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Eureka County Public Works Department
Right-of-Way Amendment
Rehabilitation of Eureka's Water Collection System

ENVIRONMENTAL ASSESSMENT

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U.S. Department of the Interior
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BLM

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LIST OF ACRONYMS

amsl	above mean sea level
AUM	Animal Unit Month
BLM	Bureau of Land Management
BMP	Best Management Practices
CEA	Cumulative Effects Area
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
EPA	Environmental Protection Agency
EA	Environmental Assessment
FLPMA	Federal Land Policy and Management Act
gpm	gallons per minute
HDPE	High Density Polyethylene
HFRA	Healthy Forests Restoration Act
HMA	Herd Management Area
JBR	JBR Environmental Consultants, Inc.
LR2000	BLM Legacy Rehost System
MLFO	Mount Lewis Field Office
NAGPRA	Native American Graves Protection and Repatriation Act
NDEP	Nevada Division of Environmental Protection
NDOT	Nevada Department of Transportation
NDOW	Nevada Department of Wildlife
NDWR	Nevada Division of Water Resources
NEPA	National Environmental Policy Act
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
PVC	Polyvinyl chloride
RMP	Resource Management Plan
ROW	Right-of-Way
TCP	Traditional Cultural Property

CHAPTER 1
INTRODUCTION

1.1 INTRODUCTION

The Eureka County Public Works Department (Eureka County) proposes to repair an existing water system that collects and conveys water from ten springs to the town of Eureka, Nevada. The springs and associated underground waterlines are on public lands managed by the Bureau of Land Management (BLM). The system is south of Eureka, along the U.S. Highway 50 corridor in the canyon between the Fish Creek Range and Diamond Mountains (Eureka Canyon). The northernmost spring is approximately 0.8 mile east of U.S. Highway 50 and approximately 1.2 miles southeast of Eureka. The southernmost spring is approximately 0.8 mile west of U.S. Highway 50 and approximately 4.5 miles south of Eureka (Figure 1).

The collection system is not currently connected to Eureka's water supply and is in disrepair. The system was originally constructed in the 1870s and has since undergone numerous improvements and restorations (KEC 2009). Eureka County acquired the system in 1994 to supplement Eureka's municipal water supply and possesses the water rights for all ten springs.

1.2 PURPOSE AND NEED OF THE PROPOSED ACTION

BLM's purpose is to respond to the Standard Form 299 application submitted to the Mount Lewis Field Office (MLFO) by Eureka County on November 19, 2007. The application requested that existing right-of-way (ROW) grant NVN 007463 be amended to contain the ten springs and all portions of the water collection system so the system can be repaired. The BLM must assure that authorization of the Proposed Action avoids undue or unnecessary degradation of public lands as required under the Federal Land Policy and Management Act (FLPMA) of 1976 or other Public Land Acts.

Eureka's water supply is pumped from two wells in Diamond Valley. However, decreasing water table levels in Diamond Valley make the future of Eureka's water supply uncertain. Additionally, the current well and pump system is expensive to operate. The Proposed Action is needed to provide a secondary source of water that fulfills the following objectives:

- Reliable,
- Clean and safe, and
- Cost effective to operate and maintain.

1.3 RELATIONSHIP TO PLANNING AND CONFORMANCE WITH PLANS

The public lands administered by the BLM in the project vicinity are managed in accordance with the Shoshone-Eureka Resource Management Plan (RMP) and Record of Decision (ROD) for the Shoshone-Eureka Resource Area (BLM 1984; 1986). The proposed action is in conformance with the RMP, even though it is not specifically provided for, because it is consistent with the following RMP decisions (objectives, terms, and conditions): "Management Actions Not Expressly Addressed by the Resource Management Plan– ROD PART II.E."

The proposed ROW amendment (Proposed Action) does not conflict with any known state or local planning, ordinance, or zoning.

CHAPTER 2
PROPOSED ACTION AND ALTERNATIVES

2.1 PROPOSED ACTION

Eureka County Public Works proposes to rehabilitate an existing system that collects and conveys water from ten springs on BLM-administered public land. Because system components are outdated, damaged, and no longer usable, they would be completely replaced. New spring collection boxes and underground water transmission lines would be installed. Construction methods and materials are described in Section 2.1.3.

Rehabilitation would include installation of new and modern components to protect water from external pollutants that could exist on and below the soil surface. Further, rehabilitation would ensure the supplemental water supply is consistently available for use in Eureka. The springs are at elevations higher than Eureka so groundwater collected in the rehabilitated system could be conveyed to Eureka by gravity, eliminating the need for a pumping system. Therefore, the rehabilitated system would reliably provide supplemental water that is safe for consumption in a cost effective manner.

2.1.1 Project Phasing and Construction Schedule

In order to accommodate Eureka County's budget, the Proposed Action would be implemented in two phases (Figure 2). Phase I would include rehabilitation of Prospect, Summit, Gorman, Lanie, Bullwacker, and Richmond Springs. Phase II would consist of repairs at the remaining springs: Fred, Florio, Middle, and Lucky Springs. Eureka County has not located the precise location of the existing infrastructure at Fred Spring. Prior to construction, Eureka County would have to conduct a more thorough search and locate existing components. The assessment of impacts at Fred Spring is based on a field survey of vegetation and habitat characteristics observed within the proposed Fred Spring ROW, and assumes construction methods, materials, and area would be the same (or similar) to the construction proposed at other springs.

Construction would begin following authorization of the Proposed Action. Construction would take place between April and October and Phases I and II would be completed within 24 months of authorization of the Proposed Action.

2.1.2 ROW Amendment and Configuration

Currently, most of the system is outside the existing ROW NVN 007463. The proposed amendment of ROW NVN 007463 would expand and reconfigure the limits of the ROW to include a 1,000-foot by 1,000-foot square around each spring source and a 60-foot-wide corridor to contain 11,565 feet of underground waterline. If amended, the amended ROW would consist of approximately 215.5 acres containing the springs and 15.9 acres containing the associated water transmission lines. The proposed ROW would contain the following elements, as shown in Figure 2 and Table 2-1 below.

Table 2-1 Proposed ROW

Project Element	Township, Range, Section (T, R, S)	Area of ROW (Acres)
Bullwacker and Richmond Springs	T19N, R53E, S24, and T19N R54E, S19	38.5
Florio Spring	T19N, R53E, S25	23.0
Fred and Lanie Springs	T19N, R53E, S25, and T19N R54E, S30	39.0
Gorman Spring	T19N, R53E, S25	23.0
Lucky Spring	T18N, R53E, S1, and T18N, R54E, S6	23.0
Middle Spring	T19N, R53E, S36, and T19N R54E, S31	23.0
Summit Spring	T18N, R53E, S1, and T18N, R54E, S6	23.0
Prospect Spring	T18N, R53E, S12	23.0
Subtotal		**215.5**
Waterline between Bullwacker and Lanie Springs (4,354.2 LF)	T19N, R54E, S19 and S30	6.0
Waterline between Lanie and Florio Springs (782.8 LF)	T19N, R53E, S25	1.1
Waterline between Prospect and Lucky Springs (4,896 LF)	T18N, R53E, S12, and T18N, R54E, S6 and S7	6.7
Waterline between Lucky and Summit Springs (1,532.1 LF)	T18N, R54E, S6	2.1
Subtotal		**15.9**
Total		**231.4**

2.1.3 System Components

Spring Sites

At each spring, existing collection facilities would be replaced. Remnants of the old water system that are exposed during construction, as well as all construction debris and trash, would be hauled to the Eureka County landfill. An underground collection gallery would be constructed to collect spring water. The lower end of each collection gallery would be capped with a concrete cut-off wall to allow water to accumulate. The cut-off wall would be fitted with a pipe to allow water to flow from the collection gallery to the spring box. Spring boxes would be fitted with a manhole for access and maintenance.

Compliant with Nevada Division of Environmental Protection (NDEP) regulations for municipal water supply systems, each spring would be enclosed within an 8-foot security chain link fence with protective signage around the perimeter. In addition to providing security from vandalism, the fencing would prevent domestic animals and wildlife from potentially contaminating the water source. Following recommendations made by the Nevada Department of Wildlife (NDOW) to safely and effectively keep elk, deer, and antelope out, fencing material would be made of a single roll of 8-foot-high commercial game fence or cyclone fencing with minimal spaces between gates and posts. Based on preliminary engineering plans completed for Phase I, approximately 1 acre around each spring would be fenced but as much as 1.7 acres may be fenced depending on specific site conditions and topography. Fenced areas would generally encompass 20 to 120 feet of area downslope and 80 to 160 feet upslope of proposed spring boxes. Phase II rehabilitation is expected to disturb similar-sized areas. Construction

disturbances from Phase I and II is estimated to be 12.2 acres. Disturbances would be primarily confined to the proposed fenced areas and would not extend beyond the limits of the proposed ROW.

Each spring would be protected from surface runoff contamination by a 2-foot-deep diversion ditch designed to capture runoff and divert it around the spring. The diversion ditch would be located within the fenced area at each site. Immediately downstream of the diversion, captured runoff would be allowed to follow its natural pre-construction drainage pattern.

Waterlines

Installation of waterlines would begin with excavating a trench approximately 6 feet deep and 9 feet wide (3 feet wide at the base). The new segments of waterline, either PVC or HDPE pipe, would be placed at least 48 inches below ground. The pipe would rest on at least 4 inches of clean bedding material and be surrounded by at least 12 inches of clean bedding material on both sides. The trench would then be backfilled with native material. Bedding and backfill material and compaction density would meet requirements of Nevada Standard Details for Public Works Construction and standards used by the Eureka County Public Works Department.

Once construction is completed at each spring site and along water line routes, disturbed ground would be reclaimed to preconstruction contours and seeded for erosion and weed control with the BLM-approved seed mix listed in Section 4.2 Mitigation Measures. Excess material and construction debris would be hauled to the Eureka landfill. Best Management Practices (BMPs) would be used to minimize the potential for erosion and siltation caused by stormwater runoff from the project area. BMPs are defined by NDEP in the State of Nevada Handbook of Best Management Practices (1994). The disturbance on public land for pipeline construction would be limited to the width of the proposed amended ROW (60 feet).

Equipment including an excavator, backhoe, compactor, dump truck, and water truck may have to travel overland to access and rehabilitate portions of the waterlines. Because of its proximity to Eureka, the Proposed Action would not require additional disturbance for equipment staging/fueling areas. The facilities would be constructed by a licensed contractor and would be owned, operated, and maintained by Eureka County.

2.2 Environmental Protection Measures

The following Environmental Protection Measures are incorporated into the Proposed Action to avoid and minimize potential adverse effects.

1. To protect water quality, Eureka County and/or its contractors would implement BMPs at all times during construction. BMPs are defined by NDEP in the State of Nevada Handbook of Best Management Practices (1994).

2. As a part of its BMP plan, Eureka County and/or its contractors would minimize the potential for erosion and siltation and the establishment of noxious weeds and spread of invasive species. ROW areas disturbed during construction would be reseeded with a BLM-approved erosion control seed mix. Only certified weed-free hay would be used if hay bales are used for erosion control.

