

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

Environmental Assessment

**Maintenance of Range Developments within Ely District
Wilderness**

PREPARING OFFICE

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Environmental Assessment
Maintenance of Range Developments within Ely
District Wilderness

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Chapter 1. Introduction

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Much of the land administered by the Bureau of Land Management (BLM) is within livestock grazing allotments, and has permitted livestock grazing occurring. Range developments throughout these allotments have been installed over the years, including spring development, fences, pipelines, and reservoirs. These range developments require regular maintenance. Many developments lie within designated wilderness and pre-date the wilderness designation. This EA incorporates maintenance of various range developments that lie within wilderness.

Section 4(c) of the Wilderness Act lists uses and activities that are specifically prohibited in wilderness: "Except as specifically provided for in this Act, and subject to existing private rights, there shall be no commercial enterprise and no permanent road within any wilderness area designated by this Act and, except as necessary to meet minimum requirements for the administration of the area for the purpose of this Act (including measures required in emergencies involving the health and safety of persons within the area), there shall be no temporary road, no use of motor vehicles, motorized equipment or motorboats, no landing of aircraft, no other form of mechanical transport, and no structure or installation within any such area." (See Appendix F, *Glossary* (p. 121) for definitions.)

Further, the Wilderness Act states "Where grazing of livestock has been authorized by a grazing permit or grazing lease for land within a wilderness, and the use was established before Congress established the wilderness area, under Section 4(d)(4)(2) of the Act it "shall be permitted to continue subject to such reasonable regulations as are deemed necessary by the [administering agency]."

Grazing use would continue, under federal regulations, to be managed in a manner that promotes standards attainment. The Ely District manages the land within both the Northeastern Great Basin, and Mojave – Southern Great Basin Resource Advisory Council Standards areas. Activities and the necessary facilities used to support livestock grazing would be permitted to continue in wilderness. Planning related to grazing operations would be guided by the Congressional Grazing Guidelines (House Report 105-405 Appendix A, 1990) and the BLM Manual 6340 (Management of Designated Wilderness Areas).

1.1. Identifying Information:

1.1.1. Title, EA number, and type of project:

Maintenance of Range Developments within Ely District Wilderness

DOI-BLM-NV-L000-2014-0006-EA

Subject Function Code: 8560 — Designated Wilderness

1.1.2. Location of Proposed Action:

Range developments are found within each of the 22 designated wilderness areas on the District. See Appendix A, *Maps* (p. 35).

1.1.3. Name and Location of Preparing Office:

Lead Office -Ely District Office and number LLNVL0000

HC 33 Box 33500

Ely, NV 89301

1.2. Purpose and Need for Action:

The purpose is to analyze the impacts of performing minor maintenance on existing range developments found throughout the 21 wilderness areas on the Ely District for allotments that do not have a current, fully processed permit that has analyzed these actions. There are 22 designated wilderness areas on the Ely District, however, one of which (White Rock Range Wilderness) does not contain range developments and is not included in this document.

The need for the action is to allow minor maintenance, where appropriate and in compliance with the Wilderness Act, that states “Where grazing of livestock has been authorized by a grazing permit or grazing lease for land within a wilderness, and the use was established before Congress established the wilderness area, under Section 4(d)(4)(2) of the Act it "shall be permitted to continue subject to such reasonable regulations as are deemed necessary by the [administering agency]." The continuation of existing grazing may apply to not only the utilization of the forage resource, but also the use and maintenance of livestock management developments and facilities that were associated with the grazing activity at the time of designation and have been authorized by the BLM. Grazing management activities, including the construction, use, and maintenance of livestock management developments, must comply with the BLM grazing regulations 43 CFR 4100, as well as Manual 6340 — Management of Designated Wilderness Areas [See Appendix C, *Wilderness Planning: Excerpt from BLM Manual 6340 – Management of Designated Wilderness Areas (Public)*: (p. 63)]. This EA will not cover new project construction, reconstruction, or major maintenance of range developments.

As stated in BLM Manual 6340:

Structures and installations used for livestock management existing at the time of designation may be maintained. Maintenance may be done by the occasional use of motorized equipment where:

- A. practical non-motorized alternatives do not exist; and
- B. the motorized use is expressly authorized in the grazing permit and advanced written permission for each maintenance activity is granted by the BLM; and
- C. the motorized use was allowed prior to wilderness designation.

In most situations, authorization for motorized use would be considered on a case-by-case basis—for example, to remove sediment from a stock reservoir. In some cases, a schedule could be established—for example, hauling water to fill a tank. In all cases, authorization should be for no more than is practically necessary to support the livestock grazing program and for actions that would not have a significant adverse impact on the natural environment. The use of an existing route and mode of travel also must cause the least impact on wilderness

character and be similar to what was allowed prior to wilderness designation. These decisions are made during the grazing permitting process with the use of a Minimum Requirements Analysis, completed in conjunction with the associated NEPA analysis, through which alternatives are analyzed to determine the method that least impacts wilderness character while remaining consistent with the rule of practical necessity and reasonableness in supporting the livestock grazing program.

Ideally all maintenance activities would be determined and analyzed in the Environmental Assessment associated the Term Permit Renewal (TPR). The schedule for TPR's may not coincide with the maintenance needs, however. Without an up-to-date TPR, which analyzes and describes the maintenance activity in wilderness, the authorized grazing permittee would be delayed in addressing their maintenance needs as a site-specific EA would be required for each maintenance activity. The intention in drafting this EA is to address standard, regular minor maintenance needs in designated wilderness in lieu of a revised TPR, to allow the permittee to address their minor maintenance needs, such as repair to troughs, fencelines and pipelines.

This EA would not eliminate the need for the BLM to complete a Minimum Requirements Analysis (MRA) for the specific maintenance needs, and the permittee is required to obtain — in advance — a letter of authorization for each maintenance activity. Once the TPR for an allotment within wilderness is completed the maintenance actions would be in conformance with that document.

This also fulfills the need for the permittees to comply with 43 CFR 4120. 3-1 (a), which states “Range improvements shall be installed, used, maintained, and/or modified on the public lands, or removed from these lands, in a manner consistent with multiple-use management.”

1.3. Scoping, Public Involvement and Issues:

Internal scoping was conducted by a BLM interdisciplinary (ID) team on April 1, 2013 (Schell Field Office), and September 23, 2014 (Caliente Field office) to identify any resource concerns or issues associated with the proposed action. The Notice of Proposed Action in Wilderness letter was sent to the EYDO wilderness mailing list on November 19, 2014; no comments were received. Tribal consultation letters were sent on October 3, 2014. Preliminary issues identified were:

- impacts to wilderness character,
- noxious and invasive weeds,
- cultural resources, and
- threatened and endangered species.

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Chapter 2. Proposed Action and Alternatives

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2.1. Description of Action Common to All Alternatives

Routine livestock management activities in wilderness areas, including project inspection and maintenance (e.g. minor fence repairs), small quantity salt distribution, or herding animals would be accomplished by non-motorized, non-mechanized means (e.g. by foot or horseback). Further, this environmental analysis covers actions that do not require extensive surface disturbance (e.g. below-ground pipeline replacement), or heavy machinery (e.g. bulldozer).

2.2. Description of the Proposed Action: Motorized

This proposed action describes typical motorized maintenance actions for existing range developments in wilderness, as described by development type:

- Fences & Corrals
- Developed Springs, including head box and water distribution source (e.g. trough, tank, dirt pond)
- Pipelines
- Reservoirs

See Appendix A, *Maps* (p. 35) and Appendix B, *Table of known Range Developments in Wilderness and Wildlife/Special Status Species* (p. 57) for a list of known range developments in wilderness.

Fences & Corrals

Fences throughout the planning area require routine maintenance, and as described in above, would be performed by non-motorized, non-mechanized means. However, additional maintenance may be required from time to time due to damage from wildfires, animals, or intentional destruction. For any single segment of preexisting fence at least one-quarter mile from any designated motorized route and at least one-half mile in length, the use of the motorized vehicles or equipment may be allowed for replacement or repair to damage otherwise unpreventable through routine inspection and maintenance (i.e. destruction by wildfire, or extensive damage from livestock, wild horses and/or wildlife). It is anticipated that damage which would require the use of motorized equipment or vehicles to replace segments longer than one-half mile would not occur frequently. Alternative fence locations, materials, construction techniques, and the use of additional gates would be evaluated prior to authorizing more frequent use of motorized equipment or vehicles for fence that repeatedly requires repairs.

Requests for motorized equipment for maintenance of corrals at least a half mile from any designated motorized route within the wilderness may be authorized not more than once every ten years.

Developed Springs

The use of motorized vehicles or equipment for routine replacement of stock troughs may be authorized not more than once every ten years. The District Manager may allow additional use of motorized equipment or vehicles on a case-by-case basis where the BLM determines the need for replacement is due to extraordinary circumstances (i.e. flash flood, wildfire, vandalism, etc.).

Replacement troughs would be designed and constructed to function ten years or more under normal conditions of use with routine maintenance and to blend with the surrounding environment to the extent practicable. Headboxes may be cleaned out with hand tools at any time.

Pipelines

Maintenance or repairs to below-ground pipeline segments of up to 40 feet may occur with hand-tools (e.g. repairing a leak in a section of pipe) on a case-by-case basis. Above-ground pipe may be repaired, as needed, using hand tools. Replacement of above-ground pipeline may be authorized under this EA. Use of a generator to blow out clogged pipeline may occur annually. A motor vehicle may be authorized to haul the generator to the location (see *Access* below).

Reservoirs

Reservoir or stock pond needing minor clearing with hand tools may occur as needed (e.g. cleaning out inlet/outlet). Any heavy equipment needs for maintenance of reservoirs or stock ponds would require site-specific NEPA analysis.

Additional Range Specific Management

Access

In cases with approved motorized access for any of the above maintenance, access would be confined to previously utilized routes except in cases where the potential for resource damage is determined to be unacceptable. In such cases, an alternate route may be identified. Some previously utilized routes have been restored to their natural condition in order to prevent unauthorized motorized use. It is anticipated that most repair of range developments requiring motorized vehicles would be accomplished with a single trip using one vehicle and, as needed, a trailer. The use of motorized vehicles or equipment would be scheduled to minimize disturbance to riparian areas, soils, wildlife, and the visiting public.

Access route maintenance may use hand tools (shovel, hand saw) for minor repair needs, when approved in association with other maintenance requests. The use of heavy equipment for major access route developments would be considered on a case-by-case basis with site-specific NEPA analysis.

Except in the case of emergency, permittees must obtain written authorization from the District Manager prior to using any motorized equipment or vehicles within the wilderness areas. For uses evaluated as part of this document, authorizations would typically be issued within one to two weeks from the time of request.

Emergencies

For the purposes of allowing motorized equipment and/or vehicles for grazing management, an emergency is defined as any unpreventable or reasonably unforeseeable set of circumstances which, without immediate action, would likely result in the death of livestock or result in long-term or irreversible impact to the wilderness resource. At a minimum, grazing permittees must obtain verbal authorization from the District Manager for each instance in which motorized equipment or vehicles are to be used in the wilderness. Verbal authorization must be followed up with a written authorization for the wilderness file. In the event that the District Manager is not immediately available, the permittee must notify the District Manager as soon as practicable but no later than 48 hours following the use of motorized equipment or vehicles.

In times of drought springs flow may be reduced or may no longer flow. Water hauls would be considered on a case-by-case basis and would require site specific NEPA analysis.

Minimization Measures

1. A BLM Biologist will determine the need for biological surveys for BLM Sensitive and federally listed, proposed, and candidate species. Appropriate measures, as outlined in biological opinions or as applicant committed measures, may be applied.
2. Assess the potential for impacts to Threatened, Endangered, Proposed, and Candidate Species by the Proposed Action. Undertake consultation under section 7 of the Endangered Species Act as needed. Terms and Conditions from the Ely District Resource Management Plan (RMP) Programmatic Biological Opinion (File No. 84320-2008-F-0078) and other Biological Opinions may apply.
3. Management Actions, which may be found under various resource specialties, from the Ely RMP will be adhered to as applicable.
4. Although the Ely RMP provides parameters for survey needs, minimization and mitigation measures for certain species, species lists, species distribution, and seasonality, and best available science may change over time and commensurate measures may need to be added.
5. In accordance with the Migratory Bird Treaty Act (MBTA), take of migratory birds is not authorized. Therefore, actions which have the potential to affect migratory bird species of concern must be minimized or avoided. Most migratory birds nest between April and July, dates will be adjusted for the species present in the area and the specific proposed activity. Activities may not occur during this period without special authorization, and only after breeding bird surveys have been conducted by a qualified biologist. Authorization for construction during this breeding period would be contingent on the findings of the survey, within seven days of the activity. Nests found will be protected by appropriate buffers agreed to by the BLM wildlife team.

Authorization Process

All authorizations for the use of motorized equipment, motorized vehicles or mechanized equipment (see Appendix F, *Glossary* (p. 121)) would specify the type of vehicle and number of vehicle passes, the route(s) to be used and period of use for motorized equipment. The number of vehicle passes authorized would be based upon the minimum number necessary to safely accomplish maintenance objectives. The selection of vehicles to be used would be based upon readily available and cost-effective equipment which minimizes soil disturbance, compaction and resource damage.

Prior to a motorized, mechanized vehicle or equipment entry, the BLM must complete a MRA and the BLM must issue a letter of authorization to the permittee. The MRA process includes the use of a Minimum Requirements Decision Guide (MRDG), which is designed to assist wilderness managers in making appropriate decisions in wilderness. Conducting a minimum requirements analysis follows the direction of both law and agency policy. The MRDG uses a process to identify, analyze, and select management actions that are the minimum necessary for wilderness administration. It applies this direction from the Act (section 4(c)) and incorporates a two-step process. Step 1 determines whether administrative action is necessary. If action is found to be necessary, then Step 2 provides guidance for determining the minimum activity. Step

2 has been referred to as determining the minimum tool but could include any type of activity, method, or equipment.

The Proposed Action would not eliminate the need for the BLM to complete a MRA for the specific maintenance needs, and the permittee is required to obtain — in advance — a letter of authorization for each maintenance activity. The authorization should be for no more than is practically necessary to support the livestock grazing program and for actions that would not have a significant adverse impact on the natural environment. This Letter of Authorization would include the following information:

- name and project number of the range development and description of the maintenance action,
- the range of dates the maintenance action would take place,
- the number of days authorized for use of motorized/mechanized equipment or vehicles,
- the authorized equipment or vehicle(s) including quantity,
- any required mitigation measures,
- exact travel route(s), and
- any rehabilitation requirements.

2.3. Description of Alternative B: Non-motorized

Under this alternative, maintenance of existing range developments would utilize non-motorized methods only, regardless of development type (see list below). This alternative would exclude the use of any motorized or mechanized tools or equipment, in accordance with the Wilderness Act.

- Fences
- Developed Springs, which would include the head box and the water distribution source (e.g. trough, tank, dirt pond)
- Pipeline
- Reservoirs
- Corrals

The above developments throughout the planning area require routine maintenance to ensure proper functionality. Additional maintenance may be required when damage results from wildfires, animals, or intentional destruction. All access and maintenance would be achieved by horse, foot or utilizing packstock. An unlimited number of trips would be allowable for non-motorized maintenance activities. Since no Prohibited Uses, as described in Section 4(c) of the Wilderness Act, are proposed, the permittee would not be required to obtain a written letter of authorization prior to the non-motorized activity under this alternative.

Where non-motorized means are not practical, the circumstances would be evaluated under a site-specific NEPA document, and MRA for consideration of motorized or mechanized methods of maintenance.

2.4. Description of Alternative C: No Action

The No Action Alternative is the continuation of current management. In this case, each request for motorized or mechanized vehicle or equipment uses for maintenance of existing range developments would require a site-specific NEPA analysis, MRA and letter of authorization. This would dramatically delay the permittee's ability to maintain existing range developments, particularly those instances when motorized/mechanized vehicles or equipment are determined to be the minimum necessary for the maintenance activity.

2.5. Alternatives Considered but not Analyzed in Detail

No other alternatives were considered.

2.6. Conformance

Compliance with Existing Laws and Regulations

This EA complies with the Wilderness Act and the enabling legislation: the Nevada Wilderness Protection Act of 1989, Lincoln County Conservation, Recreation and Development Act (LCCRDA, 2004) and White Pine County Conservation, Recreation and Development Act (WPCCRDA, 2006), as well as numerous other applicable laws, regulations, and executive orders, including 43 CFR Parts 6300 and 8560.

The Wilderness Act states in Sec. 4(d)(4):

(2) the grazing of livestock, where established prior to September 3, 1964, shall be permitted to continue subject to such reasonable regulations as are deemed necessary by the [administering agency].

The Nevada Wilderness Protection Act states in Sec. 6. Grazing in Wilderness Areas:

(a) LIVESTOCK GRAZING. — Grazing of livestock in wilderness areas designated in section 2 that was established prior to the date of enactment of this Act shall be administered in accordance with section 4(d)(4) of the Wilderness Act (16 U.S.C. 1133(d)(4)) and section 108 of the Act entitled “An Act to designate certain National Forest System lands in the States of Colorado, South Dakota, Missouri, South Carolina, and Louisiana for inclusion in the National Wilderness Preservation System, and for other purposes (16 U.S.C. 1133 note).

LCCRDA states in Sec. 204. Administration,

(b) LIVESTOCK.—Within the wilderness areas designated under this title that are administered by the Bureau of Land Management, the grazing of livestock in areas in which grazing is established as of the date of enactment of this Act shall be allowed to continue, subject to such reasonable regulations, policies, and practices that the Secretary considers necessary, consistent with section 4(d)(4) of the Wilderness Act (16 U.S.C. 1133(d)(4)), including the guidelines set forth in Appendix A of House Report 101–405.

The WPCCRDA (2006) states in Sec. 324. Administration:

(b) Livestock- Within the wilderness areas designated under this subtitle that are administered by the Bureau of Land Management and the Forest Service, the grazing of livestock in areas in which grazing is established as of the date of enactment of this Act shall be allowed to continue--

(1) subject to such reasonable regulations, policies, and practices that the Secretary considers necessary; and

(2) consistent with section 4(d)(4) of the Wilderness Act (16 U.S.C. 1133(d)(4)), including the guidelines set forth in Appendix A of House Report 101-405.

See Appendix D, *Congressional Grazing Guidelines* (p. 65), which is House Report 101-405.

Currently, 21 of the EYDO's 22 wilderness have range management direction in eight wilderness management plans:

- Big Rocks Wilderness, Mount Irish Wilderness, and South Pahroc Range Wilderness Management Plan and Environmental Assessment. January 14, 2008. NV-040-06-003.
- Fortification Range, Parsnip Peak, and White Rock Range Wilderness - Final Wilderness Management Plan and Environmental Assessment. January 5, 2009. Ely District Office: EA-NV-040-2007-111. Cedar City Field Office: EA-UT-040-2007-35.
- Delamar Mountains, Meadow Valley Range and Mormon Mountains Wilderness - Final Wilderness Management Plan and Environmental Assessment. December 16, 2009. NV-040-08-14-EA.
- Clover Mountains Wilderness and Tunnel Spring Wilderness – Final Wilderness Management Plan and Environmental Assessment. November 1, 2010. DOI-BLM-NV-L000-2009-0007-EA.
- Weepah Spring Wilderness & Worthington Mountains Wilderness – Final Wilderness Management Plan and Environmental Assessment. October 13, 2011. DOI-BLM-NV-L000-2010-0008-EA.
- Highland Ridge, Mount Grafton, South Egan Range, and Far South Egans Wilderness - Final Wilderness Management Plan and Environmental Assessment. August 14, 2013. DOI-BLM-NV-L000-2009-0012-EA.
- Becky Peak and Government Peak Wilderness - Final Wilderness Management Plan and Environmental Assessment. May 30, 2014. DOI-BLM-NV-L000-2013-0006-EA.
- Bristlecone Wilderness and Goshute Canyon Wilderness - Final Wilderness Management Plan and Environmental Assessment. December 18, 2014.

Within several Wilderness Management Plans, there is specific direction on allowances for range development inspection and maintenance access. Specifically, see the plans regarding Highland Ridge, Becky Peak, Government Peak, Bristlecone and Goshute Canyon Wildernesses. The remainder of the wilderness areas follow the direction within this EA. Currently, only the Mt. Moriah Wilderness lacks the management direction of a wilderness management plan.

Conformance to Existing BLM Land Use Plan

This EA has been analyzed within the scope of the Ely District Approved Resource Management Plan (2008) and has been found to be in conformance with the goals, objectives, and decisions of the Decision Summary and Record of Decision.

- Travel Management: TM-1: Close designated wilderness to motorized and mechanized travel according to policy and enabling legislation.
- Special Designations: SD-5: Manage 22 designated wilderness areas in accordance with the Wilderness Act of 1964; the Nevada Wilderness Protection Act of 1989; the Lincoln County Conservation, Recreation, and Development Act of 2004; the White Pine County Conservation, Recreation and Development Act of 2006. Twenty-two designated wilderness areas totaling approximately 1.1 million acres have been designated by Congress in this decision area. This includes six citizen-proposed areas of wilderness quality that were not managed by the Ely District Office as wilderness study areas.

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Chapter 3. Affected Environment & Environmental Effects:

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The 22 wilderness areas covered by the Proposed Action are located in Lincoln and White Pine County in the Mojave and Great Basin ecoregions.

3.1. Resources/Concerns Considered for Analysis

The critical elements of the human environment, as identified by the BLM Manual 1790-1, are listed in EA Table 4. Elements that may be affected are further described in this Environmental Assessment. Rationales for those elements that would not be affected are also listed in EA Table 4. These critical elements will not be considered further in this document. Some of these items are being considered to ensure compliance with laws, Supplemental Authorities, Executive Orders, or regulations that impose requirements on all Federal actions.

Resource/Concern Considered	Analyzed (Yes/No)	Rationale for Dismissal from Analysis or Issue(s) Requiring Detailed Analysis
Air Quality	No	Insignificant effects.
Cultural Resources	No	Exempt from NHPA review under the Nevada State Protocol Agreement. For more information refer to CRINA FY15-028.
Environmental Justice	No	No minority or low-income populations would be disproportionately affected by the proposed action.
Fish and Wildlife	No	Although some disturbance and displacement may occur no population level effects are anticipated from the action.
Floodplains	No	Although some land disturbance may occur, it will not impact downstream flooding.
Forest and Rangeland Health	Yes	Proposed action will affect livestock management which may affect rangeland health.
Migratory Birds	Yes	Migratory Birds are analyzed in detail below.
Native American Religious Concerns and other concerns	No	There will not be any foreseeable impacts to traditional religious or cultural sites of importance with grazing within the designed wilderness areas.
Threatened or Endangered Species	Yes	The Delamar Mountains, Meadow Valley Range, and Mormon Mountains Wilderness areas contain habitat for desert tortoise, a threatened species. Analysis provided below.
Wastes, Hazardous or Solid	No	No known hazardous or solid wastes identified within the project areas nor would they be likely introduced by the proposed.
Water Quality, Drinking/Ground	No	Although some land disturbance may occur, it will not impact surface water quality.
Wetlands/Riparian Zones	Yes	The proposed action will affect wetlands/riparian zones with in wilderness areas.
Wild and Scenic Rivers	No	No Wild and Scenic Rivers occur within or adjacent to the project area. No further analysis is necessary.
Wilderness	Yes	May affect wilderness character. Analysis provided below.

In addition to the Critical Elements of the Human Environment, the BLM considers other resources that occur on public lands, or issues that may result from the implementation of the Proposed Action. A brief rationale for either considering or not considering the issue or resource further is provided.

Resource or Concern	Analyzed (Yes/No)	Rationale for dismissal from Analysis or requiring detailed Analysis
Areas of Critical Environmental Concern (ACEC)	No	No impacts to ACECs are anticipated.
Fire Management	No	No impacts are anticipated.
Lands and Realty	No	No impacts to land use authorizations are anticipated.
Livestock Grazing Uses	Yes	The proposed action affects Livestock Grazing Uses.

Invasive Non-native Plan Species (includes noxious weeds)	No	A weed risk assessment has been completed for this project (see Appendix E, <i>Weed Risk Assessment</i> (p. 67)).
Minerals	No	There are no active mining claims in the wilderness areas. Wilderness is removed from mineral entry, therefore, minerals is not an issue.
Recreation Uses	No	No impacts to recreation from either alternative.
Special Status Animal Species	Yes	There may be effects to special status animal species. Analysis provided below.
Special Status Plant Species	No	No special status plants have been identified within the project areas. A minimization measure has been added to the action regarding special status plants.
Vegetation/Soils/Watershed	No	The proposed action involves small scale disturbances that are not likely to have effects on a vegetation or soils at a watershed level.
Visual Resources	No	As visual resource management class one areas, all wilderness actions would comply with those criteria.
Wild Horses	No	There may be some displacement of wild horses during maintenance activities but following the maintenance horses should be able to return to natural activity in the area of disturbance.
Water Resources (Water Rights)	No	Although some land disturbance may occur, it will not impact surface water quality.

3.2. Migratory Birds

3.2.1. Affected Environment

Major avian communities within the Ely District occur in creosote-white bursage, Joshua tree woodlands, sagebrush, phreatophyte, pinyon-juniper, montane, riparian, and aspen habitats. Many migratory birds are heavily dependent on riparian systems. Seventy-seven bird species have been identified as either riparian obligate or riparian dependent in the western US (Rich, 2002). Willow, aspen and cottonwoods provide vital riparian under-story, mid-story and canopy cover to support a diverse bird community. Species using this habitat include but are not limited to northern goshawk (*Accipiter gentilis*), broad-tailed hummingbird (*Selasphorus platycercus*), northern flicker (*Colaptes auratus*), house wren (*Troglodytes aedon*), warbling vireo (*Vireo gilvus*), yellow-rumped warbler (*Dendroica coronata*), western wood pewee (*Contopus sordidulus*), lazuli bunting (*Passerina amoena*) and western tanager (*Piranga ludoviciana*). Migratory birds occur in all habitats of the Ely District throughout year with nesting predominantly occurring from March-July.

3.2.2. Impacts of Proposed Action: Motorized

The proposed action could result in some disturbance and displacement of migratory birds. Impacts could vary depending upon the time of year, duration, and amount of disturbance. Adherence to the proposed minimization measures in the proposed action should lessen impacts

3.2.3. Impacts of Alternative B: Non-Motorized

An unlimited number of trips would be allowed for non-motorized maintenance activities. Using non-motorized methods for maintenance of range developments could result in longer durations of disturbance to wildlife species. Noise levels and areas of ground disturbance may be less under

this alternative than the proposed action due to the use of non-motorized equipment. Otherwise, impacts would be similar to those described under the proposed action.

3.2.4. Impacts of Alternative C: No Action

The no action alternative would allow maintenance of range developments in wilderness, but the authorization process would be different. The no action alternative would result in similar impacts as those described under the proposed action. The minimization measures in the proposed action would not be required; therefore, effects to migratory birds could be greater under the no action alternative.

3.3. Threatened or Endangered Species

3.3.1. Affected Environment

Within the Ely District, wildlife includes a diverse array of species typical of the Great Basin and Mojave Desert ecosystems. Of these, the U.S. Fish and Wildlife Service (USFWS) list includes one species as threatened or endangered species with a potential to be affected by the proposed action. The proposed project areas include general habitat for the federally threatened Agassiz's desert tortoise (*Gopherus agassizii*).

The Delamar Mountains, Meadow Valley Range, and Mormon Mountains Wilderness Areas contain habitat for desert tortoise. In the Delamar Mountains Wilderness, the Mormon Mesa ACEC boundary fence in the Grapevine allotment is within general habitat for desert tortoise. The Kane Springs division fence in the Delamar allotment and Alamo fence in the Lower Lake East allotment in the Delamar Mountains Wilderness are in general habitat for desert tortoise. In the Meadow Valley Range Wilderness, all three fences in the Boulder Spring allotment are partially within general desert tortoise habitat and all range developments (R&J reservoir, a trough, three corrals, and an administrative access route) in the Breedlove allotment are located in general desert tortoise habitat. Three fences in the White Rock allotment are in general desert tortoise habitat in the Mormon Mountains Wilderness.

3.3.2. Impacts of Proposed Action: Motorized

With an assumption that fenceline maintenance could disturb an approximately 10 foot-wide area, the proposed action could disturb up to 8.9 acres of desert tortoise habitat for fenceline maintenance (Table 1).

Maintenance of R&J reservoir, a trough, three corrals, and an administrative access route in the Breedlove allotment could disturb approximately an additional 4.58 acres of general desert tortoise habitat. In sum, the proposed action could disturb up to 13.48 acres of general desert tortoise habitat.

Table 1. Range developments in wilderness and desert tortoise habitat

Wilderness Area	Allotment	Description	Number of acres
Delamar Mountains	Grapevine	ACEC fenceline	.91 acre

Delamar Mountains	Lower Lake East	Alamo fence	1.7 miles = 2.06 acres
Delamar Mountains	Delamar	Kane Springs division fence	0.4 miles = 0.48 acres
Meadow Valley Range	Boulder Spring	3 fences	1.9 miles = 2.30 acres
Meadow Valley Range	Breedlove	R&J Reservoir	0.5 acre
Meadow Valley Range	Breedlove	1 trough	0.1 acre
Meadow Valley Range	Breedlove	3 corrals	0.3 acre
Meadow Valley Range	Breedlove	Administrative access route	3.68 acres
Mormon Mountains	White Rock	3 fences	2.6 miles = 3.15 acres
Total			13.48 acres

In general, maintenance of range developments could lead to potential effects such as mortality, injury or harassment of individuals as a result of vehicle or equipment encounters, and disruption of feeding, breeding, or sheltering during maintenance activities.

3.3.3. Impacts of Alternative B: Non-Motorized

An unlimited number of trips would be allowed for non-motorized maintenance activities. Using non-motorized methods for maintenance of range developments could result in longer durations of disturbance to wildlife species. Additional trips could increase the risk of encounters with desert tortoises and resulting harassment or mortality. Noise levels and areas of ground disturbance may be less under this alternative than the proposed action due to the use of non-motorized equipment. Otherwise, impacts would be similar to those described under the proposed action.

3.3.4. Impacts of Alternative C: No Action

The no action alternative would allow maintenance of range developments in wilderness, but the authorization process would be different. The no action alternative would result in similar impacts as those described under the proposed action. The minimization measures in the proposed action would not be required; therefore, effects to desert tortoise could be greater under the no action alternative.

3.4. Special Status Animal Species

3.4.1. Affected Environment

A review of the proposed project locations in relation to several geospatial databases was used to identify special status animal species that could be potentially affected by the proposed action. Special status species with potential to inhabit the general project areas include but are not limited to: bighorn sheep (*Ovis canadensis*), pygmy rabbit (*Brachylagus idahoensis*), pallid bat (*Antrozous pallidus*), big brown bat (*Eptesicus fuscus*), California myotis (*Myotis californicus*), western pipistrelle (*Pipistrellus hesperus*), silver-haired bat (*Lasionycteris noctivagans*), long-eared myotis (*Myotis evotis*), Townsend's big-eared bat (*Corynorhinus townsendii*), Brazilian free-tailed bat (*Tadarida brasiliensis*), western small-footed myotis (*Myotis ciliolabrum*), long-legged myotis (*Myotis volans*), golden eagle (*Aquila chrysaetos*), bald eagle (*Haliaeetus leucocephalus*), greater sage-grouse (*Centrocercus urophasianus*), Agassiz's desert tortoise (*Gopherus agassizii*), banded Gila monster (*Heloderma suspectum cinctum*), Meadow Valley Wash desert sucker (*Catostomus clarkia* ssp.), Meadow Valley Wash speckled dace (*Rhinichthys osculus* ssp.), Bonneville cutthroat trout (*Onchorhynchus clarkii utah*), flat-topped

Chapter 3 Affected Environment & Environmental Effects:

Impacts of Alternative B: Non-Motorized

Steptoe pyrg (*Pyrgulopsis planulata*), southern Steptoe pyrg (*Pyrgulopsis sulcata*), and Steptoe hydrobe (*Eremopyrgus eganensis*). See Appendix B, *Table of known Range Developments in Wilderness and Wildlife/Special Status Species* (p. 57)

3.4.2. Impacts of Proposed Action: Motorized

The proposed action could result in some disturbance and displacement of special status species. Impacts could vary depending upon the time of year, duration, and amount of disturbance. Adherence to the proposed minimization measures in the proposed action should lessen impacts.

3.4.3. Impacts of Alternative B: Non-Motorized

An unlimited number of trips would be allowed for non-motorized maintenance activities. Using non-motorized methods for maintenance of range developments could result in longer durations of disturbance to wildlife species. Noise levels and areas of ground disturbance may be less under this alternative than the proposed action due to the use of non-motorized equipment. Otherwise, impacts would be similar to those described under the proposed action.

3.4.4. Impacts of Alternative C: No Action

The no action alternative would allow maintenance of range developments in wilderness, but the authorization process would be different. The no action alternative would result in similar impacts as those described under the proposed action. The minimization measures in the proposed action would not be required; therefore, effects to special status species could be greater under the no action alternative.

3.5. Forest and Rangeland Health

3.5.1. Affected Environment

Forests and rangelands within the project area range from Mojave blackbrush (*Coleogyne ramosissima*) and creosote bush (*Larrea tridentata*) communities in the southern end of district, to Pinyon-Juniper and ponderosa (*Pinus ponderosa*) woodlands intermixed with sagebrush rangelands typical of the Great Basin in the northern end of the district.

3.5.2. Impacts of Proposed Action: Motorized

Forest and rangeland health would benefit from the motorized proposed action in that it would allow for a more rapid response to issues regarding range developments that are failing or have failed. Any additional disturbance caused by the use of motorized vehicles in wilderness would be outweighed by benefits realized from the timely maintenance of range developments. For example, waters can be used to focus grazing in a particular area or eliminated to exclude grazing from an area. Functional fences keep cattle within their grazing area, where as a dysfunctional fence will allow cattle to stray outside their grazing area. Overall this would aid in achieving and/or maintaining Standards for Rangeland Health.

3.5.3. Impacts of Alternative B: Non-Motorized

Forest and Rangeland health would benefit from the more timely authorization to repair or maintain range developments, but to a lesser degree in situations that could benefit from the use of motorized equipment. In some cases repairs or maintenance may be impossible without the use of motorized equipment. This alternative would still help in achieving and maintaining Standards for Rangeland Health. in instances where repairs or maintenance of range developments are delayed or prevented by access issues and/or administrative processes. Timely responses to issues regarding livestock are important for the safety of the animals and to prevent undesirable effects caused by unmanaged grazing.

3.5.4. Impacts of Alternative C: No Action

Forest and rangeland health could be negatively impacted by the inability to respond in a timely manner to failing or failed range developments. Grazing management is hindered under this alternative and some operations are not able to implement best management practices due to administrative obstacles. The no action alternative can make achievement and maintenance of Rangeland Health Standards difficult.

3.6. Wetlands and Riparian Zones

3.6.1. Affected Environment

Wetlands and riparian zones within wilderness areas are critical features for wildlife and livestock. Some riparian areas in the wilderness areas are developed under a water right and some do have enclosures with an accessible trough to protect riparian vegetation from livestock and wild/feral horses. Riparian areas are often found in rugged terrain such as deep canyons and rocky outcroppings. In some cases the springs feeding the riparian area provide water to grazing operations, and due to their age require frequent maintenance. Some range developments older than 50 years of age need to be evaluated as a cultural resource (see cultural resource section).

3.6.2. Impacts of Proposed Action: Motorized

Under the motorized proposed action, it is possible to have a more rapid response to issues regarding range developments that are failing or have failed. Any additional disturbance caused by the use of motorized vehicles in wilderness would be outweighed by benefits realized from the timely maintenance of range developments. The breaching of an enclosure could allow livestock or wild/feral horses to impact riparian vegetation in a short period of time. The failure of a pipeline or other water system feature could result in the dehydration of livestock. Also, it should be noted that wildlife often use water features constructed for livestock, and in some case wildlife may be dependent on range developments. The motorized proposed action would allow for the transportation of materials that may be too cumbersome to transport on foot or horseback.

