

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

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**Preliminary Environmental Assessment**

**DOI-BLM-NV-L030-2020-0002 EA**

March 4, 2020

Tempiute Well and Pipeline  
and  
Crescent Spring Pipeline Extension  
on the  
Bald Mountain Allotment  
(#21003)

*Lincoln County, Nevada*

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## 1.0 Introduction

This document identifies issues, analyzes alternatives, and discloses the potential environmental impacts associated with construction of the Tempiute Well and Pipeline and extension of the Crescent Spring Pipeline on the Bald Mountain Allotment (#21003).

### 1.1 Background

The Bald Mountain Allotment is located in Lincoln County, Nevada approximately three miles southeast of the town of Rachel in the western portion of the Caliente Field Office, Ely District Bureau of Land Management (BLM) (Fig 1.1). The allotment is on the northern fringe of the Mojave Desert and the vegetation includes iconic Mojave Desert plant species, such as Joshua Tree (*Yucca brevifolia*), Mojave yucca (*Yucca schidigera*), and cholla cactus (*Cylindropuntia* spp.) as well as plant species found in the transition zone between the Mojave Desert and the Great Basin, such as blackbrush (*Coleogyne ramosissima*). The allotment, including Department of Defense land on the western edge of the allotment, encompasses 260,056 acres; 218,229 acres of public land within the allotment is administered by BLM.

Bald Mountain allotment general location (Mount Diablo Meridian, Nevada):

- T.4 S., R.55, 56, 57 E., many sections
- T.5 S., R.55.5, 56, 57, 58 E., many sections
- T.6 S., R. 56, 57, 58, 59 E., many sections
- T.7 S., R. 56, 57, 58, 59 E., many sections

Grazing preference for this cattle allotment is water-based and is held by D/4 Enterprises (authorization #2705021) as a result of ownership of water rights. D/4 Enterprises is the only livestock operator authorized to graze the Bald Mountain allotment. Table 1.1 shows mandatory Terms and Conditions for the allotment.

**Table 1.1. Permitted Grazing Use on the Bald Mountain Allotment.**

Permittee	Authorization Number	Season of Use	Livestock Type	AUMs		
				Suspended	Active	Permitted
D/4 Enterprises	2705021	3/1 – 2/28	Cattle	487	5,751	6,298
			Horses	0	60	
			Totals	487	5,811	

The vast majority of the allotment is within the Tikaboo Valley hydrographic basin (169A); the extreme northern portion of the allotment is within the Penoyer Valley basin (170) (Fig. 1.2). Elevations range from about 9,300 feet on Bald Mountain to about 4000 feet in the southern portion of the allotment.

Recurring drought is the primary factor affecting ecosystem function in the Mojave Desert (Hereford et al. 2006, Huning 1978). Mean annual precipitation on the allotment is 5.8 inches based on a 15 year record (1996-2010) of BLM rain gauge data (Fig. 1.3). Precipitation in

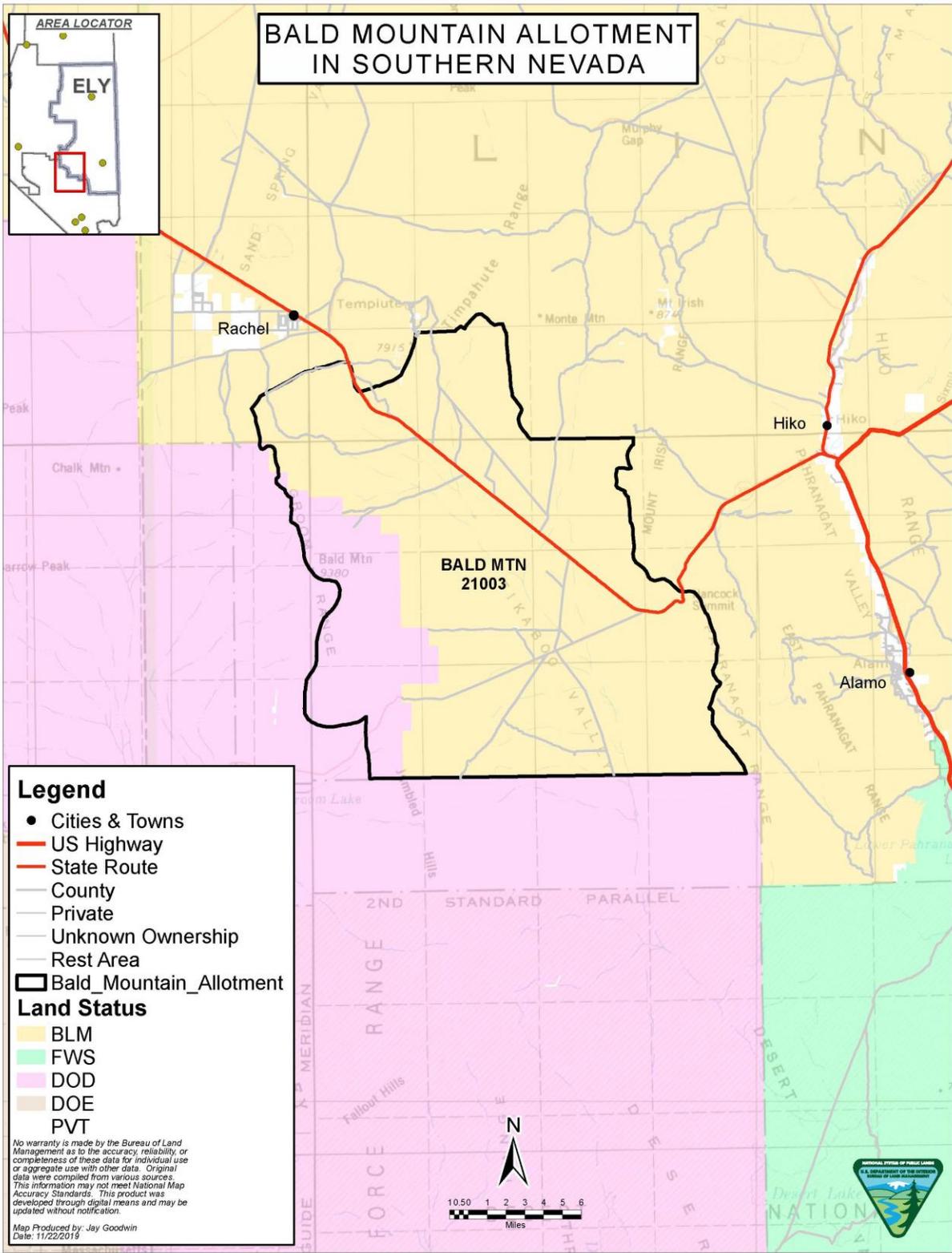
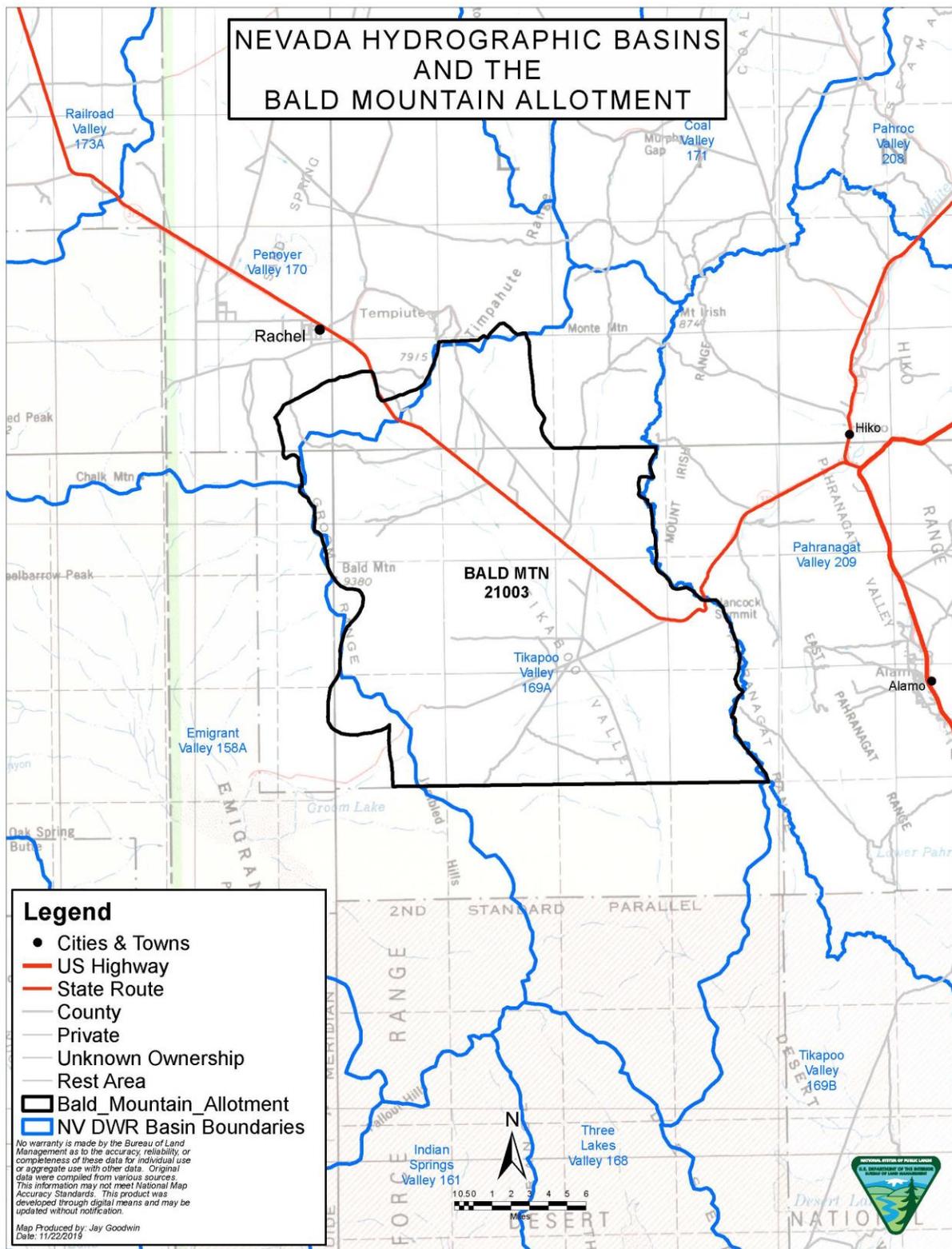
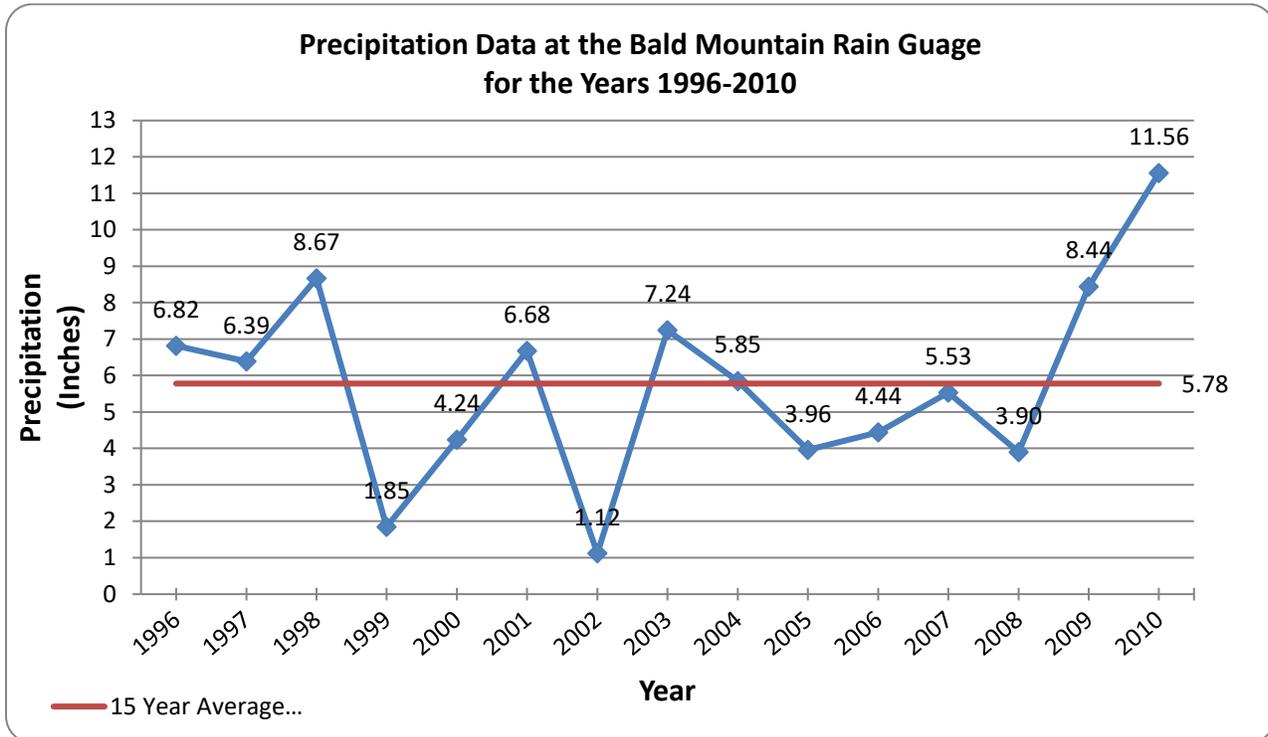


Figure 1.1. Location of the Bald Mountain allotment in southern Nevada.



**Figure 1.2. Hydrographic basins and the Bald Mountain allotment.**

southern Nevada is highly variable on both temporal and spatial scales (see Halliday 1957). Rain gauge data reflect this variability, with total annual precipitation varying between 1.12 in 2002 to 11.56 inches in 2010. On average, four years in ten receive precipitation in the normal or average range, one year in three is a drought year, and one year in four is a wet year. February and July are the wettest months of the year, receiving about 0.9 inches of precipitation. May, June, and September are the driest with less than 0.25 inches of rain.



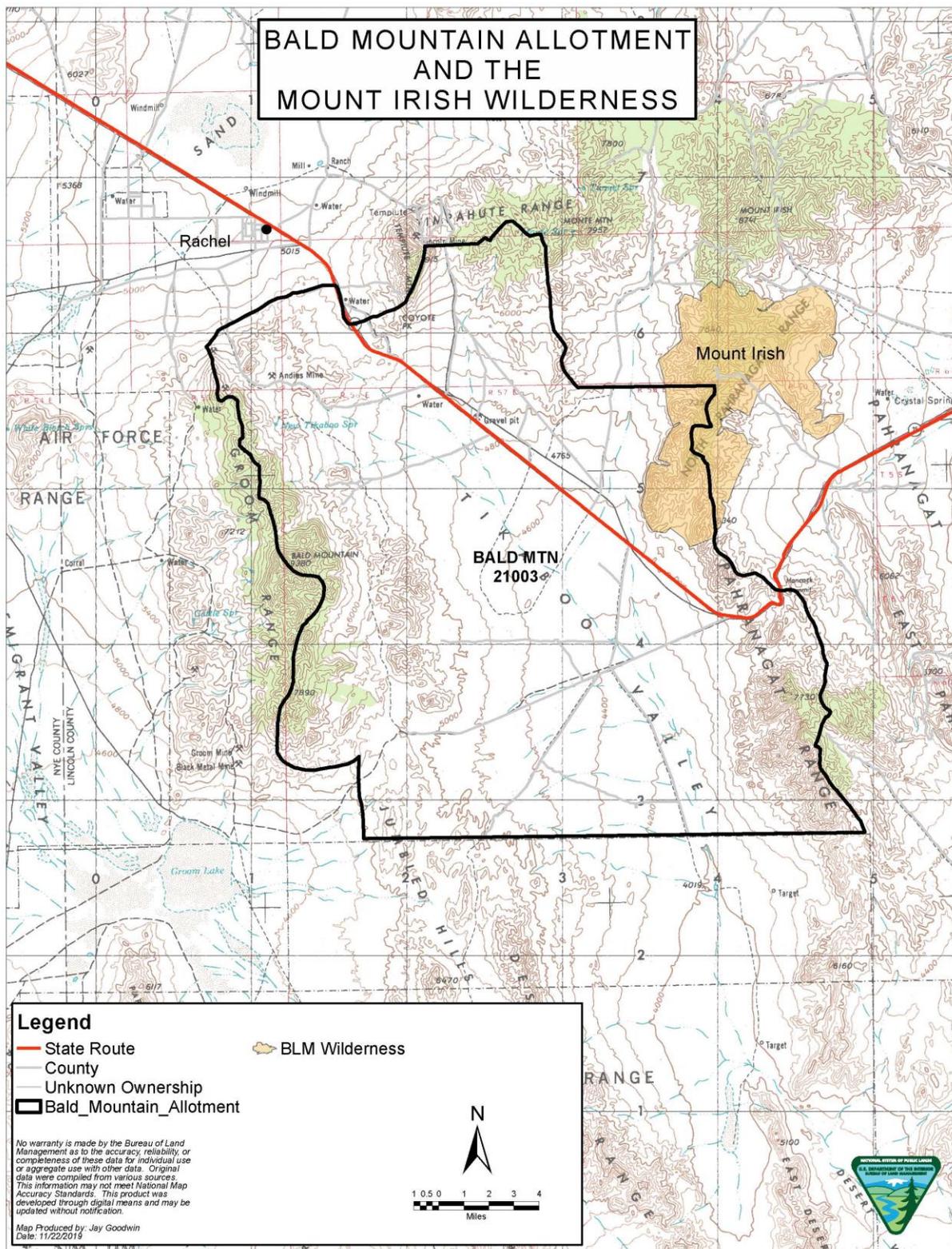
**Figure 1.3. Annual precipitation measured at the BLM Bald Mountain rain gauge.**

The eastern edge of the Bald Mountain allotment lies within the Mount Irish Wilderness in the North Pahrangat Range of mountains (Fig 1.4). This area is characterized by steep, rugged, rocky terrain that is relatively unsuitable for domestic cattle (Coughenour 1991).