3. Eureka County and/or its contractors would implement BMPs for spill prevention and cleanup. Eureka County and/or its construction contractor would not maintain and fuel equipment at the project site. No washing of oil, grease, or other petroleum products would be allowed on-site during construction. Any oil, fuel, or hydraulic fluid leaks would be cleaned up immediately after detection. If the leak is on a compacted surface, an oil-absorbing product would be applied. Once the cleanup product has absorbed the leak, it would be swept up and disposed of according to federal, state, or local regulations. If the leak occurs on soil, the contaminated soil would be removed and disposed of according to federal, state, or local regulations. In the event of a major spill, the spill would be contained using an on-hand supply of erosion control structures and/or by creating berms, as feasible and necessary. Within 24 hours of an identified spill, Eureka County and/or its construction contractor would notify the NDEP - Bureau of Water Pollution Control.

4. To protect known cultural resources, Eureka County would avoid the arborglyph (tree-carving) site during construction. To ensure avoidance, an archaeological monitor would be present during any ground-disturbing activities within 60 feet of the site. The assigned monitor would be a qualified archaeologist who meets Nevada BLM standards.

5. Eureka County would fence springs to keep large ungulates (e.g., livestock, elk, deer, and antelope) away from spring sources. The fencing would be 8 feet high and made of 8-foot commercial game fence or cyclone fencing with minimal spaces between gates and posts.

2.3 PERMITS AND APPROVALS

Eureka County is responsible for obtaining valid permits and approvals from all relevant federal, state, and local agencies to construct the proposed project. The following permits/approvals would be needed.

1. Stormwater General Permit for construction sites from NDEP, Bureau of Water Pollution Control because the project would disturb more than 1 acre. Prior to construction a notice of intent and filing fee would be submitted and a Stormwater Pollution Prevention Plan would be prepared.

2. Surface Area Disturbance permit from NDEP Bureau of Air Pollution Control because the project would disturb more than 5 acres.

3. Encroachment Permit from Nevada Department of Transportation (NDOT) because portions of the Proposed Action would intersect or coincide with the existing U.S. Highway 50 ROW.

2.4 SCOPING

The project was internally scoped by the BLM Interdisciplinary (ID) Team from December 2008 to April 2009. The BLM ID Team identified the supplemental authority elements and other resources to be addressed in this document (Section 3.3).

The availability of water for wildlife was raised as a concern. During the preparation of this document, Eureka County and the BLM solicited input from the NDOW to identify appropriate mitigation measures to address this concern.

2.5 ALTERNATIVES TO THE PROPOSED ACTION

The National Environmental Policy Act (NEPA) directs the BLM to "study, develop, and describe appropriate alternatives to recommended courses of action in any proposal that involves unresolved conflicts concerning alternative uses of available resources" (42 USC 4332). Alternatives to the proposal should meet the purpose and need of the Proposed Action. Alternatives should be practical or feasible from a technical and economic standpoint, and reasonably accomplished.

2.5.1 No Action Alternative

Under the No Action Alternative, the BLM would not authorize the amendment to ROW authorization NVN 007463. Eureka County would not be permitted to rehabilitate the water collection system. Without a supplemental water source Eureka County would continue without a secondary water source until adequate funding is obtained to drill, operate, and maintain a new well or purchase water rights at other springs.

2.5.2 Alternatives Considered but Eliminated from Further Analysis

Use of other springs was considered but eliminated from further analysis because purchasing the water rights would be too expensive for Eureka County. Drilling a well was also considered but eliminated because the operational costs of a new well and pump system would also be cost prohibitive. Additionally a pump would be less dependable than a gravity-fed system because it would be vulnerable to mechanical failures.

CHAPTER 3
AFFECTED ENVIRONMENT

3.1 GENERAL SETTING

The project area consists of ten springs and associated waterlines in Eureka County, Nevada. The area is south of Eureka, along the U.S. Highway 50 corridor in Eureka Canyon, between the Fish Creek Range and Diamond Mountains. The northernmost spring site is located approximately 0.8 mile east of U.S. Highway 50 and approximately 1.2 miles southeast of Eureka. The southernmost spring site is located approximately 0.8 mile west of U.S. Highway 50 and approximately 4.5 miles south of Eureka. The highest portions of the project are at approximately 7,500 feet above mean sea level (amsl), and the lowest point is at approximately 6,800 feet amsl, approximately 300 feet higher than Eureka. According to the *Soil Survey of Diamond Valley Area, Nevada, Parts of Elko, Eureka, and White Pine Counties* (SCS 1980), the climate in the vicinity of the project area is semiarid mid-latitude steppe climate, with temperatures in summer being warm to hot while winters are near or below freezing. In summer when daytime temperatures are hot, the nighttime temperatures are relatively cool. Precipitation typically ranges from 8 to 18 inches per year.

The area surrounding the project is sparsely populated with most of the population living in Eureka and the northern part of Eureka Canyon. The economy of the area is dominated by mining, ranching, irrigated farming, and tourism. Eureka is the only town in the area and is also the county seat of Eureka County. Surrounding the commercial core of Eureka are primarily residential land uses with other mixed uses interspersed.

Major features near the project area include Eureka Canyon and U.S. Highway 50, which runs through Eureka Canyon. Two gravel roads maintained by Eureka County are also key features in the project area: Windfall Canyon Road generally follows the bottom of the Windfall Canyon, and New York Canyon Road generally follows the bottom of New York Canyon. Both roads are west of U.S. Highway 50.

3.2 HISTORICAL USE OF SPRINGS

Currently, the water collection system comprises various segments of the historic Eureka/McCoy Water Works and Richmond Pipeline System, the first residential water system for Eureka dating back as early as the 1870s. However, no intact portions of the water system are believed to exist within the project area (Kautz Environmental Consultants, Inc. 2009). Most of the existing system components date to the late 1960s, when most of the system was last rehabilitated. During the last rehabilitation effort, waterlines were replaced with steel and PVC. Springs were also rehabilitated during this time and have since received minimal maintenance. The following is a summary of the conditions at each site.

Prospect Spring

This spring, next to an unpaved road, has readily evident pipe fragments nearby. The debris and surface disturbance from a bulldozer are generally centered on the small site. The pipe fragments appear to be the remains of a dismantled irrigation feature or perhaps a spring box.

Lucky Spring

This spring is located in a depression caused by bulldozer excavation during historic maintenance of the system. The bulldozer disturbance may be a result of the rehabilitation efforts during the late 1960s. The depression contains various artifacts related to water conveyance, including fragments of pipe, lumber, and concrete molded forms.

Summit Spring

The spring box at this spring has been completely removed and never replaced. A large, open trench appears to be a recent excavation. Pipe fragments scattered in the area are likely the remnants of the original spring box.

Middle Spring

This spring has a concrete manhole, a wooden post, and discarded pipe fragments. This site is near U.S. Highway 50 and has likely been altered by construction of the modern highway. The concrete manhole is likely a late 1960s replacement of an older spring box.

Fred Spring

According to Eureka County records, a concrete manhole spring box was built at this spring in the late 1960s. However, this spring box is not evident and could have been covered by modern refuse that has been dumped in the area.

Florio Spring

This spring consists of a corrugated steel pipe manhole protruding vertically from the ground with a steel lid. This appears to have been built very recently, and the area surrounding the feature is clear of vegetation. There are fragments of concrete within the disturbed area which may be the remnants of a concrete manhole built in the late 1960s.

Gorman Spring

This spring includes a concrete manhole spring box constructed in the late 1960s at the base of a steep slope. Galvanized and iron pipes found near this manhole are likely the remnants of the original spring box.

Lanie Spring

This spring has a concrete manhole with a steel plate lid. Modern materials appear to be used in the manhole, which support Eureka County records indicating the spring box was rehabilitated in the late 1960s.

Bullwacker Spring

The two spring boxes at this site were removed by a bulldozer in the late 1960s and never replaced. Two bulldozer disturbances remain evident at this site to date. The northern disturbance area has cast iron pipes extruding from the ground, and the southern disturbance area contains partially buried galvanized steel pipes. A livestock trough is located just east of the northern disturbance.

Richmond Spring

The spring box at this site was removed by a bulldozer in the late 1960s and never replaced. Water seeps from a created cut at the source and drains to a pool impounded by a modern rock wall.

3.3 SUPPLEMENTAL AUTHORITY ELEMENTS AND OTHER RESOURCES CONSIDERED FOR ANALYSIS

To comply with the NEPA, BLM is required to address specific elements of the environment that are subject to requirements specified in statute or regulation or by executive order (BLM 2008). The following table outlines the elements that must be addressed in all environmental analysis, as well as other resources deemed appropriate for evaluation. Table 3-1 also denotes if the Proposed Action or No Action Alternative affects those elements. Supplemental Authority elements determined to be Not Present or Present/Not Affected need not be carried forward for analysis or discussed further in the document. Supplemental Authority elements determined to be Present/May be Affected must be carried forward for analysis in the document.

Table 3-1 Supplemental Authority Elements Considered for Analysis

Supplemental Authority Element	Not Present	Present/Not Affected	Present/May Be Affected	Rationale
Air Quality		✓		The proposed project is not within an area of non-attainment or areas where total suspended particulates or other criteria pollutants exceed Nevada air quality standards. There would be temporary increased particulate matter during construction; however, Nevada air quality standards would not be exceeded. Because the project would disturb more than 5 acres, Eureka County would obtain a required Surface Area Disturbance permit from NDEP Bureau of Air Pollution Control.
Area of Critical Environmental Concern (ACEC)	✓			Resource is not present.
Cultural Resources			✓	See Section 3.3.6.

Supplemental Authority Element	Not Present	Present/Not Affected	Present/May Be Affected	Rationale
Environmental Justice	✓			No minority or low-income groups have been determined to exist within areas potentially affected by the Proposed Action and Alternative. Methods used for this determination are discussed in Section 3.3.5.
Farm Lands (Prime or Unique)	✓			Resource is not present.
Fish Habitat	✓			Resource is not present. This fish habitat is related to specific Congressional acts protecting marine and commercial fish habitat. It does not apply to common aquatic habitats and fisheries.
Floodplains	✓			Resource is not present.
Forests and Rangelands (HFRA only)	✓			Resource is not present. No aspens would be removed at the springs. This project does not meet the requirements to qualify as an Healthy Forest Restoration Act (HFRA) project. While no aspens would be removed, up to three juniper shrubs located in the pipeline trench alignment would be removed if they cannot be avoided. Removal of a limited number of juniper shrubs would not increase the risk of wildland fire, disease or insect epidemics considered under the HFRA.
Human Health and Safety	✓			Resource is not present.
Migratory Birds			✓	See Section 3.3.14.
Native American Religious Concerns		✓		Section 3.3.7 describes the historic Native American use of the region and discusses measures that would be followed in the event that Native American resources are discovered.
Noxious Weeds/Invasive Non-native Species			✓	See Section 3.3.8.
Threatened, Endangered Species	✓			Resource is not present (see Appendix B).
Waste, Hazardous or Solid			✓	See Section 3.3.2
Water Quality (Surface/Ground)			✓	See Section 3.3. 9.
Wetlands/Riparian Zones			✓	See Section 3.3.11.
Wild & Scenic Rivers	✓			Resource is not present.
Wilderness	✓			Resource is not present.

