APPENDIX C

North McCullough Wilderness Management Plan

U.S. Department of the Interior

Bureau of Land Management

Las Vegas Field Office
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NORTH MCCULLOUGH WILDERNESS MANAGEMENT PLAN

Sloan Canyon National Conservation Area

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NORTH MCCULLOUGH WILDERNESS MANAGEMENT PLAN

1.0 INTRODUCTION

1.1 Scope of the Wilderness Management Plan

Developed in conjunction with the Sloan Canyon National Conservation Area (NCA) planning process, this North McCullough Wilderness Management Plan (WMP) provides specific direction for the management of the North McCullough Wilderness (Wilderness) over the next 10 years. It (1) describes the Wilderness including existing conditions, features, and uses; (2) identifies the goals and objectives in the management of the Wilderness; (3) identifies the issues as developed by Bureau of Land Management (BLM) specialists, other agencies, and the public during scoping for the Sloan Canyon NCA Resource Management Plan (RMP) and Environmental Impact Statement (EIS); (4) identifies assumptions concerning changes expected during the life of the WMP; (5) presents a management strategy to maintain or improve the natural character of the Wilderness; (6) provides specific direction for the management of the various resources and activities within the Wilderness to ensure the preservation of the area's wilderness character, (7) establishes a monitoring strategy that tracks the outcome of activities undertaken within the Wilderness; and (8) identifies a sequence of activities necessary for the implementation of this WMP.

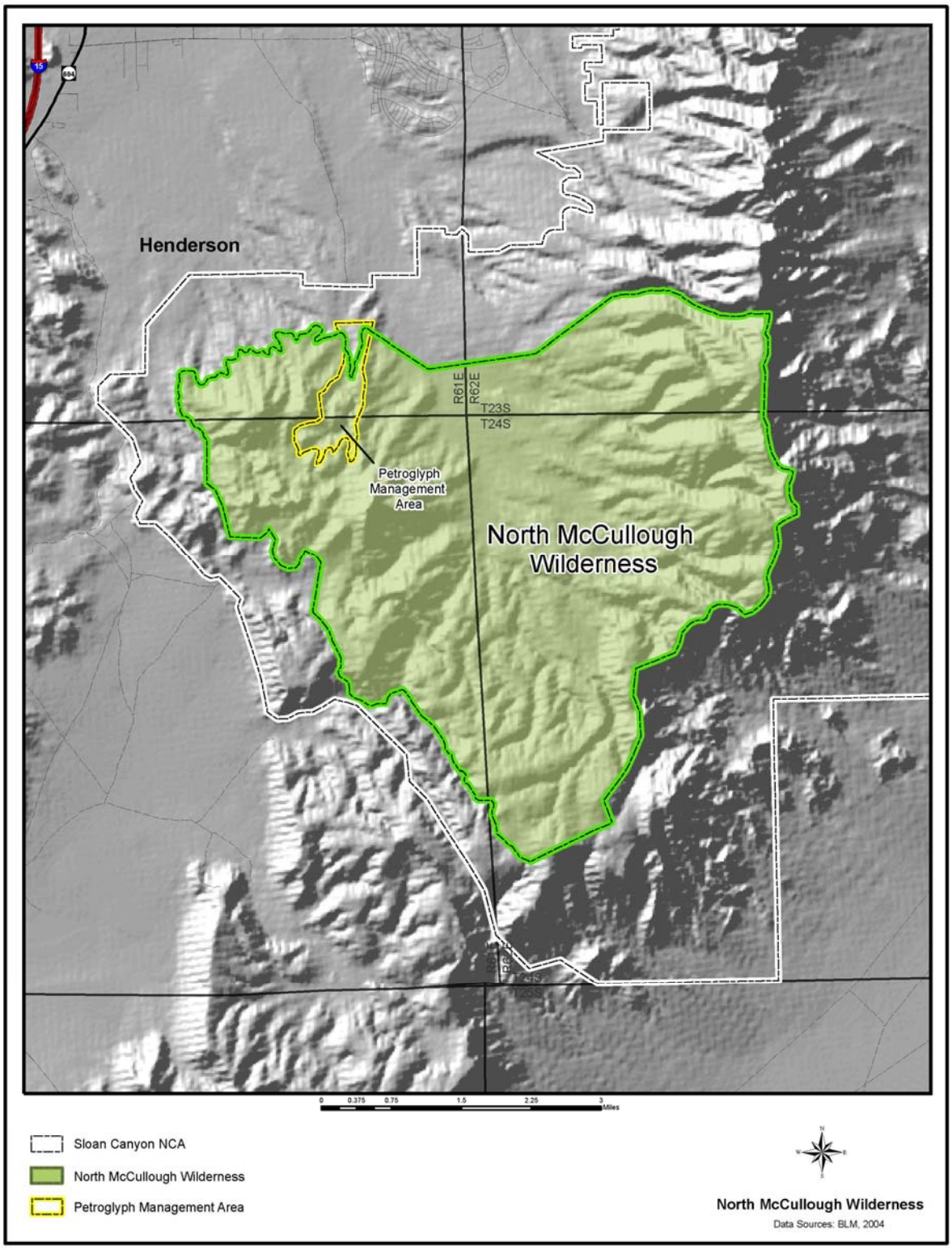
In addition to the proposed management of the North McCullough Wilderness presented in this plan, the Sloan Canyon NCA Draft RMP/EIS provided a full description and analyses for four other alternatives that were considered but not selected as part of the proposed plan. The Record of Decision for the Sloan Canyon NCA RMP/Final EIS (FEIS) will serve as the decision document for this plan.

This WMP is consistent with the Clark County Conservation of Public Lands and Natural Resources Act of 2002 (the Clark County Act); the Wilderness Act of 1964; Grazing Guidelines (House Report No. 101-405, Appendix A); and Wildlife Management Guidelines (House Report No. 101-405, Appendix B). It is also consistent with Code of Federal Regulation (CFR) 43 Part 6300; BLM Manuals 8560 (Management of Designated Wilderness Areas) and 8561 (Wilderness Management Plans); BLM Handbook H-8560-1 (Management of Designated Wilderness Areas); *Proposed Las Vegas Resource Management Plan and Final Environmental Impact Statement* (BLM 1998a); Memorandum of Understanding (MOU) between the BLM and the Nevada Department of Wildlife (NDOW) (BLM MOU 6300-NV930-0402, Supplement 9); and the *Clark County Multiple Species Habitat Conservation Plan* (CCDCP 2000).

1.2 Wilderness Overview

On November 6, 2002, the Clark County Act established the Sloan Canyon NCA. The Clark County Act also designated the North McCullough Wilderness (Figure C.1), which totals 14,765 acres and lies entirely within the southwest portion of the NCA. Prior to designation, most of the current Wilderness was part of the former North McCullough Wilderness Study Area (WSA).

Figure C.1. North McCullough Wilderness



The North McCullough Wilderness is located to the south and immediately adjacent to the Las Vegas Valley in the north half of the north-south trending McCullough Range (Figure C.2). It is roughly triangular in shape and spans approximately 6 miles at its longest and widest points. The eastern boundary follows the crest of the escarpment, the base of which forms the eastern edge of the NCA. The volcanic features that rim Hidden Valley define the western boundary. The northern boundary crosses Sutor Hills, Sloan Canyon and a large basin that contains the Sloan Canyon Petroglyph Site and other prominent features such as Sutor and Hanna Peaks. The massive, rounded to flat-topped volcanic peaks have a gradual western slope. The Wilderness interior is comprised of a broad two-mile wide central valley separating the main ridgeline to the east, from the rugged Sutor Hills. Elevations range from 2,850 feet at the lower end of the central valley to 5,058 feet at the ridgeline of the McCullough Range on the east side of the Wilderness. The North McCullough Wilderness is volcanic in origin and examples of lava flows, ash falls and glassy zones are clearly displayed in the Wilderness.

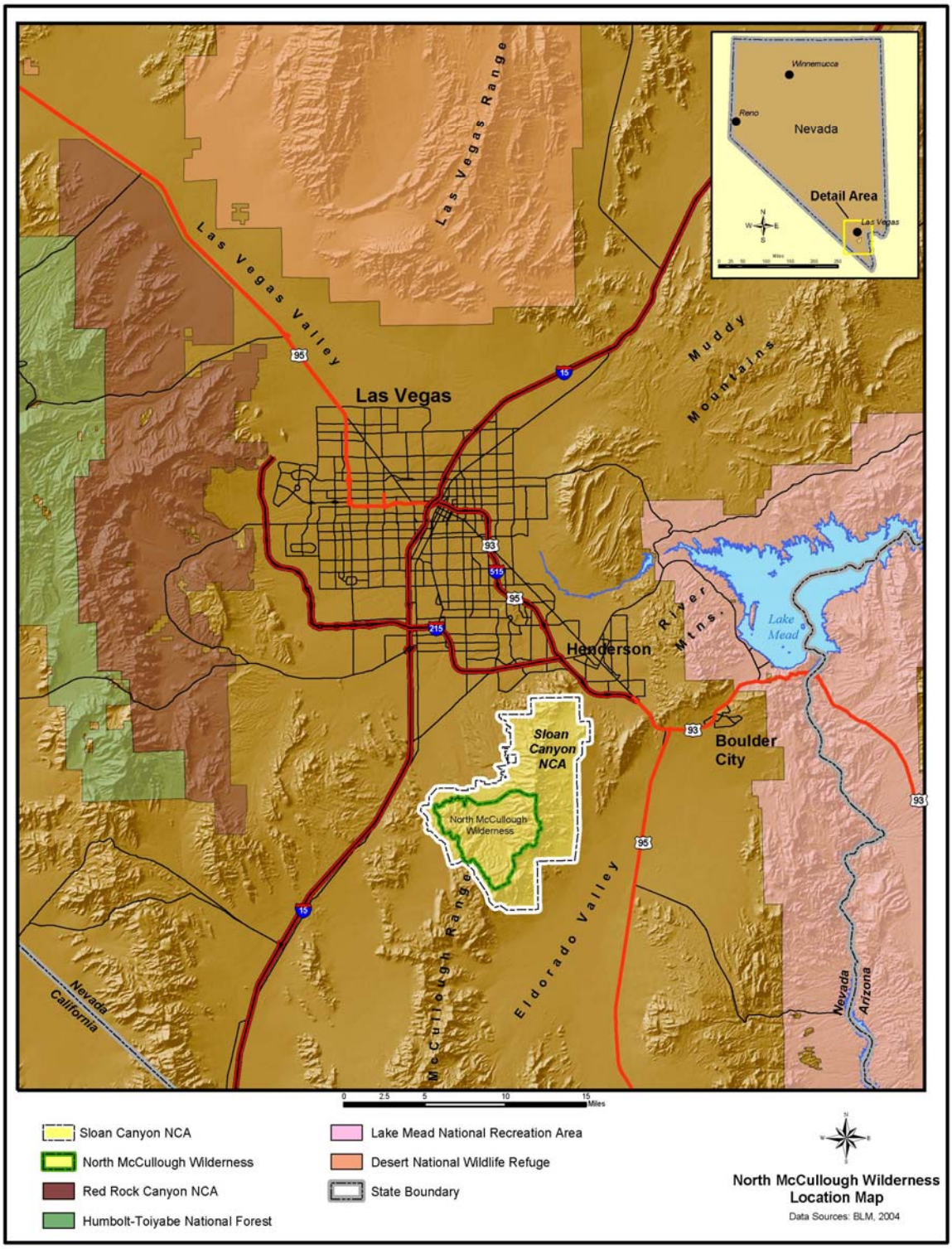
Looking north at the proximity of the Las Vegas Valley from the North McCullough Wilderness.