No perennial streams occur on BLM-administered lands within the allotment and there are no riparian areas. There are ephemeral streams (washes), in which water may flow during storm events, and reservoirs that capture and store these ephemeral flows. Groundwater in the project area lies in the basin sediments, which are part of the Great Basin alluvial aquifer system.

Water for wildlife and grazing livestock is supplied by small montane springs, reservoirs which fill from rain or snow melt, and waterhails. Sufficient water to meet livestock metabolic requirements is the greatest limitation to livestock production on the allotment.

No Wild Horse Herd Management Area, Herd Area, desert tortoise habitat, or sage grouse habitat occur within the Bald Mountain allotment. Sensitive species known to occur on



**Figure 1.4. Wilderness Areas and the Bald Mountain allotment.**

BLM-administered land within the allotment are golden eagles (*Aquila chrysaetos*) which nest in the steep, rocky hills within and south of the Mount Irish Wilderness.

## **1.2 Introduction of the Proposed Action**

D/4 Enterprises has proposed to drill a groundwater well (Tempiute Well) and construct a pipeline (Tempiute Pipeline) to convey water from this well to existing livestock water troughs which are currently supplied by hauling water, and to extend the Crescent Spring Pipeline and add one stock trough (Fig. 1.5). The proposed well and pipeline, as well as the Crescent Spring Pipeline extension, would be entirely within the Tickaboo Valley (169A) hydrographic basin on public land managed by BLM. No part of the well and pipeline would occur within Wilderness, an ACEC, desert tortoise habitat, or Wild Horse Herd Management Area. Existing troughs that would be supplied by the new Tempiute Pipeline are BMWH 14, BMWH 13, BMWH 10, and New Water 1. A new storage tank and stock trough would be located at the new well.

D/4 Enterprises has acquired a permit to appropriate groundwater from the Nevada Division of Water Resources for the proposed Tempiute Well (Appendix I). They have also obtained permission from Lincoln County Power District No. 1 (LCPD) to bury the proposed pipeline in the nonexclusive Right-of-Way (ROW) issued to LCPD for the power line (Appendix II). Lincoln County Roads Department (LCRD), which maintains bladed roads in the project area, also supports the project (Appendix III) and maps of pipeline locations have been provided to LCRD in order to prevent pipeline damage during road maintenance.

## **1.3 Purpose and Need for the Proposed Action**

The purpose of the proposed action is to improve livestock waters on the Bald Mountain allotment in an area presently dependent upon waterhauls for the provision of livestock water and thereby allow improved range management through control of spatial and temporal livestock distribution. The need for the action is to respond to the permittee's acquisition of a permit to appropriate groundwater and to maintain or progress towards achieving the rangeland health standards and guidelines established by the Mojave-Southern Great Basin Resource Advisory Council (Anon. 1997).

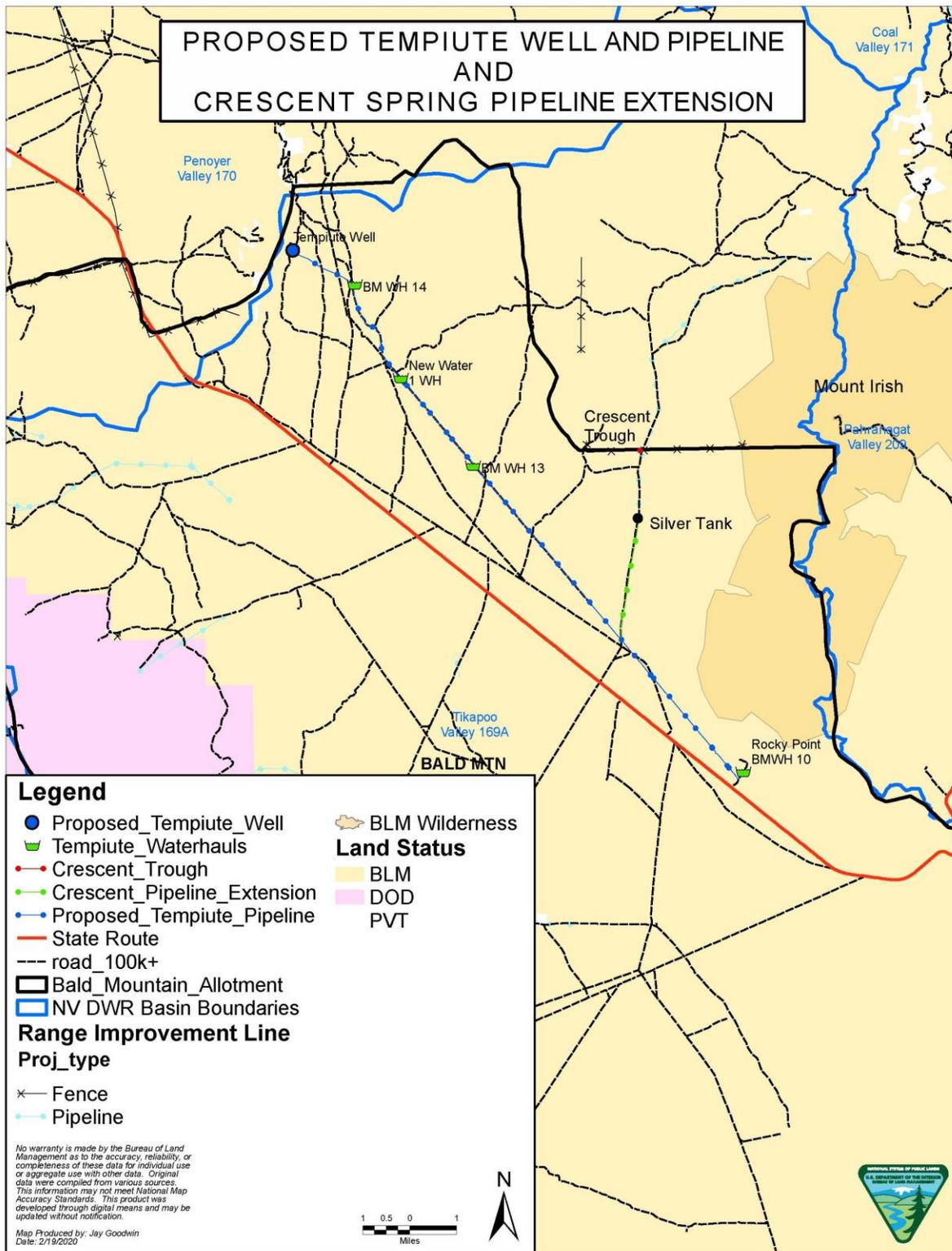
## **1.4 Decision to Be Made**

The BLM's decision to be made is whether to authorize D/4 Enterprises, Inc. to drill a new water well and construct a new 15.1 miles long pipeline from this well and to extend the Crescent Spring Pipeline on the Bald Mountain Allotment (#21003).

## **1.5 Conformance**

### **1.5.1 BLM Land Use Plan**

The proposed action is in conformance with the Ely RMP (Anon. 2008a), which states as goals:



**Figure 1.5. Locations of the proposed Tempiute Well & Pipeline and Crescent Spring Pipeline Extension.**

- Manage livestock grazing on public lands to provide for a level of livestock grazing consistent with multiple use, sustained yield, and watershed function and health.
- Manage vegetation resources to achieve or maintain resistant and resilient ecological conditions while providing for sustainable multiple uses and options for the future across the landscape.
- Manage watersheds to achieve and maintain resource functions and conditions required for healthy lands and sustainable uses.
- Seek to reduce imminent threats [to cultural resources] and resolve potential conflicts from natural or human-caused deterioration, or potential conflict with other resource uses.
- Prevent the introduction and spread of noxious and invasive weeds. Control or eradicate existing populations.

The Ely RMP (Anon. 2008a) further states as objectives:

- To allow livestock grazing to occur in a manner and at levels consistent with multiple use, sustained yield, and the standards for rangeland health.
- To manage for resistant and resilient ecological conditions including healthy, productive, and diverse populations of native or desirable nonnative plant species appropriate to the site characteristics.

The Ely RMP (Anon. 2008a) includes the following management actions:

- Management Action LG-1 Make approximately 11,246,900 acres and 545,267 animal unit months available for livestock grazing on a long-term basis.
- Management Action LG-5 Maintain the current grazing preference, season-of-use, and kind of livestock until the allotments that have not been evaluated for meeting or making progress toward meeting the standards or are in conformance with the policies, are evaluated. Depending on the results of the standards assessment, maintain or modify grazing preference, seasons-of-use, kind of livestock, and grazing management practices to achieve the standards for rangeland health. Changes, such as improved livestock management, new range improvement projects, and changes in the amount and kinds of forage permanently available for livestock use, can lead to changes in preference, authorized season-of-use, or kind of livestock. Ensure changes continue to meet the Ely RMP goals and objectives, including the standards for rangeland health.
- Management Action WR-4 Maintain or improve watershed conditions by controlling or restricting land uses and utilizing tools, where appropriate, to promote desired vegetation conditions.

The proposed action is consistent with the Lincoln County Public Lands Policy Plan (Anon. 2015) which states:

- Policy 4-5: Allotment management strategies should be developed that provide incentives to optimize stewardship by the permittee. Flexibility should be given to the permittee to reach condition standards for the range. Monitoring should utilize all science-based relevant studies, as described in the current Nevada Rangeland Monitoring Handbook. Changes to these standards should involve pre-planning collaborative consultation with the permittee and Lincoln County Commission.

## **1.5.2 Acts and Agreements**

The proposed action was analyzed within the scope of other relevant Acts, Executive Orders and associated regulations, and Agreements listed below and found to be in compliance:

- The Federal Land Policy and Management Act (1976) (43 U.S.C. §§ 1701-1782, October 21, 1976, as amended 1978, 1984, 1986, 1988, 1990-1992, 1994 and 1996)
- The Taylor Grazing Act (1934 as amended)
- The Public Rangelands Improvement Act (1978)
- The National Environmental Policy Act (1969) (42 U.S.C. §§ 4321-4347, January 1, 1970, as amended 1975 and 1994)
- National Historic Preservation Act (1966) (Public Law 89-665; 16 U.S.C. 470 as amended through 2000)
- State Protocol Agreement between the Bureau of Land Management, Nevada and the Nevada State Historic Preservation Office for Implementing the National Historic Preservation Act (Revised January 2012)
- Archaeological Resources Protection Act (ARPA) (1979)

## **1.6 Tiering**

This document is tiered to and incorporates by reference the Ely District Record of Decision and Approved Resource Management Plan (Anon. 2008a).

## **1.7 Internal/Public Scoping and Relevant Issues**

On June 10, 2019, Steve Medlin of D/4 Enterprises, Inc., the permittee of record for the Bald Mountain allotment, contacted BLM concerning his proposal to drill a new water well. Mr. Medlin had also had previous contacts with BLM staff regarding this proposal; those discussions were not documented by BLM.

On June 18, 2019, Steve and Glenda Medlin met with BLM regarding the proposed Tempiute Well. Mr. Medlin had been informed by BLM that he first needed to obtain a permit to appropriate groundwater from the Nevada Division of Water Resources and only then would BLM proceed toward analyzing drilling a groundwater well and constructing a pipeline. Mr. Medlin pointed out he had acquired this permit and that under the terms of the permit, D/4 Enterprises had until October 10, 2020 to show completion of the well.

On November 8, 2019, a request for a Cultural Resource Inventory Needs Assessment (CRINA) for the proposed action was provided to the BLM Archaeologist.

On November 9, 2019, a Weed Risk Assessment for noxious and invasive weeds was completed for the proposed action.

On November 18, 2019, certified letters requesting comments or concerns regarding cultural resources that could be affected by the proposed Tempiute Well and Pipeline and Crescent Spring Pipeline Extension were sent to local Native American tribes. Letters were sent to the Duckwater Shoshone, Ely Shoshone, Yomba Shoshone tribes, Moapa Band of Paiutes, Las

Vegas Band of Paiutes, Piute Indian Tribe of Utah, and the Confederated Tribes of the Goshute Reservation. All letters were delivered by November 27, 2019. No comments were received as of March 4, 2020.

On November 26, 2019, a BLM internal meeting was held at the Caliente Field Office to review the Proposed Action. The proposed action was presented and scoped by resource specialists to identify relevant issues to be addressed in this EA. Comments were provided by BLM staff and incorporated into the Proposed Action.

## **2.0 Alternatives Including the Proposed Action**

### **2.1 Proposed Action**

D/4 Enterprise's proposed action is to drill a new groundwater well and construct a new 15.1 miles long pipeline on the Bald Mountain Allotment (#21003). The new pipeline would supply water from the new groundwater well to a new stock trough at the well as well as four existing stock troughs. Additionally, D/4 Enterprises proposes to extend the Crescent Spring Pipeline (Project #550592) south 2.75 miles and add one new stock trough to this pipeline (Fig. 1.5).

The well would be drilled at T. 04 S., R. 56 E., Sec 12, NESE (UTM 11S 621056, 4163625). Development of the well would include installation of solar panels to power an electric submersible pump, a 10,000 gallon or smaller storage tank, and a stock trough. The well head and solar panels would be protected from livestock damage by a fence or by use of livestock panels to enclose the approximately 50' x 50' area. The trough would be equipped with a float valve to prevent overflow and a wildlife escape ramp. Development of the well would not prevent vehicle passage along the existing track adjacent to the proposed well. The trail would remain accessible to vehicles after drilling the well and installation of solar panels, storage tank, and trough.

The pipeline would start at the proposed well location and run southeast to Bald Mountain Waterhaul (BMW) 14 (11S 623175, 4162466), approximately 1.5 miles from the proposed well. From BMW 14, the pipeline would follow the bladed dirt road south for approximately 1.75 miles to the junction with the power line road. The pipeline would then follow the power line road to the southeast for another 12 miles, past New Water 1 and BMW 13 to a terminus, after a short 0.2 mile turn to the north, at BMW 10 (UTM 11S 636554, 4145675). The Nevada Department of Transportation (NDOT) materials pit (ROW N043430; UTM 633661, 4147507) about 0.75 miles southeast of the South Crescent Road would be avoided unless the ROW is amended; the pipeline would be buried in the original disturbance from power line construction to the south of the materials pit and south of the Tempiute Pole Line Road. The pipeline would begin at an elevation of 6640 feet and end at an elevation of 4633 feet.

