitable habitat for elk through ecosystem and vegetation management. (Standard)

(0.42) Initial elk populations will be maintained at current 1996 population levels until such time as additional elk habitat is provided through ecosystem and vegetation management. Work with NDOW to reduce the initial elk populations, should the elk herds not move into newly created habitats. (Standard)

(0.43) Work with NDOW to identify current elk population's utilization levels of key forage species, home ranges of elk herds, and resource overlap with other grazing animals. (Standard)

(0.44) Cooperate with NDOW to reduce elk population when habitat capability is exceeded by 15%. If possible, reduce population size to 20% below. (Guideline)

(0.45) Augment non-native wildlife species only where necessary to maintain genetic viability of the populations. (Standard)

(0.46) Develop and maintain cooperative partnerships with hunters and trappers to benefit ecosystem health. (Guideline)

(0.47) When constructing a standard barbed-wire fence (3 or 4 strand), use a smooth top strand. (Standard)

(0.48) Close all livestock allotments on the Spring Mountains NRA to grazing under term or temporary grazing permits. Livestock will only be permitted to graze to achieve specific desired ecological conditions. Domestic sheep and goats are prohibited throughout the Spring Mountains NRA. (Standard)

(0.49) Remove all structures related to grazing activities that are not necessary for current management, or of historic value. (Standard)

(0.50) Work cooperatively with interested groups to evaluate caves. The inventory process should document all unique biological, hydrological, geological, mineralogical, paleontological, educational, scientific, cultural, and/or recreational values. (Standard)

(0.51) Allow access to all caves only from the beginning of March through the end of May; and from the beginning of September through the end of October. Seasonal restrictions will remain in place until bat roosting/hibernating inventories have been completed. Long-term seasonal restrictions will be determined based on survey results. Allow year-round access to Robbers' Roost Cave. (Standard)

(0.52) Construction above or in the vicinity of a cave will be designed in a way to insure protection of the cave resources. Diversion of surface drainage into caves is prohibited. (Standard)

(0.53) Where possible, maintain native vegetation around cave openings for a minimum distance of 100 yards. (Guideline)

(0.54) Gate cave or mine openings where needed for public safety and resource protection. (Guideline)

(0.55) All gates on caves and mines will be designed to provide for unrestricted access for bats. Temporary (test) gates of PVC or other light, impermanent material will be constructed first to determine bats' reaction to gate design, prior to final design and construction of permanent gates. (Standard)

(0.56) Prohibit alteration of cave and mine entrances (except for gating to protect cave resources) or their use as disposal sites for slash, spoils, or other refuse. (Standard)

(0.57) Rock climbing within 100 yards of known active or recently active peregrine falcon nests will be allowed only from the beginning of July through the end of January. Specific routes may be signed as necessary to inform of seasonal closures if nests are identified. Monitor peregrine nesting success to determine if the 100 yard closure is effective. (Standard)

(0.58) Continue to provide firewood by designating fuelwood collection areas. (Guideline)

(0.59) Dead and down fuelwood collection areas may be designated in the Mixed Conifer Land Type Association (outside the Wilderness) when necessary to meet specific ecosystem health goals and objectives. As necessary, minimize impacts to Palmers chipmunk. (Guideline)

(0.60) Avoid cutting fuelwood, or cutting trees for salvage or sanitation within 0.5 mile of active or recently active flammulated owl or goshawk nest. Trees hazardous to public safety or extreme fire danger may be removed. Insect and disease treatments may occur within this area to control epidemic outbreaks. (Guideline)

(0.61) Allow collection of snags only between the months of October and the end of February. (Standard)

(0.62) Minimize paving of existing unpaved forest system roads within the SMNRA, provided public safety and resource management objectives are met. (Guideline)

(0.63) Close all undesignated spur roads in riparian areas; close other spur roads on a case by case basis, after site specific analysis. (Guideline)

(0.64) Relocate existing roads outside of washes, riparian areas, and 50-year floodplains if relocation 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 higher levels of use.

(0.65) Allow motorized vehicle use only on designated roads and trails, except for snowmobile use in approved areas. Close washes to motorized use. (Standard)

(0.66) Allow bicycle use only on established and/or designated roads and trails. (Standard)

(0.67) No sale of national forest system land within the SMNRA. (Standard)

(0.68) Educate the public to the sensitivity of endemic species of the Spring Mountains, the importance of diversity, the significance of the Spring Mountains' biodiversity, and how to recreate without impacting these resources. (Guideline)

Protect American Indian cultural uses and heritage resources.

(0.69) Encourage and maintain cooperative partnerships with American Indian tribes and individuals. (Guideline)

(0.70) Proposed activity requiring NEPA documentation will not be initiated without prior consultation with local American Indian tribes, unless otherwise stipulated in an agreement (MOU) with the tribes. (Standard)

(0.71) American Indian human remains will not be held or stored. In accordance with the Native American Graves Protection and Repatriation Act, remains and/or grave good will be returned to the appropriate tribe upon their written request. (Standard)

(0.72) Inadvertent field discovery of American Indian human remains and/or grave goods will not be disturbed until the appropriate tribe is notified. All activity around the discovery will be halted, in accordance with the Native American Graves Protection and Repatriation Act, until the tribe has determined their recommendations. (Standard)

(0.73) American Indians may gather or tend traditional native plants or materials for personal use without obtaining a special use permit. Non-native plants may not be introduced. (Standard)

(0.74) American Indians may use traditional religious or cultural sites (in compliance with health and safety laws) without obtaining a special use permit. (Standard)

(0.75) Mitigate project effects to heritage resources through avoidance, signing, interpretation, HABS/HAER recordation, rehabilitation, and/or complete excavation. (Guideline)

(0.76) Close or remove appropriate roads and trails that affect, either directly or indirectly (by allowing access), heritage resources. (Guideline)

(0.77) Minimum standards for mitigating project effect will include photo documentation, archival research, and post project rehabilitation. (Standard)

(0.78) Curate all artifacts pursuant to federal regulation 36 CFR 79. (Standard)

(0.79) Third party consultants for archaeology, history, or architectural history shall apply for and be issued, if they meet "professional qualifications standards" of the "Secretary of Interior's Standards and Guidelines for Archaeology and Historic Preservation," an Archaeological Resource Protection Act permit for all surveys and excavations. (Standard)

(0.80) American Indian consultants will be appointed by their tribes and will meet their standards. (Standard)

(0.81) Where necessary, test-excavations will be utilized to determine the eligibility of a site for the National Register of Historic Places. (Guideline)

(0.82) Data recovery excavations may take place after first giving local American Indian tribes the opportunity to comment on the excavation and to be present before, during, and after the activity. (Standard)

(0.83) Data recovery excavations and treatment plans may take place after first consulting with the State Historic Preservation Office and the Advisory Council of Historic Preservation. (Standard)

(0.84) Oral interviews of American Indians and other local individuals will be conducted in accordance with standards established by professional ethnographers. Permission must be granted by the individual to tape and transcribe their interview and to keep it on file. (Guideline)

(0.85) No climbing will be allowed within 50 feet of rock art or other heritage resource. (Standard)

(0.86) Historic structures, including Kyle and Lee Guard Stations, shall be used to the maximum extent feasible. (Standard)

(0.87) Permits for paleontological resources will only be issued for educational and scientific purposes. (Standard)

Avoid disruptions to current uses and users of the Spring Mountains.

(0.88) Encourage and maintain cooperative partnerships with other fire agencies. (Guideline)

(0.89) Use bulldozers in fire suppression only as a last resort (lives or private property threatened). (Guideline)

(0.90) Mechanized equipment (such as chainsaws, helicopters, and retardant drops) may be used in fire suppression within the Wilderness and Wilderness Study Areas when fire danger is very high to extreme, the wildland/urban interface is threatened, and/or national/local fire season requires aggressive action. (Standard)

(0.91) Develop and maintain a network of shaded fuelbreaks to interrupt continuous stands of fuel. Maintain 50 linear feet/acre of downed trees with a 12 inch dbh within the shaded fuelbreak (if fuelbreak is being managed ecologically for the late seral stage of Pinyon/Juniper and Mixed Conifer Land Type Associations, or if managed for other seral stage within Palmers chipmunk habitat). Use existing road corridors and natural barriers. (Guideline)

(0.92) When possible, use existing human-made and natural barriers as control lines in preference to building new lines when suppressing wildfires and prescribing fires. (Guideline)

(0.93) Do not use bulldozers to create control lines for prescribed burns. (Standard)

(0.94) Seasonal fire restrictions may be used when fire risk is high to extreme. (Guideline)

(0.95) Remove infected trees (insects and diseased) when hazardous to public safety in recreation developments, or along roads and trails, or that threaten private property. (Guideline)

(0.96) Continue cooperative efforts with permittees and others to provide avalanche forecasting and notify public of hazardous conditions. (Guideline)

(0.97) Cooperate with Clark County, Nye County, the BLM, Nevada Highway Patrol, Las Vegas Metropolitan Police Department, and the Nevada Department of Transportation on management of roads and traffic. (Guideline)

(0.98) Except where necessary for humanitarian reasons (injured or diseased animals) or genetic defects (such as club-foot, sway-back) wild horses and burros removed in a gather will not be destroyed. Animals will either be placed in the adoption program or returned to a territory. (Standard)

(0.99) Allow humanitarian measures (supplemental water and/or feed) for wild horse and burro populations only as an interim step prior to removal. (Standard)

(0.100) Unless under emergency circumstances, or wild horse and burro population exceeds Appropriate Management Level by more than 30%, return a portion of each age class (with representatives of each sex) to the territory to maintain sustainable age distribution and sex ratio. (Guideline)

(0.101) When possible (without exceeding Appropriate Management Level), allow wild horses and burros from territories outside the Spring Range to be placed in the Spring Mountain, Red Rock, and Johnnie Territories to increase genetic diversity of the herds. Wild horses brought into these territories need to be from a similar climate. (Guideline)

(0.102) Once Appropriate Management Level for wild horses and burros is achieved, conduct gathers when population exceeds Appropriate Management Level by 15%. If possible, reduce population size to 20% below Appropriate Management Level. (Guideline)

(0.103) Work cooperatively with interested groups to establish seasonal use periods for caves and to educate cave users. (Guideline)

(0.104) No alteration of rock surfaces by gluing, chipping, or chiseling during climbing activities will be allowed. (Standard)

(0.105) No permanent fixed ropes or cables will be left in place for climbing or belaying purposes (not to include chain links used for belay/rappel/toprope anchors). (Standard)

(0.106) Allow development of new bolted climbing routes under a voluntary route registration system. After development of more than 5 routes, new climbing areas in Wilderness and WSA's will require site survey before additional routes are developed. (Standard)

(0.107) Bolts can only be placed using non-motorized equipment within the Wilderness and WSAs. Use of power drills is prohibited. (Standard)

(0.108) Develop or realign trails into climbing areas as appropriate to provide for public safety and resource protection. (Guideline)

(0.109) Green fuelwood areas adjacent to or within the foreground view of sensitivity level 1 roads will be less than 3 acres in size and designed to mimic natural openings. Retain a 100 yard buffer zone of undisturbed vegetation for green fuelwood areas larger than 3 acres adjacent to sensitivity level 1 roads. (Standard)

(0.110) On lands withdrawn from minerals entry, mineral operating plans will be approved only after first completing a validity exam. (Standard)

(0.111) Mining operating plans will be approved only if they contain stipulations for reclamation of surface resources to as near as possible pre-existing conditions, and are designed to meet applicable visual quality objectives after operations are completed. Where preferable, allow for ecological and other uses of the area after operations are completed (i.e., fish ponds, etc.) in exchange for reclamation. (Standard)

(0.112) Sale of common variety minerals is only allowed within the exemption area (Section 27, T. 23S., R. 58E.). (Standard)

(0.113) Allow for the use of existing borrow pits for public works. New borrow pit areas will only be used when resource impacts are minimal and cost of hauling in materials is prohibitive. (Standard)

(0.114) Abandoned mine entrances may be closed for public safety after surveys to determine the locations of biological and heritage resources have been conducted. (Guideline)

(0.115) Roads in and to developed recreation areas or administrative sites, and roads leading to moderate or high use areas, should be maintained for sedans (low clearance vehicles). (Guideline)

(0.116) Roads will be maintained to a minimum width and roadside vegetation will be mechanically treated (brushed) at locations appropriate to ensure public safety. Vegetation treatment will be done in a manner to minimize visual impacts. (Guideline)

(0.117) Roads under Forest Service jurisdiction should remain open for public travel unless the following occurs: (Guideline)

1. Road is unsafe for public travel, or open status causes unacceptable resource damage.
2. Closures or restrictions are needed to meet public use or other resource needs.

(0.118) Travelways that are closed or restricted may be used for search and rescue, firefighting, or other emergency use; and appropriate types and levels of recreational use (e.g., hiking). (Guideline)

(0.119) All road closures at the Wilderness boundary will be signed. Turnarounds and parking areas will be added at appropriate locations. (Standard)

(0.120) Sign all designated forest system roads to identify the route names/number and to indicate the ends of roads and parking areas. (Guideline)

(0.121) Use water bars, culverts, drainage ditches, or other management practices as appropriate to maintain road surfaces and minimize erosion. (Guideline)

(0.122) Where parallel or braided roads are causing resource damage, restrict use to a single location, in coordination with appropriate state and local authorities. (Guideline)

(0.123) Manage designated and informal use (unnumbered) trails that are causing resource damage to reduce damage and restrict use to a single trail. (Guideline)

(0.124) Designate and sign informal use trails in the vicinity of group use sites. Use temporary trail closures to reduce conflicts. (Guideline)

(0.125) As existing appropriate permits expire, require permittee to provide for education and interpretation of natural resources. (Guideline)

(0.126) Require site/area rehabilitation upon completion/termination as part of all new permits. (Standard)

(0.127) Profit-making special use permittees will pay fair market value consistent with national regulations for ski areas, electronic sites, and outfitter/guides. (Standard)

(0.128) Require cleanup and consolidation of electronic sites. (Standard)

(0.129) Require all permittees to use paint colors and construction materials that blend with the landscape and reduce the site's visual contrast when performing regularly scheduled maintenance. (Guideline)

(0.130) Require permits for publicized and/or organized events with 25 or more participants. (Standard)

(0.131) Require permits for groups with 15 or more pack or saddle stock. Require as part of the permit, all participants must stay on approved trails. Require removal of all hay and fecal material as part of site rehabilitation. (Standard)

(0.132) Require one portable toilet (or equivalent) to be supplied by permittee for every 25 participants in a publicized and/or organized event, except for use of group use sites that have permanent restroom facilities. (Standard)

See Standards 0.73 and 0.74 for specific direction on American Indian uses and special use permits.

Where consistent with the above, provide additional opportunities for recreation.

(0.133) Require new Forest Service administrative facilities to use gas or electric heat as primary source. Wood may be used as a secondary heat source only. (Standard)

(0.134) New facilities, special uses, or private developments on national forest system lands will be constructed or carried out using "defensible space" guidelines to limit the incidence, speed, and damage from wildfire, where consistent with maintaining habitat for species of concern. (Standard)

(0.135) Provide additional developed recreation facilities in appropriate locations to encourage use away from upper Kyle and Lee Canyons. Emphasize new facilities in lower Kyle and Lee Canyons (east of Highway 158), at Cold Creek, and on the west side of the Spring Mountains. (Guideline)

(0.136) All new recreation facilities will incorporate barrier-free design features to ensure access for people with disabilities. (Standard)

(0.137) New campgrounds and picnic areas will be located outside the 50-year floodplain, riparian areas, and avalanche hazard zones. (Standard)

(0.138) Allow development of low standard facilities (signs, trails, restrooms) and parking areas within the 50-year floodplain if no other alternative is available. Design these facilities to provide for public safety and to maintain floodplain function. (Guideline)

(0.139) Provide restroom facilities at appropriate group use sites which can be supplemented with portable toilets by larger groups. (Guideline)

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

(0.141) Construct any new roads outside riparian areas, washes, and the 50-year floodplain; and at least 100 yards away from existing water sources, except at crossings perpendicular to the water course. (Standard)

(0.142) Minimize dead end trail alignments by linking existing trails where appropriate. All new trails should be loops or linked to existing trails. (Guideline)

(0.143) Improve existing trailheads at designated and undesignated trails to provide adequate parking, signage and traffic control devices, and restroom facilities where appropriate. (Guideline)

(0.144) New commercial developments will be approved only if they meet all the following requirements: (Standard)

1. Do not negatively impact threatened, endangered, or sensitive species, or species of concern;
2. Incorporate "defensible space" design (landscape design to prevent loss of property or life in case of wildfire), and fire safe facilities;
3. Provide for education and interpretation of natural resources;
4. Fit within a mountain setting;
5. Offer activities not generally provided on private land;
6. Minimize visual impacts;
7. Traditional or historic public use(s) is not limited;
8. Private land is not available;
9. Provide additional public restrooms (as appropriate);
10. Gambling is not part of Forest Service authorization.

(0.145) New administrative facilities will be located outside the 50-year floodplain, riparian areas, and avalanche hazard zones. (Standard)

(0.146) All new administrative facilities will use drought tolerant landscaping with an emphasis on native species. (Guideline)

(0.147) All private lands within the SMNRA outside of developed subdivisions are suitable for acquisition, through purchase, exchange, or donation. (Guideline)

(0.148) Land purchase and exchange will be carried out only with willing sellers, on an equal value basis. (Standard)

(0.149) The two isolated parcels within Mountain Springs are suitable for disposal, through exchange. (Guideline)

(0.150) Consider disposal through exchange of land occupied by special use permits or summer homes if it would result in ecosystem, administrative, and recreational benefits and where exchange will further the purposes of the Spring Mountains National Recreation Area Act. (Guideline)

Management Area 11

MANAGEMENT AREA 11 - DEVELOPED CANYONS

Management Area 11 (Developed Canyons) includes the most well-known, popular, and ecologically diverse parts of the Spring Mountains. This management area extends along the east side of the Spring Mountains below the Mt. Charleston Wilderness, and is bounded on the north by the Mt. Stirling Wilderness Study Area, and on the south by the LaMadre Wilderness Study Area. The total acreage is 72,151.

a) Emphasis

In Management Area 11, new development in upper Kyle and Lee Canyons would be limited, while distributing use and facilities to other areas of the SMNRA, including the lower canyons. A higher emphasis would be placed on protection of native species, ecological processes, and heritage resources, incorporating these considerations into the management of recreation areas. Fire management and vegetation treatments to reduce fire spread are also stressed. The wild horse and elk populations in Cold Creek would be reduced from current levels, while managing recreation use more carefully to allow riparian areas such as Willow Creek to recover.

b) Objectives

Conserve the health, diversity, integrity, and beauty of the ecosystem.