The North McCullough Wilderness consists of the Mojave Desert scrub vegetation community. This community is primarily composed of low, widely spaced shrubs, including the creosote bush (*Larrea tridentata*) and the white bursage (*Ambrosia dumosa*). Other affiliated community shrubs include ephedra (*Ephedra* spp.), brittlebrush (*Encleia virginensis*), burro bush (*Hymenoclea salsola*), bebbia (*Bebbia juncea*), and desert saltbrush (*Atriplex polycarpa*). Characteristic species associated with the Mojave Desert include Mojave yucca (*Yucca schidigera*), teddybear cholla (*Opuntia bigeloviai*), and hedgehog cacti (*Echinoceres* spp.). Black grama grass (*Bouteloua eriopoda)*, not known to occur elsewhere in Nevada, is found in the Wilderness. Short-lived annual and perennial wild flowers appear in late March, April, and May, and when prompted by winter rains.

Four vegetation associations are represented within the Sloan Canyon NCA and the Wilderness: (1) volcanic basalt slope association, (2) moderate creosote (greater than 30 percent cover), (3) sparse creosote/bursage mix, and (4) desert wash association (BLM 2004a). Detailed descriptions of the vegetation associations are included in Section 3.12 and Figure 3.10 of the Sloan Canyon RMP/EIS.

Although only one vegetation community, Mojave Desert scrub, is represented in the Wilderness, it supports a variety of wildlife species including desert bighorn sheep (*Ovis canadensis nelsoni*), Gila monster (*Heloderma suspectum cinctum*), and chuckwalla (*Sauromalus obesus*). The primary natural factors that influence populations and distribution of wildlife are water availability, vegetation, topography, and weather patterns. To date, the actual number of wildlife species occurring within the Wilderness is unknown; however, vertebrate wildlife species found within its borders represent three major classes: reptiles, birds, and mammals.

Figure C.2. North McCullough Wilderness - Location Map



Wildlife Special Status Species include species federally listed as threatened and endangered, proposed for listing, or candidates for listing under the Endangered Species Act. They also include species designated by each BLM State Director as sensitive and those listed, or proposed for listing, by a State in a category implying potential endangerment or extinction. Presently, the Mojave population of the desert tortoise (*Gopherus agassizii*) is listed as threatened and is the only federally protected species located in the NCA and potentially within the Wilderness (U.S. Fish and Wildlife Service 2003). A listing of Wildlife Special Status Species that may be found in the North McCullough Wilderness is presented in Table 3.6 of the Sloan Canyon RMP/EIS.

No natural perennial water sources exist within the Wilderness, but high-intensity thunderstorms can produce rapid runoff and flash flooding. Sloan Canyon hosts an ephemeral stream where water is found in the channel only during, and immediately after, rainstorms. The North McCullough Slickrock Catchment #1 (Project #4916) is the only wildlife water development (guzzler) within the Wilderness and was installed before Wilderness designation, while the area was a WSA.

Several manmade disturbances and developments exist within the North McCullough Wilderness. Approximately 3.75 miles of worn-in two-track vehicle routes, due to prior unauthorized off-highway vehicle (OHV) travel, can be found. A small rock and motor dam and a dug well are also present within the central valley of the Wilderness.

The currently low levels of recreation use within the North McCullough Wilderness is expected to increase with the rapid growth rate of the Las Vegas Valley and as information about recreational opportunities within the Wilderness and NCA becomes more available. Except for some recent monitoring of visitation to the Sloan Canyon Petroglyph Site, visitor use has not been closely monitored.

Generally the Wilderness receives low levels of dispersed recreational use primarily because of its rugged terrain and limited vehicle access to its boundary. There are opportunities for wildlife watching and permitted hunting in the Wilderness. Hiking and horseback riding opportunities abound within the Wilderness, with destinations frequently including Sutor and Hanna Peaks, North McCullough escarpment, and Sloan Canyon Petroglyph Site. Although opportunities for camping are possible, this form of recreation is not frequently pursued within the Wilderness.

The majority of recreationists use the Wilderness when they visit the Sloan Canyon Petroglyph Site, which is usually accessed from the north by way of the Sloan Canyon wash. Visitation to the Sloan Canyon Petroglyph Site increased following the designation of the NCA and Wilderness, with large parties, including organized hiking groups, frequenting the site. Based on limited monitoring in 2003-2004, preliminary visitor estimates indicate approximately 5 to 10 persons accessing the Sloan Canyon Petroglyph Site per weekday, with slightly higher visitation on weekend days.

Motorized access leading to the Wilderness is limited to several vehicle routes that approach from the northwest in the Sloan Canyon area and the southwest from Hidden Valley. These routes access Sloan Canyon and the wash leading to the Sloan Canyon Petroglyph Site. Other access to the Wilderness boundary is by off-trail hiking or horseback riding as there are no formal trails, trailheads, or associated developments adjacent to or within the Wilderness. For the most part, the rugged and rocky terrain discourages unauthorized vehicular access into the Wilderness. A small amount of unauthorized motorized use of the Wilderness has occurred at the Hidden Valley side near the southern access to the Sloan Canyon Petroglyph Site.

No areas of high mineral resource potential have been identified in the Wilderness. There are no mineral leases and only portions of three current, but undeveloped, claims intruding slightly into the northwest portion of the North McCullough Wilderness. The validity of the claims have not been determined.

Low-level aircraft flights occur over the Wilderness. The highest percentage of low-level overflights is from scenic tours originating from local area airports, although private flights from Henderson Executive Airport, located several miles from the northern Wilderness boundary, also contribute. In addition, commercial flights from McCarran International Airport pass directly over the Wilderness, although they tend to be localized to the western edge and at an altitude of more than 4,000 feet. Legislation currently before Congress proposes a future heliport located west of the NCA and mandates a two-mile wide helicopter flight corridor over the Wilderness. The legislation would allow helicopter overflights at elevations between 500 and 1000 feet above ground, over the Wilderness. As proposed, approximately 90 round-trip overflights a day, equating to a flight about every four minutes, will emanate from the heliport.

The Hidden Valley Allotment is currently open to livestock grazing. A portion of this ephemeral allotment lies within the North McCullough Wilderness but, because of the rugged terrain and lack of water, cattle typically do not wander into the Wilderness. Within this portion of the allotment there are no developments associated with livestock grazing.

Wildfires in the vicinity of the North McCullough Wilderness generally occur in the summer but are not uncommon in the spring, and occasionally occur in the late fall months. Within the Wilderness, there are few recent wildfire occurrences. This lack of wildfire is due to the sparseness and low stature of the shrub vegetation. Even in years with an ephemeral buildup of non-native annual grasses, the rockiness of the terrain and discontinuity of the fuel bed minimizes the risk of wildfire spread.

1.3 Wilderness Characteristics

The quality of the wilderness values were a key consideration in designating the North McCullough Wilderness. The Wilderness generally appears natural, but there are a few signs (e.g., disturbances, developments) of human use introduced into the environment prior to the area's designation. These include two-track vehicle routes, rock and motor dam, dug well, and a wildlife water development (guzzler).

Despite its proximity to a largely populated urban area, the portion of the Wilderness outside the Petroglyph Management Area possesses good solitude opportunities due to the historically low levels of visitor use; lack of trails and other developments; and topography that provide some natural screening from the adjacent urban area or other wilderness users. A lesser degree of solitude is available within the Petroglyph Management Area as this area has the heaviest visitation within the Wilderness. The primeval character of the entire Wilderness is essentially intact except for the occurrence of some introduced plants, primarily annual grasses.

Opportunities for a primitive and unconfined form of recreation close to a rapidly growing urban area abound. Diverse non-developed recreational opportunities such as hiking/backpacking, rock scrambling, nature study, photography, horseback riding, hunting, and general exploration can be easily pursued throughout the Wilderness.

2.0 NATIONAL WILDERNESS MANAGEMENT GOALS

The following goals direct the objectives, policy, management strategies and actions developed in this plan.

- To provide for the long-term protection and preservation of the area's wilderness character under a principle of non-degradation. The area's natural condition, opportunities for solitude, opportunities for primitive and unconfined types of recreation and any ecological, geological, or other features of scientific, educational, scenic, or historical value present will be managed so that they will remain unimpaired.
- To manage the wilderness area for the use and enjoyment of visitors in a manner that will leave the area unimpaired for future use and enjoyment as wilderness. The wilderness resource will be dominant in all management decisions where a choice must be made between preservation of wilderness character and visitor use.
- To manage the area using the minimum tool, equipment, or structure necessary to successfully, safely, and economically accomplish the objective. The chosen tool, equipment, or structure should be the one that least degrades wilderness values temporarily or permanently. Management will seek to preserve spontaneity of use and as much freedom from regulations as possible.
- To manage nonconforming but accepted uses permitted by the Wilderness Act and subsequent laws in a manner that will prevent unnecessary or undue degradation of the area's wilderness character. Nonconforming uses are the exception rather than the rule; therefore, emphasis is placed on maintaining wilderness character.

2.1 Wilderness Specific Issues

Issues to be addressed in this plan were identified by BLM specialists, other agencies, and the public during the scoping period for the Sloan Canyon NCA RMP/EIS. Most issues identified by the public also included a preference for management. Although the preferences were used in developing a range of alternatives, the following is only a listing of the issues:

- How will the appropriate level of use for the North McCullough Wilderness be determined?
- What types of ongoing visitor use monitoring will be addressed in the plan?
- How will the appropriate level of signage for the Wilderness be determined?
- How will seasons of use for the Wilderness be addressed?
- How will a Limits of Acceptable Change (LAC) process be incorporated into the development of the North McCullough WMP?
- How will visitor information collection systems be applied to Wilderness and used to manage Wilderness recreation?
- How will rehabilitation of ways within the Wilderness be addressed?
- How would interpretation attract visitation to the Wilderness? How would increased visitation lead to inappropriate permanent human presence and uses that impact wilderness values?
- How will trail use and development in Wilderness be addressed?

- How will the establishment of new rock climbing routes be addressed?
- How will wildlife habitat in the Wilderness be managed?
- How will the proximity of urban areas to the NCA and Wilderness be addressed to ensure appropriate access and protection of resources?

2.2 Issues Not Addressed in this Plan

Several issues identified during scoping are already addressed in other planning documents, solved through policy or administrative action, or are considered to be outside the scope of this WMP. Presented below is a list of the issues, along with a statement as to why each is not addressed in this plan.

- How will aerial tours of the area be addressed for the Wilderness?

  The BLM does not have jurisdiction over the airspace above the North McCullough Wilderness. The use of aircraft is only regulated by the BLM if they land or if anything or anyone is picked up or dropped by means of an aircraft.

- How will the WMP be embedded in the overall management plan to ensure that it is recognizable and consistent with plans for other wilderness areas in the region?

  The North McCullough WMP has been incorporated into the Sloan Canyon NCA Proposed (PRMP)/FEIS as an appendix. It has been developed in accordance with BLM Manual 8561, Wilderness Management Plans, which provided policy and guidance for its preparation. National Environmental Policy Act requirements have been satisfied through the PRMP and Draft RMP/EIS that provide a full description and analyses for the preferred alternative as well as three other alternatives that were considered but not selected. The Record of Decision for the Sloan Canyon NCA PRMP serves as the decision document for this plan.

- How will the coordination of volunteer groups be incorporated into Wilderness management?

  The BLM has an established volunteer program which includes utilizing volunteers for Wilderness monitoring and projects. Volunteers under BLM direction may assist in implementing the plan however, the decision to do so is not required through this WMP.

- How will the appropriate herd size for bighorn sheep in the Wilderness be determined in the plan?

  The management of wildlife within the State of Nevada is the responsibility of the NDOW. BLM is responsible for management of wildlife habitat on BLM administered lands. Appropriate herd size for the North McCullough Wilderness and the McCullough Mountains was published in the *Rangewide Plan for Managing Habitat of Desert Bighorn Sheep on Public Lands* (BLM 1998b).