3.6.3. Impacts of Alternative B: Non-Motorized

Under the non-motorized alternative, a more rapid response to failing or failed range developments would still be facilitated as with the motorized proposed action, but the response

may be hindered by the inability to use motorized equipment. In some cases repairs may be impossible without the use of motorized equipment.

3.6.4. Impacts of Alternative C: No Action

The no action alternative would limit the ability to respond to failing or failed range developments. The use of motorized equipment would be restricted. Considerable time would be needed to conduct administrative procedures that would give the authorization to address problems. In this time, considerable damage to riparian areas or wildlife could occur.

3.7. Livestock Grazing Use

3.7.1. Affected Environment

Grazing allotments and livestock operations have been in place since before Wilderness designation. As a result, many of the range developments have been constructed under different management regimes. Tools and techniques used before may not be acceptable since Wilderness designation. Livestock grazing is dependent on range developments in order to operate sustainably and in order to achieve and/or maintain Standards for Rangeland Health.

3.7.2. Impacts of Proposed Action: Motorized

Under the motorized proposed action, it is possible to have a more rapid response to issues regarding range developments that are failing or have failed. Any additional disturbance caused by the use of motorized vehicles in wilderness would be outweighed by benefits realized from the timely maintenance of range developments. The motorized alternative would facilitate better livestock management and better allow operators to implement best management practices in their operations.

3.7.3. Impacts of Alternative B: Non-Motorized

Under the non-motorized alternative, a more rapid response to failing or failed range developments would still be facilitated as with the motorized proposed action, but the response may be hindered by the inability to use motorized equipment. In some cases repairs may be impossible without the use of motorized equipment. When motorized equipment is needed, response times may be greatly increased and response times would be similar to that of the no-action alternative.

3.7.4. Impacts of Alternative C: No Action

The no action alternative would leave the current administrative practices in place. Repairs and maintenance of range developments would be delayed during the authorization process. Lengthy delays could result in impacts to BLM managed resources as well as those of the livestock operation.

3.8. Wilderness

3.8.1. Affected Environment

The 1964 Wilderness Act's Statement of Policy, Section 2(a) states that wilderness areas "shall be administered... so as to provide for the protection of these areas, the preservation of their wilderness character" (Public Law 88-577). This affirmative legal mandate applies to all wildernesses across the entire National Wilderness Preservation System, and thus to the 22 wilderness areas on the Ely District. Wilderness character is described under five categories as listed in the Wilderness Act of 1964: untrammeled, natural, undeveloped, outstanding opportunities for solitude or a primitive unconfined form of recreation and other features of scientific, educational, scenic or historical value.

Untrammeled. Wilderness is essentially unhindered and free from modern human control or manipulation. The Wilderness Act defines wilderness as, "an area where the earth and its community of life are untrammeled by man," and is "affected primarily by the forces of nature." Few trammeling activities occur within the EYDO wilderness areas and include management of wildland fire and weeds, emergency stabilization and rehabilitation activities, small-scale surface disturbance restoration, the presence of wildlife water developments, range developments and fences.

Natural. Wilderness ecological systems are substantially free from the effects of modern civilization. It is "protected and managed so as to preserve its natural conditions." The natural and primeval character of the wilderness is mostly preserved. Some changes to the native vegetation composition have occurred, including the introduction of the non-native annual cheatgrass over portions of the wildernesses. Other non-native or noxious plant species may be found in various locations including, but not limited to: Russian Olive, Tamarisk, and Dalmation Toadflax. The non-native chukar partridge may be present in various wilderness areas, too.

Undeveloped. Wilderness has minimal evidence of modern human occupation or modification. It is land "retaining its primeval character and influence," "without permanent improvements or human habitation," "with the imprint of man's work substantially unnoticeable," and "where man himself is a visitor who does not remain." There various developments scatter across the 22 wildernesses including: developments associated with active livestock grazing, wildlife water developments, abandoned mining claims and associated structures, unauthorized vehicle routes, designated trails and facilities associated with recreational activities (peak/cave registers, fire rings). Generally these developments are few and far between when one considered the vastness of the landscapes in question.

Outstanding opportunities for solitude or a primitive form of recreation. Wilderness provides opportunities for people to experience natural sights and sounds, solitude, freedom, risk, and the physical and emotional challenges of self-discovery and self-reliance. It "has outstanding opportunities for solitude or a primitive and unconfined type of recreation" and "shall be administered...in such manner as will leave them unimpaired for future use and enjoyment as wilderness."

Visitors can enjoy outstanding opportunities for solitude and primitive, unconfined recreation in the wildernesses. The varied topography of each wilderness — mountains with canyons and broad drainages — provide excellent opportunities for solitude as do the sheer size of many of the wildernesses on the District. Outstanding recreation opportunities for hiking, exploration and

camping are present throughout the areas. Only the 14-day stay limit for camping in all areas confines primitive recreational opportunities.

Other Features of Value. Wilderness areas “may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value.” Though these values are not required of any wilderness, where they are present they are part of that area’s wilderness character, and must be protected as rigorously as any of the four required qualities.

3.8.2. Impacts of Proposed Action: Motorized

To analyze the impacts of the proposed action on wilderness character, we must look at each quality of wilderness character in turn:

Untrammelled. Any action taken in wilderness to intentionally control the earth and its community of life impairs the untrammelled quality. The divergence of water resources into troughs, ponds and reservoirs alters the natural flow of water. The existing fences (and to a lesser extent corrals) alter the free movement of wildlife. Under the proposed action these are not new trammeling activities, but rather the maintenance ensures the continuance of the pre-existing trammeling structures (developments). Since there are no new trammeling actions proposed, the proposed action will not impair this quality.

Natural. The proposed action is not necessary to preserve the natural quality of wilderness character. The proposed action is in accordance with BLM Manual 6340, and the Congressional Grazing Guidelines. No new impacts to the natural quality would occur under the proposed action.

Undeveloped. The undeveloped quality is not further degraded by this action. It is “preserved” at the same level as when these areas were designated as all the developments being considered for maintenance under this project pre-exist the wilderness designation (one exception: a fence in the Far South Egans Wilderness was installed post-designation and a separate NEPA process analyzed the effects of that action). However, any use of motorized equipment or vehicles, or mechanical transport is an impact to the undeveloped quality for the duration of its use. The proposed action is consistent with the furl of practical necessity and reasonableness, as required by BLM Manual 6340. The coordination with permittees as described in the Authorization Process above, would allow the BLM to select the method for maintenance, repairs and access that least impacts wilderness character, and the undeveloped quality in particular.

Outstanding opportunities for solitude or a primitive form of recreation. The proposed action is not necessary to preserve the “outstanding opportunities” quality of wilderness character. Limited impacts are anticipated to opportunities for solitude under the proposed action from the sound of equipment and vehicles performing the maintenance, and with people in the area. Maintenance activities are likely to take place on weekdays, however, when visitation is lowest. These actions are of short duration, which will also reduce any impacts to visitors’ solitude. No impacts are anticipated to the opportunities for primitive and unconfined recreation under the proposed action.

Other Features of Value. The diversity of wilderness represented here also includes a diversity of “Other Features of Value,” however it is certain that the proposed action would not impact any geologic features of values. Impacts to cultural resources have been analyzed by an archaeologist and protocols for cultural resources will be followed (e.g. reviewing the Cultural Resources Inventory Needs Assessment with the archaeologist prior to project implementation).

3.8.3. Impacts of Alternative B: Non-Motorized

To analyze the impacts of the this alternative on wilderness character, we must look at each quality of wilderness character in turn:

Untrammeled. This non-motorized alternative would have the same impacts the untrammeled quality of wilderness character as described under the Proposed Action.

Natural. No new impacts would occur to the natural quality of wilderness character, therefore this alternative is the same as the proposed action .

Undeveloped. This alternative would preserve this quality of wilderness character when compared to the proposed action. No motorized equipment, vehicles or mechanical transport would be allowed under this EA, consequently this quality would not be impacted.

Outstanding opportunities for solitude or a primitive form of recreation. This alternative would preserve the opportunities for solitude and a primitive and unconfined type of recreation.

Other Features of Value. No impacts would occur to any other features of value found in the 21 wilderness areas included in this EA.

3.8.4. Impacts of Alternative C: No Action

The No Action Alternative would be the same as Alternative B: Non-Motorized, in terms of impacts to the five qualities of wilderness character. In short, no impacts would occur under this alternative.

Chapter 4. Cumulative Effects

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4.1. Cumulative Effects Analysis

The purpose of the cumulative impacts analysis for the proposed action is to evaluate the combined, incremental effects of human activity within the scope of the project. The scope of the cumulative analysis will be restricted to actions within these wildernesses.

The Council on Environmental Quality (CEQ) regulations define scope and state that connected actions, cumulative actions, and similar actions should be included in the effects analysis (40 CFR 1508.25). The scope of the cumulative effects analysis will be restricted to an area that includes a one-mile buffer around each of the wilderness areas. The one-mile distance equates to the proximity of human activities that may affect wilderness character. This distance was chosen to represent the visual and sound intrusion that could be carried to and from edges due to topography, as well as the heightened risk of wildfire, weed invasion, and non-native seeding that is in close proximity to the wilderness.

Designated wilderness on the Ely District includes the following actions, in all or some of the following actions:

Action	Past Action	Present Action	Reasonably Foreseeable Future Action
Wilderness Management Plan development	X		
Wildlife Water Development Inspection & Maintenance	X	X	X
Range Development Maintenance	X	X	X
Recreation (hunting, hiking, horseback riding)	X	X	X
Invasive Weed Treatments	X	X	X
Fire Management	X	X	X
Emergency Stabilization & Restoration	X	X	X
Wild Horse presence	X	X	X
Wilderness Monitoring	X	X	X

The 1997 CEQ Handbook Guidelines for Assessing and Documenting Cumulative Impacts states that the cumulative effects analysis can be focused on issues and resource values identified during scoping that are of major importance. In this context that would include threatened and endangered species, and wilderness character.

4.2. Migratory Birds, BLM Special Status Animal Species, and Threatened and Endangered Species

Some past, present, and reasonably foreseeable future actions have impacted and will continue to impact migratory birds, BLM special status animal species, and threatened and endangered species. For example, the Southern Nevada Complex wildland fire burned XXX acres of desert tortoise habitat in 2005. Wildland fire suppression of this large fire complex resulted in some effects to wildlife species. The presence of noxious and invasive weeds in these burned areas has created the need for integrated weed treatments to prevent re-burn of native habitat. These activities have resulted in and will continue to create some disturbance and displacement of migratory birds, special status species, and threatened and endangered species.

A cumulative impact could occur when two activities overlap in both time and space. The potential is very low for the Proposed Action to overlap temporally and spatially with other activities in habitat for migratory birds, BLM special status animal species, or threatened and

endangered species. The maintenance of range improvements in wilderness would be very limited in time and space and would have minimal impacts on wildlife and its associated habitat. Any future activities which may impact threatened and endangered species would be subject to section 7 consultation under the Endangered Species Act. If this project were cumulatively added to other uses, the overall effect would be negligible.

4.3. Wilderness

There are few activities in the Proposed Action that, when combined with other activities, result in a cumulative impact. These include: 1) Actions that may include motorized use, and 2) Actions that may disturb soils, vegetation, or other natural resources.

All motorized use, whether authorized or not, impacts the undeveloped quality for the duration of the use. Motorized use may also impact the opportunities for solitude due to noise and/or visitor experience, and generally results in impacts to the natural and untrammelled qualities (ruts and ground disturbance). When viewed by total motorized use across all wilderness (vehicles or equipment), the cumulative impact of the past, present and RFFAs, the overall use of motorize/mechanized equipment or vehicles is very low. This ensures the preservation of wilderness character. When this project is added to all other uses the overall effect is negligible.

Cumulative impacts may result from activities that occur simultaneously even when separated by space (up to one mile). However, there is a low probability for this cumulative impact to occur due to the low frequency of motorized use in the wilderness. The impact is considered negligible and is related mostly to authorized livestock operations, and wildlife water development inspections, and unauthorized vehicle incursions.

Authorized actions in wilderness may involve disturbance to soils, vegetation, or other natural or cultural resources. Actions considered for their contribution to cumulative impacts to natural resources include wildfire suppression, emergency stabilization and rehabilitation, weed treatments, and livestock concentration areas. A cumulative impact would only occur when two activities overlap in both time and space. There is a low probability for that to occur because such actions occurring within wilderness must be authorized by BLM. In addition, livestock grazing operations must adhere to Rangeland Health Standards designed to prevent effects to vegetation community and ecosystem health.

In conclusion, cumulative impacts associated with past, present, or reasonably foreseeable actions within the analysis area would have a negligible effect. When added to other foreseeable actions in the analysis area, actions included in the Proposed Action would manage allowable uses within wilderness while protecting wilderness character by ensuring the minimum necessary actions occurred.

Chapter 5. List of Preparers

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Table 5.1. List of Preparers

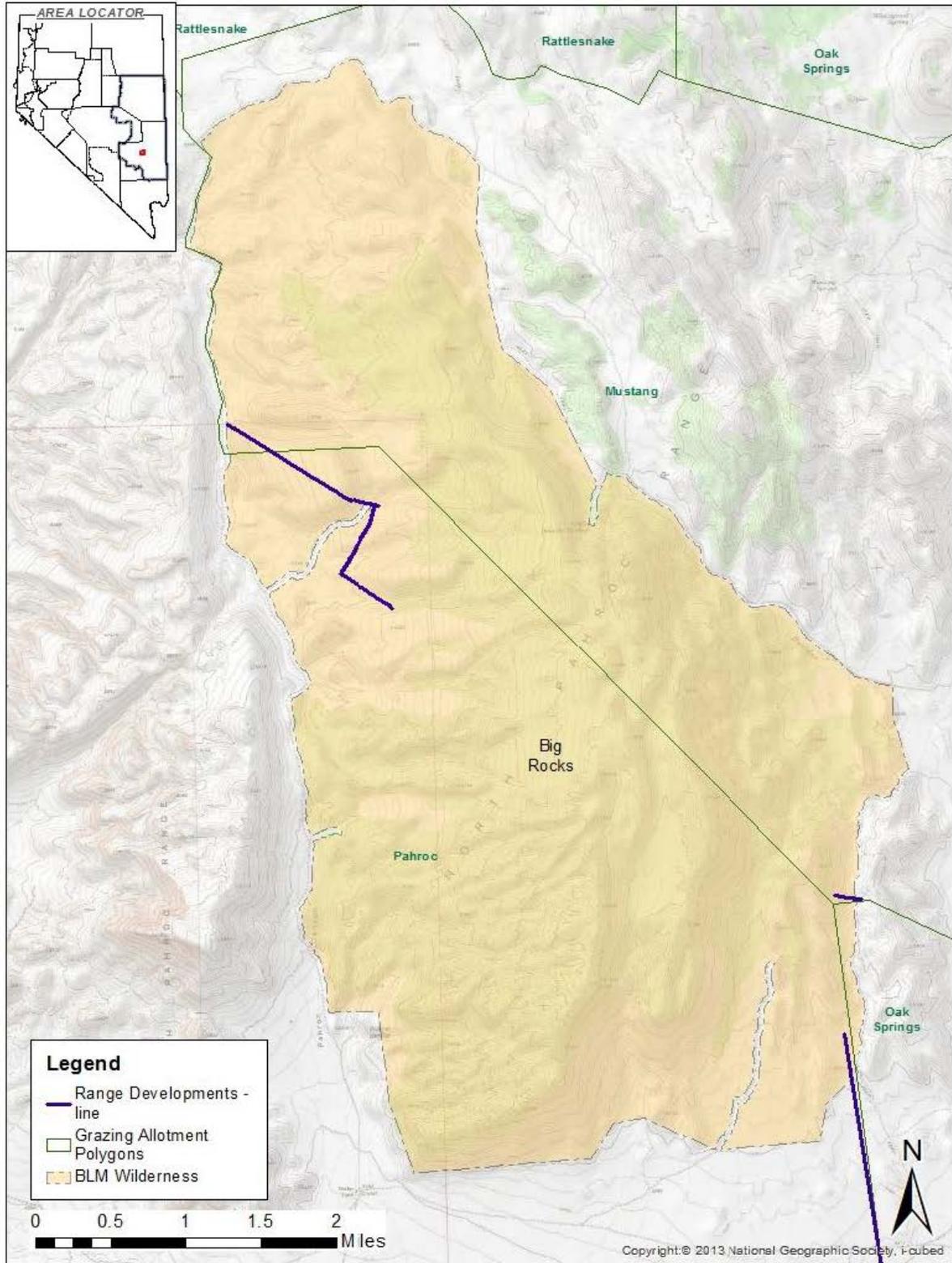
Name	Title	Responsible for the Following Section(s) of this Document
Domenic Bolognani	Range Conservationist	Range
Cameron Boyce	Natural Resource Specialist	Air Quality, Water Quality, Range, Vegetative Resources Floodplains, Riparian/Wetlands
Ty Chamberlain	Land & Realty Specialist	Lands
Daniel Condie		Range
Lisa Domina	Outdoor Recreation Planner	Recreation
Alicia Hankins	Land & Realty Specialist	Lands
Randy Johnson	HazMat Specialist	Hazardous Wastes
Harry Konwin	Archaeologist	Cultural Resources
Nicholas Pay	Archaeologist & NEPA Coordinator	Cultural Resources & NEPA
Chris McVicars	Noxious & Invasive Weed Specialist	Noxious & Invasive Weeds
Ben Noyes	Wild Horse & Burro Specialist	Wild Horses
Carissa Shilling	Geologist	Minerals
Emily Simpson	Wilderness Planner	Wilderness
Alicia Styles	Wildlife Biologist	Wildlife, Special Status Animals, Special Status Plans, Migratory Birds, ACEC (Biological)
Todd Trapp	Wildlife Biologist	Wildlife, Special Status Animals, Special Status Plans, Migratory Birds, ACEC (Biological)
Elvis Wall	Native American Coordinator	Native American Religious Concerns & Tribal Consultation

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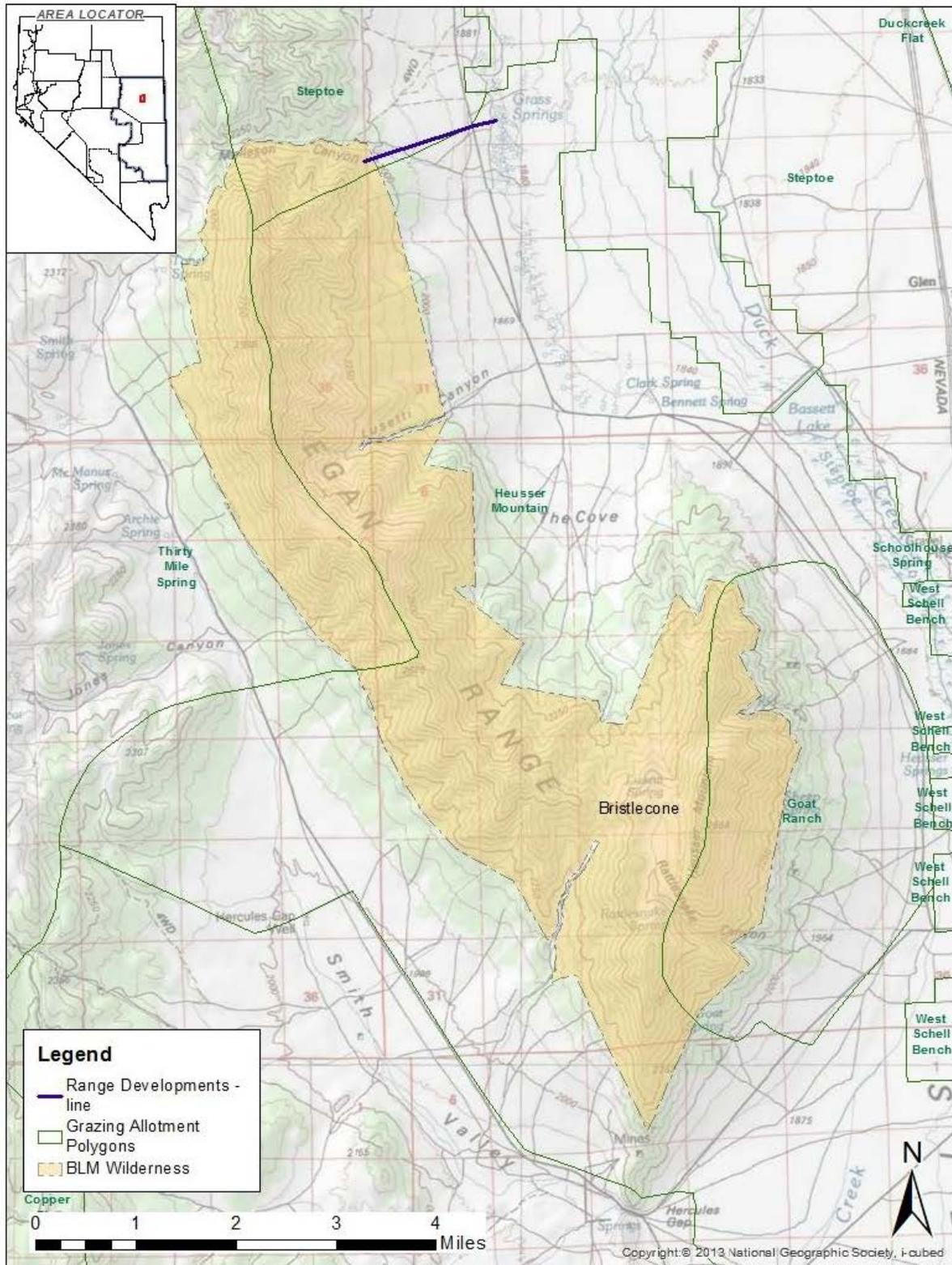
Appendix A. Maps

The following maps present the wilderness boundary and known range developments within wilderness. The White Rock Range Wilderness, which lies on the Ely District, is not shown in the maps because there are no known range developments within the boundaries of the wilderness.

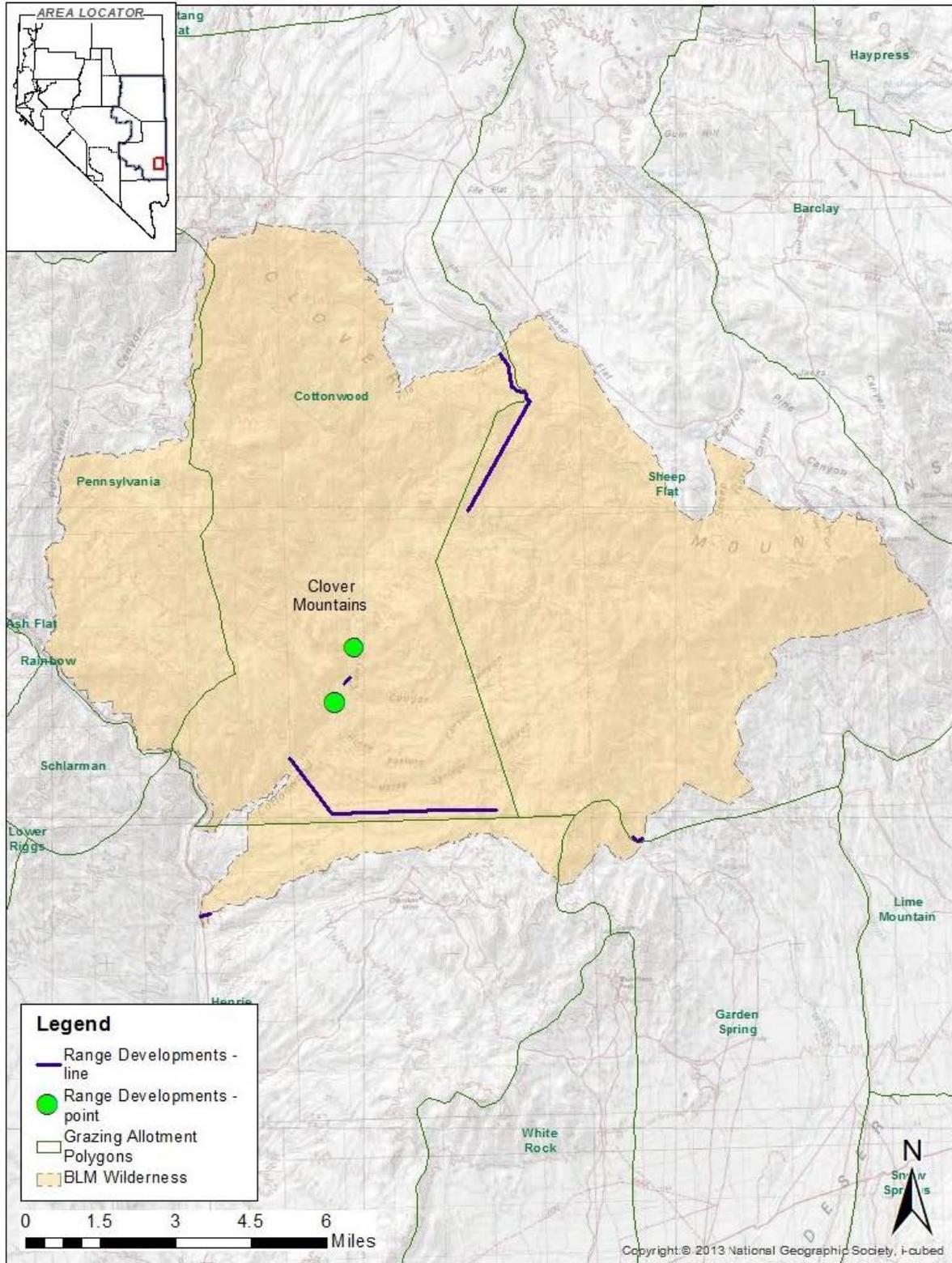
No Warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data. Multiple map scales are used (e.g. 1:50,000 or 1:125,000) to fit each wilderness on one page. The symbols representing points (e.g. trough) or polygons (e.g. reservoirs) may appear larger on the map so that the feature stands out when depicted at such a large scale.



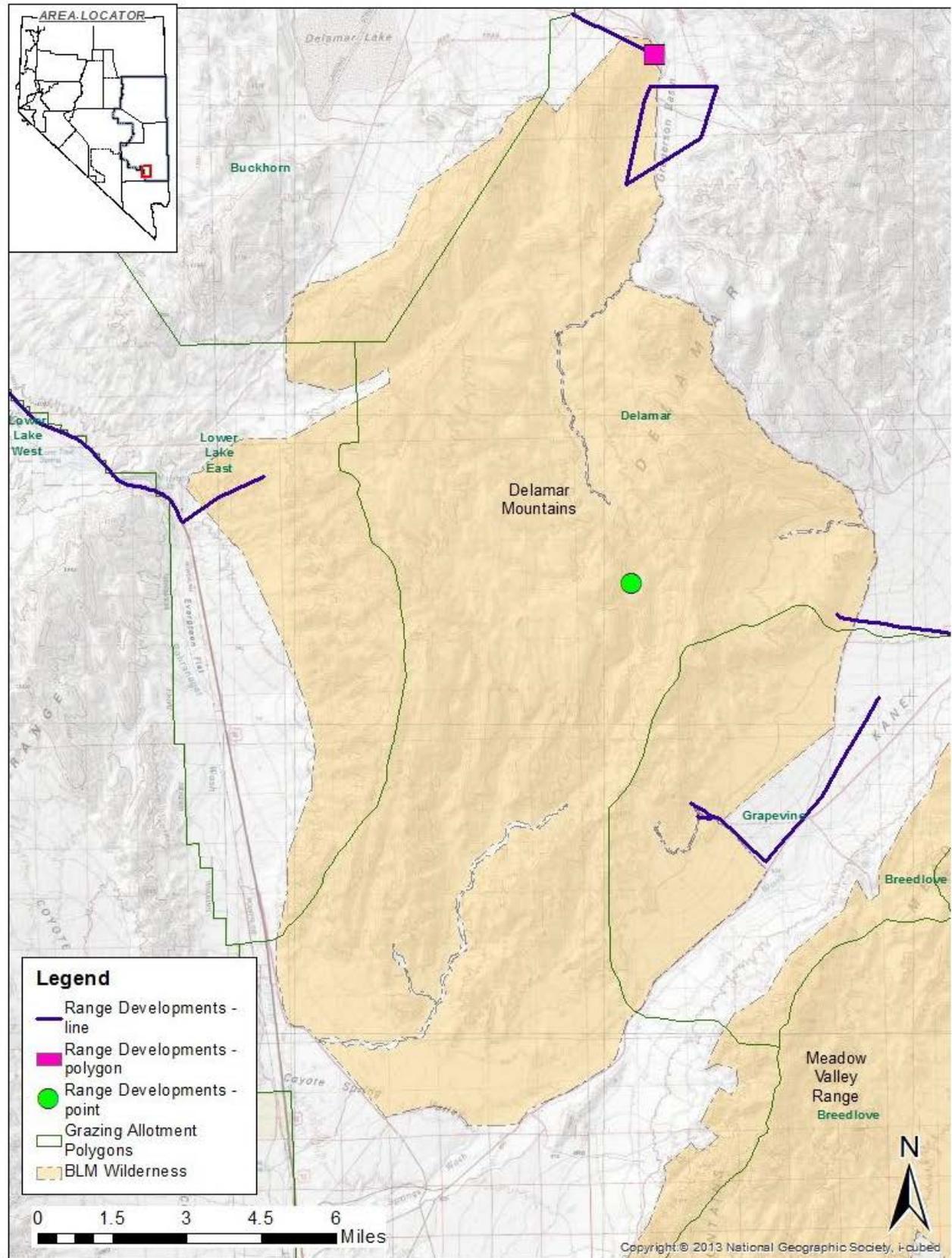
Map A.2. Known Range Developments within Big Rocks Wilderness



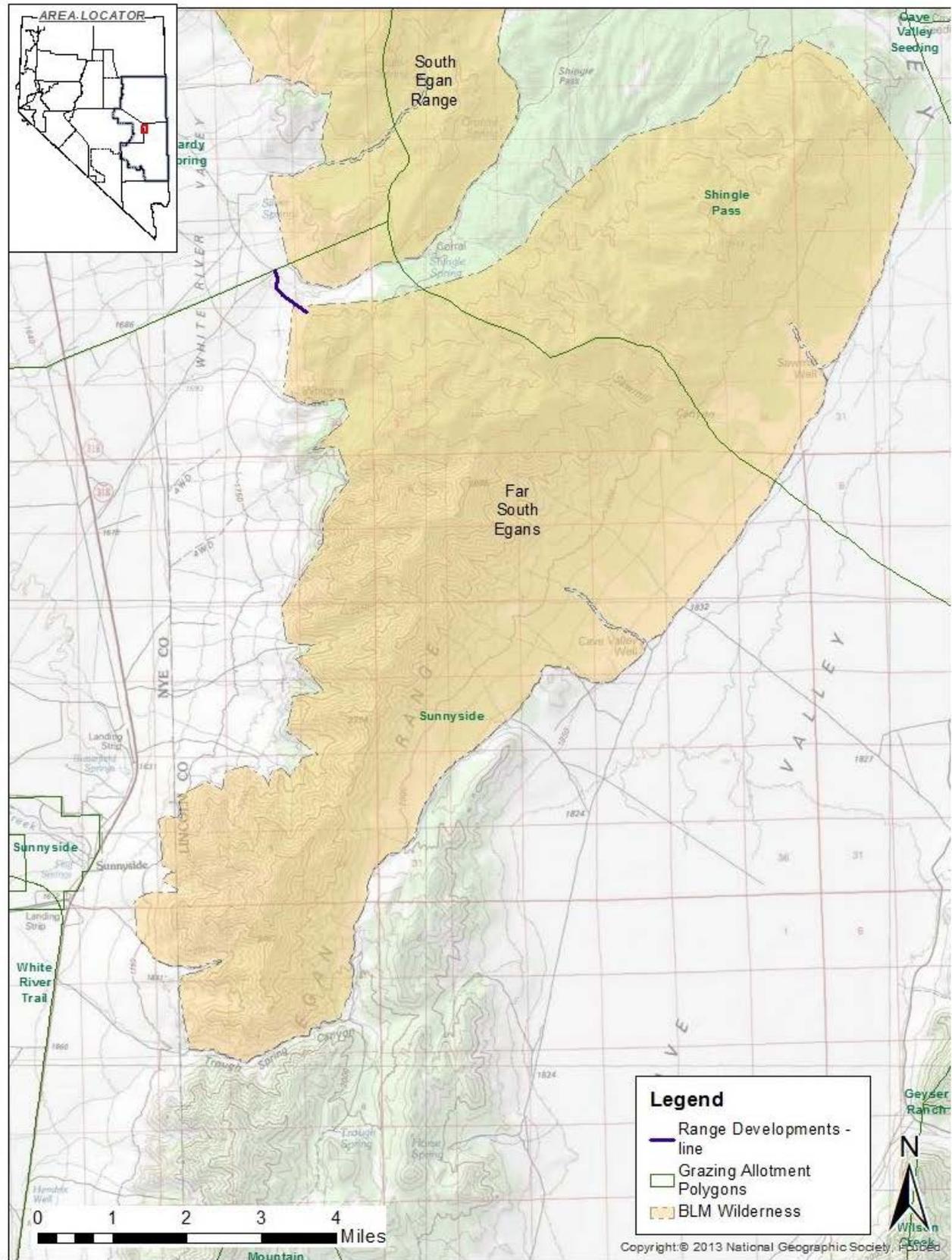
Map A.3. Known Range Developments within Bristlecone Wilderness



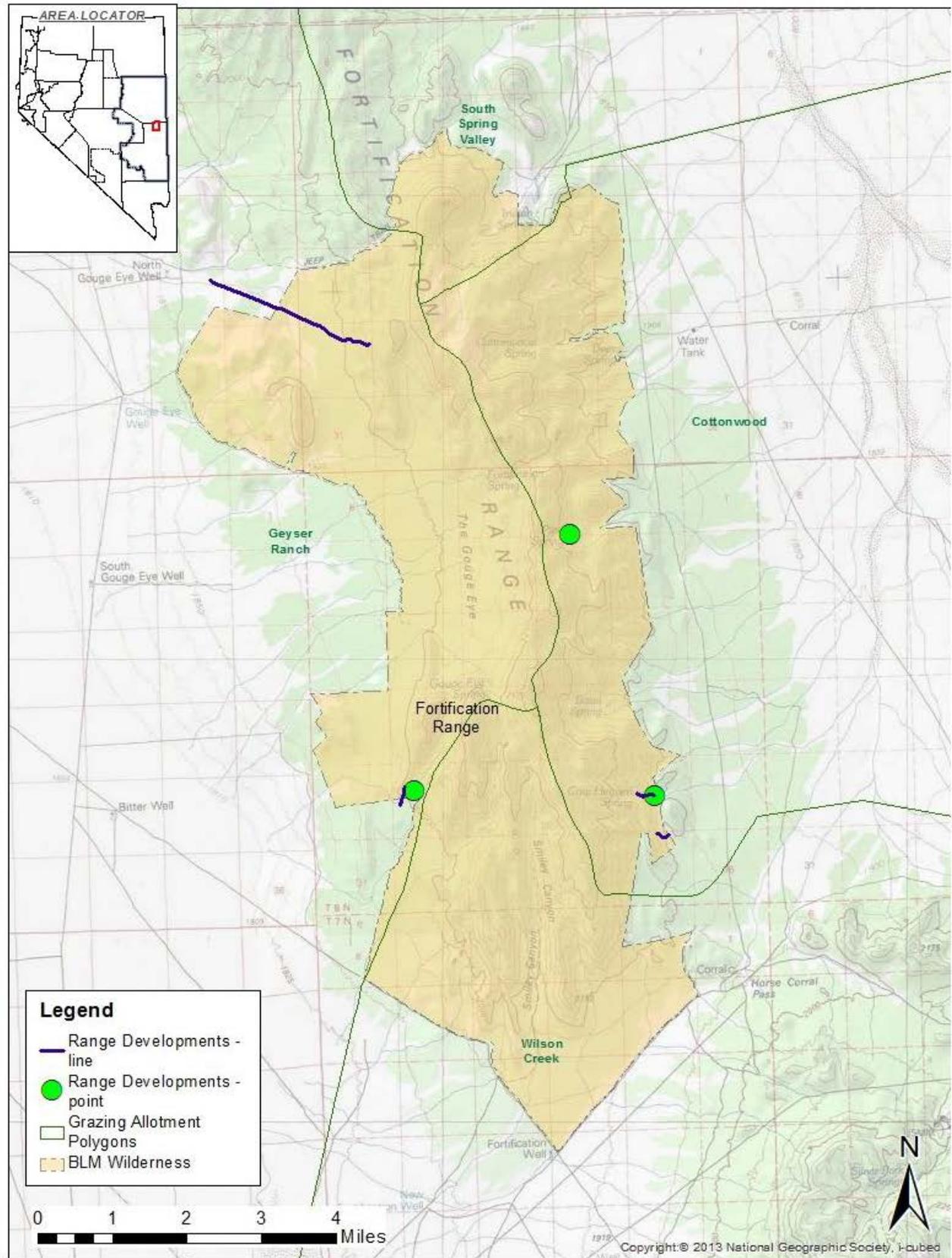
Map A.4. Known Range Developments within Clover Mountains Wilderness