(11.1) Achieve the following mixture of plant communities (seral stages) within each Land Type Association:

Seral Stage (Vegetation Mosaic)

Land Type Association	Early	Mid	Late
Creosote	0%	0%	90-100%
Blackbrush	0%	0%	90-100%
Pinyon/Juniper	3-10%	50-67%	30-40%
Mixed Conifer	1-3%	25-50%	50-70%
Bristlecone Pine	0%	0%	90-100%
Lower Wash	0%	0%	90-100%
Upper Wash	0%	0%	90-100%

(11.2) Develop partnerships to monitor and improve air quality.

(11.3) Maintain quality drinking water in recreation developments and administrative facilities.

(11.4) Allow surface flows to return to ecosystem use.

(11.5) Enhance developed sites where feasible to restore resource or wildlife values where recreation use has adversely affected resources.

Protect American Indian cultural uses and heritage resources.

(11.6) Historical resources are protected and maintained for their value in understanding significant periods of time in the area.

Avoid disruptions to current uses and users of the Spring Mountains.

(11.7) Manage the area for a variety of high quality, public recreational activities for both summer and winter, with an emphasis on those that are not available on private lands.

(11.8) Increase public awareness of the range of recreation opportunities available, site availability, alternative sites, and resource constraints.

(11.9) Manage insects and diseases to reduce hazards to public safety and private property.

(11.10) Habitat Capability for elk in Cold Creek is 84.

(11.11) Keep wild horses from Kyle and Lee Canyon.

(11.12) Lower Deer Creek is removed from the Spring Mountains Wild Horse and Burro Territory due to danger posed by this herd to traffic on Kyle and Lee Canyon Highways.

Appropriate Management Level for wild horses and burros in Cold Creek is: horses, 26; burros, 0 (based upon 1992 range analysis and estimated population).

The analysis showed a downward trend in the vegetation community composition, and soil condition (erosion and compaction) within a one mile radius of the ponds. Utilization on willows exceeded 40%. This is excessive utilization for a community in a downward trend. This Appropriate Management Level is therefore based upon 30% of 1993 population which was 92 wild horses. No burros use this area, therefore, Appropriate Management Level for burros is 0.

(11.13) Minimize traffic congestion on major roads within Kyle and Lee Canyons, in cooperation with federal, state, local agencies, local residents, and businesses.

(11.14) Increase capability to monitor and manage visitor traffic in Kyle and Lee Canyons.

(11.15) Develop cooperative management relationships with recreational residence associations.

Where consistent with the above, provide additional opportunities for recreation.

(11.16) Provide facilities that meet administrative needs, are cost effective, increase management presence and customer satisfaction, and operate year-round.

(11.17) Future trail alignments will emphasize public safety, resource protection, and customer satisfaction.

(11.18) Provide additional multiple use trail opportunities.

(11.19) Increase accessibility of trailheads at appropriate locations for equestrians.

(11.20) Provide for additional winter trail opportunities for cross-country skiing.

(11.21) Ensure public safety while providing additional winter recreation opportunities and reducing user conflicts.

c) Desired Future Condition

Conserve the health, diversity, integrity, and beauty of the ecosystem.

The desired mosaic of seral stages has been achieved (as shown in Objectives). The Blackbrush and Creosote communities are maintained in primarily late seral stage conditions. Stands of pinyon/juniper and mixed conifer are open. Ground disturbance is minimized while management activities take place. Bristlecone pine stands are open. Old trees and downed logs are left in place and are not being removed for use as firewood.

The historic role of fire is mimicked, while protecting the developed areas. Fuel loads within early and mid-seral stages of the Pinyon/Juniper and Mixed Conifer LTAs are low near developed areas. Shaded fuelbreaks are designed to protect the developed areas, while helping to meet the desired mosaic of vegetative communities and protecting the habitat needs of species of concern.

Riparian areas at Deer Creek, Willow Creek, and Macks Canyon Spring have increased in size, have more native vegetative cover, are accessible to wildlife, and provide habitat for species of concern (Palmers chipmunk, goshawk, flammulated owl). The fences around the Mud Springs complex are maintained. Water flows at these springs have been restored to the historic level.

Temporary closures (with rest-rotation) are being used in Lee Canyon meadow to maintain high ecological condition. Erosion within the meadow and on the adjacent slopes is restored to the historic rate. The natural drainage channel within the meadow has gentle slopes covered with desired vegetation.

In cooperation with Clark County, measures have been taken to improve overall air quality. Smoke from prescribed fires is minimized in the main canyons, major highways, and the Las Vegas valley.

Water is being conserved in recreation developments and administrative facilities. Water conservation is required as part of Forest Service authorizations.

Recreation facilities and new administrative sites in Lee Canyon are using groundwater. The surface water is not piped directly from the source, improving ecosystem health, and increasing habitat for species of concern. The Forest Service contribution to groundwater contamination is minimized.

Whiskey Spring and pool is accessible to wildlife. The pipeline from McFarland Spring is maintained and providing water for elk and wild horses outside the riparian area.

Floodplains are acting as energy dispersers during flood events. Flooding is achieving the historic mosaic of seral stages within the Upper and Lower Wash communities. The floodplain has returned to its historic function without threatening public safety and private property.

Insects and plant diseases are at endemic levels and not threatening private property. Infected trees that do not pose a threat to private property or public safety are providing for small openings in the tree canopy necessary to promote early seral stages. A cooperative relationship with NDF helps to keep insects and plant diseases on private property at low levels.

Areas of high biodiversity and/or species of concern are protected from development of facilities and trails, and impacts from wild horses and burros. Clokeys eggvetch and rough angelica populations are increasing and sustainable. Butterflies are protected by prohibiting collection without a permit.

Recreation and administrative facilities within Kyle and Lee Canyons are being managed to maintain and allow for the regeneration of large ponderosa pine trees. Wildlife habitat is provided within recreation and administrative facilities. The ski area is using native seed to maintain 60% vegetative cover on the ski slopes.

The elk population is at the habitat capability to sustain ecosystem health, and genetic viability of the population is maintained. The fisheries at Cold Creek are maintained at sustainable levels and minimal stocking is occurring. No new non-native fish species or subspecies have been introduced to Cold Creek or Willow Creek.

As a result of cooperative efforts, State Highways 156, 157 and 158 are designated as State or Federal Scenic Byways. Lands are managed to maintain high levels of scenic quality, with an emphasis on views from major roads and use areas. From these areas, management activities are not visually evident or are visually subordinate to the characteristic landscape. Regularly scheduled maintenance of facilities under special use permit reduces their visual contrast. Green fuelwood areas are designed to repeat the size and patterns of opening present in the characteristic landscape, and to provide long distance, panoramic views where possible. Vegetative or topographic buffer areas are utilized to block views of green fuelwood areas as appropriate. Green fuelwood areas visible in the foreground of major roads are located and designed to enhance visual quality. All Forest Service authorizations use applicable visual quality guidelines.

Protect American Indian cultural uses and heritage resources.

Historic resources are enjoyed by the public through interpretation, stabilization projects, and educational opportunities. These resources maintain the feel, setting, and context in which they were built and present an overall historical experience for the visitor, occupant, and professional.

Avoid disruptions to current uses and users of the Spring Mountains.

A variety of high quality recreational opportunities are available in both summer and winter. The developed areas are protected from wildland fires through the restriction of campfires outside of developed recreation facilities and increased fire suppression capability in Cold Creek. Hazard tree surveys and plans improve public safety within recreation and administrative facilities.

Public education and interpretive opportunities are increased, as is the public's awareness of site availability, alternative sites, and resource constraints. The ability to contact and inform visitors is increased.

Wild horse and burro populations are at the appropriate management level to sustain ecosystem health. Wild horses are not found in Kyle and Lee Canyons. Wild horses and burros have adoptable characteristics that are being passed on to their offspring.

Summer festivals are continuing at the ski area, while not inhibiting the enjoyment of other recreation users. Outfitter/guide opportunities are occurring at appropriate levels. The existing power and phone lines within Kyle Canyon have been designated a utility corridor. Angel Peak electronic site permittees are under a single site manager permit.

Where consistent with the above, provide additional opportunities for recreation.

A visitor center for the SMNRA has been developed which serves as a visitor destination, and as a center for educational and interpretive efforts. Public entrance stations on Kyle Canyon Road and Lee Canyon Road are developed in cooperation with NDOT, Clark County, businesses and residents of Mt. Charleston and Lee Canyon, and others. Kyle and Lee Guard Stations are maintained and used to the maximum extent possible. Some administrative uses are transferred from Kyle Guard Station to the visitor center or other appropriate locations in lower Kyle Canyon for year-round operations. Cooperative efforts result in the development and operation of a work center/fire station at Cold Creek.

The ability to manage traffic in upper Kyle and Lee Canyons is increased through the cooperative development of entrance stations, increased visitor signage, and parking area management.

General recreation opportunities are increased through the development of additional campgrounds (multi-use), picnic areas, and multi-use trails in and between lower Kyle and Lee Canyons, north of Lee Canyon, and at Cold Creek. Improvements to existing recreation sites and trailheads improve access to multi-use trail network for equestrians, OHV users, and other users. Connections to new trails increases multi-use trail opportunities. A cooperative effort with BLM results in the development of a multi-use trail system that provides connections to regional trails. Access for persons with disabilities has been improved at Desert View Trail.

The ski area is providing additional winter recreation opportunities. Traffic congestion in upper Lee Canyon is managed by providing additional parking areas on State Highway 156, east of State Highway 158. A shuttle service transports customers from parking areas in lower Lee Canyon to upper Lee Canyon.

Cooperative efforts in law enforcement, winter road and traffic management, and avalanche forecasting result in increases in winter recreation opportunities and safety. Snow play opportunities in safe and managed locations are increased. A utility corridor from Angel Peak to Lee Canyon has been approved.

d) Standards and Guidelines

Conserve the health, diversity, integrity, and beauty of the ecosystem.

(11.1) Provide protection of the riparian areas (in accordance with NV Revised Statute 503.660) at Cold and Willow Creeks through the use of new road alignments, vehicle barriers, and/or signage. Redirect parking and camping away from riparian corridors. Allow only day-use, walk-in activities to occur within the riparian corridor. (Standard)

(11.2) Relocate the road through Cold Creek and Willow Creek out of riparian areas, in cooperation with Clark County, to provide an alignment that improves road safety, maintenance, and management. (Guideline)

(11.3) When practical, use current technologies (such as vault mini-flush, on-site treatment) to minimize the amount of organic waste entering the ground water supply from recreation developments in Kyle and Lee Canyons, and along Deer Creek Highway. (Guideline)

(11.4) Allow day-use only in the meadow area in Lee Canyon. Use temporary closures to allow for resource restoration/rehabilitation. (Standard)

(11.5) Provide trail markers and post restrictions to bouldering in the vicinity of Robbers' Roost Cave to protect Jaeger ivesia and Clokey greasebush. Interpretive signage may be used as appropriate. (Guideline)

(11.6) Allow collection of butterflies in Lee Canyon, Cold Creek, Willow Creek, and upper Kyle Canyon only through permits. (Standard)

(11.7) Where possible, control access to, and revegetate areas that are adjacent to recreation developments and have slopes greater than 25 percent. (Guideline)

(11.8) Close and rehabilitate trail to and "Gary Abbot Campground" site. Close area to overnight use. (Standard)

(11.9) Revegetate and restore understory at appropriate locations within developed recreation areas and new administrative sites consistent with defensible space (i.e., fire safety)

guidelines. Where possible, control access using temporary barriers at locations where revegetation efforts are occurring. (Guideline)

(11.10) To maintain wildlife cover in developed sites, encourage campground hosts/concessionaire to provide wood for purchase by campers/picnickers. (Guideline)

(11.11) Provide water sources for wildlife adjacent to or within developed facilities. Maintain public restrooms to prevent access by wildlife (Palmers chipmunk). (Guideline)

(11.12) Designate ski area sub-basin visual quality objective as partial retention. (Guideline)

(11.13) Work cooperatively with federal, state and local agencies to designate State Highways 156, 157, 158 as state and/or federal scenic byways. Protect the scenic viewshed of State Highway 156, 157, and 158 to maintain naturally appearing scenery. (Guideline)

Protect American Indian cultural uses and heritage resources.

(11.14) New facilities, alterations of existing facilities, or recreational signs at Kyle and Lee Guard Stations will be consistent with their primitive forest setting, traditional colors, paints, and materials, and with the historic CCC theme. (Standard)

Avoid disruptions to current uses and users of the Spring Mountains.

(11.15) Minimize impacts of smoke from prescribed fires to Kyle and Lee Canyons, and State Highways 95, 156, 157, and 158. (Guideline)

(11.16) When possible, convert recreation facilities and new administrative sites in Lee Canyon to a groundwater source. (Guideline)

(11.17) Provide use, education, and interpretive information, such as winter recreation opportunities, parking, etc. through the use of signage, visitor contacts, maps and pamphlets, and information stations. (Guideline)

(11.18) Divert public to other appropriate areas once site or road capacities have been reached. (Guideline)

(11.19) Openings in green fuelwood areas will be 8 acres or less in size and designed in a mosaic pattern optimizing edge effect. (Standard)

(11.20) Construct fences in strategic locations to keep wild horses out of Kyle and Lee Canyons. (Guideline)

(11.21) Maintain facilities on a regular basis at levels required to prevent deterioration of facilities, protect investments, minimize resource damage, and ensure customer satisfaction. (Guideline)

(11.22) Reconstruct or rehabilitate existing recreation developments in the 50-year floodplain, only to 50% of the cost to relocate the facility out of the 50-year floodplain. (Standard)

(11.23) Allow expansion of existing recreational facilities in upper Kyle and Lee Canyons only within existing developed site boundaries. Emphasize use of current disturbed areas. (Guideline)

(11.24) Designate specific primitive camp and picnic sites in upper Macks Canyon and at the Archery Range (at Deer Creek) by using parking barriers, fencing, signing, and education. (Guideline)

(11.25) Prohibit snowmobile use in upper Lee Canyon (west of Deer Creek Highway) except for administrative use, search and rescue, and operational use within or for the Las Vegas Ski and Snowboard Resort. (Standard)

(11.26) In upper Kyle and Lee Canyons (west of State Highway 158), wood and charcoal fires are only allowed within developed facilities, during the winter or other low fire danger season, or by permit. Campstoves are allowed without restriction. (Standard)

(11.27) Within a one mile radius of Cold Creek, wood and charcoal fires are only allowed within developed facilities, during the winter or other low fire danger season, or by permit. Campstoves are allowed without restriction. (Standard)

(11.28) Discourage snow play, where possible, in unsafe and unmanaged areas. (Guideline)

(11.29) Increase cooperation with state and local agencies, permittees, and the public, for law enforcement, emergency services, and education in winter recreation sites. (Guideline)

(11.30) Retain Wheeler Pass Road as a four wheel drive road and continue to provide minimal maintenance as necessary to protect natural values, limit erosion, and provide administrative access and recreational use. (Guideline)

(11.31) Designate Macks Canyon Road as a snowmobile trail and close road seasonally to automobiles. (Standard)

(11.32) Manage and maintain existing informal use trails in the Macks Canyon area that are not causing resource damage. (Guideline)

(11.33) Close the Bristlecone Trail to motorized vehicles. Place barriers to prohibit off-trail travel into populations of species of concern. Use signs to educate users to the importance of species of concern, and the threats to their existence. (Standard)

(11.34) Equestrian use on Bristlecone Trail (Trail 148) is only allowed on the Scout Canyon portion of the trail. (Standard)

(11.35) Address user conflicts on Bristlecone Trail through a site-specific planning involving US Fish and Wildlife Service, trail users, and interested groups. (Guideline)

(11.36) Continue to permit existing outfitter/guide opportunities, such as trail rides and carriage/sleigh rides. Require trail maintenance and clean-up as part of permit. (Standard)

(11.37) Outfitter/guide vehicle tours are limited to: (Standard)

Maximum group size = 5 vehicles (less than 9 passengers/vehicle)
Maximum tours = 100 tours per year/2 tours per day.

(11.38) Facilities within utility corridors will minimize visual impacts to the surrounding landscape, and be underground everywhere feasible. (Guideline)

(11.39) As possible, consolidate permits in Angel Peak electronic site to a multiple-user authorization with issuance of one site manager permit. (Guideline)

(11.40) Continue to permit organizational camps within Kyle and Lee Canyons. (Guideline)

(11.41) Permit commercial movie/films if limited to less than 20 people/participants, less than 5 vehicles (maximum vehicle size is 9 passengers/vehicle), and no semi-tractor trailers. (Standard)

(11.42) Festivals are allowed in Lee Canyon under the following conditions (Standard):

1. No festivals on holiday weekends between Memorial Day and Labor Day.
2. No festivals over 2500 people.
3. Two festivals per month can occur with attendance over 500 people between Memorial Day Weekend and Labor Day Weekend.
4. There is no restriction on the number of festivals that can occur with less than 500 people so long as there is no amplified music.

(11.43) Maintain at least 10 parking spaces at the Bristlecone Trailhead available at all times to trail users during summer operations at the ski area. (Standard)

(11.44) Work with recreation residence associations to maintain the character and quality of recreational residence areas (summer homes under permit on national forest system lands) while protecting natural resource values. (Guideline)

(11.45) Issue no permits for new recreational residences located on national forest system lands. (Standard)

(11.46) Require as a condition of recreation residence permits located on national forest system lands, safety inspections as required by local, state, and federal regulations. (Standard)

(11.47) Allow for additional capital investments for interior upgrades and exterior maintenance of recreation residences located on national forest system lands. Allow expansion of existing recreation residences smaller than 1,000 square feet in Kyle Canyon up to 1,000 square feet. Allow expansion of existing recreation residences up to 1,600 square feet in Lee Canyon. (Standard)

(11.48) Provide housing for seasonal staff at appropriate locations. (Guideline)

(11.49) Limit public access to administrative sites as needed to ensure public safety. (Guideline)

Where consistent with the above, provide additional opportunities for recreation.

(11.50) Develop a SMNRA visitor center along the entrance to Kyle and/or Lee Canyons. Explore the potential for joint development with the Las Vegas Visitors and Convention Authority, Nevada State Tourism Division, Bureau of Land Management, and others. (Guideline)

(11.51) Provide a point of contact for upper Kyle and Lee Canyons that allows distribution of educational and interpretive materials, outside the visitor center and entrance stations. (Guideline)

(11.52) Provide entrance stations on State Highways 157 and 158 at the entrances to upper Kyle and Lee Canyons, in cooperation with federal, state, and local agencies, and local residents

and business interests. The stations will include gates or other methods to manage traffic flow. (Guideline)

(11.53) Provide additional multi-use recreation facilities in lower Kyle or Lee Canyons. (Guideline)

(11.54) Only allow low standard recreation facilities, including small camping areas or restrooms to be developed in upper Kyle and Lee Canyons west of State Highway 158 as a resource protection measure. Allow new campgrounds and picnic areas to be developed in lower Kyle and Lee Canyons, east of State Highway 158. (Standard)

(11.55) Permit development of municipal sewage treatment facility in Kyle Canyon if no private land is available. (Guideline)

(11.56) Allow managed public access to Soda Straw Cave if public safety is ensured, management of the site is provided, and resource values of the cave can be protected. (Guideline)

(11.57) Allow limited expansion of ski area in Lee Canyon and enhancement of skiing opportunities and facilities within the scope of an approved master development plan and under the following constraints: (Standard)

1. Expansion occurs within the existing sub-basin.
2. Does not impact any threatened, endangered, or sensitive species or species of concern, or its habitat.
3. Expansion is commensurate with development of additional parking in the lower Lee Canyon area, and shuttle services.
4. Expansion incorporates defensible space design and fire safe facilities.
5. Where consistent with other standards and guidelines.

