



## 3.14 Special Designations and Lands with Wilderness Characteristics

### 3.14.1 Affected Environment

#### 3.14.1.1 Overview

Special designation areas are units of land that federal or state agencies manage for the protection and enhancement of specific resource values. This land includes wilderness, wilderness study areas (WSAs), Areas of Critical Environmental Concern (ACECs), and other special management areas (e.g., national wildlife refuges [NWRs] and ranges).

Wilderness is established by Congress in accordance with the Wilderness Act of 1964. Wilderness Areas are managed to preserve wilderness characteristics. WSAs contain wilderness characteristics and are managed to preserve those values until Congress either designates them as wilderness or releases them for other uses. Instant Study Areas (ISAs) are a type of WSA that contains primitive and natural qualities but are not recommended for wilderness. ACECs are BLM-designated areas where special management attention is required to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources, and other natural systems or processes. Many of the special designations are managed to maintain wilderness characteristics and cultural resources. In some instances, special designation areas promote the recovery of a specific species, such as the desert tortoise (BLM 2008, 1998; USFWS 2009).

To identify special designations within the region of study, data were collected from the BLM, the USFS, and the National Atlas. The region of study includes all land within 5 miles of the ROWs and ancillary facilities, groundwater development areas, and the associated hydrologic basins. As noted in **Table 3.14-1**, the majority of special designations are either wilderness areas or ACECs. The special designations that are within the region of study are shown in **Figures 3.14-1** and **3.14-2** and **Figures F3.14-1** and **F3.14-2** (**Appendix F**) and are listed in **Table 3.14-2**. There are no designated Wild and Scenic River segments in the region of study. However, there are two river segments on USFS lands in the northern part of the region of study identified as eligible for study under the Wild and Scenic Rivers Act: Muncy Creek (wild) and Smith Creek (recreation, scenic, and wild).

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#### QUICK REFERENCE

**ACEC** – Area of Critical Environmental Concern  
**ACM** – Applicant Committed Protection Measures  
**GIS** – Geographic Information System  
**ISA** – Instant Study Area  
**LWC** – Lands with Wilderness Characteristics  
**NDOW** – Nevada Department of Wildlife  
**RFFA** – Reasonably Foreseeable Future Actions  
**RMP** – Resource Management Plan  
**ROW** – Right-of-way  
**USFS** – U.S. Forest Service  
**USFWS** – U.S. Fish and Wildlife Service  
**WSA** – Wilderness Study Area

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**Table 3.14-1 Types and Occurrence of Special Designations Within the Region of Study**

Types of Special Designations <sup>1</sup>	Number of Special Designations
Wilderness	29
ACECs	27
WSA/ISA	12
NWR/State Wildlife Management Areas	8
National Park/National Recreation Area	2

<sup>1</sup> Does not include the Desert Biosphere Reserve and Experimental Range.

**Figure 3.14-1 Areas of Critical Environmental Concern**

**Figure 3.14-2 Wilderness, WSAs, NWRs, and Other Special Management Areas**

**Table 3.14-2 Special Designations that Occur within the Region of Study**

Responsible Agency	Name	Protected Resource	Total Acres of Area	Crossed by ROWs or Ancillary Facilities	Within Groundwater Development Areas
BLM	Arden ACEC /Desert Tortoise Conservation Center	Historic railroad construction and mining; desert tortoise	1,480	No	No
BLM	Arrow Canyon Wilderness	Wilderness characteristics	27,530	No	No
BLM	Baker Archaeological Site ACEC	Cultural resources	80	No	Yes
BLM	Baking Powder Flat ACEC	Protected butterfly	13,640	No	Yes
BLM	Becky Peak Wilderness	Wilderness characteristics	18,199	No	No
BLM	Big Rocks Wilderness	Wilderness characteristics	12,997	No	No
BLM	Bristlecone Wilderness	Wilderness characteristics	14,095	No	No
BLM	Clover Mountains Wilderness	Wilderness characteristics	85,784	No	No
BLM	Condor Canyon ACEC	Riparian habitat and scenic canyon	4,500	No	No
BLM	Conger Mountain WSA	Wilderness characteristics	20,400	No	No
BLM	Coyote Springs ACEC	Desert tortoise	51,549	Yes	No
BLM	Delamar Mountains Wilderness	Wilderness characteristics	111,328	No	No
BLM	Deep Creek Mountains WSA	Wilderness characteristics	68,910	No	No
BLM	Far South Egans Wilderness	Wilderness characteristics	36,384	No	No
BLM	Fish Springs WSA	Wilderness characteristics	52,500	No	No
BLM	Fortification Range Wilderness	Wilderness characteristics	30,656	No	No
BLM	Fossil Mountain ACEC	Prehistoric life form	1,920	No	No
BLM	Gandy Mountain Caves ACEC	Geologic feature	1,120	No	No
BLM	Gandy Salt Marsh ACEC	Unique biological and riparian	2,270	No	No
BLM	Goshute Canyon Wilderness	Wilderness characteristics	42,543	No	No
BLM	Government Peak Wilderness	Wilderness characteristics	6,313	No	No
BLM	Hidden Valley ACEC	Prehistoric habitation and rock art	3,360	No	No
BLM	Highland Range ACEC	Intermountain bristlecone pine woodland, montane shrublands, butterfly diversity	6,900	No	No
BLM	Highland Ridge Wilderness	Wilderness characteristics	6,900	No	No
BLM	Honeymoon Hill/City of Rocks ACEC	Rock art	3,900	No	No
BLM	Howell Peak WSA	Wilderness characteristics	24,800	No	No
BLM	Kane Springs ACEC	Desert tortoise	57,190	Yes	No
BLM	King Top WSA	Wilderness characteristics	84,770	No	No
BLM	Lower Meadow Valley Wash ACEC	Riparian and special status species	25,000	No	No
BLM	Meadow Valley Range Wilderness	Wilderness characteristics	123,500	No	No
BLM	Mormon Mesa – ACEC (Ely Office)	Desert tortoise	109,680	No	No
BLM	Mormon Mesa – ACEC (Las Vegas Office)	Desert tortoise	151,360	No	No

**Table 3.14-2 Special Designations that Occur within the Region of Study (Continued)**

Responsible Agency	Name	Protected Resource	Total Acres of Area	Crossed by ROWs or Ancillary Facilities	Within Groundwater Development Areas
BLM	Mormon Mountains Wilderness	Wilderness characteristics	157,938	No	No
BLM	Mount Grafton Wilderness	Wilderness characteristics	78,754	No	No
BLM	Mount Irish ACEC	Rock art	15,100	No	No
BLM	Mount Irish Wilderness	Wilderness characteristics	28,334	No	No
BLM/USFS	Mount Moriah Wilderness (includes Mount Moriah RNA)	Wilderness characteristics	8,691	No	No
BLM	Muddy Mountains WSA	Wilderness characteristics	96,170	No	No
BLM	North McCullough WSA	Wilderness characteristics	47,166	No	No
BLM	Notch Peak WSA	Wilderness characteristics	51,130	No	No
BLM	Pahroc Art ACEC	Rock art and rock shelters	2,400	No	No
BLM	Parsnip Peak Wilderness	Wilderness characteristics	43,693	No	No
BLM	Rainbow Gardens ACEC	Geological, scenic, scientific, cultural, and sensitive plant species	37,620	No	No
BLM	River Mountains ACEC	Bighorn sheep, scenic views	5,617	No	No
BLM	Rose Guano Bat Cave ACEC	Historic guano mine and cave	40	No	No
BLM	Schlesser/Pincushion ACEC	Schlesser Pincushion cactus	4,930	No	No
BLM	Scott's Basin WSA	Wilderness characteristics	6,990	No	No
BLM	Shooting Gallery ACEC	Rock art	15,600	No	No
BLM	Shoshone Ponds ACEC	Rocky Mountain juniper and protected fish species	1,240	No	No
BLM	South Pahroc Range Wilderness	Wilderness characteristics	25,800	No	No
BLM	Snake Creek Indian Burial Cave ACEC	Cultural resources	40	No	No
BLM	South Egan Range Wilderness	Wilderness characteristics	67,214	No	No
BLM	Sunrise Mountain ISA	Unique geologic, biologic, and aesthetic values	10,240	No	No
BLM	Swamp Cedar ACEC	Rocky Mountain juniper, other rare and endemic plant communities, and cultural resources	3,200	No	Yes
BLM	Swasey Mountain WSA	Wilderness characteristics	49,500	No	No
BLM	Wah Wah Mountains ACEC	Biological community	5,970	No	No
BLM	Wah Wah Mountains WSA	Wilderness characteristics	42,140	No	No
BLM	Weepah Spring Wilderness	Wilderness characteristics	51,480	No	No
BLM	White River Valley ACEC	Sensitive plants	13,100	No	No
BLM	White Rock Range Wilderness	Wilderness characteristics	24,413	No	No
USFS	Bald Mountain Wilderness	Wilderness characteristics	14,040	No	No
USFS	Desert Biosphere Reserve and Experimental Range	Agricultural range experiment station	55,680	No	No
USFS	Grant Range Wilderness (includes Troy Peak RNA)	Wilderness characteristics	52,600	No	No

**Table 3.14-2 Special Designations that Occur within the Region of Study (Continued)**

Responsible Agency	Name	Protected Resource	Total Acres of Area	Crossed by ROWs or Ancillary Facilities	Within Groundwater Development Areas
USFS	High Schells Wilderness (includes North and South Schell Peaks and Cleve Creek Baldy RNAs)	Wilderness characteristics	121,497	No	No
USFS	La Madre Mountain Wilderness	Wilderness characteristics	47,267	No	No
USFS	Rainbow Mountain Wilderness	Wilderness characteristics	25,113	No	No
USFS	Red Mountain Wilderness	Wilderness characteristics	20,490	No	No
NPS	GBNP	National Park encompassing Lehman Caves, bristlecone pine groves, and Wheeler Peak.	77,100	No	No
NPS	Lake Mead	National Recreation Area	~1.5mm	No	No
NPS	Jimbilnan Wilderness	Wilderness characteristics	18,879	No	No
NPS	Pinto Valley Wilderness	Wilderness characteristics	39,173	No	No
USFWS	Desert National Wildlife Range	Wildlife including desert tortoise and desert bighorn sheep	1,600,000	No	No
USFWS	Fish Springs NWR	Marsh system provides vital habitat for migrating wetland birds	17,992	No	No
USFWS	Pahranagat NWR	Migratory bird habitat and threatened and endangered species including desert tortoise and southwestern willow flycatcher	5,308	No	No
USFWS	Moapa Valley NWR	Moapa Dace and other endangered, threatened, and candidate species	117	No	No
NV	Wayne E. Kirch State Wildlife Management Area	Lakes, wetlands, waterfowl, and public hunting grounds	14,815	No	No
NV	Key Pittman State Wildlife Management Area	Lakes, waterfowl, and public hunting grounds	1,332	No	No
NV	Steptoe Valley State Wildlife Management Area	Lakes, waterfowl, public boating, and public hunting grounds	6,426	No	No
UT	Indian Peaks State Game Management Area	Mule deer and trophy bull elk habitat; fishing for rainbow trout	10,240	No	No

**3.14.1.2 Right-of-way Areas**

The proposed project ROWs or ancillary facilities would cross two ACECs—the Coyote Springs and Kane Springs ACECs. Both of these ACECs are managed to protect the desert tortoise. There are no other special designations, including wilderness areas, WSAs, or NWRs or ranges, crossed by the proposed project ROWs or ancillary facilities.