  NDOW and the BLM continue to cooperatively manage the population and its habitat in accordance with this document and other planning documents including habitat management plans.

- How will trespass in the Wilderness be addressed?

  Actions designed to help in the prevention of unauthorized activities (trespass), as well as, the rehabilitation measures to be undertaken in the event of an unauthorized activity are presented in this WMP. Enforcement of wilderness regulations and detection of violators, however, is not addressed in this plan as they are provided for in existing law, regulation and policy including penalties provided for at 43 CFR 6302.30.

- How will recreation use of the NCA be managed to balance the spectrum of recreation intensity between the Wilderness and NCA, outside the Wilderness?

  The WMP addresses several actions designed to prevent recreational activities allowed within the NCA from impacting on the North McCullough Wilderness, where those same activities are not allowed. The actual management of recreational use within the NCA, and how its intensity will be balanced between the NCA and the Wilderness is addressed within the Sloan Canyon RMP.

- How will BLM Law Enforcement and Wilderness Rangers be used to manage wilderness?

  The hiring and use of both Law Enforcement and Wilderness Rangers (non-law enforcement) is an administrative action not requiring a decision through this WMP. Wilderness Rangers are the first line contact with wilderness and backcountry users; and are responsible for monitoring (see Section 5.0) for a variety of potential unauthorized incursions into the Wilderness. All regulations will be enforced by BLM Law Enforcement Agents and Law Enforcement Rangers. Violators will be detected through periodic patrol and investigative follow-up to reports by the public, BLM and other agency employees. Any prohibited acts defined at 43 CFR 6302.20, outside of those authorized in this plan, are subject to the penalties provided for at 43 CFR 6302.30.

2.3 Wilderness Management Objectives

Objectives, under the National Wilderness Management Goals presented earlier (Section 2.0), were developed to address the management of, and the issues identified for, the North McCullough Wilderness. These objectives are not listed in any order of priority.

- Maintain or improve solitude within the Wilderness.
- Maintain or improve naturalness in the Wilderness to achieve a standard of no known surface disturbances and stable or decreasing non-native plant populations.
- Provide a diversity of opportunities for primitive and unconfined recreation.

2.4 Current Situation and Assumptions

In order to appropriately develop the various management actions necessary to meet the plan objectives, the existing situation and anticipated changes that can reasonably be expected to take place over the life of this plan are considered first. Inventory, monitoring, and research will be an important component to meeting the objectives of the plan.

It is anticipated that current daily visitation to the North McCullough Wilderness would increase in the area near Petroglyph Management Area to numbers requiring guided tours and permitted access. This area has historically witnessed a majority of the visitation to the area now designated as Wilderness. Continuation of this pattern of use is anticipated to continue in the future. For the remainder of the Wilderness, it is anticipated that the current sporadic visitation would moderately increase to daily visitation primarily on weekends during the spring and fall. Lesser visitation is anticipated during the extremes of the winter and particularly summer months. Management of the various visitor uses may be required in order to preserve the future use and enjoyment of the area.

- The population and associated development in the Las Vegas Valley will continue to grow, particularly in the area immediately adjacent to the NCA and the northern and western boundary

of the Wilderness. The resultant population within a one-mile distance is anticipated to focus increased attention on the Wilderness.

- Currently, unauthorized vehicular access to the North McCullough Wilderness boundary is primarily at two locations, the north end of Sloan Canyon and on the west at Hidden Valley. Both of these locations are usually used to access the Sloan Canyon Petroglyph Site. It is anticipated that infrastructure (e.g., housing) growth in the Las Vegas Valley, and in particular that of the City of Henderson up to the NCA boundary, could result in management issues concerning vehicular access to the NCA and interior Wilderness.

- Now that the area has been designated, visitors formerly unfamiliar with the area may learn about the North McCullough Wilderness from not only maps provided by the BLM but also websites; newspaper and magazine articles; and guidebooks from various sources. For the most part these visitors may be interested in recreation opportunities not involving the use of motor vehicles. They are looking for new opportunities or areas that are less crowded. The fact that this is a desert wilderness with its associated desert characteristics (e.g., extreme temperature and lack of water) is expected to influence interest in the area and somewhat limit visitation.

- It is anticipated that hiking/backpacking, rock scrambling, nature study, photography, horseback riding, permitted hunting, and general exploration will continue to be the primary recreational activities pursued within the Wilderness.

- As with many of the wilderness areas in southern Nevada, interest in and the potential for guiding services is low within the North McCullough Wilderness. This is not expected to change appreciably over the foreseeable future.

In order to maintain the natural appearance, including the visual landscape and the soundscape, of the North McCullough Wilderness, some limited management actions will be necessary.

- The surrounding NCA provides added protection to the Wilderness from potential unauthorized OHV intrusions. The northern, southern and western boundaries of the Wilderness, however, are near areas currently being used for unauthorized OHV recreation. Management will need to recognize that there still remains a potential for unauthorized OHV incursions within the Wilderness at these locations.

- The Wilderness will be affected not only by increased visitation to the Sloan Canyon Petroglyph Site, but also by external urban sounds from the adjacent community, and the sight of power lines and mountaintop radio repeater facilities.

- Aircraft overflights of the area are currently infrequent and usually at high elevations. However, two new airport development proposals exist that could greatly degrade solitude of the area: 1) a heliport near the northwest corner of the Wilderness would cause sight-seeing helicopter overflights every few minutes; 2) the construction of a cargo/passenger airport between Primm and Jean, Nevada, could cause additional, lower level commercial overflights, depending on takeoff and landing flight paths.

- A limited number of surface disturbances and developments can be found within the North McCullough Wilderness. Where appropriate, they will require management action to remove and/or rehabilitate them.

It is anticipated that the preservation of the primeval character and influence of the natural resources of the Wilderness will require minimal management actions.

- Other than a potential for Sahara mustard and tamarisk, noxious weeds are not known to occur in the Wilderness. New introductions of noxious weeds are possible and need to be addressed early to prevent infestation. Red brome and Russian thistle are exotic invasive weeds. These species are widespread and eradication is currently not possible, although management actions to reduce surface disturbance can help prevent it from dominating the ecosystem. Should effective eradication methods be identified in the future, they would be analyzed to determine their impact on the overall environment and utilized where appropriate.
- Within the boundary of the Wilderness, there are few recent wildfire occurrences. Because the vegetation in the Wilderness is not fire-adapted, fire has the potential to convert areas from native species dominance to dominance by non-native introduced species.
- There is minimal natural surface water within the Wilderness. The only natural occurring surface water sources are ephemeral in nature, resulting from infrequent thunderstorms and subsequent runoff. There is one wildlife water development (guzzler) emplaced prior to the Wilderness designation, but it is well hidden and not readily visible.
- Non-BLM initiated inventory, monitoring, or research projects will be periodically proposed within the Wilderness. It is anticipated that most of these proposals will add to the understanding of the wilderness resource and help to improve wilderness management. All proposals will need to be reviewed before approval to assure the work is compatible with preservation of the wilderness resource and is not more suitable for areas outside of the Wilderness.

3.0 MANAGEMENT STRATEGY

The strategy of the North McCullough WMP is to maintain or improve the natural character of the Wilderness by protecting many of the near-pristine conditions while rehabilitating existing human impacts. The strategy recognizes that as the cities of Las Vegas and Henderson expand their boundaries and populations in the coming years, the Wilderness will be subject to increases in visitor use and its associated consequences. The Wilderness will be managed in a manner that protects the qualities of wilderness character consistent with appropriate levels of public use. Wilderness characteristics will be maintained through standards and/or limitations established through this plan. Separate standards and/or limitations will be established for the highly-visited Petroglyph Management Area and the remainder of the Wilderness. This WMP emphasizes monitoring and the ability of managers to take corrective actions, if necessary.

The North McCullough Wilderness provides wilderness experiences for a wide range of the public. Consequently, the Petroglyph Management Area, as well as its northern and southern access trails, will be managed as a more concentrated use area. This concentrated use area (351 acres) constitutes about 2 percent of the 14,765-acre Wilderness. The Sloan Canyon Petroglyph Site has been an important destination, prehistorically and historically, and it will likely see more visitation as the NCA is developed and the surrounding population increases. BLM believes that visiting the Sloan Canyon Petroglyph Site is a rare and unique opportunity for the American public, and that the visitor experience at this site furthers the goals of Wilderness by generating an understanding and appreciation of cultural resources. BLM is committed to managing the Petroglyph Management Area intensively to prevent the degradation of natural and cultural resources that could result from visitor use. The remaining Wilderness, following minimal rehabilitation, will be managed to maintain its current condition and prevent gradual impacts to pristine areas.

A challenge of wilderness management is meeting public demand for its use while protecting wilderness values such as ecological integrity and solitude. This plan attempts to find an acceptable level of impacts

and to assess the trade-offs of resource protection, visitor freedom, and wilderness values. BLM is aware that each visitor holds a personal set of expectations of and assumptions on what a wilderness experience is or should be, and believe that most everyone's desired experience can be provided across the Wilderness with this management strategy. However, it is recognized that at times peak public demand will not be met (e.g. limitation of access to the Wilderness) to avoid the risk of unacceptable impacts on wilderness values.

3.1 The Petroglyph Management Area and Access

Visitors will have the greatest possibility of encountering others in this portion of the Wilderness. Access by designated trails and trailheads will be required, as will guided tours during periods of high use such as weekends and holidays. During periods of lower use (e.g., weekdays), visitors may go to the Petroglyph Management Area unaccompanied by a BLM-sponsored guide, if they obtain a permit. The sights and sounds of human activity will be common. Some risk and challenge will be encountered, but route finding will be easy with the aid of trails. The natural setting may be minimally modified in accommodating access to the site, but in a manner that protects natural resources and presents minimal visual impact. Management decisions will support healthy, viable, and naturally distributed wildlife and plant populations.

Directional signs may be provided. No equestrian or pack animal use will be allowed in the Petroglyph Management Area or the northern access trails, but it will be allowed on the Hidden Valley Trail south of the Petroglyph Management Area (Figure C.3). Packed in and certified weed-free feed will be required for animals used for recreational riding or pack stock. No camping, rock climbing, geocaching, rockhounding or dogs are allowed within the Petroglyph Management Area.

3.2 Remainder of the North McCullough Wilderness

This area includes the portion of the North McCullough Wilderness outside the Petroglyph Management Area and its north and south access trails. At this time, except for the area where hiking is limited to proposed trails developed in the future (Figure C.4), access to this portion of the Wilderness will be available for cross-country hiking from the boundary of the NCA or from a limited number of access roads. In the event of the establishment of social trails (foot worn hiking paths), occasional management activity may be necessary to protect and/or rehabilitate resources. Unwanted trails and sites may be actively rehabilitated by management or allowed to recover naturally. In the event that a social trail is desired for retention, management actions necessary to bring it up to BLM standards may be undertaken. No directional signs will be placed in this portion of the Wilderness. Cross country equestrian and pack animal use will be allowed. Packed in and certified weed-free feed will be required for animals used for recreational riding or pack stock. Rock climbing will be allowed but the use of permanent anchors will be prohibited. Camping will be allowed but within the limitations and standards specified in this plan. Geocaching and rockhounding is prohibited throughout the Wilderness. Dogs are also prohibited in the Wilderness. Management decisions will support healthy, viable, and naturally distributed wildlife and plant populations.

The following site-specific actions will be implemented at the North McCullough Wilderness. These actions meet the wilderness management objectives and respond to those Wilderness specific issues which were identified through the RMP process. All actions are supplemental to and consistent with Wilderness laws, regulations, and policies, which must further be consulted in the event of future unforeseen issues.