(11.58) To improve year-round administrative services in Kyle Canyon, develop administrative facilities in the lower canyon and transfer some uses from Kyle Guard Station. Emphasize continued occupation and maintenance of Kyle Guard Station. (Guideline)

(11.59) Allow expansion of existing administrative facilities in Kyle and Lee Canyons only within existing developed site boundaries and where consistent with their historic nature. Emphasize use of current disturbed areas. (Standard)

(11.60) Provide a facility at Cold Creek for fire suppression, recreation administration, and visitor information. (Guideline)

(11.61) Provide winter camping opportunities at appropriate developed facilities in Lee Canyon. (Guideline)

(11.62) Increase management presence and snow play opportunities at Foxtail Snow Play Area. (Guideline)

(11.63) As possible, develop additional snow play area in Kyle Canyon, within the area's road and parking capacity, or if needed parking/transportation capacity is provided. Avoid species of concern. If avalanche hazard zones cannot be avoided, provide for adequate forecasting, warning, and closure. (Guideline)

(11.64) Increase available winter parking within Kyle and Lee Canyons through cooperative efforts with other federal, state, and local agencies, with an emphasis on designated winter parking areas that are cleared to a standard size and capacity. (Guideline)

(11.65) Cooperate with federal, state, local agencies, and others to encourage, develop, and maintain additional parking along Lee Canyon Highway (State Highway 156) at or east of Deer Creek Highway. (Guideline)

(11.66) Allow for road widening to provide adequate lane widths or paved shoulders for bicycle and/or pedestrian traffic on Kyle Canyon Highway, Lee Canyon Highway, and Deer Creek Highway only if and where impacts to species of concern can be avoided or mitigated. Prohibit development of additional travel lanes. (Standard)

(11.67) Provide a native surface connecting road between Kyle Canyon and Lee Canyon east of Deer Creek Highway. Emphasize use of existing roads. Coordinate location and construction of any new road segments with BLM, US Fish and Wildlife Service, interested groups and with a potential powerline from Angel Peak to Lee Canyon. (Guideline)

(11.68) Provide additional mountain bike trail opportunities, within the constraints of the biodiversity hotspots. (Guideline)

(11.69) Provide improvements to the Desert Senses Trail to increase access to persons with disabilities. Provide interpretive signage on trail. (Guideline)

(11.70) Work cooperatively with BLM, Nevada Department of Transportation, and other agencies and groups to plan and develop trail connections from U.S. 95 that parallel Kyle or Lee Canyon Highways, if and where impacts to species of concern can be avoided or mitigated. (Guideline)

(11.71) Identify and manage the Harris Springs site as a designated group use site, available for blackpowder shooting and other uses. (Guideline)

See Standard 11.14 for specific direction regarding heritage resources as related to administrative sites in Kyle and Lee Canyon.

Management Area 12

MANAGEMENT AREA 12 - MT. CHARLESTON WILDERNESS

Management Area 12 (the Mt. Charleston Wilderness) includes the high peaks at the crest of the Spring Range surrounding Charleston Peak. This management area follows the boundary of the Mt. Charleston Wilderness, designated by Congress in 1989, and includes the Carpenter Canyon Research National Area and the sensitive alpine areas. Total acreage is 42,420.

a) Emphasis

In Management Area 12, restoration and protection of those characteristics that make the Wilderness a special place would be stressed: rare plants, an untrammeled appearance, and opportunities for primitive recreation. More than in other management areas, some recreational uses would be restricted (e.g., campfires, overnight camping) in order to protect wilderness and ecological values. Prescribed natural fires would burn within specific parameters.

b) Objectives

Conserve the health, diversity, integrity, and beauty of the ecosystem.

(12.1) Restore and maintain the natural, ecological, and visual character of the Wilderness.

(12.2) Protect natural and heritage resources and natural processes that enhance backcountry/wilderness recreational opportunities, including prohibiting consumptive uses of wilderness resources except where authorized by law or regulation.

(12.3) Manage the Research Natural Area to retain its natural and scientific values.

(12.4) Reduce impacts of non-native plants.

(12.5) Allow fires to play their historic roles, where consistent with the protection of wilderness resources, public safety, and private property and developed facilities in surrounding areas.

(12.6) Protect wilderness resources, including live and dead bristlecone pines, from removal/cutting for fuel.

(12.7) Restore water sources to historic flows.

(12.8) Keep wild horses and burros out of the Wilderness.

(12.9) Visual quality is unimpaired.

(12.10) Remove structures and debris from the Wilderness.

(12.11) Remove administrative facilities from the Wilderness.

Avoid disruptions to current uses and users of the Spring Mountains.

(12.12) Manage the area to meet the intent and objectives of the Wilderness Act.

(12.13) Educate the public to the value of wilderness, not just as a non-motorized recreation area, but as a place of natural processes and of personal risks.

(12.14) Increase awareness of the Wilderness and prevent mechanized travel within the Wilderness.

(12.15) Allow for signs in the Wilderness only at a minimum level necessary for public safety (directional) and resource protection.

(12.16) Allow for continued use and maintenance of existing climbing routes, as well as new opportunities for climbing in appropriate areas.

Where consistent with the above, provide additional opportunities for recreation.

(12.17) Provide backcountry/wilderness recreation opportunities through development of the trail system at appropriate locations.

(12.18) Allow only commercial uses that minimize impacts to resources and the wilderness experience, including outfitter/guide services for hiking, equestrian use, and climbing.

c) **Desired Future Condition**

Conserve the health, diversity, integrity, and beauty of the ecosystem.

Wilderness use is managed to protect resource values. The vegetation mosaic is maintained through natural disturbances. Bristlecone pine stands are open. Old trees and downed logs are left in place and are not being used as firewood. Soil compaction has been reduced and native vegetation has returned to Mummy Spring and Trough Spring.

Air pollution within control of the Forest Service is not impacting the ecosystem, especially any species of concern. Air pollution is not impacting the visual resources as seen from the Wilderness.

Flow rates at Mummy Spring and Trough Spring are higher and more consistent. Flooding is maintaining the vegetation mosaic. Floodplains are uninhibited and acting as energy dispersers.

The occurrence of exotic plants, such as cheatgrass and dandelion, has been reduced. Recreation use is managed so as not to impact the delicate and unique area. Wild horses are not found within the Wilderness.

The forest landscape is managed to achieve the "Preservation" visual quality objective, where the Wilderness exhibits a naturally evolved landscape character. Management activities are not evident to visitors, except for very low visual impact recreation facilities, such as trails. Trails are visible in foreground, close-range views, but at middleground and background distances, trails fade out of view in the naturally evolved landscape character. Wilderness character is strengthened by limited signage; the removal of the phone line between Kyle and Lee Canyons, the radio repeater and plane wreck on Charleston Peak; and other built features and debris.

Avoid disruptions to current uses and users of the Spring Mountains.

Most fires which do not pose a direct threat to the developed areas or public safety are treated as prescribed natural fires, and allowed to burn as long as they remain within prescribed conditions.

Climbing in the Wilderness is managed to protect resources. Trailheads are signed to provide interpretive and educational information, as well as identify use restrictions.

Horse use is managed to reduce impacts to endemic species, and vegetation. Outfitter/guide permits are at appropriate use levels and in appropriate areas.

Where consistent with the above, provide additional opportunities for recreation.

General recreation opportunities are increased and use is dispersed by the development of a crest trail.

d) Standards and Guidelines

Conserve the health, diversity, integrity, and beauty of the ecosystem.

(12.1) Allow natural disturbances (fire, flood, avalanche) to achieve desired condition of vegetation mosaic. Use management tools to achieve desired condition only if other alternatives are not available. (Guideline)

(12.2) Where possible, remove obvious exotic plants (dandelions, cheatgrass) manually. (Guideline)

(12.3) Allow for treatment of exotic pests within the Wilderness when scientific evaluations indicate a need. Only use pesticides when no other options are available and then use the least persistent chemical or biological pesticide. Avoid use in habitat for species of concern whenever possible. (Guideline)

(12.4) Remove fire rings from the Wilderness. Emphasis should be placed on removing features which encourage use on degraded or sensitive sites. (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)

(12.6) Discourage foot-traffic and camping at Mummy Spring by removing visitor-made trails, trail signage, and restoring native vegetation in riparian areas. (Guideline)

(12.7) Obliterate existing roads, except for maintenance of existing roads as trail alignments. (Standard)

(12.8) When maintaining upper North Divide Trail switch-backs, minimize ground disturbance to protect rare plants. (Guideline)

(12.9) Relocate South Loop Trail away from meadow if practical, and if other resources will not be affected. (Guideline)

(12.10) Trail construction and commercial uses within the Research Natural Area are prohibited, except for outfitters/guides passing through the RNA on the Mt. Charleston Loop Trail. (Standard)

(12.11) Remove the repeater on Charleston Peak if adequate radio coverage is assured. (Guideline)

(12.12) Rock climbing in the Fletcher Canyon and Robbers' Roost areas (both within and outside the Wilderness boundary) will continue only on existing routes until surveys for species of concern are complete. After surveys have been completed, local restrictions or seasonal closures may be used to protect species of concern. (Guideline)

(12.13) Wilderness permits are required for all overnight use within the Wilderness. Prohibit camping in sensitive areas, as determined through monitoring. (Standard)

Avoid disruptions to current uses and users of the Spring Mountains.

(12.14) Campstoves are not restricted within the Wilderness. Campfires of any kind are prohibited. (Standard)

(12.15) Post and maintain signage at entry points to the Wilderness (trails, trailheads, and roads). Minimize the amount of signage within the Wilderness itself. (Guideline)

(12.16) Monitor increase of exotic non-native plant populations in the alpine to identify the need for any trail closures and restrictions for equestrian use. (Guideline)

(12.17) Discontinue equestrian use in the alpine if monitoring determines that equestrian use is having a negative impact on vegetation within the Biodiversity Hotspots. (Standard)

(12.18) Pack and saddle stock are limited to day use on all of South Loop Trail and on North Loop Trail from Trail Canyon trail junction to Charleston Peak (see Map 6). (Standard)

(12.19) Encourage the use of weed-free feed. (Guideline)

(12.20) Remove telephone line in the Wilderness between Kyle and Lee Canyons once utility corridor between Angel Peak and Lee Canyon has been approved. (Standard)

(12.21) Require permits for publicized and/or organized events with 15 or more participants if any portion of the activity takes place within the Wilderness. (Standard)

(12.22) Competitive events are prohibited in the Wilderness. (Standard)

(12.23) Outfitter/guide horseback operators will only be allowed to use South Loop and Bonanza Trails. (Standard)

(12.24) A maximum of 15 pack or saddle stock will be permitted to use the trails in the Wilderness for organized trail rides. (Standard)

(12.25) On South Loop Trail, limit outfitter/guide permittees (horseback) to 30 visitor days and a maximum group size of 5 people. (Standard)

Where consistent with the above, provide additional opportunities for recreation.

(12.26) Flood control devices will not be constructed in the Wilderness. (Standard)

(12.27) All motorized/mechanized vehicle use will be permitted only up to the Wilderness boundary and trailheads. Extension of existing roads across the Wilderness boundary by informal use is prohibited. (Standard)

(12.28) Special use permits may allow outfitter guide service for hiking, equestrian, and climbing activities. (Guideline)

Management Area 13

MANAGEMENT AREA 13 - WEST SIDE

Management Area 13 includes most of the less developed west slope of the Spring Mountains. This management area is bounded on the north by the Mt. Stirling Wilderness Study Area and on the east by the Mt. Charleston Wilderness. To the south and west, it extends to the Forest boundary. The national forest portion of the LaMadre and Pine Creek Wilderness Study Areas fall with this area. The west side includes the Wheeler Wash, Mt. Potosi, and Clark, Wallace, Carpenter, Trout, and Lovell Canyon areas. Total acreage is 129,220.

a) Emphasis

In Management Area 13, increased levels of recreation development and service and increased multi-use trails and campsites at appropriate locations would be provided, to distribute recreational use throughout the SMNRA. At the same time, increased protection for heritage resource sites and the unique environment of Carpenter Canyon would be provided.

b) Objectives

Conserve the health, diversity, integrity, and beauty of the ecosystem.

(13.1) Achieve the following mixture of plant communities (seral stages within each Land Type Association):

Seral Stage (Vegetation Mosaic)

Land Type Association	Early	Mid	Late
Creosote	0%	0%	90-100%
Blackbrush	0%	0%	90-100%
Pinyon/Juniper	5-10%	60-75%	20-30%
Mixed Conifer	2-5%	25-50%	50-70%
Bristlecone Pine	0%	0%	90-100%
Lower Washes	0%	0%	90-100%
Upper Washes	0%	0%	90-100%

(13.2) Maintain unfragmented blocks of land.

(13.3) Reduce hazardous dust along major gravel roads.

(13.4) Manage lands within the LaMadre and Pine Creek Wilderness Study Areas to meet the Visual Quality Objective of Retention, until such time as Congress designates these areas as wilderness or releases them from consideration.

Avoid disruptions to current uses and users of the Spring Mountains.

(13.5) Manage Wilderness Study Areas to maintain eligibility for wilderness designation.

(13.6) Maintain quality drinking water in recreation developments.

(13.7) Manage insects and diseases to reduce hazards to the public and private property.

(13.8) Habitat Capability for elk: Wheeler Pass, 87; Lovell Summit, 65.

(13.9) Improve access to water for wild horses and burros.

(13.10) Appropriate Management Level for wild horses and burros in Wheeler Pass: horses, 11; burros, 0 (based upon 7% of available water).

Lowest recorded water flow rate is used; assuming wild horses require 10 gallons of water per day. Those gpm rates (gallons per minute): Wheeler Well, 0.0 gpm; Buck Spring, 0.75 gpm; Rosebud Spring, 0.34 gpm.

Appropriate Management Level for wild horses and burros in Wheeler/Wallace: horses, 10; burros, 21 (based upon 7% of available water).

Lowest recorded water flow rate is used; assuming wild horses require 10 gallons of water per day; burros require 5 gallons of water per day. Those gpm rates (gallons per minute): Kiup Spring, 1.7 gpm; Ford Spring, 0.25 gpm; Carpenter Tank, 0.0 gpm; Lee Spring, unknown; Trout Spring, 0.0*; Horse Spring, 0.0* [* Dedicated to community/private use].

Appropriate Management Level for wild horses and burros in Red Rock Territory: horses, 50; burros, 50 (based upon Bureau of Land Management recommendations and the best available information).

(13.11) Manage lands to provide semiprimitive motorized and roaded natural recreation opportunities.

(13.12) Maintain roadless character of Wilderness Study Areas.

Where consistent with the above, provide additional opportunities for recreation.

(13.13) Provide new recreation developments in appropriate locations that serve multiple user groups, including low elevation campgrounds.

(13.14) Develop and operate a facility at Mountain Springs for fire prevention/suppression. Emphasize operation of joint use facility with other agencies.

(13.15) Develop a small administrative facility in Pahrump. Emphasize operation of a joint use facility with other agencies for fire prevention and suppression, law enforcement, and visitor information and service.

c) Desired Future Condition

Conserve the health, diversity, integrity, and beauty of the ecosystem.

The historic role of fire is mimicked, while protecting the developed areas. Fuel loads within early and mid-seral stages of the Pinyon/Juniper and Mixed Conifer Land Type Associations are low near developed areas. Shaded fuelbreaks are designed to protect the developed areas, while helping to meet the desired mosaic of vegetative communities and protecting the habitat needs of species of concern.

The Blackbrush and Creosote communities are maintained in primarily late seral stage conditions. Where possible, natural disturbance is contained to 10 acres or less.

Stands in the Pinyon/Juniper and Mixed Conifer Land Type Associations are open. The desired mosaic (as shown in Objectives) of seral stages has been achieved. Ground disturbance is minimized while management activities take place.

Large blocks of land remain unfragmented by facilities, roads, and motorized trails. Wilderness Study Areas remain eligible for the National Wilderness Preservation System. Development of roads in WSA's is prohibited and facility/trail development is limited to the minimum necessary for public enjoyment and administrative purposes.

In cooperation with Clark and Nye Counties, measures have been taken to improve overall air quality. Smoke from prescribed fires is minimized along major highways, and the Pahrump valley.

Riparian areas at Cave Spring, CC Spring, Rose's Spring, Yount Spring, and Kiup Spring have increased native vegetative cover, are accessible to wildlife, and provide habitat for species of concern. The fisheries at Peak Springs are maintained at sustainable levels. No new non-native fish species or subspecies has been introduced to Peak Spring.

Water conservation is practiced within new recreation developments and administrative facilities. Water conservation is required as part of Forest Service authorizations.

All new recreation facilities and administrative sites are using groundwater. The surface water remains at the source, improving ecosystem health, and increasing habitat for species of concern. The Forest Service contribution to groundwater contamination is minimized.

Lands are managed to maintain high levels of visual quality. Lands within Wilderness Study Areas are managed to maintain the existing visual character of roadless areas. Green fuelwood areas are located and designed to minimize visual impacts.

Protect American Indian cultural uses and heritage resources.

The Tecopa Charcoal Kilns are stabilized and interpreted. The Yellow Plug Petroglyphs are protected through a cooperative agreement with an amateur archaeological group. The undesignated road into Yellow Plug is removed.

Avoid disruptions to current uses and users of the Spring Mountains.

Designated trails in the Cottonwood valley area are managed consistently with connecting loop trails on BLM lands. Spur roads are blocked to limit access to Ninety-nine Mine, Contact Mine, Pauline Mine, Dawn Mine, Cave Spring, and CC Spring. Most other existing roads remain open for motorized travel. Rocky Gap Road is managed for challenging, off-highway vehicle use, and resource protection, in coordination with adjacent BLM management.

Where consistent with the above, provide additional opportunities for recreation.

Fire suppression and law enforcement capability on the west side have increased. Facilities for fire prevention/suppression and law enforcement are developed and operated at Mountain Springs and Pahrump through a cooperative effort with other agencies.

Increased opportunities for developed camping and trail use are provided throughout area. New sites offer less developed facilities than those found on the east side of the Spring Mountains; these sites are managed to protect resource values and ensure public health, safety, and satisfaction.

Capability to meet demand for developed recreation is increased. In cooperation with the Nevada Division of State Parks, one or more sites in the Wheeler Wash area are developed for camping, day use, and for multi-use trailheads. A low standard recreation facility, with small designated campsites or restrooms, is developed in Carpenter Canyon as a resource protection measure.