**3.14.1.3 Groundwater Development Areas**

Three ACECs—Baker Archaeological Site, Baking Powder Flat, and Swamp Cedar—fall within the groundwater development area boundaries. The ACECs are managed for a variety of purposes, including protection of rare plant and wildlife species and the protection of cultural sites. The groundwater development area boundaries were delineated to

avoid ROW exclusion areas, including wilderness areas. There are no other special designations, including NWRs or ranges, within the groundwater development area boundaries.

While project ROW facilities and groundwater development are not planned in these areas, other special management areas within or near the water resources region of study are considered in this analysis. These areas include a National Park, Wildlife Management Areas, and NWRs.

### **Great Basin National Park**

GBNP encompasses over 77,000 acres in White Pine County, south of Highway 50/6 and east of Highway 93. The Park was established in 1986 to protect a representative portion of the physiographic Great Basin region, which includes over 699 species of flora, including ancient bristlecone pines, over 300 species of fauna, 45 caves including Lehman Caves, and several rock glacier formations (e.g., cirques, moraines, alpine tarns), and the only glacier in the Great Basin region.

The management of human activities and natural resources is described in the GBNP General Management Plan (NPS 1992). The Planning Issues and Concerns section of this document provide an overview of the Park's management direction.

### **Lake Mead National Recreation Area**

The Lake Mead National Recreation Area is located off of U.S. 93, southeast of Boulder City, Nevada. Lake Mead, the focal point of the National Recreation Area, was created by backing up the Colorado River behind the Hoover Dam. Lake Mead National Recreation Area was named the first national recreation area (in 1964) and has drawn hundreds of thousands of visitors to view the contrast of desert and water and the incredible structure that is Hoover Dam. The National Recreation Area includes two lakes and over 1.5 million acres of land.

Lake Mead National Recreation Area offers year-round recreational opportunities including boating, swimming, fishing, hiking, and sightseeing. It also is home to thousands of desert plants and animals, adapted to survive in an extreme place where rain is scarce and temperatures are high.

### **Wayne E. Kirch State Wildlife Management Area**

The primary management emphasis on Wildlife Management Areas is the protection of wetlands and waterfowl including the use of the areas as public hunting and fishing grounds. The Wayne E. Kirch Wildlife Management Area is located in the White River Valley in northeastern Nye County, accessed via SR 318. The Wildlife Management Area is composed of a total of 14,815 acres, and includes five major reservoirs plus springs, marshes and wetlands; providing important nesting areas for waterfowl. The primary sources of water are Flag Springs and Hot Creek Spring.

### **Key Pittman State Wildlife Management Area**

The Key Pittman Wildlife Management Area is located in the north end of the Pahrnagat Valley between the Pahrnagat Range to the west and the Hiko Range to the east; is approximately 135 miles south of Ely and 110 miles north of Las Vegas on Highway 318. The Wildlife Management Area is composed of 1,332 acres including Nesbitt and Frenchy Lakes and appropriated water rights totaling approximately 632 acre feet annually from Hiko Springs managed by the Hiko Ditch Company and 580 acre feet annually from Crystal Springs. The Wildlife Management Area contains about 632 acres of wetlands and aquatic habitats consisting of lakes, fresh emergent wetlands, and wet meadow areas. Uplands total about 700 acres including alkali desert scrub, desert wash and croplands. The Wildlife Management Area supports an abundance of wildlife; more than 24 species of ducks have been recorded on the area.

### **Steptoe Valley State Wildlife Management Area**

The Steptoe Valley Wildlife Management Area is located immediately south of Ely, along U.S. Highway 93/50 in White Pine County consisting 6,426 acres, it includes Comins Lake, which is located about six miles south of Ely. Steptoe Creek, Cave Creek, and Comins Lake are the primary water resources on the Steptoe Valley Wildlife Management Area. Comins Lake, at the lower end of Steptoe and Cave Creek drainage basins, has a surface area of about 410 acres. The fauna is extremely diverse due to the mosaic of habitat types present. The Steptoe Valley is an important Great Basin stopover and resting area for waterfowl.

### **Desert National Wildlife Refuge**

The approved refuge boundary of the Desert NWR encompasses approximately 1.6 million acres, in Clark County, Nevada, and includes other jurisdiction near eastern boundary of the Refuge along SH 93 (Summary Figure 3, USFWS 2009). The boundary of the Desert NWR was established in May 20, 1936 under Executive Order 7373 and later amended by the SNPLMA and the Lincoln County Conservation, Recreation, and Development Act of 2004 (LCCRDA) (Sprunger 2011). The refuge was established for the preservation and management of desert bighorn sheep and its habitat. All lands within the approved refuge boundary are managed to meet the mission and goals of the refuge as outlined in the approved CCP prepared pursuant to the National Wildlife Refuge System Administration Act of 1966 (NWRS Administration Act), as amended by the National Wildlife Refuge System Improvement Act of 1997 (Improvement Act) (Public Law [PL] 105-57). Uses within the approved refuge boundary that are incompatible with refuge mission and alignment of goals are identified as an impact.

### **Pahranagat National Wildlife Refuge**

Pahranagat NWR is located approximately 90 miles north of Las Vegas in Lincoln County, Nevada. Located within the Pacific Flyway, Pahranagat NWR was established to provide habitat for migratory birds, especially waterfowl. The water for Pahranagat's lakes and marshes originates from the Ash and Crystal Springs to the north of the refuge and is managed to obtain the most value for wildlife. Various types of wetland habitats support many plants favored as food by over 230 species of migratory birds and other resident wildlife.

### **Moapa Valley National Wildlife Refuge**

The Moapa Valley NWR was established to secure habitat for the endangered Moapa dace, a small fish commonly found throughout the headwaters of the Muddy River system. The refuge is located on 117 acres in northeastern Clark County and is approximately 60 miles north of Las Vegas, Nevada. Dace habitat within the refuge consists of stream channels supported by six thermal springs emerging near the center of the refuge.

#### **3.14.1.4 Lands with Wilderness Characteristics**

Secretarial Order 3310 *Protecting Wilderness Characteristics on Lands Managed by the BLM*, issued on December 22, 2010, directs the BLM to protect wilderness characteristics through project-level decisions unless the BLM determines that impairment of wilderness characteristics is appropriate and consistent with applicable requirements of law and other resource management considerations. In accordance with BLM Manual 6303 *Consideration of LWCs for Project-Level Decisions in Areas Not Analyzed in Accordance with BLM Manual 6302*, the BLM may conduct the inventory of lands with wilderness characteristics (LWCs) using available information (e.g., existing maps, photos, records related to range projects, monitoring data) and field verification.

The inventory is based on criteria defined in Section 2(c) of the Wilderness Act and incorporated in FLPMA for sufficient size, naturalness, outstanding opportunities for either solitude or primitive and unconfined recreation, and supplemental values (ecological, geological, or other features of scientific, educational, scenic, or historical values). According to BLM Manual 6303, lands that clearly lack wilderness characteristics are those that do not meet the naturalness criterion because they have extensive surface disturbance and/or do not meet the size criterion of 5,000 acres or any of the size exceptions.

BLM reviewed the existing wilderness inventory conducted in 1979 to determine whether the project would directly affect any LWCs in the region of study. Then, BLM conducted a field inventory of identified units in April 2011 to verify the previous findings. The inventory only addresses roadless units that the ROWs would bisect (**Table 3.14-3**). The remaining roadless areas were not evaluated for LWC since the ROWs paralleled a roadless boundary and would not eliminate a roadless unit from being an LWC merely based on a size reduction or impair LWC criteria that could make the area eligible for potential designation as Wild Lands in the future.

**Table 3.14-3 Roadless Units Crossed by the Right-of-way and Ancillary Facilities**

Unit ID	Size (Acres)	Sufficient Size	Naturalness	Solitude	Primitive and Unconfined Recreation	Supplemental Values	Lands with Wilderness Characteristics
177C-1-2011	19,564	yes	yes	no	no	n/a	no
183-1-2011	23,201	yes	yes	no	no	n/a	no
180-1-2011	50,635	yes	yes	no	no	n/a	no
220-1-2011	19,612	yes	yes	no	no	n/a	no
0106-2-2011	40,049	yes	yes	no	no	n/a	no
0135-2011	8,402	yes	no	no	no	n/a	no
108-2-2011	1,005	no	yes	no	no	n/a	no
108-1-2011	1,544	no	yes	no	no	n/a	no
110A-2-2011	5,765	yes	yes	no	no	n/a	no
186-2-2011	7,442	yes	yes	no	no	n/a	no
186-1-2011	1,447	no	yes	no	no	n/a	no
184-2011	6,138	yes	yes	no	no	n/a	no
186-4-2011	3,537	no	yes	no	no	n/a	no
177-1-2011	31,103	yes	yes	no	no	n/a, parts of former Fortification Range WSA	no
177A-1-2011	12,818	yes	yes	no	no	n/a	no
184B-2011	5,318	yes	yes	no	no	n/a, large wash feature	no
177C-2-2011	7,336	yes	yes	no	no	n/a	no
215-2011	31,736	yes	yes	yes	no	no	yes
214-1-2011	4,270	no	yes	no	no	n/a	no
216-2011	23,473	yes	yes	no	no	n/a	no
01R-12-5-2011	2,678	no	n/a	n/a	n/a	n/a	no
0136-1	12,921	yes	yes	yes	no	Joshua tree forest on eastern 2/3 of unit	yes
01R-29-1-2011	10,936	yes	yes	no	no	n/a	no

Through this process, the BLM determined that there are 23 roadless units bisected by the proposed ROWs, two of which were found to meet LWC criteria (**Figure 3.14-3** and **Table 3.14-3**). Effects of Tier 2 future facilities on LWC areas would be completed in subsequent NEPA when facility locations are known.

**Figure 3.14-3 Lands with Wilderness Characteristics**

## 3.14.2 Environmental Consequences

### 3.14.2.1 Rights-of-way

#### Issues

The following issues are evaluated for impacts to special designations from ROW construction and facility maintenance:

- Potential surface disturbance could be inconsistent with management prescriptions of special designations.
- Potential surface disturbance could be incompatible with the resource values that the special designations protect.
- Future special designation areas could be limited by the changes in land uses over the long-term.

Sections 3.3 (Water Resources), 3.5 (Vegetation), 3.6 (Terrestrial Wildlife), and 3.7 (Aquatic Biology Resources) discuss the potential effects on resources that many of these special designations protect. Section 3.15.2 (Visual Resources) discusses impacts to visually sensitive areas and Section 3.16 (Cultural Resources) discusses impacts to cultural resources.

#### Assumptions

The following assumptions were used in the impact analysis for special designations:

- Precautions would be taken to protect managed resources in utility corridors that are located within special designations.
- Facilities would not be approved in special designation areas identified as ROW exclusion areas.