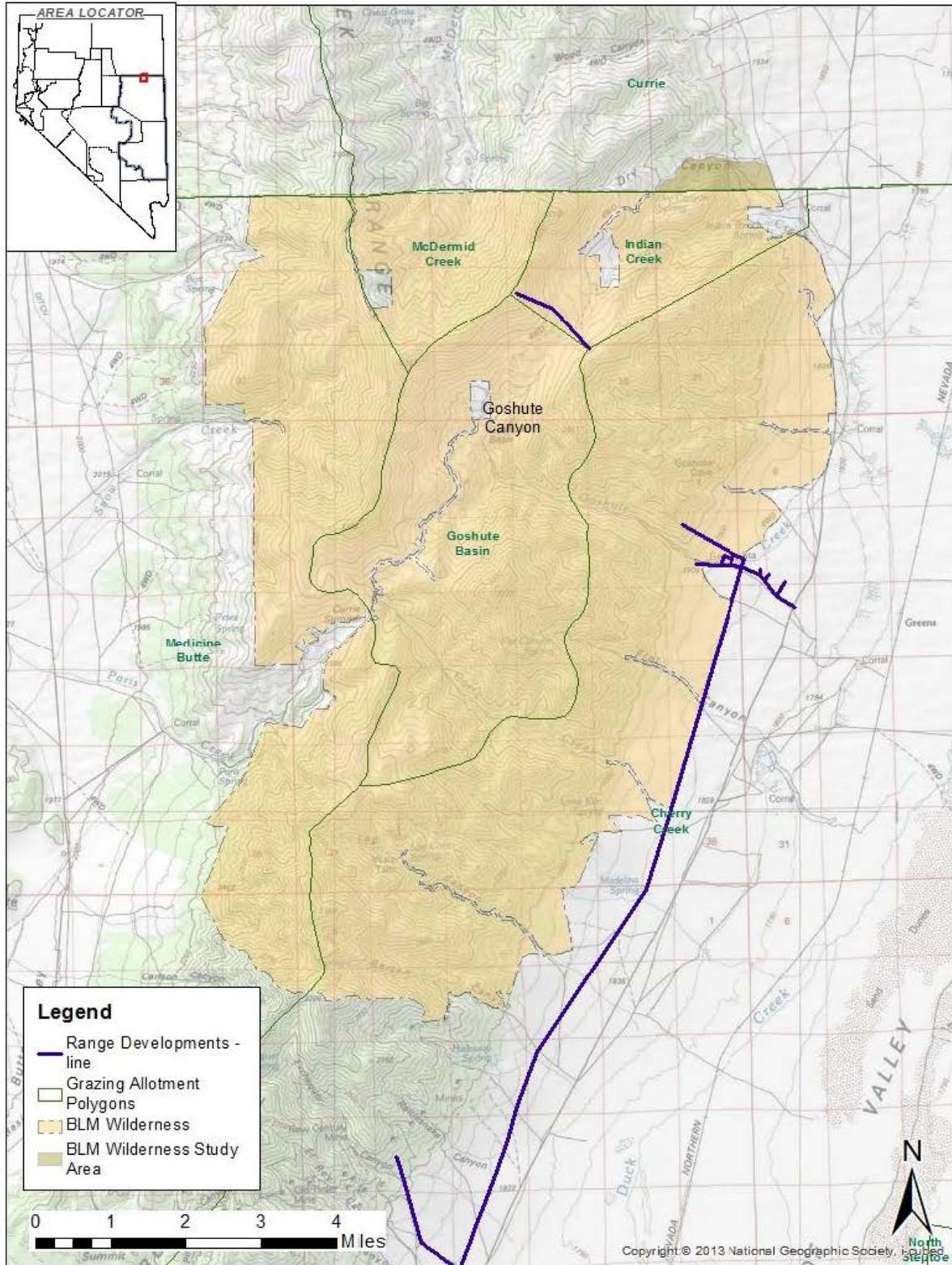
Map A.5. Known Range Developments within Delamar Mountains Wilderness



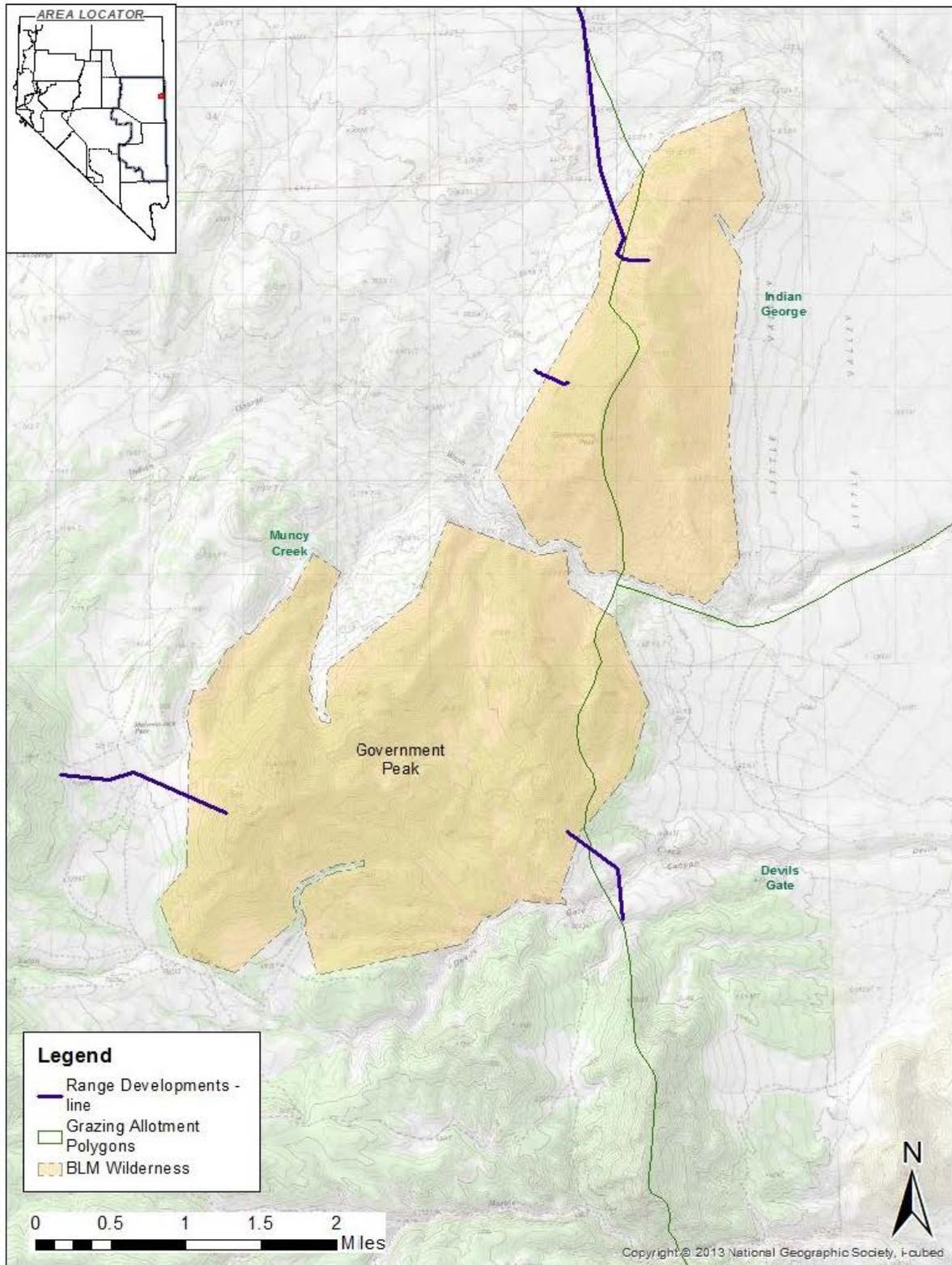
Map A.6. Known Range Developments within Far South Egans Wilderness



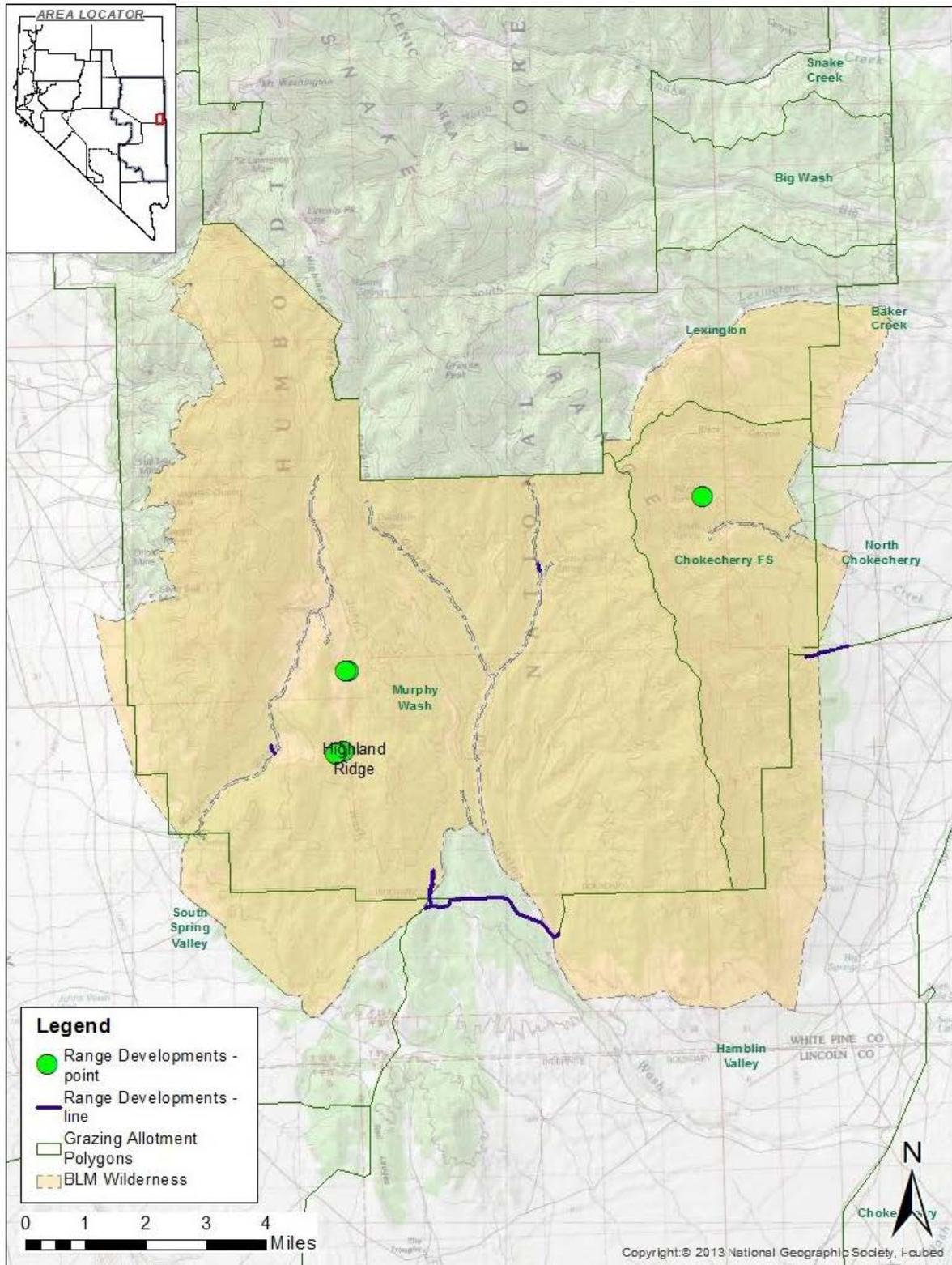
Map A.7. Known Range Developments within Fortification Range Wilderness



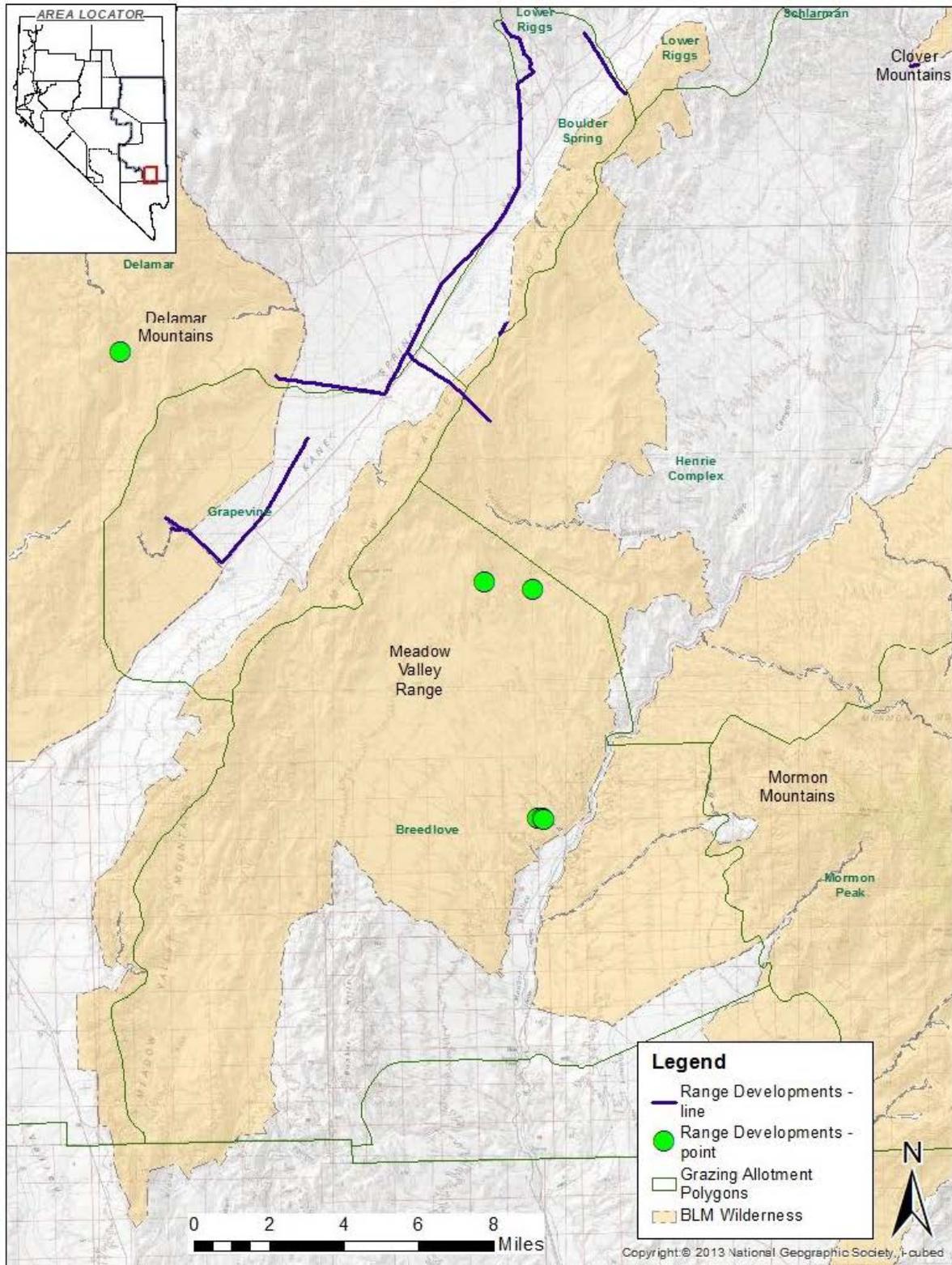
Map A.8. Known Range Developments within Goshute Canyon Wilderness



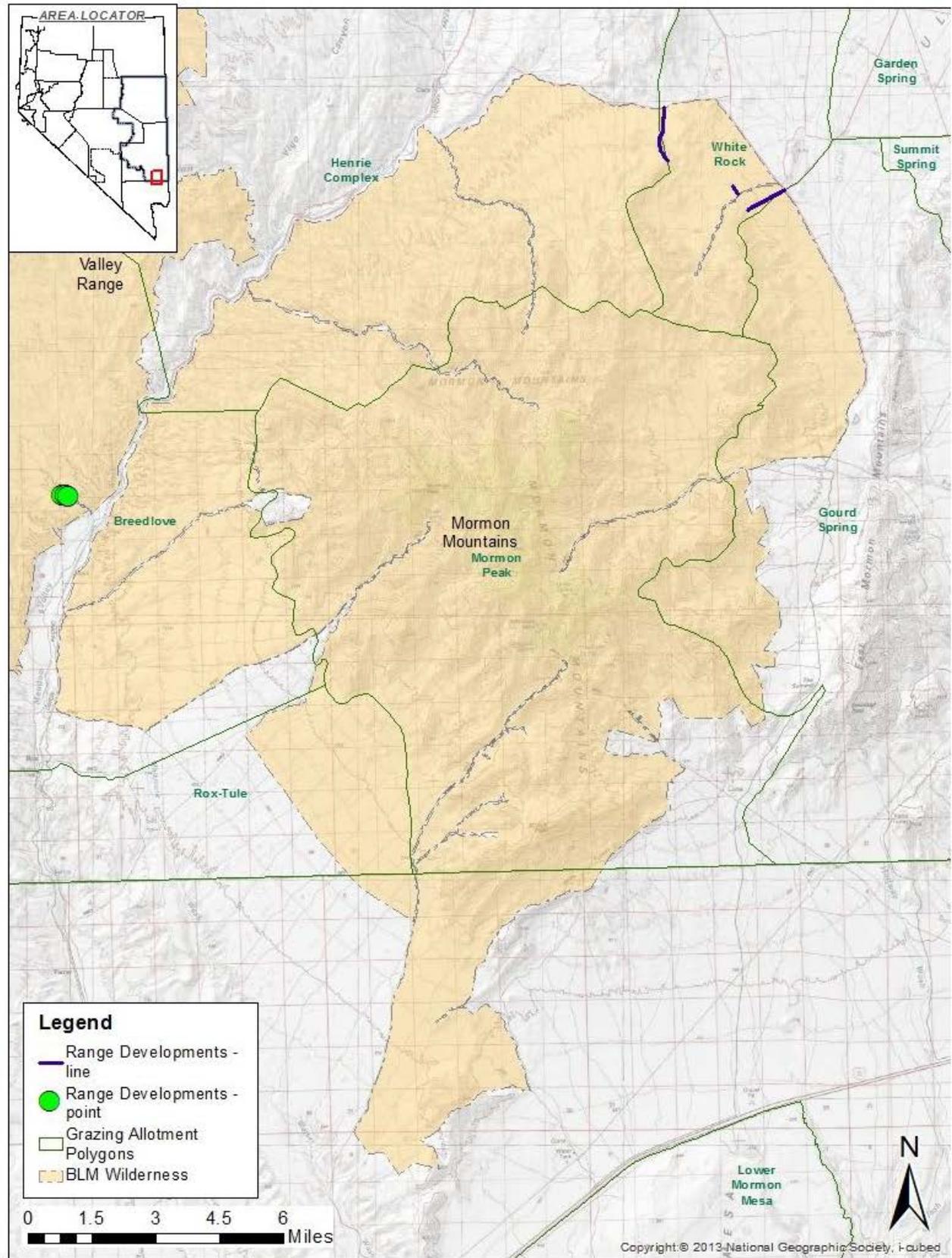
Map A.9. Known Range Developments within Government Peak Wilderness



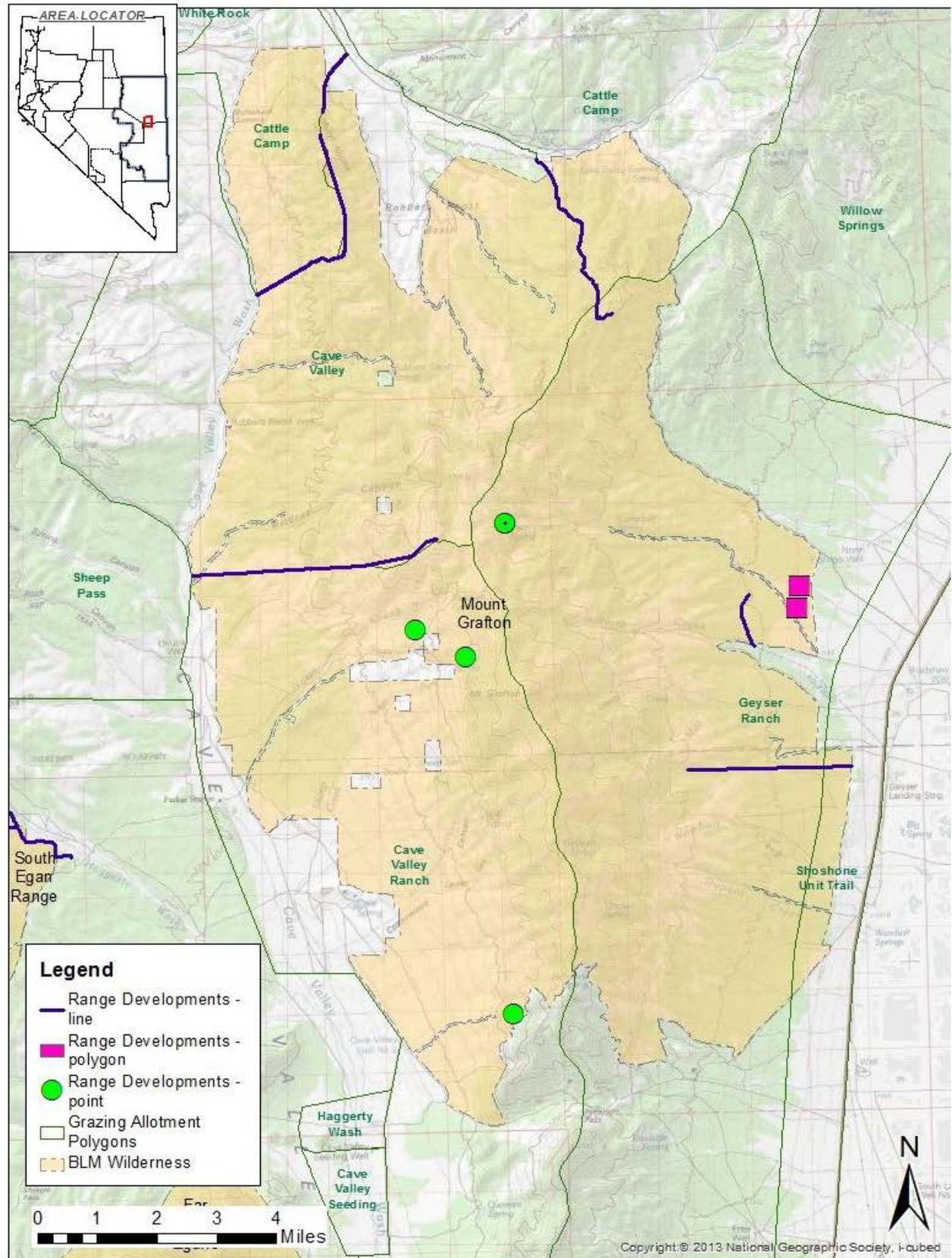
Map A.10. Known Range Developments within Highland Ridge Wilderness



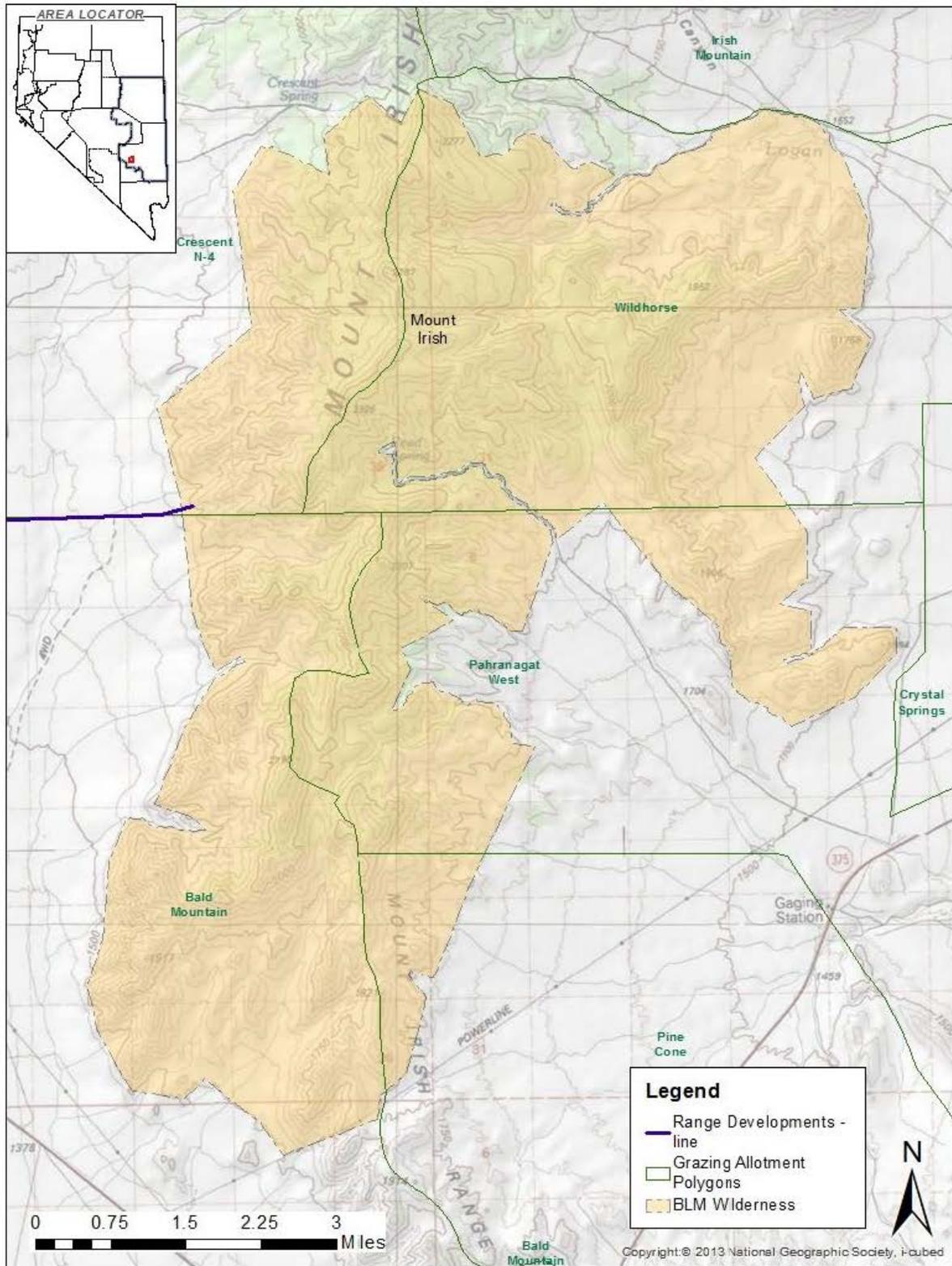
Map A.11. Known Range Developments within Meadow Valley Range Wilderness



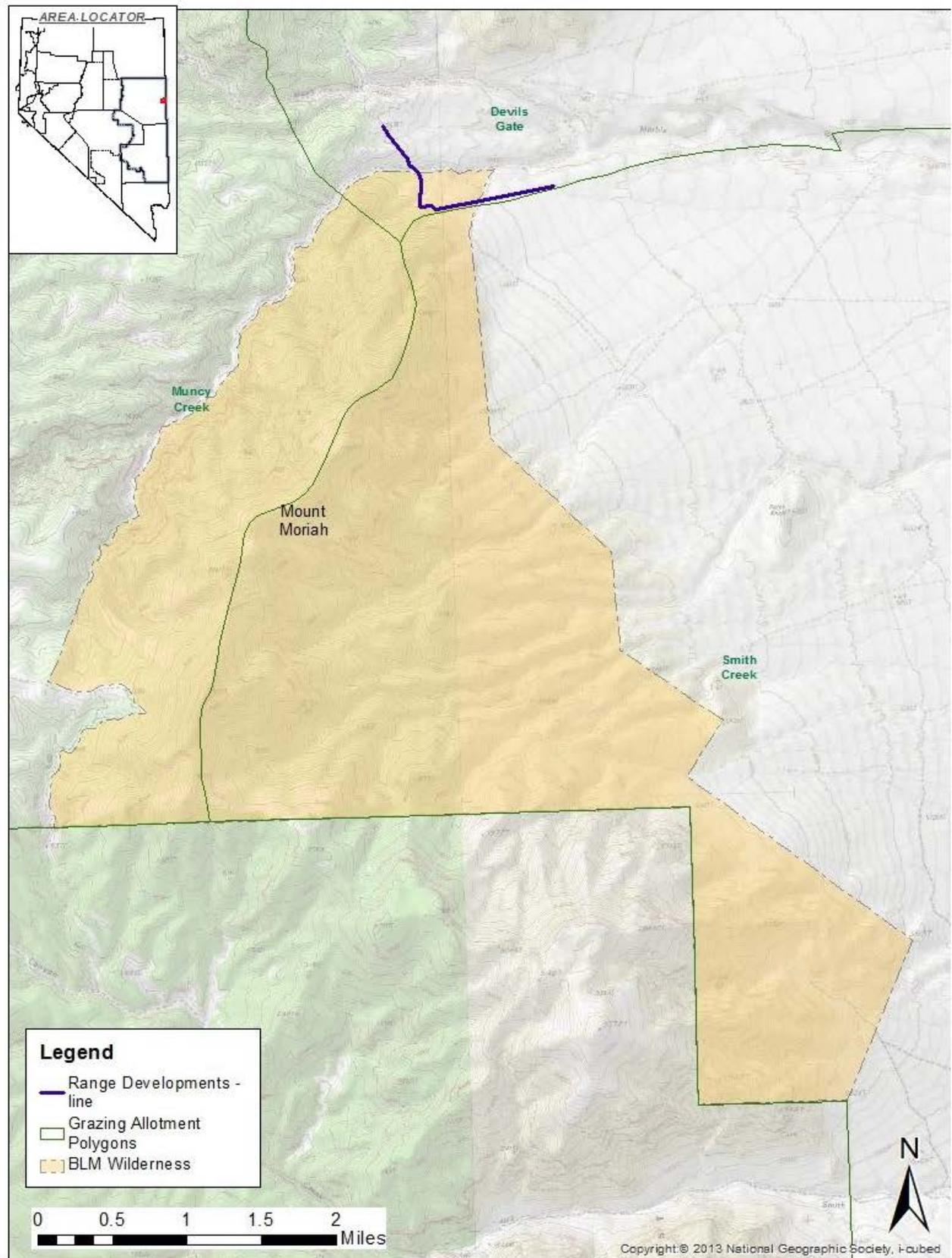
Map A.12. Known Range Developments within Mormon Mountains Wilderness



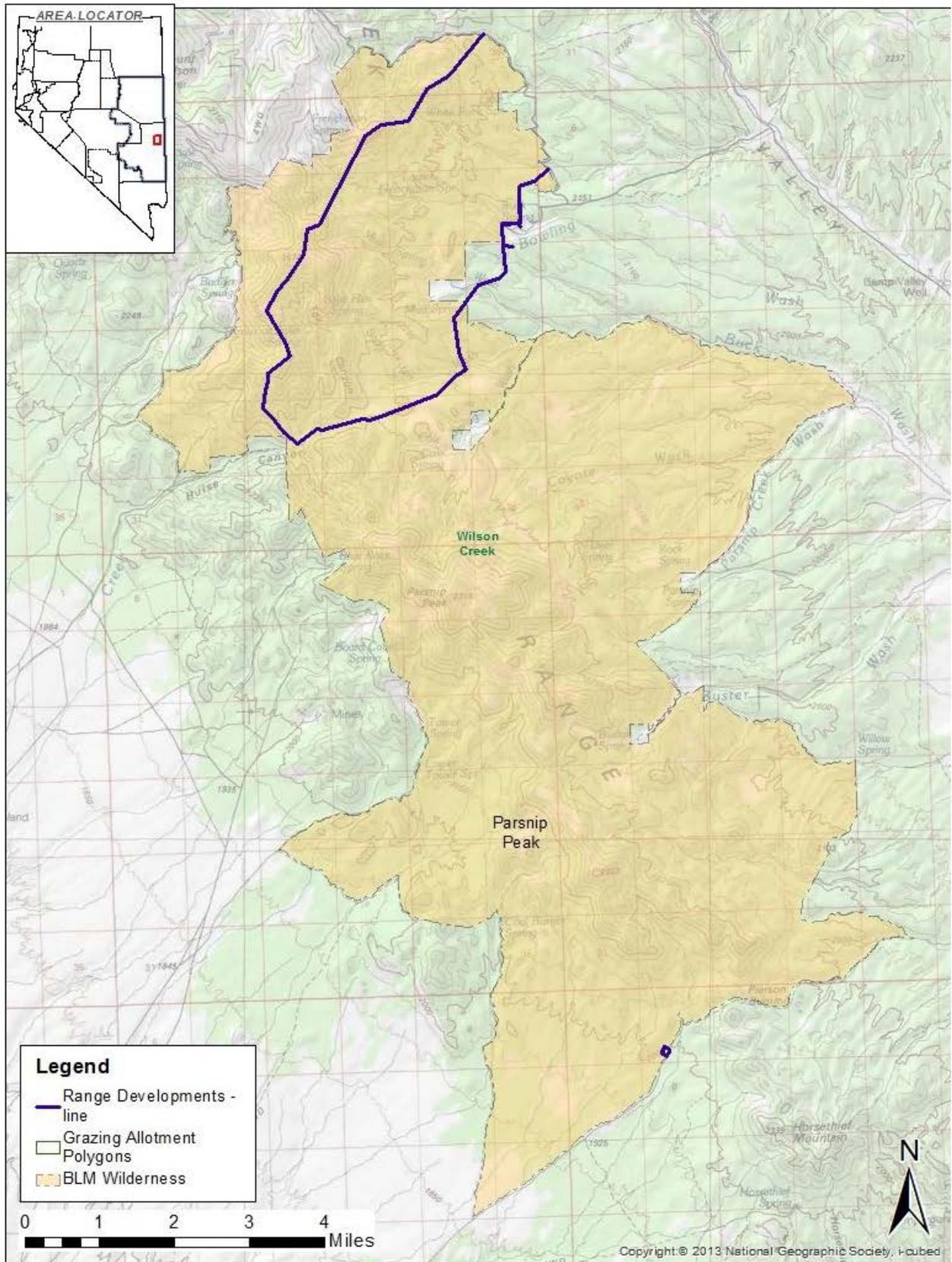
Map A.13. Known Range Developments within Mount Grafton Wilderness