General recreation opportunities are increased through the development of additional multi-use trails. A crest trail is developed, in coordination with BLM, that links the Red Rock Canyon National Conservation area with the SMNRA. Existing and newly developed routes are designated as multi-use trails outside the Wilderness and WSA's.

d) Standards and Guidelines

Conserve the health, diversity, integrity, and beauty of the ecosystem.

(13.1) Green fuelwood area openings will not exceed 40 acres in size. Design openings to optimize edge-effect and minimize visual impacts. (Guideline)

(13.2) Maintain large undisturbed blocks of vegetation in an unfragmented condition without new roads or motorized trails including: Lovell Wash/Yount/Rose Springs area (T. 21S, R. 57E, Sections 4, 5, 6, 7, 8, 17, 18, 19, 30; T. 21S, R. 56E, Sections 1, 2, 10-17, 20-27) (see Map 7). (Standard)

(13.3) Work with Clark County, Nye County, and BLM to reduce hazardous dust on Wheeler Wash Road (FS Roads 071, 601, 510, 557) from State Highway 160 (both locations) to Wheeler Pass; and Trout Canyon Road (FS Road 576) from State Highway 160 to the subdivision. (Guideline)

(13.4) Use groundwater sources in preference to surface water for public use in developed recreation facilities. (Guideline)

(13.5) Prohibit construction of roads within Wilderness Study Areas subject to Congressional designation. (Standard)

Protect American Indian cultural uses and heritage resources.

(13.6) The Yellow Plug Petroglyph site will be managed for its protection and significance. The undesignated road is removed. Roads, trails, or facilities will not be constructed in the vicinity of the petroglyphs. (Standard)

(13.7) Stabilize and interpret the Tecopa Charcoal Kilns. (Standard)

Avoid disruptions to current uses and users of the Spring Mountains.

(13.8) Within the vicinity of Trout Canyon, and within the Mountain Springs buffer zone, wood and charcoal fires are only allowed during the winter or other low fire danger season, or by permit. Campstoves are allowed without restriction. (Standard)

(13.9) Saleable mineral operations are allowed only if they support site reclamation or public works. (Standard)

(13.10) Manage the Rocky Gap Road as a challenging, off-highway vehicle route by providing minimal maintenance necessary to protect natural values, limit erosion, and provide safe administrative access. Coordinate with BLM and appropriate state and local authorities for consistent management of Rocky Gap Road. (Guideline)

(13.11) When possible, and in conjunction with Clark County, realign Wheeler Wash Road (FS 601) out of the wash (see Map 8). (Guideline)

(13.12) As possible, consolidate permits at Mt. Potosi electronic site to a multiple-user authorization with issuance of one site manager permit. (Guideline)

(13.13) Outfitter/guide vehicle tours: (Standard)

Maximum group size = 5 vehicles (less than 9 passengers/vehicle)
Maximum tours = 200 tours per year/4 tours per day.

Outfitter/guide vehicle tours are allowed on Wheeler Wash Road (FS 601, Wallace Canyon Road (FS 081 and FS 081a), Clark Canyon Road (FS 071) to the Junction of FS Road 566a, Wheeler Pass Road (FS 510, 557, and 601); Lovell Wash Road (FS 537) and Lovell Summit Road (FS 536).

(13.14) Continue to permit the archery range at Mountain Springs, where consistent with protection of natural and heritage resources and values, and promote public use of the facility. (Standard)

(13.15) Establish a buffer zone around the community of Mountain Springs with no new recreation or administrative development (except for fire suppression), no new development under special use permits, and no commercial use (see Map 9). (Standard)

Where consistent with the above, provide additional opportunities for recreation.

(13.16) Develop group use areas, semiprimitive campsites and picnic areas on the west side of the SMNRA, with an emphasis on sites in the Wheeler Wash area and sites in upper Lovell Canyon. (Guideline)

(13.17) Develop low standard recreation facilities, including small campsites or restrooms, in Carpenter Canyon as a resource protection measure. Close the last section of road to prevent vehicle access through stream and riparian area. Make campsites walk-in access only. (Standard)

(13.18) Provide foot/horse access into upper Trout Canyon, around private land. (Guideline)

(13.19) Develop trails in Cottonwood valley in conjunction with BLM trail proposals. Coordinate with BLM and Clark County on consistent management of the trail system. (Guideline)

(13.20) All new trails developed within the Wilderness Study Areas will be non-motorized. (Standard)

Management Area 14

MANAGEMENT AREA 14 - MT. STIRLING

Management Area 14 includes the remote and undeveloped northwestern end of the Spring Mountains. This management area includes the national forest system portion of the Mt. Stirling Wilderness Study Area, as well as surrounding lands to the north (Big Timber and Jaybird Springs) and west (Horsehutem and Santa Cruz Springs). Total acreage is 71,855.

a) Emphasis

Management Area 14 would retain Mt. Stirling's essentially undeveloped, roadless character, avoiding development of major recreation facilities. Management treatments would be designed to mimic or restore ecological processes such as fire, while maintaining the Wilderness Study Area's suitability for wilderness designation pending Congressional action.

b) Objectives

Conserve the health, diversity, integrity, and beauty of the ecosystem.

(14.1) Achieve the following mixture of plant communities (seral stages within each Land Type Association):

Seral Stage (Vegetation Mosaic)

Land Type Association	Early	Mid	Late
Creosote	0%	0%	90-100%
Blackbrush	0%	0%	90-100%
Pinyon/Juniper	5-15%	45-75%	20-40%
Mixed Conifer	2-5%	25-50%	50-70%
Lower Wash	5-15%	45-75%	20-40%
Upper Wash	5-15%	45-75%	20-40%

(14.2) Take advantage of the remote setting of this management area to actively restore historic disturbance regimes and improve wildlife habitat.

(14.3) Manage lands within the Mt. Stirling WSA to meet the Visual Quality Objective of Retention, until such time that Congress designates it as wilderness or releases the area from consideration.

(14.4) Manage lands within the management area outside of the Mt. Stirling WSA to meet the applicable visual quality objectives.

Avoid disruptions to current uses and users of the Spring Mountains.

(14.5) Manage recreation to maintain potential suitability of the Wilderness Study Area for the National Wilderness Preservation System, until such time that Congress designates it as wilderness or releases the area from consideration.

(14.6) Maintain existing roadless character of the Wilderness Study Area.

(14.7) Habitat capability for elk for Mt. Stirling is 97.

(14.8) Initial Appropriate Management Level for Johnnie Territory: horses, 50; burros, 75 (based upon Bureau of Land Management recommendations and the best available information).

(14.9) Maintain existing semiprimitive motorized recreational opportunities where this use does not cause unacceptable resource damage.

(14.10) Maintain use of existing roads outside of the Wilderness Study Area for multiple use.

Where consistent with the above, provide additional opportunities for recreation.

(14.11) Enhance semiprimitive non-motorized recreational opportunities, with an emphasis on the Mt. Stirling Wilderness Study Area.

c) Desired Future Condition

Conserve the health, diversity, integrity, and beauty of the ecosystem.

The Blackbrush and Creosote communities are maintained in primarily late seral stage conditions. Where possible, natural disturbance is contained to 10 acres or less.

Stands of pinyon/juniper and mixed conifer are open. The desired mosaic (as described in Objectives) of seral stages has been achieved. Ground disturbance is minimized while management activities take place.

Riparian areas at Big Timber, Santa Cruz, and Jaybird Spring have increased native vegetative cover, are accessible to wildlife, are accessible to wild horses and burros, and provide habitat for species of concern.

Floodplains are acting as energy dispersers during flood events. Flooding and prescribed fires are achieving the historic mosaic of seral stages within the Upper and Lower Wash communities. The floodplain has returned to its historic function without threatening public safety and private property.

Smoke from prescribed fires is minimized along major highways, and in Indian Springs, Mercury, and the Pahrump valley.

The elk population is at the habitat capability to sustain ecosystem health, and genetic viability of the population is maintained.

The existing visual quality and roadless character of the Wilderness Study Area is maintained. No new road or facility is constructed in the Mt. Stirling WSA. The area's eligibility for the National Wilderness Preservation System is maintained.

Avoid disruptions to current uses and users of the Spring Mountains.

Wild horse and burro populations are at the appropriate management level to sustain ecosystem health. The populations are targeted for aggressive population control methods. Wild horses and burros have adoptable characteristics that are being passed on to their offspring.

Spur road to Stirling Mine is realigned. Most existing roads remain open for motorized travel.

Where consistent with the above, provide additional opportunities for recreation.

Semiprimitive non-motorized recreational opportunities are increased with the development of a crest trail. Cooperative efforts with BLM result in the development of an interconnected road system for multiple use between Crystal Springs, Horseshutem Springs, and Grapevine Springs areas.

d) Standards and Guidelines

Conserve the health, diversity, integrity, and beauty of the ecosystem.

(14.1) Green fuelwood area openings will not exceed 40 acres in size. Design openings to optimize edge-effect and minimize visual impacts. (Guideline)

(14.2) Prohibit construction of developed recreation sites or additional roads in the Mt. Stirling WSA until such time as Congress makes the decision regarding inclusion in the National Wilderness Preservation System. (Standard)

Avoid disruptions to current uses and users of the Spring Mountains.

(14.3) Realign the unnumbered spur road to Stirling Mine to avoid the mine and provide a turn around and parking. (Guideline)

(14.4) Realign those sections of the unnumbered road linking Big Timber Road (FS 553) to Jaybird Road (FS 552) that are out of the wash (see Map 8). (Guideline)

(14.5) If possible, move Big Timber Road (FS 553) out of wash (all sections) (see Map 8). (Guideline)

(14.6) Outfitter/guide vehicle tours: (Standard)

Maximum group size = 5 vehicles (less than 9 passengers/vehicle)
Maximum tours = 100 tours per year/2 tours per day.

Outfitter/guide vehicle tours are allowed on Jaybird Road (FS 552), Big Timber Road (FS 553 and 555), the unnumbered FS Road connecting Big Timber and Jaybird Roads via Gold Springs Road (FS 592), and Horseshutem Road (FS 551).

Where consistent with the above, provide additional opportunities for recreation.

(14.7) Develop trail linking Bonanza Trail to Mt. Stirling area. (Guideline)

Monitoring and Evaluation

MONITORING AND EVALUATION

Research Need: Investigate fire ecology of all the plant communities.

Research Need: Determine particular site characteristics that prevail with cheatgrass invasion.

Research Need: Relationship between ski area and Mt. Charleston blue.

Research Need: Investigate seed predation on Clokeys eggvetch.

Research Need: Investigate habitat requirements and disturbance regime for Clokeys eggvetch and rough angelica populations.

Research Need: Identification of bat roosting sites.

Research Need: Impacts of rock climbing on cliff dwelling species (plant and animal).

Research Need: Impacts of caving on cave dwelling bats.

Research Need: Identification of sensitive butterfly habitat and predictive model for butterfly distribution.

Research Need: Development of monitoring protocol for ecosystem health using species of concern.

Research Need: Determine disturbance regimes for each vegetative community.

Research Need: Determine seed pollination mechanism, germination success, and seed viability for Clokeys eggvetch and rough angelica.

Research Need: Determine link between development, canopy density/fragmentation, and cowbird habitat/density.

Research Need: Determine genetic composition of the wild horse and burro populations to determine historic lineage.

Research Need: Investigate link between archaeological sites and rare plant species.

Research Need: Effectiveness of wild horse population control methods (birth control and spaying).

Research Need: Determine effects of current fuel levels as compared historic fuel levels and their effect on fire behavior.

Research Need: Inventory of cave resources.

Research Need: Identify if desert bighorn sheep are attracted to domestic goat pheromones.

Activity: Clokeys eggvetch population monitoring
Priority: Must be completed as part of Forest Plan implementation
Intent: Determine population size and trend
Responsibility: District Botanist, Ecologist, or Resource Staff
Methodology: Photo points with each individual flagged; mapping population boundary; and counting individuals at each population location

Frequency: Every year during late May through mid June for the first 3 years, after that, every other year
Degree of Variability Requiring Further Action: A significant decrease in population numbers or population area.

Activity: Rough angelica population monitoring
Priority: Must be completed as part of Forest Plan implementation
Intent: Determine population size and trend
Responsibility: District Botanist, Ecologist, or Resource Staff
Methodology: Photo points with each individual flagged; mapping population boundary; and counting individuals at populations on national forest system lands adjacent to developed areas (campgrounds, picnic areas, roads, private property
Frequency: Every year during early June through early July for the first 3 years, after that, every other year
Degree of Variability Requiring Further Action: A significant decrease in population numbers or population area.

Activity: Charleston tansy population monitoring
Priority: As funding is available, or partnerships obtained
Intent: Determine population size and trend
Responsibility: District Botanist, Ecologist, or Resource Staff
Methodology: Photo points with each individual flagged; mapping population boundary; and counting individuals at populations on national forest system lands adjacent to developed areas (campgrounds, picnic areas, roads, private property
Frequency: Every two years during early July through early August for the first 4 years, after that, every three years
Degree of Variability Requiring Further Action: A 20% decline in population numbers or population area.

Activity: Charleston kittentails population monitoring
Priority: As funding is available, or partnerships obtained
Intent: Determine population size and trend
Responsibility: District Botanist, Ecologist, or Resource Staff
Methodology: Photo points with each individual flagged; mapping population boundary; and counting individuals at populations on national forest system lands adjacent to developed areas (campgrounds, picnic areas, roads, private property
Frequency: Every two years during early July through early August for the first 4 years, after that, every three years
Degree of Variability Requiring Further Action: A 20% decline in population numbers or population area.

Activity: Mt. Charleston blue population monitoring
Priority: As funding is available, or partnerships obtained
Intent: Determine population size and trend
Responsibility: District Botanist, Ecologist, or Resource Staff
Methodology: To be determined later
Frequency: Every two years during early July through early August for the first 4 years, after that, every three years
Degree of Variability Requiring Further Action: A 20% decline in population numbers or population area.

Activity: Community-level monitoring of alpine LTA
Priority: As funding is available, or partnerships obtained
Intent: Determine recreational impacts and vegetation community changes on species of concern within this LTA.
Responsibility: District Botanist, Ecologist, or Resource Staff
Methodology: To be determined later
Frequency: Every two years during early July through early August for the first 4 years, after that, every three years
Degree of Variability Requiring Further Action: A 15% decline in population numbers or population area of the species of concern, or a 15% increase in weedy, non-native plant populations.

Activity: Community-level monitoring of Bristlecone LTA
Priority: As funding is available, or partnerships obtained
Intent: Determine recreational impacts and vegetation community changes on species of concern that occur within the LTA.
Responsibility: District Botanist, Ecologist, or Resource Staff
Methodology: To be determined later
Frequency: Every two years during early July through early August for the first 4 years, after that, every three years
Degree of Variability Requiring Further Action: A 15% decline in population numbers or population area of the species of concern, or a 15% increase in weedy, non-native plant populations.

Activity: Peregrine nesting success
Priority: As funding and nests are identified
Intent: Determine impacts of climbing on nesting peregrine falcons
Responsibility: NDOW, Ecologist, or Resource Staff
Methodology: To be determined later
Frequency: As nests are identified.
Degree of Variability Requiring Further Action: If there is no nesting success, increase the buffer zone around potential and active peregrine nests, in consultation with NDOW and US Fish and Wildlife Service.

Activity: Cowbird Populations
Priority: As funding is available, or partnerships obtained
Intent: Determine population trend and impacts of cowbirds on species of concern
Responsibility: NDOW, Ecologist, US Fish and Wildlife Service
Methodology: To be determined later
Frequency: Annually
Degree of Variability Requiring Further Action: Significant increase in cowbird populations or impacts on other species.

Activity: Monitor water quality at recreation developments and administrative facilities
Priority: Must be completed as part of Forest Plan implementation
Intent: Determine if water meets drinking water quality standards
Responsibility: District Staff, Clark County, and Cooperators
Methodology: Variable
Frequency: Once per month
Degree of Variability Requiring Further Action: Water quality does not meet State water quality standards.

Activity: Protection of Yellow Plug
Priority: Must be completed as a part of Forest Plan implementation
Intent: Ensure that Yellow Plug is protected from vandalism and erosion

Responsibility: District monitoring team or cooperator
Methodology: Site visitation and photographs
Frequency: Once every three months
Degree of Variability Requiring Further Action: Decline in art panels and/or midden deposit.

Activity: Protection and stability of the Tecopa Charcoal Kilns
Priority: Must be completed as a part of Forest Plan implementation
Intent: Ensure that the Tecopa Charcoal Kilns are protected from vandalism and remain stable for public safety
Responsibility: District monitoring team
Methodology: Site visitation and photographs
Frequency: Once every six months
Degree of Variability Requiring Further Action: Obvious vandalism and/or crumbling of the standing kiln.

Activity: Monitor recreational impacts on species of concern
Priority: As funding is available, or partnerships obtained
Intent: Determine what and where recreational activities are impacting species of concern
Responsibility: District Staff and Cooperators
Methodology: Variable
Frequency: Annually
Degree of Variability Requiring Further Action: Recreational impacts are reducing species of concern populations by an unacceptable level.

Activity: Monitor camping and equestrian use in the Wilderness
Priority: As funding is available, or partnerships obtained
Intent: Determine if overnight camping is affecting species of concern
Responsibility: District Staff and Cooperators
Methodology: Variable
Frequency: Annually
Degree of Variability Requiring Further Action: Recreational impacts are reducing species of concern populations by an unacceptable level.

Activity: Determine prevalence of cheatgrass invasion after management activities
Priority: As funding is available, or partnerships obtained
Intent: Monitor wildfires, prescribed fires, and ground disturbing management activities for cheatgrass invasion
Responsibility: District Staff and Cooperators
Methodology: Monitor five wildfires per year; monitor all prescribed fires, and all ground disturbing activities within the Blackbrush LTA
Frequency: Annually
Degree of Variability Requiring Further Action: Cheatgrass invasion.

Activity: Holistic riparian area inventory
Priority: As funding is available, or partnerships obtained
Intent: Inventory vegetative cover, invertebrates, and amphibians; spring flow rate; use by wildlife, wild horse, and burro populations; degree of disturbance at the spring source, and utilization levels to develop a baseline of information
Responsibility: District Staff and Cooperators
Methodology: Inventory
Frequency: Once
Degree of Variability Requiring Further Action: Identification of species of concern; utilization exceeds 30%; soil compaction is more than 20% of historic variability; surface flow does not appear

to support existing vegetation; cover (vegetation, litter, rock, pavement) is less than 60%; area surrounding source has less than 70% cover.

Activity: Riparian area health
Priority: As funding is available, or partnerships obtained
Intent: Determine riparian area health compared to baseline
Responsibility: District Staff and Cooperators
Methodology: Monitor vegetative cover; invertebrates and amphibians; spring flow rate; use by wildlife, wild horse, and burro populations; degree of disturbance at the spring source, and utilization levels and compare if health has improved or declined from baseline
Frequency: Every three years
Degree of Variability Requiring Further Action: If riparian area health has declined, or identification of species of concern; utilization exceeds 30%; soil compaction is more than 20% of historic variability; surface flow does not appear to support existing vegetation; cover (vegetation, litter, rock, pavement) is less than 60%; area surrounding source has less than 70% cover.