Figure C.3. Petroglyph Management Area

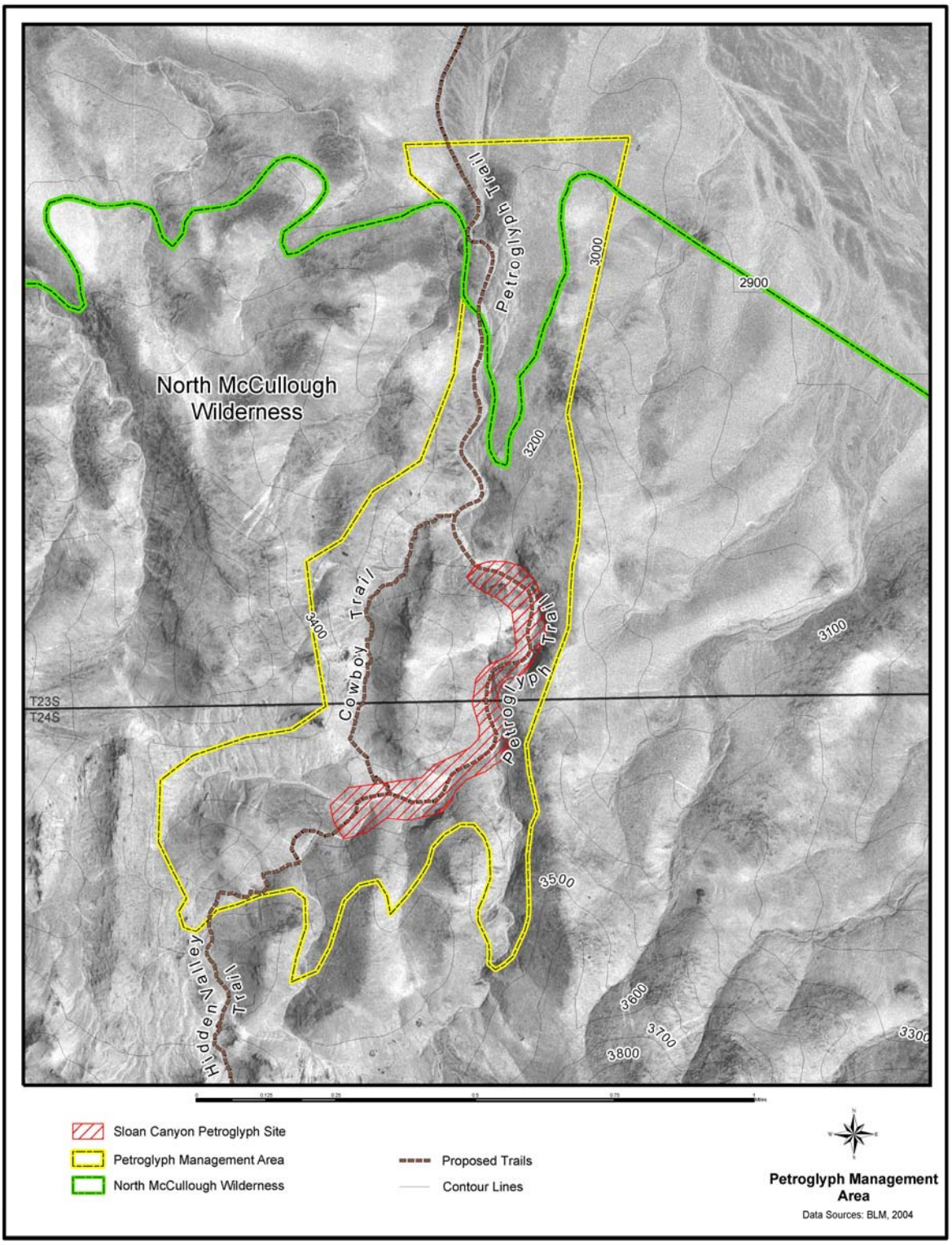
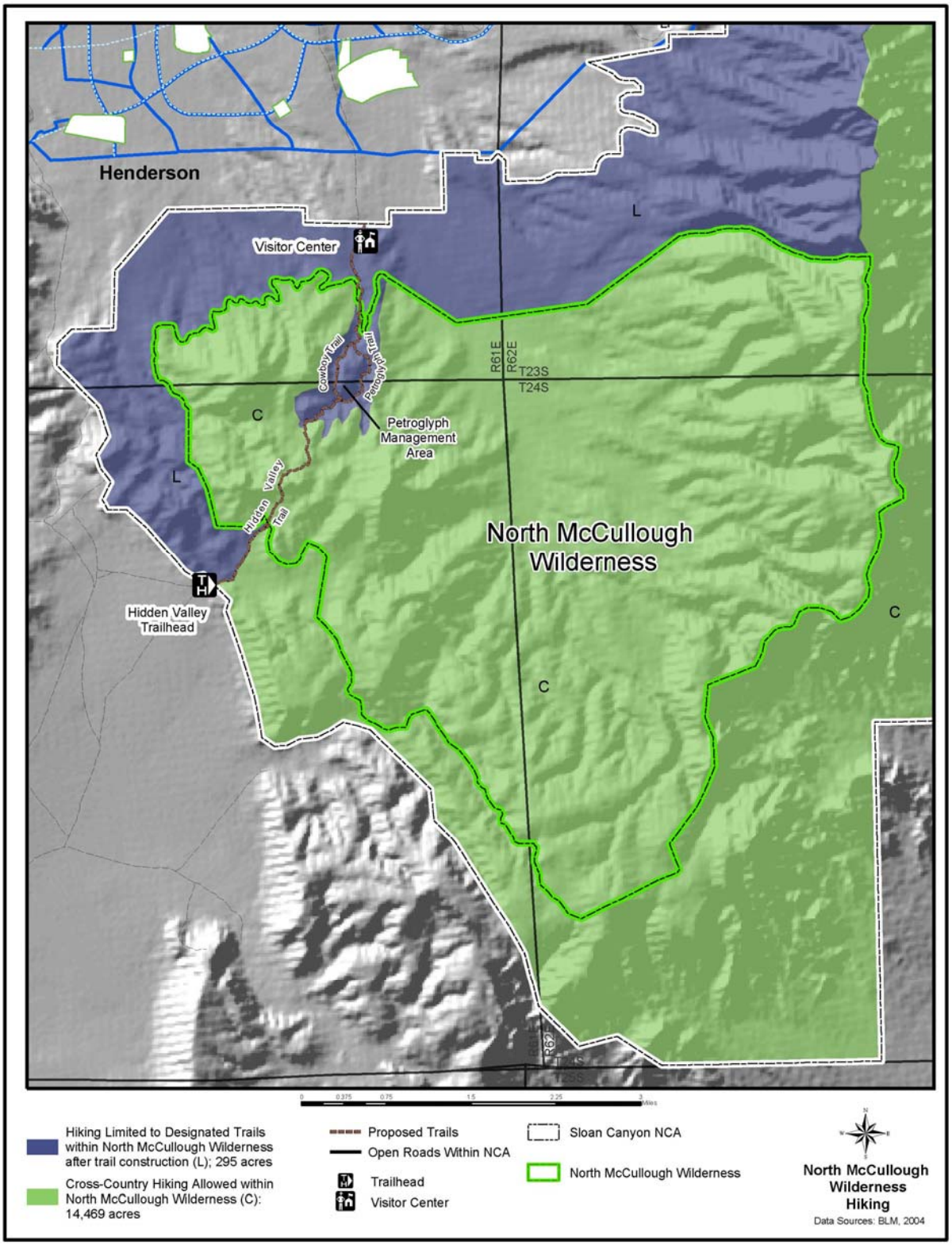


Figure C.4. North McCullough Wilderness Hiking



Because demands on the Wilderness and surrounding NCA will likely increase over the coming years, the Plan contains flexible management guidance, which will be refined based on use and resource monitoring. Visitation and resource monitoring (see Section 5.0) will be used to further define baseline resource conditions and document any changes to them. Once additional resource baseline data is acquired, a system such as LAC will be used to refine limits and standards for future actions.

The concepts outlined in the LAC System for Wilderness planning (Stankey et al. 1985) or succeeding professional standards will be used. The LAC emphasizes a framework for establishing acceptable, appropriate, and measurable resource and social conditions in Wilderness. Its process focuses on desired conditions, defines what is and is not acceptable, and develops a strategy to prevent unacceptable conditions.

Once residential development on the western side of the NCA is complete, the Wilderness and the Sloan Canyon Petroglyph Site will be just a short distance from a large urban population. To manage the potential increase in visitation, to protect the sensitive cultural and natural resources, and to protect wilderness characteristics, detailed management actions were developed.