Other resources of the human environment that have been considered for analysis are listed in Table 3-2. Elements that may be affected are further described in the EA. The rationale for elements that would not be affected by the Proposed Action and Alternative is listed in the table.

Table 3-2 Other Resources Considered for Analysis

Other Resources	Not Present*	Present/Not Affected	Present/May Be Affected	Rationale
Fire Management		✓		The County would implement precautionary measures to prevent fires during operation of the Proposed Action. These measures are discussed in 4.2 Mitigation Measures.
Grazing Management			✓	See Section 3.3.18.
Homeland Security of Drinking Water Systems		✓		The Proposed Action would supplement the existing water supply system that supports up to 650 residents in the vicinity of Eureka. A vulnerability assessment of this community water system is not required (these assessments are required for populations of more than 3,300 persons) per the Public Health Security and Bioterrorism Preparedness and Response Act of 2002.
Land Use			✓	See Section 3.3.1.
Minerals			✓	See Section 3.3.16.
Paleontological Resources	✓			Paleontological resources are typically associated with sedimentary structures, which are located within very small portions of the project area. However, the majority of the proposed project activities are associated with replacement of previously buried components of the water collection system. It is extremely unlikely that paleontological resources would be encountered within previously disturbed areas. Paleontological resources are not expected to be present.
Recreation			✓	See Section 3.3.3.
Socioeconomics			✓	See Section 3.3.4.
Soils			✓	See Section 3.3.15.
Special Status Species			✓	See Section 3.3.13.
Vegetation			✓	See Section 3.3.10.
Visual Resources		✓		The Proposed Action would require removal of vegetation and excavation and stockpiling of soil. Construction equipment may be stored on-site and visible from U.S. Highway 50. However, these features would be temporary components of the visual landscape. Following construction, disturbed areas would be contoured and seeded to restore preconstruction conditions. Most springs are not visible from U.S. Highway 50, the location where most visual receptors would be expected. Impacts to visual resources are not expected.
Wild Horses and Burros			✓	See Section 3.3.17.
Wildlife and Fisheries			✓	See Section 3.3.12.

The following sections describe resources present and affected by the Proposed Action. Although specific Native American concerns have not been identified, the resource topic is brought forward in Section 3.3.7 to discuss measures that would be implemented should Tribally identified Traditional Cultural Properties (TCPs) or specific Native American cultural, traditional, or spiritual use sites, activities, or resources be discovered during construction. Environmental Justice is brought forward in Section 3.3.5 to describe the method used to determine the absence of minority and low income groups in the project area.

The following information was derived from data gathered during a field investigation, review of available literature, and interviews and correspondence with the BLM and other federal, state, and local agency resource personnel. Photographs taken at each spring site and selected waterline corridors are contained in Appendix A.

3.3.1 Land Use

Land uses in the project area include livestock grazing and dispersed recreation. Other authorized ROWs include the existing waterline (NVN 007463), telephone uses (NVN 0023185, NVN 0054073, NVN 021282, NVN 066394, and NVN 076179), power transmission lines (NVN 085021 pending approval), material sites (NVN 0042805 and NVN 0055727), and the NDOT ROW authorization for U.S. Highway 50 (NVCC 018079).

The NDOT ROW authorization for U.S. Highway 50 is 400 feet wide and currently contains existing waterlines, including the waterline main into which rehabilitated lines would connect. Portions of the proposed ROW that would overlap NDOT ROW are located at Florio, Middle, and Summit Springs and along the waterline routes between Bullwacker and Lanie Springs and between Lanie and Florio Springs.

3.3.2 Hazardous and Solid Waste

Solid waste generated by the project would include remains of the former spring collection infrastructure and steel pipe exposed during project construction. Old pipes were made from steel and not asbestos-cement.

3.3.3 Recreation

Recreational use of the project area is dispersed due to the lack of established facilities, lack of unique natural features, and low population density of the surrounding area. Limited recreation use includes hunting, sightseeing, and off-road vehicle use. Within the vicinity of the project area there are no designated public recreation trails, campgrounds, or parks. The Perdiz Sporting Clays Range is located in Windfall Canyon, approximately 2,000 feet southeast of the Gorman Spring site. The site provides recreational target shooting opportunities designed to simulate actual hunting conditions.

3.3.4 Socioeconomics

Eureka County is a 4,176-square-mile, predominantly rural county in north-central Nevada. Eureka County has been dependent on the mining industry since it was first founded, and the mining

industry still employs many residents. Agriculture is another important part of the economy and includes cattle and sheep ranching and hay farming. Travel and tourism also contribute to Eureka County's economy. Eureka has a population ranging from 450 to 650 depending on the source and census block area, which represents one-fourth to one-third of Eureka County's population. Eureka County's social and economic indicators are summarized in Table 3-3. Since Eureka makes up a large portion of Eureka County, it is reasonable to assume indicators of Eureka County are representative of Eureka.

Table 3-3 Social and Economic Indicators

Indicators	Eureka County	State of Nevada	United States
Population (2008)	1,628	2,600,167	304,059,724
Private non-farm employment (2007)	Less than 1,000	1,195,806	120,604,265
Ethnicity (2008)*			
White persons	92.1%	80.9%	65.6%
Black persons	0.5%	8.1%	12.8%
American Indian/Alaska Native	2.5%	1.5%	1.0%
Asian	1.2%	6.2%	4.5%
Hispanic/Latino	13.1%	25.7%	15.4%
Households (2000)	666	751,165	105,480,101
Housing Units (2008)	1,046	1,127,061	129,065,264
Median Household Income (2007)	$54,107	$54,996	$50,740
Persons Below Poverty Level (2007)	9.1%	10.6%	13.0 %

**(Persons of Hispanic/Latino ethnicity may identify themselves as more than one race; therefore ethnicity percentage sums may total more than 100 percent.)*
Source of Information: U.S. Census Bureau, State and County Quick Facts (U.S. Census Bureau 2009b).

3.3.5 Environmental Justice

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, requires each federal agency to identify and address disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority and low income populations.

The U.S. Census Bureau data indicate there are no poverty areas in Eureka County, which includes Eureka. As shown in Table 3-3, the percentage of the population below the poverty level in Eureka County in 2007 was lower than the national average. The population of Eureka County is predominantly white, comprising 92 percent of the estimated population in the county in 2008 compared with 66 percent in the United States as a whole. Census data (not shown on the table) also indicate that there are no areas within Eureka County, including Eureka, where the minority populations exceed 50 percent of the total populations.

3.3.6 Cultural Resources

Cultural uses of the project area have varied over time, driven by environmental conditions, Native American traditions, the historic rush to the West, boom and bust mining periods, and the resilience and persistence of settlers. During the early pre-history periods, use of the project area was primarily for hunting and plant gathering, and people were nomadic. During the Archaic and Late Prehistoric periods these areas would have continued to be utilized for hunting and plant gathering. Historically, the project area was primarily utilized by Native Americans, miners, ranchers, and settlers.

Eighteen cultural resource investigations have been conducted within one mile of the project area. Kautz Environmental Consultants, Inc. most recently conducted a Class III cultural resource survey of the entire project area in May and June 2009 (BLM Report BLM6-2793P). Nineteen isolate artifacts (12 historic, 7 prehistoric) and 26 archaeological sites (17 historic, 5 prehistoric, 4 historic and prehistoric) were observed and/or updated. The isolate artifacts are categorically not eligible for listing in the National Register of Historic Places (NRHP). All but one of the 26 archaeological sites have been recommended as not eligible for listing in the NRHP. The one site that is eligible for listing is an aspen grove containing arborglyphs primarily associated with Basque and Peruvian sheep ranchers.

3.3.7 Native American Concerns

The project area is south of the Diamond Valley Western Shoshone "district," an area known to have had relatively abundant populations and winter villages. Villages were most often established in the warmer foothills below mountains with abundant pinyon pine populations, as the pine nut was an important food source. Hunting was also an important subsistence activity for the Western Shoshone. Dwellings were temporary; highly mobile living conditions did not encourage ownership of property, and as a result material culture was simple and basic. As the region became increasingly populated with white settlers, Western Shoshone culture and traditions began to diminish. Many Native Americans settled near major towns or relocated to reservations and adapted to Euro-American customs (Kautz Environmental Consultants 2009).

Various tribes and bands of the Western Shoshone have stated that federal projects and land actions can have widespread effects to their culture and religion as they consider the landscape as sacred and as a provider. Typical sites and resources that could be considered sacred to the continuation of tribal traditions include, but are not limited to, prehistoric and historic village sites, sources of water (hot and cold springs), pine nut gathering locations, sites of ceremony and prayer, archaeological sites, burial locations, "rock art" sites, medicinal/edible plant gathering locations, areas associated with creation stories, or any other tribally designated TCP.

For the preparation of this EA, the Duckwater Shoshone Tribe was asked to comment and participate in Native American resource concern identification. Tribally identified TCP and specific Native American cultural, traditional, or spiritual activities, sites, or resources are not known to exist or have not been identified by tribal participants. However, consultation opportunities are still available throughout the EA review process and the life of the project.

3.3.8 Noxious Weeds/Invasive Non-native Species

Within Nevada, noxious weeds are defined in the Nevada Revised Statutes (NRS) 555.005 as "any species of plant which is, or is likely to be, detrimental or destructive and difficult to control or eradicate." The Nevada Department of Agriculture's Noxious Weed Website (http://agri.state.nv.us/PLANT_NoxWeeds_index.htm) provides a list of all weeds currently listed as noxious for the State of Nevada.

JBR Environmental Consultants, Inc. (JBR) performed a noxious weed inventory during a site visit in October 2009. The survey included the springs and the pipeline corridors. Two State of Nevada noxious weeds, low whitetop (*Cardaria draba*) and nodding thistle (*Carduus nutans*), were found in the project area. A small amount of low whitetop was found at Middle Spring. Nodding thistle was found near Richmond and Bullwacker Springs, and near the lower end of a road that accesses Gorman Spring from the east. Low white top is a Category C weed in Nevada, and nodding thistle is a Category B weed.

Bull thistle (*Cirsium vulgare*), an invasive, non-native species, was found at Prospect and Florio Springs. Only a single plant was found at Florio Spring. Cheatgrass (*Bromus tectorum*), another invasive, non-native species that is widespread in Nevada, occurs within the project area.

3.3.9 Water Quality (Surface/Ground)

With the exception of Prospect Spring, all springs are in the Diamond Valley Hydrographic Area where groundwater levels have been declining for the past 40 years (Tumbusch & Plume 2006). Prospect Spring is in the Little Smoky Valley Hydrographic Area. Both hydrographic areas are part of the Central Region Hydrographic Basin.