A new stock trough would be added to the Crescent Spring Pipeline. The trough would be located in the boundary fence between the Bald Mountain and Crescent N4 allotments at T. 04 S., R. 58 E., Sec 32, SWSW (UTM 11S 632983, 4156740) about 250 feet or less west of the South Crescent Road. The trough would serve stock on both sides of the fence. A new 250 foot

(or less) long spur would be added to the pipeline to supply water to this trough and would be buried adjacent to the existing fence line. A valve at the junction of the spur with the existing Crescent Spring Pipeline would control flow to the trough. The trough would be rectangular, roughly 36" wide by 12 to 24" deep by 6 to 8' long and installed in the fence with about 18" of trough on each side of the fence. The trough would be set in the ground so that the rim was no more than 12 to 14 inches above ground surface to allow both sheep and cattle to drink. A float valve would be installed to prevent overflow. A wildlife escape ramp would also be installed. At the new trough, the existing barbed wire fence would be replaced with a rigid pipe fence that would extend 30 feet to either side of the new trough.

The Crescent Spring Pipeline extension would start at the Silver Tank Corral (UTM 11S 632918 4154453), the current terminus of the Crescent Spring Pipeline. The pipeline would be extended 2.75 miles to the south following the road to junction with the new pipeline. A one-way check valve would be installed in the extended pipeline at this junction to prevent water from the new Tempiute Pipeline from flowing back up the Crescent Spring Pipeline toward Silver Tank. The pipeline extension would begin at an elevation of 5012 feet and end at an elevation of 4710 feet.

Pipelines would be buried to a depth of 24" or greater to prevent damage from both freezing and road maintenance activities. The sections of the pipelines that follow existing roads would be buried immediately adjacent to the bladed road in the road berm. On the Power Line Road, the pipeline would be buried on the opposite side of the road from power poles. At existing trough locations, the pipeline would jog from the road to the trough and back so that valves controlling flow to troughs are located at the trough rather than in the road berm. The pipe used in construction would be 2" in diameter or smaller PEX or HDPE plastic pipe. Valves and vents would be installed during construction as needed to facilitate and control water flow to troughs and allow drainage of the system.

New ground disturbance would be limited to the area immediately surrounding the new well and the approximate 1.5 miles of pipeline between the well location and BMWH 14. This would amount to approximately 3.5 acres of disturbance, given a leveled 100' x 100' well pad, well pad access road, and a 12' x 1.5 miles pipeline corridor. New ground disturbance would be seeded with grasses, forbs, and shrubs appropriate to the site upon the completion of construction to re-establish vegetation.

Cooperative Agreements (Form 4120-6) between D/4 Enterprises and BLM would be entered into for the proposed well and pipeline and for the pipeline extension.

Construction would occur in coordination with a BLM project inspector (PI) and would be required to meet BLM range improvement project specifications. Fencing at the well would be to BLM standards for a 4-strand barbed wire cattle fence (Anon. 1989). The PI would make periodic site visits to check on construction progress and compliance with specifications. Upon completion of the project, a final inspection would be made to ensure compliance with specifications and to correct any existing deficiencies. BLM would notify Lincoln County Roads Department, which is authorized to complete routine maintenance on the bladed roads along which the pipelines would be buried (Anon. 2012), of the new pipelines and provided a map showing pipeline locations.

## **2.2 Invasive, Non-Native Species and Noxious Weeds Control**

A Weed Risk Assessment was completed for this project (Appendix IV). The measures listed in the Weed Risk Assessment would be followed to prevent or minimize the spread of weeds during project construction. During routine inspections of the well, pipelines, and troughs, the area would be monitored for invasive and noxious weeds. Early Detection, Rapid Response (Anon. 2003) protocols would be implemented to treat and control any discovered weed infestations.

## **2.3 Monitoring and Project Maintenance**

BLM policy calls for inspecting pipelines annually to identify and complete any needed maintenance and assure proper function. Operationally, the Bald Mountain permittee inspects water developments more frequently than this as this infrastructure is critical to their livestock operation - the availability of water to livestock is the factor which most limits their operation. Consequently, the well and pipeline project would be inspected at least twice per year.

Normal maintenance of pipelines, troughs, and storage tanks is defined as the labor and materials required annually to keep a pipeline in a proper working condition to supply water from source to troughs as designed and intended. This includes but is not limited to:

- Blowing lines with compressed air to clear plugs.
- Excavating, repairing, and reburying leaking or plugged sections of the pipeline.
- Repairing or replacing broken or leaking parts, including valves, risers, troughs, trough braces, pumps, and storage tanks.
- Draining the system to prevent freeze damage.
- Draining and cleaning stock troughs.
- Installation of functional bird ladders in stock troughs.
- Replacing dirt, gravel, or rock fill around troughs.

## **2.4 No Action Alternative**

The No Action Alternative would maintain the status quo. The proposed well would not be drilled, the new pipeline would not be constructed, and the Crescent Spring Pipeline would not be extended. Provision of livestock water in this portion of the Bald Mountain allotment would remain dependent upon hauling water by truck.

## **2.5 Alternatives Considered but Eliminated from Further Analysis**

Terminating the proposed pipeline at BMWH 13 (not continuing the pipeline to BMWH 10) was considered as an alternative as this would halve the length of the pipeline with commensurate reductions in materials and labor costs.

This alternative would result in BMWH 10 remaining a waterhaul. As such, the reliability of stock water at this location would be less than if the trough were supplied via pipeline.

Consequently, options for control of spatial and temporal livestock distribution through access to stock water, and corresponding potential for improved range management, would be less than under the proposed action. Therefore, this alternative was not further analyzed.

### **3.0 Affected Environment and Associated Environmental Effects**

#### **3.1 Resources and Issues Considered for Analysis - Proposed Action**

Table 3.1 identifies resources that may be affected by implementation of the proposed action as determined by BLM internal scoping. Appendix V presents all resources considered and the rationale for inclusion in or elimination from detailed analysis.

**Table 3.1. Resources and Issues Analyzed for the Tempiute Well & Pipeline and Crescent Spring Pipeline Extension Project.**

Resource/Concern Considered	Issues Analyzed	Rationale for Issues Requiring Detailed Analysis
Water Resources (Water Rights, etc.)	Yes	Proposed Action appropriates groundwater from a new well. Action requires approval of an application to appropriate groundwater by NV DWR and could result in certification of a water right with proof of beneficial use.
Grazing Uses & Rangeland Health Standards	Yes	The Proposed Action supports livestock grazing and will increase grazing use in the vicinity of a new trough. The Proposed Action must be evaluated against the Mojave-Southern Great Basin Standards and Guidelines for Grazing Management.
Watershed Management	Yes	The Proposed Action includes one new livestock trough at the well head and will result in increased grazing use (herbivory) on slopes around the new trough.

#### **3.2 Resources/Issues Analyzed**

The resources and issues within the affected environment that merited a detailed analysis are addressed in the following sections.

##### **3.2.1 Water Resources**

###### **3.2.1.1 Affected Environment**

Stock water may be obtained from springs, groundwater wells, and reservoirs that store ephemeral stream flows. Rights to appropriate these limited waters are highly valued and carefully guarded. Before a well can be drilled the Nevada Division of Water Resources must approve an application to appropriate groundwater. In the Tickaboo Valley Basin (169A), groundwater is almost fully appropriated.

Many of the dozen or so springs found on the allotment have been developed to supply water to pipelines which distribute water to troughs across the allotment. Some of these springs have

perennial flow (e.g. Savio Spring), but others are drought ephemeral (sensu Dekker and Hughson 2014). Ephemeral springs are likely supplied by a small, perched, locally recharged aquifer. Such an aquifer sustains surface flow at the spring only when precipitation is sufficient to recharge the aquifer (Dekker and Hughson 2014, Huning 1978). During periods when precipitation is too little to recharge the aquifer, spring flow diminishes or ceases. Mean annual precipitation on the allotment is only about 6 inches, and drought years are more frequent than wet years (see Section 1.1).

Existing groundwater appropriations in the Tickaboo Valley Basin are based on a single inactive well (169A S06 E58 05CABA1 SNWA 169W509M) and additional unapproved applications filed in 1999 (64674) and 2010 (79321 and 79322). Application 64674 was submitted by Lincoln County and Vidler Water Company to appropriate water for irrigation use on 1280 acres of public land which were to be transferred to private ownership. This acreage has remained in public ownership to present and is not identified for disposal through the Lincoln County Conservation, Recreation, and Development Act (2004) in the Ely District Resource Management Plan (Anon. 2008a); therefore, private ownership is not foreseeable. Applications 79321 and 79322 were submitted by Southern Nevada Water Authority (SNWA) for municipal and domestic use in Clark, Lincoln, Nye, and White Pine counties. The wells have not been drilled, the distribution system has not been constructed, and beneficial use has not been demonstrated. All three of these applications were protested by multiple parties.

### **3.2.1.2 Environmental Effects**

#### **Proposed Action**

D/4 Enterprises has secured approval from the State Water Engineer to appropriate sufficient water from an underground source to water 200 cattle year round, not to exceed 4.8 acre-feet annually (Appendix I). This use would bring groundwaters in the Tickaboo Valley basin (169A) very near to fully allocated. Proof of beneficial use of this water would result in D/4 Enterprises securing a certificated water right.

The proposed well is unlikely to have any effect on static water levels in groundwater wells in the Tickaboo Valley basin (169A) due to the lack of other wells in a reasonable proximity. According to U.S. Geological Survey (USGS) topographic maps and online Water Resources Mapping data, the nearest groundwater well in the Tickaboo Valley basin is an inactive well 8.8 miles from the proposed well.

According to USGS mapping, there are no springs located within a mile of the proposed well. Drilling the proposed well and extracting groundwater is unlikely to have any effect on spring flows in the area.

The proposed well is unlikely to have any effect on static water levels or spring flows in the adjacent Penoyer Valley basin (170) due to geographic and hydrological factors.

## No Action Alternative

Under the No Action alternative, the Tempiute Well would not be drilled and the Tempiute Pipeline would not be constructed. The basin's groundwater would not be fully appropriated. No new water right would be certificated.

### 3.2.2 Grazing Uses & Rangeland Health Standards

#### 3.2.2.1 Affected Environment

The scarcity of water for livestock is the greatest limitation to livestock operations on the Bald Mountain allotment. The Bald Mountain permittee has had cattle die of thirst after getting trapped above the allotment boundary fence at the South Crescent Road. Many of the springs found on the allotment have been developed and supply water to pipelines which distribute water to troughs across the allotment. Some of these springs have perennial flow, but others are drought ephemeral (*sensu* Dekker and Hughson 2014) and flow from these ephemeral springs diminishes or even ceases in times of low or no rainfall. These springs, as is typical for drought ephemeral springs in the Mojave Desert, are very likely supplied by a small, locally recharged, perched aquifer. Such an aquifer sustains surface flow at the spring only when abundant precipitation recharges the aquifer (Dekker and Hughson 2014). During periods when precipitation is too little to recharge the perched aquifer, water does not flow from the spring (Huning 1978).

The portion of the Bald Mountain allotment that is north of Nevada Highway 375 is roughly 57,681 acres and the project area is within this portion of the allotment. The area currently has a single pipeline-fed stock water at Silver Tank. Four additional waterhaul locations (BMW 10, 13, 14, and New Water 1) are the only other waters available to cattle. Consequently, supplying the required 12 - 15 gallons of water per day per cow (Vallentine 1989; Heitschmidt and Taylor 1991) is heavily dependent upon, and can be entirely dependent upon, the livestock operator hauling water in a tanker truck to fill troughs, which risks livestock injury should mechanical troubles interfere with water hauling, and which is costly, laborious, and time consuming even without mechanical breakdowns..

Groundwater wells provide a much more reliable source of water for livestock.

The most recent Standards evaluation for the allotment, completed in 2010 during the grazing permit renewal process, found that Standards were achieved in the northern half of the allotment, which would include the project area.

The understory vegetation in the pinyon-juniper dominated area surrounding the proposed well produces about 300-450 pounds per acre (Anon. 2010-2016). Tree canopy cover in the wooded area at the well is more sparse than the reference state for this ecological site, allowing greater understory plant diversity and production. Farther from the proposed well, black sagebrush and Indian ricegrass dominate the plant community and production increases to about 500 pounds per acre (Anon. 2010-2016). In both plant communities, desirable herbaceous species, such as Indian ricegrass (*Achnatherum hymenoides*), needleandthread (*Hesperostipa comata*), Thurber's

needlegrass (*Achnatherum thurberianum*), desert needlegrass (*Achnatherum speciosum*), muttongrass (*Poa fendleriana*), and squirreltail (*Elymus elymoides*) provide forage for cattle.

### **3.2.2.2 Environmental Effects**

#### **Proposed Action**

The Tempiute Well would result in a single new water trough at the well head in an area where water was not previously available to livestock. Though cattle would have explored the area when searching for forage previously, the construction of the new trough would result in a greatly increased residence time by cattle in the area (Bailey et al. 1996, Martin and Ward 1970, Coughenour 1991). Cattle will loaf at the new water trough and exploration for forage within a mile radius of the trough would intensify. Cattle distribution on the allotment would change somewhat as a result of the new trough: grazing use of the area surrounding the proposed Tempiute Well would increase.

The trough at the Tempiute Well would increase the forage resource available to cattle by enabling cattle to more thoroughly explore the area as a consequence of the proximate water source. The surrounding area produces 300-500 pounds per acre, and some of this production is by plant species cattle would readily graze. The utility of the allotment to the livestock operator would be increased by the new trough.

An additional water trough would also increase options for flexibility in livestock management on the allotment as livestock waters can be used to control the distribution of cattle (Martin and Ward 1970, Coughenour 1991)). Generally, cattle will explore an area of about a one to two mile radius of a water source in searching for forage. The presence of cattle in a particular area within the allotment can be strongly influenced by controlling which troughs are filled, when they are filled, and how long they remain filled.

Distribution of stock water via the proposed Tempiute Pipeline to existing waterhauls would not result in changes in grazing use or cattle distribution as there would be no changes in the locations of these existing troughs. The pipeline would eliminate the need to haul water by truck to these locations. Grazing use at existing waterhauls (BMW 10, 13, 14, and New Water 1) would not change under the proposed action.

The addition of a trough to the Crescent Spring Pipeline on the allotment boundary could result in more grazing use in this area but would also prevent stray livestock from dying of thirst if trapped north of the fence, as has happened in the past. Because the allotment boundary fence is 1½ mile from stock water at Silver Tank, grazing use in the area of the new trough is unlikely to be much greater compared to current use as the location is within the distance cattle will travel from Silver Tank in searching for forage. This trough will water both cattle and sheep.

Achievement of Standards is unlikely to be affected by implementation of the proposed action. Standards are currently being achieved in this portion of the allotment. The addition of a new trough at the well head would result in changes in cattle distribution and grazing use in this area. Grazing use near the well would increase as there would be a source of stock water at this

location. Grazing use in the vicinity of the new trough would reflect the permittee's normal stocking rates and operations as seen at existing waterhauls. Use at BMWH 14 and New Water 1 may decrease as some of these animals will likely be placed at or move to the new trough. The magnitudes of these changes are very unlikely to be sufficient to result in failure to achieve soils, ecosystem function, or habitat and biota Standards. Increased grazing use would result in less plant cover and plant litter on the ground, at least transiently, in the area of the new trough, but grazing use in other portions of the project area has not prevented achievement of the Standards. Proper grazing management allows achievement of the Standards.

## **No Action Alternative**

Under the No Action alternative, the current status quo would be continued. The proposed well would not be drilled and the proposed pipeline and pipeline extension would not be constructed. The availability of water at the existing waterhauls would continue to rely on hauling water by truck. There would be no changes in livestock distribution and grazing uses as there would not be a new trough at the proposed well. There would be no changes in factors affecting achievement of Standards.