Activity: Fire history in Pinyon/Juniper and Mixed Conifer communities
Priority: As funding is available, or partnerships obtained
Intent: Understand the historic role fire played within these communities to mimic through management
Responsibility: District Staff or Cooperator
Methodology: Aerial Photo Survey
Frequency: Once
Degree of Variability Requiring Further Action: None.

Activity: Air quality within Kyle and Lee Canyons
Priority: As funding is available, or partnerships obtained
Intent: Determine if air quality in Kyle and Lee Canyons violates Clark County Air Quality Standards; to investigate impacts of air quality on indicator species (ponderosa pine, endemics, and lichens)
Responsibility: District Staff, Clark County, and Cooperators
Methodology: Monitoring stations, repeat photography for visual range
Frequency: Continuously
Degree of Variability Requiring Further Action: Sulphate deposition greater than 44 lbs/acre; Alkalinity reduced by 10% of baseline in surface water; Visual range reduced more than 5% of baseline at the 90th percentile (clean days).

Activity: Population densities of bark beetles in the areas around developments (private and public)
Priority: As funding is available, or partnerships obtained
Intent: Determine current population levels of bark beetles and how to avoid epidemic outbreaks
Responsibility: District Staff and State and Private Forestry
Methodology: Aerial Survey by State and Private Forestry
Frequency: Every three years
Degree of Variability Requiring Further Action: Increase in bark beetles beyond endemic levels.

Activity: Population densities of mistletoe in areas around developments private and public)
Priority: As funding is available, or partnerships obtained
Intent: Determine current density of mistletoe and how it affects epidemic outbreaks of bark beetles
Responsibility: District Staff and State and Private Forestry

Methodology: Stratified sample with ocular estimate of density
Frequency: Every three years
Degree of Variability Requiring Further Action: Increase in mistletoe beyond endemic levels.

Activity: Federally listed species monitoring (southwest willow flycatcher, Mexican spotted owl, peregrine falcon, Lahontan cutthroat trout, and desert tortoise)
Priority: As funding is available, or partnerships obtained
Intent: Determine population size and trend
Responsibility: District Botanist, Ecologist, NDOW, and USFWS
Methodology: Baseline Inventory and follow-up
Frequency: Once every year for the first 3 years and then every 3 years after that
Degree of Variability Requiring Further Action: A 20% decline in population numbers or population area.

Activity: Neotropical migratory bird populations and trend
Priority: As funding is available, or partnerships obtained
Intent: Determine population size and trend
Responsibility: District Biologist, Ecologist, NDOW, and USFWS
Methodology: Baseline inventory and follow-up on population trend
Frequency: Once every year for the first 3 years and then every 3 years after that
Degree of Variability Requiring Further Action: A 20% decline in population numbers or population area.

Activity: Northern goshawk and flammulated owl populations and trend
Priority: As funding is available, or partnerships obtained
Intent: Determine population size and trend
Responsibility: District Biologist, Ecologist, NDOW, and USFWS
Methodology: Baseline inventory and follow-up population trend
Frequency: Once every year for the first 3 years and then every 3 years after that
Degree of Variability Requiring Further Action: A 20% decline in population numbers or population area.

Activity: Baseline data on all species of concern
Priority: As funding is available, or partnerships obtained
Intent: Determine population size and trend
Responsibility: District Botanist, Biologist, Ecologist, NDOW, and USFWS
Methodology: Baseline Inventory and follow-up on population trend
Frequency: Once every year for the first 3 years and then every 3 years after that
Degree of Variability Requiring Further Action: A 20% decline in population numbers or population area.

Activity: Effectiveness of cover sites for wildlife in developed recreation facilities
Priority: As funding is available, or partnerships obtained
Intent: To determine effectiveness of human-made and natural cover sites developed within developed recreation facilities
Responsibility: District Staff and Nevada Division of Wildlife
Methodology: Site visitation and recording animal use of cover sites. Cover site investigation identifying seed caches, scat, and other evidence of use by small mammals and amphibians

Frequency: Annually
Degree of Variability Requiring Further Action: Cover sites not being used.

Activity: Genetic testing of wild horse and burro populations
Priority: As funding is available, or partnerships obtained
Intent: Determine genetic variation of wild horse and burro populations in all territories on the Spring Mountains, including the areas that BLM has lead agency responsibility
Responsibility: District Staff, BLM, Cooperator, Genetic Lab
Methodology: Draw blood from at least 25% of the wild horses and burros returned to the territory following a gather. Send to a genetic testing laboratory for analysis
Frequency: No less than once every 10 years for each territory, and herd within a territory
Degree of Variability Requiring Further Action: Testing shows that inbreeding occurring within the population.

Activity: Resource overlap between elk and wild horses
Priority: As funding is available, or partnerships obtained
Intent: Determine dietary and forage preference overlap between wild horses and elk. Determine percent elk and wild horses foraging on species of concern
Responsibility: District Staff or Cooperator
Methodology: Fecal analysis combined with forage utilization in areas supporting both species; mapping both species' home ranges with area overlap
Frequency: Once every three months (seasonal ranges) for three years
Degree of Variability Requiring Further Action: Utilization in excess of 30% or foraging on species of concern.

Activity: Elk population monitoring
Priority: As funding is available, or partnerships obtained
Intent: Determine population size, dynamics, condition and trend, and home ranges
Responsibility: Nevada Division of Wildlife
Methodology: Helicopter Census
Frequency: Annually
Degree of Variability Requiring Further Action: Elk population is 20% over Habitat Capacity.

Activity: Desert bighorn sheep population monitoring
Priority: As funding is available, or partnerships obtained
Intent: Determine population size, dynamics, condition and trend, and home ranges
Responsibility: Nevada Division of Wildlife
Methodology: Helicopter Census
Frequency: Annually
Degree of Variability Requiring Further Action: Desert bighorn sheep population is 40% under desired level.

Activity: Deer population monitoring
Priority: As funding is available, or partnerships obtained
Intent: Determine population size, dynamics, condition and trend, and home ranges
Responsibility: Nevada Division of Wildlife
Methodology: Helicopter Census
Frequency: Annually
Degree of Variability Requiring Further Action: Deer population is 40% under desired level.

Activity: Fish population monitoring
Priority: As funding is available, or partnerships obtained
Intent: Determine population size, dynamics, condition and trend, and habitat condition

Responsibility: Nevada Division of Wildlife
Methodology: Stream Survey
Frequency: Once every 5 years
Degree of Variability Requiring Further Action: Fish population is 50% under desired level.

Activity: Wild horse and burro population census
Priority: As funding is available, or partnerships obtained
Intent: Determine population size, dynamics, and condition and trend
Responsibility: District Staff, BLM Staff, and Cooperators
Methodology: Helicopter Census; remote surveillance camera at spring/watering locations
Frequency: Helicopter Census - Once every 3 months; Remote Camera - Important spring sites once each season
Degree of Variability Requiring Further Action: Gather if population is in excess of 20% AML and last gather was more than 3 years before census.

Activity: Annual fire occurrence and acreages
Priority: As funding is available, or partnerships obtained
Intent: Determine locations and sizes of fires on an annual basis, as compared to local fire season, and annual weather/climate conditions
Responsibility: District Staff and Cooperators
Methodology: Compilation of fire records in tabular form and mapped
Frequency: Annually
Degree of Variability Requiring Further Action: None.

Activity: Hazard tree surveys
Priority: As funding is available, or partnerships obtained
Intent: Identify hazard trees within recreation and administrative facilities
Responsibility: District Staff and State and Private Forestry
Methodology: Ocular Estimate
Frequency: Every three years
Degree of Variability Requiring Further Action: Identification of hazard trees.

Activity: Monitor resource conditions at recreation developments
Priority: As funding is available, or partnerships obtained
Intent: Limit resource degradation at developed campsites, day use sites, and backcountry campsites
Responsibility: District monitoring team or cooperator
Methodology: Site visitation, mapping and photographs, standardized data forms
Frequency: Annually
Degree of Variability Requiring Further Action: Noticeable enlargement of use area and reduction in cover.

Activity: Visitor use levels at developed sites
Priority: As funding is available, or partnerships obtained
Intent: Evaluate use of developed recreation sites to determine if established objectives are being met
Responsibility: District Staff
Methodology: PAOTs
Frequency: Annually
Degree of Variability Requiring Further Action: 15% variance at the end of the first 4 years, then every 5 years.

Activity: Wilderness visitor use levels
Priority: As funding is available, or partnerships obtained
Intent: Determine use levels on trails, and assess need for the Wilderness permitting system

Responsibility: District Staff
Methodology: Electronic counters at major trailheads and other key points
Frequency: Weekly during season
Degree of Variability Requiring Further Action: Increase in overall use of more than 30% from current levels.

Activity: Inventory climbing areas
Priority: As funding is available, or partnerships obtained
Intent: Document occurrence of all species of concern, monitor route density, resource impacts, and bolt proliferation
Responsibility: District Staff or Cooperator
Methodology: Site visitation and series of photo points
Frequency: Every two years, or when five new routes occur within a given area
Degree of Variability Requiring Further Action: None.

Activity: Inventory climbing use
Priority: As funding is available, or partnerships obtained
Intent: Document numbers and distribution of users
Responsibility: District Staff or Cooperator
Methodology: Site visitation, user counts, vehicle counts
Frequency: Annually
Degree of Variability Requiring Further Action: None.

WILDERNESS AND RESEARCH NATURAL AREA

1. Recommendations for Wilderness

The SMNRA contains portions of three Wilderness Study Areas defined and studied by the Bureau of Land Management. These include the Mt. Stirling WSA, the LaMadre WSA, and the Pine Creek WSA. Recommendations for the designation of these areas as wilderness or nonwilderness are contained in the Nevada BLM Statewide Wilderness Report (BLM 1991). The Spring Mountains National Recreation Area Act (Public Law 103-63) requires that the general management plan for the SMNRA prepared by the Forest Service repeat the previous wilderness suitability recommendations made by the BLM for the Wilderness Study Area lands within the SMNRA. The BLM's recommendations for designation of these lands as wilderness are now before Congress, and have not been reexamined. The Spring Mountains NRA General Management Plan repeats these recommendations as follows (see Map 10):

Mt. Stirling WSA

Within the SMNRA, the BLM recommendations for wilderness designation include 49,850 acres of the Mt. Stirling WSA and an additional 82 acres of national forest system lands outside the Mt. Stirling WSA. Of national forest system lands within the Mt. Stirling WSA, 14,200 acres are recommended for nonwilderness.

LaMadre WSA

Within the SMNRA, the BLM recommendations for wilderness designation include 18,979 acres of the LaMadre WSA. Of national forest system lands within the LaMadre WSA, 1,369 acres are recommended for nonwilderness.

Pine Creek WSA

Within the SMNRA, the BLM recommendations for wilderness designation include 4,622 acres of the Pine Creek WSA. Of national forest system lands within the Pine Creek WSA, 274 acres are recommended for nonwilderness.

2. Recommendations for Research Natural Area Expansion

It is recommended that the Carpenter Canyon Research Natural Area be expanded to include the following areas: T. 19S., R. 56E., sections 28, 29, 30, and 31.

This expansion allows for the further research of the highest elevation species of concern. This increases the acreage from 2,250 acres to approximately 4,810 acres (see Map 11).

PROPOSED AND PROBABLE MANAGEMENT PRACTICES

Conserve the health, diversity, integrity, and beauty of the ecosystems.

(1) Develop a seed bank from species growing in the Spring Range, including species of concern, for use in rehabilitation after fire, restoration of vegetation in recreation, administrative facilities, and road right-of-ways; and for rehabilitation of areas under Forest Service authorizations, in cooperation with interested groups, and federal, state and local agencies.

(2) If possible, remove unnecessary improvements (pipeline and troughs) at Gold Spring.

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

(4) Restore lower Big Timber Spring. Fence and move trough outside riparian area.

(5) Restore riparian vegetation at upper Big Timber around stock pond. Maintain open pool of water. Fence and pipe water out of riparian area for wild horse and burro access.

(6) Fence Santa Cruz Spring and pipe water out to wild horses and burros.

(7) Remove Wallace Canyon pipelines and water trough.

(8) Remove unnecessary improvements (fence, pipeline), and abandoned vehicle, corral, and other debris from grazing operation at Roses Spring, providing these items are not of historical significance.

(9) Remove unnecessary improvements (fence, pipeline) at Kiup Spring.

(10) Remove unnecessary improvements, and the old corral, barrels, and other debris from livestock grazing operation at Yount Spring, providing these items are not of historical significance.

(11) Pipe water from Wheeler Well to an undisturbed area outside the existing dispersed recreation area. Restrict vehicle access to new trough while not inhibiting access by wild horses and wildlife. Bury pipeline. Use interpretive signing to educate public as to the sensitivity of water locations.

(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.

(14) Work with ski area permittee and other partners to propagate Torrey milkvetch on the ski runs to enhance habitat for the Mt. Charleston blue.

(15) Develop interpretive sign/brochure to inform public to not pick flowers and trample vegetation along trails and within recreation developments.

(16) Close unnumbered spur roads off Macks Canyon Road (FS 073) that are located in riparian areas. Limit expansion of other spur roads through placement of vehicle barriers or berms.

(17) Eliminate vehicle access to Willow Creek riparian area via the unnumbered spur roads off Forest Road 061 in and around Willow Creek and west towards Wheeler Pass that are located in or

lead to the riparian area. Limit expansion of other spur roads through placement of vehicle barriers or berms.

(18) Block vehicle access to the riparian area from spur roads leading to the old Kyle Canyon Ski Area.

(19) Eliminate vehicle access on the unnumbered spur road to Ninety-nine Mine and Contact Mine, in coordination with appropriate state and local authorities.

(20) 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.

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

(22) Eliminate vehicle access on the unnumbered spur road to Big Timber Spring, in coordination with appropriate state and local authorities.

(23) Provide designated parking and day use areas located away from riparian area at Willow Creek by using parking barriers, relocating road alignment, reestablishing riparian vegetation, fencing, and signage.

(24) Remove all portions of the Air Force C-54 transport plane wreckage on Charleston Peak that are visible from the Mt. Charleston National Recreation Trail.

(25) **Remove fire rings from Wilderness.**

(26) Remove Charleston Peak repeater, if adequate radio coverage can be assured without constructing additional repeaters in the Wilderness or WSAs.

Protect American Indian cultural uses and heritage resources.

(27) Stabilize, interpret, and provide recreational use of the Tecopa Charcoal Kilns.

(28) Nominate Kyle and Lee Guard Stations to the National Register of Historic Places.

(29) Provide interpretation at Kyle and Lee Guard Stations.

(30) Cooperative with amateur and professional groups to protect heritage resources.

(31) Develop a cultural, abiotic, and biotic overview of the area based on land type associations.

Avoid disruptions to current uses and users of the Spring Mountains.

(32) Support an active interpretive/volunteer association.

(33) Cooperate with interpretive/volunteer association to distribute interpretive and informational materials.

(34) Provide brochures or other information materials for campground hosts to distribute. Provide materials and signage as appropriate when revegetation/restoration efforts are occurring in campgrounds.

(35) Provide interpretive signs and displays at trailheads, riparian areas, and springs as necessary to educate public on resource values and to inform users of requirements and restrictions.

(36) To achieve AML, conduct gathers of wild horses and burros (at a minimum) every five years, and use population control methods such as birth control, gelding of young stallions, spaying mares/jennies, and sex selective gathers.

(37) Once AML has been achieved and is sustainable, return at least 10% of the 0-5 year olds from each age class to the population after each gather. Sex ratio of those 0-5 years olds returned to the population will be the same as that of the age class from which they were gathered.

(38) Collect age and sex information, and photograph all individual wild horses returned to a territory after a gather. Prepare a Lincoln Index by freeze branding all gathered wild horses returned to the territory with the territory number.

(39) During gathers, utilize knowledge of contractor, BLM wild horse and burro specialists, and/or interested parties to identify those adoptable characteristics of wild horses and burros. Use those characteristics in selecting animals to return to the territories.

(40) Gather wild horses that enter and use the Wilderness as permanent range. Water and hay trapping is the preferred method. Helicopters may be used in wild horse gathers if other methods are ineffective, so long as public and operator safety is assured.

(41) Gather wild horses that enter and use Kyle and Lee Canyons as permanent range. Water and hay trapping is the preferred method. If this is not possible, use helicopter, so long as public and operator safety is assured.

(42) In cooperation with NDOT and BLM, fence and provide cattleguards on the north side of State Highway 156, from State Highway 95 to existing cattleguard (just west of State Highway 158).

(43) Designate appropriate areas in Cold Creek Burn, Big Timber Corral Burn, and Wheeler Wash as dead and down fuelwood areas.

(44) Designate specific primitive camp/picnic sites and parking areas in upper Macks Canyon by using parking barriers and signage.

(45) Designate specific primitive camp/picnic sites and parking areas at the Archery Range site at Deer Creek by using parking barriers and signage.

(46) Develop signs, brochures, and other materials to educate public on restrictions to camping within 100 yards of water sources.

(47) Encourage campground permittee to staff the Kyle Canyon information center by allowing sale of goods (firewood, ice, etc.) at facility. Encourage volunteer staffing of information center.

(48) Establish partnerships with cavers and rock climbers for education, public use, and protection of unique resources.

(49) In cooperation with climbing interest groups, develop brochures with interpretive and educational materials and make available at Kyle Canyon information center, at Red Rock Visitor Center, and at local climbing shops, gyms, and from local guides/outfitters.

(50) Upon revision/updating of forest map, remove selected spring locations from map as appropriate.

(51) Inventory and map backcountry/Wilderness camps. Remove built structures and fire rings where appropriate.

(52) Inventory and map rock climbing routes.

(53) Maintain or berm appropriate access points in coordination with Nevada Department of Transportation, when they are snow plowing roads.

Where consistent with the above, provide additional opportunities for recreation.

(54) Develop a visitor center along the entrance to Kyle and/or Lee Canyons. Explore the potential for joint development with Las Vegas Visitors and Convention and Visitors Authority, Nevada State Tourism Division, Bureau of Land Management, and others.

(55) Develop entrance stations on Kyle Canyon Highway and Lee Canyon Highway.

(56) Develop comfort station and interpretive facilities at Macks Canyon.

(57) In cooperation with BLM, NDOT, the Nevada State Tourism Division, and others, complete Nevada Scenic Byway nominations for State Highway 156, 157, and 158. Support other agencies' efforts for nominating State Highway 160.

(58) Work cooperatively with local cavers group to design, construct, and maintain access gate to Soda Straw Cave.

(59) Work cooperatively with local cavers group to design, construct, and maintain access gate to Pinnacle Cave.

(60) Reconstruct Cathedral Rock Picnic Area.

(61) Reconstruct Fletcher View, McWilliams, Kyle Canyon, and Dolomite campgrounds.

(62) Reconstruct Mahogany Grove and Foxtail Group Picnic Area.

(63) Reconstruct/rehabilitate Deer Creek Picnic site. Move picnic sites/tables out of riparian area if possible.