During October 2009, JBR visited the project area and informally assessed the hydrological conditions at each spring. In addition to estimating flows, JBR utilized indicators such as the moisture content of soils and the types of vegetation at each spring site to assess the groundwater discharge flows (Table 3-4). Based on these field observations, JBR concluded that four springs do not discharge groundwater at the ground surface. Of the remaining springs, five springs are estimated to discharge groundwater at a rate of 2 gallons per minute (gpm) or less. Estimated discharge at Bullwacker Spring, the largest spring, was estimated to be up to 6 gpm.

Table 3-4 Groundwater Discharge Estimates

Spring Site	Presence of Surface Water?	Estimated Discharge Rate
Prospect Spring	Yes	1 to 2 gpm
Lucky Spring	Yes	Less than 1 gpm
Summit Spring	Yes	1 to 2 gpm
Middle Spring	Flow captured, no discharge to the surface	0
Gorman Spring	Flow captured, no discharge to the surface	0
Florio Spring	Flow captured, no discharge to the surface	0
Fred Spring	Flow captured, no discharge to the surface	0
Lanie Spring	Yes	1 to 2 gpm
Bullwacker Spring	Yes	3 to 6 gpm
Richmond Spring	Yes	1 gpm

3.3.10 Vegetation

Vegetation in the general project area is dominated by mountain big sagebrush (*Artemisia tridentata vaseyana*), small (Douglas) rabbitbrush (*Chrysothamnus viscidiflorus*), and Utah juniper (*Juniperus osteosperma*) (Appendix A, Photograph 1). Serviceberry (*Amelanchier alnifolia*) is common near Lucky Spring, and snowberry (*Symphoricarpos oreophilus*) is a common component of the mountain brush community near Prospect and Lucky Springs. Hairspine pricklypear (*Opuntia polyacantha* var. *hystricina*) is common near Prospect Spring and along the pipeline corridor from Prospect Spring to Lucky Spring. An understory of grasses including bottlebrush squirreltail (*Elymus elymoides* [formerly *Sitanion hystrix*]), Basin wildrye (*Leymus* [formerly *Elymus*] *cinereus*), Indian ricegrass (*Achnatherum hymenoides*), and some wheatgrass (*Agropyron* sp) is present in much of the area. The singleleaf pinyon (*Pinus monophylla*) and Utah juniper were noted on the hillslopes above Bullwacker and Richmond Springs. Dominant vegetation at each spring site is summarized in Table 3-5 below.

Table 3-5 Dominant Vegetation at Springs

Site	Dominant Vegetation
Prospect Spring	Mountain big sagebrush, bitterbrush, serviceberry, green rabbitbrush
Lucky Spring	Mountain big sagebrush, bitterbrush, serviceberry
Summit Spring	Mountain big sagebrush, juniper, grass
Middle Spring	Wild rose, mountain big sagebrush, grass
Gorman Spring	Mountain big sagebrush, bitterbrush, serviceberry, green rabbitbrush, juniper
Florio Spring	Mountain big sagebrush, bitterbrush, serviceberry, green rabbitbrush, with wet meadow species below spring box
Fred Spring	Big sagebrush
Lanie Spring	Dense big sagebrush
Bullwacker Spring	Sandbar willow and wild rose with big sagebrush and pinyon around site
Richmond Spring	Aspen grove, chokecherry, mountain big sagebrush, bitterbrush, serviceberry

3.3.11 Wetland/Riparian Zones

Photographs of the springs are contained in Appendix A. Woody riparian vegetation occurs at Bullwacker and Richmond Springs. A quaking aspen (*Populus tremuloides*) stand grows just above Richmond Spring, and chokecherry (*Prunus virginiana*) at Richmond Spring.is common near this spring. Bullwacker Spring supports an extensive stand of sandbar willow (*Salix exigua*), as well as a wet meadow vegetation community.

Small areas of wet meadow vegetation at Prospect, Lucky, Lanie, Florio, Bullwacker, and Richmond Springs occur as narrow "stringers," or strips of hydrophytic vegetation. The wet meadow community consists of Baltic rush (*Juncus balticus*), Nebraska sedge (*Carex nebrascensis*), and meadow barley (*Hordeum brachyantherum*). A very small wet meadow area (237 square feet) is present near the existing manhole at Middle Spring, and sparse wet meadow vegetation is located along an excavated channel below Summit Spring. No wetland vegetation is present at Gorman Spring or within the vicinity of the area identified as the location of Fred Spring. Table 3-6 summarizes the extent of wetland vegetation found at the springs.

Table 3-6 Wetland Characteristics

Spring Site	Wetland Area	Characteristics
Prospect Spring	7,122 ft^2 (0.16 ac.)	Stringer of wetland below source
Lucky Spring	2,136 ft^2 (0.05 ac.)	Stringer of wetland below source
Summit Spring	1,291 ft^2 (0.03 ac.)	Source excavated; limited wetland area
Middle Spring	237 ft^2 (0.01 ac.)	Site developed (manhole); small area of wetland vegetation around manhole
Gorman Spring	0	Site developed (manhole); no wetland vegetation
Florio Spring	11,189 ft^2 (0.26 ac.)	Site developed (manhole); wetland vegetation down-gradient from manhole. Wetlands at Florio Spring are augmented by minimal flows from Cherry Spring (not a part of the project) to the east.
Fred Spring	0	No evidence of development (spring box or infrastructure); no wetland vegetation in vicinity
Lanie Spring	4,291 ft^2 (0.1 ac.)	Site developed (manhole); narrow wetland stringer below source north of manhole and passing manhole on east
Bullwacker Spring	23,812 ft^2 (0.55 ac.)	Troughs at multiple spring sources; wet meadow and sandbar willow vegetation
Richmond Spring	2,295 ft^2 (0.05 ac.)	Pond developed below source; wetland vegetation with aspens and chokecherries

JBR performed a preliminary wetland delineation in October 2009 and April 2010 to determine the extent of potentially jurisdictional Waters of the U.S. that would be subject to regulation under Section 404 of the Clean Water Act (33 CFR Part 329) under the U.S. Army Corps of Engineers (Corps) wetland regulatory program. JBR delineated eight small wetlands shown in Table 3-6 and concluded that these wetlands do not meet the definition of Waters of the U.S. The wetlands failed to meet the criteria of Waters of the U.S. because they are isolated and do not support interstate commerce or industrial uses. Eureka County submitted a request for an approved jurisdictional determination to the Corps, and a decision is pending. JBR's delineation

of wetlands and jurisdictional determination should be considered preliminary until verified by the Corps.

3.3.12 Wildlife

Springs serve as water sources for small game and nongame species and migratory birds, and vegetation surrounding the springs provide forage and cover. Only Prospect, Lucky, Summit, Lanie, Bullwacker and Richmond Springs have water available to wildlife. Field observations of vegetation at each spring site found that Bullwacker and Richmond Springs have the highest value to wildlife because they support a woody riparian plant community. According to NDOW, chukar (*Alectoris chukar*) utilize Bullwacker and Richmond Springs as water sources (personal communication, Mike Podborny). Summit, Middle, and Florio Springs provide reduced wildlife value because the area of wetland they support is small and are in proximity to U.S. Highway 50.

NDOW identifies the project area as mule deer (*Odocoileus hemionus*) summer range. During its October 2009 site visit, JBR observed mule deer tracks and/or pellets at Prospect, Florio, Richmond, and Bullwacker Springs. Some deer may migrate through the project area, but deer winter use at the elevations typical of the proposed project is light (personal communication, Mike Podborny, NDOW). Prospect and Lucky Springs, specifically, provide quality habitat for deer.

3.3.13 Special Status Species

Special Status Species include species listed or proposed for listing under the Endangered Species Act as threatened or endangered, candidate species, and species included on the Nevada BLM's sensitive species list. Candidate species are species or subspecies (i.e., taxa) that may warrant listing as threatened or endangered and for which there is sufficient information on biological vulnerability and threat(s) to support a rule to list as threatened or endangered, but for which the issuance of a proposed rule to list is precluded by higher listing priorities. Proposed species are taxa for which a proposal to list the species as threatened or endangered has been published in the Federal Register.

No federally listed or proposed plant or animal species are known to occur in the project area. NDOW indicated greater sage-grouse (*Centrocercus urophasianus*), a candidate for federal listing, occur in the southern part of the project area (personal communication, Mike Podborny). Habitat maps on file with BLM indicate the project area is nesting, winter, and summer range. A single greater sage-grouse pellet was found near Prospect Spring. Sage-grouse subsist on a diet largely of sagebrush during winter. During spring and summer, springs and meadow areas are utilized as brood-rearing habitat. These mesic areas provide an important source of insects and nutritious green vegetation for young sage-grouse. The yellow-billed cuckoo (*Coccyzus americanus*), also a candidate for listing, was recorded on a single occasion in Eureka in 1976. Yellow-billed cuckoos inhabit areas of extensive riparian habitat such as large cottonwood groves. Such habitat does not exist in the project area.

Habitat for several BLM sensitive species occurs in the project area. Specifically, the juniper titmouse (*Baeolophus ridgewayi*) occurs in juniper habitat in the Great Basin. Juniper titmice were observed west of the project area and would be expected to occur in similar habitat that occurs near Gorman, Summit, and Lanie Springs. Pinyon jays (*Gymnorhinus cyanocephalus*), while not observed, would also be expected to occur in the area. The BLM sensitive species loggerhead shrike (*Lanius ludoviscianus*) may nest in juniper trees or large shrubs. Vesper sparrows (*Pooecetes gramineus*) inhabit grassland and mountain sagebrush habitats and may occur in the area. Prairie falcons (*Falco mexicanus*) may forage in open portions of the project area.

Areas of mountain big sagebrush habitat occur near Prospect and Lucky Springs, along the proposed pipeline ROW that runs from Prospect Spring to Summit Spring, and near Lanie Spring. Dense or tall sagebrush habitats with friable soils (i.e., crumbly soils that would support an underground burrow) may be utilized by pygmy rabbits (*Brachylagus idahoensis*), another BLM sensitive species. No evidence of pygmy rabbits was found in these areas or elsewhere within the project area.

The BLM sensitive species golden eagle (*Aquila chrysaetos*) was observed near Richmond Spring. Cliffs and outcrops are located above this spring and above Bullwacker Spring to the south. No stick nests or extensive areas of whitewashing that might indicate nesting occurs in the area were noted on these cliffs, but the bird observed near Richmond Spring indicates golden eagles do forage in the area.

The cliffs above Richmond and Bullwacker Springs, as well as pinyon and juniper trees in the area, represent potential bat roosting habitat. A number of bat species are included on the BLM sensitive species list and may occur in the area. Sources of open water, including the small pool present at Richmond Spring, would be expected to attract foraging bats.