#### Methodology for Analysis

Construction surface disturbance impacts by alternative were evaluated according to the following steps:

- Identification of impacts to special designation areas that could be affected by construction of the pipeline, power line, and ancillary facility ROWs;
- Identification of special designations within 5 miles of ROWs where land use and management changes would occur as a result of the project;
- Evaluation of agency management plans, intent of area designations, or agency mission and management prescriptions for designated resources;
- Evaluation of BLM RMP management actions, BMPs, and ACMs;
- Evaluation of existing mitigation measures and their effectiveness;
- Recommendation of additional mitigation measures to reduce or offset impacts; and
- Estimation of residual impacts after ACMs and recommended mitigation measures are applied.

### 3.14.2.2 Proposed Action, Alternatives A through C

#### Construction and Facility Maintenance

##### *All Impact Issues*

Although the project crosses two special designations, the proposed ROWs would be located within designated utility corridors in compliance with management prescriptions, with one exception. The water treatment facility and buried storage reservoir proposed in the Coyote Springs ACEC would be located outside the designated utility corridor (see Section 3.8, Land Use and **Figure 3.8-5**). The acreage of surface disturbance from pipeline, power line, and associated facility construction and maintenance within special designations is summarized in **Table 3.14-4**. The BLM Coyote Springs ACEC has the largest affected acreage, followed by the BLM Kane Springs ACEC. The Coyote Springs and Kane Springs ACECs are both managed by the BLM to protect desert tortoise populations. Tortoise populations would

be indirectly affected by construction and facility maintenance due to improved public access, as discussed in Wildlife, Section 3.7.2.

**Table 3.14-4 Special Designation Acreage Affected by Construction and Facility Maintenance of Rights-of-way and Ancillary Facilities, Proposed Action and Alternatives A through C**

Special Designation	Construction <sup>1</sup>	Facility Maintenance <sup>2</sup>
BLM Coyote Springs ACEC	1,249	155
BLM Kane Springs ACEC	401	22
<b>Total</b>	<b>1,650</b>	<b>177</b>

<sup>1</sup> Acreage includes area disturbed during construction.

<sup>2</sup> Acreage includes areas where aboveground structures would be located.

The BLM Coyote Springs ACEC is identified as a ROW avoidance area, except within designated utility corridors. Placement of facilities on BLM-administered lands in ROW avoidance areas is subject to BLM approval depending on whether the uses are consistent with the special designation associated with the area. The water treatment facility and buried storage reservoir would be within the Coyote Springs ACEC, outside of the designated utility corridor. Construction in this location would require the BLM to grant a new ROW in a ROW-avoidance area. Impacts would likely be minimal because of the proposed facility's proximity to U.S. 93, near the designated utility corridor at the easternmost edge of the ACEC. BLM authorization of a ROW in the Coyote Springs ACEC would need to follow all survey, stipulation, and monitoring requirements designed to protect desert tortoise (discussed in Section 3.6, Terrestrial Wildlife). It is possible that facilities may need to be relocated to avoid long-term desert tortoise habitat loss. During facility operation and maintenance, hazardous materials, such as standard water treatment chemicals, would be transported to and stored at the water treatment facility and buried storage reservoir site. If chemicals are spilled, they could cause damage to the area. Environmental damage from spills of stored hazardous chemicals at the water treatment facility in the Coyote Springs ACEC would be minimized by complying with a Stormwater Pollution Prevention Plan (SWPPP), developed in compliance with the CWA.

The BLM Kane Springs ACEC, managed for tortoise habitat, would experience impacts similar to those described for the Coyote Springs ACEC. Proposed construction within 5 miles of the ACEC may indirectly influence desert tortoise populations because of the operation of heavy machinery and vehicle traffic.

The Coyote Spring Valley Pressure Reducing Station would be located on BLM land adjacent to the eastern edge of the USFWS Desert National Wildlife Range, but within the acquisition boundary identified by the USFWS. The facility would be located within a designated utility corridor, and it would not conflict with the management prescriptions in this special designation. The operation and maintenance of this facility could limit the USFWS's ability to acquire and incorporate this relatively small portion of BLM land into the wildlife range.

Wilderness characteristics in adjacent wilderness, the USFS High Schells Wilderness Area, may be temporarily diminished during construction due to noise associated with heavy machinery and increased traffic occurring 1.7 miles east of the wilderness area boundary. Visitors in adjacent wilderness areas might notice a temporary disruption to solitude during construction. However, since all project construction would occur outside the wilderness area boundaries, no direct (permanent or physical) impacts to wilderness areas are anticipated.

ACMs would be implemented to avoid or minimize construction and maintenance-related effects on the resources protected by the special designations. Within desert tortoise habitat, such as the Coyote Springs and Kane Springs ACECs, temporary desert tortoise exclusion fencing could be used to enclose active construction areas (ACM A.1.14). Permanent tortoise exclusion structures would be installed and maintained (along with site security fencing) around the above-ground facilities within desert tortoise habitat, such as the water treatment facility and buried storage reservoir (ACM A.1.16). If off-road vehicle travel is necessary within a designated ROW, a qualified biologist would first clear the proposed route (ACM A.1.11). Further ACMs regarding the desert tortoise can be found in Section 3.6, Terrestrial Wildlife.

**Conclusion.** The Coyote Springs ACEC and Kane Springs ACEC, would be directly affected by construction and maintenance of the ROWs and ancillary facilities. Surface disturbance from pipeline, power line, and associated facility construction and maintenance within the Coyote Springs ACEC and Kane Springs ACEC may interfere with management objectives and would conflict with established management prescriptions, particularly for development proposed outside of designated utility corridors. In the Kane Springs and Coyote Springs ACECs, facility development may require additional measures to minimize effects on desert tortoise. Visitors in the adjacent USFS High Schells Wilderness Area might notice a temporary disruption to solitude during construction; however, no direct impacts to wilderness areas would be anticipated since project construction would occur outside the wilderness area boundaries.

Long-term impacts from the maintenance of above-ground facilities (e.g., structures, access roads, and power lines) would result within the boundaries of two special designations—Coyote Springs ACEC and Kane Springs ACEC. Improved public access would be anticipated to indirectly affect special designation area values. Long-term operation of the Coyote Spring Valley Pressure-reducing Station would limit the USFWS's ability to acquire and incorporate this relatively small portion of land into the wildlife range; however, this area is within a ROW corridor.

Proposed mitigation measures:

**ROW-SD-1:** To the degree possible, avoid siting temporary construction areas within the boundaries of special designations and to within designated ROW corridors. **Effectiveness:** This measure would be highly effective in avoiding impacts to special designations. **Effects on other resources:** There could be minimal effects of implementing this measure on transportation and associated air emissions if longer travel distances are required.

Mitigation measures required to address impacts to the areas designated to protect desert tortoise are discussed in Section 3.6, Terrestrial Wildlife.

Residual impacts would include:

- Long-term maintenance of facilities that do not comply with the original intent of the resource protection management prescriptions within two special designations (the Kane Springs and Coyote Springs ACECs).

#### *Lands with Wilderness Characteristics*

The pipeline and power line ROWs would bisect two roadless units determined to meet LWC criteria: Units 215-2011 and 0316-1. Roadless Unit 215-2011 is 31,736 acres, contains one small fence line (50 feet) and numerous two-track routes, and contains outstanding opportunities for solitude on the eastern 1/3 of the unit. Roadless Unit 0316-1-2011 is 12,921 acres and contains few two-track routes, some flagging for the On-Line power line project along eastern boundary, and a landing strip on north end as well as fences and range developments. On the eastern 2/3 of unit, the Joshua tree forest allows for outstanding opportunities for solitude. The western 1/3 of unit is very open, contains minimal topography, and does not contain outstanding values.

The ROWs would bisect the western edge of Unit 215-2011 and the middle portion of Unit 0316-1. The ROW would become the western boundary for Unit 215-2011 and would eliminate approximately 700 acres from the roadless unit. The remaining 31,000 acres would still meet the criteria for LWC. Unit 0136-1 would be split in two. The western portion, which does not contain outstanding opportunities for solitude and contains unnatural features (landing strip and fencelines), would be reduced to approximately 4,200 acres. The western portion would not meet the size criteria after the ROW is granted. The remaining 8,700 acres on the eastern portion of the unit would still meet the criteria for LWC.

**Conclusion.** The pipeline and power line ROWs would bisect two roadless units determined to meet LWC criteria: Units 215-2011 and 0316-1. The ROWs would eliminate 700 acres from Unit 215-2011, but the remaining 31,000 acres would still meet the criteria for LWC. The ROWs would eliminate 4,200 acres from Unit 0136-1, but the remaining 8,700 acres on the eastern portion of the unit would still meet the criteria for LWC.

Proposed mitigation measures:

None.

Residual impacts include:

- The ROWs would eliminate 700 acres from Unit 215-2011 and 4,200 acres from Unit 0136-1 as a result of the maintained roads associated with the ROWs.

### 3.14.2.3 Alternative D

#### Construction and Facility Maintenance

##### *All Impact Issues*

The same ROW construction and facility maintenance impacts discussed for the Proposed Action and Alternatives A through C would apply to Alternative D. Alternative D thereby would require 225 miles of pipeline and 208 miles of power lines in Clark and Lincoln Counties, Nevada. The acreage of surface disturbance from pipeline, power line, and associated facility construction and maintenance within special designations under Alternative D is summarized in **Table 3.14-5**.

**Table 3.14-5 Special Designation Acreage Affected by Construction and Facility Maintenance of Rights-of-way and Ancillary Facilities – Alternative D**

Special Designation	Construction <sup>1</sup>	Facility Maintenance <sup>2</sup>
BLM Coyote Springs ACEC	1,249	155
BLM Kane Springs ACEC	401	22
<b>Total</b>	<b>1,650</b>	<b>177</b>

<sup>1</sup> Acreage includes area disturbed during construction.

<sup>2</sup> Acreage includes areas where aboveground structures would be located.

**Conclusion.** The Coyote Springs ACEC and Kane Springs ACEC would be directly affected by construction and maintenance of the ROWs and ancillary facilities. Surface disturbance from pipeline, power line, and associated facility construction and maintenance within the Coyote Springs ACEC and Kane Springs ACEC may interfere with management objectives and would conflict with established management prescriptions, particularly for development proposed outside of designated utility corridors. In the Kane Springs and Coyote Springs ACECs, facility development may require additional measures to minimize effects on desert tortoise. Visitors in the adjacent USFS High Schells Wilderness Area might notice a temporary disruption to solitude during construction; however, no direct impacts to wilderness areas would be anticipated since project construction would occur outside the wilderness area boundaries.

Long-term impacts from the maintenance of above-ground facilities (e.g., structures, access roads, and power lines) would result within the boundaries of two special designations—Coyote Springs ACEC and Kane Springs ACEC. Improved public access would be anticipated to indirectly affect special designation area values. Long-term operation of the Coyote Spring Valley Pressure-reducing Station would limit the USFWS's ability to acquire and incorporate this relatively small portion of land into the wildlife range; however, this area is within a ROW corridor.