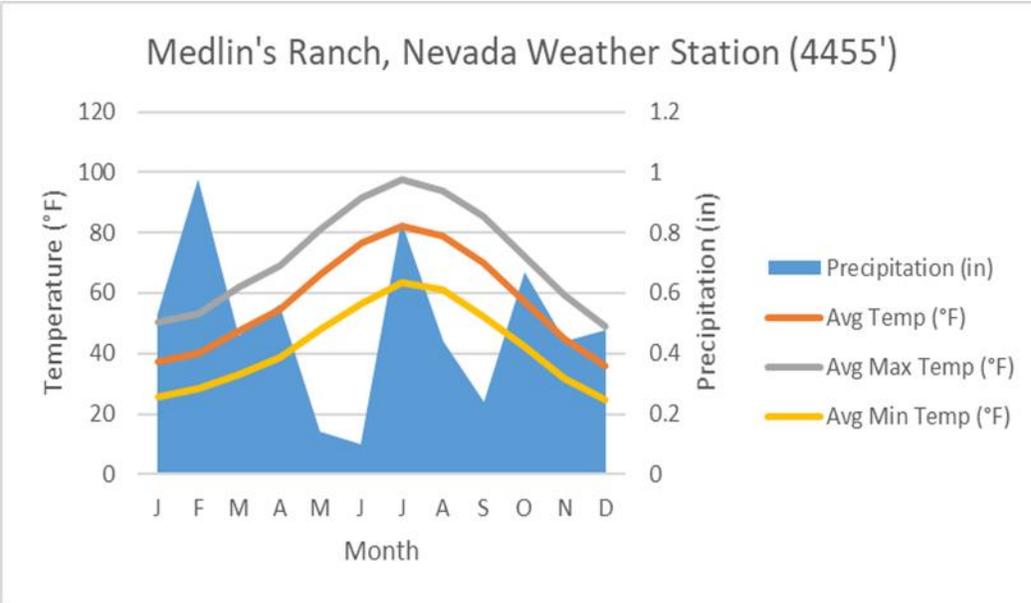
### **3.2.3 Watershed Management**

#### **3.2.3.1 Affected Environment**

The project area is within the Tickaboo Valley hydrographic basin (169A) on the northern fringe of the Mojave Desert. The west, north, and east boundaries of the allotment are in higher elevation, mountainous terrain that drains firstly toward the center of the allotment then southward to the south-central allotment boundary. Mean annual precipitation is 5.8 inches, but is highly variable (see Fig. 1.3). On average, monthly precipitation is less than one inch in all months of the year. Figure 3.1 is a climate diagram for Medlin's Ranch in the center of the allotment.

All plant communities in the project area are dominated by tap-rooted woody species, such as singleleaf pinyon (*Pinus monophylla*), Utah juniper (*Juniperus osteosperma*), black sagebrush (*Artemisia nova*), spiny hopsage (*Grayia spinosa*), and fourwing saltbush (*Atriplex canescens*) (Anon. 2010-2016). Grasses, including Indian ricegrass, galleta (*Hilaria jamesii*), desert needlegrass, and needleandthread (*Hesperostipa comata*) occur in the understory. Plant community composition is 45-75% shrubs and trees and 20-50% grasses in the Reference State. In all plant communities, plant cover is low (Table 3.2). While plants contribute to soil and site stability, soil factors, including rock fragments (stones, cobbles, and gravels), soil texture, slope, and cryptogams are major factors in watershed stability in this desert environment (Belnap et al. 2005, Cerdà 2001, Schlesinger et al. 1990.)

Mechanisms for soil erosion are kinetic energy transfer from water and wind to soil particles (Thurow 1991). Though the area is arid, receiving less than 6 inches of rain per year on average, erosion of soils by water could occur during overland flow in high intensity events, such as summer convection storms or snow melt. High winds could similarly entrain soil particles not protected by vegetation, rock, or high soil aggregate stability. The presence of rock in and on the



**Figure 3.1. Climate Diagram for Medlin’s Ranch, Bald Mountain allotment.**

soil would inhibit soil erosion, as these larger, heavier materials require more kinetic energy to entrain and transport (Cerdà 2001, Posen et al. 1990). Cryptogamic crusts on the soil surface and fungi and bacteria in soil also inhibit erosion by increasing soil aggregate and soil surface stability (Brady 1984, Brotherson et al. 1983, Anderson et al. 1982).

The 15.1 miles long Tempiute Well and Pipeline would traverse six ecological sites. Table 3.2 presents these ecological sites, soils and vegetation data, and the length of the pipeline within each ecological site. The same information for the 2.75 miles long Crescent Spring Pipeline Extension, which would traverse 2 ecological sites, is presented in Table 3.3.

The well and the initial 1.5 miles of the Tempiute pipeline would be located on the steepest slopes of the project area and would also be new ground disturbance. Consequently, the potential for increased rates of soil erosion due to the proposed action are greatest in this area. Risk of erosion increases with slope, particularly for sandy soils, and with increased vegetation disturbance – whether through construction, herbivory (e.g. livestock grazing), wildfire, or other event.

The Logring soil at the proposed well is a Loamy-skeletal, carbonatic, mesic Lithic Xeric Torriorthent. The surface horizon is a very gravelly loam. Logring soils are shallow and very shallow, well drained, occur on 8-75% slopes, and have 45-50% gravels and cobbles in the upper 7 inches of the soil profile. This soil co-occurs with rock outcrops.

The Ursine soil, also found in this steeper area between the well and BMWH 14, is a Loamy-skeletal, carbonatic, mesic, shallow Xeric Haplodurid. Surface horizon texture is gravelly sandy loam. Ursine soils are shallow to a duripan, well drained, and occur on 0-30% slopes. The soil surface averages about 35-40% cover by gravels and cobbles with 20-30% gravel in the upper 5 inches of the soil profile.

**Table 3.2. Ecological sites traversed by the Tempiute Pipeline.**

Ecological Site		Plant Community and Soil Series	Plant Cover (%)	Slope (%)	Soil Texture <sup>1</sup>	Pipeline Length (mi)
Name	Number					
PIMO-JUOS WSG	F029XY069NV	Pinyon pine-Utah juniper/ black sagebrush on Logring soils	20-35 (tree canopy <sup>2</sup> )	15-50	very gravelly loam <sup>3</sup>	0.25
Shallow Calcareous Loam 8-12" P.Z.	R029XY008NV	Black sagebrush/Indian ricegrass on Ursine soils	20-30	2-50	gravelly sandy loam	5.1
Shallow Droughty Loam 5-8" P.Z.	R029XY031NV	Spiny hopsage-spiny menodora/Indian ricegrass on Delamar soils	20-30	2-8 <sup>4</sup>	gravelly sandy loam	5.0
Droughty Loam 5-8" P.Z.	R029XY079NV	Spiny hopsage-Nevada ephedra/Indian ricegrass-desert needlegrass on Koyen soils	20-30	2-4 <sup>4</sup>	gravelly sandy loam	2.0
Sandy Loam 5-8" P.Z.	R029XY046NV	Fourwing saltbush-winterfat/Indian ricegrass on Koyen and Penoyer soils	15-25	2-8	sandy loam and silt loam	0.6
Shallow Gravelly Slope 8-10" P.Z.	R029XY019NV	Blackbrush/desert needlegrass-Indian ricegrass on Pahroc soils	10-20	4-15 <sup>4</sup>	very gravelly, very fine sandy loam	2.1

1. Soil surface horizon texture.

2. Tree canopy cover in the project area is more sparse, between 10-15%.

3. This map unit is the Logring-rock outcrop association; 20% of the area is covered by rock outcrops.

4. Slopes of the soil mapping unit.

The Logring and Ursine soils are on the steepest slopes of the project area. Both soils are shallow or very shallow to either fractured parent material or an indurated hardpan and have abundant rock (gravels and cobbles) in and on the soil. Both soils are in Hydrologic Soil Group D: infiltration is very slow due to shallow soil or impervious material (rock or duripan).

The majority of the proposed pipelines (about 7.6 miles of the Tempiute Pipeline and 2.6 miles of the Crescent Spring Pipeline Extension) cross Delamar, Koyen, and Penoyer soils on relatively flat or gently sloped terrain. The new stock trough on the Crescent Spring pipeline would be on Delamar soil. These soils are moderately deep to deep.

The Delamar soil is a moderately deep Fine-loamy, mixed, superactive, mesic Typic Argidurid with a silica and carbonate cemented duripan at about 30” depth. The texture of the surface horizon is sandy loam. Delamar soils are well drained and occur on slopes of 0-8%. Infiltration is slow in this soil due to the presence of a duripan; the soil is in Hydrologic Soil Group C.

The Koyen soil is a very deep, well-drained Coarse-loamy, mixed, superactive, mesic Typic Haplocambid with a sandy loam surface horizon texture and occurs on 0-8% slopes. Penoyer is similar to Koyen – very deep and well drained - but is a Coarse-silty, mixed, superactive, calcareous, mesic Typic Torriorthents. The surface horizon has a silt loam texture. Penoyer soils occur on 0-4% slopes.

Both Koyen and Penoyer soils are in Hydrologic Soil Group A. Infiltration is rapid in these coarse textured, deep soils. Rapid infiltration and lack of slope reduce the potential for accelerated soil erosion from these soils.

**Table 3.3. Ecological sites traversed by the Crescent Spring Pipeline Extension.**

Ecological Site		Plant Community and Soil Series	Plant Cover (%)	Slope (%)	Soil Texture <sup>1</sup>	Pipeline Length (mi)
Name	Number					
Shallow Gravelly Slope 8-10” P.Z.	R029XY019NV	Blackbrush/desert needlegrass-Indian ricegrass on Pahroc soils	10-20	4-15 <sup>2</sup>	very gravelly, very fine sandy loam	0.2
Shallow Droughty Loam 5-8” P.Z.	R029XY031NV	Spiny hopsage-spiny menodora/Indian ricegrass on Delamar soils	20-30	2-8 <sup>2</sup>	gravelly sandy loam	2.55

1. Soil surface horizon texture.

2. Slopes of the soil mapping unit.

The last 2 miles of the Tempiute Pipeline, in the area of BMWH 10, is on Pahroc soil. The Pahroc soil, a Loamy-skeletal, mixed, superactive, mesic, shallow Typic Haplodurid, is shallow to an indurated hardpan at about 11 inches deep. The texture of the surface horizon is gravelly loam with the soil surface typically armored by a desert pavement of gravels and cobbles. Pahroc soils occur on 2-15% slopes; these soils are well drained. The Pahroc soil is in Hydrologic Soil Group D: very slow infiltration due to shallow depth to a duripan.

### 3.2.3.2 Environmental Effects

#### Proposed Action

Construction of the proposed pipelines would result in increased grazing use in the vicinity of the well due to a new stock water trough at this location. Vegetation and cryptogamic crust disturbance would increase the potential for subsequent soil erosion. Herbivory would also reduce the amount of plant litter present on the soil surface, and plant litter protects the soil surface from rain drop impact and soil aggregate breakdown. However, the vegetation communities in the project area are dominated by woody shrubs or trees and plant cover and plant litter is sparse. Consequently, though vegetation and cryptogamic crust play a role in stabilizing soil in the project area, slope and rock fragments play a greater role in soil and site stability.

Increased watering locations allow improved livestock distribution and grazing management through the use of stock waters to control where, when, and how long cattle are present (Coughenour 1991, Bailey et al. 1996, Martin and Ward 1970). Soil stability and vegetative cover and vigor is likely to increase with improved livestock distribution and management in the project area as a whole, which would be beneficial to the watershed (Briske et al. 2008, Anderson 1993, Thurow 1991, Dietz 1989).

However, increased grazing use can also lead to increased soil erosion if vegetation disturbance exceeds the capacity of vegetation to recover from herbivory. Grazing generally reduces the amount of plant litter (dead plant material) and cryptogamic crust on the ground surface (Hughes 1983, Brotherson et al. 1983, Anderson et al. 1982). Cryptogamic crusts can provide soil and site stabilizing benefits as well as function as nitrogen-fixers, increasing the nitrogen content and fertility of soils (Belnap 2002, Billings et al. 2003, Evans and Ehleringer 1993), and nitrogen and carbon can be translocated between cryptogamic crusts and bunchgrasses, benefiting both (Green et al. 2008). Proper grazing management is required to prevent unacceptable impacts to vegetation, cryptogamic crust, and soils. Importantly, rangeland health Standards (Anon. 1997) were achieved for this portion for the Bald Mountain allotment in the most recent (2010) assessment. The same permittee continues to operate on the allotment.

Managing grazing to promote vigor of and seed production by perennial grass species can be expected to lead to improved watershed condition. Greater cover by perennial grasses would result in increased soil stabilization and reduced soil erosion (Anderson 1993, Thurow 1991). Such a grazing system would also benefit other herbaceous plant species (forbs), and an increase in the abundance of perennial grasses and forbs will improve ecological functions (e.g. energy capture, nutrient cycling) (Archer and Smeins 1991, Anderson 1993). The additional stock water at the well would increase grazing management options and flexibility, providing the opportunity for recovery from grazing.

Soil and vegetation disturbance from project construction would increase the potential for soil erosion. However, the abundance of rock (gravels, cobbles, and rock outcrops) in the Logring and Ursine soils would act to prevent accelerated soil erosion resulting from implementing the proposed action because rock plays a major role in preventing soil erosion on these slopes (*sensu*

Cerdà 2001, Posen et al. 1990). Accelerated soil erosion is unlikely to result from project implementation due to soil and climate factors (e.g. rock fragments on the surface, less than 6 inches of annual precipitation). Additionally, new ground disturbance resulting from implementing the proposed action would be seeded with desirable species to promote vegetation recovery which would also promote soil and site stability.

On the other hand, suitability for burying a pipeline below frostline in the Logring, Ursine, and Pahroc soils is diminished by shallow soil and burial to 24 or more inches could be difficult. Neither the Delamar nor Koyen soils would pose challenges for pipeline burial. Project construction would require the use of a powerful bulldozer to pull a ripping tooth through the Logring, Ursine, and Pahroc soils. After construction, the corridor ripped for pipeline burial will very likely have more and larger rock fragments on the soil surface. This increased density of rock on the ground surface would likely be apparent to an observant person, but may be largely unnoticeable to a casual observer travelling across the allotment. This rock could also inhibit soil erosion by functioning as microscale barriers to soil movement (Cerdà 2001, Posen et al. 1990), and could provide safe sites for seedling establishment by sheltering emerging seedlings from wind and sun (Bainbridge 2007). Soil moisture availability could be improved on a microscale by rocks intercepting and concentrating rainfall.