4.0 WILDERNESS MANAGEMENT ACTIONS

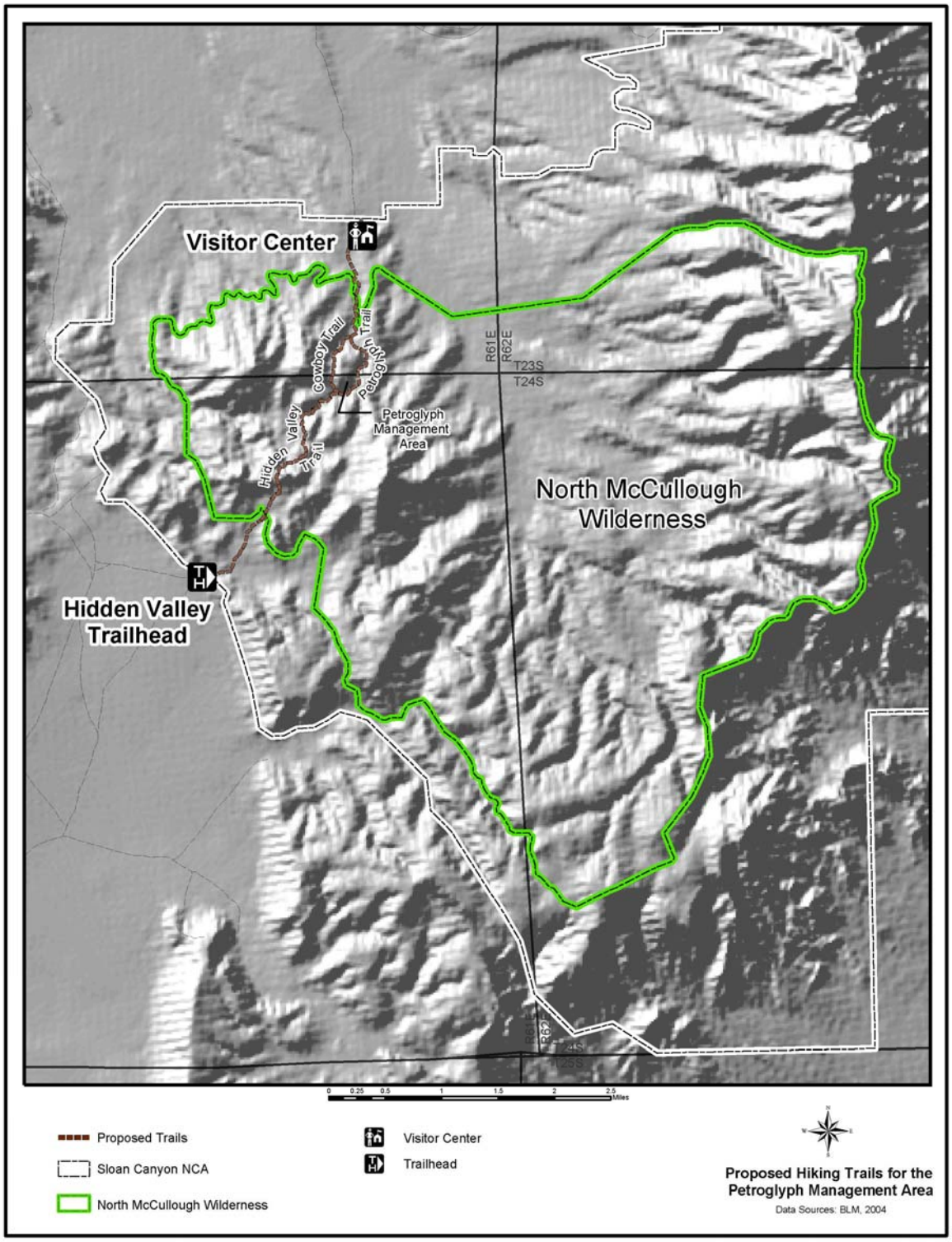
4.1 Trails Management

4.1.1 Construction and/or Designation of Approximately 3 Miles of Trail

Access to and use of the Petroglyph Management Area will be confined to the canyon bottom and a limited number of proposed trails designed to provide for flexibility in visitor needs and resource protection. Two trails that access the Sloan Canyon Petroglyph Site, one from the north and one from the south will be constructed and designated (Figure C.5). A 1.38 mile long portion of Hidden Valley Trail, emanating from the Hidden Valley Trailhead, will be constructed and will direct visitors away from the existing wildlife water development (guzzler). Within the Wilderness the 0.86 mile long “Cowboy” Trail, emanating from the Petroglyph Trail on the north end of Sloan Canyon, will be constructed to provide an alternative to the Petroglyph Trail. The 0.7 mile portion of the Petroglyph Trail that is in the Wilderness will be designated, but because it is located entirely within the wash bottom of Sloan Canyon, it requires limited construction. Because of major obstructions along the Petroglyph Trail, the Cowboy Trail will provide a more negotiable and safer alternative means of access to the Sloan Canyon Petroglyph Site. Use of the Cowboy Trail eliminates the need for placement of structures designed to negotiate the rock obstructions along the Petroglyph Trail.

In the future, if deemed necessary for the enhancement of Wilderness, trails may be added within the area where hiking is limited to designated trails (Figure C.4) provided the design and construction of a new trail will not cause impacts to sensitive cultural, natural resources, and/or wilderness character. This minimal trail development will be allowed only for the purposes of resource protection, enhancement of wilderness values and erosion control, and only after conducting a minimum requirement/minimum tool analysis and environmental assessment. Site-specific resource conditions will be considered when selecting trail locations and designing trail features. The construction of trails in the vicinity of wildlife water developments is prohibited within a 1/4-mile radius. Social trails may be adopted with minimal construction throughout the Wilderness but they will not be designated.

Figure C.5. Proposed Hiking Trails for the Petroglyph Management Area



All constructed trails will meet established trail standards as presented in BLM Manual 9114, BLM Handbook H-9114-1, and BLM Handbook H-8560-1. Trails must not be constructed with treads of more than 24 inches in width except where a wider (not more than 48 inches) trail is justified to protect the wilderness resource and/or provide for visitor safety. Trails must follow natural contours where possible and result in minimum disturbance to soil and ground cover. Maintenance will strive to limit trail width to the 24 inches and not to exceed 36 inches except where necessary for safety or sections in washes. Trail sections constructed in excess of 24 inches will be maintained at no more than 18 inches of its original width.

4.1.2 Social Trail Management

Outside the area of the Petroglyph Management Area, cross-country travel by foot and horseback riding will be allowed (Figure C.4 and Figure C.8). This may result in the creation of social trails leading to the more desirable destinations within the Wilderness. Although creation of social trails will be discouraged, Sutor and Hanna Peaks are two locations that may attract the establishment of such trails. Although these worn-in trails would not be shown on BLM maps or brochures, once they are discovered by visitors to the area they may see continued use.

To date, most travel has utilized the numerous dry washes or rocky areas throughout the Wilderness and as a result, no known social trails have been documented. Through ongoing monitoring and review of published route descriptions, an inventory of future social trails occurring outside of the dry washes, will be maintained. Once trails are discovered, they will be evaluated to determine the impact to cultural, natural resources, and Wilderness character, as well as, the objectives of this plan.

If found to be feasible, trails resulting in unacceptable impact to the wilderness and not desired for future designation, modification, or use will be rehabilitated following the guidelines as presented later in Section 4.3. In the event that a social trail is retained, problem sections only may be rerouted, improved or maintained in order to correct an unstable situation or adverse impacts resulting from the trail but not to make the trail easier to travel or encourage its use. This would include situations where slopes are in excess of 15%, which presents the potential for excessive surface erosion and where trail deterioration is high; and trail braiding either exists or is beginning. Maintenance will strive to limit trail width to 24 inches, and not exceed 36 inches except where necessary for safety or sections in washes. The completion of a minimum requirement/minimum tool analysis and environmental assessment is required prior to any trail work.

4.2 Wilderness Visitation

The main access to the Petroglyph Management Area will be controlled through a Visitor Center located near the NCA boundary at the northern end of the Sloan Canyon wash, outside the North McCullough Wilderness. Rangers, BLM staff, and/or volunteer site stewards will patrol the Petroglyph Management Area for visitors entering from points other than the Visitor Center and will either deny access based on visitation levels or issue a self-guided tour permit. Use of the Petroglyph Management Area will be limited to the Visitor Center's operational hours, which will be determined by BLM before the center is opened.

A visitor to the wilderness (hiker)

The Petroglyph Management Area, although a small portion of the North McCullough Wilderness, receives an estimated 90% of the visitation to the Wilderness. Opportunities for solitude, although occasionally good during low use periods, are generally low within the Petroglyph Management Area. Considering the amount of use within the canyon and in order to protect the special features of the area, limitations on visitor use have been established. Visitors to the Petroglyph Management Area during periods of high use such as weekends and holidays must join a BLM-sponsored guided tour. No more than one guided group, of no more than 20 people, will be allowed in the Petroglyph Management Area at one time. With prior reservations, organized groups of 10 to 35 people will be allowed to visit the Petroglyph Management Area accompanied by a BLM-sponsored guide. During periods of lower use (e.g., weekdays), visitors may go to the Petroglyph Management Area unaccompanied by a BLM-sponsored guide, if they obtain a permit. Self-guided tour permits will be issued from the Visitor Center at the north entrance to Sloan Canyon, the Hidden Valley Trailhead at the south entrance, or from a roving ranger. No more than 25 permits per hour will be issued for self-guided tours. While seeking to protect the special features (e.g., cultural resources) of the area, its unconfined character may be somewhat diminished. Resource baselines will be refined through continued monitoring (visitation and resources will be monitored in accordance with Section 5.0 of this plan). Within four years of the completion of visitor facilities (e.g. Visitor Center, Hidden Valley Trailhead, and Sloan Canyon north and south access trails), a system such as LAC will be used to establish indicators and standards for future actions. Following establishment of these standards limitations on the number of individuals, number of groups and/or group size may be adjusted.

For the portion of the North McCullough Wilderness outside the Petroglyph Management Area and the hiking area limited to designated trails (Figure C.4), visitors will have good primitive and unconfined recreational opportunities. Except for the vicinity of the north and south access trails into the Petroglyph Management Area, visitors will realize good solitude opportunities as they traverse the Wilderness cross-country. Unlike Sloan Canyon, encounters with other individuals or groups will be infrequent. As would be expected in an area immediately adjacent to an urban population, outside sights and sounds will be encountered during most trips. Within this portion of the Wilderness, the standard for visitor group encounters (visitors traveling within sight or sound of one another) more than one-half mile from the wilderness boundary and one-quarter mile from the Cowboy, Petroglyph, and Hidden Valley Trails is set at no more than five encounters per day exceeded on no more than four days per year. As with the Petroglyph Management Area, resource baselines will be refined through continued monitoring (visitation and resources will be monitored in accordance with Section 5.0 of this plan). Within four years of the completion of visitor facilities (e.g., Visitor Center, Hidden Valley Trailhead, and the Petroglyph Management Area north and south access trails), a system such as LAC will be used to reevaluate and if necessary establish new thresholds for future actions. Following this process, visitor encounter standards may be adjusted or limits imposed.

4.3 Disturbance Rehabilitation

Throughout the North McCullough Wilderness, existing disturbances and developments, as identified in Table C.1 and Figure C.6, will be rehabilitated within four years of the Sloan Canyon NCA Approved RMP/FEIS Record of Decision using appropriate methods determined through a minimum requirement/minimum tool analysis for each project. Approximately 3.75 miles (2.93 acres) of two-track vehicle routes and 244 square yards (0.05 acres) of disturbance associated with a rock and motor dam and dug well will be rehabilitated. Active rehabilitation will take place on those areas not currently rehabilitating naturally or located within washes.

Active rehabilitation will include methods/processes designed to remove and obscure the known disturbances. Methods/processes such as breaking up compacted surfaces; recontouring to original grade; seeding and/or planting of vegetation native to, and currently occurring within, the Wilderness; and

placement of dead vegetation and rock, collected near the site, to mimic the form and texture of the surrounding landscape. In the interim, all access routes will be blocked using signs and/or barricades located outside the wilderness boundary.

Looking west from Sutor Peak at a two-track vehicle route to be rehabilitated

Rock and mortar dam requiring rehabilitation

Dug well requiring rehabilitation

Typical two-track requiring rehabilitation

Table C.1. North McCullough Wilderness Disturbances and Developments

Disturbance/ Development Number	Description	Length (miles)	Area of Disturbance	Location
1	Two-track vehicle route entering Wilderness from northern boundary	1.47 miles	1.75 acres	East of Sloan Canyon. Approximate route and location shown as 4-Wheel Drive road on United States Geological Survey 1:24,000 maps. T 23 and 24 S; R 61 and 62 E; Sections 36, 1, 6
2	Short two-track vehicle route intersecting Disturbance 1 near northern boundary	.07 miles	.08 acres	T 23 S; R 61 E; Section 36
3	Two-track vehicle route entering Wilderness from Hidden Valley	.30 miles	.35 acres	T 24 S; R 61 E; Section 3, SW1/4,SW1/4,SW1/4
4	Short two-track vehicle route intersecting Disturbance 3 near southern boundary	.09 miles	.10 acres	T 24 S; R 61 E; Section 10, NE1/4,NE1/4
5	Two-track vehicle route accessing North McCullough Slickrock Catchment #1 from the southern boundary and continuing to west	1.3 miles	1.51 acres	T 24 S; R 61 E; Sections 2 and 11
6	Short two-track vehicle route intersecting Disturbance 5	.12 miles	.14 acres	T24 S; R 61 E; Sections 2 and 11
7	Rock and motor dam	N/A	133 square	T 24 S; R 61 E; Section 1, and 6

Disturbance/ Development Number	Description	Length (miles)	Area of Disturbance	Location
			yards	
8	Dug well	N/A	111 square yards	T 24 S; R 62 E; Section 6, SW 1/4
9	Short two-track vehicle route intersecting Disturbance 5 near southern boundary	.24 miles	.28 acres	T 24 S; R 61 E; Section 11
North McCullough Slickrock Catchment #1	Wildlife water development including catchment, tanks, and water access for wildlife	N/A	N/A	T 24 S; R 61 E; Section 2