Proposed mitigation measures:

**ROW-SD-1: Avoid Temporary Surface Disturbance in Special Designation Areas.** To the degree possible, avoid siting temporary construction areas within the boundaries of special designations and to within designated ROW corridors. Effectiveness: This measure would be highly effective in avoiding impacts to special designations. Effects on other resources: There could be minimal effects of implementing this measure on transportation and associated air emissions if longer travel distances are required.

Mitigation measures required to address impacts to the areas designated to protect desert tortoise are discussed in Section 3.6, Terrestrial Wildlife.

Residual impacts include:

- Long-term maintenance of facilities that do not comply with the original intent of the resource protection management prescriptions within two special designations (the Kane Springs and Coyote Springs ACECs).

*Lands with Wilderness Characteristics*

Impacts to LWC would be the same as the Proposed Action. The pipeline and power line ROWs would bisect two roadless units determined to meet LWC criteria: Units 215-2011 and 0316-1. The ROWs would eliminate 700 acres from Unit 215-2011, but the remaining 31,000 acres would still meet the criteria for LWC. The ROWs would eliminate 4,200 acres from Unit 0136-1, but the remaining 8,700 acres on the eastern portion of the unit would still meet the criteria for LWC.

**Conclusion:** The pipeline and power line ROWs would bisect two roadless units determined to meet LWC criteria: Units 215-2011 and 0316-1. The ROWs would eliminate 700 acres from Unit 215-2011, but the remaining 31,000 acres would still meet the criteria for LWC. The ROWs would eliminate 4,200 acres from Unit 0136-1, but the remaining 8,700 acres on the eastern portion of the unit would still meet the criteria for LWC.

Proposed mitigation measures:

None.

Residual impacts include:

- The ROWs would eliminate 700 acres from Unit 215-2011 and 4,200 acres from Unit 0136-1 as a result of the maintained roads associated with the ROWs.

**3.14.2.4 Alternative E****Construction and Facility Maintenance***All Impact Issues*

The same ROW construction and facility maintenance impacts discussed for the Proposed Action and Alternatives A through C would apply to Alternative E. Alternative E would require 225 miles of pipeline and 208 miles of power lines in Clark and Lincoln Counties, Nevada. The acreage of surface disturbance from pipeline, power line, and associated facility construction and maintenance within special designations under Alternative E is summarized in **Table 3.14-6**.

**Table 3.14-6 Special Designations Affected by Construction and Facility Maintenance of Rights-of-way and Ancillary Facilities, Alternative E**

Special Designation	Construction <sup>1</sup>	Facility Maintenance <sup>2</sup>
BLM Coyote Springs ACEC	1,249	155
BLM Kane Springs ACEC	401	22
<b>Total</b>	<b>1,650</b>	<b>177</b>

<sup>1</sup> Acreage includes area disturbed during construction.

<sup>2</sup> Acreage includes areas where aboveground structures would be located.

**Conclusion.** The Coyote Springs ACEC and Kane Springs ACEC would be directly affected by construction and maintenance of the ROWs and ancillary facilities. Surface disturbance from pipeline, power line, and associated facility construction and maintenance within the Coyote Springs ACEC and Kane Springs ACEC may interfere with management objectives and would conflict with established management prescriptions, particularly for development proposed outside of designated utility corridors. In the Kane Springs and Coyote Springs ACECs, facility development may require additional measures to minimize effects on desert tortoise. Visitors in the adjacent USFS High Schells Wilderness Area might notice a temporary disruption to solitude during construction; however, no direct impacts to wilderness areas would be anticipated since project construction would occur outside the wilderness area boundaries.

Long-term impacts from the maintenance of above-ground facilities (e.g., structures, access roads, and power lines) would result within the boundaries of two special designations—Coyote Springs ACEC and Kane Springs ACEC. Improved public access would be anticipated to indirectly affect special designation area values. Long-term operation of the Coyote Spring Valley Pressure-reducing Station would limit the USFWS's ability to acquire and incorporate this relatively small portion of land into the wildlife range; however, this area is within a ROW corridor.

Proposed mitigation measures:

**ROW-SD-1: Avoid Temporary Surface Disturbance in Special Designation Areas.** To the degree possible, avoid siting temporary construction areas within the boundaries of special designations and to within designated ROW corridors. Effectiveness: This measure would be highly effective in avoiding impacts to special designations. Effects on other resources: There could be minimal effects of implementing this measure on transportation and associated air emissions if longer travel distances are required.

Mitigation measures required to address impacts to the areas designated to protect desert tortoise are discussed in Section 3.6, Terrestrial Wildlife.

Residual impacts include:

- Long-term maintenance of facilities that do not comply with the original intent of the resource protection management prescriptions within two special designations (the Kane Springs and Coyote Springs ACECs).

#### *Lands with Wilderness Characteristics*

Impacts to LWC would be the same as the Proposed Action. The pipeline and power line ROWs would bisect two roadless units determined to meet LWC criteria: Units 215-2011 and 0316-1. The ROWs would eliminate 700 acres from Unit 215-2011, but the remaining 31,000 acres would still meet the criteria for LWC. The ROWs would eliminate 4,200 acres from Unit 0136-1, but the remaining 8,700 acres on the eastern portion of the unit would still meet the criteria for LWC.

Conclusion. The ROWs would bisect two roadless units determined to meet LWC criteria: Units 215-2011 and 0316-1. The ROWs would eliminate 700 acres from Unit 215-2011, but the remaining 31,000 acres would still meet the criteria for LWC. The ROWs would eliminate 4,200 acres from Unit 0136-1, but the remaining 8,700 acres on the eastern portion of the unit would still meet the criteria for LWC.

Proposed mitigation measures:

None.

Residual impacts include:

- The ROWs would eliminate 700 acres from Unit 215-2011 and 4,200 acres from Unit 0136-1 as a result of the maintained roads associated with the ROWs.

#### **3.14.2.5 Alignment Options 1 through 4**

Impacts for the Alignment Options (1 through 4) are identified in relation to the relevant segment of the Proposed Action (**Table 3.14-7**).

**Table 3.14-7 Special Designations Impact Summary for Alignment Options 1 through 4**

<b>Alignment Option</b>	<b>Analysis</b>
<p><b>Alignment Option 1</b> (Humboldt-Toiybe Power Line Alignment)  <b>Option Description:</b> Change the locations of a portion of the 230-kV power line from Gonder Substation near Ely to Spring Valley.  <b>Applicable To:</b> Proposed Action and Alternatives A through C and E.</p>	<ul style="list-style-type: none"> <li>Impacts to special designations associated with Alignment Option 1 would result in the same impacts as discussed for the Proposed Action.</li> <li>Impacts to LWC associated with Alignment Option 1 would result in the same impacts as discussed for the Proposed Action.</li> </ul>
<p><b>Alignment Option 2</b> (North Lake Valley Pipeline Alignment)  <b>Option Description:</b> Change the locations of portions of the mainline pipeline and electrical transmission line in North Lake Valley.  <b>Applicable To:</b> Proposed Action and Alternatives A through C and E.</p>	<ul style="list-style-type: none"> <li>Impacts to special designations associated with Alignment Option 2 would result in the same impacts as discussed for the Proposed Action. The alignment would pass near the Mount Grafton Wilderness Area, possibly resulting in more visitation to the area and temporarily disrupting solitude because of ROW disturbance.</li> <li>Impacts to LWC associated with Alignment Option 2 would result in the same impacts as discussed for the Proposed Action.</li> </ul>
<p><b>Alignment Option 3</b> (Muleshoe Substation and Power Line Alignment)  <b>Option Description:</b> Eliminate the Gonder to Spring Valley transmission line, and construct a substation with an interconnection with an interstate, high voltage power line in Muleshoe Valley.  <b>Applicable To:</b> Proposed Action and Alternatives A through C and E.</p>	<ul style="list-style-type: none"> <li>Impacts to special designations as associated with Alignment Option 3 would result in the same impacts discussed for the Proposed Action.</li> <li>Impacts to LWC associated with Alignment Option 3 would result in the same impacts as discussed for the Proposed Action.</li> </ul>
<p><b>Alignment Option 4</b> (North Delamar Valley Pipeline and Power Line Alignment)  <b>Option Description:</b> Change the location of a short section of mainline pipeline in Delamar Valley to follow an existing transmission line.  <b>Applicable To:</b> All alternatives.</p>	<ul style="list-style-type: none"> <li>Impacts to special designations as associated with Alignment Option 4 would result in the same impacts as discussed for the Proposed Action.</li> <li>Impacts to LWC associated with Alignment Option 4 would result in fewer impacts than the Proposed Action. The ROWs would only bisect one of the two roadless units determined to meet LWC criteria, Unit 215-2011. Alignment Option 4 would bypass Unit 0136-1 on the eastern boundary.</li> </ul>

### 3.14.2.6 No Action

Under the No Action Alternative, project construction and operation would be limited to currently approved actions. Management direction on BLM public lands would be directed by the Ely and Las Vegas RMPs, which have specific management prescriptions for special designations. Use and protection of special designations that are managed by other federal and state agencies would comply with those agencies' specific management plans and guidelines.

### 3.14.2.7 Comparison of Alternatives

**Table 3.14-8** provides a comparison of impacts for construction and facility maintenance of the action alternatives on special designations and LWC.

**Table 3.14-8 Comparison of Alternatives and Options – Rights-of-way**

<b>Parameter</b>	<b>Proposed Action, Alternatives A through C</b>	<b>Alternative D</b>	<b>Alternative E</b>
Number of special designations directly affected	2	2	2
Acres of special designations affected by construction	1,650	1,650	1,650
Acres of special designations affected by facility maintenance	177	177	177
Number of LWC bisected	2	2	2

### 3.14.2.8 Groundwater Development and Groundwater Pumping

#### Issues

The following issues are evaluated for impacts to special designations from groundwater development and groundwater pumping:

- Surface disturbance could be inconsistent with management prescriptions and diminish or impair values of special designations.
- Special designations that contain water-dependent values, including phreatophytic vegetation, wet meadows, springs, and streams, could be affected by the drawdown effects from groundwater pumping.
- Areas eligible for special designations could be limited by impaired or diminished values over the long-term.

Sections 3.3, Water Resources; 3.5, Vegetation; 3.6, Terrestrial Wildlife; and 3.7, Aquatic Biology Resources discuss the potential effects on resources that many of these special designations protect. A discussion of impacts to visually sensitive areas is in Section 3.15.2 and Section 3.16 discusses impacts to cultural resources.

#### Assumptions

The following assumptions were used in the impact analysis for special designations:

- Precautions would be taken to protect resources and important values that contribute to the special designation.
- Facilities would not be approved in special designation areas identified as ROW exclusion areas.
- Assumptions about the potential changes in water dependent resources from groundwater pumping do not incorporate additional assumptions about the effects of climate change because specific long-term effects of climate change are not presently known, and the incremental contribution of climate change effects to project effects cannot be reasonably estimated. A general discussion of climate change effects is provided in Section 3.1.3.2, Climate Change Effects to All Other Resources.