(64) Provide improvements to Blue Tree site in Lee Canyon for use as equestrian/multi-use camp site, including expanded parking area and trailhead facilities.

(65) Reconstruct existing trailheads with an emphasis on safety, resource protection, and public information. Provide traffic control barriers and informational signage.

(66) Construct campground at Tres Piedras site.

(67) Construct a campground and/or trailhead at the former Harris dump site.

(68) Construct multi-use campgrounds in the Wheeler Wash area and/or the upper Lovell Canyon area; emphasize cooperative effort with Nevada Division of State Parks, if appropriate.

(69) Construct additional restrooms in the Kyle and Lee Canyon, and Deer Creek areas, including at Macks Canyon, Cathedral Rock, and appropriate high use trailheads or climbing areas.

(70) Cooperate with federal, state, local agencies, and permittees to provide radio message or electronic information signs on lower Kyle Canyon Highway and lower Lee Canyon Highway to alert road users to highway conditions and parking restrictions in the upper canyons.

(71) Develop additional snow play area in Kyle Canyon that can potentially be operated and managed by a concessionaire.

(72) Provide signage at Foxtail Snowplay area providing information on alternative parking areas to use when both lots at the snowplay area are full.

(73) Cooperate with federal, state, local agencies, and others to provide a multi-use trail network around the Spring Mountains.

(74) Provide a connecting trail link between the Bristlecone Trail (Trail 148) and the North Loop Charleston Peak Trail (Trail 146).

(75) Provide a connecting trail between the Bonanza Trail (Trail 151) and the Mt. Stirling WSA and the Wheeler Wash area.

(76) Provide a connecting trail between the Red Rock Canyon NCA and the Charleston Peak Trail.

(77) Develop a crest trail linking Mt. Potosi area to the Mt. Stirling area which utilizes existing trails to the extent possible.

(78) Develop a multi-use trail between Lee Canyon and Mud Springs.

(79) Working cooperatively with the BLM, develop or designate multi-use trails in the Cold Creek and Grapevine areas outside of the Mt. Stirling WSA.

(80) Working cooperatively with BLM and Nevada Division of State Parks, designate a multi-use trail system in the Wheeler Wash area.

(81) Construct restrooms at Blue Tree, Macks Canyon, and Archery Range designated group use sites.

SUITABILITY DETERMINATIONS

1. Recreation Development

The areas suitable for recreation development include the Cold Creek area, land around the periphery of the Mt. Stirling WSA, portions of the area between Kyle and Lee Canyon Highways east of Deer Creek Highway, roaded areas on the west side of the Spring Mountains, and portions of the Mt. Potosi area. In response to public concerns, a buffer zone around the community of Mountain Springs and lower Lovell Canyon limits new recreation development and commercial development by others on national forest system lands. In general, upper Kyle and Lee Canyons, west of Deer Creek Highway, are not suitable for recreation development, other than improvements to existing facilities, low standard facilities, and public contact/information facilities. These canyons are considered unsuitable for recreation development due to existing high use, resource concerns and biodiversity hotspots, flood and avalanche hazards, and traffic congestion.

The Mt. Charleston Wilderness is not suitable for new recreation development other than non-motorized trails. New, permanent roads and structures are generally prohibited in the three existing wilderness study areas. A large block of land, near Lost Cabin Springs, that is unfragmented by roads is also unsuitable for recreation development.

2. Recreation Opportunity

Existing Recreation Opportunity Spectrum (ROS) classes prepared for the central core of the SMNRA were established prior to the designation of the Mt. Charleston Wilderness. Other than revisions to these ROS classes to reflect the current wilderness management, few changes in desired ROS classes are proposed. Descriptions of ROS class changes are summarized below.

Higher elevation areas previously designated as Semi-Primitive Non-motorized (SPNM) are revised to Primitive where included in the Mt. Charleston Wilderness. Areas unfragmented by roads remain as SPNM ROS class, and include the three Wilderness Study Areas and other large blocks of unfragmented lands. Roaded areas generally remain as Roaded Natural ROS class.

3. Timber Production

The vast majority of the Spring Mountains National Recreation area is dominated by shrubs and forbs (creosote, blackbrush, alpine), or woodlands not capable of producing crops of industrial wood (pinyon-juniper, bristlecone). In the upper canyons, historic sawmills and charcoal kilns testify that timber has been harvested here, but most of these fell into disuse early in the century. Those lands capable of producing commercial timber - primarily the mixed conifer forests of Kyle and Lee Canyons - are much more valuable for their scenic and ecological values than as sources of wood products. With large ponderosa pines extremely scarce in the deserts of Southern Nevada, each tree becomes very important to those who live here.

The Toiyabe Forest Plan (page C-2) designates the forest lands of the SMNRA as unsuitable for timber production. After reviewing these lands as prescribed in 36 CFR 219.14(d), The Spring Mountains NRA General Management Plan **would continue to classify all of the SMNRA as not suited for timber production**. Timber will not be cut or sold from the SMNRA except for salvage, cutting necessary to achieve other resource objectives (e.g. hazard trees within a campground, shaded fuelbreaks, fuel load reductions, or trees which must be removed during construction projects), and cutting necessary to achieve desired ecological conditions (e.g. green fuelwood area within pinyon-juniper).

4. Domestic Livestock

Under 36 CFR 219.20(a), the Forest Plan must determine the suitability of national forest system lands for grazing or browsing by domestic livestock. While the central core of the SMNRA (the "old district") has not been grazed since early in this century, if at all, some allotments on the enhancement lands were grazed as recently as 1993 under BLM permits. None are currently active, though evidence of grazing remains, including fences, stock tanks, and changes in vegetation composition.

The vegetation of the Spring Mountains National Recreation area developed in an environment of scarce water and arid conditions; this is a harsh environment, with less than ideal conditions for forage or browse production. Historically, the large grazing animals of the Spring Mountains included deer and desert bighorn sheep. Since the turn of the century, horses, burros, and elk have been introduced to this ecosystem. Along with the native wildlife, these animals can stretch the available water and forage to their limits, with important effects on riparian and upland vegetation and spring flows. Even without grazing, this system is at or above its capacity for large grazing animals.

Accordingly, the Spring Mountains NRA General Management Plan **would designate the SMNRA as not suitable for grazing by domestic livestock.** The eight (inactive) allotments on enhancement lands would be closed. Grazing on the SMNRA would only be approved to accomplish other resource objectives (e.g., cattle within a fuelbreak to prevent regrowth of woody species and limit fire danger). Grazing for livestock production purposes would not be approved.

5. Wild Horses and Burros

Those areas as shown on Map 14 are suitable for wild horse and burro use. This is approximately 838,860 acres. This increases the suitable acreage by approximately 324,971 acres. The unsuitable area in the center of the range has increased by approximately 95,694 acres.

Trout Canyon, Wallace Canyon, Wheeler Wash, Wheeler Pass, and Cold Creek are suitable for wild horse and burro use. The Lovell Canyon, Summit, and Wash Herd Unit and the Lower Deer Creek Herd Unit are removed from the Spring Mountains Wild Horse and Burro Territory. Wild horses and burros are not currently using Lovell Canyon. Horses and burros do use Deer Creek, but this herd is relatively small. Collisions between horses and vehicles on Kyle Canyon and Lee Canyon Highways make the Deer Creek herd a hazard to public safety.

Areas within the Spring Mountain Territory that are more than 10 miles from a water source, or have more than 30 percent slope are considered unsuitable for wild horse and burro use. These areas are shown to be within the territory but have not been used when determining Appropriate Management Levels.

6. Minerals Development

The Spring Mountains National Recreation Area Act withdrew almost all of the SMNRA from:

- Location, entry, and patent under the mining laws; and
- Operation under the mineral leasing and geothermal leasing laws.

Approximately 480 acres in the extreme southern portion of the SMNRA were exempted from this minerals withdrawal, and remain open to entry under mining and leasing laws. In addition, the withdrawal does not effect valid rights existing at the time of the Spring Mountains National Recreation Area Act. Except as provided in this paragraph, the Spring Mountains National Recreation Area is not available for minerals development.

Appendix

APPENDIX

Table 1. Known Threatened, Endangered, Sensitive Species, and Species of Concern.

Common/Scientific Name	Distribution
Plants:	
Rough Angelica (*Angelica scabrida*)	SM
Charleston Pussytoes (*Antennaria soliceps*)	SM
Rosy King Sandwort (*Arenaria kingii* ssp *rosea*)	SM
Clokey Milkvetch (*Astragalus aequalis*)	SM
Black Woolypod (*A. funereus*)	W
Halfring Milkvetch (*A. mohavensis hemigyrus*)	W
Clokey Eggvetch (*A. oophorous clokeyanus*)	SM
Spring Mountain Milkvetch (*A. remotus*)	SM
Upswept Moonwort (*Botrychium ascendens*)	W
Dainty Moonwort (*B.crenulatum*)	W
Clokey thistle (*Cirsium clokeyi*)	SM
Jaeger Draba (*Draba jaegeri*)	SM
Charleston Draba (*D. paucifructa*)	SM
Nevada Willowherb (*Epilobium nevadensis*)	W
Clokey Greasebush (*Glossopetalon clokeyi*)	SM
Smooth Dwarf Greasebush (*G. pungens glabra*)	W
Hidden Ivesia (*Ivesia cryptocaulis*)	SM
Jaeger ivesia (*I. jaegeri*)	W
Charleston Pinewood Lousewort (*Pediularis semibarbata charlestonsis*)	NV
Yellow Twotone Beardtongue (*Penstemon bicolor* spp *bicolor*)	NV
Rosy Twotone Beardtongue (*P. bicolor* ssp *roseus*)	W
Death Valley Beardtongue (*P. fruticiformis* ssp *amargosae*)	W
Keck beardtongue (*P. leiophyllus* var. *keckii*)	SM
Bean cinquefoil (*Potentilla beanii* aka *P. concinna*)	SM
Clokey Mountain Sage (*Salvia dorrii clokeyi*)	NV
Clokey Catchfly (*Silene clokeyi*)	SM
Charleston Tansy (*Sphaeromeria compacta*)	SM
Charleston Kittentails (*Synthyris ranunculina*)	SM
Charleston Grounddaisy (*Townsendia jonesii tumulosa*)	NV
Invertebrates:	
Spring Mtn Acastus Checkerspot (*Chlosyne acastus*)	SM
Dark Blue (*Euphilotes enoptes* ssp)	SM
Morand Checkerspot (*Euphydryas anicia morandi*)	SM
Spring Mtn Comma Skipper (*Hesperia comma* ssp)	SM
Nevada Admiral (*Limenitus weidemeyerii nevadae*)	NV
Spring Mtn Icarioides Blue (*Plebejus icarioides* ssp)	SM
Mt. Charleston Blue (*P. shasta charlestonensis*)	SM
Undescribed springsnail (*Pyrgulopsis sp. nova* #1)	W
Undescribed springsnail (*P. sp. nova* #58)	W
Carole Silverspot (*Speyeria zerene carolae*)	SM
Palmers Chipmunk (*Eutamias palmeri*)	SM
Allens (Mexican Big-eared Bat (*Idionycteris phyllotis*)	W

Table 1. Known Threatened, Endangered, Sensitive Species, and Species of Concern. (continued)

Western Small-footed Myotis (*Myotis ciliolabrum*)	W
Yuma Myotis (*M. yumanensis*)	W
Long-legged Myotis (*M. volans*)	W
Fringed Myotis (*M. thysanodes*)	W
Long-eared Myotis (*M. evotis*)	W
Pale Townsends Big-eared Bat (*Plecotus townsendii pallescens*)	W
Birds:	
Northern Goshawk (*Accipiter gentilis*)	W
Western Burrowing Owl (*Athene cunicularia hypugea*)	W
Flammulated Owl (*Otus flammuleolus*)	W
Fish:	
Lahontan Cutthroat Trout (*Oncorhynchus clarki henshawi*)	W
Reptiles:	
Desert Tortoise (*Gopherus agassizii*)	W
Banded Gila Monster (*Heloderma suspectum cinctum*)	W
Chuckwalla (*Sauromalus obesus*)	W

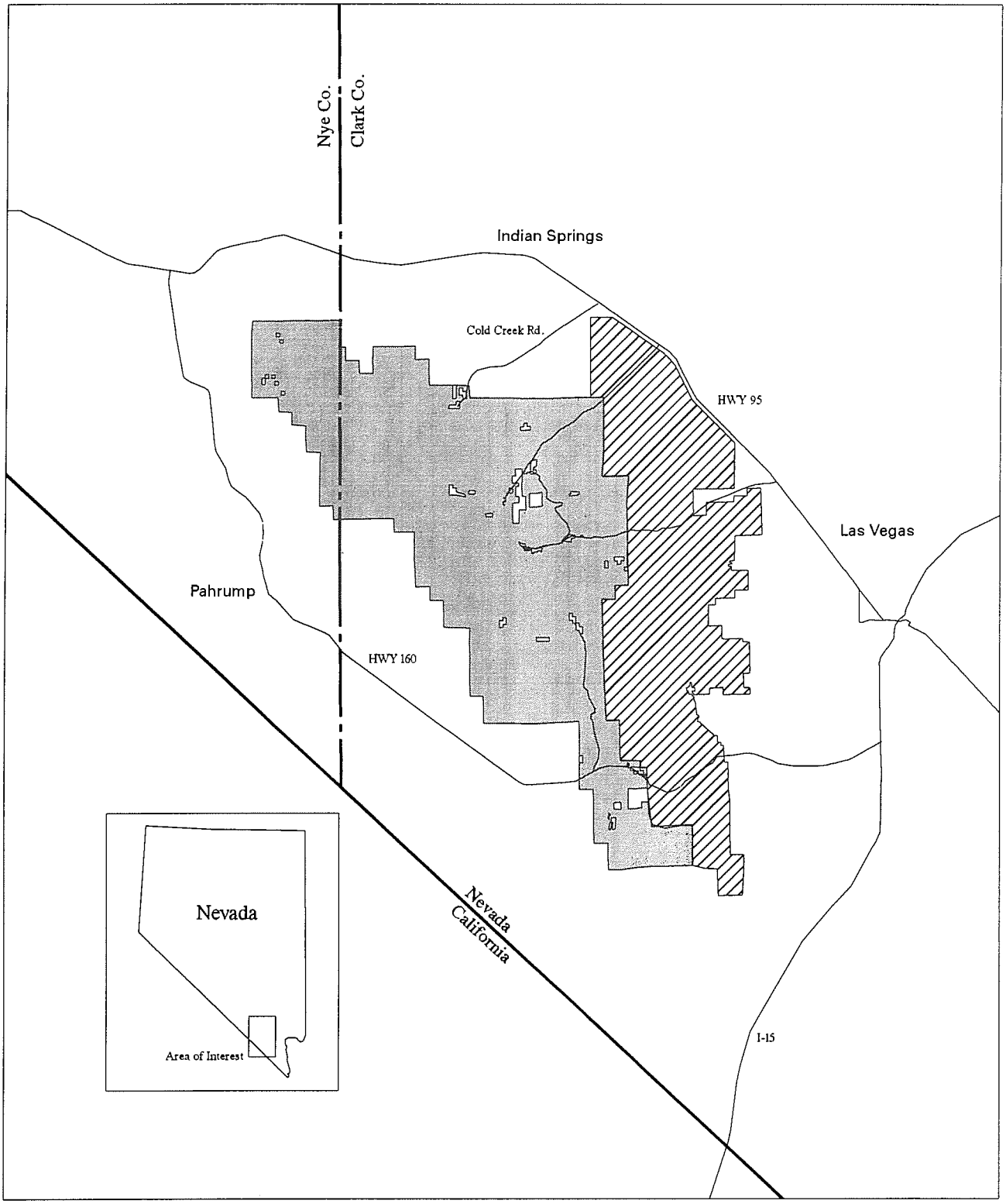
Table 2. Potential Threatened, Endangered, Sensitive Species, and Species of Concern.

Common/Scientific Name	**Distribution**
Plants:	
White Bearpoppy (*Arctomecon merriamii*)	W
Alkali Mariposa Lily (*Calochortus striatus*)	W
Mammals:	
Mexican Long-tongued Bat (*Choeronycteris mexicana*)	W
Spotted Bat (*Euderma maculatum*)	W
Greater Western Mastiff Bat (*Eumops perotis californicus*)	W
California Leaf-nose Bat (*Mactotus californicus*)	W
Cave Myotis (*Myotis velifer*)	W
Big Free-tailed Bat (*Nyctinomops macrotis*)	W
Birds:	
Southwest Willow Flycatcher (*Empidonax alnorum*)	W
Peregrine Falcon (*Falco peregrinus*)	W
Mexican Spotted Owl (*Strix occidentalis*)	W

Distribution Abbreviations: SM = Spring Mountains Endemic; NV = Southern Nevada Endemic; W = More Widespread and in Adjacent States.