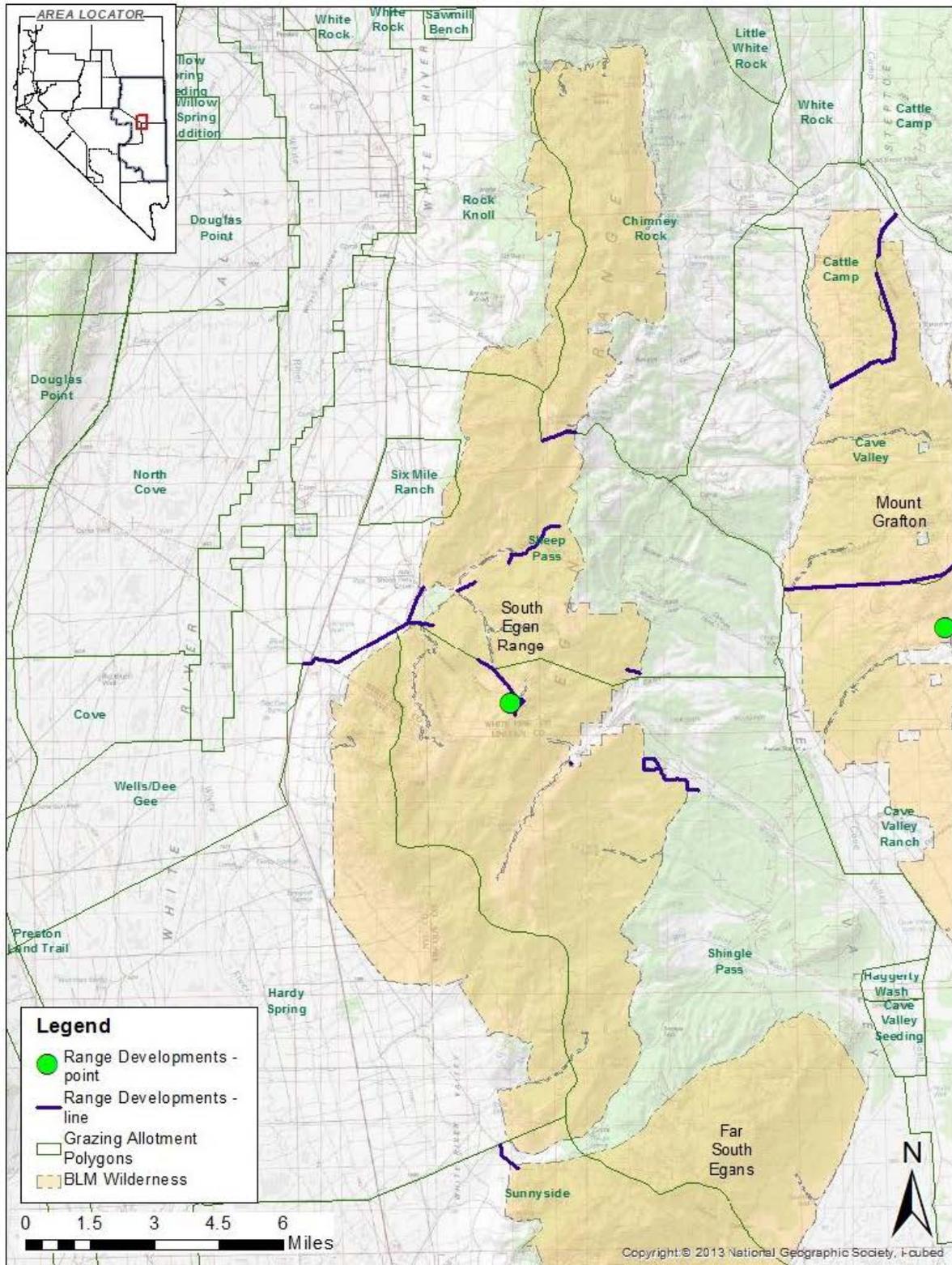
Map A.14. Known Range Developments within Mt. Irish Wilderness



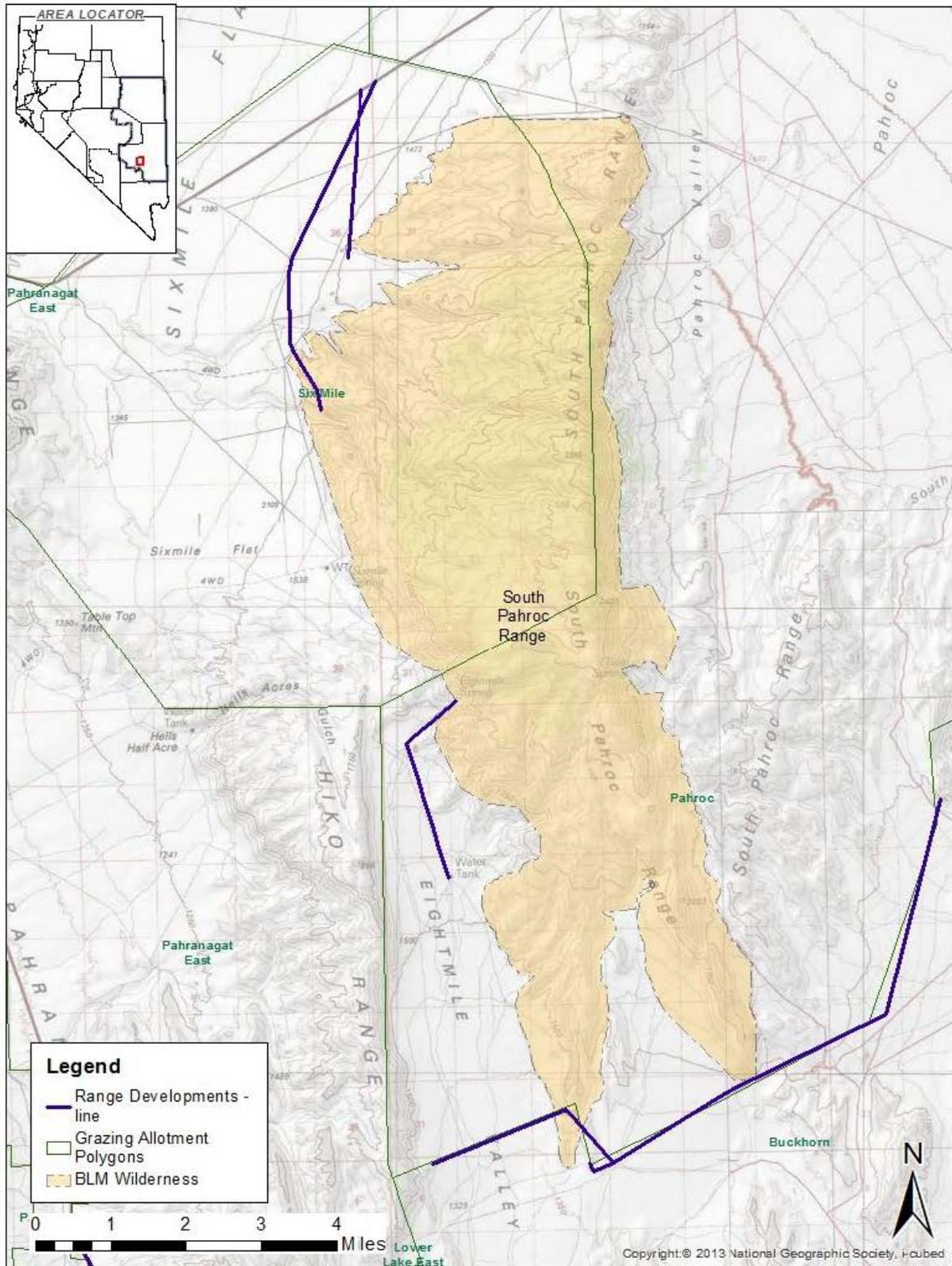
Map A.15. Known Range Developments within Mt. Moriah Wilderness (BLM-managed portion only)



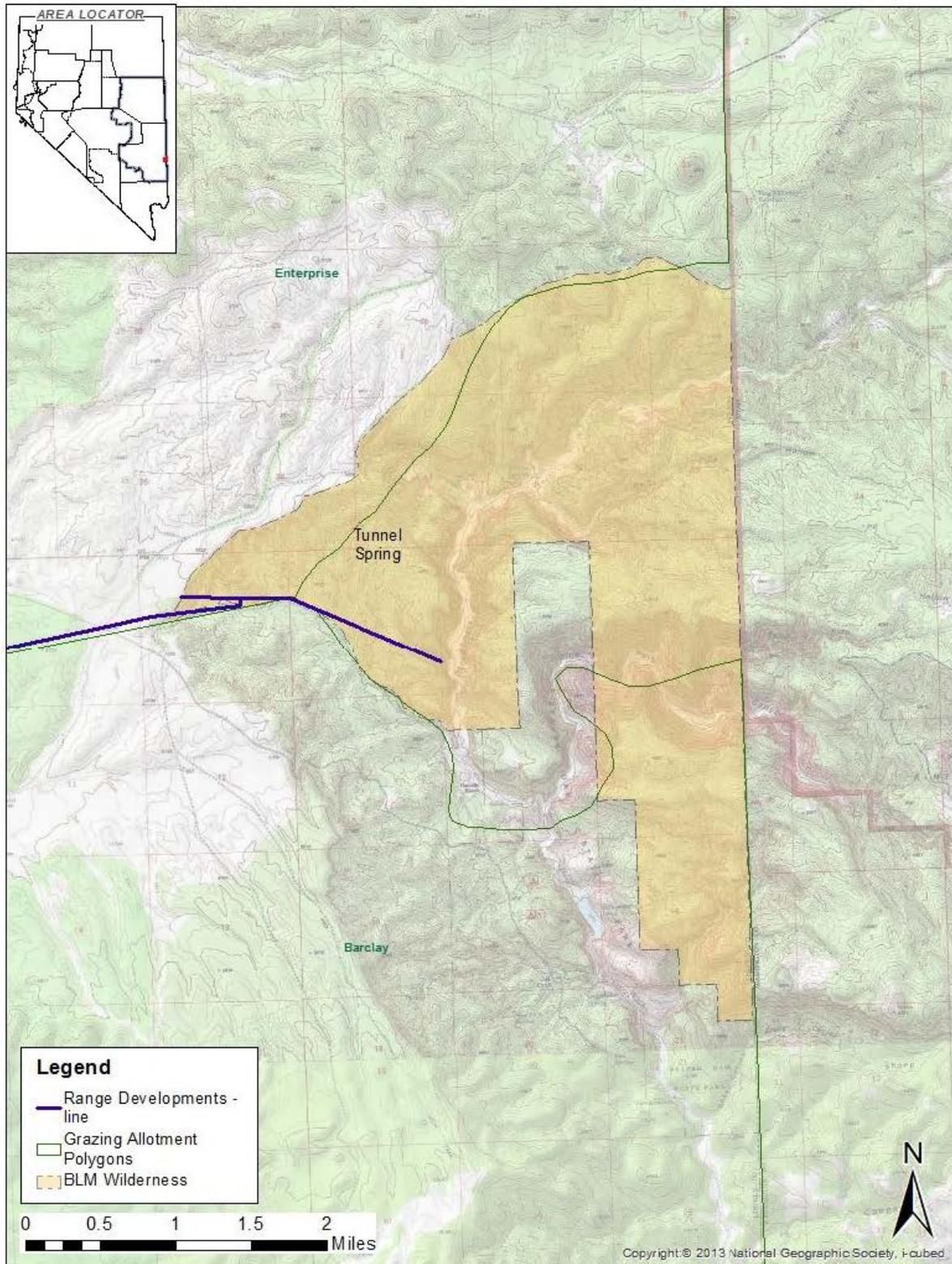
Map A.16. Known Range Developments within Parsnip Peak Wilderness



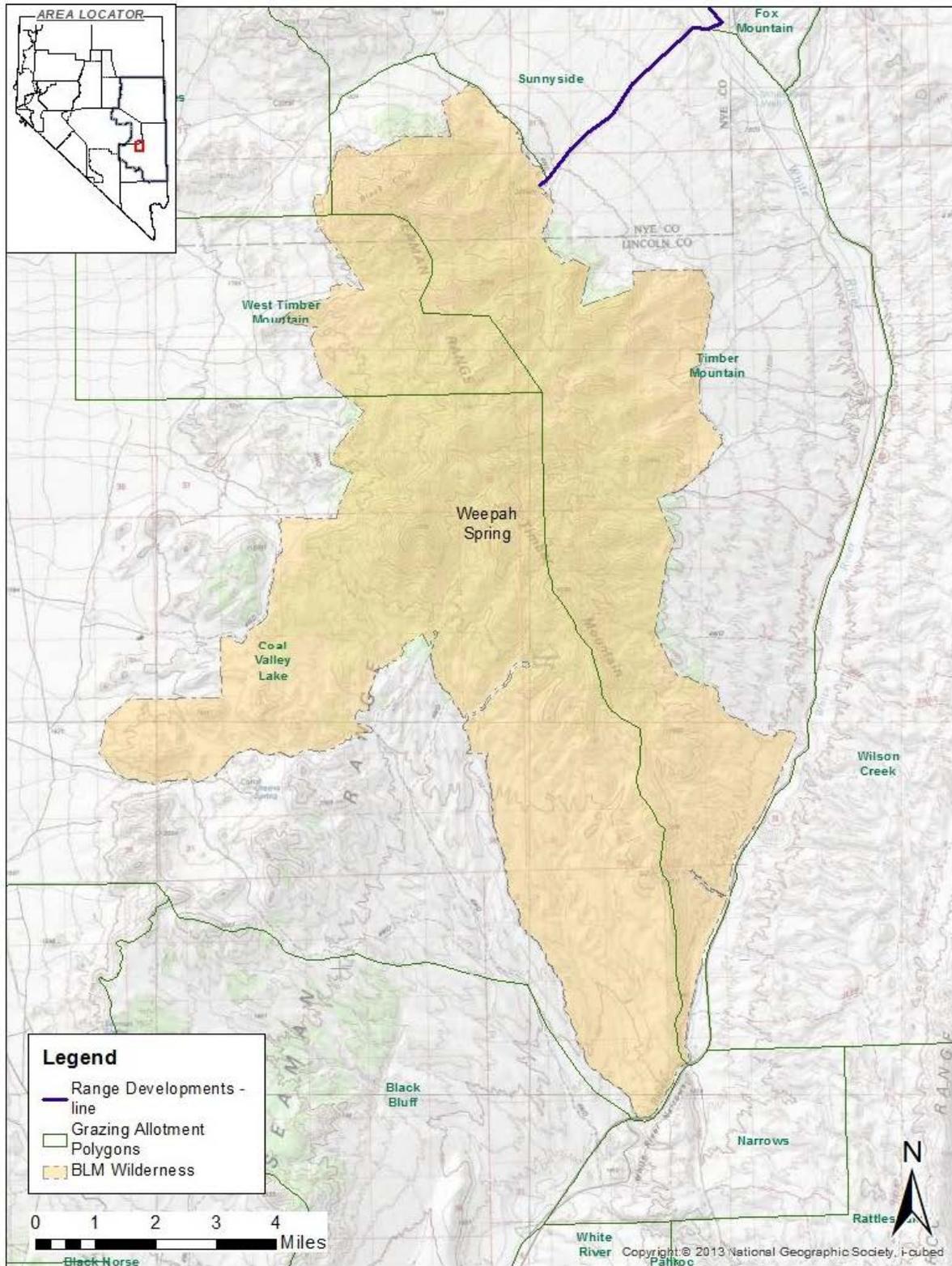
Map A.17. Known Range Developments within South Egan Range Wilderness



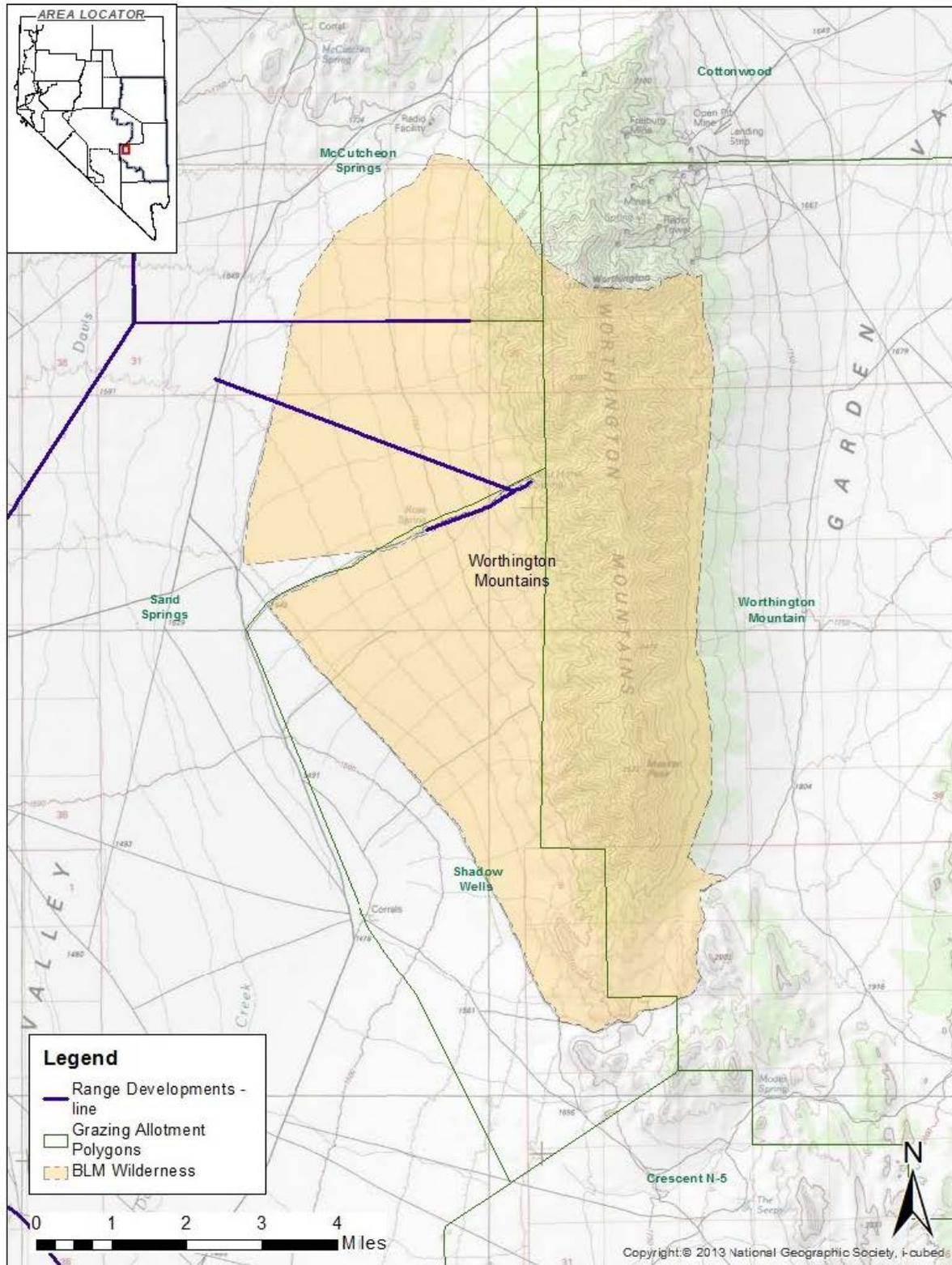
Map A.18. Known Range Developments within South Pahroc Range Wilderness



Map A.19. Known Range Developments within Tunnel Spring Wilderness



Map A.20. Known Range Developments within Weepah Spring Wilderness



Map A.21. Known Range Developments within Worthington Mountains Wilderness

Appendix B. Table of known Range Developments in Wilderness and Wildlife/Special Status Species

The following table identifies known range developments in wilderness. Developments that lie wholly within cherrystem routes are not included here as they would not require analysis for access or maintenance. Other developments may existing within designated wilderness not identified here. Where proof is provided that the developments pre-date the wilderness designation, the analysis in this EA would then apply to those developments, as well.

This table also includes, in the right-hand column, the wildlife species that may occur, or the habitat in which the range development occurs.

Acronyms used:

- GSG = Greater Sage-grouse
 - GHMA = General Habitat Management Area
 - OHMA = Other Habitat Management Area
- DT = Desert Tortoise
 - CHU = Critical Habitat Unit

Wilderness	Grazing Allotments	Identified Developments in Wilderness	RIPS #	Wildlife/Special Status Species
Becky Peak	Becky Creek	2 fences (1.2 mi; 0.1 mi)		Smaller segment in GSG OHMA; unoccupied Rocky Mountain bighorn sheep habitat; elk and mule deer general habitat
	Becky Springs	None known		
	Cherry Creek	None known		
	Chin Creek	None known		
	North Steptoe	None known		
	Sampson Creek	Skull Spring Trough	554694	GSG GHMA; unoccupied Rocky Mtn. bighorn sheep habitat; elk and mule deer general habitat
	Tippett	None known		
Big Rocks	Mustang	Fence (0.2 mi)		Raptor nest near fenceline; occupied desert bighorn sheep habitat; mule deer general habitat
	Pahroc	Mustang Allotment Fence (2.1 mi)	574242	Occupied desert bighorn sheep habitat; mule deer general habitat
	Oak Springs	Pahroc Allotment Fence (0.3 mi) – between Oak Springs and Pahroc allotments	570234	Occupied desert bighorn sheep habitat; mule deer and pronghorn general habitat

Wilderness	Grazing Allotments	Identified Developments in Wilderness	RIPS #	Wildlife/Special Status Species
Bristlecone	Goat Ranch	None known		
	Heusser Mountain	None Known		
	Steptoe	1 Fence (0.11 mi)	550986	In GSG non-habitat; pygmy rabbit habitat; Steptoe hydrobe (<i>Eremopyrgus eganensis</i>), flat-topped Steptoe pyrg (<i>Pyrgulopsis planulata</i>), and southern Steptoe pyrg (<i>Pyrgulopsis sulcata</i>) in Grass Spring area; Rocky Mtn. bighorn sheep unoccupied, elk and pronghorn general and crucial winter mule deer habitat
	Thirty Mile Spring	None known		
Clover Mountains	Boulder Spring	None known		
	Cottonwood	2 corrals	4507; 4506	
		Fence – Cottonwood South Fence (4.7 mi)	574030	
		Fence – in Cottonwood Canyon (0.2 mi)	574505	
	Garden Springs	None known		
	Henrie Complex	South Division Fence (0.25 mi)	574065	
	Pennsylvania	None known		
	Schlarman	None known		
Sheep Flat	Fence (Fife Canyon & Fife Spring; 3.7 miles) Fence – SE edge of W. (0.2 mi)	570483; 574003 574644	Desert bighorn sheep unoccupied habitat; elk and deer general habitat; mule deer crucial summer habitat	
Delamar Mountains	Buckhorn	None known		
	Delamar	Gregerson Basin Reservoir	Unknown if actually there	
		Pockets Reservoir #3	570315	
		Fence – Abate seeding fence (NE side of W) - (2.8 mi)	570407	
		Kane Springs Division fence (E side)(0.4 mi) Gregerson Basin Fence (0.8 mi)	574825	Kane Springs division fence in general DT habitat; several eagle and hawk nests in vicinity of Pockets Reservoir #3; desert bighorn sheep occupied habitat; mule deer and elk general habitat
	Grapevine	Grapevine Res. Enclosure Fence (at Willow Springs (0.6 mi)	575111	In general and Mormon Mesa CHU DT habitat (along ACEC boundary); banded Gila monster (<i>Heloderma suspectum cinctum</i>)
Lower Lake East	Alamo Fence (NW - near gravel pit; 1.7 mi)	574005	In general DT habitat; desert bighorn sheep occupied habitat	
Far South Egans	Shingle Pass	Hardy Springs Fence extension (0.2 mi)	554463	Small portion in OHMA; desert bighorn sheep occupied and unoccupied habitat; elk, mule deer, and pronghorn general habitat; mule deer crucial summer habitat
	Sunnyside	None known		

Wilderness	Grazing Allotments	Identified Developments in Wilderness	RIPS #	Wildlife/Special Status Species	
Fortification Range	Cottonwood	Moriah – Wilson Fence (0.3 mi)		desert bighorn sheep unoccupied habitat; elk, pronghorn, and mule deer general habitat; mule deer crucial summer habitat	
		Cow Heaven pipeline (0.3 mi)			
		Cow Heaven trough			
		Pipe Spring headbox			
	Geyser Ranch	Gouge Eye Fence (1.4 mi) Lake Valley Fence (0.2 mi)	550660	Gouge Eye fence partially in non-habitat; desert bighorn sheep unoccupied habitat; elk, pronghorn, and mule deer general habitat; mule deer crucial summer habitat	
	South Spring Valley	None known			
	Wilson Creek	TPR in process.			
Goshute Canyon	Cherry Creek	Steptoe Valley Drift Fence (0.9 mi)	550910	Both fences in GHMA & OHMA; Bonneville Cutthroat Trout near fenceline; unoccupied Rocky Mtn. bighorn sheep habitat; elk and mule deer general habitat; pronghorn habitat	
		Lower Goshute Fence (0.3 mi)	554174		
		Goshute Basin	None known		
		Indian Creek	Indian Creek Fence (1.3 mi)	554173	In OHMA; unoccupied Rocky Mtn. bighorn sheep habitat; elk and mule deer general habitat
		McDermitt Creek	None known		
	Medicine Butte	None Known			
Government Peak	Devils Gate	None known			
	Indian George	TPR anticipated for completion soon.		Fence in GSG OHMA	
	Muncy Creek	Government Peak fence (0.25 mi)	554106	Antelope Snake Fence and Summit Fence in GSG OHMA; golden eagle nest near Government Peak fence or Summit Fence complex; unoccupied Rocky Mtn. bighorn sheep habitat; elk, mule deer, and pronghorn general habitat	
		Mormon Jack Fence (0.3 mi)	554365		
Summit Fence Complex (0.2)	554147				
Antelope-Snake Fence (0.3 mi)	550532				
Highland Ridge	Baker Creek	None known			
	Chokecherry	North Spring Trough & pipeline – north of Chokecherry cherrystem		Rocky Mtn. bighorn sheep occupied and unoccupied habitat; mule deer, antelope, and elk general habitat	
	Lexington	None known			
	Hamblin Valley	Chokecherry Drift Fence (0.4 mi)	550715 WMP	Non-habitat for GSG; golden eagle nest; Rocky Mtn. bighorn sheep occupied and unoccupied habitat; mule deer, antelope, and elk general habitat	
	Murphy Wash	Troughs and associated pipelines and fence in John's Wash (2) Shoshone Hamlin Fence (2 segments – 0.9 mi – east end may or may not extend into wilderness)	GPS'd Per WMP 550461 GPS'd	Silver-haired bat (<i>Lasiorycteris noctivagans</i>), long-eared myotis (<i>Myotis evotis</i>), Townsend's big-eared bat (<i>Corynorhinus townsendii</i>), Brazilian free-tailed bat (<i>Tadarida brasiliensis</i>), big brown bat (<i>Eptesicus</i>)	

Wilderness	Grazing Allotments	Identified Developments in Wilderness	RIPS #	Wildlife/Special Status Species
		Fence in Big Spring Wash (T11R69sec28; 0.08 mi) Fence in Murphy's Wash (0.2 mi) – s. of cabin	GPS'd	<i>fuscus</i>), western small-footed myotis (<i>Myotis ciliolabrum</i>), long-legged myotis (<i>Myotis volans</i>), and California myotis (<i>Myotis californicus</i>) at trough in cherrystem; prairie falcon and eagle/hawk nest near cherrystem; Rocky Mtn. bighorn sheep occupied and unoccupied habitat; elk and mule deer general habitat; mule deer crucial winter habitat; all in GSG non-habitat
	North Chokecherry	Closed to Grazing. No developments.		
	South Spring Valley	None known.		
Meadow Valley Range	Boulder Spring	Fence – GPS'd (0.4 mi) T09S R65E Sec. 13 Grapevine/Henry Wilson Fence (1.4 mi) – overlaps into Henrie Complex Kane Springs Elgin Fence (0.1 mi)	573514/570410 570589	All 3 fences at least partially in DT general habitat; desert bighorn sheep occupied habitat; mule deer general habitat
	Breedlove	R&J Reservoir 1 trough 3 corrals	574664	All in DT general habitat
	Delamar	None known		
	Grapevine	None known		
	Henrie Complex	1 fence – remote; unconfirmed (0.1 mi)		
	Lower Riggs			
Mormon Mountains	Breedlove	None known		
	Gourd Spring	TPR Recently Completed		
	Henrie Complex	None known		
	Mormon Peak	TPR Recently Completed		
	Rox-Tule	None known		
	White Rock	S. Tule Rotation Pasture Fence (1.1) Other fence off cherrystem (0.2 mi) Rotation Fence (1.3 mi)	570658 574514	All 3 fences in DT general habitat; desert bighorn sheep occupied habitat

Wilderness	Grazing Allotments	Identified Developments in Wilderness	RIPS #	Wildlife/Special Status Species
Mount Grafton –	Cattle Camp/Cave Valley	TPR completed in 2014		
	Cave Valley Ranch	Cement trough (near mine on S. end) Sagehen trough Hgo Fence (4.3 mi)	550753	Cement trough in GSG GHMA Sagehen trough in GSG OHMA and Brush Spring trough in non-habitat Grafton fence (Cave Valley & Cave Valley Ranch boundary fence) in GSG OHMA; desert bighorn sheep occupied habitat; elk and mule deer crucial summer habitat; mule deer, elk, and pronghorn general habitat
	Geyser Ranch	North Creek Riparian Fence (1.0 mi) Darrel Fence (2.8 mi) 2 reservoirs Brush Spring trough Deer Track Pond & Trough	554698 550883	Portion of Darrel fence in GSG GHMA & OHMA; desert bighorn sheep occupied habitat; elk and mule deer crucial summer habitat; elk, pronghorn and mule deer general habitat; Deer Track Pond and Trough in GSG OHMA; 2 reservoirs in GSG GHMA
Mt. Irish	Bald Mountain	North Valley Fence (0.1 mi)	554141	Desert bighorn sheep occupied habitat; mule deer and pronghorn general habitat
	Crescent N-4	None known		
	Irish Mountain	None known		
	Pahranagat West	None known		
	Pine Cone	None known		
Mt. Moriah	Wildhorse	None known		
	Devils Gate	Marble Wash Drift Fence (0.7 mi)	550419	Unoccupied Rocky Mtn. bighorn sheep habitat; elk, mule deer, and pronghorn general habitat
	Muncy Creek	None Known		
	Smith Creek	None known		
Parsnip Peak	Wilson Creek	Bowling Fence (11.6 mi)	554226	Small portions of Bowling fence in GSG OHMA; elk general and crucial summer habitat; mule deer general and crucial summer habitat
		Pierson Summit corral	551034	
South Egan Range	Brown Knoll	None known		
	Chimney Rock	None known		
	Hardy Spring	None known		
	Rock Canyon	None known		
	Sheep Pass	Tony Allotment Fence (0.6 mi) Sheep Pass Canyon Fence (1.1 mi – two segments) WGF Fence (0.3) Sheep Drift Fence (0.2 mi) Whipple Seeding Fence (0.2 mi)	550750 551032 550751 550981 550595	Sheep drift fence & Whipple seeding fence in non-habitat for GSG; Schoolhouse spring fence in GSG OHMA; desert bighorn sheep unoccupied habitat; elk habitat; mule deer crucial summer habitat

Wilderness	Grazing Allotments	Identified Developments in Wilderness	RIPS #	Wildlife/Special Status Species
	Shingle Pass	Haggerty Fence (1.3 mi) Ninemile Fence (1.6 mi) Pipeline in Long Canyon (adjacent to private) Trough & pipeline at Parker Spring	554136	S Egan pipeline (adjacent to private) in GSG OHMA; trough & pipeline at Parker Spring in GSG OHMA; Ninemile fence in non-habitat; desert bighorn sheep occupied and unoccupied habitat; elk habitat; mule deer crucial summer habitat
	Six Mile Ranch	None known		
	Sunnyside	None known		
South Pahroc Range	Buckhorn	Alamo Canyon Fence (0.4 mi)	574029	desert bighorn sheep occupied habitat
	Pahroc	Headbox at Eightmile Spring & pipeline (50') (Twin Springs water development now outside wilderness)		desert bighorn sheep occupied habitat; mule deer general habitat
	Six Mile	Gardner Valley Allot Fence (two segments: 0.1 and 0.9 mi)	554220	Eagle nest near fenceline; desert bighorn sheep occupied habitat; mule deer general habitat
Tunnel Spring	Barclay	None known		
	Enterprise	Clover Mountain Panaca Fence (1.5 mi?)	570195	Elk and mule deer general habitat; mule deer crucial summer habitat
Weepah Spring	Coal Valley Lake	None known (Weepah Spring developments in cherrystem)		
	Needles	None known		
	Sunnyside	None known		
	Timber Mountain	Sunnyside-Fox Mtn Fence (0.1 mi) (White Rock Spring developments in cherrystem)	554568	Eagle nest; unoccupied desert bighorn sheep; general mule deer and pronghorn habitat
	West Timber Mountain	None known		
White Rock Range	U4	None known		
	Wilson Creek	None known		
Worthington Mountains	McCutcheon Springs	Sand Springs Rest Rot Fence (2.4 mi)	550379	Desert bighorn sheep unoccupied habitat; mule deer and pronghorn general habitat
	Sand Springs	Horse Spring Pipeline (3.3 mi)	554262	Prairie falcon and red-tailed hawk nests in vicinity of pipeline; desert bighorn sheep unoccupied habitat; mule deer and pronghorn general habitat
	Shadow Wells	None known		
	Worthington Mountain	None known		

Appendix C. Wilderness Planning: Excerpt from BLM Manual 6340 – Management of Designated Wilderness Areas (Public):

8. Grazing

a. **Background.** The Wilderness Act, Section 4(d)(4)(2) states: “the grazing of livestock, where established prior to the effective date of this Act, shall be permitted to continue subject to such reasonable regulations as are deemed necessary by the [administering agency].” In 1990, the

House of Representatives issued House Report 101-405, Appendix A— Grazing Management Guidelines, in association with the Arizona Desert Wilderness Act of 1990. Although the

Wilderness Act provides the authority for managing grazing in wilderness, this report (and its predecessor, House Report 96-1126, issued in association with the Colorado Wilderness Act of 1980) has been cited in many subsequent wilderness bills and provides helpful information.