#### Methodology for Analysis

Groundwater development and groundwater pumping impacts by alternative were evaluated according to the following steps:

- Evaluation of agency management plans, intent of area designations, or agency mission and management prescriptions for designated areas;
- Identification of special designations that overlap with groundwater development areas that could be affected by future facilities;
- Generalization of construction effects in Cave, Delamar, Dry Lake, Snake, and Spring valleys due to the current unknown locations of wells and facilities needed for pumping at this stage of the project;
- Identification of special designations with water-dependent values that could be affected by groundwater drawdown;
- Evaluation of BLM RMP management actions, BMPs, and ACMs;
- Evaluation of existing mitigation measures and their effectiveness;
- Recommendation of additional mitigation measures to reduce or offset impacts; and
- Estimation of residual impacts after ACMs and recommended mitigation measures are applied.

Effects of future facilities on LWC areas would be completed in subsequent NEPA analyses when facility locations are known.

### 3.14.2.9 Proposed Action

#### Groundwater Development Area

The impact of constructing wells, roads, collector pipelines, and power distribution lines in Delamar, Dry Lake, Cave, Spring, and Snake valleys would be similar to those that are discussed for the construction of pipelines, power lines, and related facilities (Section 3.14.2.1). **Table 3.14-9** lists the acreage of the three special designations that could be affected by facilities proposed in the groundwater development areas. All of the BLM Baking Powder Flat and Swamp Cedar ACECs and just under half of the Baker Archeological Site ACEC fall within the groundwater development area boundaries. All three ACECS are managed as ROW avoidance areas, but ROWs might be granted if minimal conflict existed with the identified resource values and if impacts could be mitigated (BLM 2008). Although placing groundwater development areas within avoidance areas is not prohibited in these areas, the construction and operation of wells and associated facilities might affect the resources and important values within them.

If future facilities are constructed within the ACEC boundaries, the associated surface disturbance and resulting facilities could diminish and possibly impair the values for which the ACEC was designated. Areas of vegetation and habitat in the Baking Powder Flat and Swamp Cedar ACECs could be removed and altered by the project, depending on the extent of the project approved in these ACECs. The resulting aboveground facilities could impair the cultural resources setting in the Baker Archeological Site and Swamp Cedar ACECs. Long-term maintenance of facilities requiring increased use of heavy equipment and traffic in the area could conflict with values of ACEC special designations. Increased visitation also could result from improved public access and affect how the ACECs are managed and the condition of resources within them.

**Table 3.14-9 Special Designations within the Groundwater Development Areas for the Proposed Action**

Special Designation	Hydrologic Basin	Resource Value	Area within Groundwater Development Areas (Acres)	Percent of Total Area
Baker Archeological Site ACEC	Snake Valley	Cultural resources	38	48
Baking Powder Flat ACEC	Spring Valley	Sensitive butterfly habitat	13,638	99.9
Swamp Cedar ACEC	Spring Valley	Rocky Mountain juniper in alkali valley soils, cultural resources	3,200	100

Wilderness characteristics in wilderness areas adjacent to the groundwater development areas may be temporarily diminished during construction due to noise associated with heavy machinery and increased traffic depending on the proximity of these activities to the wilderness area boundary. Visitors in adjacent wilderness areas might notice a temporary disruption to solitude during construction. However, since all project construction would occur outside the wilderness area boundaries, no direct (permanent or physical) impacts to wilderness areas are anticipated. The following wilderness areas could be temporarily and indirectly affected, depending on the proximity of activities to the wilderness boundary: High Schells, Mount Moriah, Highland Ridge, Fortification Range, Far South Egans, Big Rocks, and Delamar Mountains.

**Conclusion.** All of the BLM Baking Powder Flat and Swamp Cedar ACECs and just under half of the Baker Archeological Site ACEC fall within the groundwater development area boundaries. All three ACECS are managed as ROW avoidance areas, but ROWs might be granted if minimal conflict existed with the identified resource values and if impacts could be mitigated (BLM 2008). If future facilities are constructed within the ACEC boundaries, the associated surface disturbance and resulting facilities could diminish and possibly impair the values for which the ACEC was designated. Wilderness characteristics in wilderness areas adjacent to the groundwater development areas may be temporarily diminished during construction due to noise associated with heavy machinery and increased traffic, depending on the proximity of these activities to the wilderness area boundary.

Proposed mitigation measures:

**GW-SD-1: Avoid New Disturbance in ACECs.** To the degree possible, avoid new surface disturbance in ACECs outside of utility corridors when planning well locations and roads. Effectiveness: This measure would be highly effective in protecting the values for which the ACEC was designated. Effects on other resources: There could be minimal effects of implementing this measure on transportation and associated air emissions if longer travel distances are required.

Mitigation measure ROW-SD-1 also applies to groundwater development.

Residual impacts include:

- If future facilities are constructed within the ACEC boundaries, the associated surface disturbance and resulting facilities could diminish and possibly impair the values for which the ACEC was designated. This impact could occur in three ACECs—Baking Powder Flat, Swamp Cedar, and Baker Archeological Site ACECs. Temporary, indirect effects to wilderness characteristics could occur in the following wilderness areas depending on the proximity of these activities to the wilderness area boundary: High Schells, Mount Moriah, Highland Ridge, Fortification Range, Far South Egans, Big Rocks, and Delamar Mountains.

### Groundwater Pumping

Special designations that contain water-dependent values, including phreatophytic vegetation, wet meadows, springs, and streams, could be affected by the drawdown from groundwater pumping. Drawdown effects may reduce flow to ponds, springs, and perennial streams and alter vegetation, which could affect the values of the special designation areas. More details on the anticipated changes in overall plant communities and wildlife habitat are provided in Vegetation, Section 3.5; Terrestrial Wildlife, Section 3.6; and Aquatic Biological Resources, Section 3.7.

Gradual changes in wetland meadow and phreatophyte (i.e., basin shrubland) vegetation communities from groundwater drawdown could adversely affect water- and wildlife-related values in special management areas. The analysis was conducted on areas where the 10-foot drawdown overlapped with areas of groundwater shallower than 50 feet (detailed in Section 3.5.2.8, Vegetation Resources). In total, pumping could adversely affect wetland meadow and phreatophytic vegetation in five special designations (**Table 3.14-10**), with the most area affected in the Baking Powder Flat, Shoshone Ponds, and Swamp Cedar ACECs. Vegetation changes in these areas could affect the resources being protected by the ACEC designation, compromising the objective of the designation. While changes in wetland meadow and phreatophyte vegetation could affect migratory bird habitat within the Pahrnagat NWR, drawdown effects would not be anticipated to compromise the objectives of the designation.

**Table 3.14-10 Acres of Wetland Meadow and Phreatophytic Vegetation Areas within Special Designations Affected under the Proposed Action**

Special Designation	Full Build Out	Full Build Out Plus 75 Years	Full Build Out Plus 200 Years
Baking Powder Flat ACEC	1,475	9,546	9,546
Lower Meadow Valley Wash ACEC	0	0	78
Pahrnagat NWR	0	0	225
Shoshone Ponds ACEC	0	1,021	1,021
Swamp Cedar ACEC	93	3,163	3,163
<b>Total</b>	<b>1,568</b>	<b>13,730</b>	<b>14,033</b>

Reductions of perennial streams and spring flows in special designations have the potential to adversely affect resources dependent upon those water resources including riparian and wetland vegetation. Special designations projected to have perennial streams and springs with moderate to high risk for reduced flows from groundwater drawdown are provided in **Table 3.14-11** and **Table 3.14-12**. Water level changes in the springs and streams of the

Shoshone Ponds, and Lower Meadow Valley Wash ACECs could affect the resources being protected by the ACEC designation, compromising the objective of the designation. Drawdown effects in the Pahranaagat NWR could affect migratory bird habitat, but would not be anticipated to compromise the objectives of the NWR designation. Drawdown effects on springs and streams in the High Schells and Mount Grafton Wilderness Areas could affect some forms of primitive recreation dependent on the water sources, but would not be anticipated to compromise the objectives of the wilderness designation.

Although there are no designated Wild and Scenic River segments currently within the region of study, there are two river segments on USFS lands in the northern part of the region of study identified as eligible for study under the Wild and Scenic Rivers Act: Muncy Creek (wild) and Smith Creek (recreation, scenic, and wild). Muncy Creek occurs within the groundwater draw down area full build out plus 75 years. Reduced water levels in the creek over time could affect potential designation of the river segment.

**Table 3.14-11 Number of Springs in Special Designations at Risk<sup>1</sup> of Being Affected By Drawdown Due to Proposed Action Pumping**

Special Designation	Full Build Out	Full Build Out Plus 75 Years	Full Build Out Plus 200 Years
Baking Powder Flat ACEC	0	1	1
High Schells USFS Wilderness	0	0	1
Mount Grafton Wilderness	0	0	3
Shoshone Ponds ACEC	0	5	5

<sup>1</sup> Impacts would include effects on riparian and wetland vegetation.

**Table 3.14-12 Miles of Perennial Streams in Special Designations at Risk<sup>1</sup> of Being Affected By Drawdown Due to Proposed Action Pumping**

Special Designation	Full Build Out	Full Build Out Plus 75 Years	Full Build Out Plus 200 Years
High Schells USFS Wilderness	0	<1	1
Lower Meadow Valley Wash ACEC	0	0	3
Pahranaagat NWR	0	0	<1

<sup>1</sup> Impacts would include effects on riparian and wetland vegetation.

Section 3.3, Water Resources, provides a detailed summary of the potentially affected springs and streams in GBNP based on the modeling completed for this EIS, as well as other recent work by the USGS. **Tables 3.14-11** and **3.14-12** provide the number of springs, and perennial stream miles that could be affected within the Park by 10 feet or more of groundwater drawdown.

The NPS has noted that the statute that established the GBNP specifies that the purpose of the GBNP is to conserve the natural resources within the GBNP and provide for the enjoyment of those resources in a way that leaves them unimpaired for future generations. NPS states that this mandate requires that there can be no impact to GBNP resources from the proposed project.

**Conclusion.** Special designations that contain water-dependent values, including phreatophytic vegetation, wet meadows, springs, and streams, could be affected by the drawdown effects from groundwater pumping. Pumping could adversely affect water-dependent values in nine special designations, with the most potential for impacts anticipated in the Baking Powder Flat, Shoshone Ponds, and Swamp Cedar ACECs. Water level changes in the Baking Powder Flat, Shoshone Ponds, and Lower Meadow Valley Wash ACECs could affect the resources being protected by the ACEC designation, compromising the objective of the designation. Potential project reductions in stream flow in springs and streams within GBNP could be contrary to the statute that established the Park. SNWA has recognized and agreed to “avoid any effect on federal resources within the boundaries of the GBNP from groundwater withdrawal by SNWA” (**Appendix C**). While drawdown could affect some water-dependent resources within the Pahranaagat NWR and High

Schells and Mount Grafton Wilderness Areas, drawdown effects would not be anticipated to compromise the objectives of these designations.

Proposed mitigation measures:

**GW-SD-2: Additional Hydrologic Studies Prior to BLM Snake Valley Lateral ROW Authorization.** Prior to BLM issuing a ROW and/or notice to proceed for the Snake Valley lateral, additional data collection and groundwater modeling analysis would be completed to more accurately predict whether any GBNP stream flow and spring flow reductions (magnitude and extent) would occur from proposed project operations.