### **No Action Alternative**

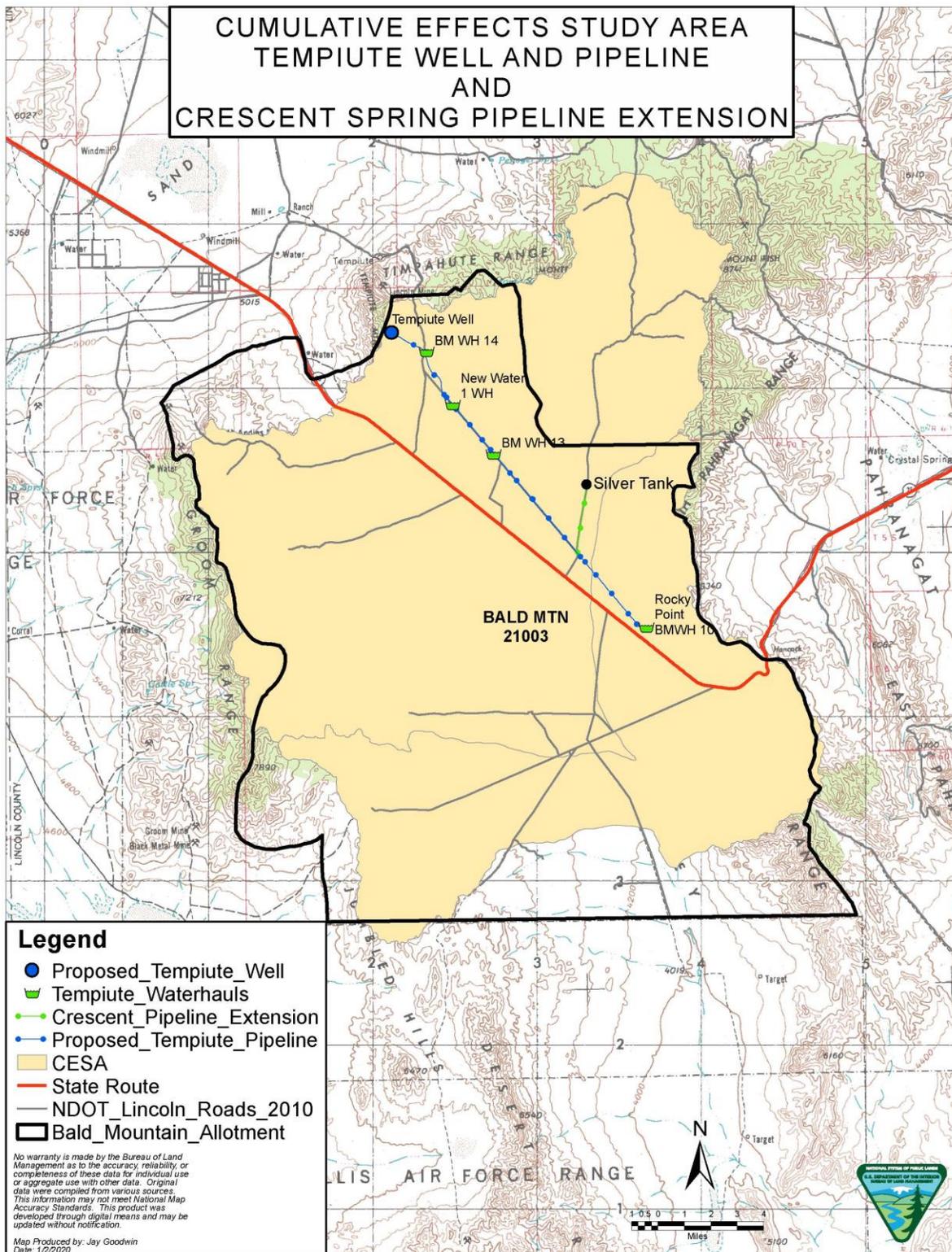
Under the No Action alternative, the project would not be implemented and there would not be new soil and vegetation disturbance or increased herbivory in the area of the proposed well. Plant cover and soil erosion rates would be unchanged from background or reference state potentials. Potential improvement of watershed condition through improved livestock distribution and range management would not be realized.

## **4.0 Cumulative Effects**

The 253,163.3 acres Cumulative Effects Study Area (CESA) for this project is defined as the Upper Tickaboo Valley (1606001413) and Middle Tickaboo Valley (1606001414) watersheds (Fig. 4.1). This area was chosen based on resources identified as requiring a detailed analysis in this EA (see Table 3.2), natural boundaries, the proposed actions and other past and present actions, and relevant concerns. The time frame for the analysis is 10 years, which is the lifetime of the grazing permits proposed herein as per 43 CFR §4130.2(d).

According to the Guidelines for Assessing and Documenting Cumulative Impacts (Anon. 1994), a cumulative effects analysis should be focused on those issues and resources where the incremental impact of the Proposed Action results in a meaningful change in the cumulative effect from other past, present and reasonably foreseeable future actions within the CESA.

Additionally, guidance provided in the BLM National Environmental Policy Act Handbook states, “Determine which of the issues identified for analysis may involve a cumulative effect with other past, present, or reasonably foreseeable future actions. If the proposed action and alternatives would have no direct or indirect effects on a resource, you do not need a cumulative effects analysis on that resource” (Anon. 2008b, p. 57).



**Figure 4.1. Cumulative Effects Study Area for the Tempiute Well and Pipeline and Crescent Spring Pipeline Extension.**

This cumulative effects analysis is focused on resources identified as having significant potential for impacts to occur, directly, indirectly, or cumulatively, due to implementation of the Proposed Action. These resources are Water Resources, Grazing Uses, Rangeland Health, and Watershed Management (see Table 3.1).

## 4.1 Past Actions

Mining operations commenced in the area in the mid-1800's following the discovery of silver ore in 1865 (Tschanz and Pampeyan 1970). Additional mines followed producing tungsten, copper, zinc, mercury and other metals but mining activity was always constrained by limited water availability. The mines resulted in small populations of a few dozen persons or less, until the demand for tungsten rose during World War II, when the town of Tem Piute, which supported the Lincoln Mine, had a population of 500 persons. When demand and prices fell, mines and towns were abandoned without reclamation.

Livestock grazing operations in the project area began during the mid to late-1800s, initially by livestock associated with working the mines or feeding the mining communities (Oliver et al. 2019, Young and Sparks 1985, Hull 1976). After railroads were built, Lincoln County livestock operations became suppliers to the national market for meat, leather, and wool. The Ely RMP/EIS summarizes livestock grazing history in the region on pages 3.16–1 to 3.16–3 (Anon. 2007). Range improvements have been developed on the Bald Mountain and adjoining allotments to improve grazing management; these include fencing, corrals, and stock water developments.

Fire history records dating back to 1900 indicate that there has been only one fire in the CESA, which is unsurprising as the fire return interval in deserts can be hundreds of years (Brooks and Minnich 2006, Brooks and Matchett 2006). The Egypt Fire occurred in 2006 and burned 107 acres. This small wild land fire was located within the Upper Tickaboo Valley watershed on the Bald Mountain allotment near the location of the current New Water 1 waterhaul.

Water rights to the known springs in the CESA were secured by various parties. Pipelines were constructed to make beneficial use of these waters.

The only vegetation treatment that has been implemented in the CESA was an aerial seeding of the area burned in the Egypt fire. Hambly Range Non-Wilderness Mix was applied from a fixed wing aircraft on March 2, 2007. The seed mix consisted of squirreltail (*Elymus elymoides*), Indian ricegrass (*Achanterum hymenoides*), sand dropseed (*Sporobolus cryptandrus*), Sandberg's bluegrass (*Poa secunda*), thickspike wheatgrass (*Elymus lanceolatus*), needleandthread (*Hesperostipa comata*), galleta (*Hillaria jamesii*), blue flax (*Linum perenne*), small burnet (*Sanguisorba minor*), and sainfoin (*Onobrychis viciifolia*).

In 2014, a 40 acre parcel of public land in the Bald Mountain allotment, which was the location of a seasonal cow camp, was sold to Steve and Glenda Medlin (owners of D/4 Enterprises, Inc.) thereby becoming private land. This parcel now serves as the Meldin's year-round home. Water for domestic use originates at springs to which D/4 Enterprises owns the water right and is transported via pipeline to storage tanks at the property.

In 2016, a long-distance motorized vehicle race (Vegas to Reno) traversed the Bald Mountain allotment in the project area. The race promoter does not plan to stage the event again in future.

Southern Nevada Water Authority (SNWA) applied for six permits for underground water in the CESA (Permits 79320, 79321, 79322, 53947, 53948, 53949) as part of the Southern Nevada Water Authority Clark, Lincoln, and White Pine Counties Groundwater Development Project (Anon. 2012b). This water is to be used for domestic and municipal uses. Permit 53948 is dated March 14, 2005 and has a duty-balance of 2587 acre-feet-annually. The remaining five permits have been protested. The pipelines that would convey this water to places of beneficial use have yet to be constructed though the project was initiated in the 1980s, hence proof of completion and beneficial use has not been demonstrated.

Groundwater perennial yield in the Tickaboo Valley-Northern Part (169A) was determined by the Nevada Division of Water Resources to amount to 2600 acre feet/year (AFY) and by 2017, 2595 AFY had been appropriated. Ground water yield (1700 AFY) in the Tickaboo Valley-Southern Part (169B) is fully appropriated.

Noxious weeds (Scotch thistle (*Onopordum acanthium*), Russian knapweed (*Acroptilon repen*)) were introduced in the Nevada Highway 375 corridor (see Appendix IV). Invasive annuals, including red brome, cheatgrass, Russian thistle, and kochia have been introduced to the area.

## **4.2 Present Actions**

Exploratory and small-scale production mining continue in the CESA. Currently, there are no authorized mineral actions in the project area directly affected by the proposed action. Mining and other land uses, including livestock grazing, are limited by the availability of water.

The single permittee holding grazing privileges on the Bald Mountain Allotment is D/4 Enterprises (see Section 1.1). A rotation grazing system is currently used to manage year-round grazing of the allotment. D/4 Enterprises is the current owner of water rights, in whole or in part, for those known springs which supply water used on the Bald Mountain allotment for stock water and domestic purposes.

Groundwater appropriation in the Tickaboo Valley-Northern Part (169A) increased to 2599 AFY with the approval of D/4 Enterprises' application to appropriate public waters (Permit 87797), leaving a single AFY from an underground source available.

Four ROWs have been issued to NDOT for materials pits and NDOT removes material as needed for road maintenance. LCRD maintains various roads in the CESA as identified in the Road Maintenance Agreement Between Bureau of Land Management Ely District and Lincoln County Nevada (Anon. 2012a) to standards defined therein. A ROW has been issued to LCPD for the Tempiute Power Line, within which much of the proposed Tempiute Pipeline would be located.

A designated Lincoln County Conservation, Recreation, and Development Act (LCCRDA) utility corridor follows State Route 375 from the eastern boundary of the CESA west to the

junction of the highway and Savio Road (11S 625235 4153522), primarily to the south of the paved highway.

Widely dispersed incidental recreation continues to occasionally occur within the allotment in the form of hunting, trapping, 4-wheeling (OHV), and wildlife viewing. More intensive recreation is possible though unlikely. The widely-publicized Storm Area 51 event in September 2019, which appeared to have the potential to congregate hundreds if not thousands of persons at entertainment events in Rachel and Hiko, and which would have had many persons camping on and traveling across the Bald Mountain allotment, did not realize forecast attendance. Attendance was in the dozens of persons rather than thousands.

### **4.3 Reasonably Foreseeable Future Actions**

Livestock grazing will continue under the existing grazing permit, and the terms and conditions specified therein, on the allotment. Upon expiration, the permit will be considered for renewal through site-specific NEPA analysis.

The Southern Nevada Water Authority Clark, Lincoln, and White Pine Counties Groundwater Development Project (Anon. 2012b) may resume; however, pipeline construction has yet to be initiated and construction of the project is not occurring at present. SNWA has secured water rights and LCCRDA utility corridors for pipelines have been designated.

There are no other known actions in the CESA for which planning has been initiated or completed, permits issued, and funding secured.

### **4.4 Cumulative Effects Analysis**

A comprehensive cumulative impacts analysis can be found on pages 4.28-60 of the Ely Proposed Resource Management Plan/Final Environmental Impact Statement (Anon. 2007).

#### **4.4.1 Water Resources**

##### **4.4.1.1 Proposed Action**

The proposed action would result in essentially the full allocation of underground public waters in the Tickaboo Valley-Northern Part watershed (169A); only a single AFY of groundwater would remain unallocated. Future appropriation of groundwater greater than 1 AFY from this watershed would require acquisition of a water right from a current water right owner. Changes in place of use of waters would remain available to owners of water rights.

##### **4.4.1.2 No Action Alternative**

Under the No Action alternative, five AFY of groundwater in the Tickaboo Valley-Northern Part watershed would remain available for appropriation. Nevada Division of Water Resources could still approve a permit(s) to appropriate public water from an underground source in this watershed until groundwater was fully allocated.

## **4.4.2 Grazing Uses & Rangeland Health Standards**

### **4.4.2.1 Proposed Action**

The proposed action would result in some changes to the CESA typically associated with redistribution of livestock. The proposed action does not change the amount of use in AUMs authorized under the grazing permit. Cattle residence time would increase in the vicinity of the proposed well as a result of a new stock water trough at this location. Greater utilization by cattle of forage and browse species in the north end of the project area would result. However, utilization in this area has been very limited in the past because of the distance to stock water. Additionally, cattle presence at other water sources would be diminished as some of these animals would now be watering and grazing near the new well. Increased utilization near the well is not anticipated to result in undesirable cumulative impacts as current grazing management is facilitating the achievement of grazing Standards (Anon.1997).

### **4.4.2.2 No Action Alternative**

Livestock distribution and utilization patterns would not change under the No Action alternative. No cumulative impacts from past, present, and reasonably foreseeable future actions would occur.

## **4.4.3 Watershed Management**

### **4.4.3.1 Proposed Action**

The proposed action would result in more intensive use of forage in the north end of the allotment where the lack of a proximate water source in the past has limited the amount of time cattle spent searching for and utilizing forage. More intensive grazing in the area would reduce the amount of plant material on the site, both standing live plants and plant litter on the soil surface, as well as result in more soil disturbance from cattle traffic. However, livestock grazing within the project area has not prevented the achievement of Standards for Grazing Management (Anon. 1997). Current grazing practices are not destabilizing soil or the watershed.

Were the Southern Nevada Water Authority Clark, Lincoln, and White Pine Counties Groundwater Development Project to resume, the designated LCCRDA utility corridor and location of the DWR-approved SNWA well suggest there would be no overlap of project areas. Infrastructure for this project would be aligned with existing roads thereby minimizing new disturbance.

No other reasonably foreseeable actions are anticipated that would exacerbate impacts to the watershed. Consequently, detrimental cumulative impacts to watershed stability and function are not expected with project implementation.

### **4.4.3.2 No Action Alternative**

There would be no cumulative impacts to the watershed under the No Action alternative.

## **5.0            Consultation and Coordination**

### **5.1 List of Preparers - BLM Resource Specialists**

Jay Goodwin	Rangeland Management Specialist/Project Lead
Jon Prescott	Planning & Environmental Coordinator
Andy Gault	Hydrologist
Elizabeth Seymour-Nash	Native American Cultural Concerns

### **5.2    Persons, Groups or Agencies Consulted**

The permittee of record for the Bald Mountain allotment, interested publics, regional Native American tribes, Nevada State agencies, and Federal agencies were consulted. See Section 1.7.

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**APPENDIX I**

**Approved Permit to Appropriate Water  
Issued to D/4 Enterprises**



Permit No. 87797

**THE STATE OF NEVADA**  
**PERMIT TO APPROPRIATE WATER**

**Name of Permittee:** D/4 ENTERPRISES INC.  
**Source:** UNDERGROUND  
**Basin:** TIKAPOO VALLEY-NORTHERN PART  
**Manner of Use:** STOCKWATERING  
**Period of Use:** JANUARY 1ST THROUGH DECEMBER 31ST  
**Priority Date:** 03/23/2018

\*\*\*\*\*

**APPROVAL OF STATE ENGINEER**

This is to certify that I have examined the foregoing application, and do hereby grant the same, subject to the following limitations and conditions:

This permit is issued subject to all existing rights on the source. It is understood that the amount of water herein granted is only a temporary allowance and that the final water right obtained under this permit will be dependent upon the period of use and the average number of livestock served from the waters of this source. It is further understood that this right must allow for a reasonable lowering of the static water level at permittee's well due to any other ground water development in the area. The well shall be equipped with a 2-inch opening for measuring depth to water. If the well is flowing, a valve must be installed and maintained to prevent waste. The State retains the right to regulate the use of the water herein granted at any and all times.

This permit is issued ahead of senior filings for out-of-basin transfers. Pursuant to NRS 533.370(3)(d), water must remain in the basin for future economic growth and development. As such, water under this permit must remain in the basin.

This permit does not extend the permittee the right of ingress and egress on public, private or corporate lands.

The issuance of this permit does not waive the requirements that the permit holder obtain other permits from State, Federal and local agencies.

The point of diversion and place of use are as described on the submitted application to support this permit.

(Continued on Page 2)

Permit No. 87797

The amount of water to be appropriated shall be limited to the amount which can be applied to beneficial use, not to exceed 0.00663 cubic feet per second and 4.8 acre-feet annually, or sufficient to water 200 cattle.