Grazing is specifically permitted in wilderness under Section 4(d)(4)(2) of the Act. After designation of an area as wilderness, Allotment Management Plans may need to be revised or developed for allotments within a wilderness to ensure they are consistent with this policy.

b. **Continuation of livestock grazing.** Where grazing of livestock has been authorized by a grazing permit or grazing lease for land within a wilderness, and the use was established before

Congress established the wilderness area, under Section 4(d)(4)(2) of the Act it “shall be permitted to continue subject to such reasonable regulations as are deemed necessary by the [administering agency].” The continuation of existing grazing may apply to not only the utilization of the forage resource, but also the use and maintenance of livestock management developments and facilities that were associated with the grazing activity at the time of designation and have been authorized by the BLM. Grazing management activities, including the construction, use, and maintenance of livestock management developments, must comply with the BLM grazing regulations 43 CFR 4100, as well as this manual.

c. **Adjustments in levels of authorized use.** There will be no automatic reduction in the amount of livestock use permitted simply because an area is designated as wilderness. Reductions should be made only as a result of normal changes in grazing management based on range condition and in accordance with the BLM’s grazing regulations. For example, an increase in the number of livestock may be permitted if it can be demonstrated that the increase will have no negative impact on wilderness character.

d. **Grazing facilities.**

i. *Structures and installations used for livestock management existing at the time of designation* may be maintained. Maintenance may be done by the occasional use of motorized equipment where:

A. practical non-motorized alternatives do not exist; and

B. the motorized use is expressly authorized in the grazing permit and advanced written permission for each maintenance activity is granted by the BLM; and

C. the motorized use was allowed prior to wilderness designation.

In most situations, authorization for motorized use would be considered on a case-by-case basis—for example, to remove sediment from a stock reservoir. In some cases, a schedule could be established—for example, hauling water to fill a tank. In all cases, authorization should be for no more than is practically necessary to support the livestock grazing program and for actions that would not have a significant adverse impact on the natural environment. The use of an existing route and mode of travel also must cause the least impact on wilderness character and be similar to what was allowed prior to wilderness designation. These decisions are made during the grazing permitting process with the use of a Minimum Requirements Analysis, completed in conjunction with the associated NEPA analysis, through which alternatives are analyzed to determine the method that least impacts wilderness character while remaining consistent with the rule of practical necessity and reasonableness in supporting the livestock grazing program.

Actual authorization is granted, consistent with the NEPA analysis, in a letter of authorization.

Authorizations need to be consistent with the Decision Document, including specified design features or mitigation measures and any specified follow-up actions. Authorizations will include exact travel routes to be followed by any motorized equipment or mechanical transport, as well as rehabilitation requirements.

Where practical alternatives to the use of motor vehicles exist—for example, using horses to distribute small quantities of salt or repair short sections of fence—the BLM will only authorize non-motorized activities.

ii. *Reconstruction or replacement of existing facilities* will require the use of natural materials if their use would not impose unreasonable added cost for the grazing permittee. An exception is when use of other materials would require less frequent motorized or mechanized access to perform maintenance.

iii. *New facilities* will be permitted by the BLM only for the purpose of enhancing the protection of wilderness character.

e. **Use of motorized equipment.** Except as allowed under sub-section 9.d, above, the use of motor vehicles, motorized equipment, or mechanical transport to carry out a lawful grazing-associated activity is limited to emergencies only, such as rescuing sick animals or placing feed in emergency situations. In emergencies, permittees do not need prior authorization for these uses, but must notify the BLM of their use reasonably soon thereafter. The use of motor vehicles, motorized equipment, or mechanical transport is not allowed for herding animals or routine inspection of the condition of developments or the condition of the range.

Appendix D. Congressional Grazing Guidelines

House Report 101–405, Appendix A

Section 4(d)(4)(2) of the Wilderness Act states: "the grazing of livestock, where established prior to the effective date of this Act, shall be permitted to continue subject to such reasonable regulations as are deemed necessary by the Secretary of Agriculture".

The legislative history of this language is very clear in its intent that livestock grazing, and activities and the necessary facilities to support a livestock grazing program, will be permitted to continue in National Forest wilderness areas, when such grazing was established prior to classification of an area as wilderness.

Including those areas designated in 1964 by the Wilderness Act, Congress has designated a large number of wilderness areas, including areas which are managed the Forest Service, Fish and Wildlife Service, and Bureau of Land Management. A number of these areas contain active grazing program, which are conducted pursuant to existing authorities. In all such cases, when enacting legislation classifying an area as wilderness, it has been the intent of the Congress that the cited language of the Wilderness Act would apply to grazing within wilderness areas administered by all Federal agencies.

To avoid any possible confusion, however, the Committee believes it would appropriate to reiterate the guidelines and policies (which have been set out previously in the Committee's Report on H.R. 5487 of the 96th Congress, House Report N. 96-617) that are to be utilized by BLM in implementing the relevant provisions of the Wilderness Act with respect to livestock grazing in the wilderness areas designated by this bill. It is the intention of the Committee that these guidelines and policies be considered in the overall context of the purposes and direction of the Wilderness Act of 1964 and this bill, and that they be promptly, fully, and diligently implemented and made available to Bureau of Land Management personnel at all levels and to all holders of permits for grazing in the wilderness areas designated by this bill.

The guidelines and policies are as follows:

1. There shall be no curtailments of grazing in wilderness areas simply because an area is, or has been designated as wilderness, nor should wilderness designations be used an excuse by administrators to slowly "phase out" grazing. Any adjustments in the numbers of livestock permitted to graze in wilderness areas should be made as a result of revisions in the normal grazing and land management planning and policy setting process, giving consideration to legal mandates, range condition, and the protection of the range resource from deterioration.

It is anticipated that the number of livestock permitted to graze in wilderness would remain at the approximate levels at the time an area enters

the wilderness system. If land management plans reveal conclusively that increased livestock numbers or animal unit months (AUMs) could be made available with no adverse impact on wilderness values such as plant communities, primitive recreation, and wildlife populations or habitat, some increases in AUMs may be permissible. This is not to imply, however, that wilderness lends itself to AUM or livestock increases and construction of substantial new facilities that might be appropriate for intensive grazing management in non-wilderness areas.

2. The maintenance of supporting facilities, existing in an area prior to its classification as wilderness (including fences, line cabins, water wells and lines, stock tanks, etc.), is permissible in wilderness. Where practical alternatives do not exist, maintenance or other activities may be accomplished through the occasional use of motorized equipment. This may include, for example, the use of backhoes to maintain stock ponds, pickup trucks for major fence repairs, or specialized equipment to repair stock watering facilities. Such occasional use of motorized equipment should be expressly authorized in the grazing permits for the area involved. The use of motorized equipment should be based on a rule of practical necessity and reasonableness. For example, motorized equipment need not be allowed for the placement of small quantities of salt or other activities where such activities can reasonably and practically be accomplished on horseback or foot. On the other hand, it may be appropriate to permit the occasional use of motorized equipment to haul large quantities of salt to distribution points. Moreover, under the rule of reasonableness, occasional use of motorized equipment should be permitted where practical alternatives are not available and such use would not have a significant adverse impact on the natural environment. Such motorized equipment uses will normally only be permitted in those portions of a wilderness area where they had occurred prior to the area's designation as wilderness or are established by prior agreement.

3. The replacement or reconstruction of deteriorated facilities or improvements should not be required to be accomplished using "natural materials", unless the material and labor costs of using natural materials are such that their use would not impose unreasonable additional costs on grazing permittees.

4. The construction or new improvements or replacement of deteriorated facilities in wilderness is permissible if in accordance with these guidelines and management plans governing the area involved. However, the construction of new improvements should be primarily for the purpose of resource protection and the more effective management of these resources rather than to accommodate increased numbers of livestock.

5. The use of motorized equipment for emergency purposes such as rescuing sick animals or the placement of feed in emergency situations is also permissible. This privilege is to be exercised only in true emergencies, and should not be abused by permittees.

In summary, subject to the conditions and policies outlined in this report, the general rule of thumb on grazing management in wilderness should be that activities or facilities established prior to the date of an area's designation as wilderness should be allowed to remain in place and may be replaced when necessary for the permittee to properly administer the grazing program. Thus, if livestock grazing activities and facilities were established in an area at the time Congress determined that the area was suitable for wilderness and placed the specific area in the wilderness system, they should be allowed to continue. With respect to areas designated as wilderness prior to the date of this Act, these guidelines shall not be considered as a direction to reestablish uses where such uses have been discontinued

Appendix E. Weed Risk Assessment

RISK ASSESSMENT FOR NOXIOUS & INVASIVE WEEDS

Maintenance of Range Developments in Wilderness

Lincoln, Nye and White Pine Counties, Nevada

SECTION 1 - PROPOSED ACTION AND INTRODUCTION

1.1 – PROPOSED ACTION

The purpose is to analyze the impacts of maintaining and/or reconstructing existing range developments found throughout 21 of the wilderness areas on the Ely District for the areas that have not had a Term Permit Renewal recently. The White Rock Range Wilderness contains no known range developments, and is not analyzed here.

The need for the action is allow compliance with the Wilderness Act, which states “Where grazing of livestock has been authorized by a grazing permit or grazing lease for land within a wilderness, and the use was established before Congress established the wilderness area, under Section 4(d)(4)(2) of the Act it "shall be permitted to continue subject to such reasonable regulations as are deemed necessary by the [administering agency]." The continuation of existing grazing may apply to not only the utilization of the forage resource, but also the use and maintenance of livestock management developments and facilities that were associated with the grazing activity at the time of designation and have been authorized by the BLM. Grazing management activities, including the construction, use, and maintenance of livestock management developments, must comply with the BLM grazing regulations 43 CFR 4100, as well as Manual 6340 — Management of Designated Wilderness Areas.

As stated in BLM Manual 6340: “Structures and installations used for livestock management existing at the time of designation may be maintained. Maintenance may be done by the occasional use of motorized equipment where:

- A. Practical non-motorized alternatives do not exist; and
- B. The motorized use is expressly authorized in the grazing permit and advanced written permission for each maintenance activity is granted by the BLM; and
- C. The motorized use was allowed prior to wilderness designation.

No field weed surveys were completed for this project. Instead the Ely District weed inventory data were consulted. Prior to project implementation, further site-specific analysis may be required.

1.2 - INTRODUCTION

Each of the 21 Wilderness Areas is analyzed individually in Section 2.

Risk assessments are based on two factors. Factor 1 quantitatively analyzes the likelihood of noxious/invasive weed species spreading to the project area (scale of 0-10). Factor 2 quantitatively analyzes the consequences of noxious/invasive weed establishment in the project area (scale of 1-10). The product of the two factors yields the Risk Rating (scale of 0-100), which determines the need for any preventative management measures.

Tables 1, 2 and 3 below show the ranking criteria for Factor 1 and Factor 2, as well as the Risk Rating table.

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

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

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

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

TABLE 3 - The Risk Rating is obtained by multiplying Factor 1 by Factor 2.

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

SECTION 2 - RISK ASSESSMENTS

TABLE 4 – RISK RATING FOR EACH OF THE 21 WILDERNESS AREAS

WILDERNESS	QUANTATITIVE RATING	QUALATATIVE RATING
2.1 - Becky Peak	15	MODERATE
2.2 - Big Rocks	24	MODERATE
2.3 - Bristlecone	4	LOW
2.4 - Clover Mountains	72	HIGH
2.5 - Delamar Mountains	63	HIGH
2.6 - Far South Egans	40	MODERATE
2.7 - Fortification Range	8	LOW
2.8 - Goshute Canyon	64	HIGH
2.9 - Government Peak	8	LOW
2.10 - Highland Ridge	20	MODERATE
2.11 - Meadow Valley Range	81	HIGH
2.12 - Mormon Mountains	72	HIGH
2.13 - Mount Grafton	49	MODERATE
2.14 - Mount Irish	5	LOW
2.15 - Mount Moriah	3	LOW
2.16 - Parsnip Peak	64	HIGH
2.17 - South Egan Range	25	MODERATE
2.18 - South Pahroc Range	49	MODERATE
2.19 - Tunnel Spring	42	MODERATE
2.20 - Weepah Spring	24	MODERATE
2.21 - Worthington Mountains	16	MODERATE

2.1 - BECKY PEAK WILDERNESS

The following species documented within or adjacent to the Wilderness (*Reference Map 3.1*):

Carduus nutans Musk thistle

Cirsium arvense Canada thistle

Cirsium vulgare Bull thistle

Onopordum acanthium Scotch thistle

The Wilderness was last inventoried for noxious weeds in 2003. Below is a list of un-inventoried species found on the district; some of which may be present in the area.

Bromus tectorum Cheatgrass

Ceratocephala testiculata Bur buttercup

Convolvulus arvensis Field bindweed

Elaeagnus angustifolia Russian olive

Erodium cicutarium Filaree

Kochia scoparia Kochia

Halogeton glomeratus Halogeton

Salsola kali Russian thistle

Sysimbrium altissimum Tumble mustard

Verbascum thapsus Common mullein

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

The rating for Factor 1 is Low (3). Very few populations of noxious and invasive weeds have been identified within or immediately adjacent to the area. During project implementation, noxious and invasive weed spread can be reasonably avoided.

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

The rating for Factor 2 is Moderate (5). Should new populations of noxious or invasive species infest the area, they would likely be identified and treated very quickly. The ambient vegetation also appears to be fairly resilient to weed spread.

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

The Risk Rating is Moderate (15). This indicates that the project can proceed as planned as long as the following measures are followed:

- Any discovery of newly established populations of noxious/invasive weeds will be communicated to the Ely District Noxious and Invasive Weeds Coordinator.
- Where appropriate, vehicles and heavy equipment used for the completion, maintenance, inspection, or monitoring of ground disturbing activities; for emergency fire suppression; or for authorized off-road driving will be free of soil and debris capable of transporting weed propagules.
- All straw, hay, straw/hay, or other organic products used for reclamation or stabilization activities, must be certified that all materials are free of plant species listed on the Nevada noxious weed list or specifically identified by the Ely District Office.
- Disturbance of vegetation would be kept to a minimum through construction site management (e.g. using previously disturbed areas and existing easements, limiting equipment/materials storage and staging area sites, etc.)
- No noxious weeds will be allowed on the site at the time of reclamation release. Any noxious weeds that become established will be controlled.

2.2 – BIG ROCKS WILDERNESS

The following species documented within or adjacent to the Wilderness (*Reference Map 3.2*):

Acroptilon repens Russian knapweed

Cirsium vulgare Bull thistle

Lepidium draba Hoary cress

Lepidium latifolium Perennial Pepperweed

The Wilderness was last inventoried for noxious weeds in 2007. Below is a list of un-inventoried species found on the district; some of which may be present in the area.

Bromus rubens Red brome

Bromus tectorum Cheatgrass

Ceratocephala testiculata Bur buttercup

Convolvulus arvensis Field bindweed

Erodium cicutarium Filaree

Kochia scoparia Kochia

Halogeton glomeratus Halogeton

Salsola kali Russian thistle

Sysimbrium altissimum Tumble mustard

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

The rating for Factor 1 is Low (3). No weeds have been identified within the area, and very few are found in the vicinity. During project implementation, noxious and invasive weed spread can be reasonably avoided.

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

The rating for Factor 2 is High (8). Should noxious or invasive species establish within the project area, it is likely that the populations will spread and become difficult to mitigate or eradicate. This is particularly true for invasive annual grasses (such as Cheatgrass and Red brome).

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

The Risk Rating is Moderate (24). This indicates that the project can proceed as planned as long as the following measures are followed:

- Any discovery of newly established populations of noxious/invasive weeds will be communicated to the Ely District Noxious and Invasive Weeds Coordinator.
- Where appropriate, vehicles and heavy equipment used for the completion, maintenance, inspection, or monitoring of ground disturbing activities; for emergency fire suppression; or for authorized off-road driving will be free of soil and debris capable of transporting weed propagules.
- All straw, hay, straw/hay, or other organic products used for reclamation or stabilization activities, must be certified that all materials are free of plant species listed on the Nevada noxious weed list or specifically identified by the Ely District Office.
- Disturbance of vegetation would be kept to a minimum through construction site management (e.g. using previously disturbed areas and existing easements, limiting equipment/materials storage and staging area sites, etc.)
- No noxious weeds will be allowed on the site at the time of reclamation release. Any noxious weeds that become established will be controlled.

2.3 – BRISTLECONE WILDERNESS

The following species documented within or adjacent to the Wilderness (*Reference Map 3.3*):

Lepidium draba Hoary cress

The Wilderness was last inventoried for noxious weeds in 2003. Below is a list of un-inventoried species found on the district; some of which may be present in the area.

Bromus tectorum Cheatgrass

Ceratocephala testiculata Bur buttercup

Elaeagnus angustifolia Russian olive

Erodium cicutarium Filaree

Kochia scoparia Kochia

Halogeton glomeratus Halogeton

Salsola kali Russian thistle

Sysimbrium altissimum Tumble mustard

Verbascum thapsus Common mullein

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

The rating for Factor 1 is Low (1). No weeds have been identified within the area, and very few are found in the vicinity. During project implementation, noxious and invasive weed spread can be reasonably avoided.

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

The rating for Factor 2 is Moderate (4). Should new populations of noxious or invasive species infest the area, they would likely be identified and treated very quickly. The ambient vegetation also appears to be fairly resilient to weed spread.

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

The Risk Rating is Low (4). This indicates that the project can proceed as planned as long as the following measures are followed:

- Any discovery of newly established populations of noxious/invasive weeds will be communicated to the Ely District Noxious and Invasive Weeds Coordinator.

2.4 – CLOVER MOUNTAINS WILDERNESS

The following species documented within or adjacent to the Wilderness (*Reference Map 3.4*):

Lepidium draba Hoary cress

Lepidium latifolium Perennial pepperweed

Tamarix spp. Salt cedar

The Wilderness was last inventoried for noxious weeds in 2008. Below is a list of un-inventoried species found on the district; some of which may be present in the area.

Bromus rubens Red brome

Bromus tectorum Cheatgrass

Ceratocephala testiculata Bur buttercup

Convolvulus arvensis Field bindweed

Erodium cicutarium Filaree

Kochia scoparia Kochia

Halogeton glomeratus Halogeton

Salsola kali Russian thistle

Sysimbrium altissimum Tumble mustard

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

The rating for Factor 1 is High (8). Saltcedar is present within and adjacent to the project area, and is of major concern in the area. Rainbow canyon lies immediately west of the Wilderness Area, and contains high densities of Saltcedar and other noxious and invasive species. Also, many previously burned areas have become infested with invasive annual grasses, further increasing the likelihood of invasive weed spread.

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

The rating for Factor 2 is High (9). Should more noxious or invasive species or populations establish within the project area, it is likely that the populations will spread and become difficult to mitigate or eradicate. This is particularly true for invasive annual grasses (such as Cheatgrass and Red brome).

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

The Risk Rating is High (72). This indicates a high probability of noxious and invasive weed spread due to project activities. The project can proceed as planned as long as the following measures are followed:

- Any discovery of newly established populations of noxious/invasive weeds will be communicated to the Ely District Noxious and Invasive Weeds Coordinator.
- Vehicles and heavy equipment used for the completion, maintenance, inspection, or monitoring of ground disturbing activities; for emergency fire suppression; or for authorized off-road driving will be free of soil and debris capable of transporting weed propagules.
- Animals used on public lands by special recreation permittees or by contractors for weed control or reclamation will be cleaned, quarantined, and fed weed-free feed prior to being used or released on public lands. The length of this quarantine will be specified in the special recreation permit or contract.

- All straw, hay, straw/hay, or other organic products used for reclamation or stabilization activities, must be certified that all materials are free of plant species listed on the Nevada noxious weed list or specifically identified by the Ely District Office.
- Disturbance of vegetation would be kept to a minimum through construction site management (e.g. using previously disturbed areas and existing easements, limiting equipment/materials storage and staging area sites, etc.)
- Prior to entering public lands, the contractor, operator, or permit holder will provide information and training regarding noxious weed management and identification to all personnel who will be affiliated with the implementation of the project. The importance of preventing the spread of weeds to uninfested areas and importance of controlling existing populations of weeds will be explained.
- No noxious weeds will be allowed on the site at the time of reclamation release. Any noxious weeds that become established will be controlled.

2.5 – DELAMAR MOUNTAINS WILDERNESS

The following species documented within or adjacent to the Wilderness (*Reference Map 3.5*):

Brassica tournefortii Sahara mustard

Tamarix spp. Salt cedar

The Wilderness was last inventoried for noxious weeds in 2008. Below is a list of un-inventoried species found on the district; some of which may be present in the area.

Bromus rubens Red brome

Bromus tectorum Cheatgrass

Ceratocephala testiculata Bur buttercup

Convolvulus arvensis Field bindweed

Erodium cicutarium Filaree

Kochia scoparia Kochia

Halogeton glomeratus Halogeton

Salsola kali Russian thistle

Sysimbrium altissimum Tumble mustard

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

The rating for Factor 1 is High (7). Saltcedar and Sahara mustard are present within and adjacent to the project area. Kane Springs Valley lies to the east and Highway 93 to the west. Both of these areas are traveled fairly heavily, and are catalysts for weed spread. The 2005 Delamar fire (144,000 acres) burned much of the Wilderness Area, approximately 18,000 acres of which had previously burned in 1999. As such, invasive annual grasses are heavily present within the region, posing extreme risk of weed spread and further catastrophic fire events.

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

The rating for Factor 2 is High (9). Should more noxious or invasive species or populations establish within the project area, it is likely that the populations will spread and become incredibly difficult to mitigate or eradicate. This is particularly true for invasive annual grasses (such as Cheatgrass and Red brome). Additionally, much of the Wilderness Area is classified as Desert tortoise (*Gopherus agassizii*) habitat. Large-scale, catastrophic fires (largely caused by the presence of invasive species) threaten to permanently degrade existing habitat while drastically decreasing the probability of habitat rehabilitation. For all the reasons mentioned above, the Delamar Mountains Wilderness is very sensitive to noxious and invasive weed spread.

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

The Risk Rating is High (63). This indicates a high probability of noxious and invasive weed spread due to project activities. The project can proceed as long as the following measures are followed:

- Any discovery of newly established populations of noxious/invasive weeds will be communicated to the Ely District Noxious and Invasive Weeds Coordinator.
- Where appropriate, vehicles and heavy equipment used for the completion, maintenance, inspection, or monitoring of ground disturbing activities; for emergency fire suppression; or for authorized off-road driving will be free of soil and debris capable of transporting weed propagules.
- Animals used on public lands by special recreation permittees or by contractors for weed control or reclamation will be cleaned, quarantined, and fed weed-free feed prior to being used or released on public lands. The length of this quarantine will be specified in the special recreation permit or contract.
- All straw, hay, straw/hay, or other organic products used for reclamation or stabilization activities, must be certified that all materials are free of plant species listed on the Nevada noxious weed list or specifically identified by the Ely District Office.
- Disturbance of vegetation would be kept to a minimum through construction site management (e.g. using previously disturbed areas and existing easements, limiting equipment/materials storage and staging area sites, etc.)
- To minimize the transport of soil-borne noxious weed seeds, roots, or rhizomes, infested soils or materials would not be moved and redistributed on weed-free or relatively weed-free areas. In areas where infestations are identified or noted and infested soils, rock, or overburden must be moved, these materials will be salvaged and stockpiled adjacent to the area from which they were stripped. Appropriate measures will be taken to minimize wind and water erosion of these stockpiles. During reclamation, the materials will be returned to the area from which they were stripped.
- Prior to entering public lands, the contractor, operator, or permit holder will provide information and training regarding noxious weed management and identification to all personnel who will be affiliated with the implementation of the project. The importance of preventing the spread of weeds to uninfested areas and importance of controlling existing populations of weeds will be explained.

- No noxious weeds will be allowed on the site at the time of reclamation release. Any noxious weeds that become established will be controlled.

2.6 – FAR SOUTH EGANS WILDERNESS

The following species documented within or adjacent to the Wilderness (*Reference Map 3.6*):

Acroptilon repens Russian knapweed

Centaurea stoebe Spotted knapweed

Lepidium draba Hoary cress

Linaria dalmatica Dalmatian toadflax

The Wilderness was last inventoried for noxious weeds in 2008. Below is a list of un-inventoried species found on the district; some of which may be present in the area.

Arctium minus Common burdock

Bromus tectorum Cheatgrass

Ceratocephala testiculata Bur buttercup

Convolvulus arvensis Field bindweed

Elaeagnus angustifolia Russian olive

Erodium cicutarium Filaree

Kochia scoparia Kochia

Halogeton glomeratus Halogeton

Salsola kali Russian thistle

Sysimbrium altissimum Tumble mustard

Tragopogon dubius Yellow salsify

Verbascum thapsus Common mullein

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

The rating for Factor 1 is Moderate (5). There are currently no documented noxious weed infestations within the Wilderness Area or the existing range improvement. However, Russian knapweed is present immediately adjacent to the existing range improvement along the access route that would likely be used as an access route. Other un-inventoried species are also likely present in the vicinity.

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

The rating for Factor 2 is High (8). Should noxious or invasive species establish within the project area, it is likely that the populations will spread and become difficult to mitigate or

eradicate. This is particularly true for Russian knapweed and invasive annual grasses (such as Cheatgrass and Red brome).

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

The Risk Rating is Moderate (40). This indicates that the project can proceed as planned as long as the following measures are followed:

- Any discovery of newly established populations of noxious/invasive weeds will be communicated to the Ely District Noxious and Invasive Weeds Coordinator.
- Where appropriate, vehicles and heavy equipment used for the completion, maintenance, inspection, or monitoring of ground disturbing activities; for emergency fire suppression; or for authorized off-road driving will be free of soil and debris capable of transporting weed propagules.
- All straw, hay, straw/hay, or other organic products used for reclamation or stabilization activities, must be certified that all materials are free of plant species listed on the Nevada noxious weed list or specifically identified by the Ely District Office.
- Disturbance of vegetation would be kept to a minimum through construction site management (e.g. using previously disturbed areas and existing easements, limiting equipment/materials storage and staging area sites, etc.)

No noxious weeds will be allowed on the site at the time of reclamation release. Any noxious weeds that become established will be controlled.

2.7 – FORTIFICATION RANGE WILDERNESS

The following species documented within or adjacent to the Wilderness (*Reference Map 3.7*):

Lepidium draba Hoary cress

Onopordum acanthium Scotch thistle

Tamarix spp. Salt cedar

The Wilderness was last inventoried for noxious weeds in 2004. Below is a list of un-inventoried species found on the district; some of which may be present in the area.

Bromus tectorum Cheatgrass

Ceratocephala testiculata Bur buttercup

Convolvulus arvensis Field bindweed

Elaeagnus angustifolia Russian olive

Erodium cicutarium Filaree

Kochia scoparia Kochia

Halogeton glomeratus Halogeton

Marrubium vulgare Horehound

Salsola kali Russian thistle

Sysimbrium altissimum Tumble mustard

Verbascum thapsus Common mullein

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

The rating for Factor 1 is Low (1). There are currently no documented noxious weed infestations within the Wilderness Area or the existing range developments. Noxious weed infestations are documented over 4 miles southeast of the Wilderness Area near the Atlanta Mine.

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

The rating for Factor 2 is High (8). Should noxious or invasive species establish within the project area, it is likely that the populations will spread and become difficult to mitigate or eradicate. This is particularly true for invasive annual grasses (such as Cheatgrass).

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

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

- Any discovery of newly established populations of noxious/invasive weeds will be communicated to the Ely District Noxious and Invasive Weeds Coordinator.

2.8 – GOSHUTE CANYON WILDERNESS

The following species documented within and/or adjacent to the Wilderness (*Reference Map 3.8*):

Carduus nutans Musk thistle

Cicuta maculata Water hemlock

Cirsium arvense Canada thistle

Cirsium vulgare Bull thistle

Lepidium draba Hoary cress

Onopordum acanthium Scotch thistle

Tamarix spp. Salt cedar

The Wilderness was last inventoried for noxious weeds in 2006. Below is a list of un-inventoried species found on the district; some of which may be present in the area.

Bromus tectorum Cheatgrass

Ceratocephala testiculata Bur buttercup

Convolvulus arvensis Field bindweed

Elaeagnus angustifolia Russian olive

Erodium cicutarium Filaree

Kochia scoparia Kochia

Halogeton glomeratus Halogeton

Salsola kali Russian thistle

Sysimbrium altissimum Tumble mustard

Verbascum thapsus Common mullein

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

The rating for Factor 1 is High (8). The existing range developments lie within and adjacent to the northern and eastern portions of the Wilderness Area. Noxious weed infestations are documented within and immediately adjacent to these range developments, and along access roads. Also, un-documented invasive species are heavily present along access roads.

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

The rating for Factor 2 is High (8). Should noxious or invasive species establish within the project area, it is likely that the populations will spread and become difficult to mitigate or eradicate. This is particularly true for bull thistle, scotch thistle, Canada thistle and musk thistle, as well as invasive annual grasses (such as Cheatgrass).

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

The Risk Rating is High (64). This indicates that the project can proceed as planned as long as the following measures are followed:

- Any discovery of newly established populations of noxious/invasive weeds will be communicated to the Ely District Noxious and Invasive Weeds Coordinator.
- Where appropriate, vehicles and heavy equipment used for the completion, maintenance, inspection, or monitoring of ground disturbing activities; for emergency fire suppression; or for authorized off-road driving will be free of soil and debris capable of transporting weed propagules.
- Animals used on public lands by special recreation permittees or by contractors for weed control or reclamation will be cleaned, quarantined, and fed weed-free feed prior to being used or released on public lands. The length of this quarantine will be specified in the special recreation permit or contract.
- All straw, hay, straw/hay, or other organic products used for reclamation or stabilization activities, must be certified that all materials are free of plant species listed on the Nevada noxious weed list or specifically identified by the Ely District Office.
- Disturbance of vegetation would be kept to a minimum through construction site management (e.g. using previously disturbed areas and existing easements, limiting equipment/materials storage and staging area sites, etc.)
- To minimize the transport of soil-borne noxious weed seeds, roots, or rhizomes, infested soils or materials would not be moved and redistributed on weed-free or relatively weed-free areas. In areas where infestations are identified or noted and infested soils, rock, or overburden

must be moved, these materials will be salvaged and stockpiled adjacent to the area from which they were stripped. Appropriate measures will be taken to minimize wind and water erosion of these stockpiles. During reclamation, the materials will be returned to the area from which they were stripped.

- Prior to entering public lands, the contractor, operator, or permit holder will provide information and training regarding noxious weed management and identification to all personnel who will be affiliated with the implementation of the project. The importance of preventing the spread of weeds to un-infested areas and importance of controlling existing populations of weeds will be explained.
- No noxious weeds will be allowed on the site at the time of reclamation release. Any noxious weeds that become established will be controlled.

2.9 – GOVERNMENT PEAK WILDERNESS

The following species documented within or adjacent to the Wilderness (*Reference Map 3.9*):

Onopordum acanthium Scotch thistle

Tamarix spp. Salt cedar

The Wilderness was last inventoried for noxious weeds in 2011. Below is a list of un-inventoried species found on the district; some of which may be present in the area.

Bromus tectorum Cheatgrass

Ceratocephala testiculata Bur buttercup

Convolvulus arvensis Field bindweed

Elaeagnus angustifolia Russian olive

Erodium cicutarium Filaree

Kochia scoparia Kochia

Halogeton glomeratus Halogeton

Marrubium vulgare Horehound

Salsola kali Russian thistle

Sysimbrium altissimum Tumble mustard

Verbascum thapsus Common mullein

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

The rating for Factor 1 is Low (1). There are currently no documented noxious weed infestations within the Wilderness Area or the existing range developments. Noxious weed infestations are documented over 2 miles east of the Wilderness Area.

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

The rating for Factor 2 is High (8). Should noxious or invasive species establish within the project area, it is likely that the populations will spread and become difficult to mitigate or eradicate. This is particularly true for invasive annual grasses (such as Cheatgrass).

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

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

- Any discovery of newly established populations of noxious/invasive weeds will be communicated to the Ely District Noxious and Invasive Weeds Coordinator.

2.10 – HIGHLAND RIDGE WILDERNESS

The following species documented within or adjacent to the Wilderness (*Reference Map 3.10*):

Carduus nutans Musk thistle

Centaurea stoebe Spotted knapweed

Cirsium arvense Canada thistle

Cirsium vulgare Bull thistle

Conium maculatum Poison hemlock

Tamarix spp. Salt cedar

The Wilderness was last inventoried for noxious weeds in 2011. Below is a list of un-inventoried species found on the district; some of which may be present in the area.

Bromus tectorum Cheatgrass

Ceratocephala testiculata Bur buttercup

Convolvulus arvensis Field bindweed

Elaeagnus angustifolia Russian olive

Erodium cicutarium Filaree

Kochia scoparia Kochia

Halogeton glomeratus Halogeton

Salsola kali Russian thistle

Sisymbrium altissimum Tumble mustard

Verbascum thapsus Common mullein

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

The rating for Factor 1 is Moderate (4). Very few populations of noxious and invasive weeds have been identified within or immediately adjacent to the area. During project implementation, noxious and invasive weed spread can be reasonably avoided.

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

The rating for Factor 2 is Moderate (5). Should new populations of noxious or invasive species infest the area, they would likely be identified and treated very quickly. Ambient vegetation also appears to be fairly resilient to weed spread.

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

The Risk Rating is Moderate (20). This indicates that the project can proceed as planned as long as the following measures are followed:

- Any discovery of newly established populations of noxious/invasive weeds will be communicated to the Ely District Noxious and Invasive Weeds Coordinator.
- Where appropriate, vehicles and heavy equipment used for the completion, maintenance, inspection, or monitoring of ground disturbing activities; for emergency fire suppression; or for authorized off-road driving will be free of soil and debris capable of transporting weed propagules.
- All straw, hay, straw/hay, or other organic products used for reclamation or stabilization activities, must be certified that all materials are free of plant species listed on the Nevada noxious weed list or specifically identified by the Ely District Office.
- Disturbance of vegetation would be kept to a minimum through construction site management (e.g. using previously disturbed areas and existing easements, limiting equipment/materials storage and staging area sites, etc.)
- No noxious weeds will be allowed on the site at the time of reclamation release. Any noxious weeds that become established will be controlled.

2.11 – MEADOW VALLEY RANGE WILDERNESS

The following species documented within or adjacent to the Wilderness (*Reference Map 3.11*):

Acrotilon repens Russian knapweed

Brassica tournefortii Sahara mustard

Cirsium vulgare Bull thistle

Hyoscyamus niger Black henbane

Lepidium draba Hoary cress

Lepidium latifolium Perennial pepperweed

Tamarix spp. Salt cedar

Tribulus terrestris Puncturevine

The Wilderness was last inventoried for noxious weeds in 2008. Below is a list of un-inventoried species found on the district; some of which may be present in the area.

Bromus rubens Red brome

Bromus tectorum Cheatgrass

Ceratocephala testiculata Bur buttercup

Convolvulus arvensis Field bindweed

Erodium cicutarium Filaree

Kochia scoparia Kochia

Halogeton glomeratus Halogeton

Salsola kali Russian thistle

Sysimbrium altissimum Tumble mustard

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

The rating for Factor 1 is High (9). Saltcedar, sahara mustard and perennial pepperweed are present within the project area and many other noxious infestations lie adjacent. Meadow Valley Wash lies to the east and Kane Springs Valley to the west. Both of these areas are traveled fairly heavily, and are catalysts for weed spread. Meadow Valley Wash is the eastern border of the Wilderness Area, and the area is very heavily infested with noxious weeds. Multiple large-scale, catastrophic wildfires have burned the majority of the Wilderness Area and surrounding area. As such, invasive annual grasses are heavily present within the region, posing extreme risk of weed spread and further catastrophic fire events.

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

The rating for Factor 2 is High (9). Should more noxious or invasive species or populations establish within the project area, it is likely that the populations will spread and become incredibly difficult to mitigate or eradicate. This is particularly true for invasive annual grasses (such as Cheatgrass and Red brome). Additionally, much of the Wilderness Area is classified as Desert tortoise habitat. Large-scale, catastrophic fires (largely caused by the presence of invasive species) threaten to permanently degrade existing habitat while drastically decreasing the probability of habitat rehabilitation. For all the reasons mentioned above, the Meadow Valley Range Wilderness is incredibly sensitive to noxious and invasive weed spread.

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

The Risk Rating is High (81). This indicates a high probability of noxious and invasive weed spread due to project activities. The project can proceed as long as the following measures are followed:

- Any discovery of newly established populations of noxious/invasive weeds will be communicated to the Ely District Noxious and Invasive Weeds Coordinator.
- Where appropriate, vehicles and heavy equipment used for the completion, maintenance, inspection, or monitoring of ground disturbing activities; for emergency fire suppression; or for authorized off-road driving will be free of soil and debris capable of transporting weed propagules.