Residual impacts would include:

- Special designations that contain water-dependent values, including phreatophytic vegetation, wet meadows, springs, and streams, could be affected by the drawdown effects from groundwater pumping including: Baking Powder Flat ACEC, Lower Meadow Valley Wash ACEC, Pahrangat NWR, GBNP, Shoshone Ponds ACEC, Swamp Cedar ACEC, High Schells USFS Wilderness, and Mount Grafton Wilderness. More details on the anticipated changes in overall plant communities and wildlife habitat are provided in Vegetation, Section 3.5; Terrestrial Wildlife, Section 3.6; and Aquatic Biological Resources, Section 3.7.

**3.14.2.10 Alternatives A Through E**

**Groundwater Development Area**

The same construction and facility maintenance impacts discussed for the Proposed Action would apply to Alternatives A through E. Impacts are summarized in **Table 3.14-13**.

**Table 3.14-13 Summary of Impacts, Proposed Mitigation, and Residual Effects to Special Designations for Alternatives A through E**

Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
<b>Construction, Operation, and Maintenance</b>				
Same as the Proposed Action.	Same as the Proposed Action.	Same as the Proposed Action.	No special designations would fall within the groundwater development areas.	Same as the Proposed Action.
<b>Proposed Mitigation Measures</b>				
GW-SD-1 and ROW-SD-1	GW-SD-1 and ROW-SD-1	GW-SD-1 and ROW-SD-1	None.	GW-SD-1 and ROW-SD-1
<b>Residual Impacts</b>				
If future facilities are constructed within the ACEC boundaries, the associated surface disturbance and resulting facilities could diminish and possibly impair the values for which the ACEC was designated. This impact could occur in three ACECs—Baking Powder Flat, Swamp Cedar, and Baker Archeological Site ACECs.	If future facilities are constructed within the ACEC boundaries, the associated surface disturbance and resulting facilities could diminish and possibly impair the values for which the ACEC was designated. This impact could occur in three ACECs—Baking Powder Flat, Swamp Cedar, and Baker Archeological Site ACECs.	If future facilities are constructed within the ACEC boundaries, the associated surface disturbance and resulting facilities could diminish and possibly impair the values for which the ACEC was designated. This impact could occur in three ACECs—Baking Powder Flat, Swamp Cedar, and Baker Archeological Site ACECs.	No impacts to special designations are anticipated.	If future facilities are constructed within the ACEC boundaries, the associated surface disturbance and resulting facilities could diminish and possibly impair the values for which the ACEC was designated. This impact could occur in three ACECs—Baking Powder Flat, Swamp Cedar, and Baker Archeological Site ACECs.

**Conclusion.** Surface disturbance impacts to special designations from future facilities in the groundwater development areas would be the same as the Proposed Action, with the exception of Alternative D. There are no special designations within the groundwater development areas under Alternative D.

### Groundwater Pumping

Drawdown effects on special designations would be similar to the Proposed Action. Wetland meadow and phreatophytic vegetation as well as springs and perennial streams at medium to high risk for reduced flows within special designations due to pumping effects under Alternatives A through E are listed in **Table 3.14-14**, **Table 3.14-15**, and **Table 3.14-16**. Water level changes in the springs and streams in the Baking Powder Flat, Lower Meadow Valley Wash, Shoshone Ponds, and Swamp Cedar ACECs could affect the resources being protected by the ACEC designation, compromising the objective of the designation. Drawdown effects in the Pahrnagat NWR could affect migratory bird habitat, but would not be anticipated to compromise the objectives of the NWR designation. Drawdown effects on springs and streams in the High Schells, Mount Grafton, Parsnip Peak (Alternative D only), and White Rock Range (Alternative D only) Wilderness Areas could affect some forms of primitive recreation dependent on the water sources, but would not be anticipated to compromise the objectives of the wilderness designation.

**Table 3.14-14 Acres of Wetland Meadow and Phreatophytic Vegetation Areas within Special Designations Affected By Drawdown Due to Pumping, Alternatives A through E**

Special Designation	Pumping Timeframe	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Baking Powder Flat ACEC	Full Build Out	1,475	0	1,475	0	1,475
	Full Build Out + 75 Years	9,546	9,350	4,394	8,262	9,546
	Full Build Out + 200 Years	9,546	9,546	6,094	9,546	9,546
Lower Meadow Valley Wash ACEC	Full Build Out	0	0	0	0	0
	Full Build Out + 75 Years	0	0	0	0	0
	Full Build Out + 200 Years	0	78	0	0	0
Pahrnagat NWR	Full Build Out	0	0	0	0	0
	Full Build Out + 75 Years	0	0	0	0	0
	Full Build Out + 200 Years	0	225	0	0	0
Shoshone Ponds ACEC	Full Build Out	0	0	0	0	0
	Full Build Out + 75 Years	1,021	1,021	505	0	1,021
	Full Build Out + 200 Years	1,021	1,021	506	861	1,021
Swamp Cedar ACEC	Full Build Out	0	1,360	0	0	0
	Full Build Out + 75 Years	656	3,163	12	0	656
	Full Build Out + 200 Years	2,069	3,163	72	0	1,842

**Table 3.14-15 Number of Springs in Special Designations at Risk of Being Affected By Drawdown Due to Pumping, Alternatives A through E**

Special Designation	Pumping Timeframe	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Baking Powder Flat ACEC	Full Build Out	0	0	0	0	0
	Full Build Out + 75 Years	1	1	0	1	1
	Full Build Out + 200 Years	1	1	1	1	1
High Schells USFS Wilderness	Full Build Out	0	0	0	0	0
	Full Build Out + 75 Years	0	0	0	0	0
	Full Build Out + 200 Years	0	1	0	0	0
Mount Grafton Wilderness	Full Build Out	0	0	0	0	0
	Full Build Out + 75 Years	0	1	0	0	0
	Full Build Out + 200 Years	1	3	0	1	1
Parsnip Peak Wilderness	Full Build Out	0	0	0	0	0
	Full Build Out + 75 Years	0	0	0	0	0
	Full Build Out + 200 Years	0	0	0	3	0
Shoshone Ponds ACEC	Full Build Out	0	0	0	0	0
	Full Build Out + 75 Years	5	5	3	0	5
	Full Build Out + 200 Years	5	5	3	5	5
White Rock Range Wilderness	Full Build Out	0	0	0	0	0
	Full Build Out + 75 Years	0	0	0	0	0
	Full Build Out + 200 Years	0	0	0	1	0

**Table 3.14-16 Miles of Perennial Streams in Special Designations at Risk of Being Affected By Drawdown Due to Pumping, Alternatives A through E**

Special Designation	Pumping Timeframe	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
High Schells USFS Wilderness	Full Build Out	0	0	0	0	0
	Full Build Out + 75 Years	0	0.2	0	0	0
	Full Build Out + 200 Years	0.4	0.4	0	0	0.2
Lower Meadow Valley Wash ACEC	Full Build Out	0	0	0	0	0
	Full Build Out + 75 Years	0	0	0	0	0
	Full Build Out + 200 Years	0	3.0	0	0	0
Pahranagat NWR	Full Build Out	0	0	0	0	0
	Full Build Out + 75 Years	0	0	0	0	0
	Full Build Out + 200 Years	0	0.5	0	0	0

Conclusion. Impacts to water-dependent values within special designations from groundwater pumping would be less under all alternatives as compared to the Proposed Action, with the least impacts occurring under Alternatives C and D.

Proposed mitigation measures:

Proposed Mitigation Measure GW-SD-2: Additional Hydrologic Studies Prior to BLM Snake Valley Lateral ROW Authorization would apply to Alternatives A, B, and C. Mitigation recommendations in Water, Section 3.3; Vegetation, Section 3.5; Terrestrial Wildlife, Section 3.6; and Aquatic Biological Resources, Section 3.7 may reduce identified impacts.

Residual impacts would include:

- Special designations that contain water-dependent values, including phreatophytic vegetation, wet meadows, springs, and streams, could be affected by the drawdown effects from groundwater pumping including: Baking Powder Flat ACEC, Lower Meadow Valley Wash ACEC, Pahrangat NWR, Shoshone Ponds ACEC, Swamp Cedar ACEC, High Schells USFS Wilderness, Mount Grafton Wilderness, Parsnip Peak Wilderness (Alternative D only), and White Rock Range Wilderness (Alternative D only) and GBNP (Alternatives A through C only). More details on the anticipated changes in overall plant communities and wildlife habitat are provided in Vegetation, Section 3.5; Terrestrial Wildlife, Section 3.6; and Aquatic Biological Resources, Section 3.7.

### 3.14.2.11 No Action

#### Groundwater Development Area

Under the No Action Alternative, the ROWs would not be granted and the project would not be constructed as planned. Existing and proposed projects that would affect special management areas would be subject to BLM approval in compliance with the Ely and Las Vegas Field Office RMPs. Use and protection of special designations that are managed by other federal and state agencies would comply with those agencies' specific management plans and guidelines.

#### Groundwater Pumping

Under the No Action Alternative, the ROWs would not be granted and the project would not be constructed as planned. However, other ongoing projects and activities would continue to draw down groundwater levels. Projected drawdown impacts on wetland meadow and phreatophytic vegetation as well as springs and perennial streams at medium to high risk for reduced flows within special designations due to pumping effects are listed in **Table 3.14-17**, **Table 3.14-18**, and **Table 3.14-19**.

**Table 3.14-17 Acres of Wetland Meadow and Phreatophytic Vegetation Areas within Special Designations Affected under No Action**

Special Designation	Full Build Out	Full Build Out Plus 75 Years	Full Build Out Plus 200 Years
Lower Meadow Valley Wash ACEC	0	0	202

**Table 3.14-18 Number of Springs in Special Designations at Medium to High Risk of Being Affected By Drawdown under No Action**

Special Designation	Full Build Out	Full Build Out Plus 75 Years	Full Build Out Plus 200 Years
Desert NWR	0	0	2
Lower Meadow Valley Wash ACEC	0	0	3
Parship Peak Wilderness	0	0	7

**Table 3.14-19 Miles of Perennial Streams in Special Designations at Medium to High Risk of Being Affected By Drawdown under No Action**

Special Designation	Full Build Out	Full Build Out Plus 75 Years	Full Build Out Plus 200 Years
High Schells USFS Wilderness	0	0	0
Lower Meadow Valley Wash ACEC	0	0	9
Parsnip Peak Wilderness	0	<1	1

Conclusion. Existing projects and activities under the No Action Alternative would draw down groundwater that would affect special designations that contain water-dependent values, including phreatophytic vegetation, wet meadows, springs, and streams. Areas affected include: Desert NWR, Lower Meadow Valley Wash ACEC, High Schells USFS Wilderness, and Parsnip Peak Wilderness. More details on the anticipated changes in overall plant communities and wildlife habitat are provided in Vegetation Resources, Section 3.5; Terrestrial Wildlife, Section 3.6; and Aquatic Biological Resources, Section 3.7.

Proposed mitigation measures:

None.