3.3.14 Migratory Birds

Migratory birds include species of birds that may breed in the project area but would migrate south, out of the area, prior to the onset of winter. Migratory bird species are protected under the Migratory Bird Treaty Act of 1918, which prohibits killing or taking migratory bird species without a permit. Protection under the act extends to nesting birds and their eggs. The Act includes a list of birds that are covered under the Act (CFR 50 § 10.13). Most native species of birds are included on this list.

Avian species composition and density in the project area varies with season and habitat type. Avian species diversity is highest during the spring and summer, when migrant species are present in the area. Species diversity decreases markedly during the fall and winter, when many nesting species move south, out of the project area. Surveys of the project area were conducted in October 2009, after some species of migratory birds had left the project area. Migratory bird species observed throughout the area included common ravens (*Corvus corax*), black-billed magpies (*Pica hudsonia*), mountain chickadees (*Poecile gambeli*), bushtits (*Psaltriparus*

minimus), white-crowned sparrows (*Zonotrichia leucophrys*), dark-eyed juncos (*Junco hyemalis*), and house finches (*Carpodacus mexicanus*). The white-crowned sparrows and dark-eyed juncos are expected to occur in the project area primarily during winter. The other species observed are resident species and would be expected to nest in the area.

Migratory bird species that were not observed during the October site visit but that would be expected to occur in the project area during the spring and summer include mourning doves (*Zenaida macroura*), common poorwills (*Phalaenoptilus nuttallii*), gray flycatchers (*Empidonax wrightii*), blue-gray gnatcatchers (*Polioptila caerulea*), mountain bluebirds (*Sialia currucoides*), sage thrashers (*Oreoscoptes montanus*), and Brewer's sparrows (*Spizella breweri*). Other species may occur less commonly or pass through the area as migrants.

The greatest migratory bird diversity was observed in the area of Bullwacker and Richmond Springs. These two sites support riparian vegetation including sandbar willow at Bullwacker Spring and quaking aspen and chokecherry at Richmond Spring. Pinyon and juniper habitat occurs above both of these sites. Avian species recorded at these two sites included a northern flicker (*Colaptes auratus*), scrub jays (*Aphelocoma californica*), common ravens, Clark's nutcrackers (*Nucifraga columbiana*), a single Townsend's solitaire (*Myadestes townsendi*), mountain chickadees, bushtits, spotted towhees (*Pipilo maculatus*), song sparrows (*Melospiza melodia*), and Cassin's finches (*Carpodacus cassinii*).

3.3.15 Soils

Soils have been mapped by the Natural Resources Conservation Service (NRCS) and are described in the *Soil Survey of Diamond Valley Area, Nevada, Parts of Elko, Eureka, and White Pine Counties (NRCS 2006)*. The proposed project would be constructed in five soil map units:

- The Bartine-Overland association, Map Unit BA
- The Fairydell gravelly loam, 15 to 30 percent slopes, Map Unit FAE
- The Gabel gravelly loam, 15 to 30 percent slopes, map unit GAE
- The Hussa loam, 0 to 4 percent slopes, Map Unit HUB
- The Tica very stony loam, 30 to 50 percent slopes, Map Unit TCF

Bartine-Overland Association

The Bartine-Overland association consists of about 40 percent Bartine gravelly loam on slopes of 15 to 50 percent and 40 percent Overland very gravelly loam on slopes of 15 to 50 percent. Inclusions make up about 10 percent of the unit, and rock outcrop makes up the remaining 10 percent. The Bartine soil occurs mainly on north- and east-facing slopes of mountainsides. This well-drained soil formed in residuum of limestone and other rock types. Vegetation on the Bartine soil is pinyon and juniper, big sagebrush, low sagebrush, bitterbrush, Nevada ephedra, and bluebunch wheatgrass. Permeability of the Bartine soil is moderate, and effective rooting depth is 20 to 40 inches. The Overland soil occupies primarily south- and west-facing slopes. Overland soils are well drained and formed in limestone residuum that includes some ashy loess. Vegetation on the Overland soil is juniper, pinyon, big sagebrush, and Sandberg bluegrass. Permeability is moderate, and effective rooting depth is 20 to 40 inches. Runoff for this

association is medium to rapid, and the hazard of erosion is moderate to severe. Bullwacker Spring and the mapped location of Fred Spring are located within the Bartine-Overland association, as is the majority of the proposed pipeline route that would convey water from Bullwacker Spring to the Lanie Spring area.

Fairydell gravelly loam, 15 to 30 percent slopes
The Fairydell soil is a deep, well-drained soil that formed in alluvium derived from limestone and conglomerate. This soil occurs on old dissected fans and pediments. Vegetation on the Fairydell soil is big sagebrush, rabbitbrush, Great Basin wildrye, Sandberg bluegrass, low sagebrush, and bluebunch wheatgrass. Permeability of the Fairydell soil is moderate. Effective rooting depth is 60 inches or more. Runoff is medium, and the hazard of erosion is moderate. Summit and Middle springs are located in the Fairydell soil map unit. Gorman Spring is located within an area mapped as the Fairydell soil.

Gabel gravelly loam, 15 to 30 percent slopes
The Gabel soil is a deep, well-drained soil that formed in tuff that has an admixture of loess. This soil occurs in foothills. Vegetation on the Gabel soil is big sagebrush, bitterbrush, Douglas rabbitbrush, Great Basin wildrye, snowberry, squirreltail, bluebunch wheatgrass, and pinyon and juniper. Permeability of the Gabel soil is moderately slow. Effective rooting depth is 20 to 40 inches. Runoff is medium, and the hazard of erosion is moderate. Prospect, Lucky, and Lanie Springs are located in Gabel soils, as is much of the proposed pipeline route connecting Prospect and Lucky Springs, continuing in this soil type nearly to Summit Spring.

Hussa loam, 0 to 4 percent slopes
The Hussa loam is a poorly drained soil that formed in stratified loamy alluvium. The Hussa soils are found in narrow canyon bottoms. Vegetation on the Hussa soils is big sagebrush, bluejoint rye, rubber rabbitbrush, and Basin wildrye. Permeability of the Hussa soil is moderately slow. Effective rooting depth is 60 inches. Runoff is slow or medium, and the hazard of erosion is slight to moderate. A seasonal high water table, caused by drainage that results from stream entrenchment, occurs at a depth of 4 to 6 feet. In some areas, this soil is susceptible to occasional overflow. Within the project area, this soil occurs in the bottoms of Eureka and lower Windfall Canyons. Florio and Middle Springs are located within the Hussa soil map unit.

Tica very stony loam, 30 to 50 percent slopes
The Tica soil is a well-drained soil that formed in residuum from andesite. Tica soils occur on foothills and mountains. Vegetation on the Tica soil is pinyon and juniper, low sagebrush, bluebunch wheatgrass, squirreltail, bitterbrush, and snowberry. Permeability of the Tica soil is slow, and effective rooting depth is 10 inches. Runoff is rapid, and the hazard of erosion is severe. Richmond Spring is located in an area of Tica soils.

3.3.16 Minerals
The BLM is responsible for recording mining claims on federal land. The BLM maintains the Legacy Rehost System (LR2000), a searchable database of public reports on BLM land and mineral

use authorizations, conveyances, mining claims, withdrawals, and classifications. A search of the LR2000 database indicates that 105 active unpatented mining claims have been staked in the same section quadrants as the Proposed Action. Three entities hold these claims: Basin and Range Resources, LLC (100 claims), Century Gold, LLC (3 claims), and Galli Exploration Association (2 claims).

3.3.17 Wild Horses

Portions of buried waterline, as well as the Prospect, Lucky, and Summit Springs, are located within the Fish Creek Herd Management Area (HMA) (Figure 4). The HMA includes more than 250,000 acres of BLM-administered public land and is capable of supporting 180 individual horses (BLM 2009a). When last surveyed in 2007, the Fish Creek HMA was estimated to contain a population of 118 horses (BLM 2009b). There are no wild burros or burro management areas within the vicinity of the project site.

3.3.18 Grazing Management

The project area is located within portions of three grazing allotments: Fish Creek Ranch Allotment, Ruby Hill Allotment, and Spanish Gulch Allotment. The Fish Creek Ranch and Ruby Hill allotments are located west of U.S. Highway 50. The Spanish Gulch Allotment is located east of U.S. Highway 50 (Figure 5). Both sheep and cattle are permitted to utilize the Fish Creek, Ruby Hill, and Spanish Gulch Allotments. Table 3-7 summarizes the details of these three allotments.

Table 3-7 Livestock Grazing Allotments

Allotment	Public Acres	Permitted Livestock	Active AUMs	Permitted AUMs	Season(s) of Use	Springs Contained Within Allotment
Fish Creek	287,984	Cattle and sheep	4,815	36,815	Throughout the year	Prospect
Ruby Hill	14,659	Cattle and sheep	1,286	1,286	Spring, summer	Lucky, Summit, Florio, Gorman
Spanish Gulch	5,985	Cattle and sheep	647	647	Spring, summer, and fall	Middle, Lanie, Fred, Bullwacker, Richmond

Open water and wetlands are often favored by livestock, particularly during summer. Favorable conditions in the project area are limited because most wetlands are small and lack open water, with the exception of the Richmond and Bullwacker Springs.

CHAPTER 4
ENVIRONMENTAL CONSEQUENCES

This chapter identifies and describes the environmental consequences that would result from implementation of the Proposed Action and the No Action Alternative. Mitigation Measures and Residual impacts are discussed at the end of this chapter. Cumulative Effects are analyzed in Chapter 5.

4.1 PROPOSED ACTION

The Proposed Action would be constructed in two phases as described in Section 2.1.1. Engineering plans for Phase II have not been developed at this time; however, acreages of impacts for this phase have been estimated based on Phase I impacts. The estimated impacts represent maximum disturbances, and actual disturbances would be expected to be less.

4.1.1 Land Use

The Proposed Action would not change existing land use, which is primarily livestock grazing and dispersed recreation. Replacement of spring collection boxes and underground pipeline would be compatible with these uses.

Implementation of the Proposed Action would not restrict existing ROW grantees from the continued access to and maintenance of their existing facilities. The BLM would notify all existing and pending ROW grantees of the Proposed Action prior to implementation. Construction of the Proposed Action would not commence in portions of the project area intersecting or coinciding with the existing ROW for U.S. Highway 50 until an encroachment permit is granted by NDOT.

4.1.2 Hazardous and Solid Waste

All solid waste generated by the project would be taken to the Eureka County landfill for disposal, and therefore, negligible impacts are expected. Solid waste includes old system components exposed during project excavation. When practicable, existing dilapidated system components and historic garbage would also be hauled to the landfill.

Eureka County is not aware of the use of asbestos-cement pipe in the old collection system. The potential for discovery of asbestos-cement pipe is considered unlikely but cannot be entirely ruled out. In the event of discovery of asbestos-cement pipe, Eureka County or its construction contractor would first determine if the asbestos material is friable (easily crumbled). If friable, or capable of giving off friable asbestos dust, Eureka County or its construction contractor would handle, transport, and dispose the material in accordance with NRS 618.775. See 4.2 Mitigation Measures.