- Animals used on public lands by special recreation permittees or by contractors for weed control or reclamation will be cleaned, quarantined, and fed weed-free feed prior to being used or released on public lands. The length of this quarantine will be specified in the special recreation permit or contract.
- All straw, hay, straw/hay, or other organic products used for reclamation or stabilization activities, must be certified that all materials are free of plant species listed on the Nevada noxious weed list or specifically identified by the Ely District Office.
- Disturbance of vegetation would be kept to a minimum through construction site management (e.g. using previously disturbed areas and existing easements, limiting equipment/materials storage and staging area sites, etc.)
- To minimize the transport of soil-borne noxious weed seeds, roots, or rhizomes, infested soils or materials would not be moved and redistributed on weed-free or relatively weed-free areas. In areas where infestations are identified or noted and infested soils, rock, or overburden must be moved, these materials will be salvaged and stockpiled adjacent to the area from which they were stripped. Appropriate measures will be taken to minimize wind and water erosion of these stockpiles. During reclamation, the materials will be returned to the area from which they were stripped.
- Prior to entering public lands, the contractor, operator, or permit holder will provide information and training regarding noxious weed management and identification to all personnel who will be affiliated with the implementation of the project. The importance of preventing the spread of weeds to un-infested areas and importance of controlling existing populations of weeds will be explained.
- No noxious weeds will be allowed on the site at the time of reclamation release. Any noxious weeds that become established will be controlled.

2.12 – MORMON MOUNTAINS WILDERNESS

The following species documented within or adjacent to the Wilderness (*Reference Map 3.12*):

Acroptilon repens Russian knapweed

Brassica tournefortii Sahara mustard

Cirsium vulgare Bull thistle

Hyoscyamus niger Black henbane

Lepidium draba Hoary cress

Lepidium latifolium Perennial pepperweed

Onopordum acanthium Scotch thistle

Tamarix spp. Salt cedar

Tribulus terrestris Puncturevine

The Wilderness was last inventoried for noxious weeds in 2008. Below is a list of un-inventoried species found on the district; some of which may be present in the area.

Bromus rubens Red brome

Bromus tectorum Cheatgrass

Ceratocephala testiculata Bur buttercup

Convolvulus arvensis Field bindweed

Erodium cicutarium Filaree

Kochia scoparia Kochia

Halogeton glomeratus Halogeton

Salsola kali Russian thistle

Sysimbrium altissimum Tumble mustard

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

The rating for Factor 1 is High (8). Salt cedar is documented within the Wilderness Area, and many other noxious infestations lie immediately adjacent. Meadow Valley Wash lies to the west and Kane Springs Valley to the west. Both of these areas are traveled fairly heavily, and are catalysts for weed spread. Meadow Valley Wash is the western border of the Wilderness Area, and the area is very heavily infested with noxious weeds, making it a catalyst for weed spread. Multiple large-scale, catastrophic wildfires have burned portions of the Wilderness Area and surrounding area. As such, invasive annual grasses are heavily present within the region, posing extreme risk of weed spread and further catastrophic fire events.

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

The rating for Factor 2 is High (9). Should more noxious or invasive species or populations establish within the project area, it is likely that the populations will spread and become incredibly difficult to mitigate or eradicate. This is particularly true for invasive annual grasses (such as Cheatgrass and Red brome). Additionally, much of the Wilderness Area is classified as Desert tortoise habitat. Large-scale, catastrophic fires (largely caused by the presence of invasive species) threaten to permanently degrade existing habitat while drastically decreasing the probability of habitat rehabilitation. For all the reasons mentioned above, the Mormon Mountains Wilderness is Very sensitive to noxious and invasive weed spread.

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

The Risk Rating is High (72). This indicates a high probability of noxious and invasive weed spread due to project activities. The project can proceed as long as the following measures are followed:

- Any discovery of newly established populations of noxious/invasive weeds will be communicated to the Ely District Noxious and Invasive Weeds Coordinator.
- Where appropriate, vehicles and heavy equipment used for the completion, maintenance, inspection, or monitoring of ground disturbing activities; for emergency fire suppression; or for authorized off-road driving will be free of soil and debris capable of transporting weed propagules.

- Animals used on public lands by special recreation permittees or by contractors for weed control or reclamation will be cleaned, quarantined, and fed weed-free feed prior to being used or released on public lands. The length of this quarantine will be specified in the special recreation permit or contract.
- All straw, hay, straw/hay, or other organic products used for reclamation or stabilization activities, must be certified that all materials are free of plant species listed on the Nevada noxious weed list or specifically identified by the Ely District Office.
- Disturbance of vegetation would be kept to a minimum through construction site management (e.g. using previously disturbed areas and existing easements, limiting equipment/materials storage and staging area sites, etc.)
- To minimize the transport of soil-borne noxious weed seeds, roots, or rhizomes, infested soils or materials would not be moved and redistributed on weed-free or relatively weed-free areas. In areas where infestations are identified or noted and infested soils, rock, or overburden must be moved, these materials will be salvaged and stockpiled adjacent to the area from which they were stripped. Appropriate measures will be taken to minimize wind and water erosion of these stockpiles. During reclamation, the materials will be returned to the area from which they were stripped.
- Prior to entering public lands, the contractor, operator, or permit holder will provide information and training regarding noxious weed management and identification to all personnel who will be affiliated with the implementation of the project. The importance of preventing the spread of weeds to un-infested areas and importance of controlling existing populations of weeds will be explained.

No noxious weeds will be allowed on the site at the time of reclamation release. Any noxious weeds that become established will be controlled.

2.13 – MOUNT GRAFTON WILDERNESS

The following species documented within or adjacent to the Wilderness (*Reference Map 3.13*):

Acroptilon repens Russian knapweed

Centaurea stoebe Spotted knapweed

Cirsium arvense Canada thistle

Cirsium vulgare Bull thistle

Hyoscyamus niger Black henbane

Lepidium draba Hoary cress

Onopordum acanthium Scotch thistle

Tamarix spp. Salt cedar

The Wilderness was last inventoried for noxious weeds in 2012. Below is a list of un-inventoried species found on the district; some of which may be present in the area.

Arctium minus Common burdock

Bromus tectorum Cheatgrass

Ceratocephala testiculata Bur buttercup

Convolvulus arvensis Field bindweed

Elaeagnus angustifolia Russian olive

Erodium cicutarium Filaree

Kochia scoparia Kochia

Halogeton glomeratus Halogeton

Salsola kali Russian thistle

Sysimbrium altissimum Tumble mustard

Tragopogon dubius Yellow salsify

Verbascum thapsus Common mullein

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

The rating for Factor 1 is Moderate (7). There are currently no documented noxious weed infestations within the Wilderness Area, but multiple infestations are located immediately adjacent to existing range developments. Multiple noxious infestations are also present along roads that would likely be used as access routes. Other un-inventoried species are also present adjacent to the project area.

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

The rating for Factor 2 is Moderate (7). Should noxious or invasive species establish within the project area, populations could potentially spread and become difficult to mitigate or eradicate. This is particularly true for invasive annual grasses (such as Cheatgrass).

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

The Risk Rating is Moderate (49). This indicates that the project can proceed as planned as long as the following measures are followed:

- Any discovery of newly established populations of noxious/invasive weeds will be communicated to the Ely District Noxious and Invasive Weeds Coordinator.
- Where appropriate, vehicles and heavy equipment used for the completion, maintenance, inspection, or monitoring of ground disturbing activities; for emergency fire suppression; or for authorized off-road driving will be free of soil and debris capable of transporting weed propagules.
- All straw, hay, straw/hay, or other organic products used for reclamation or stabilization activities, must be certified that all materials are free of plant species listed on the Nevada noxious weed list or specifically identified by the Ely District Office.

- Disturbance of vegetation would be kept to a minimum through construction site management (e.g. using previously disturbed areas and existing easements, limiting equipment/materials storage and staging area sites, etc.)

No noxious weeds will be allowed on the site at the time of reclamation release. Any noxious weeds that become established will be controlled.

2.14 – MT. IRISH WILDERNESS

The following species documented within or adjacent to the Wilderness (*Reference Map 3.14*):

Acroptilon repens Russian knapweed

The Wilderness was last inventoried for noxious weeds in 2007. Below is a list of un-inventoried species found on the district; some of which may be present in the area.

Bromus tectorum Cheatgrass

Ceratocephala testiculata Bur buttercup

Elaeagnus angustifolia Russian olive

Erodium cicutarium Filaree

Kochia scoparia Kochia

Halogeton glomeratus Halogeton

Salsola kali Russian thistle

Sysimbrium altissimum Tumble mustard

Verbascum thapsus Common mullein

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

The rating for Factor 1 is Low (1). No weeds have been identified within the area, and very few are found in the vicinity. The only existing range improvement lies at the far northern end of the Wilderness Area, and during project implementation, noxious and invasive weed spread can be reasonably avoided.

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

The rating for Factor 2 is Low (3). Should new populations of noxious or invasive species infest the area, they would likely be identified and treated very quickly. The ambient vegetation also appears to be fairly resilient to weed spread.

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

The Risk Rating is Low (3). This indicates that the project can proceed as planned as long as the following measures are followed:

- Any discovery of newly established populations of noxious/invasive weeds will be communicated to the Ely District Noxious and Invasive Weeds Coordinator.

2.15 – MT. MORIAH WILDERNESS

The following species documented within or adjacent to the Wilderness (*Reference Map 3.15*):

Tamarix spp. Salt cedar

The Wilderness was last inventoried for noxious weeds in 2004. Below is a list of un-inventoried species found on the district; some of which may be present in the area.

Bromus tectorum Cheatgrass

Ceratocephala testiculata Bur buttercup

Elaeagnus angustifolia Russian olive

Erodium cicutarium Filaree

Kochia scoparia Kochia

Halogeton glomeratus Halogeton

Salsola kali Russian thistle

Sysimbrium altissimum Tumble mustard

Verbascum thapsus Common mullein

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

The rating for Factor 1 is Low (1). No weeds have been identified within the area, and very few are found in the vicinity. During project implementation, noxious and invasive weed spread can be reasonably avoided.

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

The rating for Factor 2 is Moderate (5). Should new populations of noxious or invasive species infest the area, they would likely be identified and treated very quickly. The ambient vegetation also appears to be fairly resilient to weed spread.

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

The Risk Rating is Low (5). This indicates that the project can proceed as planned as long as the following measures are followed:

- Any discovery of newly established populations of noxious/invasive weeds will be communicated to the Ely District Noxious and Invasive Weeds Coordinator.

2.16 – PARSNIP PEAK WILDERNESS

The following species documented within or adjacent to the Wilderness (*Reference Map 3.16*):

Cirsium vulgare Bull thistle

Linaria dalmatica Dalmatian toadflax

Onopordum acanthium Scotch thistle

Tamarix spp. Salt cedar

The Wilderness was last inventoried for noxious weeds in 2008. Below is a list of un-inventoried species found on the district; some of which may be present in the area.

Bromus tectorum Cheatgrass

Ceratocephala testiculata Bur buttercup

Convolvulus arvensis Field bindweed

Elaeagnus angustifolia Russian olive

Erodium cicutarium Filaree

Kochia scoparia Kochia

Halogeton glomeratus Halogeton

Salsola kali Russian thistle

Sysimbrium altissimum Tumble mustard

Verbascum thapsus Common mullein

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

The rating for Factor 1 is High (8). The existing range improvement lies within and adjacent to the northern portion of the Wilderness Area. Noxious weed infestations are documented within and immediately adjacent to these range improvement, and along access roads. Also, noxious and un-documented invasive species are heavily present along access roads.

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

The rating for Factor 2 is High (8). Should noxious or invasive species establish within the project area, it is likely that the populations will spread and become difficult to mitigate or eradicate. This is particularly true for Dalmatian toadflax and invasive annual grasses (such as Cheatgrass).

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

The Risk Rating is High (64). This indicates that the project can proceed as long as the following measures are followed:

- Any discovery of newly established populations of noxious/invasive weeds will be communicated to the Ely District Noxious and Invasive Weeds Coordinator.
- Where appropriate, vehicles and heavy equipment used for the completion, maintenance, inspection, or monitoring of ground disturbing activities; for emergency fire suppression; or for authorized off-road driving will be free of soil and debris capable of transporting weed propagules.
- Animals used on public lands by special recreation permittees or by contractors for weed control or reclamation will be cleaned, quarantined, and fed weed-free feed prior to being

used or released on public lands. The length of this quarantine will be specified in the special recreation permit or contract.

- All straw, hay, straw/hay, or other organic products used for reclamation or stabilization activities, must be certified that all materials are free of plant species listed on the Nevada noxious weed list or specifically identified by the Ely District Office.
- Disturbance of vegetation would be kept to a minimum through construction site management (e.g. using previously disturbed areas and existing easements, limiting equipment/materials storage and staging area sites, etc.)
- To minimize the transport of soil-borne noxious weed seeds, roots, or rhizomes, infested soils or materials would not be moved and redistributed on weed-free or relatively weed-free areas. In areas where infestations are identified or noted and infested soils, rock, or overburden must be moved, these materials will be salvaged and stockpiled adjacent to the area from which they were stripped. Appropriate measures will be taken to minimize wind and water erosion of these stockpiles. During reclamation, the materials will be returned to the area from which they were stripped.
- Prior to entering public lands, the contractor, operator, or permit holder will provide information and training regarding noxious weed management and identification to all personnel who will be affiliated with the implementation of the project. The importance of preventing the spread of weeds to un-infested areas and importance of controlling existing populations of weeds will be explained.
- No noxious weeds will be allowed on the site at the time of reclamation release. Any noxious weeds that become established will be controlled.

2.17 – SOUTH EGAN RANGE WILDERNESS

The following species documented within or adjacent to the Wilderness (*Reference Map 3.17*):

Acroptilon repens Russian knapweed

Centaurea stoebe Spotted knapweed

Cirsium vulgare Bull thistle

Hyoscyamus niger Black henbane

Lepidium draba Hoary cress

Lepidium latifolium Perennial pepperweed

Onopordum acanthium Scotch thistle

Tamarix spp. Salt cedar

The Wilderness was last inventoried for noxious weeds in 2010. Below is a list of un-inventoried species found on the district; some of which may be present in the area.

Arctium minus Common burdock

Bromus tectorum Cheatgrass

Ceratocephala testiculata Bur buttercup

Convolvulus arvensis Field bindweed

Elaeagnus angustifolia Russian olive

Erodium cicutarium Filaree

Kochia scoparia Kochia

Halogeton glomeratus Halogeton

Salsola kali Russian thistle

Sysimbrium altissimum Tumble mustard

Tragopogon dubius Yellow salsify

Verbascum thapsus Common mullein

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

The rating for Factor 1 is Moderate (5). There are currently no documented noxious weed infestations within the Wilderness Area, but multiple infestations are located immediately adjacent. Multiple noxious infestations are also present along roads that would likely be used as access routes, but the existing range developments lay in areas that area relatively free of identified noxious weed infestations. Other un-inventoried invasive species are also located adjacent to the project area.

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

The rating for Factor 2 is Moderate (5). Should noxious or invasive species establish within the project area, populations could potentially spread and become difficult to mitigate or eradicate. This is particularly true for invasive annual grasses (such as Cheatgrass). However, the area seems to show some resiliency towards weed spread.

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

The Risk Rating is Moderate (25). This indicates that the project can proceed as planned as long as the following measures are followed:

- Any discovery of newly established populations of noxious/invasive weeds will be communicated to the Ely District Noxious and Invasive Weeds Coordinator.
- Where appropriate, vehicles and heavy equipment used for the completion, maintenance, inspection, or monitoring of ground disturbing activities; for emergency fire suppression; or for authorized off-road driving will be free of soil and debris capable of transporting weed propagules.
- All straw, hay, straw/hay, or other organic products used for reclamation or stabilization activities, must be certified that all materials are free of plant species listed on the Nevada noxious weed list or specifically identified by the Ely District Office.

- Disturbance of vegetation would be kept to a minimum through construction site management (e.g. using previously disturbed areas and existing easements, limiting equipment/materials storage and staging area sites, etc.)

No noxious weeds will be allowed on the site at the time of reclamation release. Any noxious weeds that become established will be controlled.

2.18 – SOUTH PAHROC RANGE WILDERNESS

The following species documented within or adjacent to the Wilderness (*Reference Map 3.18*):

Lepidium draba Hoary cress

Tamarix spp. Salt cedar

The Wilderness was last inventoried for noxious weeds in 2007. Below is a list of un-inventoried species found on the district; some of which may be present in the area.

Bromus rubens Red brome

Bromus tectorum Cheatgrass

Ceratocephala testiculata Bur buttercup

Convolvulus arvensis Field bindweed

Erodium cicutarium Filaree

Kochia scoparia Kochia

Halogeton glomeratus Halogeton

Salsola kali Russian thistle

Sysimbrium altissimum Tumble mustard

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

The rating for Factor 1 is Moderate (7). Very few noxious weed infestations have been identified within or adjacent to the Wilderness Area. Salt cedar and hoary cress are both present adjacent to the existing range developments. Much of the Wilderness Area has experienced large-scale, catastrophic wildfires. As such, invasive annual grasses are heavily present within and adjacent to the project areas.

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

The rating for Factor 2 is Moderate (7). Should noxious or invasive species establish within the project area, it is likely that the populations will spread and become difficult to mitigate or eradicate. This is particularly true for invasive annual grasses (such as cheatgrass and red brome). Areas heavily infested with invasive annual grasses are already stressed, and are more likely to encourage noxious and invasive weed spread.

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

The Risk Rating is Moderate (49). This indicates that the project can proceed as planned as long as the following measures are followed:

- Any discovery of newly established populations of noxious/invasive weeds will be communicated to the Ely District Noxious and Invasive Weeds Coordinator.
- Where appropriate, vehicles and heavy equipment used for the completion, maintenance, inspection, or monitoring of ground disturbing activities; for emergency fire suppression; or for authorized off-road driving will be free of soil and debris capable of transporting weed propagules.
- All straw, hay, straw/hay, or other organic products used for reclamation or stabilization activities, must be certified that all materials are free of plant species listed on the Nevada noxious weed list or specifically identified by the Ely District Office.
- Disturbance of vegetation would be kept to a minimum through construction site management (e.g. using previously disturbed areas and existing easements, limiting equipment/materials storage and staging area sites, etc.)
- No noxious weeds will be allowed on the site at the time of reclamation release. Any noxious weeds that become established will be controlled.

2.19 – TUNNEL SPRING WILDERNESS

The following species documented within or adjacent to the Wilderness (*Reference Map 3.19*):

Lepidium draba Hoary cress

Onopordum acanthium Scotch thistle

Tamarix spp. Salt cedar

The Wilderness was last inventoried for noxious weeds in 2004. Below is a list of un-inventoried species found on the district; some of which may be present in the area.

Bromus rubens Red brome

Bromus tectorum Cheatgrass

Ceratocephala testiculata Bur buttercup

Convolvulus arvensis Field bindweed

Erodium cicutarium Filaree

Kochia scoparia Kochia

Halogeton glomeratus Halogeton

Salsola kali Russian thistle

Sysimbrium altissimum Tumble mustard

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

The rating for Factor 1 is Moderate (6). Salt cedar infestations have been identified within the Wilderness Area. Salt cedar, hoary cress and scotch thistle are present within and adjacent to the existing range developments, but well outside of the Wilderness Area.

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

The rating for Factor 2 is Moderate (7). Should noxious or invasive species establish within the project area, it is likely that the populations will spread and become difficult to mitigate or eradicate. This is particularly true for invasive annual grasses (such as cheatgrass and red brome).

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

The Risk Rating is Moderate (42). This indicates that the project can proceed as planned as long as the following measures are followed:

- Any discovery of newly established populations of noxious/invasive weeds will be communicated to the Ely District Noxious and Invasive Weeds Coordinator.
- Where appropriate, vehicles and heavy equipment used for the completion, maintenance, inspection, or monitoring of ground disturbing activities; for emergency fire suppression; or for authorized off-road driving will be free of soil and debris capable of transporting weed propagules.
- All straw, hay, straw/hay, or other organic products used for reclamation or stabilization activities, must be certified that all materials are free of plant species listed on the Nevada noxious weed list or specifically identified by the Ely District Office.
- Disturbance of vegetation would be kept to a minimum through construction site management (e.g. using previously disturbed areas and existing easements, limiting equipment/materials storage and staging area sites, etc.)
- No noxious weeds will be allowed on the site at the time of reclamation release. Any noxious weeds that become established will be controlled.

2.20 – WEEPAH SPRING WILDERNESS

The following species documented within or adjacent to the Wilderness (*Reference Map 3.20*):

Acroptilon repens Russian knapweed

Lepidium draba Hoary cress

Tamarix spp. Salt cedar

The Wilderness was last inventoried for noxious weeds in 2007. Below is a list of un-inventoried species found on the district; some of which may be present in the area.

Bromus tectorum Cheatgrass

Ceratocephala testiculata Bur buttercup

Convolvulus arvensis Field bindweed

Elaeagnus angustifolia Russian olive

Erodium cicutarium Filaree

Kochia scoparia Kochia

Halogeton glomeratus Halogeton

Marrubium vulgare Horehound

Salsola kali Russian thistle

Sysimbrium altissimum Tumble mustard

Verbascum thapsus Common mullein

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

The rating for Factor 1 is Low (3). There are currently no documented noxious weed infestations within the Wilderness Area or the existing range improvement. Noxious weed infestations are documented adjacent to the Wilderness Area, but are not present within, immediately adjacent to, or along access roads leading to the existing range improvement.

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

The rating for Factor 2 is High (8). Should noxious or invasive species establish within the project area, it is likely that the populations will spread and become difficult to mitigate or eradicate. This is particularly true for invasive annual grasses (such as Cheatgrass).

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

The Risk Rating is Moderate (24). This indicates that the project can proceed as planned as long as the following measures are followed:

- Any discovery of newly established populations of noxious/invasive weeds will be communicated to the Ely District Noxious and Invasive Weeds Coordinator.
- Where appropriate, vehicles and heavy equipment used for the completion, maintenance, inspection, or monitoring of ground disturbing activities; for emergency fire suppression; or for authorized off-road driving will be free of soil and debris capable of transporting weed propagules.
- All straw, hay, straw/hay, or other organic products used for reclamation or stabilization activities, must be certified that all materials are free of plant species listed on the Nevada noxious weed list or specifically identified by the Ely District Office.
- Disturbance of vegetation would be kept to a minimum through construction site management (e.g. using previously disturbed areas and existing easements, limiting equipment/materials storage and staging area sites, etc.)

No noxious weeds will be allowed on the site at the time of reclamation release. Any noxious weeds that become established will be controlled.

2.21 – WORTHINGTON MOUNTAINS WILDERNESS

The following species documented within or adjacent to the Wilderness (*Reference Map 3.21*):

Cirsium vulgare Bull thistle

Tamarix spp. Salt cedar

The Wilderness was last inventoried for noxious weeds in 2007. Below is a list of un-inventoried species found on the district; some of which may be present in the area.

Bromus tectorum Cheatgrass

Ceratocephala testiculata Bur buttercup

Convolvulus arvensis Field bindweed

Elaeagnus angustifolia Russian olive

Erodium cicutarium Filaree

Kochia scoparia Kochia

Halogeton glomeratus Halogeton

Marrubium vulgare Horehound

Salsola kali Russian thistle

Sysimbrium altissimum Tumble mustard

Verbascum thapsus Common mullein

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

The rating for Factor 1 is Low (2). Only one documented noxious weed infestation is found within the Wilderness Area or the existing range improvement. No noxious weed infestations are documented immediately adjacent to the Wilderness Area.

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

The rating for Factor 2 is High (8). Should noxious or invasive species establish within the project area, it is likely that the populations will spread and become difficult to mitigate or eradicate. This is particularly true for invasive annual grasses (such as Cheatgrass).

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

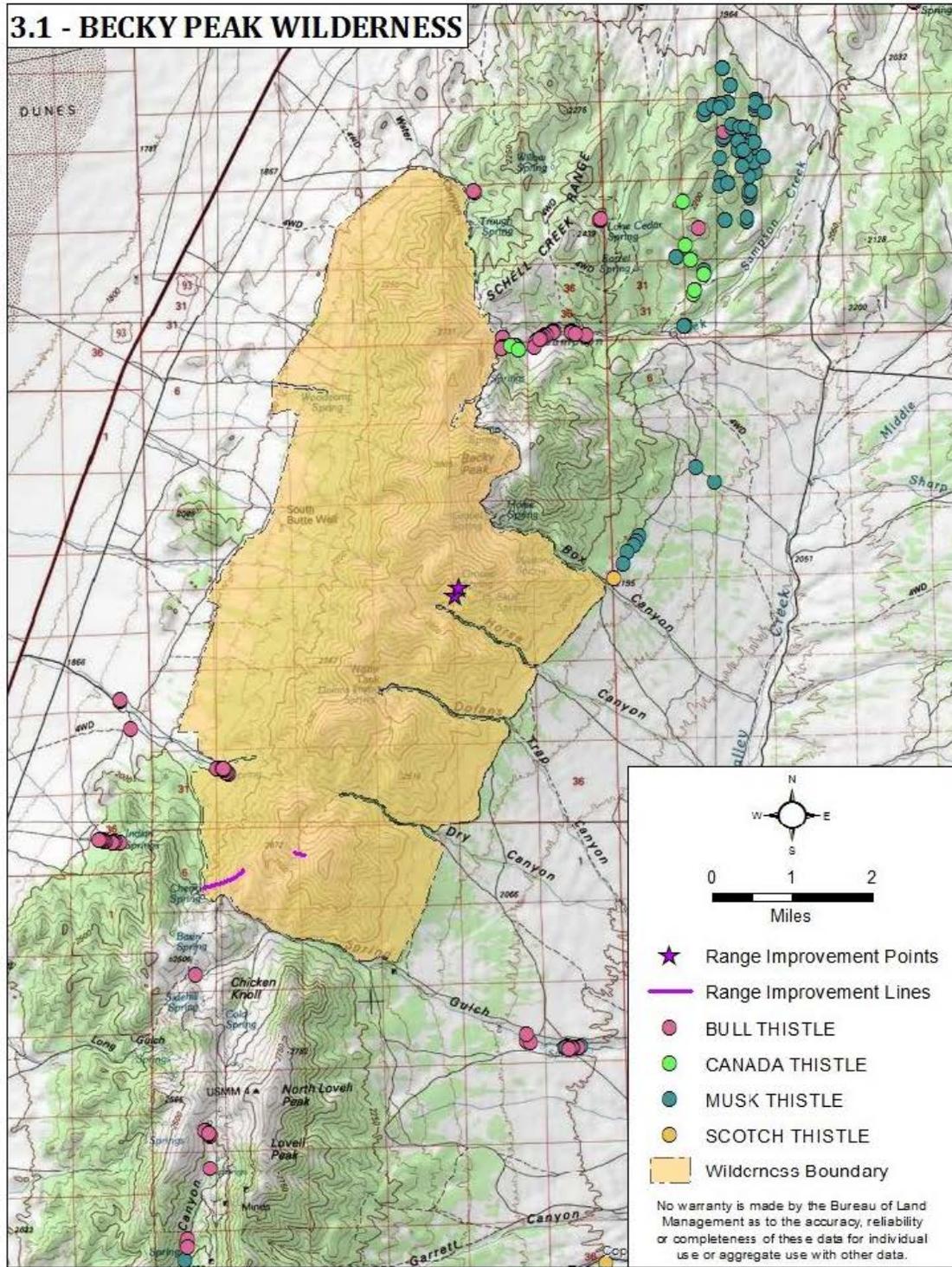
The Risk Rating is Moderate (16). This indicates that the project can proceed as planned as long as the following measures are followed:

- Any discovery of newly established populations of noxious/invasive weeds will be communicated to the Ely District Noxious and Invasive Weeds Coordinator.
- Where appropriate, vehicles and heavy equipment used for the completion, maintenance, inspection, or monitoring of ground disturbing activities; for emergency fire suppression; or for authorized off-road driving will be free of soil and debris capable of transporting weed propagules.

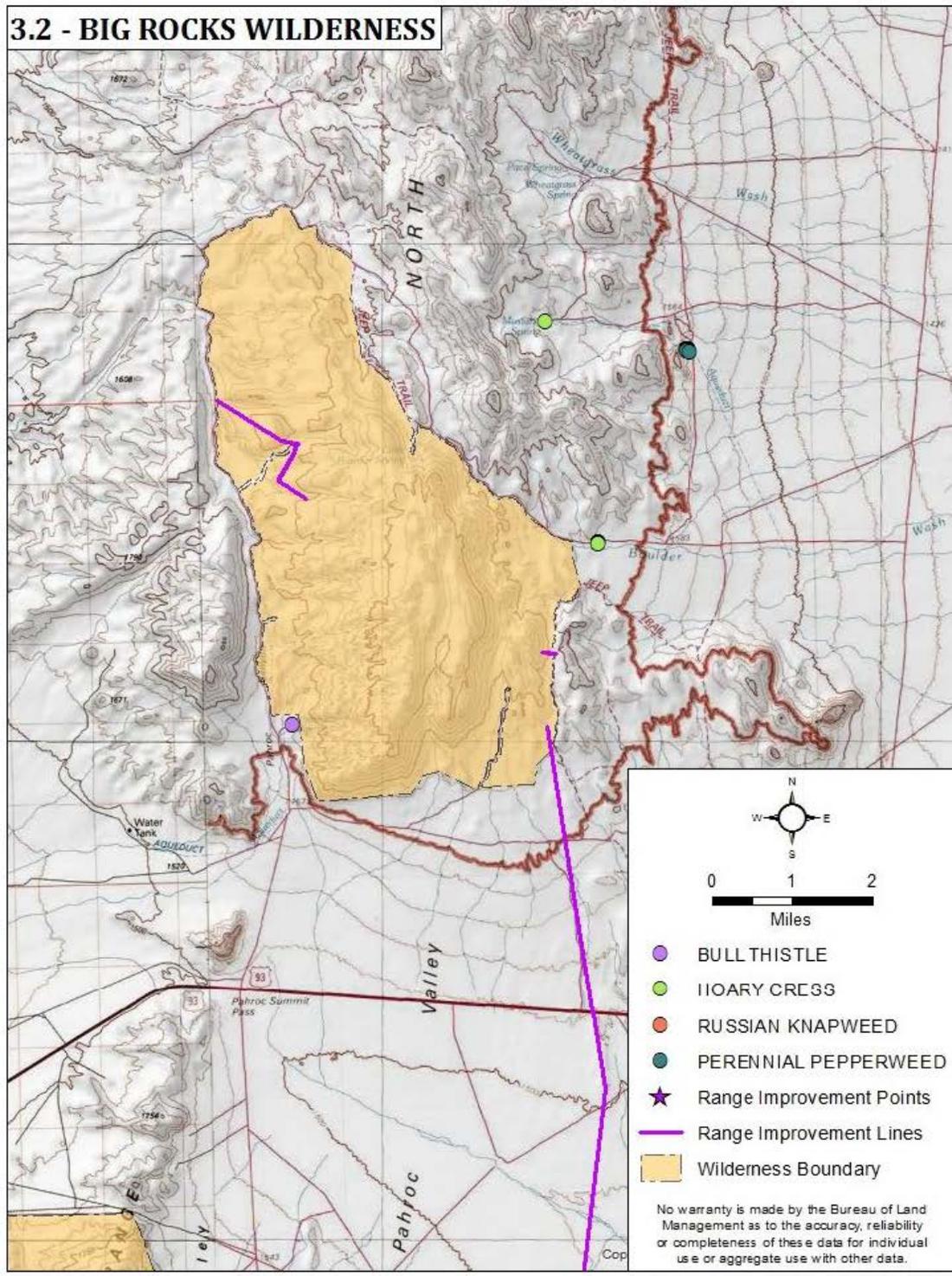
- All straw, hay, straw/hay, or other organic products used for reclamation or stabilization activities, must be certified that all materials are free of plant species listed on the Nevada noxious weed list or specifically identified by the Ely District Office.
- Disturbance of vegetation would be kept to a minimum through construction site management (e.g. using previously disturbed areas and existing easements, limiting equipment/materials storage and staging area sites, etc.)

No noxious weeds will be allowed on the site at the time of reclamation release. Any noxious weeds that become established will be controlled.