Work must be prosecuted with reasonable diligence and proof of completion of work shall be filed on or before:

October 10 2020

Water must be placed to beneficial use and proof of the application of water to beneficial use shall be filed on or before:

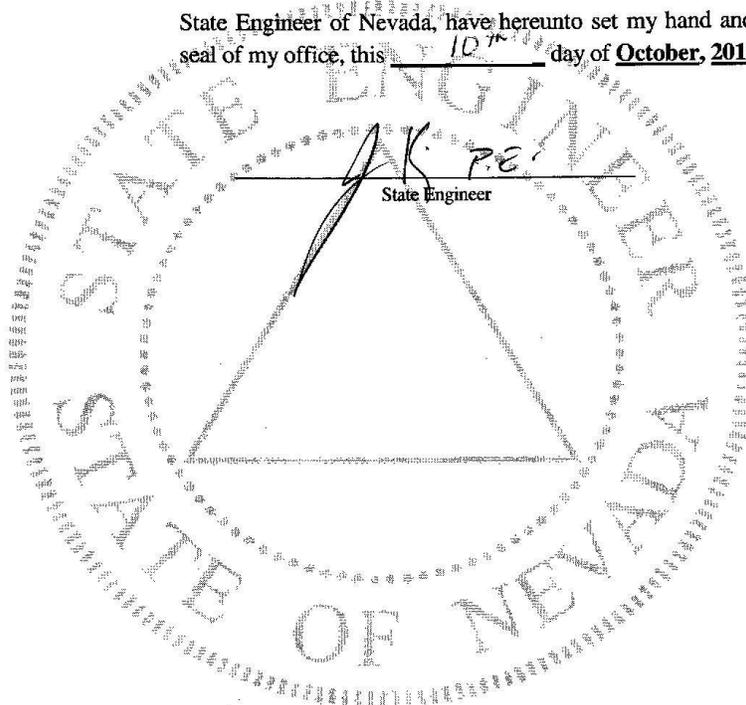
October 10 2022

Map in support of proof of beneficial use shall be filed on or before:

N/A

IN TESTIMONY WHEREOF, I, JASON KING, P.E.,

State Engineer of Nevada, have hereunto set my hand and the seal of my office, this 10<sup>th</sup> day of October, 2018



**SECOND AMENDMENT**

Application No. 87797

**APPLICATION FOR PERMIT TO APPROPRIATE THE PUBLIC WATERS OF THE STATE OF NEVADA**

THIS SPACE FOR OFFICE USE ONLY	
Date of Filing in State Engineer's Office	<u>MAR 23 2018</u>
Returned to applicant for correction	<u>APR 10 2018</u>
Corrected Application filed	<u>APR 23 2018</u>
Map filed	<u>APR 04 2018</u>

The applicant D/H Enterprises Inc.  
20031 Rock Springs Road of Alamo  
Street Address or P.O. Box City or Town  
Nevada 89001  
State and ZIP Code

hereby make(s) application for permission to appropriate the public waters of the State of Nevada, as hereinafter stated.  
 (If applicant is a corporation, give date and place of incorporation; if a copartnership or association, give names of members.)

*Steve Lee Medlin or Glenda Medlin  
 Date of incorporation: June 27, 1973  
 Place: Ste 1020, 225 Bridger St  
 Las Vegas, Nevada,*

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 STATE ENGINEERS OFFICE

- The source of water is underground  
Name of the stream, lake, underground, spring or other sources
- The amount of water applied for is 4.8 acre feet (17 c.f.s.) 2,000 cu. ft.  
Give diversion rate in cubic feet per second (CFS) AND duty in acre-feet annually (AFA).
- The water is to be used for STOCK WATERING  
Irrigation, power, mining, commercial, domestic or other use. Must be limited to one major use.
- If use is for:
  - Irrigation, state number of acres to be irrigated \_\_\_\_\_
  - Stockwater, state number and kind of animals 200 cows/cattle
  - Other use (describe fully in No. 12) \_\_\_\_\_
  - Power:
    - Horsepower developed \_\_\_\_\_
    - Point of return of water to stream \_\_\_\_\_

PER-EMAILS  
 FROM AGENT  
 DATED  
 4/24/18 &  
 4/25/18

5. The water is to be diverted from its source at the following point: (Describe as being within a 40-acre subdivision of public survey, and by course and distance to a found section corner. If on unsurveyed land, it should be so stated.)

In the N $\frac{1}{2}$ SE $\frac{1}{4}$  Sec. 12, T. 4 S., R. 56 E., M.D.M. at a point from which the southeast corner of Section 24, T. 4 S., R. 56 E. M.D.M. bears S06°07'56"E 125°59'18" (plots in the NE $\frac{1}{4}$ SE $\frac{1}{4}$  Sec 12)

6. Place of use: (Describe by legal subdivision. If on unsurveyed land, it should be so stated)

Three locations in unsurveyed land as located from Protracted BLM as follows: The SW $\frac{1}{4}$ NW $\frac{1}{4}$  Sec. 17, T. 4 S., R. 57 E.; NW $\frac{1}{4}$ SW $\frac{1}{4}$  Sec 28, T. 4 S., R. 57 E., and SE $\frac{1}{4}$ NE $\frac{1}{4}$  Sec. 3, T. 5 S., R. 57 E. Also two locations in surveyed land as follows; In the NE $\frac{1}{4}$ NE $\frac{1}{4}$  Sec 7, T. 6 S., R. 58 E and in the NW $\frac{1}{4}$ NE $\frac{1}{4}$  Sec 10, T. 6 S., R. 58 E; all in Mount Diablo Meridian

7. Use will begin about January 1<sup>st</sup> and end about December 31<sup>st</sup> of each year.

8. Description of proposed works. (Under the provisions of NRS 535.010 you may be required to submit plans and specifications of your diversion or storage works.) (State manner in which water is to be diverted, i.e. diversion structure, ditches and flumes, drilled well with a pump and motor, etc.)

Well with pump and motor, pipeline, and one trough with float  
A well

9. Estimated cost of works: Approx. \$68,000

10. Estimated time required to construct works: 4 years

(If the well is complete, describe works.)

11. Estimated time required to complete the application of water to beneficial use: 4 years

12. Provide a detailed description of the proposed project and its water usage (use attachments if necessary): (Failure to provide a detailed description may cause a delay in processing.)

A well to be drilled (estimated 230' deep), approx. 20 miles of 1 $\frac{1}{2}$  to 1 $\frac{1}{4}$  diam. plastic pipe

One new trough (approx 10' diam) and 2' deep

Other existing locations are existing with troughs, float valves and storage tanks

13. Miscellaneous remarks: General thoughts to be considered: water hereon is sought to expand the place of permitted place of use in areas not available to cattle without hauling. The valley's permitted ~~use~~ yield is estimated at 2,600 a.f.a. where in 5.8 are currently unappropriated. The largest water right holder in this basin controls 99.5% of the perennial yield but to date has not placed in beneficial use. We hope we will put this 4.5 ac. ft very soon.

lensmithland Survey@lctarbo.net.com  
E-mail Address

775 962 1196

Phone No

Ext

APPLICATION MUST BE SIGNED  
BY THE APPLICANT OR AGENT

Lenard Smith WRS, PLS

Type or print name clearly

Lenard Smith

Signature, applicant or agent

Lenard Smith Land Survey

Company Name

PO Box 443

Street Address or PO Box

Caliente, NV 89008

City, State, ZIP Code

Revised 06/17 \$360 FILING FEE AND SUPPORTING MAP MUST ACCOMPANY APPLICATION

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STATE ENGINEERS OFFICE

**APPENDIX II**

**Lincoln County Power District No. 1 – Medlin Agreement  
to  
Allow Pipeline Burial  
in  
Lincoln County Power District Right-of-Way**

BOARD OF TRUSTEES

Edward Wright, President  
Lee Mathews, Vice President  
Bob Rollins, Trustee  
Michael Fogliani, Trustee  
Dylan Frehner, Trustee



Lincoln County  
Power District  
No. 1

David Luttrell  
General Manager  
Phone: (775) 962-5122  
Fax: (775) 962-5299  
Email: dluttrell@lcpd1.com

LINCOLN COUNTY POWER DISTRICT NO. 1  
HC 74 Box 101  
Pioche, Nevada 89043

February 16, 2018

Steve Medlin  
200031 Rock Springs Road  
Alamo, Nevada 89001

Re: R-O-W Grant N-12182 Encroachment

Dear Mr. Medlin:

Please be advised that the Lincoln County Power District No. 1 (Power District) has reviewed your request to install a buried water line within the Power District's Right-of-Way Grant N-12182. It is our understanding that the proposed pipeline will be 1-1/2 inch diameter, HDPE pipe, and is to be buried approximately 3 feet below grade along the south edge of the power line patrol road between transmission line structures 37-5 and 50-6. Installation of the pipeline as proposed is acceptable to the Power District subject to the attached standard terms and conditions. Please advise the Power District's engineering department when construction of the pipeline begins.

Sincerely,

A handwritten signature in black ink, appearing to read "David Luttrell", is written over a horizontal line.

David Luttrell  
General Manager

**Lincoln County Power District No. 1**  
**Standard Conditions for Encroachment of Right-of-Way for**  
**Construction, Reconstruction, Operation and Maintenance of Facilities and Roads**

**1. Definitions.**

- a. Lincoln: Lincoln County Power District No. 1
- b. Requestor: A utility or a public agency, other than Lincoln, who has or desires to locate water, storm water, waste water, electric, or communication facilities; or roads within rights-of-way occupied by Lincoln.
- c. Clearance: A Clearance is a statement with documentation from Lincoln's Operations Manager to the Requestor's work supervisor declaring that the equipment or circuit has been de-energized and isolated from all sources of primary system energy.
- d. Hot-Line Order: A Hot-Line Order is a statement with documentation from Lincoln's Operations Manager to the Requestor's work supervisor that the automatic reclosing is turned off and that the equipment or circuit covered by the Hot-Line Order will not be intentionally re-energized until contact has been made with the work supervisor holding the Hot-Line Order.

**2. Joint Occupancy of Right-of-Way.**

- a. Lincoln authorizes the Requestor, its contractors and agents to encroach the designated right-of-way occupied by Lincoln for construction, reconstruction, operation and maintenance of utility facilities or roadways, subject to these standard conditions.
- b. For buried pipelines within Lincoln's right-of-way, the Requestor will consider induced current affects and will design appropriate cathodic protection measures to account for the close proximity to energized electrical lines, as necessary. Lincoln shall not be responsible for any damage or degradation of pipelines due to the operation of Lincoln's electric system.

**3. Ownership of Property.**

- a. All facilities constructed or caused to be constructed by Lincoln in order to implement these standard conditions shall remain the sole property of Lincoln.

**4. Discharge of Liability.**

- a. Unless a Requestor provides written notice to Lincoln indicating otherwise prior to the start of activities within the right-of-way occupied by Lincoln, it shall be understood and agreed that the Requestor shall indemnify, save and hold Lincoln

free and harmless from any and all liability, loss, damage, cost, or expense, including reasonable attorney's fees arising out of, connected with, or related to any claim by the Requestor or any third party claiming through the Requestor, which arises in any manner from any provision of these standard conditions; and shall include the Requestor's activities relating to the construction, reconstruction, operation and maintenance of its facilities and any activity of the Requestor on the premises or rights-of-way of Lincoln.

**5. Right-of-Way Requirements.**

- a. In addition to any other requirement established by the Requestor's easements or permits with others, the Requestor shall adhere to these standard conditions in areas of close proximity to Lincoln's electrical facilities.
- b. Parking of vehicles or equipment, stockpiling of material, or placement of construction yards or other obstructions on Lincoln's right-of-way or on right-of-way access roads that would prevent the patrol of Lincoln's transmission or distribution lines is not allowed.
- c. At any time the Requestor's construction or maintenance activities will block an access road to Lincoln's facilities for more than 24-hours, the Requestor shall provide an alternate access road.
- d. Dust created from the Requestor's construction activities shall be minimized and controlled to prevent excessive accumulation on Lincoln's transmission and distribution line insulators.
- e. Lincoln may require the Requestor to apply water to disturbed top soil or to cease activities creating dust if such dust is observed blowing on Lincoln's line insulators.
- f. The Requestor shall be responsible for the cost incurred by Lincoln to wash its line insulators in the vicinity of the Requestor's construction operations to prevent flashover if dust is not adequately controlled.
- g. The Requestor shall not burn rubbish or debris within Lincoln's right-of-way.
- h. The Requestor shall be responsible for all environmental cleanup and restoration of Lincoln's right-of-way caused by Requestor activities on Lincoln's right-of-way.

**6. Construction and Maintenance Requirements.**

- a. When working near electrical facilities, the Requestor shall be responsible for its own safety and the safety and well-being of the public whom may be affected by such construction.

- b. The Requestor shall adhere to all federal, state and local laws and regulations affecting construction and maintenance activities, and at a minimum shall have in place a safety program covering all activities at the work site, including work near energized electrical facilities.
- c. Lincoln shall have the right to inspect the work of the Requestor affecting Lincoln's facilities. The Requestor is responsible for requesting inspections. Inspections must be arranged two working days in advance. Schedule inspections by contacting Lincoln at (775) 962-5122.

7. **Excavations.**

- a. Excavations within sixteen feet of Lincoln's electrical facilities shall not begin unless approved by Lincoln. Approval may be obtained by contacting Lincoln at (775) 962-5122.
- b. If trenching or excavation is to occur within sixteen feet of a transformer, vault, pole or any other electric utility device, the device must be braced or supported or shoring installed by the Requestor at the sole option of Lincoln, and at the cost of the Requestor.
- c. The Requestor shall install trench plates, that are at a minimum rated for H20 loading, over open trenches bisecting access roads to Lincoln's facilities in order to allow access by Lincoln.
- d. The Requestor shall be responsible for the cost of straightening or leveling any device impacted by the Requestor's excavation activities to the satisfaction of Lincoln.
- e. The Requestor shall be responsible for repairs or the cost of repairs caused to Lincoln's existing utilities or facilities while trenching. If performed by the Requestor, the Requestor shall complete repairs in a timely manner and to the satisfaction of Lincoln.

8. **Aerial Construction.**

- a. The Requestor shall not elevate or extend the arms, booms, jibs, hoists, or platforms of cranes, derricks, hydraulic excavators, backhoes, boom trucks, bucket trucks, manlifts, or similar types of aerial equipment under or within twenty-one feet on each side of an energized conductor, unless approved by Lincoln and only in the presence of a qualified lineman to serve as a safety watch.
- b. If Lincoln must provide a qualified lineman to serve as a safety watch, the cost of such lineman shall be paid by the Requestor.

9. **Clearance and Hot-Line Order Requirements.**

- a. If the Requestor must conduct work within twenty-one feet of an energized conductor, a Clearance or Hot-Line Order may be required. A Clearance or Hot-Line Order may only be held by a qualified lineman. If Lincoln must provide a qualified lineman to hold a Clearance or Hot-Line Order, the cost of such lineman shall be paid by the Requestor.
- b. Clearances or Hot-Line Orders must be scheduled seven working days in advance.
- c. Clearances on transmission facilities (rated 69-kV phase to ground or greater) will not be allowed from April 1<sup>st</sup> through September 30<sup>th</sup> of each year. The ability to schedule a Clearance on Lincoln's other facilities shall be determined on a case-by-case basis by Lincoln's Operations Manager at the time a request is made by a Requestor.
- d. The time period allotted for a Clearance shall be determined at the sole option of Lincoln, and may occur after hours, at night, on weekends, or holidays.
- e. Clearances unless otherwise approved in writing by Lincoln's Operations Manager, will be limited to no more than 3 hours in duration with service restored at the end of the allotted time for the Clearance.
- f. Clearances and Hot-Line Orders may be requested by contacting Lincoln at (775) 962-5122.