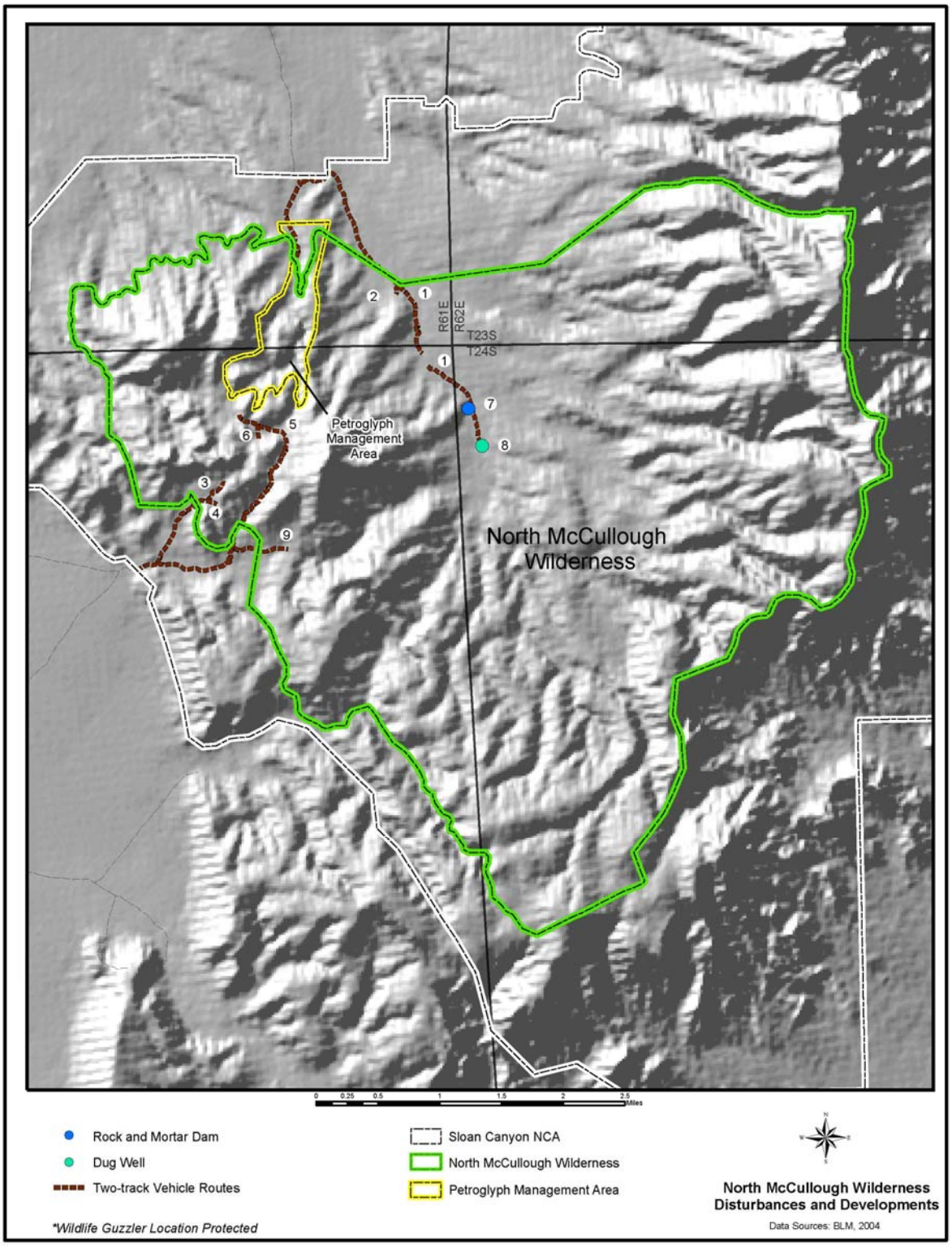
Source: BLM 2003a.

Rehabilitation of existing disturbances and developments will be conducted in order of potential for continued use. Priority will be given to the two-track vehicle routes accessing the Wilderness from Hidden Valley, Disturbances #3 (.30 miles in length), #4 (.09 miles in length), #5 (1.3 miles in length), and #6 (.12 miles in length) and #9 (.24 miles in length). These vehicle routes, despite posting have continued to be used for unauthorized access into the Wilderness and are anticipated to be a management issue until such time that signs of their presence is obscured through rehabilitation. Disturbance #1, a 1.47 mile two-track vehicle route, as well as Disturbance #2, a .07 mile long two-track spur will receive second priority. Located at the northern portion of the North McCullough Wilderness, these two disturbances have the least potential for continued unauthorized vehicle use. Although last priority for attention, in order to utilize the existing access and prevent damage to prior restoration efforts, removal and rehabilitation of the dug well (Development 8) and rock and motor dam (Development 7) will be necessary prior to the rehabilitation of Disturbances 1 and 2.

The visible portions of social trails not desired for future designation, modification, or use will be rehabilitated utilizing the same methods/processes previously identified for existing disturbances. The non-visible portions of these social trails will be left to rehabilitate naturally. Continued use of a restored social trail will be dispelled by dispersing visitation to other locations using methods such as area closures, barriers, and visitor information.

Any unauthorized activity resulting in disturbance (including vandalism); unattended personal property; and dumping within the Wilderness, will be removed or rehabilitated using a method identified through a minimum requirement/minimum tool analysis. In the case of human effects, Wilderness Rangers will receive instruction on the identification of human artifacts that are fifty years of age or more. Items that are clearly less than fifty years old will be considered unattended personal property or refuse and will be immediately removed. In the case of items clearly fifty year or more in age, or those with questionable age, they will be photographed for further consideration by an archeologist. Unattended personal property not associated with an active camp, including geocaches, will be immediately removed and held at the BLM Las Vegas Field Office. In the case of a geocache, the geocache sponsor will be notified and asked to remove the site listing from their website. Informal summit registers are considered to be casual use that does not have an effect on visitor use patterns, and as such, they may remain.

Figure C.6. Disturbances and Developments within the North McCullough Wilderness



4.4 Special Recreation Permits

No competitive or commercial (except for guiding) Special Recreation Permits (SRP) will be issued for the North McCullough Wilderness. Although Section 4(c) of the Wilderness Act prohibits commercial enterprises within wilderness areas, Section 4(d)(6) of that same Act establishes a special provision allowing for commercial services to the extent necessary for activities which are proper for realizing the recreational or other wilderness purposes of wilderness areas. Given this, SRPs for commercial for guiding and outfitters could issued outside the Petroglyph Management Area on a case-by-case basis for 1) the hunting of big game, which would be limited by the number of big game tags issued annually by NDOW; 2) academically oriented organizations whose primary purpose is education about wilderness or environmental education; and 3) organizations whose primary purpose is support to people with disabilities. Other guiding services (e.g. cultural, birding) will be evaluated on a case-by-case basis and could be permitted on an infrequent basis not to exceed two guided trips per month. Regularly scheduled guiding services will not be permitted and all guides will be required to educate and provide wilderness ethics information to their clients.

4.5 Wildlife Management

In order to provide guidance and procedures for coordination and cooperation between the BLM and the NDOW, regarding the management of wildlife within the North McCullough Wilderness, the MOU (BLM 2003b) between the BLM and NDOW will be followed. New water developments may be permitted if: 1) the BLM determines the water development will enhance wilderness values by promoting healthy, viable and naturally distributed wildlife populations; and 2) the visual impacts of the water development on the wilderness area can reasonably be minimized. Access to the existing North McCullough Slickrock Catchment #1 (Project #4916) will be managed in accordance with the MOU. A ¼ -mile avoidance area for non-wildlife related developments including trails will be established to protect wildlife waters from human influence.

The casual and commercial collection of reptiles will be prohibited within the North McCullough Wilderness. Permits for collection for scientific purposes may be issued on a case-by-case basis under a special use permit.

Desert bighorn sheep

Young coyote

4.6 Wildland Fire Management

4.6.1 Fire Suppression

Fire suppression within the North McCullough Wilderness will be conducted in accordance with the Las Vegas Field Office Fire Management Plan (BLM 2004b). The fire management target for suppression within the Wilderness will be to hold 90% of fires to 1 acre or less and 50 acres burned within a ten year period. The following guidelines will be employed during the suppression of all wildland fires within the Wilderness.

- A Resource Advisor will be dispatched to all fires occurring in or threatening the North McCullough Wilderness.
- Use of heavy equipment (bulldozers, etc.) will only be used in the Wilderness if the fire is threatening human life or property. The Field Manager must approve the use of heavy equipment in all cases.
- Air resources including helicopters and Single Engine Air Tankers (SEAT) will be included in the WILDCAD system for all wilderness fire suppression activities.
- Helibases, staging areas, and fire camps will be located outside of the Wilderness, unless authorized by the Field Manager.
- Use of retardant must be approved by the Field Manager.
- If retardant is not approved, water may be dropped from aircraft.
- Landing of helicopters will be kept to a minimum and will only occur in existing openings.
- All fire suppression activities will use Minimum Impact Suppression Techniques at all times.
- Hand crews may use conventional hand tools and, with approval from the Resource Advisor, may conservatively use chainsaws for fire line construction. Chainsaw use and line width should be kept to a minimum. Utilization of existing natural barriers, minimum “scratch line”, and cold trailing is encouraged where feasible. Handline construction will be rehabilitated back to the natural contour.
- A “Leave No Trace” policy applies to the Wilderness. All evidence of human activity must be removed, to the maximum extent possible.
- Noxious weeds will be controlled in conformance with the “Las Vegas Field Office Noxious Weed Control, Fire Management Weed Transport Control” guidelines in the Las Vegas Field Office Fire Management Plan (BLM 2004b).

4.6.2 Fire Rehabilitation

Following suppression efforts, firelines will be obscured using the minimum tool and the rest of the burned area will be left to rehabilitate naturally unless it is determined necessary to prevent damage to downslope human life and/or property; or prevent the introduction and spread of exotic plant species. When active vegetation rehabilitation is deemed necessary native species, with preference for local genetic stock, will be used exclusively. In the event that earth moving equipment is utilized in the construction of fire line during suppression efforts, the same type of equipment may be used as needed for recontouring before the equipment is released from the fire.

4.7 Use of Signs

Inside the Petroglyph Management Area, limited amounts of small, unobtrusive signs and interpretive media may be located for the purposes of resource and wilderness protection. Because access to Sloan Canyon will be limited to the three designated trails, as described in Section 4.1, a limited number of signs, within Sloan Canyon, may become necessary to control unauthorized access at points along the canyons length. These signs will indicate that access to the Petroglyph Management Area is restricted to permitted access or guided tours only beyond this point. Two information kiosks will be placed outside the Wilderness boundary at the Visitor Center and Hidden Valley Trailhead.

Other than those identified for placement within the Petroglyph Management Area, signs and interpretive media inside the North McCullough Wilderness will not be allowed. Interpretive and administrative signs (e.g., trailhead signs, and visitor registers) will be located outside the Wilderness boundary. They will consist of low-profile, natural color signs that include pertinent information, such as route details, maps, and proper wilderness etiquette. In order to help ensure that activities (allowed within the NCA but not within Wilderness) do not encroach into the Wilderness, six foot brown fiberglass markers with decals will be used to post the boundary at all known and potential access routes, visitor use areas, and at "line of sight" distances along its entire length.

4.8 Interpretation

Sloan Canyon Petroglyph

The North McCullough Wilderness is a component of the Sloan Canyon NCA, and as such is part of the overall Sloan Canyon NCA Interpretive Strategy and Environmental Education Strategy (PRMP Appendix F). Interpretation pertaining to the North McCullough Wilderness will be concentrated primarily at the Petroglyph Management Area and its north and south access trails. Although a full range of interpretive media will be provided within the NCA with media visibility decreasing as the distance from developed areas increases, only media as identified in Section 4.7 will be allowed within the Wilderness. Guided tours will provide the greatest intensity of interpretation. When obtaining a permit, all non-guided canyon visitors will experience an interpretive presentation on appropriate visitor use and proper site etiquette while visiting the Wilderness and cultural resources sites. At the Visitor Center, this may include an interpretive video, virtual tour, or a static display; but at the Hidden Valley Trailhead or within the Sloan Canyon itself, it may be an informal presentation at the time of permitting. Other interpretive information pertaining to wilderness, natural resources and recreation will be presented on maps; brochures; and kiosks (outside the Wilderness) at the Visitor Center and Hidden Valley Trailhead. It is not anticipated that these interpretive actions will appreciably increase visitation to the Wilderness. They will however, educate visitors as to the proper use and enjoyment of wilderness and its natural resources.