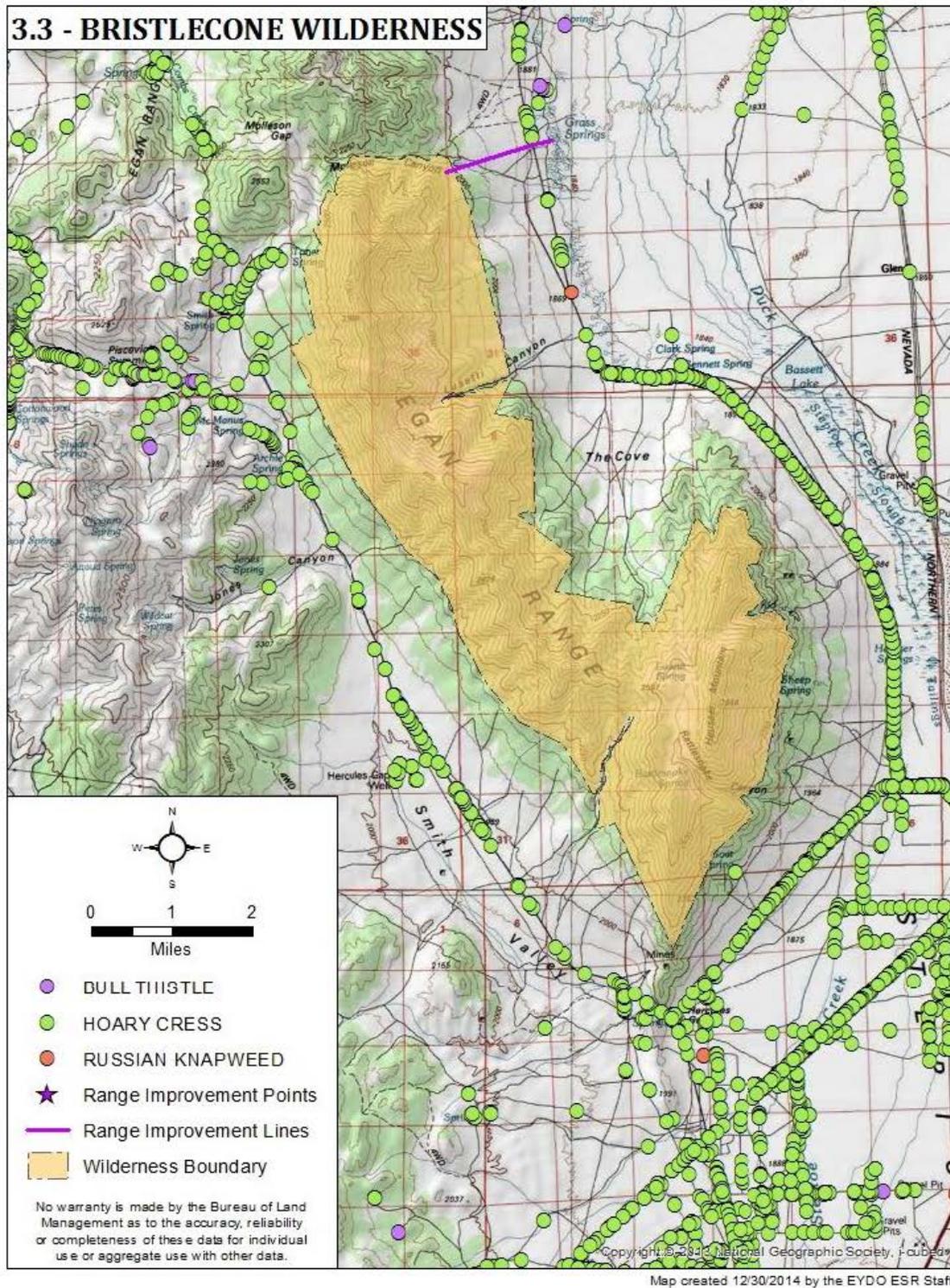
SECTION 3 - MAPS



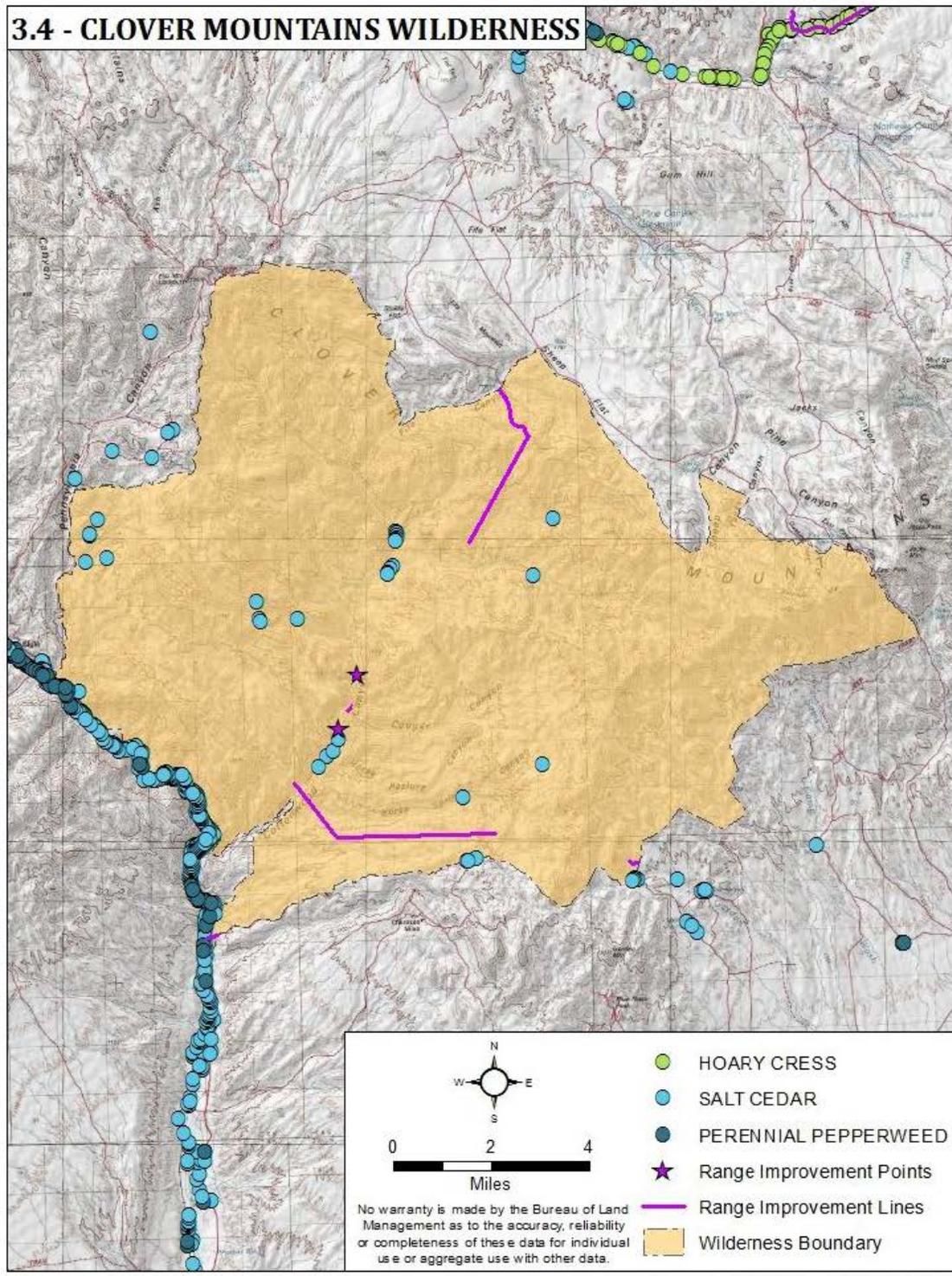
Map E.1. Weed species documented within or adjacent to the Becky Peak Wilderness



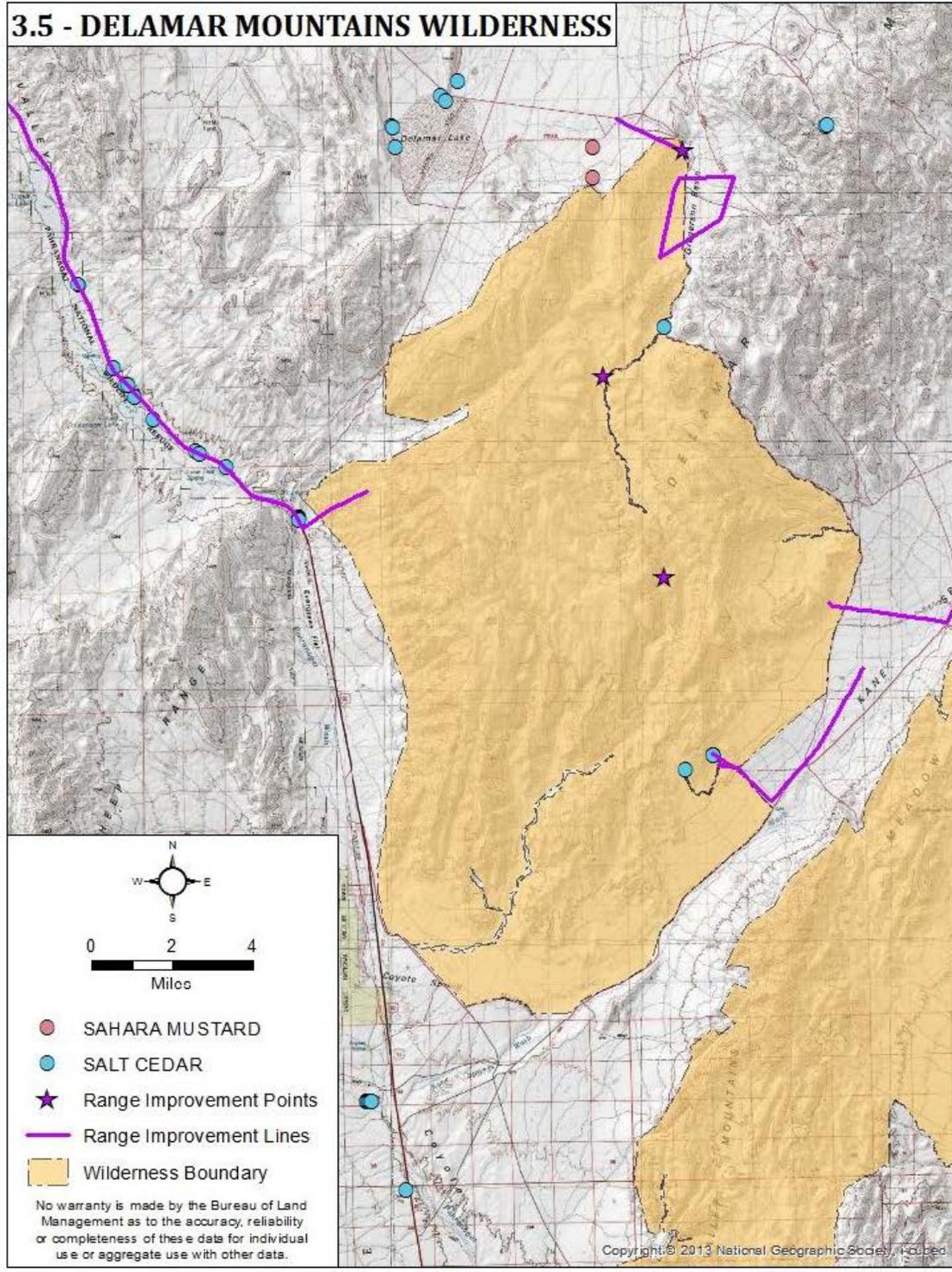
Map E.2. Weed species documented within or adjacent to the Big Rocks Wilderness



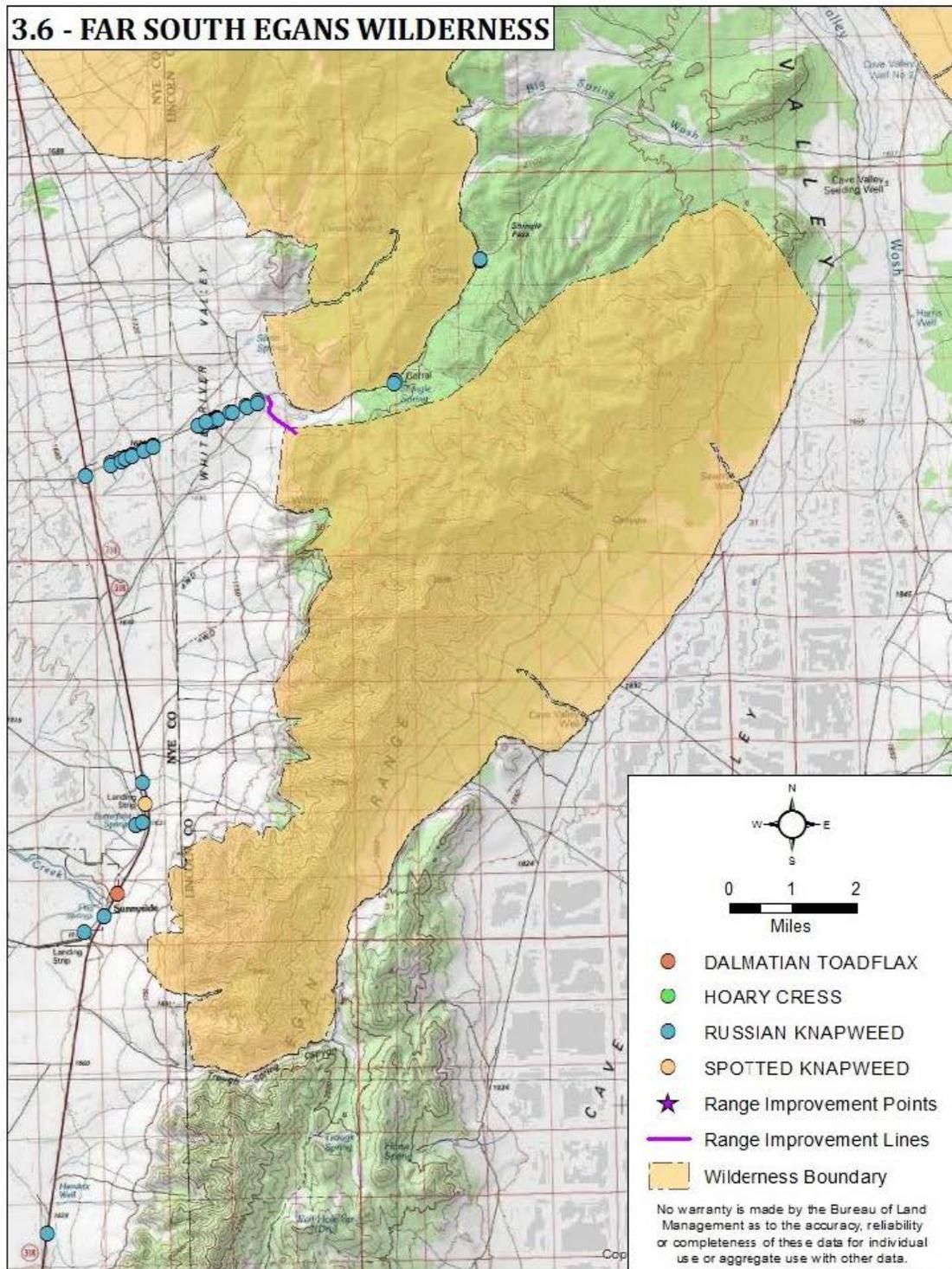
Map E.3. Weed species documented within or adjacent to the Bristlecone Wilderness



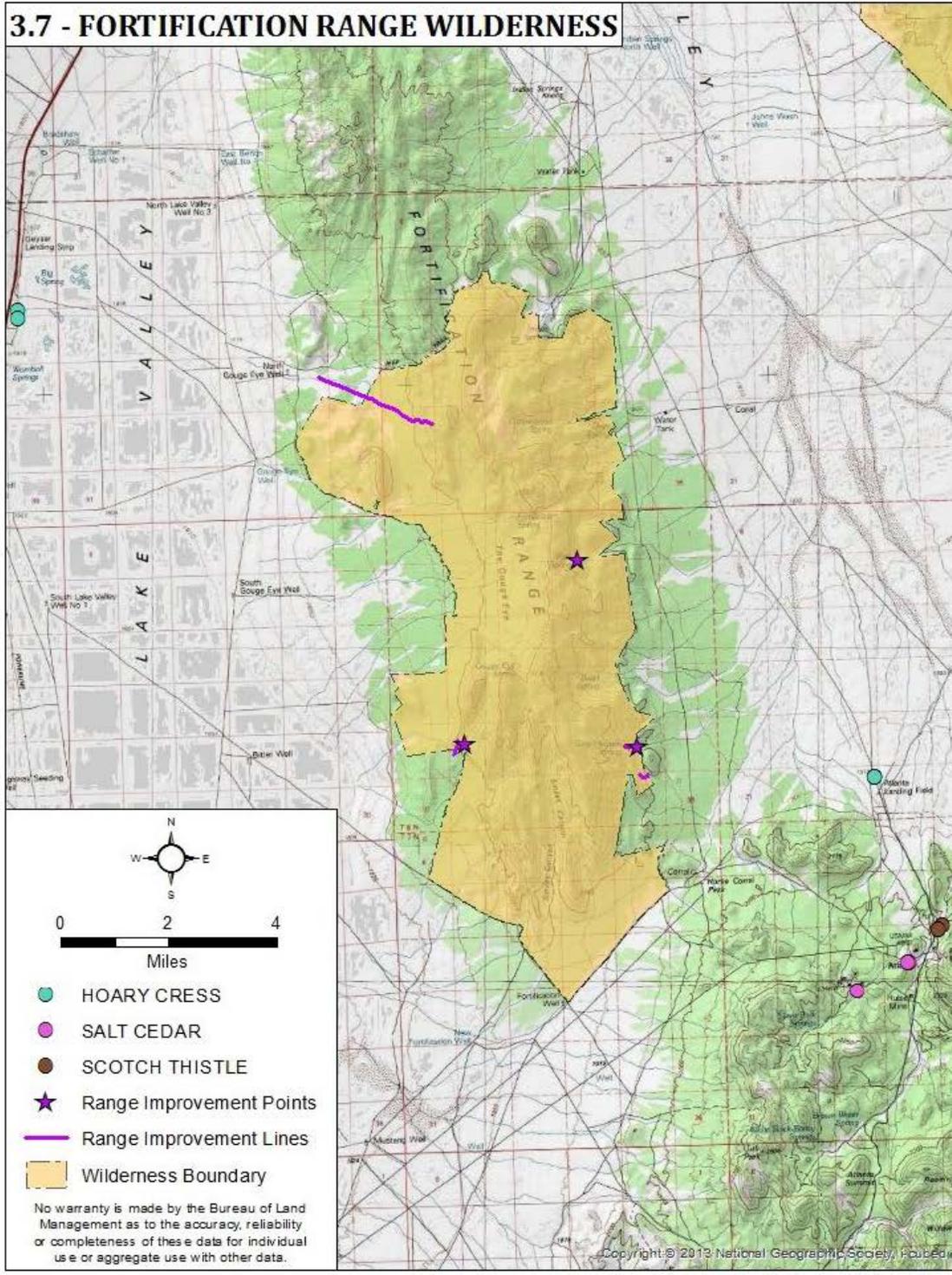
Map E.4. Weed species documented within or adjacent to the Clover Mountains Wilderness



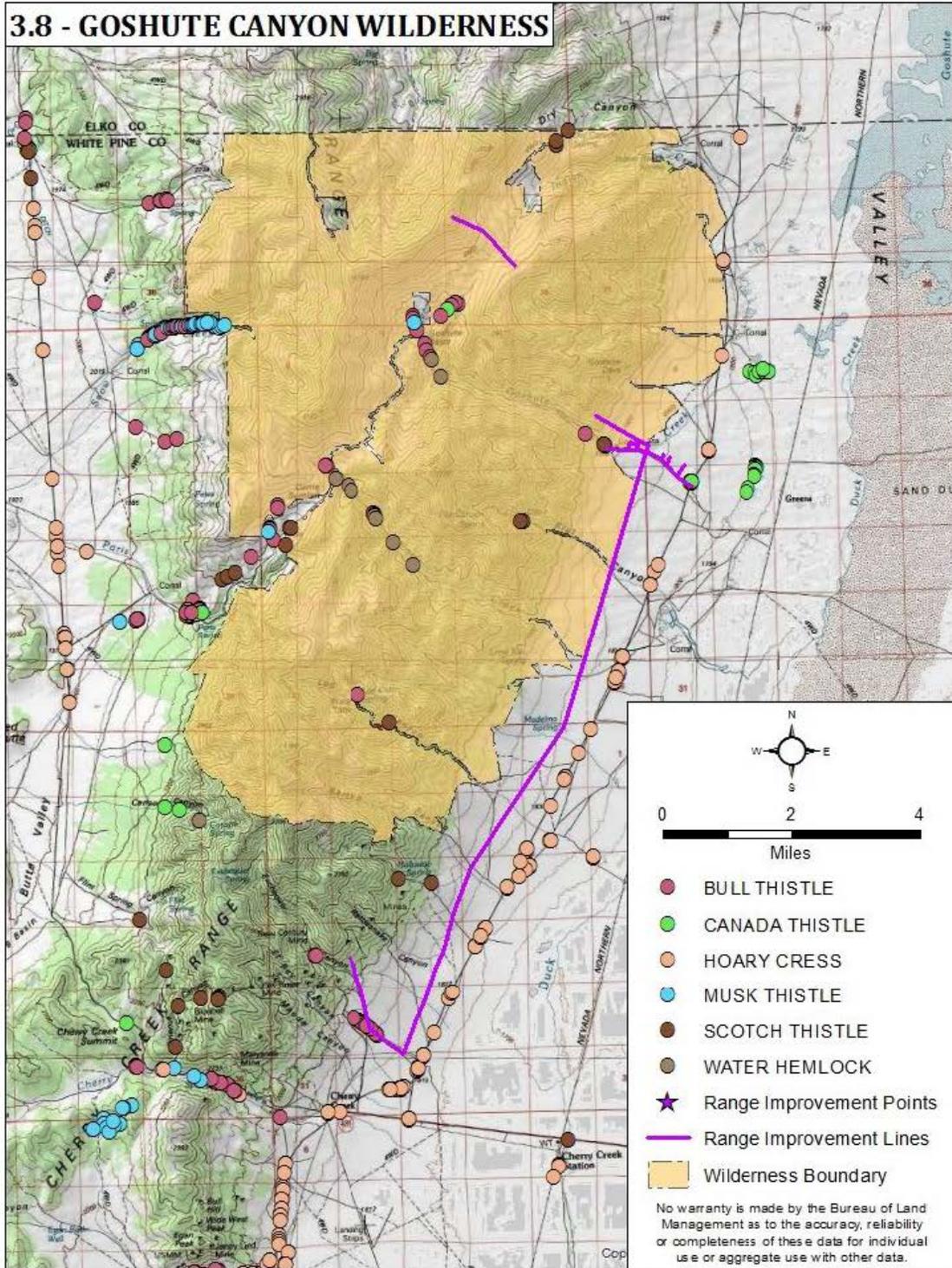
Map E.5. Weed species documented within or adjacent to the Becky Peak Wilderness



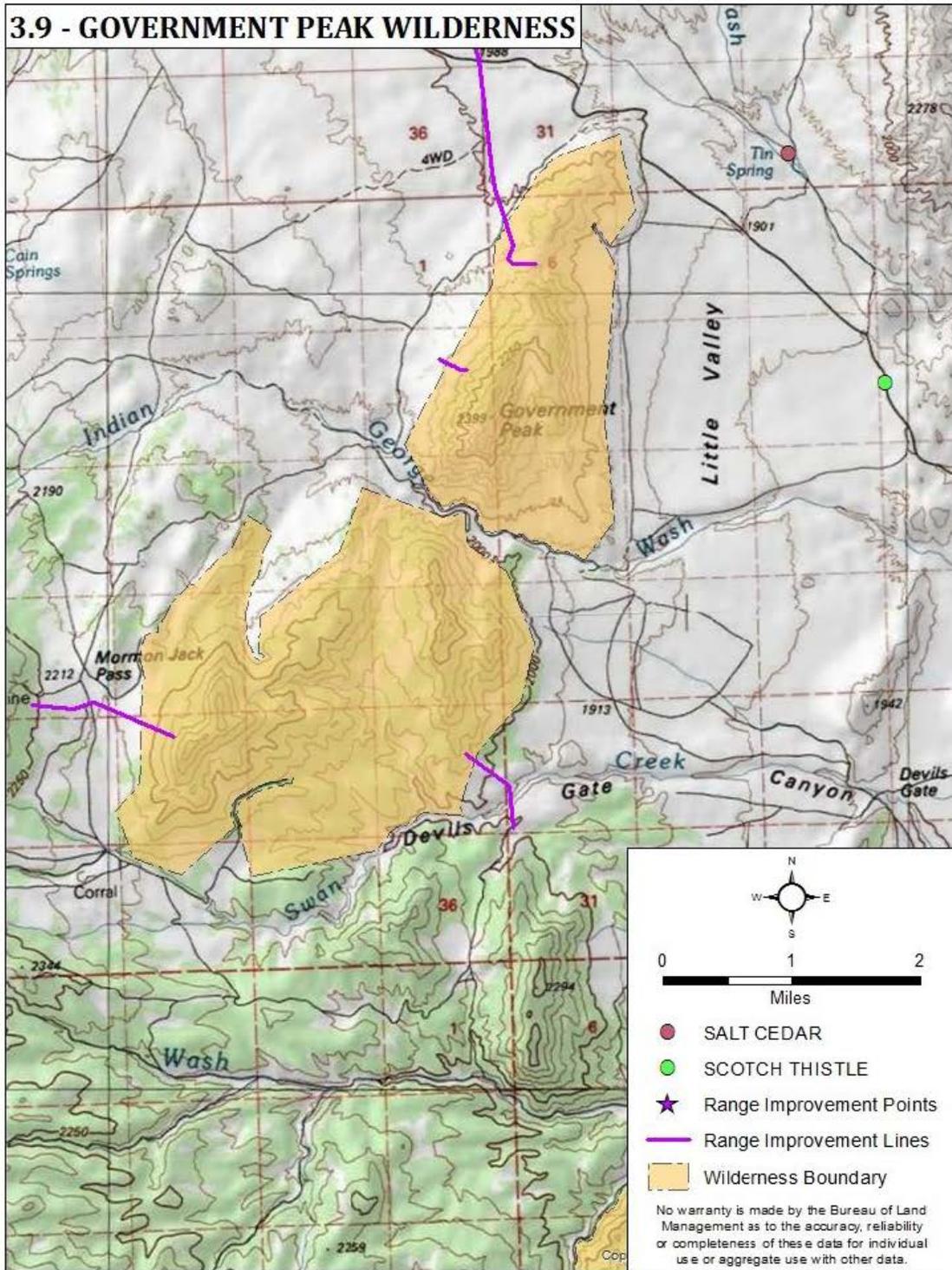
Map E.6. Weed species documented within or adjacent to the Far South Egans Wilderness



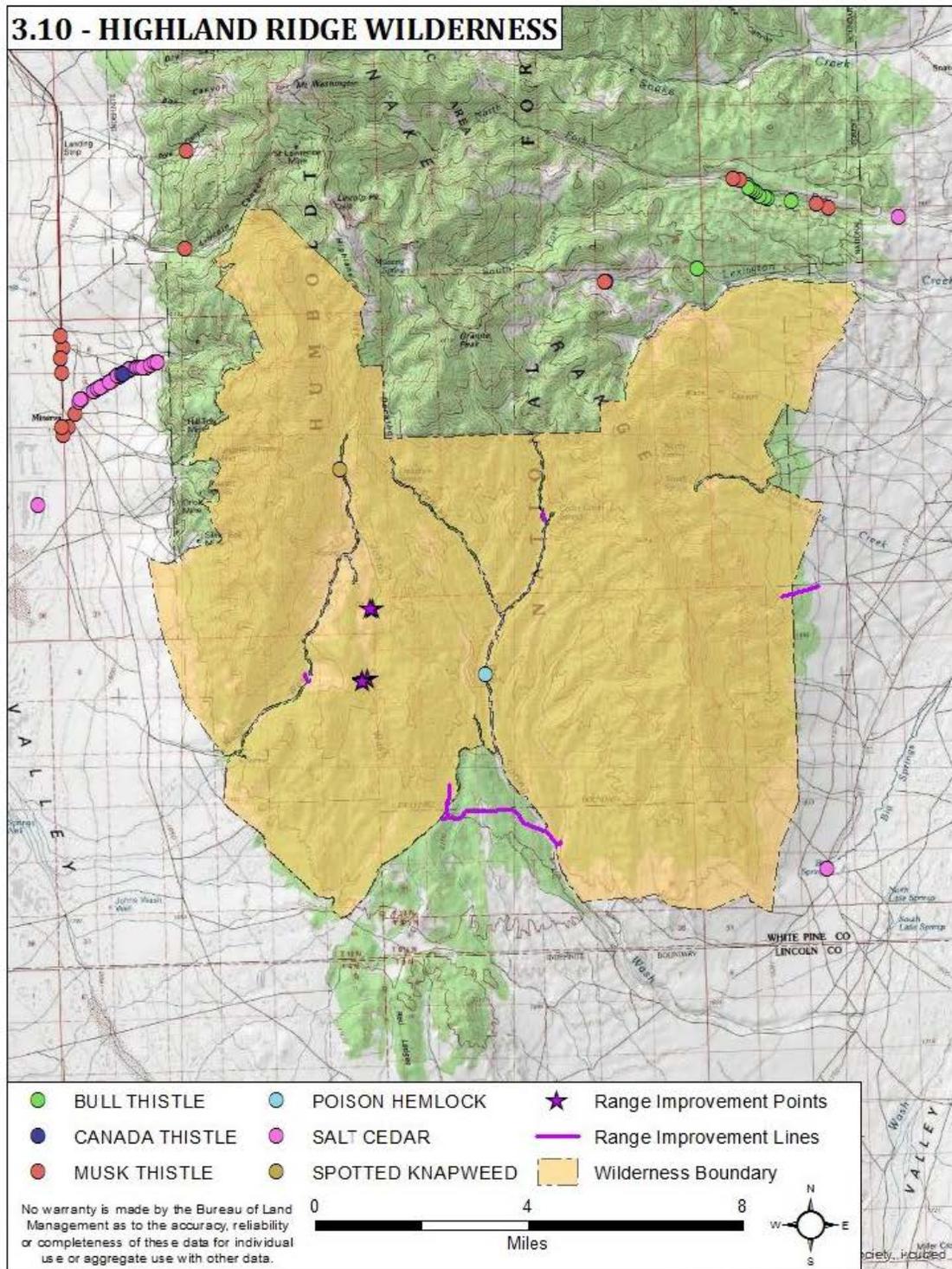
Map E.7. Weed species documented within or adjacent to the Fortification Range Wilderness



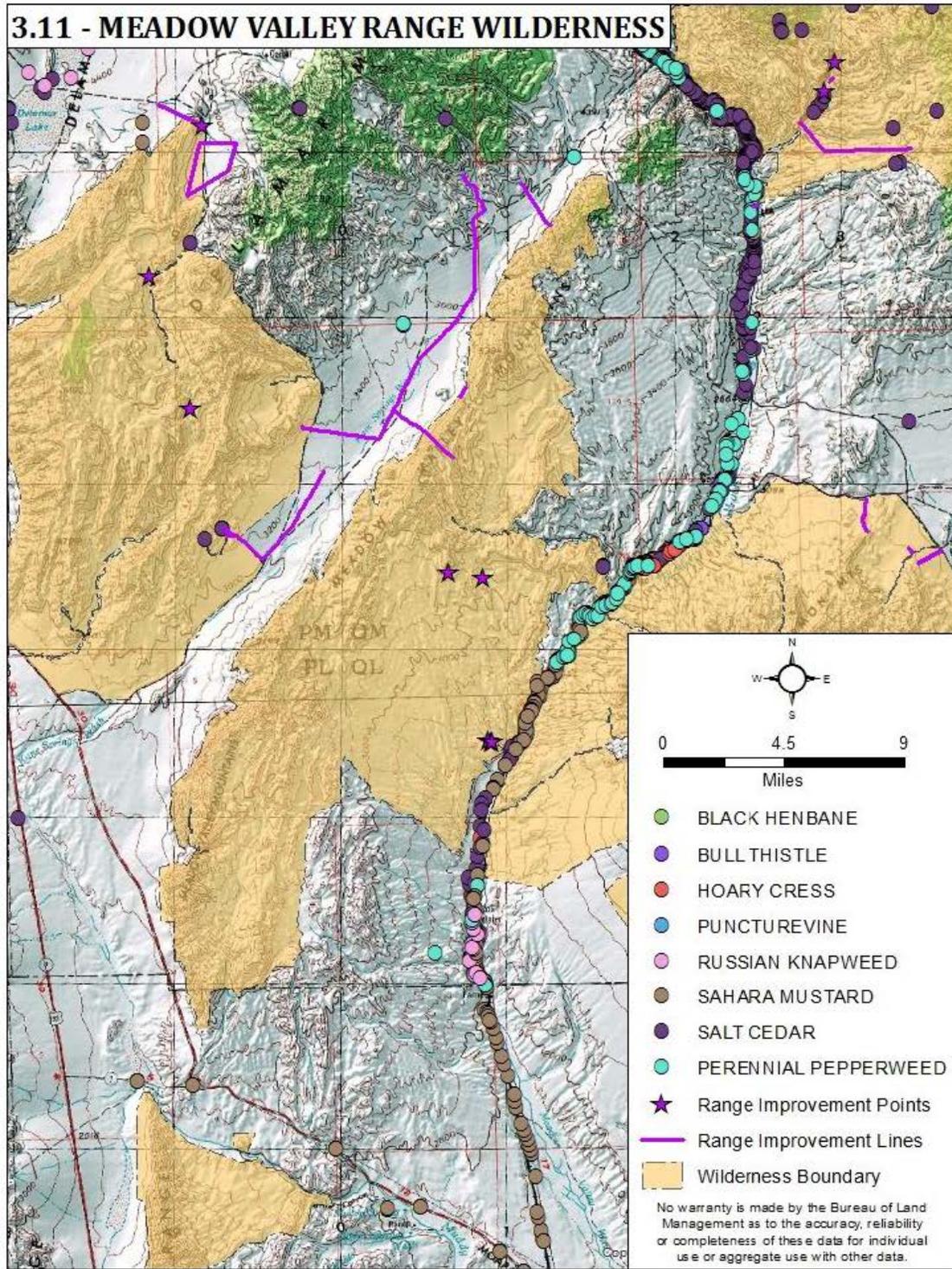
Map E.8. Weed species documented within or adjacent to the Goshute Canyon Wilderness



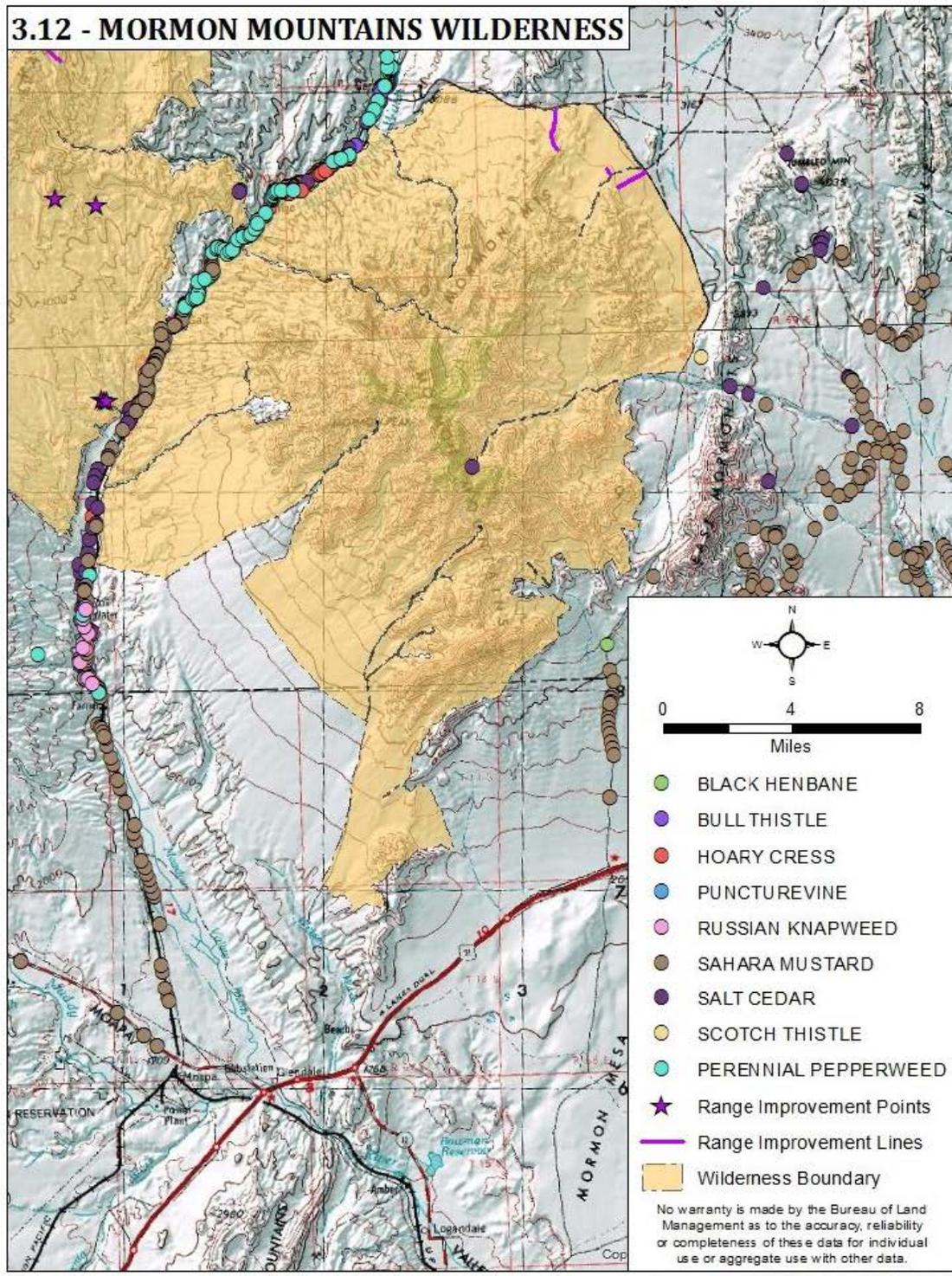
Map E.9. Weed species documented within or adjacent to the Government Peak Wilderness