Residual impacts would include:

- Existing projects and activities under the No Action Alternative would draw down groundwater that would affect special management areas that contain water-dependent values, including phreatophytic vegetation, wet meadows, springs, and streams. Areas affected include: Desert NWR, Lower Meadow Valley Wash ACEC, High Schells USFS Wilderness, and Parsnip Peak Wilderness. More details on the anticipated changes in overall plant communities and wildlife habitat are provided in Vegetation, Section 3.5; Terrestrial Wildlife, Section 3.6; and Aquatic Biological Resources, Section 3.7.

### 3.14.3 Cumulative Impacts

#### 3.14.3.1 Issues

The following issues are evaluated for cumulative impacts to special designations:

- Surface disturbance could be inconsistent with management prescriptions and diminish or impair values of special designations.
- Special designations that contain water-dependant values, including phreatophytic vegetation, wet meadows, springs, and streams, could be affected by the drawdown effects from groundwater pumping.
- Areas eligible for special designations could be adversely affected by impaired or diminished values over the long-term.

Sections 3.3, Water Resources; 3.5, Vegetation; 3.6, Terrestrial Wildlife; and 3.7, Aquatic Biological Resources discuss the potential effects on resources that many of these special designations protect. A discussion of impacts to visually sensitive areas is in Section 3.15.2 and Section 3.16 discusses impacts to cultural resources.

#### 3.14.3.2 Assumptions

The following assumptions were used in the cumulative impact analysis for special designations:

- Precautions would be taken to protect resources and important values that contribute to the special designation.
- Facilities would not be approved in special designation areas identified as ROW exclusion areas.

#### 3.14.3.3 Methodology for Analysis

The cumulative impacts of construction of the GWD Project should take into account all surface-altering actions and actions that would drawdown groundwater that would be likely to occur and that might affect special designations in the project region that are also affected by the GWD Project. Using the impact analysis for the ROWs, groundwater development areas, and groundwater pumping, impacts from other RFFAs identified in Chapter 2 were considered.

#### 3.14.3.4 No Action

##### Surface Disturbance

Under the No Action Alternative, the proposed project would not be constructed or maintained. No project-related surface disturbance would occur. However, ongoing activities and future projects would continue to occur in the region of study and may be approved on a case-by-case basis in special designations subject to approval by the federal or state administering agency. To maintain resource values within special designations, federal and state agencies would continue to manage these areas according to their specific management plans. In general, areas where surface-disturbing activity would be incompatible with the special designation, the administering agency would apply management that would exclude such activity or approve the activity with stipulations to protect resource values contributing to that designation. One exception could be within ROW corridors designated in the boundaries of special designations, where a relatively high density of utilities are sited to concentrate disturbance to existing areas. However, utilities may be forced to move outside of designated corridors and cross special designation boundaries in the future as demands increase.

##### Groundwater Pumping

For the No Action alternative, the ROWs would not be granted and the project would not be constructed as planned. However, other planned projects and activities would occur that would drawdown groundwater levels. Cumulative drawdown impacts to wetland meadow and phreatophytic vegetation as well as springs and perennial streams at medium to high risk for reduced flows within special designations due to pumping effects under the No Action Alternative are listed in **Tables 3.9-20, 3.14-21, and 3.14-22.**

**Table 3.14-20 Acres of Wetland Meadow and Phreatophytic Vegetation Areas within Special Designations Affected By Drawdown Due to Cumulative Pumping with No Action**

Special Designation	Full Build Out	Full Build Out Plus 75 Years	Full Build Out Plus 200 Years
Clover Mountains Wilderness	0	0	1
Lower Meadow Valley Wash ACEC	202	263	446
Mormon Mesa ACEC	0	0	37
Pahranagat NWR	225	225	225

**Table 3.14-21 Number of Springs in Special Designations at Risk of Being Affected By Drawdown Due to Cumulative Pumping with No Action**

Special Designation	Full Build Out	Full Build Out Plus 75 Years	Full Build Out Plus 200 Years
Becky Peak Wilderness	0	1	1
Desert NWR	0	1	5
Lower Meadow Valley Wash ACEC	3	4	4
Mormon Mesa ACEC	0	0	2
Pahranagat NWR	0	0	1
Parsnip Peak Wilderness	0	0	7

**Table 3.14-22 Miles of Perennial Streams in Special Designations at Risk of Being Affected By Drawdown Due to Cumulative Pumping with No Action**

Special Designation	Full Build Out	Full Build Out Plus 75 Years	Full Build Out Plus 200 Years
Clover Mountains Wilderness	0	0	<1
Condor Canyon ACEC	0	0	<1
Lower Meadow Valley Wash ACEC	9	9	22
Pahranagat NWR	<1	<1	<1
Parsnip Peak Wilderness	0	<1	1

**Conclusion.** Under the No Action Alternative, the proposed project would not be constructed or maintained. However, ongoing activities and future projects would continue to occur in the region of study and may be approved on a case-by-case basis in special designations subject to approval by the federal or state administering agency. Existing projects and activities under the No Action Alternative would drawdown groundwater and affect special designations that contain water-dependant values, including phreatophytic vegetation, wet meadows, springs, and streams. Areas affected include: three ACECs (Condor Canyon, Lower Meadow Valley Wash, and Mormon Mesa ACECs), two NWRs (Desert and Pahranagat NWRs), and three wilderness areas (Becky Peak, Clover Mountains, and Parsnip Peak Wilderness). More details on the anticipated changes in overall plant communities and wildlife habitat are provided in Vegetation, Section 3.5; Terrestrial Wildlife, Section 3.6; and Aquatic Biological Resources, Section 3.7.

Additional Mitigation:

None.

Residual impacts include:

- Existing projects and activities under the No Action Alternative would drawdown groundwater and affect special designations that contain water-dependant values, including phreatophytic vegetation, wet meadows, springs, and streams. Areas affected include: three ACECs (Condor Canyon, Lower Meadow Valley Wash, and Mormon Mesa ACECs), two NWRs (Desert and Pahrnatag NWRs), and three wilderness areas (Becky Peak, Clover Mountains, and Parsnip Peak Wilderness). More details on the anticipated changes in overall plant communities and wildlife habitat are provided in Vegetation Resources, Section 3.5; Terrestrial Wildlife, Section 3.6; and Aquatic Biological Resources, Section 3.7.

### **3.14.3.5 Proposed Action**

#### **Groundwater Development Area**

The GWD Project would contribute to cumulative effects in special designations where other RFFAs would disturb the same special designation. Surface disturbance associated with the GWD Project is anticipated in five ACECs (Baker Archeological Site, Baking Powder Flat, Coyote Springs, Kane Springs, and Swamp Cedar ACECs). The ACECS are managed as ROW avoidance areas, but ROWs might be granted if minimal conflict existed with the identified resource values and if impacts could be mitigated (BLM 2008). Although placing facilities within avoidance areas is not prohibited in these areas, the construction and operation of the facilities might affect the resources and important values within them. The Spring Valley Wind Project would disturb area adjacent to the Swamp Cedar ACEC. The ON Transmission Line and Eastern Nevada Transmission Line projects would pass through the Coyote Springs ACEC and disturb area adjacent to the Kane Springs ACEC. The GWD Project would contribute to cumulative impacts to these three ACECs.

To maintain resource values within special designations, federal and state agencies would continue to manage these areas according to their specific management plans. In general, areas where surface-disturbing activity would be incompatible with the special designation, the administering agency would apply management that would exclude such activity or approve the activity with stipulations to protect resources values contributing to that designation. One exception could be within ROW corridors designated in the boundaries of special designations, where a relatively high density of utilities are sited to concentrate disturbance to existing areas. However, utilities may be forced to move outside of designated corridors and cross special designation boundaries in the future as demands increase.

#### **Groundwater Pumping**

Cumulative drawdown impacts to wetland meadow and phreatophytic vegetation as well as springs and perennial streams at medium to high risk for reduced flows within special designations due to pumping effects under the Proposed Action Alternative are listed in **Tables 3.9-23, 3.14-24, and 3.14-25**.

**Table 3.14-23 Acres of Wetland Meadow and Phreatophytic Vegetation Areas within Special Designations Affected By Drawdown for No Action, Cumulative, Proposed Action and Cumulative with Proposed Action<sup>1</sup>**

Special Designation	Cumulative with No Action			Proposed Action			Cumulative with Proposed Action		
	Full Build Out	Full Build Out Plus 75 Years	Full Build Out Plus 200 Years	Full Build Out	Full Build Out Plus 75 Years	Full Build Out Plus 200 Years	Full Build Out	Full Build Out Plus 75 Years	Full Build Out Plus 200 Years
Clover Mountains Wilderness	0	0	1	0	0	0	0	0	1
Lower Meadow Valley Wash ACEC	202	263	446	0	0	78	202	341	492
Mormon Mesa ACEC	0	0	37	0	0	0	0	0	37
Pahranagat NWR	225	225	225	0	0	225	225	225	247
Baking Powder Flat ACEC	0	0	0	1,475	9,546	9,546	1,475	9,546	9,546
Shoshone Ponds ACEC	0	0	0	0	1,021	1,021	506	1,021	1,021
Swamp Cedar ACEC	0	0	0	93	3,163	3,163	210	3,163	3,163

<sup>1</sup> Acreages are based on drawdown models outputs and are not additive. Information presented is approximate and intended to display incremental effects of the project in relation to other projects in the region.

**Table 3.14-24 Number of Springs in Special Designations at Risk Due to Groundwater Pumping for No Action Cumulative, Proposed Action, and Cumulative with Proposed Action<sup>1</sup>**

Special Designation	Cumulative with No Action			Proposed Action			Cumulative with Proposed Action		
	Full Build Out	Full Build Out Plus 75 Years	Full Build Out Plus 200 Years	Full Build Out	Full Build Out Plus 75 Years	Full Build Out Plus 200 Years	Full Build Out	Full Build Out Plus 75 Years	Full Build Out Plus 200 Years
Becky Peak Wilderness	0	1	1	0	0	0	0	1	2
Desert NWR	0	1	5	0	0	0	0	1	5
Lower Meadow Valley Wash	3	4	4	0	0	0	3	4	4
Mormon Mesa ACEC	0	0	2	0	0	0	0	0	2
Pahranagat NWR	0	0	1	0	0	0	0	1	1
Parsnip Peak Wilderness	0	0	7	0	0	0	0	0	7
Baking Powder Flat ACEC	0	0	0	0	1	1	0	1	1
High Schells USFS Wilderness	0	0	0	0	0	1	0	0	1
Mount Grafton Wilderness	0	0	0	0	0	3	0	0	3
Shoshone Ponds ACEC	0	0	0	0	5	5	3	5	5

<sup>1</sup> Acreages are based on drawdown models outputs and are not additive. Information presented is approximate and intended to display incremental effects of the project in relation to other projects in the region.