Maps

SMNRA and RRCNCA



General Legend
- SMNRA Boundary
- Major Roads
- Red Rock Canyon National Conservation Area
- SMNRA

SCALE 1:700000

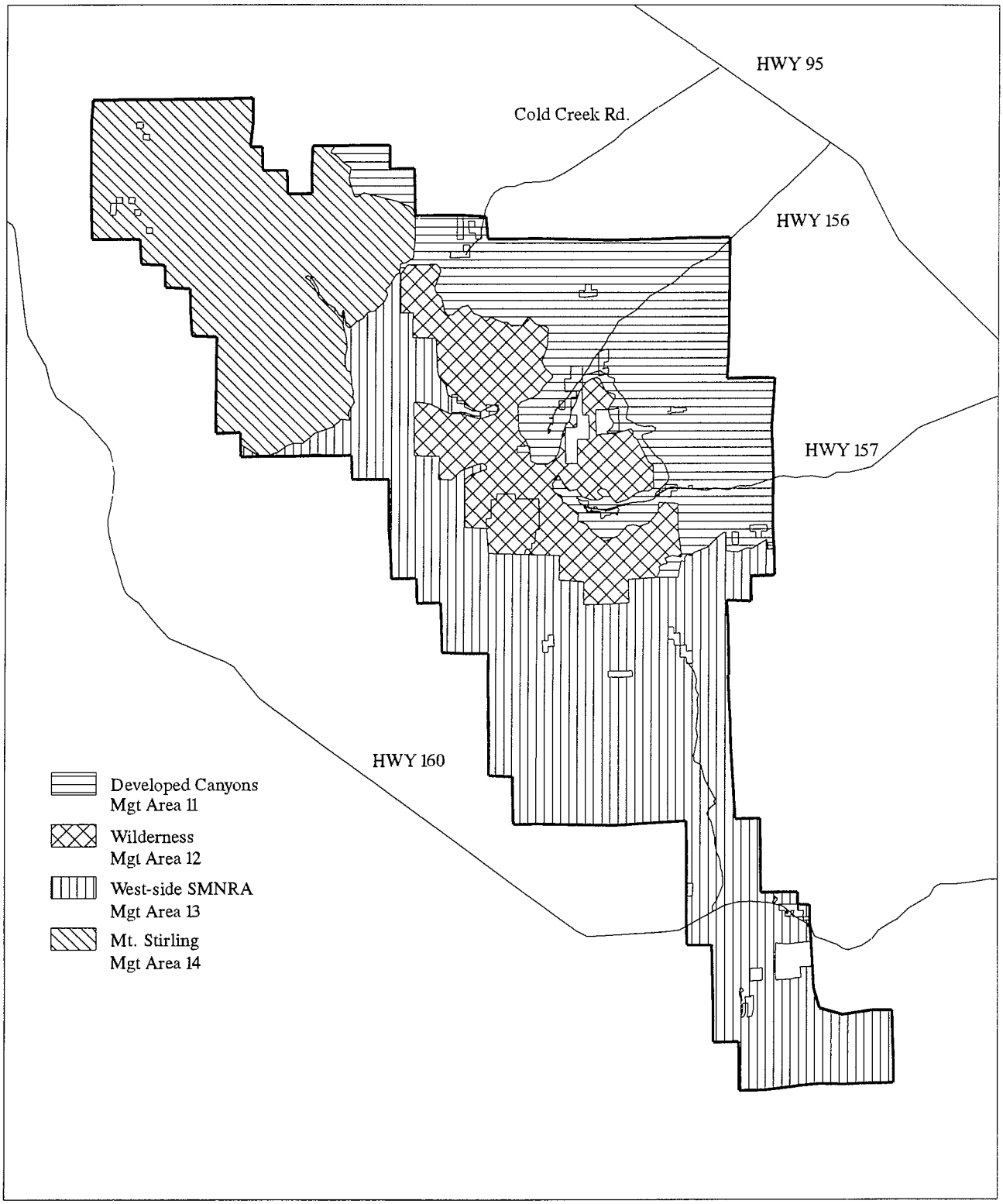
2 0 2 4 6 8 10

MILES

N

Map 1

Management Areas



General Legend
SMNRA Boundary
Major Roads

SCALE 1:400000
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MILES

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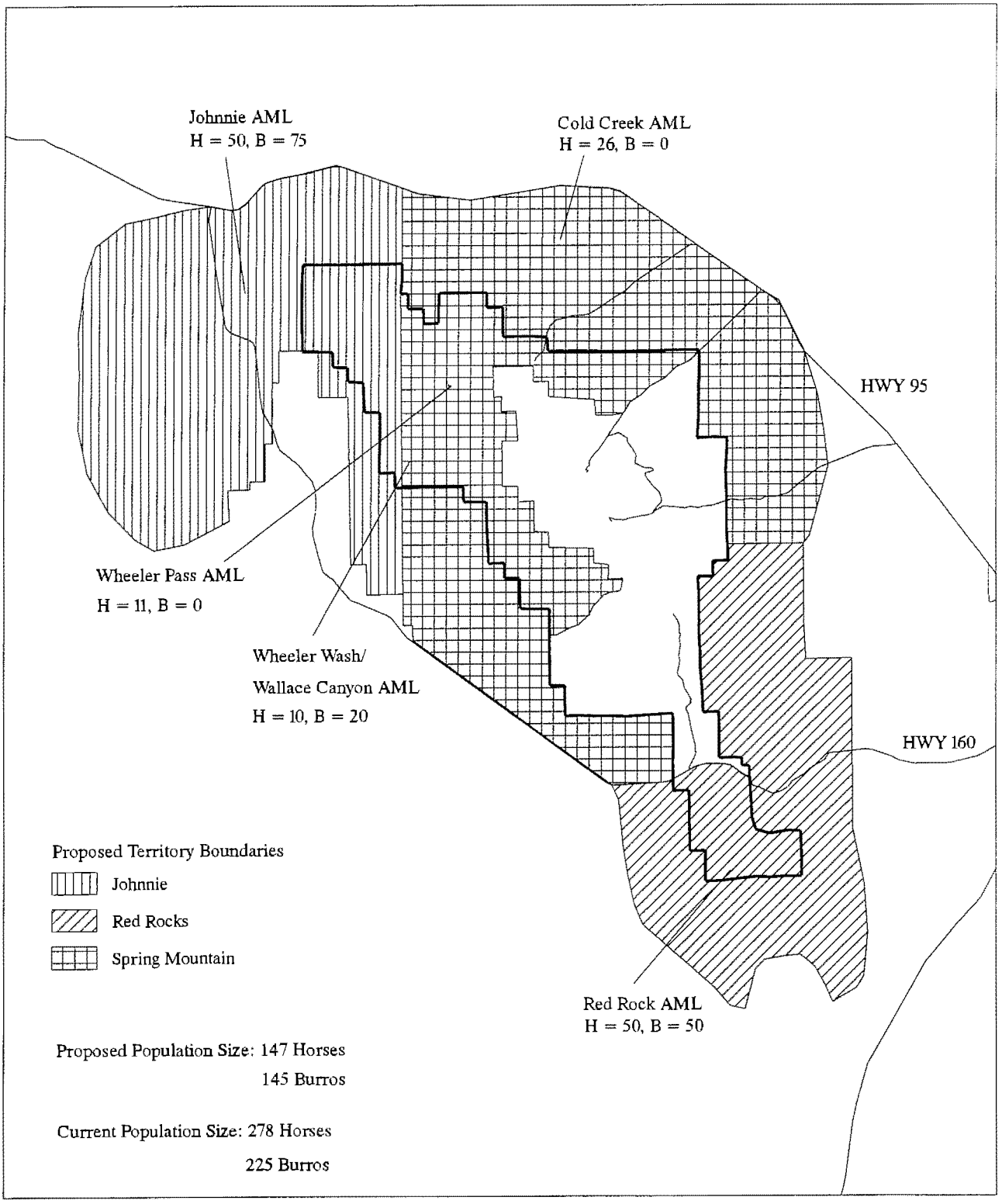
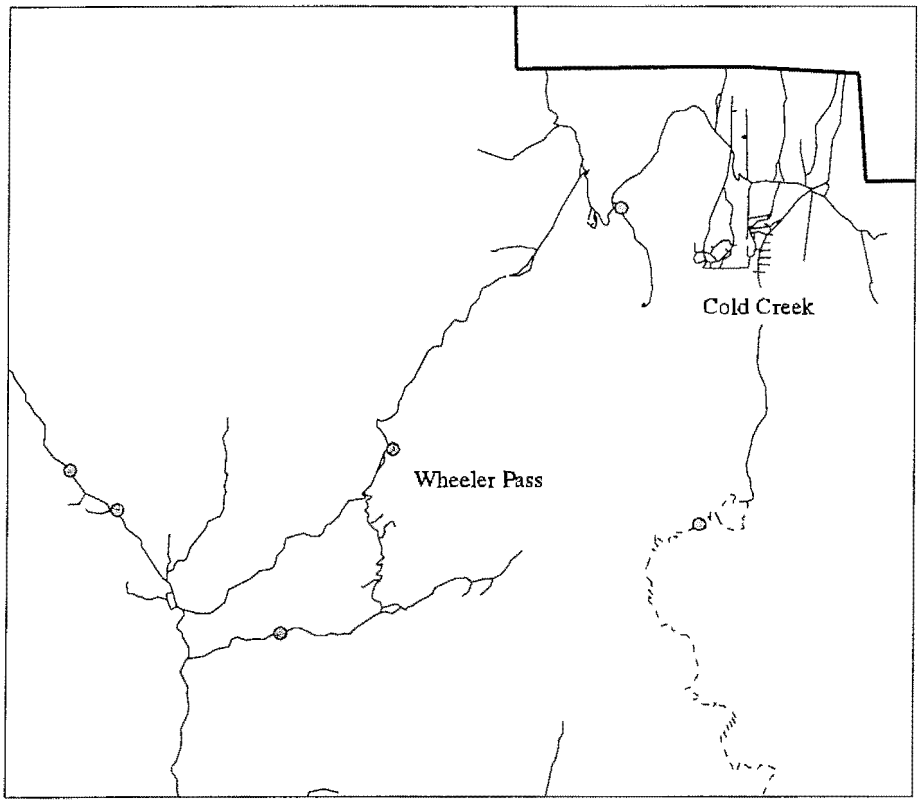
Map 2

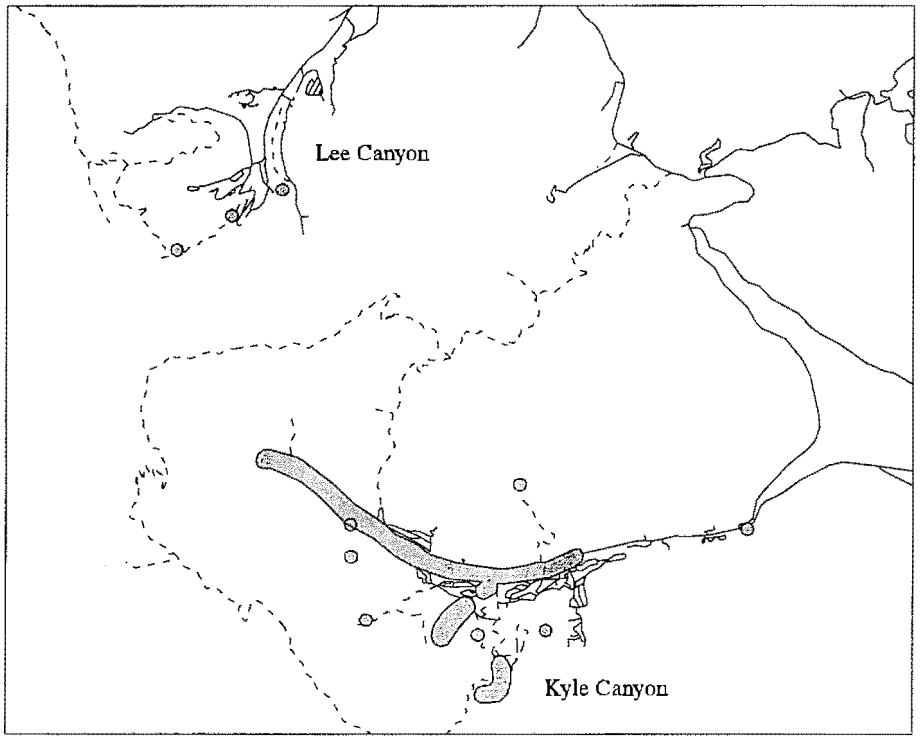
WH&B Populations - 7 percent of Resource



Map 3

Buffer Zone Around *Angelica scabrida* & *Astragalus oophorus var. clokeyanus*





General Legend

SMNRA Boundary

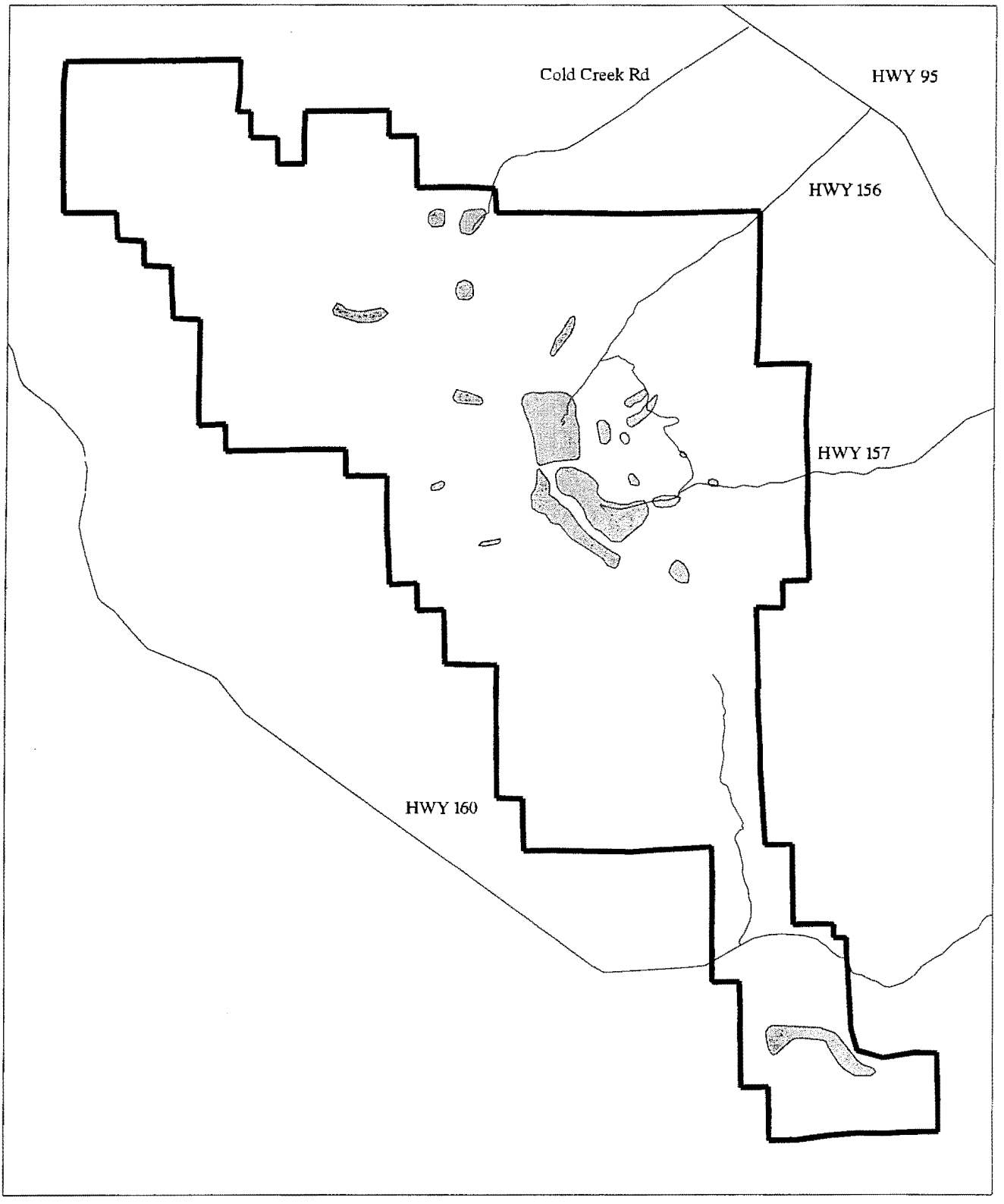
Major Roads

Trails

N

Map 4

Biodiversity Hotspots - Priority Areas



General Legend

- SMNRA Boundary
- Major Roads
- Priority Areas

SCALE 1:350000

2 0 2 4

MILES

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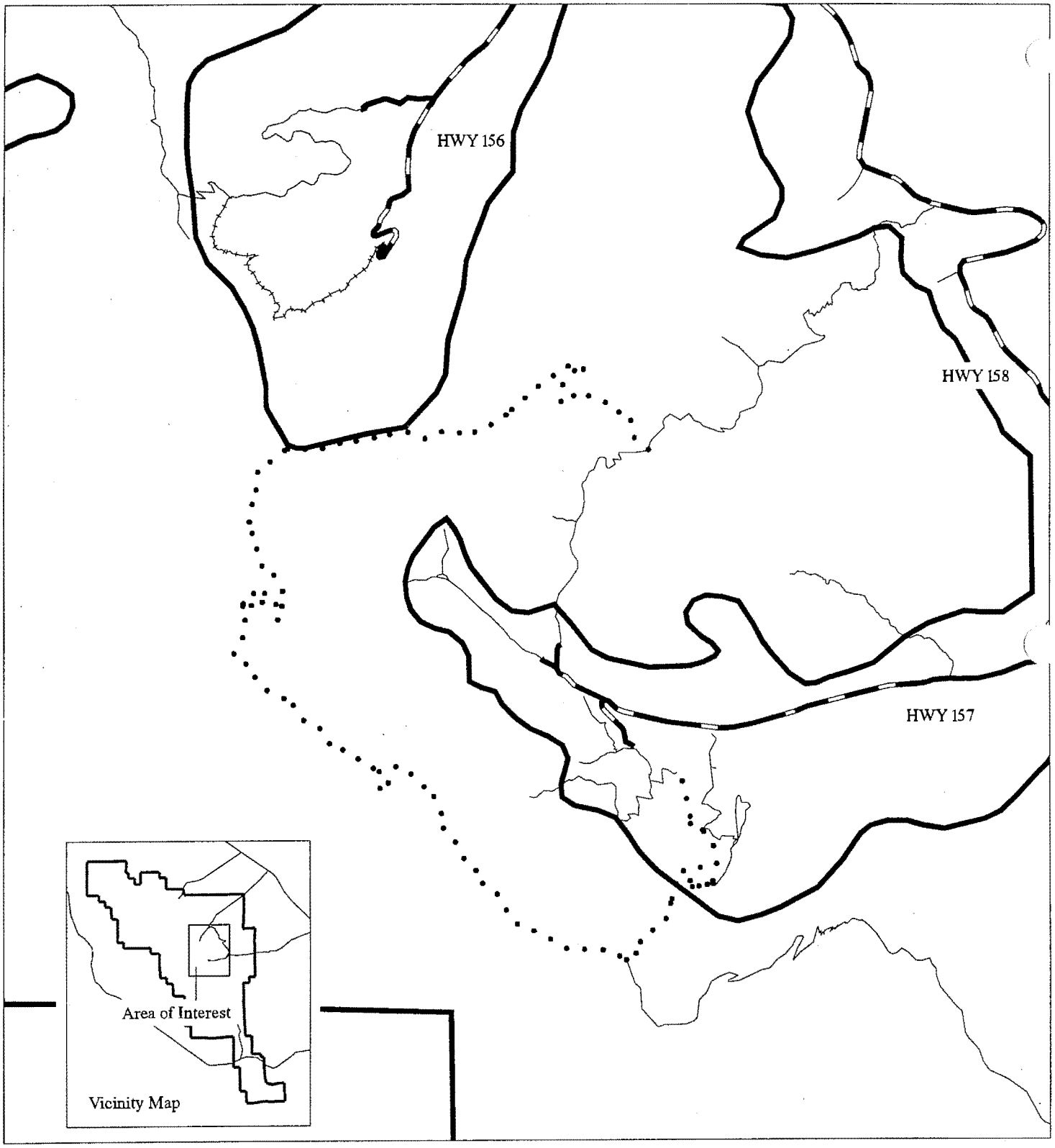
Species data provided The Nature Conservancy