4.9 Collection of Vegetation

Casual and commercial collection of vegetation is prohibited within the North McCullough Wilderness. Permits for collection for scientific purposes may be issued on a case-by-case basis under a special use permit.

4.10 Non-native Vegetation Prevention and Control

As established in the Sloan Canyon NCA PRMP, the North McCullough Wilderness has been designated as a Zone 1 Management Emphasis Area (MEA) for vegetation. As a Zone 1 MEA it will receive priority in the rehabilitation or improvement of conditions in native plant communities. Ideally, the Wilderness will be managed to sustain only native vegetation species. Toward this end, activities that may lead to the spread of non-native species will not be permitted, or will be mitigated to make the spread of these species unlikely. Through annual monitoring, where non-native species are found, emphasis will be placed on controlling small infestations, plants likely to spread and displace native plants, or plants that may disrupt ecosystem function. If it is determined that control or eradication is possible, and after completion of a minimum requirement/minimum tool analysis, the following prioritized control measures may be employed: 1) grubbing with hand tools if plants will not resprout and where infestations are of a size manageable by a small number of workers; 2) herbicides applied by backpack or packhorse equipment where grubbing is not effective; 3) biological control agents approved by the Animal and Plant Health Inspection Service where infestations are of such a size that eradication is not feasible; or 4) herbicides applied with motorized equipment where control is feasible, control impacts are quickly and readily rehabilitated, and the infestation is of such size that herbicide cannot be effectively applied otherwise. In the event that natural recruitment from a local source is not adequate, reseeding control areas with native species will be permissible.

Following a minimum requirement/minimum tool analysis, BLM may conduct projects within the Wilderness, on a case-by-case basis, to rehabilitate disturbances, which would decrease the likelihood that these areas would become dominated by invasive plant species. Rehabilitation measures will include those previously identified in Section 4.3 of this plan.

Noxious and invasive weeds will be managed under integrated weed management principals, including following BLM's *Partners Against Weeds – An Action Plan for BLM* (BLM 1996) initiative for weeds, as well as the Vegetation Restoration Strategy (PRMP Appendix H).

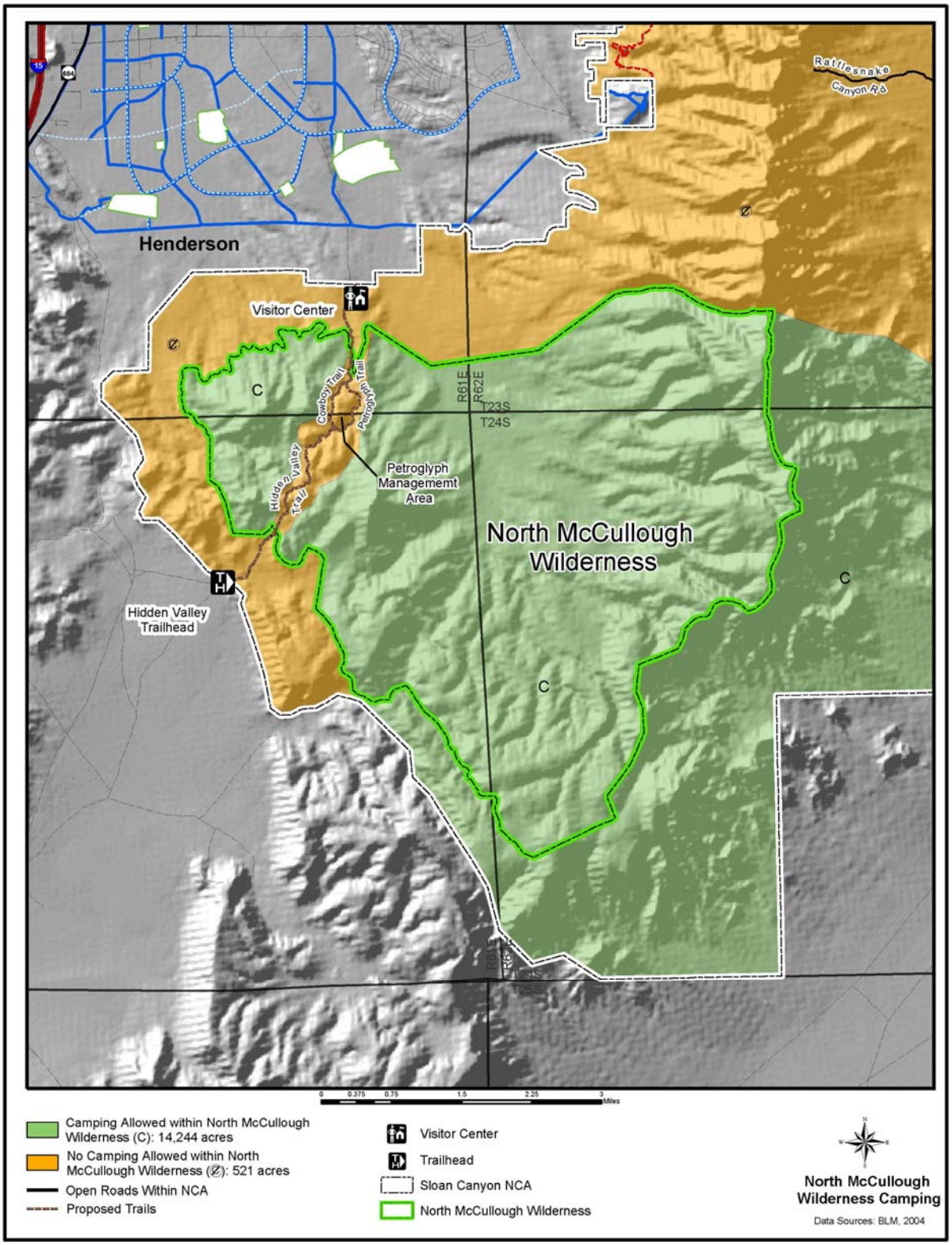
4.11 Nighttime Use

To assist in the prevention of cultural resource vandalism, destruction, and/or removal, the Petroglyph Management Area is designated for day-use only, with fires, camping, and nighttime uses prohibited (Figure C.7). Exceptions to this may be allowed only under special circumstances and with approval from the Sloan Canyon NCA or BLM Las Vegas Field Office Manager.

In the remainder of the Wilderness, nighttime use including primitive, dispersed camping will be allowed. Campers will have to be self-reliant as no developed camping sites, water, or other amenities will be provided. Campfires will be allowed but, only fuels packed in can be used. Unused campfire fuels must be packed out upon exiting the Wilderness. The burning of naturally occurring fuels will not be allowed. Campfires are allowed only at a visitors camp site, using fire pans or fire blankets. All fire waste products will be packed out of the Wilderness. Construction and use of fire rings will not be allowed. BLM encourages the use of portable gas, jellied petroleum, or pressurized liquid fuel stoves for cooking. Visitor information regarding nighttime use and Leave-No-Trace principles will be provided at the Visitor Center and the Hidden Valley Trailhead.

If more than two campsites are identified within one-quarter mile of each other, the campsite(s) presenting the least (e.g., newly established) disturbance will be rehabilitated to prevent further camping impact and proliferation of campsites. Camping sites closer than 500 feet to wildlife water developments or 300 feet to other sensitive resources (e.g., cultural sites) will be rehabilitated.

Figure C.7. Camping



4.12 Livestock Grazing

The Hidden Valley Allotment is currently open to livestock grazing. A portion of this ephemeral allotment lies within the North McCullough Wilderness but, because of the rugged terrain and lack of water, cattle typically do not wander into the Wilderness. If on-the-ground evaluations determine that forage is available, BLM will allow livestock grazing in the Hidden Valley Allotment, consistent with allotment-specific objectives. Grazing in the allotment may continue unless the permittee voluntarily relinquishes the privilege, permits, or leases in which case the allotment will be closed to further livestock grazing. Cattle are the only class of livestock authorized to graze on the Hidden Valley Allotment. Horses may be kept in corrals outside the Wilderness and used to perform ranch-related work within the Wilderness. Actions designed to attract livestock into the Wilderness are prohibited. Such actions include placement of salt and mineral supplements. New range improvements will not be allowed within the NCA or Wilderness.

4.13 Equestrian and Pack Animal Use

Equestrian and pack animal use is prohibited in the Petroglyph Management Area and its northern access (Figure C.8). Cross-country equestrian and pack animal use is allowed throughout the remainder of the North McCullough Wilderness. No animal, other than a horse, burro, or mule may be used for equestrian and/or pack animal use in the Wilderness. Except for incidental browsing, grazing of equestrian and/or pack animals is not authorized. Feeding of animals is limited to packed-in and certified weed-free feed to prevent the spread of noxious and invasive weeds. Watering of equestrian and/or pack animals at wildlife water developments is prohibited.

4.14 Other Recreational Use

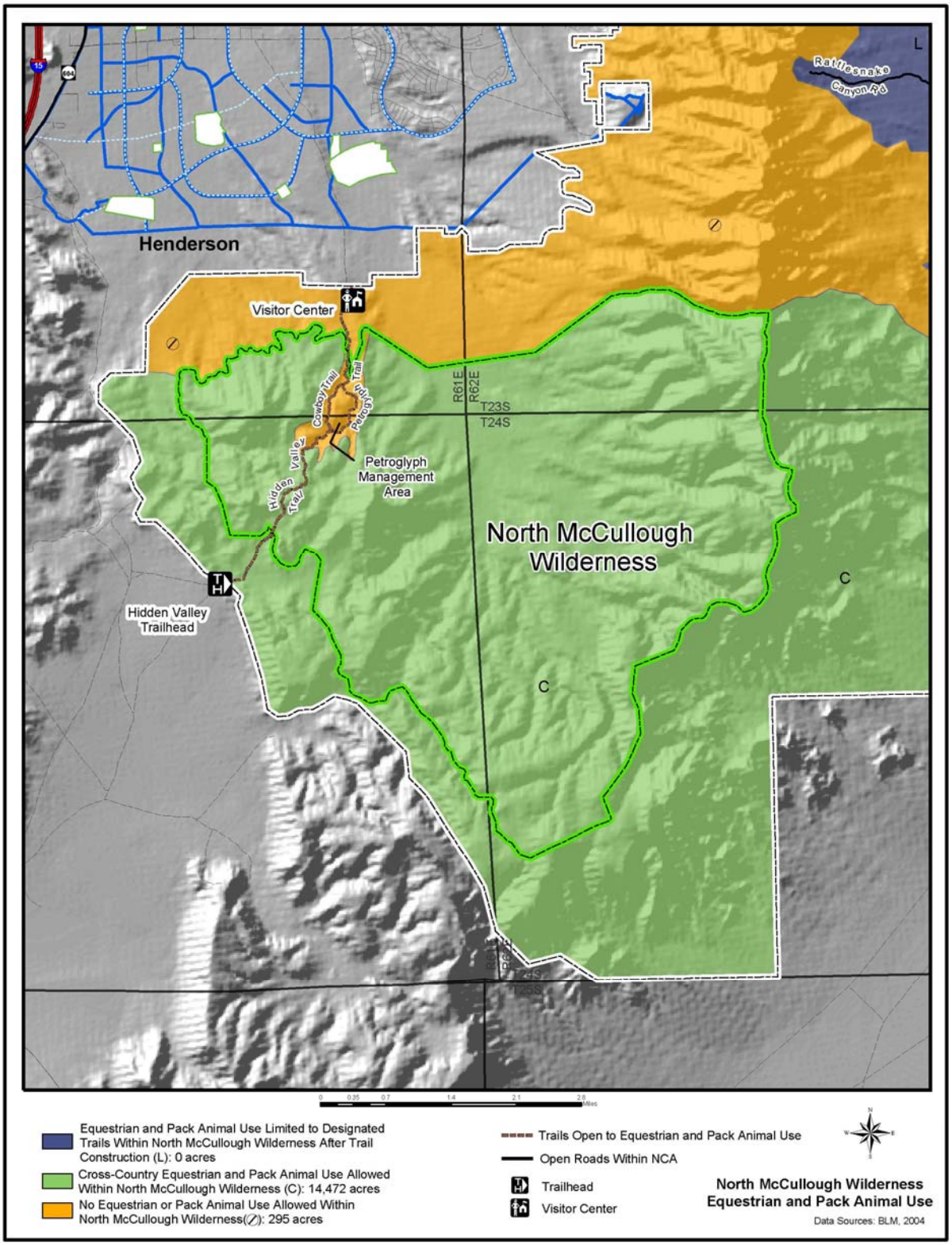
The nature of the North McCullough Wilderness is not conducive to a quality rock climbing experience. As a result, its desirability as a rock climbing destination has been low with very little rock climbing activity. This is not expected to change in the foreseeable future. Bouldering and traditional rock climbing (without permanent anchors) will be allowed in the North McCullough Wilderness except for the Petroglyph Management Area and its northern access; and areas that are found to contain sensitive resources, where it will be prohibited. Permanent anchors and other climbing hardware will be removed.