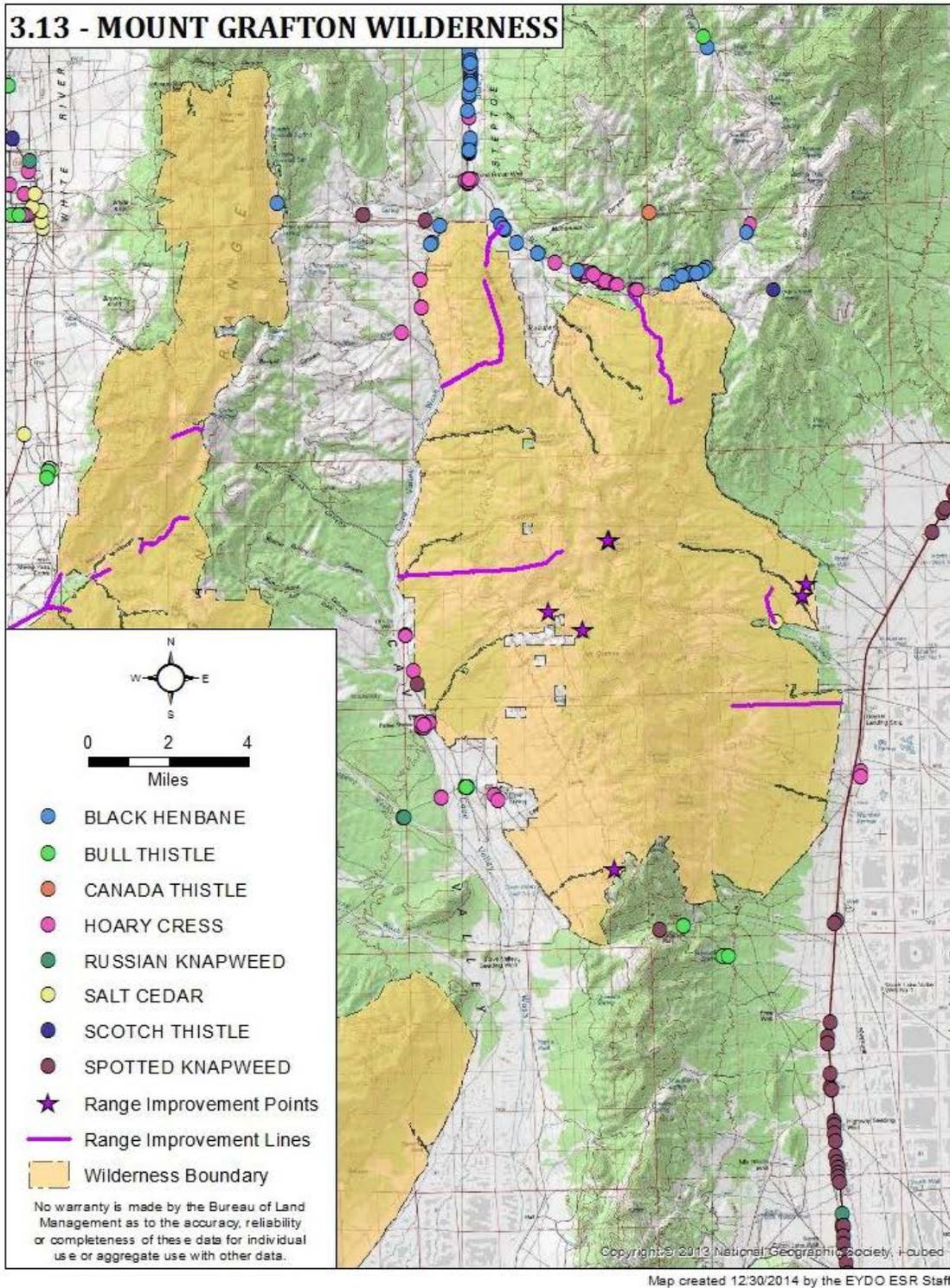
Map E.10. Weed species documented within or adjacent to the Highland Ridge Wilderness



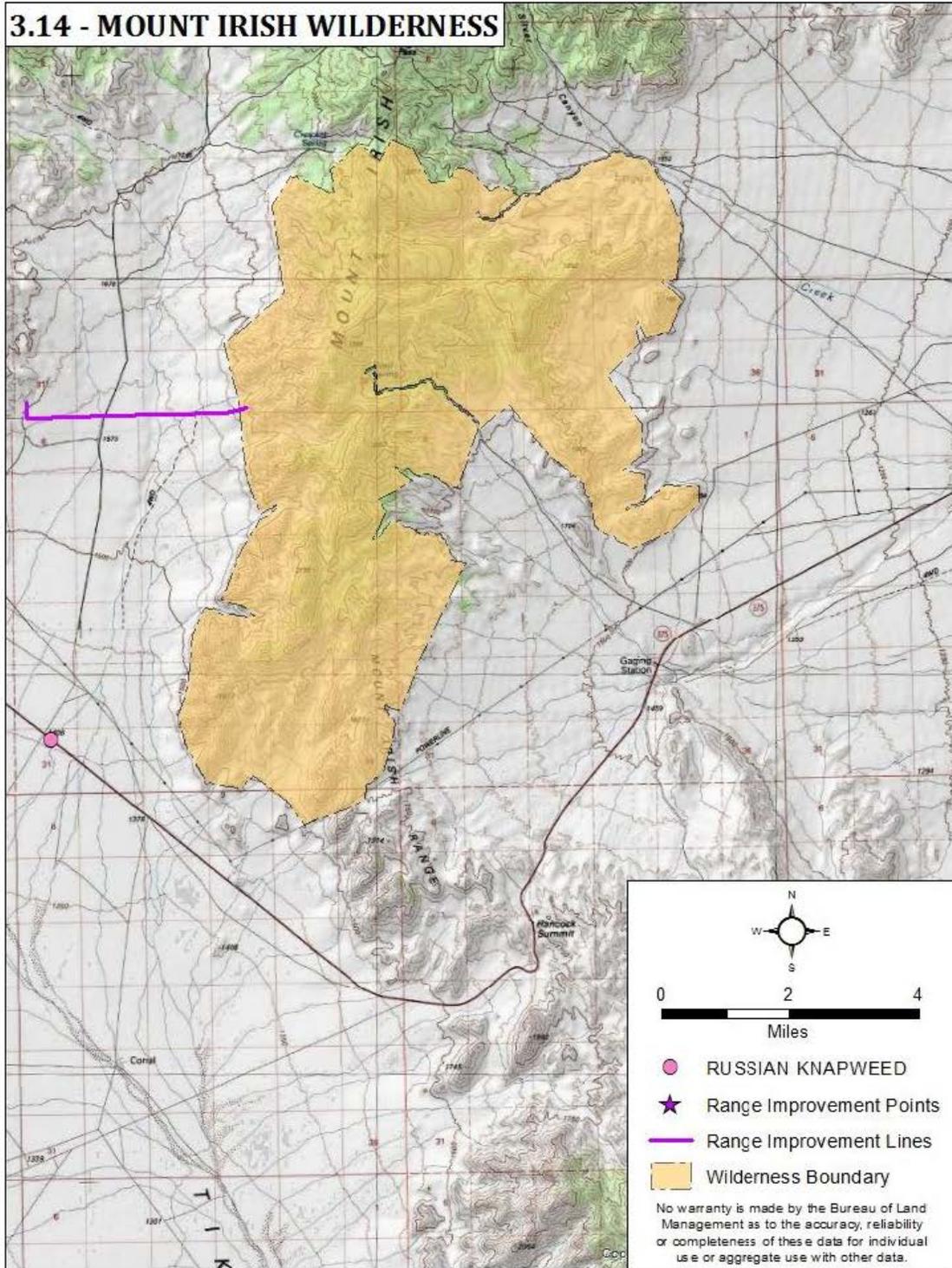
Map E.11. Weed species documented within or adjacent to the Meadow Valley Range Wilderness



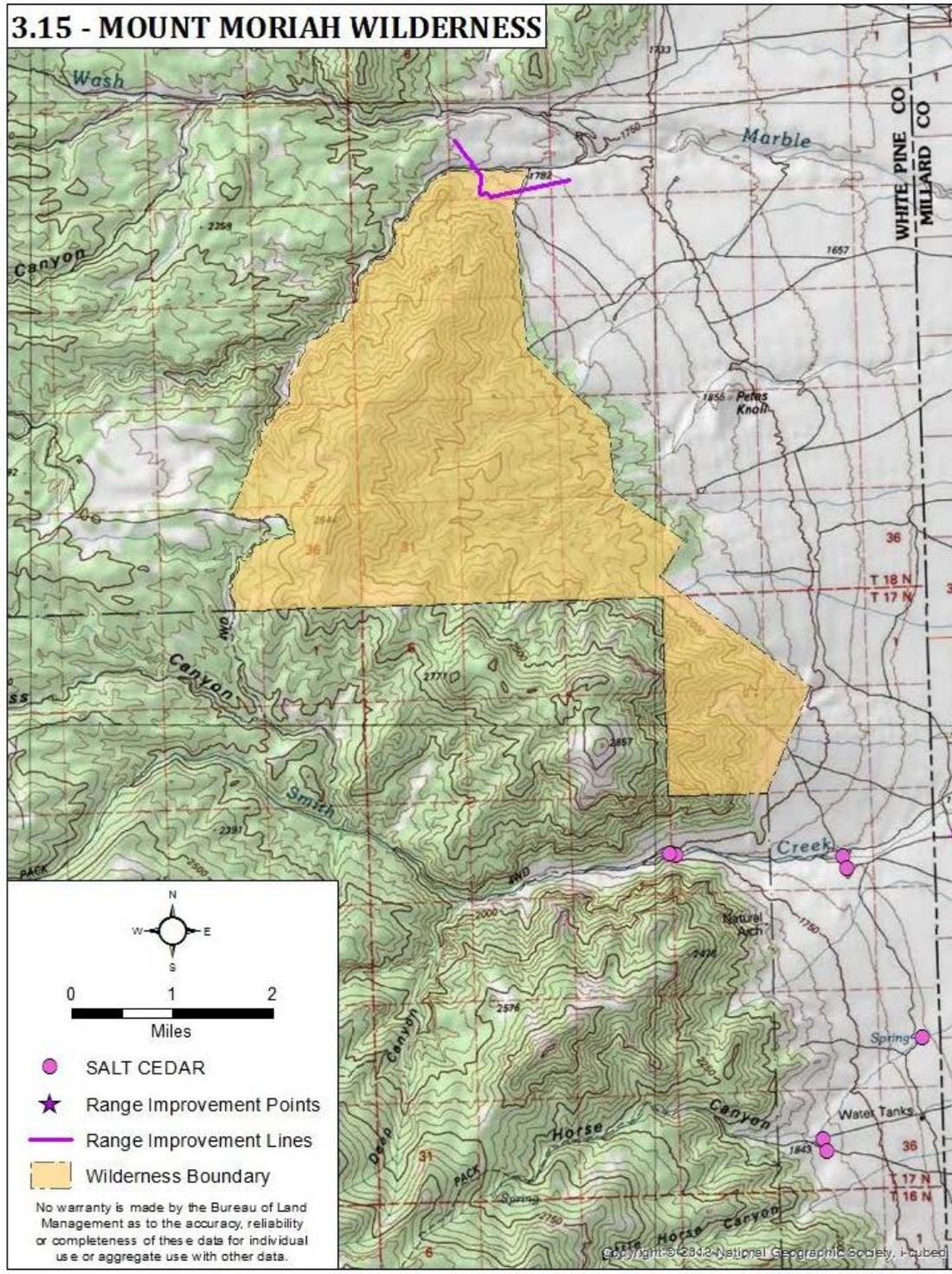
Map E.12. Weed species documented within or adjacent to the Mormon Mountains Wilderness



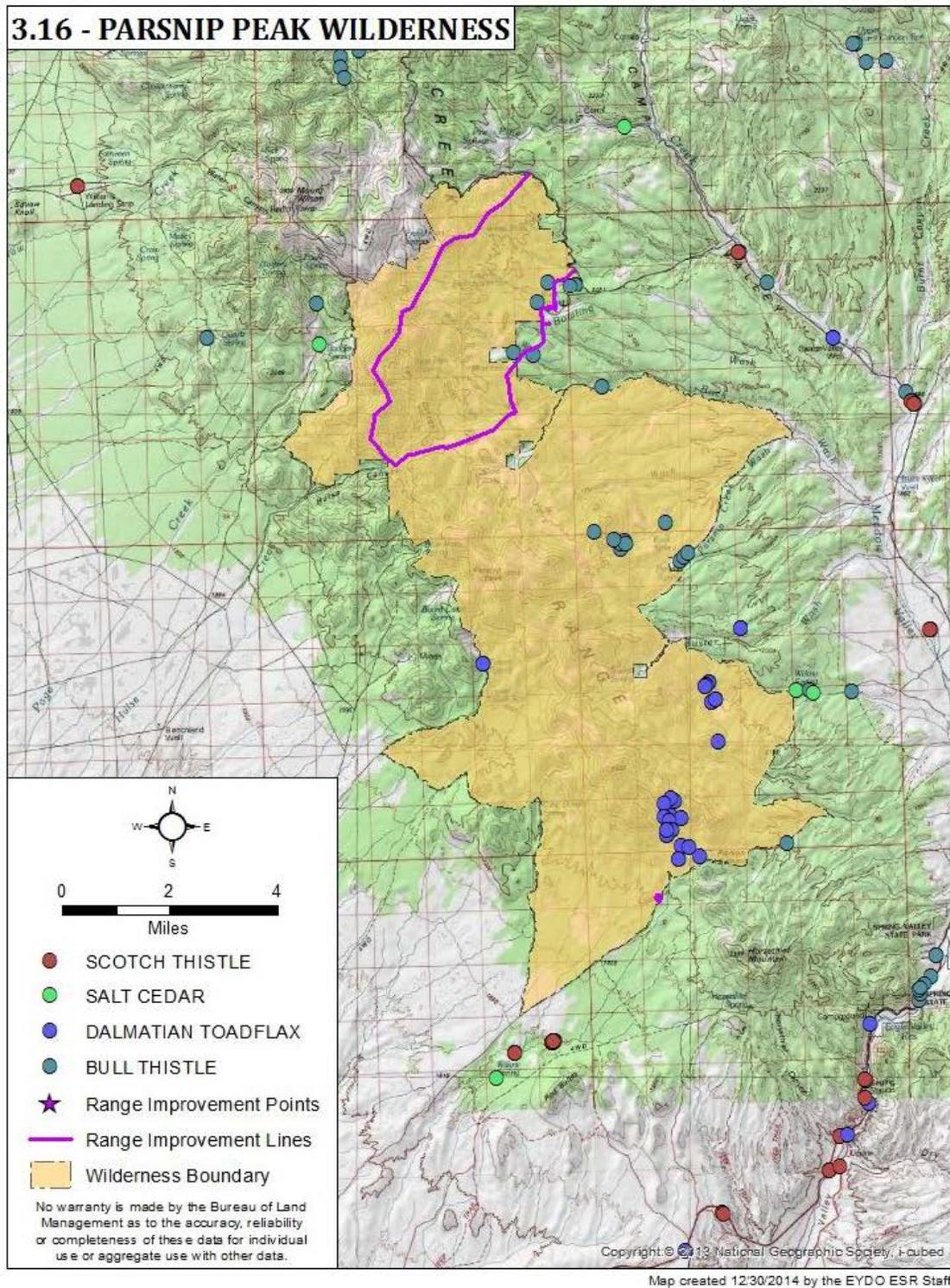
Map E.13. Weed species documented within or adjacent to the Mount Grafton Wilderness



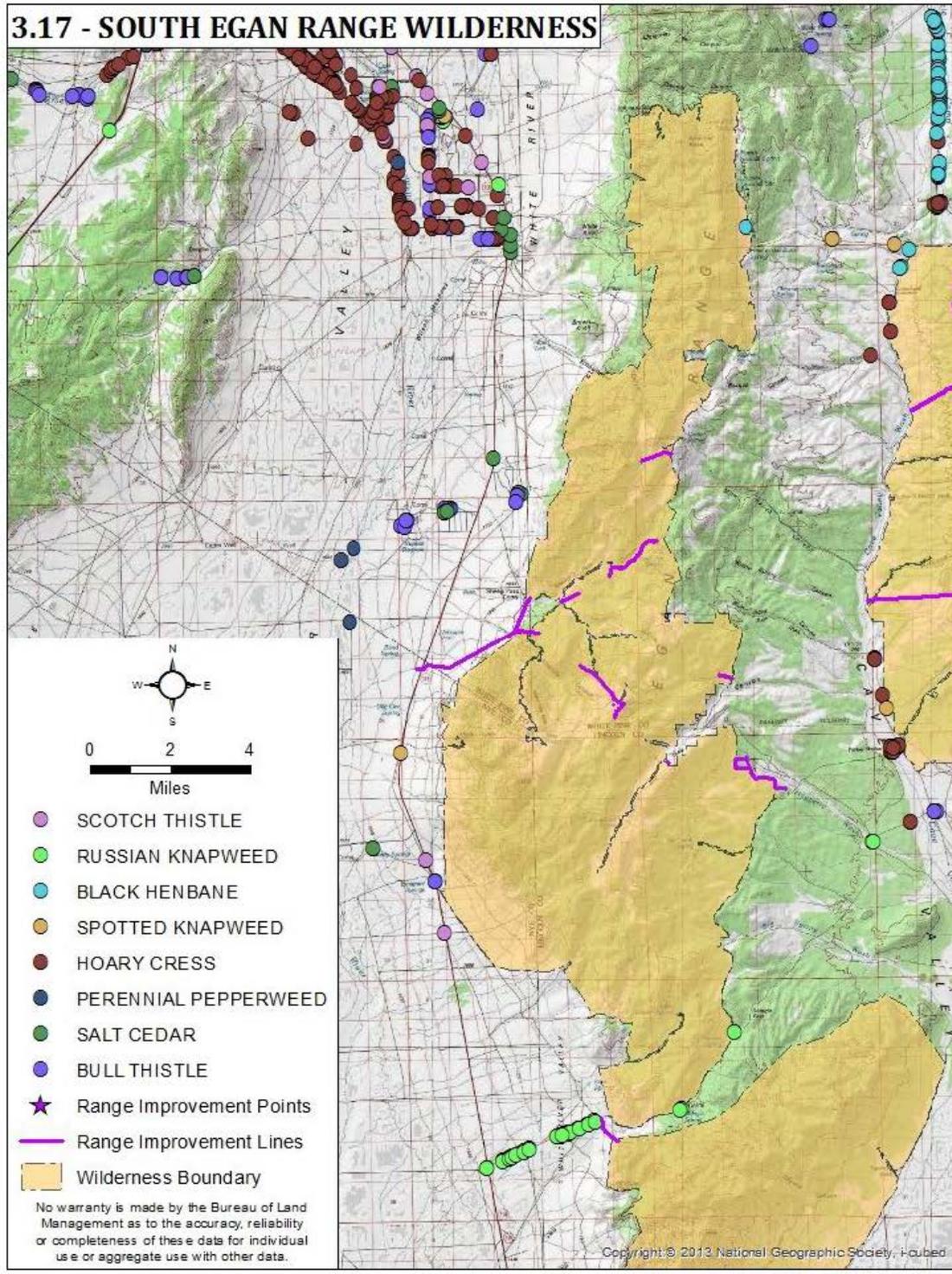
Map E.14. Weed species documented within or adjacent to the Mt. Irish Wilderness



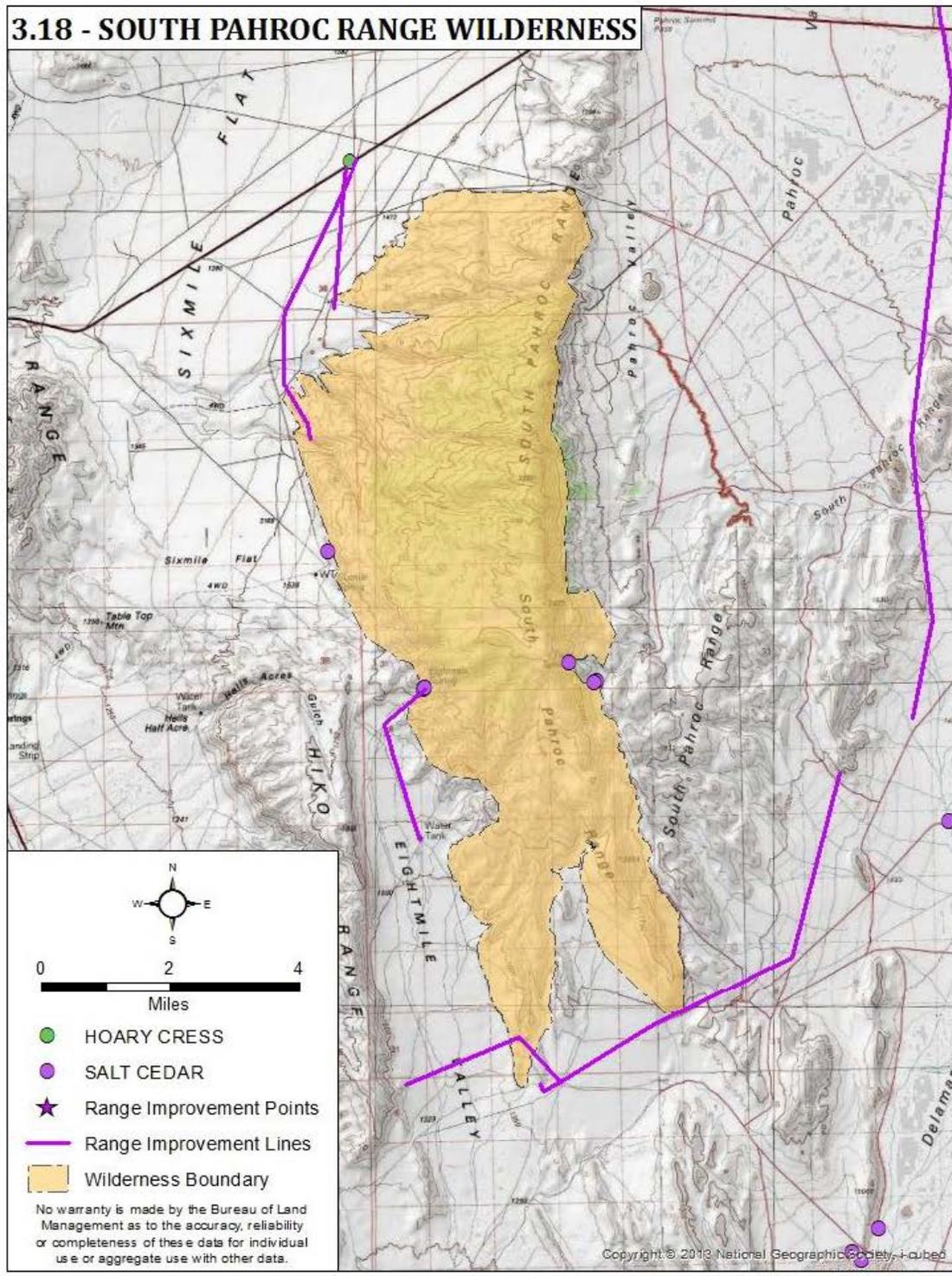
Map E.15. Weed species documented within or adjacent to the Mt. Moriah Wilderness



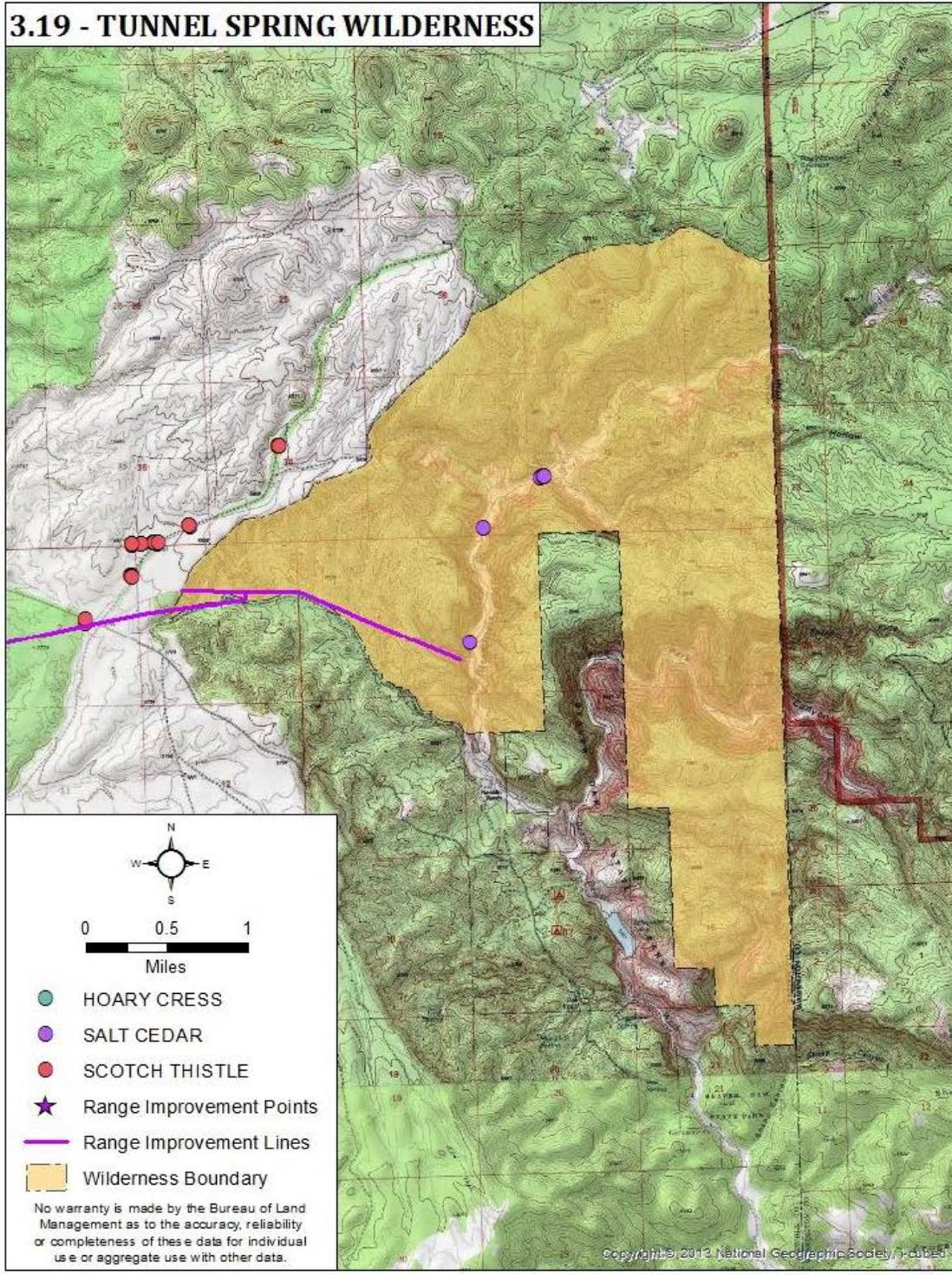
Map E.16. Weed species documented within or adjacent to the Parsnip Peak Wilderness



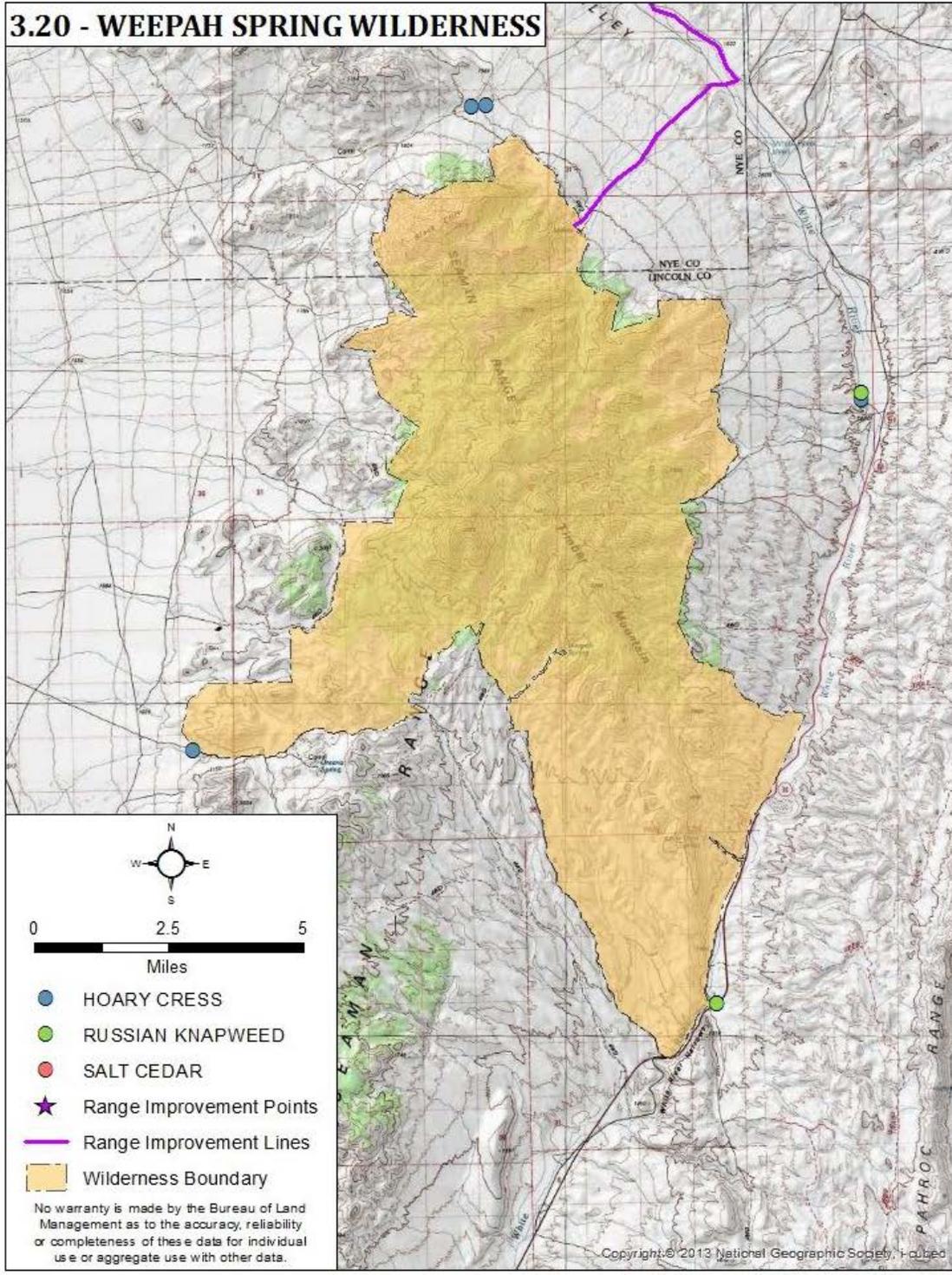
Map E.17. Weed species documented within or adjacent to the South Egan Range Wilderness



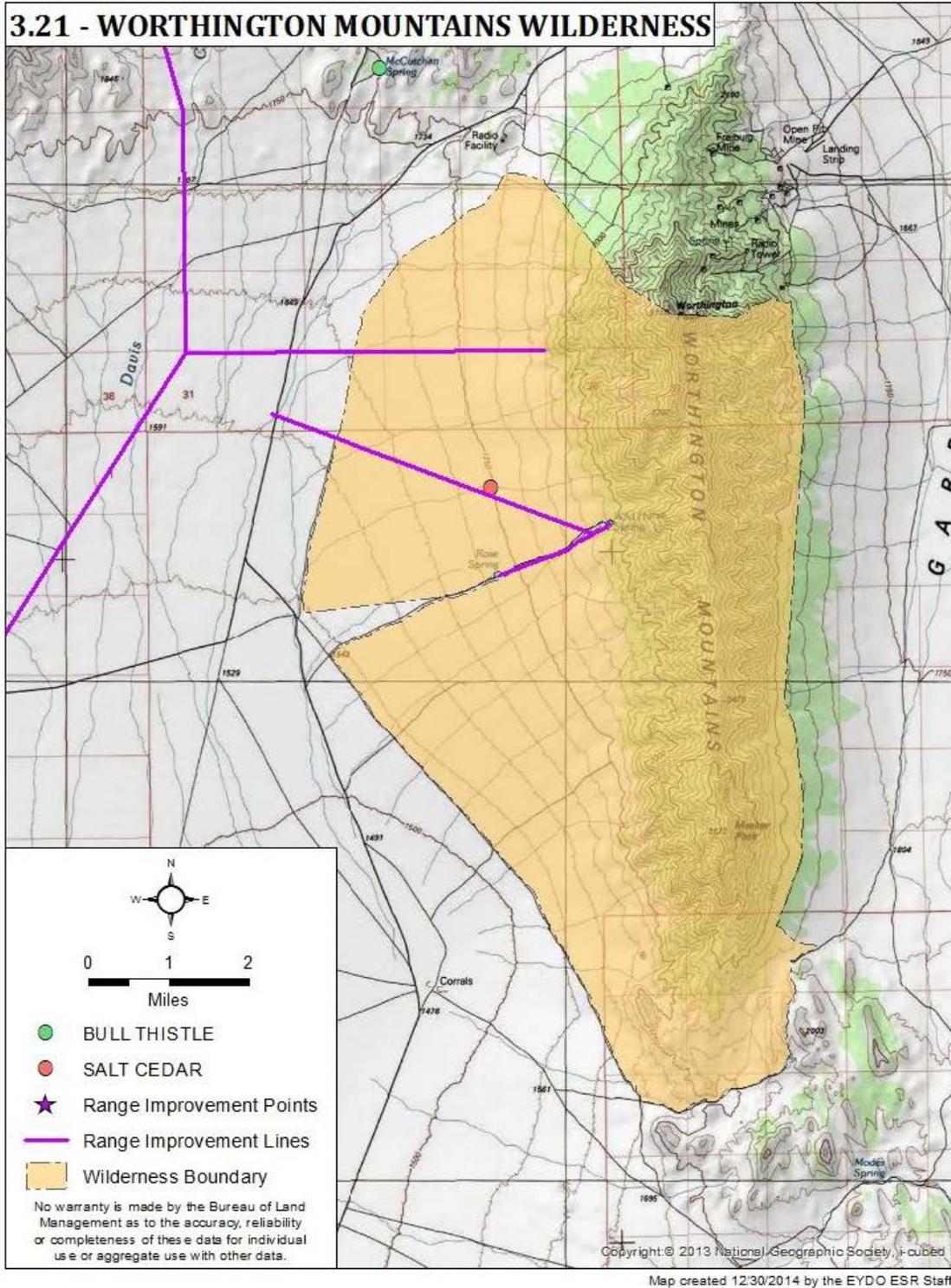
Map E.18. Weed species documented within or adjacent to the South Pahroc Range Wilderness



Map E.19. Weed species documented within or adjacent to the Tunnel Spring Wilderness



Map E.20. Weed species documented within or adjacent to the Weepah Spring Wilderness



Map E.21. Weed species documented within or adjacent to the Becky Peak Wilderness

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Appendix F. Glossary

Emergency: For the purposes of allowing motorized equipment and/or vehicles for grazing management, an emergency is defined as any unpreventable or reasonably unforeseeable set of circumstances which, without immediate action, would likely result in the death of livestock or result in long-term or irreversible impact to the wilderness resource. At a minimum, grazing permittees must obtain verbal authorization from the District Manager for each instance in which motorized equipment or vehicles are to be used in the wilderness. Verbal authorization must be followed up with a written authorization for the wilderness file. In the event that the District Manager is not immediately available, the permittee must notify the District Manager as soon as practicable but no later than 48 hours following the use of motorized equipment or vehicles.

Mechanical Transport: Any vehicle, device, or contrivance for moving people or material in or over land, water, snow, ice, or air that has moving parts as essential components of the transport and which apply a mechanical advantage, regardless of power source. (Wheelchairs or other mobility devices that meet the definition of "wheelchair" in the Americans with Disabilities Act, Section 508(c) are not prohibited in wilderness.) Examples include: wheelbarrow, bicycle, game carts, wagons, etc.

Motor Vehicle: Any means of transportation over land, snow, or ice that is powered by a motor, engine, or other non-living power source. Examples include: ATV, truck, snowmobile, bulldozer, trackhoe etc.

Motorized Equipment: Any machine that applies force by transferring energy from a motor, engine, or other non-living power source. Examples include: chainsaws, powerdrills, generators, etc.