Map 5

Equestrian Access



General Legend

- Open
- Closed
- Day Use Only
- Wilderness Boundary
- Major Roads

SCALE 1:58400

1 0 1

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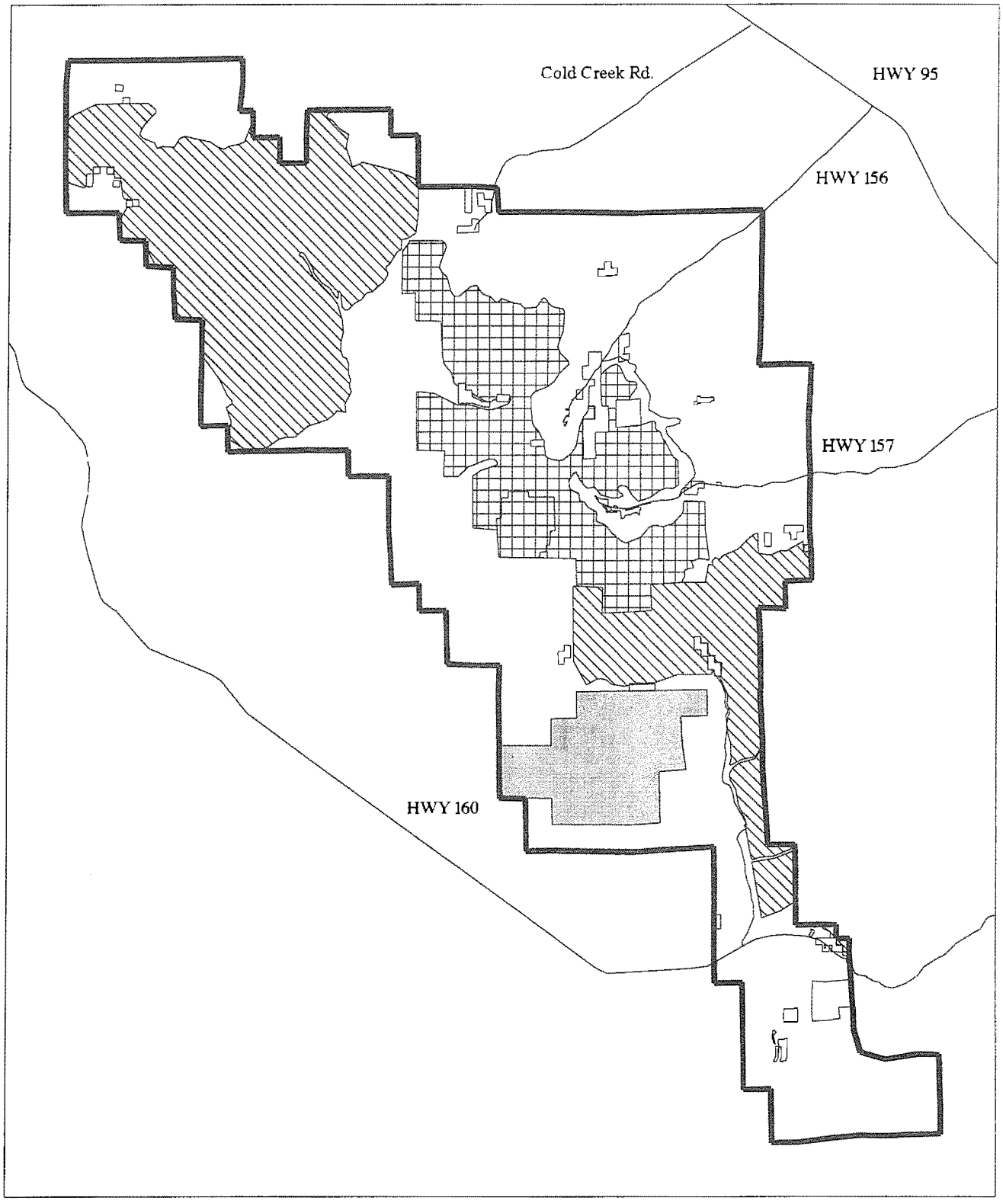
Map 6

Unfragmented Lands



General Legend

- SMNRA Boundary
- Major Roads
- Unfragmented Lands
- WSA
- Wilderness

SCALE 1:350000

2 0 2 4

MILES

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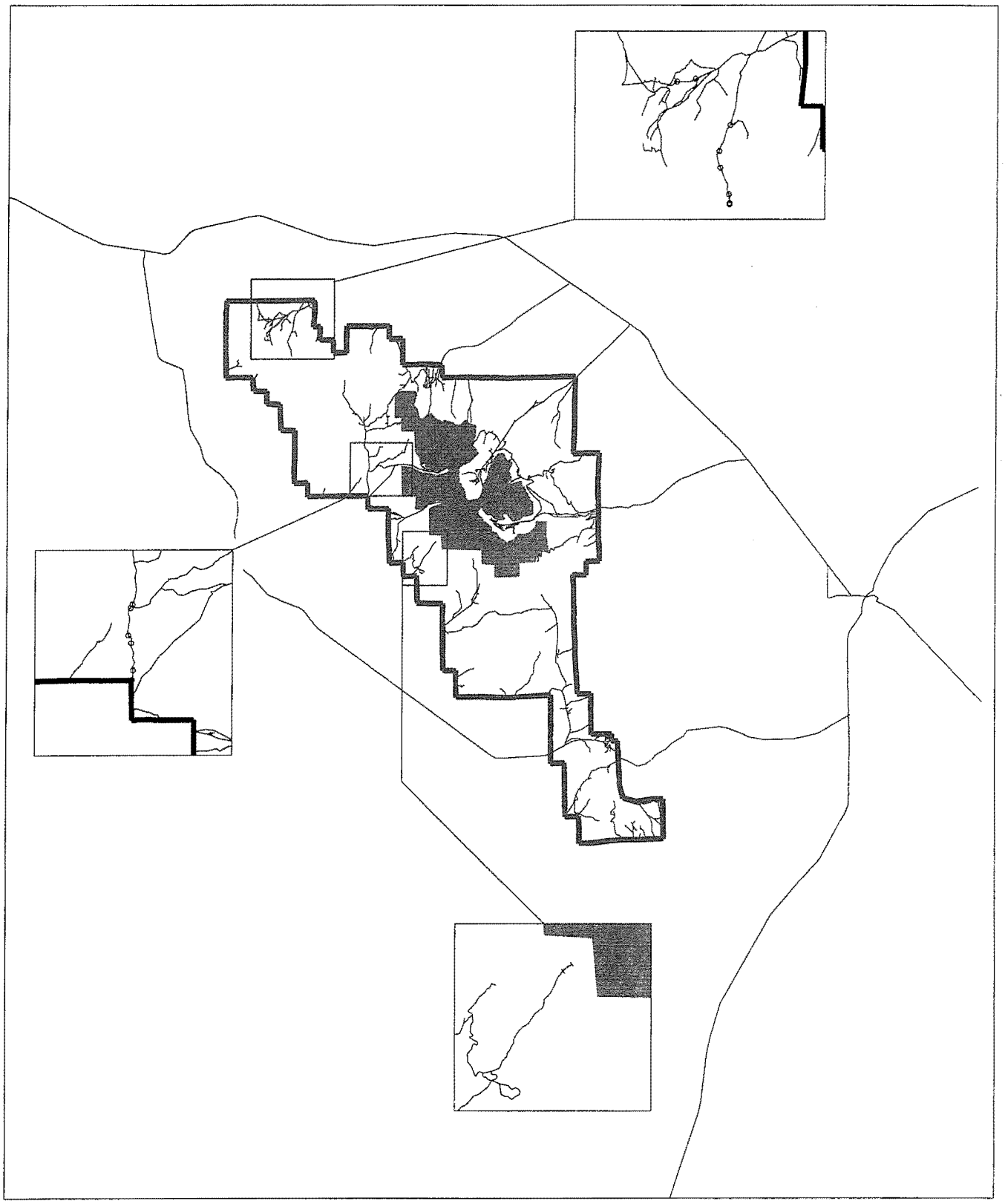
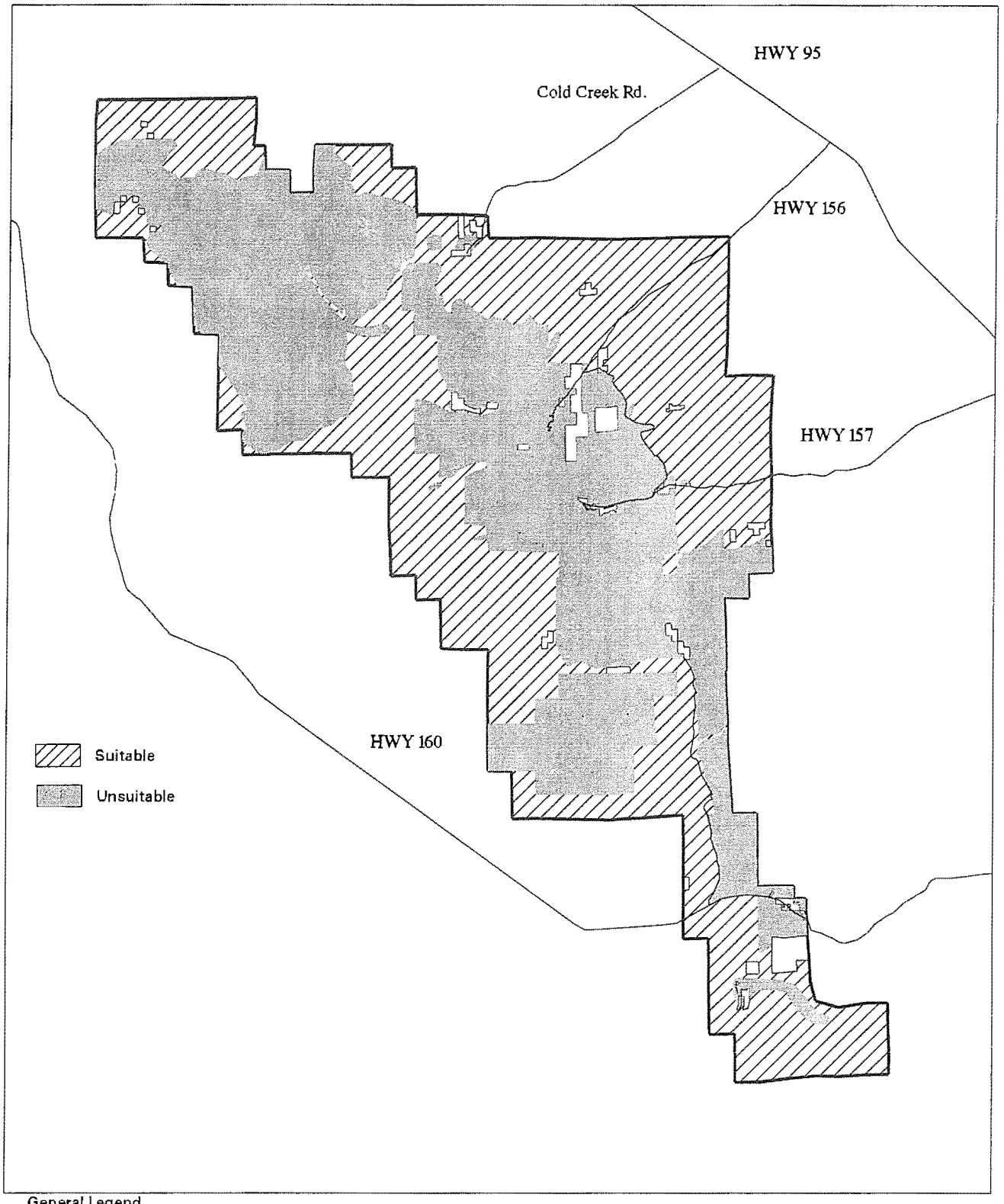
Map 7

Road Management



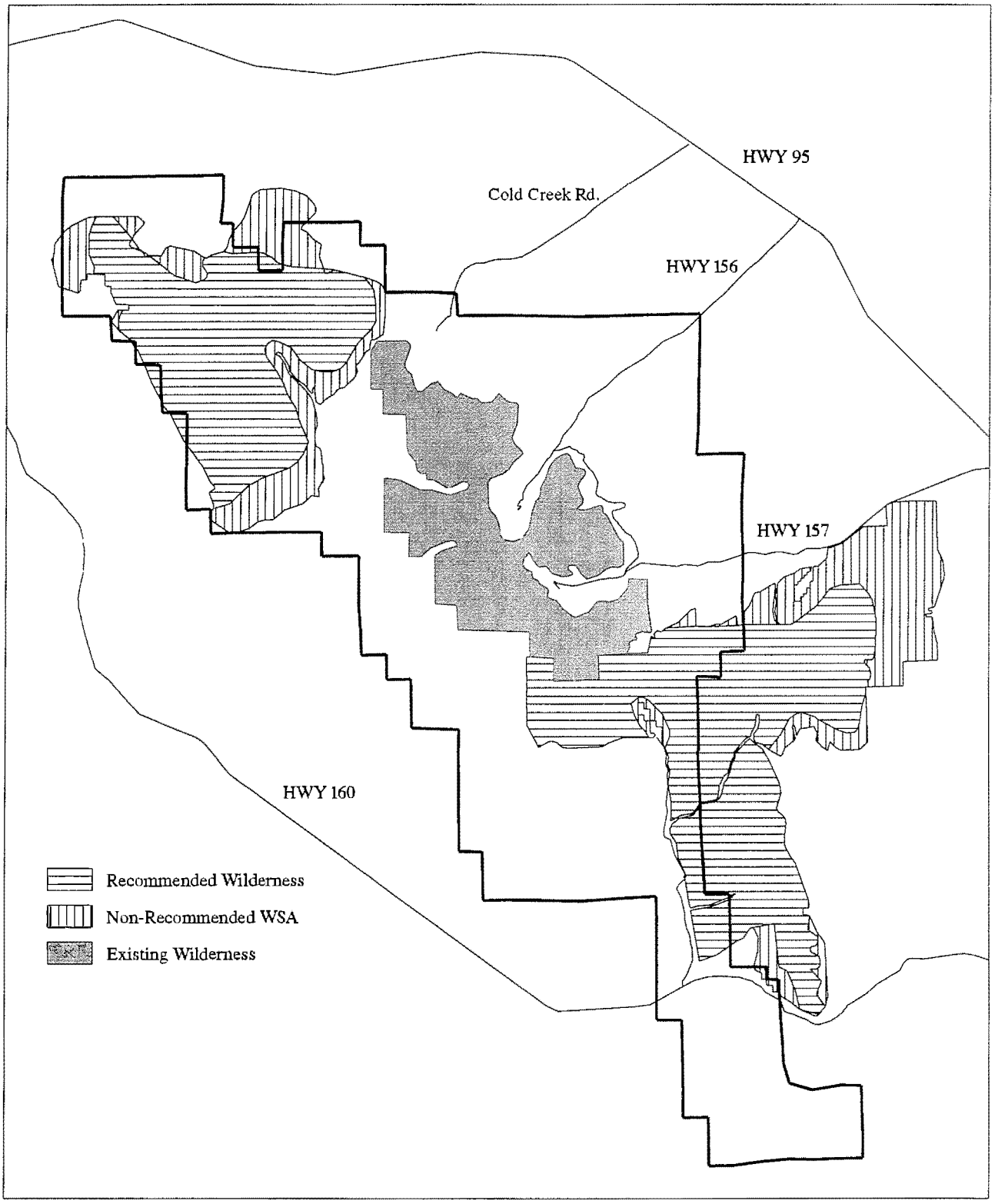
Map 8

Suitability for Recreation Development



Map 9

Recommended Wilderness



General Legend
SMNRA Boundary
Major Roads

SCALE 1:400000
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MILES

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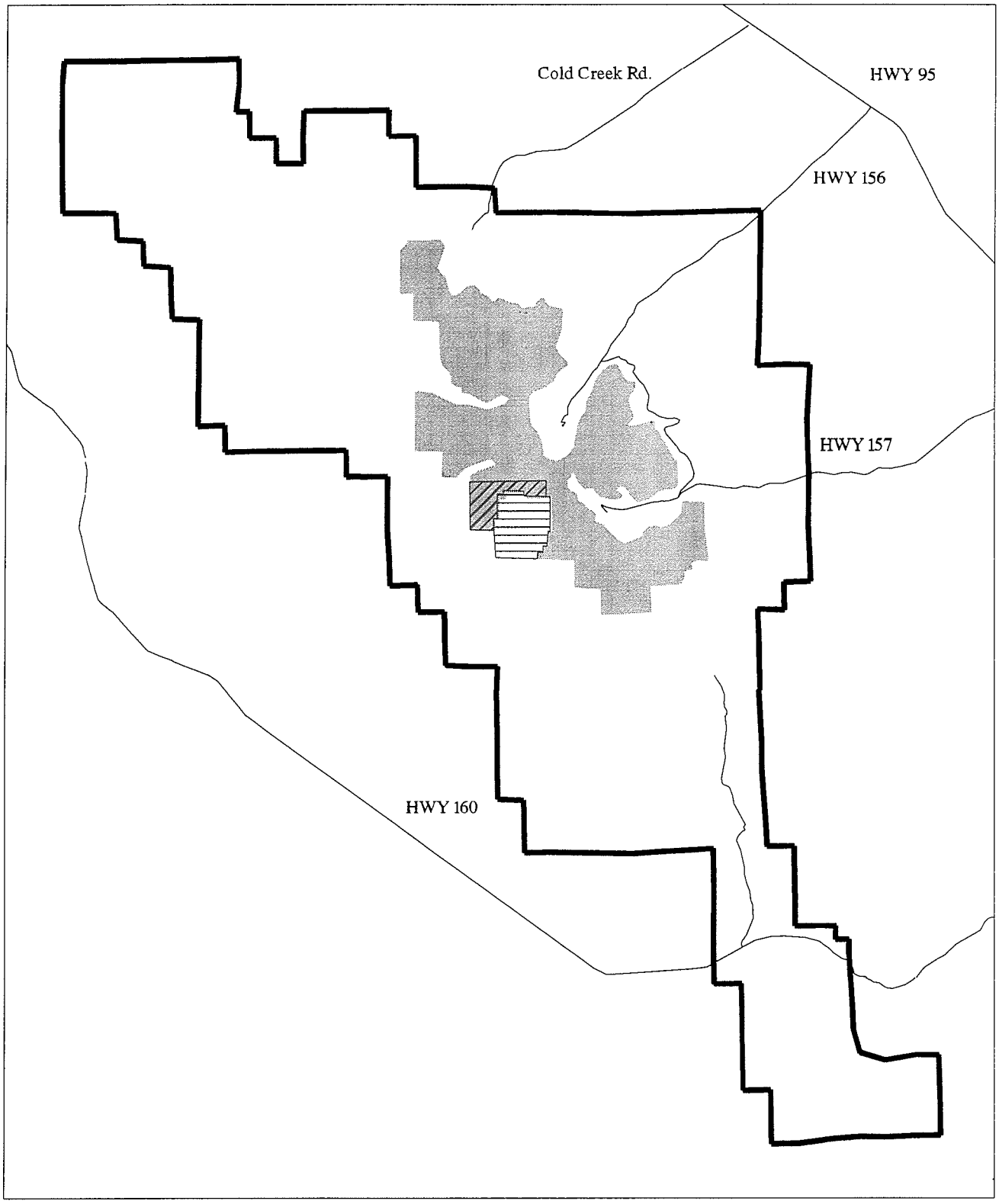
Map 10

RNA Expansion



General Legend

- SMNRA Boundary
- Major Roads
- Existing RNA
- Proposed Expansion
- Wilderness

SCALE 1:350000

2 0 2 4

MILES

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Map 11