**Table 3.14-25 Miles of Perennial Streams in Special Designations at Risk Due to Groundwater Pumping for No Action Cumulative, Proposed Action, and Cumulative with Proposed Action<sup>1</sup>**

	Cumulative with No Action			Proposed Action			Cumulative with Proposed Action		
	Full Build Out	Full Build Out Plus 75 Years	Full Build Out Plus 200 Years	Full Build Out	Full Build Out Plus 75 Years	Full Build Out Plus 200 Years	Full Build Out	Full Build Out Plus 75 Years	Full Build Out Plus 200 Years
Clover Mountains Wilderness	0	0	<1	0	0	0	0	0	<1
Condor Canyon ACEC	0	0	<1	0	0	0	0	0	<1
Lower Meadow Valley Wash	9	9	22	0	0	3	9	13	25
Pahranagat NWR	<1	<1	<1	0	0	<1	<1	<1	<1
Parsnip Peak Wilderness	0	<1	1	0	0	0	0	<1	1
High Schells USFS Wilderness	0	0	0	0	<1	1	0	<1	1
Mount Grafton Wilderness	0	0	0	0	0	0	0	0	<1

<sup>1</sup> Acreages are based on drawdown models outputs and are not additive. Information presented is approximate and intended to display incremental effects of the project in relation to other projects in the region.

The Proposed Action would contribute incremental effects under cumulative pumping to spring, stream, wet meadow, and phreatophytic vegetation within special designations: Lower Meadow Valley Wash ACEC, Pahranagat NWR, Baking Powder Flat ACEC, Shoshone Ponds ACEC, Swamp Cedar ACEC, High Schells USFS Wilderness, and Mount Grafton Wilderness (**Tables 3.14-22 through 3.14-24**). The Proposed Action would contribute all of the predicted effects on special designations impact parameters in Baking Powder Flat ACEC, Shoshone Ponds ACEC, Swamp Cedars ACEC, High Schells USFS Wilderness, and Mount Grafton Wilderness. The magnitude of the contribution would be highest in Baking Powder Flat ACEC, Shoshone Ponds ACEC, and Swamp Cedars ACEC, as indicated by vegetation and spring effects in **Tables 3.14-23 and 3.14-24**. The contribution is relatively small in the other special designations. The Proposed Action would contribute a small portion of effects in combination with No Action pumping in Lower Meadow Valley Wash ACEC and Pahranagat NWR. No Action pumping contributes all of the effects on special designations in Pahranagat NWR. No Action pumping contributes all of the effects on special designations in Becky Peak Wilderness, Clover Mountains Wilderness, Desert NWR, Parsnip Peak Wilderness, Condor Canyon ACEC, and Mormon Mesa ACEC.

**Conclusion.** Special designations that contain water-dependent values, including phreatophytic vegetation, wet meadows, springs, and streams, could be adversely affected by cumulative drawdown effects from groundwater pumping. Proposed Action pumping would contribute adverse incremental effects to wetland meadow and phreatophytic vegetation in four ACECs (Baking Powder Flat, Lower Meadow Valley Wash, Shoshone Ponds, and Swamp Cedar ACECs), which could compromise the objective of the designation. While Proposed Action pumping would contribute adverse effects to some water-dependant resources within one wildlife refuge (Pahranagat NWR) and two wilderness areas (High Schells and Mount Grafton), drawdown effects would not be anticipated to compromise the objectives of these designations.

Additional mitigation:

None. Mitigation recommendations in Water, Section 3.3; Vegetation Resources, Section 3.5; Terrestrial Wildlife, Section 3.6; and Aquatic Biological Resources, Section 3.7 may reduce identified impacts.

Residual impacts include:

- Special designations that contain water-dependent values, including phreatophytic vegetation, wet meadows, springs, and streams, could be affected by the cumulative drawdown effects from groundwater pumping including

four ACECs, one NWR, and two wilderness areas. More details on the anticipated changes in overall plant communities and wildlife habitat are provided in Vegetation, Section 3.5; Terrestrial Wildlife, Section 3.6; and Aquatic Biological Resources, Section 3.7.

### 3.14.3.6 Alternatives A through E

#### Groundwater Development Area

Cumulative impacts to special designations from surface disturbance associated with the GWD Project and other RFFAs would be similar to the Proposed Action, with the exception of Alternative D. There are no special designations within the groundwater development areas under Alternative D.

#### Groundwater Pumping

Cumulative drawdown effects on special designations would be similar to the Proposed Action. Wetland meadow and phreatophytic vegetation as well as springs and perennial streams at moderate or high risk for reduced flows within special designations would result from cumulative pumping under Alternatives A through E (Tables 3.9-24, 3.14-25, and 3.14-28).

**Table 3.14-26 Acres of Wetland Meadow and Phreatophytic Vegetation Areas within Special Designations Affected By Drawdown Due to Cumulative Pumping (Alternatives A through E)**

Special Designation	Pumping Timeframe	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Baking Powder Flat ACEC	Full Build Out	1,561	0	1,561	0	1,561
	Full Build Out + 75 Years	9,546	9,392	4,416	8,681	9,546
	Full Build Out + 200 Years	9,546	9,546	6,589	9,546	9,546
Clover Mountain Wilderness	Full Build Out	0	0	0	0	0
	Full Build Out + 75 Years	0	0	0	0	0
	Full Build Out + 200 Years	1	1	1	1	1
Lower Meadow Valley Wash ACEC	Full Build Out	202	202	202	202	202
	Full Build Out + 75 Years	263	341	263	263	263
	Full Build Out + 200 Years	446	492	446	446	446
Mormon Mesa ACEC	Full Build Out	0	0	0	0	0
	Full Build Out + 75 Years	0	0	0	0	0
	Full Build Out + 200 Years	37	37	337	37	37
Pahranagat NWR	Full Build Out	225	225	225	225	225
	Full Build Out + 75 Years	225	225	225	225	225
	Full Build Out + 200 Years	225	247	225	225	225
Shoshone Ponds ACEC	Full Build Out	262	506	262	0	262
	Full Build Out + 75 Years	1,021	1,021	767	208	1,021
	Full Build Out + 200 Years	1,021	1,021	923	923	1,021
Swamp Cedar ACEC	Full Build Out	0	1,394	0	0	0
	Full Build Out + 75 Years	689	3,163	72	0	689
	Full Build Out + 200 Years	2,118	3,163	72	0	1,871

**Table 3.14-27 Number of Springs in Special Designations at Risk of Being Affected By Drawdown Due to Cumulative Pumping (Alternatives A through E)**

Special Designation	Pumping Timeframe	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Baking Powder Flat ACEC	Full Build Out	0	0	0	0	0
	Full Build Out + 75 Years	1	1	0	1	1
	Full Build Out + 200 Years	1	1	1	1	1
Becky Peak Wilderness	Full Build Out	0	0	0	0	0
	Full Build Out + 75 Years	1	1	1	1	1
	Full Build Out + 200 Years	1	1	1	1	1
Desert NWR	Full Build Out	0	0	0	0	0
	Full Build Out + 75 Years	1	1	1	1	1
	Full Build Out + 200 Years	5	5	5	5	5
High Schells USFS Wilderness	Full Build Out	0	0	0	0	0
	Full Build Out + 75 Years	0	0	0	0	0
	Full Build Out + 200 Years	0	1	0	0	0
Lower Meadow Valley Wash ACEC	Full Build Out	3	3	3	3	3
	Full Build Out + 75 Years	4	4	4	3	4
	Full Build Out + 200 Years	4	4	4	4	4
Mormon Mesa ACEC	Full Build Out	0	0	0	0	0
	Full Build Out + 75 Years	0	0	0	0	0
	Full Build Out + 200 Years	2	2	2	2	2
Mount Grafton Wilderness	Full Build Out	0	0	0	0	0
	Full Build Out + 75 Years	0	1	0	0	0
	Full Build Out + 200 Years	2	3	1	2	2
Pahranagat NWR	Full Build Out	0	0	0	0	0
	Full Build Out + 75 Years	0	1	0	0	0
	Full Build Out + 200 Years	1	1	1	1	1
Parsnip Peak Wilderness	Full Build Out	0	0	0	0	0
	Full Build Out + 75 Years	0	0	0	0	0
	Full Build Out + 200 Years	7	7	7	7	7
Shoshone Ponds ACEC	Full Build Out	3	3	3	0	3
	Full Build Out + 75 Years	5	5	5	3	5
	Full Build Out + 200 Years	5	5	5	5	5
White Rock Range Wilderness	Full Build Out	0	0	0	0	0
	Full Build Out + 75 Years	0	0	0	0	0
	Full Build Out + 200 Years	0	0	0	3	0

**Table 3.14-28 Miles of Perennial Streams in Special Designations at Risk of Being Affected By Drawdown Due to Cumulative Pumping (Alternatives A through E)**

Special Designation	Pumping Timeframe	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Clover Mountains Wilderness	Full Build Out	0	0	0	0	0
	Full Build Out + 75 Years	0	0	0	0	0
	Full Build Out + 200 Years	0.2	0.2	0.2	0.2	0.2
Condor Canyon ACEC	Full Build Out	0	0	0	0	0
	Full Build Out + 75 Years	0	0	0	0	0
	Full Build Out + 200 Years	<1	<1	<1	<1	<1
High Schells USFS Wilderness	Full Build Out	0	0	0	0	0
	Full Build Out + 75 Years	<1	<1	0	0	<1
	Full Build Out + 200 Years	<1	<1	<1	0	<1
Lower Meadow Valley Wash ACEC	Full Build Out	9	9	9	9	9
	Full Build Out + 75 Years	12	13	12	9	12
	Full Build Out + 200 Years	22	25	22	22	22
Mount Grafton Wilderness	Full Build Out	0	0	0	0	0
	Full Build Out + 75 Years	0	0	0	0	0
	Full Build Out + 200 Years	0	<1	0	0	0
Pahranagat MWR	Full Build Out	<1	<1	<1	<1	<1
	Full Build Out + 75 Years	<1	<1	<1	<1	<1
	Full Build Out + 200 Years	<1	<1	<1	<1	<1
Parsnip Peak Wilderness	Full Build Out	0	0	0	0	0
	Full Build Out + 75 Years	<1	<1	<1	<1	<1
	Full Build Out + 200 Years	1	1	1	1	1
GBNP	Full Build Out	0	0	0	0	0
	Full Build Out + 75 Years	6	13	4	0	0
	Full Build Out + 200 Years	9	15	8	8	8

The patterns of incremental contributions from Alternatives A through E would be the same as the Proposed Action. Individual alternatives would contribute all of the adverse effects on special designations in Baking Powder Flat ACEC, Shoshone Ponds ACEC, Swamp Cedars ACEC, High Schells USFS Wilderness, and Mount Grafton Wilderness. Alternative D pumping would contribute all of the effects on special designation parameters in White Rock Range Wilderness. Individual alternatives would contribute a small portion of effects on special designations in combination with No Action pumping in Lower Meadow Valley Wash ACEC and Pahranagat NWR. All of the alternatives (A through E) would result in a lesser extent of drawdown impacts to special designations, as compared to the Proposed Action.

Additional mitigation:

None. Mitigation recommendations in Water, Section 3.3; Vegetation, Section 3.5; Terrestrial Wildlife, Section 3.6; and Aquatic Biological Resources, Section 3.7 may reduce identified impacts.

Residual impacts include:

- Special designations that contain water-dependant values, including phreatophytic vegetation, wet meadows, springs, and streams, could be affected by the cumulative drawdown effects from groundwater pumping including six ACECs, two NWRs, and six wilderness areas. More details on the anticipated changes in overall plant communities and wildlife habitat are provided in Vegetation, Section 3.5; Terrestrial Wildlife, Section 3.6; and Aquatic Biological Resources, Section 3.7.