Impacts for accidental spills of petroleum products from construction equipment could occur, but impacts would be temporary and minimal due to the BMPs that would be implemented to control and clean up spills as described in the project's Spill Prevention Plan (a part of the project's Stormwater Water Pollution Prevention Plan); see Section 2.2 Environmental Protection Measures. Protection measures include disposing of spill material in a permitted facility. If required, the appropriate agencies would be notified in accordance with the applicable federal and state regulations.

4.1.3 Recreation

An estimated 12.2 acres of public land would be fenced around the spring collection box infrastructure, which would prevent recreationists from accessing this acreage. Impacts to recreational use would be negligible because each spring is surrounded by vast amounts of public land that could be used for recreation. The Perdiz Sporting Clays Range is approximately 2,000 feet southeast of the Gorman Spring. Construction and maintenance at Gorman Spring would be short-term and temporary, and not expected to affect the recreation at the shooting range.

4.1.4 Socioeconomics

Effects of the Proposed Action on socioeconomics would be negligible because the project would generate few employment opportunities. The minimal employment opportunities that would be generated would be temporary, terminating upon completion of the rehabilitation construction efforts (within 24 months of commencement). The Proposed Action would not increase population in the area or generate demand for housing and community services.

4.1.5 Cultural Resources

An aspen grove containing arborglyphs primarily associated with Peruvian and Basque sheep ranchers was determined to be eligible for listing on the NRHP. As an Environmental Protection Measure (Section 2.2), Eureka County would avoid the site determined eligible during construction, maintenance, and operation of the water collection system. To ensure avoidance during construction, an archaeological monitor would be present during any ground-disturbing activities that occur within 60 feet of the site. The assigned monitor would be a qualified archaeologist who meets Nevada BLM standards. Monitoring at other project locations during construction is not proposed because the potential for intact subsurface deposits is minimal. The project area has been subject to repeated ground disturbance from the original construction and subsequent repairs of the spring boxes and pipelines.

Should a previously undiscovered cultural resource be discovered, Eureka County would implement mitigation measures (Section 4.2). Eureka County would halt activity near the site and immediately notify the BLM. Construction would not resume until the BLM provides notification to proceed. Because the only known site that is eligible for listing would be avoided, and because Eureka County would implement mitigation measures in the event a previously undetected resource is discovered, impacts to cultural resources are expected to be less than significant.

4.1.6 Native American Concerns

Ground disturbance associated with installation of new collection system components would be limited and would occur at springs that have previously been disturbed and developed. Considering that springs have been previously disturbed and developed, the Proposed Action is not expected to adversely affect any Native American religious site, religious practice, or ceremony, or any other traditional/spiritual/cultural use site or resource. The Proposed Action does not appear to have the ability to compromise the physical integrity of any traditional/spiritual/cultural or ceremonial use area. This action would not limit or prevent access to any unknown (to BLM) or known traditional or ceremonial sites currently in use.

Though the possibility of disturbing Native American gravesites within the project area is extremely low, Eureka County would implement procedures in compliance with Native American Graves Protection and Repatriation Act (NAGPRA), section (3)(d)(l) to minimize impacts in the event of an inadvertent discovery; see mitigation measures described in Section 4.2. NAGPRA states that the discovering individual must notify the land manager in writing of such a discovery. If the discovery occurs in connection with an authorized use, the activity which caused the discovery is to cease and the materials are to be protected until the land manager can respond to the situation. Also, during project implementation, if any surface and/or subsurface cultural properties, items, or artifacts (e.g., stone tools, projectile points) are encountered, Eureka County would not collect items and the BLM would be contacted immediately. Cultural and archaeological resources are protected under the Archaeological Resources Protection Act (ARPA) (16 U.S.C 470ii) and the FLMPA (43 U.S.C. 1701).

4.1.7 Noxious Weeds/Invasive Non-native Species

An estimated 12.2 acres of ground would be disturbed to rehabilitate the springs, and up to 15.9 acres would be disturbed to construct the pipeline network. Ground disturbance increases the risk of colonization by noxious and invasive weeds. Risk of noxious weed establishment is high because low white top and nodding thistle, Nevada state-designated noxious weeds, have been identified in the proposed ROW. Additionally, portions of the proposed ROW are prone to colonization by weeds because they are located adjacent to heavily used Highway 50 and existing two-track roads. Weed seeds may be more frequently transported along these roads. Species such as spotted knapweed (*Centaurea stoebe* [formerly *C. maculosa*]) readily invade disturbed soils and could become established in the project area.

Eureka County would minimize the potential for the establishment of noxious weeds and spread of invasive species through mitigation measures described in Section 4.2. Mitigation for noxious weeds includes reseeding of disturbed areas, monitoring, and treatment of weed infestations.

4.1.8 Water Quality (Surface/Ground)

Field observations noted that groundwater surfaces at six springs. Bullwacker Spring, the largest spring, discharges an estimated 6 gpm. Discharge at the remaining five springs is less than 2 gpm. Wetlands supported by the discharge are discussed in Section 4.1.10. Discharged groundwater flows to the surface where most percolates into the ground. Spring collection galleries would capture water

as it surfaces at each spring site. The Proposed Action is not expected to impact groundwater recharge because the amount of flow that is captured that would be prevented from percolating back into the ground is minimal and does not appear to have an important contribution to ground water recharge. Since groundwater recharge would not be affected, there would be no effects to groundwater quality

Spring development is not expected to impact groundwater discharge at neighboring springs because the proposed spring collection galleries would not draw water directly from the groundwater aquifer that supplies flows to other springs. (A direct connection to the groundwater aquifer would occur if water were withdrawn through a well and pump system.) The proposed spring collection galleries are intended to collect flows that are near the ground surface.

After construction, the rehabilitated collection system may result in localized improved water quality conditions. Fencing at each spring site would prevent trampling by livestock and wildlife, and therefore, prevent damage in saturated areas adjacent to springs and contamination of water.

Water quality impacts from erosion and siltation may occur from stormwater running off of disturbed ground. To minimize the potential for water quality impacts, Eureka County and/or its contractor would implement BMPs in accordance with the Stormwater Pollution Prevention Plan developed for the project. Development of a Stormwater Pollution Prevention Plan and implementation of construction BMPs is an applicant-proposed Environmental Protection Measure described in Section 2.2 and a requirement of the Stormwater General Permit issued by NDEP. BMPs are defined by NDEP in the State of Nevada Handbook of Best Management Practices (1994). As an added mitigation measure, BMPs would include reseeding of all disturbed areas with the erosion control seed mix as described in Section 4.2 Mitigation Measures.

4.1.9 Vegetation

Up to 12.2 acres of vegetation would be disturbed at the springs. Installation of water pipelines would disturb up to 15.9 acres. Vegetation would be removed by excavation or crushed by construction equipment. Vegetation communities affected include a mountain brush community and a wet meadow community. Sagebrush, grass, and juniper habitat would be affected by spring improvements at Gorman and Lanie Springs.

Impacts are expected to be minimal because the Proposed Action is the rehabilitation of the existing water collection system. The majority of the project would be constructed within or immediately adjacent to a previous disturbance. The pipeline running from Richmond Spring to Bullwacker Spring, then on to Lanie Spring, would be constructed largely within the footprint of an existing two-track roadway, minimizing impacts to vegetation along this section of the proposed ROW. Impacts to vegetation would be further minimized by reseeding of disturbed areas at the springs and along the pipeline routes. Eureka County would use the BLM-approved seed mix listed in Section 4.2 Mitigation Measures. Reseeding would allow for the re-establishment of native vegetation over time. Standard conditions of the Stormwater General Permit from NDEP that Eureka County would obtain prior to construction require that disturbed

soils be stabilized with perennial vegetation to meet a minimum of 70 percent of the pre-construction natural cover.

4.1.10 Wetlands/Riparian Zones

Rehabilitation of the springs would impact up to 0.9 acres of wetlands by capturing flows that sustain hydrophytic vegetation and, in some cases, excavating wetlands to place new infrastructure. While not all flow may be captured, particularly at larger sites such as Bullwacker Spring, the extent of hydrophytic vegetation present at springs would be reduced or eliminated. Hydrophytic vegetation may continue to survive at Bullwacker Spring because it is a relatively large spring. Wetland vegetation at Florio Spring is expected to survive because flows from neighboring Cherry Spring (which is not a part of the project) augment the wetland. At smaller spring (e.g., Prospect, Richmond, and Lanie Springs) wetland vegetation would be expected to be eliminated. It is expected that direct impacts to wetlands from excavation would be minimal to avoidable at Lanie and Richmond Springs because new collection components would be constructed primarily outside of wetland areas or in previously disturbed areas. Excavation would directly impact wetland areas at Prospect, Summit, and Bullwacker Springs. No aspens at Richmond Spring would be removed. The impact of the Proposed Action to wetlands would be minimal because the extent of wetlands at each individual site is small.

JBR's preliminary wetland delineation determined that no jurisdictional wetlands are associated with the springs. The project wetlands do not meet the criteria of Waters of the United States because they are isolated and their use, degradation, or destruction would not affect interstate or foreign commerce.

4.1.11 Wildlife

As an environmental protection measure, springs would be fenced to exclude larger wildlife and livestock. The fencing would consist of 8-foot chain link and would prevent larger wildlife from accessing forage on a total of approximately 12.2 acres at ten spring sites, of which, 0.9 of an acre is wetland vegetation. The loss of forage would have minimal impact to wildlife because ample forage is present in the surrounding area.

Openwater and wetland forage available at spring sites is important to wildlife, especially during summer. Six of the ten project springs have a surface water discharge. Depending on the effectiveness of collection galleries, surface flows from the project area spring sources would be reduced or eliminated, making water for wildlife no longer available. For the smaller springs, loss of wetland forage and open water would be minimal for two reasons. First, the existing discharge volumes and the wetlands they support are minimal. Second, alternate, unfenced water sources are available in close proximity. NDOW concurred that loss of water source from these smaller springs would not have a major impact to wildlife in the area; see NDOW letter contained in Appendix B. Table 4-1 shows distances to alternate water sources for project springs that have a surface water discharge.

Table 4-1 Alternative Water Source at Springs

Spring	Distance to Nearest Spring
Prospect Spring	3,000 feet east
Lucky Spring	1,000 feet west
Summit Spring	1,600 feet south
Lanie Spring	800 feet east
Bullwacker and Richmond Springs*	6,400 feet south

* *Bullwacker and Richmond Springs are side by side.*

Springs are maybe 1000 apart not really so these 2 spring are separated by a ridge. I think it would be better to Fence Springs Separately better For Wildelife and Livestock movement.

Richmond, Bullwacker, and Prospect Springs do not have a nearby alternate water source available to wildlife. Based on an on-site evaluation of the project springs on June 2, 2010, NDOW provided a written recommendation that water be made available at these spring sites to benefit wildlife (Appendix B). NDOW indicated that Bullwacker and Richmond Springs are next to each other, and water from one of the springs would suffice. To mitigate for the loss of water for wildlife at Bullwacker, Richmond, and Prospect Springs, Eureka County would pipe water to a trough outside of fences at Bullwacker and Prospect Springs. However, water would only be piped to a trough provided that excess water is available after meeting the water supply demand of Eureka. During dry years, it is possible that insufficient water would be available to supply troughs outside the spring fences.