**APPENDIX III**

**Lincoln County Road Department – Medlin Agreement  
to  
Allow Pipeline Burial**

# Lincoln County Road Department



Shane Cheeney Supervisor  
Po Box 396  
Caliente, NV 89003  
Phone (775)-962-3037  
Fax (775)-726-3613  
Email-jjacquot@lincolnnv.com

January 8, 2020

Bureau of Land Management  
Caliente Field Office  
1400 S Front Street  
PO Box 237  
Caliente, NV 89008

Dear Mr. Jay Goodwin,

This letter is to inform the BLM that the Lincoln County Road Department gives approval for Mr. Steve Medlin to install the water line with in the Tempiute Road, Tempiute Pole Road, Tempiute Mine Road and South Crescent Road ROW's. The only request is that the road be brought back to county road standards after the installation is completed.

If there are any further questions regarding this project, please contact me @ 775-962-8087 or email [jjacquot@lincolnnv.com](mailto:jjacquot@lincolnnv.com).

Thank you for your time.

Sincerely,

A handwritten signature in cursive script that reads "Shane Cheeney".

Shane Cheeney  
LCRD Supervisor

**APPENDIX IV**

**Weed Risk Assessment**

# **Risk Assessment for Noxious & Invasive Weeds**

## **Tempiute Well and Pipeline and Crescent Spring Pipeline Extension, Bald Mountain Allotment (#21003)**

On November 9, 2019, a Noxious & Invasive Weed Risk Assessment was completed for the proposed Tempiute Well and Pipeline and Crescent Spring Pipeline Extension on the Bald Mountain allotment in Lincoln County, Nevada.

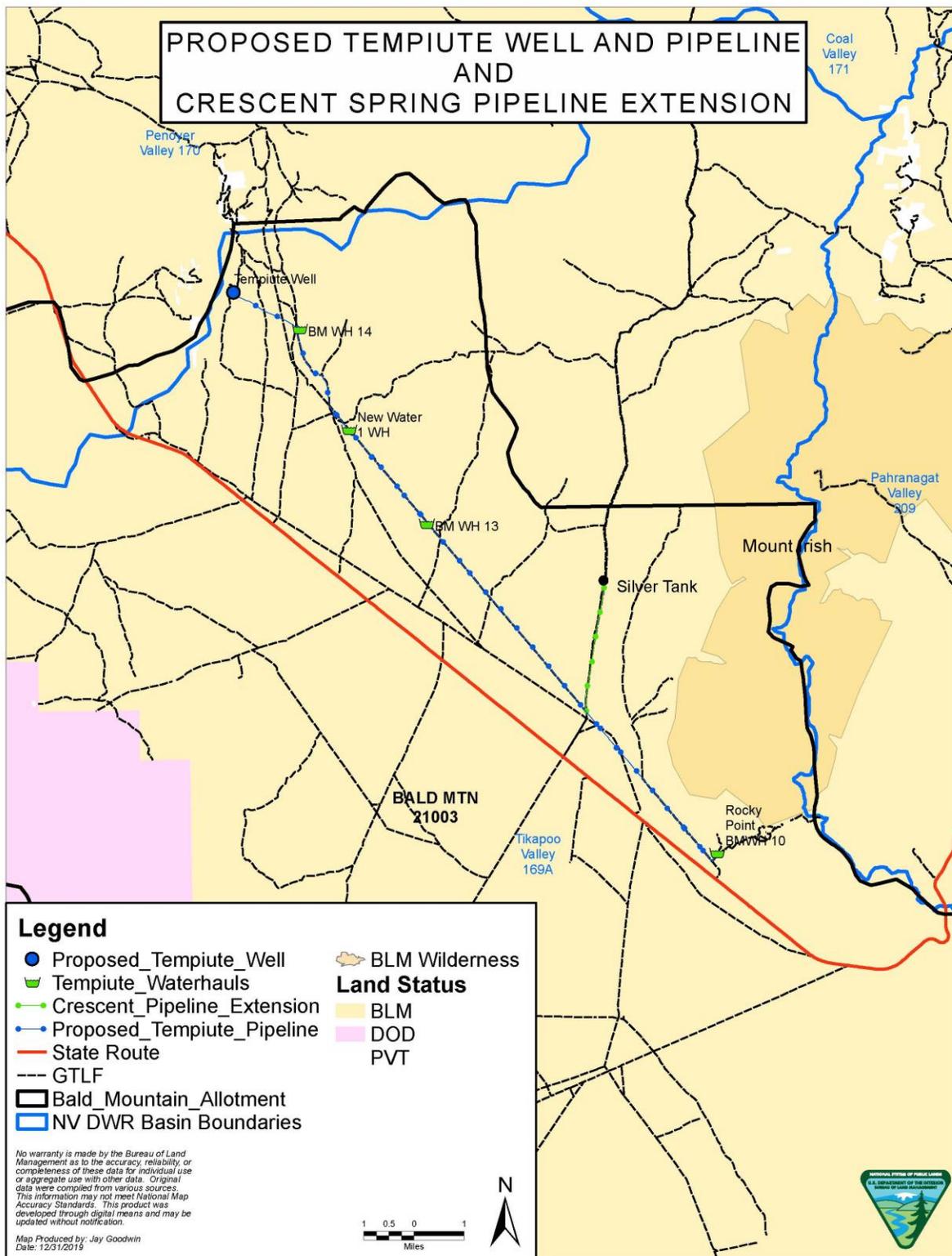
The BLM proposes to authorize D/4 Enterprises to drill a groundwater well (Tempiute Well) and construct a pipeline (Tempiute Pipeline) to convey water from this well to existing livestock water troughs which are currently supplied by hauling water, and to extend the Crescent Spring Pipeline (Fig. 1).

### **Methodology**

A weed risk assessment is based on two factors: the likelihood of weed species invading the project area (Factor 1), and the consequences of weed species becoming established in the project area (Factor 2). Tables 1 and 2, respectively, define the rating classes for each of these two factors. Within each factor and class, a numerical value is assigned to the factor based on proximity of weed infestations to the project area; weed seed or propagule dispersal mechanisms; ability of dispersed weed seeds and propagules to successfully establish, grow, and reproduce; the occurrence of suitable habitat for particular weed species, and other site specific factors, such as proximity of weed populations to roads, stream channels, and livestock trailing routes. Additionally, the adverse impacts of weed species becoming established in the project area are predicted based on consequences of invasion by these weeds of similar habitats with similar plant communities.

**Table 1. Rating classes for Factor 1 - likelihood of noxious/invasive weed species spreading into the project area.**

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



**Figure 2. Proposed Tempiute Well and Pipeline and Crescent Spring Pipeline Extension.**

**Table 3. Rating classes for Factor 2 - consequences of noxious/invasive weed establishment in the project area.**

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

The weed risk numerical rating is obtained by multiplying the assigned values of Factor 1 by Factor 2. Based on the product of this operation, a risk class is determined which, in turn, determines mitigation measures and/or project design features and standard operating procedures that must be incorporated into implementing the proposed action. Table 3 presents weed risk rating classes and associated risk-reduction and mitigation measures.

**Table 3. Weed Risk Rating classes.**

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

Ely District weed inventory data was consulted in preparing this risk assessment. This area was last surveyed in 2014. Additional field observations during site visits in 2019 was also incorporated. Known locations of noxious and invasive weeds are shown in Figure 2.

Ely District weed inventory data shows the following noxious weeds occurring on public land within the Bald Mountain allotment: Scotch thistle (*Onopordum acanthium*), Russian knapweed (*Acroptilon repen*), and salt cedar (*Tamarix* spp.). Salt cedar is a facultative riparian species and on the Bald Mountain allotment occurs only at Blowfly reservoir more than 5 miles from the project area. Both Scotch thistle and Russian knapweed are limited to the ROW of Nevada Highway 375.

The closest known occurrence of a noxious weed to the proposed Tempiute Well and Pipeline is Russian knapweed 0.9 miles from the portion of the pipeline closest to Highway 375. Noxious

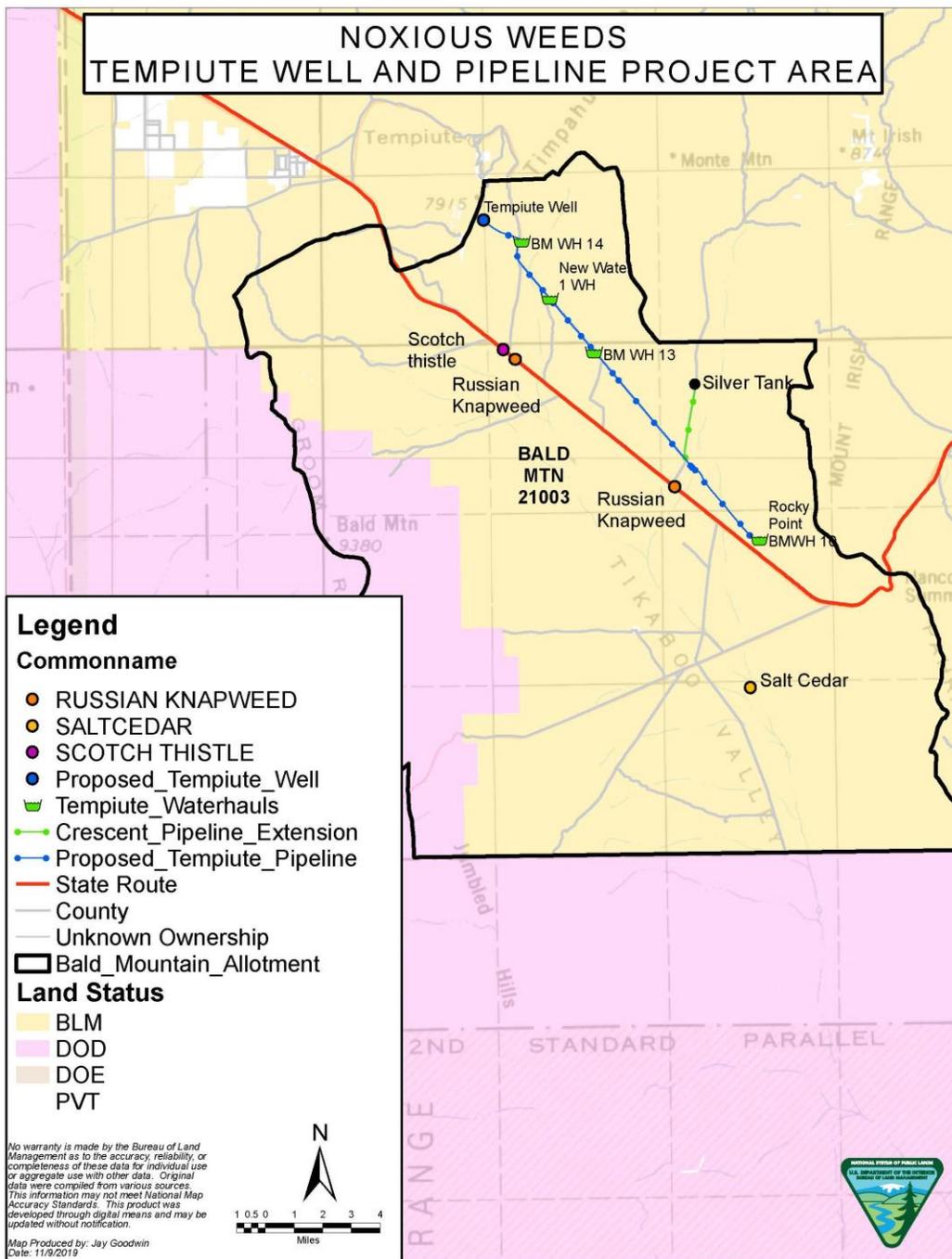


Figure 3. Noxious Weeds occurring on the Bald Mountain allotment.

weeds are not known to occur in the project area or along the roads accessing and within the project area. The following non-native invasive weeds probably also occur in or around the allotment: red brome (*Bromus rubens*), cheatgrass (*Bromus tectorum*), Russian thistle (*Salsola kali*), and kochia (*Kochia scoparia*). New cheatgrass populations are unlikely in the project as the aridity of the site is at the extreme end of the annual's ecological amplitude. New populations of red brome, Russian thistle, and kochia could become established as a result of ground disturbance in the project area. However, these species are currently rare and therefore relatively unlikely to be spread by construction activities. The project area will be monitored for noxious and invasive species and weed treatments applied if new weed populations are discovered.

### **Tempiute Well and Pipeline Weed Risk**

Noxious weeds found in the highway right-of-way near the allotment have the potential to invade public land within the allotment. Invasion of the project area by these noxious weeds would require dispersal from the established weeds to the project area. Vectors for dispersal are vehicles, wind (both Scotch thistle and Russian knapweed are in the Asteraceae and have wind-dispersed, dandelion-like seeds; salt cedar seeds can also be wind dispersed), and livestock.

Dispersal into the project area by vehicles is unlikely as the weeds do not occur in the roadway and vehicles will not be driving through weed patches. Consequently, it is unlikely that vehicles would pick up and transport any weed propagules. Dispersal by wind is possible though the distance from established populations to ground that will be disturbed by the proposed project is 0.9 mile at a minimum, and usually much greater than this. However, long-distance dispersal of weed seeds does occur. Livestock passing through a weed patch could also potentially transport weed seeds to the project area if seeds adhered to animal fur. However, even if weed seeds were transported into the project area and deposited on newly disturbed ground, establishment of weed seedlings is far from certain as the area is upland Mojave Desert and receives less than 6 inches of rain per year, on average.

For this project, Factor 1 (likelihood of weeds spreading to the project area) is Low (2) at the present time. Wind or livestock could introduce noxious or invasive weeds to the project area, but there is a significant distance between known weed locations and the project area. Design features of the proposed action would also help to prevent weeds from establishing or spreading.

The Factor 2 rating is Moderate (4) at the present time. Establishment of weeds in the project is fairly unlikely simply due to aridity. If noxious weed infestations establish within the permitted area this could have an adverse impact on native plant communities however, the proposed action includes measures to help prevent weeds from establishing. An increase of red brome could alter the fire regime in the area.

The Weed Risk rating (Factor 1 x Factor 2) is Low (8). The project may proceed as planned. The project area will be monitored for noxious and invasive species and weed treatments applied if new weed populations are discovered.

## **Crescent Spring Pipeline Extension Weed Risk**

For this project, Factor 1 (likelihood of weeds spreading to the project area) is Low (1) at the present time. Wind or livestock could introduce noxious or invasive weeds to the project area, but there is a very significant distance between known weed locations and the project area. Design features of the proposed action would also help to prevent weeds from establishing or spreading.

The Factor 2 rating is Moderate (4) at the present time. Establishment of weeds in the project is unlikely due to distance to weed populations and site aridity. If noxious weed infestations establish within the permitted area this could have an adverse impact on native plant communities however, the proposed action includes measures to help prevent weeds from establishing. An increase of red brome could alter the fire regime in the area.

The Weed Risk rating (Factor 1 x Factor 2) is Low (4). The project may proceed as planned. The project area will be monitored for noxious and invasive species and weed treatments applied if new weed populations are discovered.

## **Weed Risk Mitigation Measures**

For the proposed actions, Tempiute Well and Pipeline and Crescent Spring Pipeline Extension, the Weed Risk ratings are Low. This indicates that the project can proceed as planned so long as the project area is monitored for new weed infestations. The following mitigation measures will be implemented as part of the proposed actions:

- Continue to use integrated weed management to treat weed infestations and use principles of integrated pest management to meet management objectives and to reestablish resistant and resilient native vegetation communities.
- Develop weed management plans that address weed vectors, minimize the movement of weeds within public lands, consider disturbance regimes, and address existing weed infestations.
- Where appropriate, inspect source sites such as borrow pits, fill sources, or gravel pits used to supply inorganic materials used for construction, maintenance, or reclamation to ensure they are free of plant species listed on the Nevada noxious weed list or specifically identified by the Ely District Office. Inspections will be conducted by a weed scientist or qualified biologist.
- To minimize transport of soil-borne noxious weed seeds, roots, or rhizomes, infested soils or materials will not be moved and redistributed on weed-free or relatively weed-free areas. In areas where infestations are identified or noted and infested soils, rock, or overburden must be moved, these materials will be salvaged and stockpiled adjacent to the area from which they were stripped. Appropriate measures will be taken to minimize wind and water erosion of these stockpiles. During reclamation, the materials will be returned to the area from which they were stripped.
- Where appropriate, vehicles and heavy equipment used for the completion, maintenance, inspection, or monitoring of ground disturbing activities; for emergency fire suppression; or for authorized off-road driving will be free of soil and debris capable of transporting

weed propagules. Vehicles and equipment will be cleaned with power or high pressure equipment prior to entering or leaving the work site or project area. Vehicles used for emergency fire suppression will be cleaned as a part of check-in and demobilization procedures. Cleaning efforts will concentrate on tracks, feet and tires, and on the undercarriage. Special emphasis will be applied to axels, frames, cross members, motor mounts, on and underneath steps, running boards, and front bumper/brush guard assemblies. Vehicle cabs will be swept out and refuse will be disposed of in waste receptacles. Cleaning sites will be recorded using global positioning systems or other mutually acceptable equipment and provided to the Ely District Office Weed Coordinator or designated contact person.