Rockhounding is prohibited throughout the Wilderness. No geocaching will be allowed anywhere within the North McCullough Wilderness. Upon discovery, geocaches will be immediately removed and held at the BLM Las Vegas Field Office. Where possible, the geocache sponsor will be notified and asked to remove the site listing from their website.

4.15 Management of Dogs

In order to eliminate the possibility of wildlife harassment and conflicts with other visitors, dogs are prohibited in the North McCullough Wilderness.

Figure C.8. Equestrian and Pack Animal Use



4.16 Aircraft Overflights

The BLM does not have administrative jurisdiction of the airspace above the Sloan Canyon NCA and Wilderness. The Clark County Act specifically allows military overflights of the Wilderness. Flight testing and evaluation; designation or creation of new units of special use airspace; or establishment of training routes are not precluded. Wilderness overflights conducted by BLM will be designed to minimize impacts to wilderness characteristics. These overflights will primarily be for wilderness monitoring purposes, (e.g. checking for new disturbances, unauthorized vehicle use).

5.0 MONITORING

In the previous sections of this plan, management objectives for the North McCullough Wilderness are established and management actions designed to achieve those objectives are described. This monitoring section tracks the outcome of activities on four qualities of wilderness character, not just the quality of the wilderness the action was primarily intended to address.

Wilderness character encompasses a combination of biophysical, experiential, and symbolic elements as described by four principle qualities defined in the Wilderness Act. The combination of these qualities distinguish wilderness from all other lands. These four qualities are of equal importance to one another and are defined as:

- Untrammeled – wilderness is unhindered and free from modern human control or manipulation.
- Outstanding opportunities for solitude or a primitive and unconfined type of recreation – wilderness provides opportunities for people to experience solitude or primitive and unconfined recreation, including the values of inspiration and physical and mental challenge.
- Undeveloped – wilderness is substantially without permanent developments or modern human occupation.
- Natural - wilderness ecological systems, being affected primarily by the forces of nature, retain their primeval character and influence substantially free from the effects of modern human civilization.

A single activity is likely to have an effect on several qualities, even though the purpose of the activity is to affect only one quality of wilderness character. A single activity may improve one quality of wilderness character while diminishing another. For example an activity such as weed control, which is intended to restore natural conditions over the long term, may diminish the untrammeled condition of the wilderness in the short term. These two separate outcomes, the effectiveness on improving “natural” and the side effect of diminishing “untrammeled,” will be monitored separately.

Since activities may affect several qualities, separate activities undertaken for different purposes, may cumulatively diminish one of the same qualities of wilderness character. For example, a trail might be designated to control visitor impacts on vegetation. In the same vicinity, a fence may be constructed around a spring to protect it from damage by feral horses. Though the two activities are unrelated, both activities have an effect on the “undeveloped” quality of wilderness character. Monitoring the effects of single activities to multiple qualities of wilderness character will improve understanding of the effects upon wilderness character in combination and over time.

Effects of intentional, unintentional, and unauthorized activities will all be captured under the monitoring system. This will provide a greater understanding of the overall and specific condition of the Wilderness and will alert managers of the need to initiate corrective actions. Monitoring will also provide Wilderness

Managers with more complete information which will improve the evaluating of future proposed activities. The monitoring will not be used to compare the North McCullough Wilderness with other Wilderness Areas in the National Wilderness Preservation System, but will be used to track the conditions and changes within the Wilderness itself.

The following monitoring will assist the BLM in tracking and improving the untrammeled condition of the Wilderness:

A log of annual management and other activities that control or manipulated flora, fauna, soils, water, or natural disturbance factors present in the Wilderness will be maintained in the area's permanent wilderness file. A description, location, purpose, and expected outcome of each activity will be documented. Activities that may be tracked include—

- Rehabilitation projects
- Fire suppression activities
- Treatments of non-native vegetation
- Relocation of wildlife
- Wildlife water developments (guzzlers)
- Periods of livestock grazing

The following monitoring will assist the BLM in preserving the outstanding opportunities for solitude or a primitive and unconfined type of recreation:

- A log of sights and sounds of civilization will be maintained in the permanent wilderness file. A description and location of the activity inside or outside the Wilderness will be documented.
- A log of all restrictions on visitor use within the Wilderness will be maintained in the permanent wilderness file. A description of the restriction and its purpose will be documented.
- Visitor use encounters on designated trails will be monitored through one or more of the following methods. Opportunities for visitor sign-in and comment may be available at the trailheads. Public comments received at the trailhead, by mail, or e-mail will be periodically compiled and reviewed. Automated visitor counters may be located at trailheads. In addition, a Wilderness Ranger will visit trailheads at least once a month to record the number of parked vehicles and collect written comments (if any) or record trail counter data. The Wilderness Ranger will hike each trail monthly to record the number of encounters and trail conditions.
- Trail conditions will be monitored by the Wilderness Ranger to assure standards established in this plan are maintained. Trail tread measurements and photos will be taken at several monitoring points identified for each trail and recorded electronically by a Global Positioning System. Photo and measurement monitoring will take place as needed at locations observed to be in the early stages of deterioration or high use.
- Visitor use encounters off-trail are unlikely to exceed acceptable limits and will not be as frequently monitored; however, any off-trail encounter by a Wilderness Ranger will be recorded,

as well as any public comments or volunteer reports regarding off-trail encounters or conditions, and entries from registers. An important focus for monitoring off-trail use will be to identify the development of informal use trails (social trails). A review of published or internet provided information will also be used to identify areas of new popularity and then inspected in the field. Where monitoring identifies elevated use patterns, and especially if violations are detected, Law Enforcement Ranger patrols will be increased in those areas. Trail counters may also be used where elevated use patterns are detected.

- The Wilderness will be monitored at boundary roads or access points once a month by Law Enforcement Rangers to detect vehicle entry violations. Low-level overflight monitoring may be used to assist in detecting motor vehicle violations in progress, or to identify other activities undetected by ground monitoring.

The following monitoring will assist the BLM to track and, where possible, improve the undeveloped and natural appearance of the wilderness:

- A log of all the developments present in the Wilderness will be maintained in the permanent wilderness file. A description, location, purpose, and expected outcome of the feature will be documented.
- All former vehicle trails that are rehabilitated will be checked in the field at least twice a year to assure they are not continuing to receive motorized use and the success of rehabilitation. If unauthorized vehicle use continues, modifications as described in this plan will be made to the closure.

The following monitoring will assist the BLM in preserving the naturalness and primeval character and influence of the wilderness:

A log of all known human alterations to the ecosystem will be maintained in the area's permanent wilderness file. A description and location will be documented or referenced. Conditions that may be tracked include:

- Non-native species
- Threatened, endangered and sensitive species
- Species no longer present in the Wilderness
- Air quality
- Presence, abundance, and distribution of native species

A log of natural disturbances will be maintained in the area's permanent wilderness file. A description and location will be documented or referenced. Activities that may be tracked include—

- Fire
- Flood
- Insect or disease outbreaks

Monitoring for noxious weeds will occur at least once a year, especially focused on trails, in washes or other areas receiving regular visitor use.

Wildlife monitoring will primarily be conducted by NDOW according to the agency's established protocol. The BLM Wilderness Rangers will also record wildlife sightings, especially for nesting raptors, bighorn sheep, Gila monster, chuckwalla, and desert tortoise. Monitoring or research by other entities may occur according to protocol described in this plan.

Livestock monitoring will be conducted during active periods within the Hidden Valley Allotment. Monitoring will be conducted on at least a monthly basis as well as in association with other monitoring efforts within the Wilderness. The number of animals, location within the Wilderness, and animal identifiers will be documented and added to the area's permanent file.

Findings or a reference to the findings of inventory, monitoring, and research projects completed in the Wilderness will be included in the permanent wilderness file. Other known research outside the Wilderness, but applicable to the understanding of the wilderness ecosystem, may be referenced.

5.1 Plan Evaluation

All field reports, photographs, and monitoring data will be maintained in the official wilderness files at the BLM Las Vegas Field Office. The North McCullough WMP will be revised when the management actions prescribed no longer meet the wilderness management objectives, or when a change in the existing situation warrants revised management. The need for revision will be reviewed every five years. If the decision is made to revise this plan it will be accomplished with public participation. Minor revisions such as typographical or cartographical errors will be made by inserting an errata sheet.

5.2 Plan Implementation Sequence

Management of the North McCullough Wilderness will be carried out in accordance with this plan under the direction of the BLM Las Vegas Field Office Wilderness staff. Other BLM staff and volunteers may be called upon for support or subject expertise. Four types of management activities may occur: 1) ongoing activities carried out through the life of the plan; 2) activities that will be implemented as special projects as identified in the plan; 3) management activities that are triggered by changes in conditions as detected through monitoring; and, 4) activities that may be proposed in the future for which general guidance exists in the plan, or that may not be addressed in the plan. The actual implementation could be altered based on funding and staff availability outside the control of this plan. The following list shows the priority sequence for accomplishing management activities of the plan.

5.2.1 Ongoing Activities

- Maintenance of boundary signs
- Trailhead and vehicle access point maintenance
- Wilderness monitoring
  - Visitor use monitoring
  - Natural resource monitoring
  - Trail condition monitoring
  - All other wilderness character monitoring
- Visitor information dissemination

5.2.2 Special Projects (in order of priority)

- Archaeological, botanical, and T&E clearances to support plan implementation.
- Write and publish supplemental rules for all visitor use standards established in the plan as specified under 43 CFR 8365.1-6.
- Rehabilitation
  - Former vehicle routes
  - Rock and mortar dam
  - Dug well
- Trail designation
  - Trail construction
  - Trail marking
  - Trailhead development (Coordinated with Sloan Canyon NCA)
- Signing
  - Trailhead and access point wilderness information signs
  - Trailhead kiosks
  - Wilderness boundary markers
  - Sloan Canyon access limitation markers

5.2.3 Changing Conditions

- Rehabilitation
  - New visitor impacts
  - Fire rehabilitation
- Trail maintenance and stabilization
- Management of social conditions
  - Visitor use requirements
  - Group size
- Fire suppression
- Non-native plant control

5.2.4 Potential Future Proposals

- Guiding, outfitters, and other SRPs
- Wildlife projects
- Natural resources research

Future proposals not analyzed within this document will require separate Environmental Assessments and 30-day public notification.

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