Nevada Revised Statute 583.367 requires that "Before a person may obtain a right to the use of water from a spring or water which has seeped to the surface of the ground, he must ensure that wildlife which customarily uses the water will have access to it." According to the Nevada Division of Water Resources (NDWR) the statute is not applicable to municipalities or municipal uses (personal communication, Eric Schadeck, NDWR).

4.1.12 Special Status Species

NDOW indicates that the southern part of the project area, containing Prospect and Lucky Springs, represents greater sage-grouse habitat, which was confirmed during an on-site inspection by JBR. Springs and associated wet meadow areas provide water and food sources for sage-grouse. These springs would be reduced or eliminated by the Proposed Action. Prospect Spring supports an approximately 0.16-acre area of such habitat, and Lucky Spring supports a 5- to 6-foot-wide and 400-foot-long stringer of wetland vegetation below the spring. Because alternate water sources and wet meadow foraging areas are available in the vicinity of the project area, impacts to sage-grouse are expected to be minimal.

The project area contains habitat for other special status wildlife. A few pinyon or juniper trees may be removed during construction of the project. These trees represent potential foraging habitat for juniper titmice and may be used by pinyon jays. Pinyon-juniper habitat is common in the middle elevation areas around the Eureka area, and the loss of only a few trees during construction of the Proposed Action is not expected to affect the populations of juniper titmice or pinyon jays in the area. The limited amount of tree and shrub removal that would occur as a

result of project development is not expected to result in a significant decrease in potential loggerhead shrike nesting habitat.

Denser sagebrush habitat occurs primarily in the southern part of the project area and near Lanie Spring. Dense sagebrush represents potential pygmy rabbit habitat, but no evidence of pygmy rabbits was found in these areas. Accordingly, impacts to pygmy rabbits are not anticipated.

4.1.13 Migratory Birds

During construction, disturbance of potential migratory bird nesting habitat would occur at the spring sources (12.2 acres) and along the pipeline route (15.9 acres). Habitat would be lost until successful disturbed areas are successfully reclaimed. In the longer term, fencing around the springs may slightly reduce nesting mortality by excluding large animals and livestock, which may occasionally trample nests, and by excluding larger predators.

Disturbance to nesting migratory birds during construction could be avoided by conducting land-clearing activities required outside the migratory bird nesting season (approximately March 1 to August 1). If land clearing and ground disturbance is performed during the migratory bird nesting season, Eureka County would minimize harm to migratory birds through a preconstruction bird survey as described in Section 4.2 Mitigation Measures.

4.1.14 Soils

Construction of the new spring collection infrastructure and underground pipelines would temporarily disturb 28.1 acres of soil substrate. Based on the described soil limitations, the Tica soils and the Bartine-Overland soils have a moderate to severe erosion potential due to steep slopes. The Fairydell and Gabel soils have a moderate erosion potential, while the Hussa loam has a slight to moderate erosion potential. Impacts to soils would be minimized through use of BMPs (an Environmental Protection Measure) during construction to control erosion and siltation. Disturbed areas would be reclaimed to approximate pre-construction contours and then planted with the seed mix as described in Section 4.2 Mitigation Measures.

4.1.15 Minerals

The Proposed Action and associated ROW areas would intersect 105 active, unpatented claims staked in part by three separate claimants. Amendment of the proposed ROW would encumber land previously included in staked claims. However, impacts would be negligible because rehabilitation of the springs would not remove substantial areas of land from unpatented claims, as most of the proposed collection system components would utilize the footprint of the existing collection system.

The BLM will notify potentially affected claimants of the Proposed Action before a decision is made.

Nancy Lockridge
635-4029

P-29 table 4-1
P 31
P. 32

P. 35
4.4
Residual
Impacts

Loss of Farms Eu. Co. M. Plan
Element 7 P. 7-8
Policy 7.3.3

4.1.16 Wild Horses

The majority of the proposed project activities are associated with replacement of existing components of the water collection system in previously disturbed areas. After construction is complete, these areas would be contoured and seeded to restore preconstruction conditions. Only the immediate area surrounding each spring site would be fenced. A total of three of the project springs are located within the Fish Creek HMA, and approximately 3.5 acres within the HMA would be fenced as result of the Proposed Action.

Fenced exclosures would generally contain 1 acre around each spring and is not expected to limit their free-roaming behavior and signage posted on the chain link fence should make the fencing more visible. The fencing would prevent wild horses from utilizing springs as a water source at Summit, Lucky, and Prospect Springs. The loss of these water sources would have minor impact to wild horses for several reasons. First, wetland and openwater areas are small at Summit and Lucky Springs (0.03 and 0.05 of an acre respectively). Second, many additional springs exist elsewhere in the HMA; Table 4-1 indicates the nearest alternate water sources to Summit and Lucky Springs. Finally, wild horses would be able to utilize the proposed trough at Prospect Spring. As discussed in Section 4.1.12, water would be piped to a trough at Prospect Spring to ensure water is available to wildlife; see also Section 4.2. Mitigation Measures.

4.1.17 Grazing Management

Approximately 28.1 acres of potential forage would be disturbed in the Spanish Gulch, Ruby Hill, and Fish Creek Allotments. Impacts are expected to be minor because following completion of construction, disturbed areas would be recontoured to preconstruction conditions and reseeded. However, chain link fence exclosures at each spring that are necessary to prevent contamination of the water supply would result in 12.2 acres of permanent loss of forage, including wetlands and openwater. As discussed Section 4.1.10, rehabilitation of the springs would result in the loss of up to 0.9 acres of wetlands.

Loss of open water and wetland forage at the smaller springs (e.g., Lucky, Summit, and Lanie Springs) would have minor impacts to livestock because the area of existing wetlands is small and alternate, unfenced water sources are generally available in close proximity; see discussion of impacts to wildlife in Section 4.1.12. However, Richmond, Bullwacker, and Prospect Springs do not have a nearby alternate water source available. Eureka County would mitigate for the loss of open water and wetland forage at these sites by installing a trough at Bullwacker and Prospect Springs; see Section 4.2 Mitigation Measures. Bullwacker and Richmond Springs are next to each other and one trough would serve both springs. While the troughs are intended to benefit wildlife, livestock would also be able to use the troughs. Water would be piped to a trough provided that excess water is available after meeting the water supply demand of Eureka. During dry years, it is possible that insufficient water would be available to supply troughs outside the spring fences.

4.2 MITIGATION MEASURES

Based on the EA analysis, no additional monitoring is proposed. The following mitigation measures would be implemented in conjunction with the Proposed Action. The measures are designed to avoid or reduce the impacts associated with the Proposed Action.

Hazardous and Solid Waste

1. In the event of discovery of asbestos-cement pipe, Eureka County or its construction contractor would first determine if the asbestos material is friable. If friable, or capable of giving off friable asbestos dust, Eureka County or its construction contractor would handle, transport, and dispose the material in accordance with NRS 618.775.

Wildlife

2. To mitigate for the loss of water for wildlife at Bullwacker, Richmond, and Prospect Springs, Eureka County would pipe water to a trough outside of the exclosures at Bullwacker and Prospect Springs. However, water would only be piped to a trough provided that excess water is available after meeting the water supply demand of Eureka.

Migratory Birds

3. Disturbance to nesting migratory birds would be avoided by conducting land-clearing activities outside the migratory bird nesting season (approximately March 1 to August 1). If land-clearing activities must be constructed during the migratory bird nesting season, a preconstruction survey for nesting migratory birds would be performed by a qualified wildlife biologist. If active nests are found, nests would be avoided until the nesting has been completed.

Native American Resources

4. Though the possibility of disturbing Native American gravesites is extremely low, should a Native American gravesite be found, Eureka County would follow procedures in compliance with NAGPRA. Section (3) (d) (l) of NAGPRA states that the discovering individual must notify the land manager in writing of such a discovery. If the discovery occurs in connection with an authorized use, the activity which caused the discovery is to cease and the materials are to be protected until the land manager can respond to the situation. See Item 5 below.

Cultural Resources

5. The Archaeological Resources Protection Act (ARPA) codified at 43 CFR 7, as well as NAGPRA codified at 43 CFR 10, provide protection for historic properties, cultural resources, and Native American funerary items and/or physical remains located on federal land. In addition, ARPA provides for the assessment of criminal and/or civil

penalties for damaging cultural resources. Any unplanned discovery of surface and/or subsurface cultural properties, items, or artifacts (e.g., stone tools, projectile points); human remains; items of Native American cultural patrimony; sacred objects; or funerary items requires that all activity in the vicinity of the find ceases and immediate notification be made to Doug Furtado, Field Manager, Mount Lewis Field Office, 50 Bastian Way, Battle Mountain, NV 89820 (775-635-4000) by telephone, with written confirmation to follow, immediately upon such discovery. The location of the find should not be publically disclosed, and any human remains must be secured and preserved in place until a Notice to Proceed is issued by the authorized officer.

Fire Management

6. Eureka County would implement precautionary measures in order to prevent wildfires during construction of the Proposed Action. Adequate firefighting equipment would be kept on-site at all locations where construction is occurring. Firefighting equipment would include shovels, pulaski axes, fire extinguishers, water supplies, or similar pieces of equipment. When welding is required during construction, the welding would be conducted in an area free from or mostly free from vegetation. Construction personnel, in addition to the welder operator, would be assigned to monitor the welding area for fires. A shovel and water supply would be kept near the welder to immediately extinguish any fires that may result from welding sparks. All vehicles associated with the Proposed Action would receive frequent catalytic converter inspections and would be cleared of all brush and grass debris. All vehicles would be equipped with fire extinguishers.

   Eureka County would report all wildfires to the BLM Central Nevada Interagency Dispatch Center immediately. When conducting operations from May through September, Eureka County would contact the BLM Battle Mountain District Office, Division of Fire and Aviation to inquire about any fire restrictions in place for the project area. Eureka County would also inform the office of approximate beginning and ending dates for the construction activities. In the event that the Proposed Action generates a fire, Eureka County could be liable for suppression costs.

Noxious Weeds

7. Eureka County would minimize the potential for the establishment of noxious weeds and spread of invasive species by reclaiming disturbed areas. ROW areas disturbed during construction would be reseeded with an erosion control mix. Additionally, weed-free hay would be used if hay bales are used for erosion control.

The proposed seed mix and application rates in pounds per acre of pure live seed are as follows:

Species	Rate pounds per acre
Great Basin wildrye	3.0
Slender wheatgrass	3.0
Western wheatgrass	2.0
Blue bunch wheatgrass	5.0
Palmer penstemon	2.0
Yarrow	0.25

The timing of seeding would depend on the seeding method. Seeding would occur at any time during the year if seeds are incorporated into the soil surface to a depth no deeper than one-half (½) inch. If the no till-broadcast seeding method is used, seeding would occur in the fall. This would minimize the predation of seeds by wildlife while allowing seeds to overwinter on the soil surface, taking advantage of moisture provided by snowmelt in the spring.