- When manual weed control is implemented, remove the cut weeds and weed parts and dispose of them in a manner designed to kill seeds and weed parts.
- Conduct mixing of herbicides and rinsing of herbicide containers and spray equipment only in areas that a safe distance from environmentally sensitive areas and points of entry to bodies of water (storm drains, irrigation ditches, streams, lakes, or wells).
- Do not apply herbicides within 440 yards (0.25 mile) of residences without prior notification of the resident.
- Areas treated with herbicides will be adequately posted to notify the public of the activity and of safe re-entry dates, if a public notification requirement is specified on the label of the product applied. The public notice signs will be at least 8½” x 11” in size and will contain the date of application and the date of safe re-entry.
- Prior to entering public lands, the contractor, operator, or permit holder will provide information and training regarding noxious weed management and identification to all personnel who will be affiliated with the implementation of the project. The importance of preventing the spread of weeds to weed-free areas and importance of controlling existing populations of weeds will be explained.
- Keep removal and disturbance of vegetation to a minimum through construction site management (e.g. using previously disturbed areas and existing easements, limiting equipment/materials storage and staging area sites, etc.)
- Determine seed mixes on a site specific basis dependent on the probability of successful establishment. Use native and adapted species that compete with annual invasive species or meet other objectives.
- Generally, conduct reclamation with native seeds that are representative of the indigenous species present in the adjacent habitat. Document rationale for potential seeding with selected nonnative species. Possible exceptions would include use of nonnative species for a temporary cover crop to out-compete weeds. In all cases, ensure seed mixes are approved by the BLM Authorized Officer prior to planting.
- Certify that all interim and final seed mixes, hay, straw, and hay/straw products are free of plant species listed on the Nevada noxious weed list.
- All straw, hay, straw/hay, or other organic products used for reclamation or stabilization activities, must be certified that all materials are free of plant species listed on the Nevada noxious weed list or specifically identified by the Ely District Office.

- Control or restrict the timing of livestock movement to minimize the transport of livestock-borne noxious weed seeds, roots, or rhizomes between weed-infested and weed-free areas.
- When maintaining unpaved roads on BLM-administered lands, avoid unnecessary disturbance of adjacent native vegetation and spread of weeds. Grade roads shoulders or barrow ditches only when necessary to provide for adequate drainage. Minimize the width of grading operations. The BLM Authorized Officer will meet with equipment operators to ensure that they understand this objective.
- Prior to project approval, a site-specific weed survey and weed risk assessment will be completed. Monitoring will be conducted for a period no shorter than the life of the permit or until bond release and monitoring reports will be provided to the Ely District Office. If the presence and/or spread of noxious weeds is noted, appropriated weed control procedures will be determined in consultation with Ely District Office personnel and will be in compliance with the appropriate BLM Handbook sections and applicable laws and regulations. All weed control efforts on BLM-administered lands will be in compliance with BLM Handbook H-9011, H-9011-1 Chemical Pest Control, H-9014 Use of Biological Control Agents of Pests on Public Lands, and H-9015 Integrated Pest Management. Submission of Pesticide Use Proposals and Pesticide Application Records will be required.
- Do not conduct noxious and invasive weed control within 0.5 mile of nesting and brood rearing areas for special status species during the nesting and brood rearing season.

Prepared by:     /s/ Jay Goodwin      
 Jay Goodwin  
 Range Management Specialist

    11/09/2019      
 Date

**APPENDIX V**

**BLM Internal Scoping  
November 26, 2019**

**Tempiute Well and Pipeline  
and  
Crescent Spring Pipeline Extension**

<b>Resource/ Concerns Considered</b>	<b>A Resource Specialist</b>	<b>B Conforms with Land Use Plan? (Y/N)</b>	<b>C Further Evaluation Needed? (Y/N)</b>	<b>D Evaluations Conducted/Brief Description of Potential Issue. If “NO” in column C brief explanation why.</b>	<b>E Initials</b>	<b>F Date</b>
<b>Air Resources</b>						
*Air Quality	Andy Gault	Y	N	Possible temporary increase in dust only during construction, no long-term effects otherwise	AG	11/20/2019
<b>Water / Soil Resources</b>						
*Water Quality, Surface and Ground	Andy Gault	Y	N	Proposed Action is unlikely to affect quality of ground or surface waters	AG	11/20/2019
Water Resources (Water Rights, etc.)	Andy Gault	Y	Y	Proposed Action appropriates groundwater from a new well. Action requires approval of application to appropriate groundwater by NV DWR. Action will very nearly fully allocate groundwater in this watershed.	AG	11/20/2019
*Farmlands, Prime and Unique	Jay Goodwin	Y	N	No potential for farming exists. Proposed Action occurs (in part) in potential Prime Farmland located on public land but no proposal exists to transfer parcels to private ownership.	JG	11/12/2019
<b>Vegetation Resources</b>						
*Forest Health <sup>1</sup>	NA	NA	N	Not a Healthy Forests Restoration Act project	NA	NA
*Rangeland Standards and Guidelines <sup>2</sup>	Jay Goodwin	Y	Y	Proposed Action would need to be evaluated against Standards and Guidelines for Grazing Management	JG	11/12/2019

<sup>1</sup> Healthy Forests Restoration Act projects only

<sup>2</sup> Usually not an issue unless the action is a grazing, ESR, or habitat/vegetation restoration projects

<b>Resource/ Concerns Considered</b>	<b>A Resource Specialist</b>	<b>B Conforms with Land Use Plan? (Y/N)</b>	<b>C Further Evaluation Needed? (Y/N)</b>	<b>D Evaluations Conducted/Brief Description of Potential Issue. If “NO” in column C brief explanation why.</b>	<b>E Initials</b>	<b>F Date</b>
*Wetlands/ Riparian Zones	Andy Gault	Y	N	Not present	AG	11/20/2019
<b>Fish and Wildlife</b>						
Fish and Wildlife, Special Status Species (excluding T&E)	Jessicca McMullen	Y	N	The proposed action area contains suitable habitat for Great Basin collared lizard ( <i>Crotaphytus bicinctores</i> ) and desert horned lizard ( <i>Phrynosoma platyrhinos</i> ). Although temporary displacement of individuals may occur, no population level impacts are anticipated to these species.	JM	11/29/19
*Migratory Birds and Sensitive Avian species, (except for sage grouse).	Jessicca McMullen	Y	N	No further analysis needed. Nearest known Sensitive Avian Species (golden eagles) are more than 2 miles from the project area. Proposed project collocated with existing disturbance. No population level impacts anticipated.	JM	11/26/19
*FWS Threatened & Endangered Species or critical habitat. <sup>3</sup> Also, ACECs designated to protect habitat of listed species.	Jessicca McMullen	Y	N	T&E species not known to occur in proposed project area. Critical Habitat and ACECs not present.	JM	11/29/19

<sup>3</sup> Consultation required unless a “not present” or “no effect” finding is made

<b>Resource/ Concerns Considered</b>	<b>A Resource Specialist</b>	<b>B Conforms with Land Use Plan? (Y/N)</b>	<b>C Further Evaluation Needed? (Y/N)</b>	<b>D Evaluations Conducted/Brief Description of Potential Issue. If “NO” in column C brief explanation why.</b>	<b>E Initials</b>	<b>F Date</b>
Sensitive Plant Species, Also, ACECs designated to protect special status plant species.	Jessica McMullen	Y	N	Not known to occur in proposed project area. Project would be collocated with existing disturbance.	JM	11/29/19
<b>Wild Horse and Burro</b>						
Wild Horses	Tyler Reese	Y	N	Not present; proposed action does not occur in an HMA or HA. Wild horses are not present in the project area.	TR	11/26/19
<b>Cultural and Paleontological Resources</b>						
*Cultural Resources	Harry Konwin	Y	N	80 % disturbed, remainder surveyed: not present or avoided	HK	11/27/19
*ACEC's designated for important Historic and Cultural areas.	Harry Konwin	Y	N	Not present	HK	11/27/19
Heritage Special Designations (Historic Trails, Archaeological Areas and Districts)	Harry Konwin	Y	N	Not present	HK	11/27/19
Paleontological Resources	Harry Konwin	Y	N	No known paleontological resources	HK	11/27/19
<b>Visual Resources</b>						

<b>Resource/ Concerns Considered</b>	<b>A Resource Specialist</b>	<b>B Conforms with Land Use Plan? (Y/N)</b>	<b>C Further Evaluation Needed? (Y/N)</b>	<b>D Evaluations Conducted/Brief Description of Potential Issue. If “NO” in column C brief explanation why.</b>	<b>E Initials</b>	<b>F Date</b>
Visual Resources	Lisa Domina	Y	N	The proposed project area falls within VRM Classes III. The Class III objective is to partially retain the existing character of the landscape. Management activities may attract attention but should not dominate the view. Buried pipeline along existing roadways the solar panels and storage tank at the well head would not result in any substantive change and would not dominate the view of the casual observer.	LD	11/25/2019
<b>Lands and Realty/Renewable Energy</b>						
Land Uses (existing/pending ROW; disposal areas; land status; etc.) <sup>4</sup>	Maureen McDonald	Y	N	Proposed action is not affected by LCCRDA disposals per 2008 RMP and entire project is on public (BLM) land.  Proposed action requires pipeline burial in ROW issued to Lincoln County Power District for the power line. The LCPD ROW is not exclusive, and LCPD and D4 Enterprises (Steve Medlin) have concluded a written agreement allowing the pipeline to be constructed in the ROW. Pipeline will be sited just outside of the road in the bladed berm opposite side from powerline.  Lincoln County Roads Department blades the roads along which the pipeline will buried and has been notified of the project and provided a map.	MM	1/7/2020

<sup>4</sup> Rights of Way, and other realty actions including Lands identified for Disposal.

<b>Resource/ Concerns Considered</b>	<b>A Resource Specialist</b>	<b>B Conforms with Land Use Plan? (Y/N)</b>	<b>C Further Evaluation Needed? (Y/N)</b>	<b>D Evaluations Conducted/Brief Description of Potential Issue. If “NO” in column C brief explanation why.</b>	<b>E Initials</b>	<b>F Date</b>
				The proposed pipeline will be routed such that NDOT Materials Pit (Nev 043434) is avoided.		
<b>Travel Management</b>						
Travel Transportation Management (access; Travel Management Plan)	Lisa Domina	NA	N	Not Present. There are no Travel Transportation Management Plans within the Caliente Field Office.	LD	11/21/2019
<b>Recreation</b>						
Recreation Uses	Lisa Domina	Y	N	Proposed Action would not prevent or limit recreational uses. Recreation within the area is dispersed and low. There are no developed recreation facilities or sites in the area. The area is used primarily by ranchers and hunters.	LD	11/21/2019
<b>Livestock Grazing</b>						
Grazing Uses/Forage	Jay Goodwin	Y	Y	The Proposed Action supports livestock grazing and will increase grazing use in the vicinity of a new trough.	JG	11/12/2019
<b>Forest/Woodland Products</b>						

<b>Resource/ Concerns Considered</b>	<b>A Resource Specialist</b>	<b>B Conforms with Land Use Plan? (Y/N)</b>	<b>C Further Evaluation Needed? (Y/N)</b>	<b>D Evaluations Conducted/Brief Description of Potential Issue. If “NO” in column C brief explanation why.</b>	<b>E Initials</b>	<b>F Date</b>
Vegetative Resources (Forest or Seed Products)	Kyle Teel <b>Not ESR</b>	Y	N	Implementation of the Proposal would not affect Vegetative Resources (Forest or Seed Products)	KT	11/20/19
<b>Geology and Mineral Extraction</b>						
Mineral Resources	Elizabeth Benge	Y	N	Proposed Action does not include mineral related activities such as exploration or extraction. The Proposed Action does not preclude future exploration or extraction. There are currently no authorized mineral actions in the Proposed Action area.	EB	11/22/19
<b>Watershed</b>						
Watershed Management (soil and vegetation conditions)	Jay Goodwin	Y	Y	Proposed Action includes one new livestock trough and increased grazing use (herbivory) in the area around the new trough.	JG	11/13/2019
*Floodplains	Andy Gault	Y	N	Not present	AG	11/20/2019
<b>Fire</b>						
Fire Management	Kyle Teel	Y	N	Implementation of the Proposal would not affect fire management	KT	11/20/19
ES&R [i.e. restoration]	Chris McVicars	Y	N	Implementation of the Proposal would not affect fire management	CM	12/3/2019
<b>Noxious and Invasive Weeds</b>						

<b>Resource/ Concerns Considered</b>	<b>A Resource Specialist</b>	<b>B Conforms with Land Use Plan? (Y/N)</b>	<b>C Further Evaluation Needed? (Y/N)</b>	<b>D Evaluations Conducted/Brief Description of Potential Issue. If “NO” in column C brief explanation why.</b>	<b>E Initials</b>	<b>F Date</b>
*Invasive Non- native Species	Jay Goodwin	Y	N	A Weed Risk Assessment has been completed for the proposed action; risk is low. Affected area will be monitored and treated if new weeds establish.	JG	11/12/2019
<b>Special Designations</b>						
*Wilderness/ WSA	Blake Baker	Y	N	Not present	BB	12/2/2019
LWC	Blake Baker	Y	N	Troughs may be considered substantially unnoticeable to the casual observer and would not detract from the naturalness of the LWC unit. Proposed action will not result in any visual or auditory change to the landscape that would affect wilderness characteristics.	BB	12/2/2019
*Wild and Scenic Rivers	NA	NA	NA	NA	NA	NA
<b>Other Concerns</b>						
Public Safety <sup>5</sup>	Jon Prescott	Y	N	Not present. This action would occur in remote locations, away from any public recreation sites or other areas where the public may congregate and is off of any main thoroughfare.	JP	11/21/2019

<sup>5</sup> Analyzed if the project could cause issues with law enforcement, traffic hazards, excessive noise that could affect the public, etc.

<b>Resource/ Concerns Considered</b>	<b>A Resource Specialist</b>	<b>B Conforms with Land Use Plan? (Y/N)</b>	<b>C Further Evaluation Needed? (Y/N)</b>	<b>D Evaluations Conducted/Brief Description of Potential Issue. If “NO” in column C brief explanation why.</b>	<b>E Initials</b>	<b>F Date</b>
*Human Health and Safety <sup>6</sup>	NA	NA	NA	Application of herbicides not proposed.	NA	NA
*Wastes, Hazardous or Solid	Randy Johnson	Y	N	Proposed action will not generate hazardous or solid wastes on public lands and there are no known wastes in the project area.	RJ	12/6/19
*Native American Religious and other Concerns	Elizabeth Seymour	Y	N	Scoping letters to tribes were sent on 11/18/2019. All delivered by 11/27/2019. Awaiting response.	JB for ES	1/6/2020
*Environmental Justice	Jon Prescott	Y	N	There are no low income or minority populations in Lincoln County. This action would only impact the permittee.	JP	11/26/2019
<b>Other**</b>						

\* Nevada BLM Supplemental Authority

\*\* Socioeconomics, Noise, etc. (Usually addressed in EISs or major EA's)

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<sup>6</sup> Herbicide Projects