The Diamond Valley Weed District would include the project ROW areas as a part of its annual work plan to ensure that the project ROW areas would be inspected and all noxious weeds and invasive species would be treated.

4.3 NO ACTION ALTERNATIVE

Under the No Action Alternative, amendment of ROW authorization NVN 007463 would not be authorized and Eureka County would not be permitted to rehabilitate the water collection system. No impacts would occur at the springs and water pipeline locations.

Eureka would not have a secondary water supply source until sometime in the future when funds for a new well or development of new springs became available. Well or spring development would probably result in disturbances to vegetation and soils and could potentially disturb wildlife habitat, nesting migratory birds, special status species habitat, wetlands/riparian zones, cultural resources, water resources, and other resources. Because the location, timing, and area of disturbance associated with construction of a third well or use of additional springs are unknown, the specific environmental consequences are unknown. Any future additional proposals, not analyzed in this EA, would be analyzed under their own site specific environmental analysis at the time in which they are proposed.

4.4 RESIDUAL IMPACTS

Residual impacts are those that would remain after mitigation is successfully implemented. With the successful implementation of the environmental protection measures and BMPs incorporated into the Proposed Action, the project would result in minimal residual impacts. Exclosures around springs would result in the permanent loss of approximately 12.2 acres of forge for livestock and large ungulates. Up to 0.9 acres of wetland would also be lost. Impacts would be minimal because the loss at each site is small and would be dispersed over a very large area within Eureka Canyon.

Under the No Action Alternative, no residual impacts would occur.

CHAPTER 5
CUMULATIVE EFFECTS

5.1 CUMULATIVE IMPACTS ASSESSMENT

A cumulative impact is defined under NEPA as "the change in the environment which results from the incremental impact of the action, decision, or project when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or non-federal) or person undertakes such other action" (40 CFR Part 1508.7). "Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time" (NEPA 40 CFR Part 1508.7).

The time frame for the cumulative impact analysis and reasonably foreseeable future actions is 40 years, the anticipated design life of the proposed water collection facilities. The Cumulative Effects Area (CEA) is 36,249 acres containing Eureka and Eureka Canyon. The eastern and western limits of the CEA extend approximately 3 miles from the centerline of U.S. Highway 50. The northern and southern limits of the CEA extend approximately 3 miles north of Richmond Spring and 3 miles south of Prospect Spring. This area was identified as the CEA for analysis because the Proposed Action is unlikely to have measurable effects outside this area. For simplicity the CEA was made identical for the addressed resources where it seemed reasonable and conservative to do so.

5.2 PAST, PRESENT, AND REASONABLY FORESEEABLE ACTIONS

Past and present actions within the CEA include the projects listed below. For those projects that have resulted in ground disturbance, National Aerial Imagery Program aerial photographs from 2006 were used to estimate the acreage of disturbance.

- Ruby Hill Mine - ~700 acres
- Township of Eureka - ~520 acres
- Windfall Mine - ~600 acres
- U.S. Highway 50 ROW - ~80 acres
- Various dirt roads - ~50 acres
- Shooting range - ~3 acres
- Milk Ranch impoundment - ~0.5 acre open water
- Fiber optic line adjacent to U.S. Highway 50 ROW - minimal disturbance
- Historic spring development in Eureka Canyon - minimal disturbance
- Livestock grazing
- Wild horse herd management

Reasonably foreseeable future actions within the CEA include the following:

- Livestock grazing
- Wild horse herd management
- Continued operations of the Ruby Hill Mine

5.3 CUMULATIVE EFFECTS TO RESOURCES

Resource topics considered under this cumulative effects analysis include all resources identified in Table 2 for which the Proposed Action may cause direct or indirect impacts. Since minimal to negligible impacts were identified to Land Use, Solid Waste, Water Quality, Recreation, Socioeconomics, Environmental Justice, Cultural Resources, Native American Religious Concerns, and Minerals, these resources are not addressed in the cumulative impacts assessment. Cumulative impacts are addressed for the following resources:

- Vegetation
- Noxious Weeds/Invasive Species
- Wetland/Riparian Zones
- Wildlife
- BLM Special Status Species
- Migratory Birds
- Soils
- Wild Horse Herd Management
- Livestock Grazing

5.3.1 Vegetation and Soils

The CEA is relatively undeveloped. Limited development that has occurred is primarily associated with the town of Eureka, the Windfall Mine, and the Ruby Hill Mine. Past and present cumulative actions have resulted in approximately 1,954 acres of loss to vegetation and disturbance to soils, representing 5.4 percent of the CEA. The reasonably foreseeable future use of the CEA by wild horses and livestock is not expected to contribute to cumulative losses because public lands are managed by BLM in accordance with the Shoshone Eureka RMP. Management objectives for wild horse herd management and livestock grazing is to manage use while protecting vegetation and sensitive resources values. Continued operations of the Ruby Hill Mine would include reclamation of mining disturbances which may reverse the trend of continued vegetation and soil losses.

Proposed Action

The Proposed Action would contribute a very small and incremental loss of vegetation to cumulative losses within the CEA. Approximately 28.1 acres of vegetation would be disturbed during construction, which represents a negligible amount of acres lost within the CEA, less than

2 percent of the total cumulative losses. The cumulative impact of the Proposed Action would be minimized through implementation of BMPs and reseeding of areas disturbed during construction.

No Action Alternative
Under the No Action Alternative, no impacts would occur and therefore, there would be no cumulative effect.

5.3.2 Noxious Weeds/Invasive Species

The CEA is relatively undisturbed, although disturbance that has primarily occurred from the development of Eureka, the Windfall Mine, and the Ruby Hill Mine. Past and present cumulative actions within the CEA have resulted in approximately 1,954 acres of disturbance and have contributed to the spread and establishment of noxious weeds and invasive species. Roads and US 50 within the CEA provide routes where weed seeds can be transported, and increase the risk of spread. Reasonably foreseeable future actions (e.g., continued livestock grazing and wild horse herd management) are not expected to increase the potential for the spread and establishment of weeds. Continued operations of the Ruby Hill Mine would include weed monitoring and control within the mine site and is also not expected to increase the risk of weed spread and establishment.

Proposed Action
The Proposed Action would contribute 28.1 acres of additional ground disturbance within the CEA, which could introduce some risk of establishment and spread of noxious weeds and invasive species especially at springs and pipeline routes that currently contain weeds. The cumulative impact of the Proposed Action would be minimized through reseeding of disturbed areas and future monitoring and control of weeds by the Diamond Valley Weed District.

No Action Alternative
Under the No Action Alternative, no impacts would occur and therefore, there would be no cumulative effect.

5.3.3 Wildlife, Migratory Birds, and Special Status Species

Approximately 1,954 acres of past and present development (5% of the CEA) has resulted in a permanent loss of habitat for wildlife, migratory birds, and special status species. Habitat losses within the CEA are relatively few, although large contiguous blocks of habitat have been lost from development of Eureka, the Windfall Mine, and the Ruby Hill Mine. Cumulative actions have contributed to a small but increasing trend of habitat loss, modification, and fragmentation within the CEA, which in turn adversely affects wildlife, migratory birds, and special status species.

Reasonably foreseeable future actions affecting habitat for wildlife, migratory birds, and special status species include the use of the CEA by livestock and wild horses. However, livestock

grazing and wild horses would continue to be managed by BLM in accordance with its RMP objectives. Use would be managed in a manner that maintains and improves habitat for wildlife and sensitive species (BLM 1984). Therefore, continued livestock grazing and wild horse herd management is not expected to increase the cumulative losses to habitat for wildlife, migratory birds, and special status species. Continued operations of the Ruby Hill Mine would include reclamation of mining disturbances which, if successful, could reestablish habitat for some wildlife, including migratory birds and special status species.

Proposed Action

Fencing of the springs would exclude larger wildlife from 12.2 acres of habitat, and 15.9 acres of habitat would be temporarily disturbed from pipeline construction. Up to 0.9 acres of wetland and open water habitat would be lost. These are extremely small and incremental losses compared to the vast amount of undisturbed habitat within the CEA, where cumulative losses have been minimal. Cumulative effects would be reduced with the implementation of BMPs, revegetation of habitat disturbed by construction, and construction of water troughs at Bullwacker and Prospect Springs.

No Action Alternative

Under the No Action Alternative, no impacts would occur and therefore, there would be no cumulative effect.

5.3.4 Wetland and Riparian Resources

Past and present cumulative actions within the CEA have resulted in approximately 1,954 acres of habitat loss, of which, a small portion presumably consisted of wetland and riparian communities. Additional losses to wetland and riparian resources have undoubtedly occurred with the historic use and development of springs in Eureka Canyon. Historically, water was piped from numerous springs to the Ruby Hill Mining District and Eureka for smelting or domestic consumption (KEC 2009). The extent of historic losses or modification to wetland and riparian communities within Eureka Canyon is unknown.

Reasonably foreseeable future actions affecting wetlands and riparian resources include the use of the CEA by livestock and wild horses. However, livestock grazing and wild horses would continue to be managed by BLM in accordance with its RMP objectives. Use would be managed in a manner that maintains and improves vegetation and sensitive resources, including riparian and aquatic habitat (BLM 1984). Therefore, continued livestock grazing and wild horse herd management is not expected to increase the cumulative losses.

Proposed Action

The Proposed Action would contribute an additional 0.9 acres of loss of wetland and riparian resources to an unknown amount presumed lost from past and present actions. Wildlife habitat is likely the most important value or benefit provided by wetlands and riparian resources within the CEA. The cumulative effect of the 0.9 acre loss would be very small and incremental and would

be minimized further, through the installation of wildlife-accessible watering troughs at Bullwacker and Prospect Springs.

No Action Alternative
Under the No Action Alternative, no impacts would occur and therefore, there would be no cumulative effect.

5.3.5 Livestock Grazing and Wild Horse Herd Management

Approximately 1,954 acres (5 percent of the CEA) of vegetation has been lost from past and present cumulative actions, and represents a loss of forage for livestock and wild horses. The cumulative loss of forage has been relatively minor, although large contiguous blocks of habitat have been lost from development of Eureka, the Windfall Mine, and the Ruby Hill Mine. The reasonably foreseeable continued use of the CEA by wild horses and livestock is not expected to add to cumulative losses because public lands are managed by BLM in accordance with the Shoshone Eureka RMP. Management objectives for wild horse herd management and livestock grazing is to manage use while protecting vegetation and sensitive resources values.

Proposed Action
The Proposed Action would contribute a very small and incremental loss of forage to cumulative losses within the CEA. Approximately 12.2 acres of vegetation would be excluded from grazing animals disturbed during construction, which represents less than 1% of the total cumulative losses, and negligible amount of forage lost within the CEA. The cumulative impact of the Proposed Action would be minimized through reseeding of areas disturbed during construction and providing water troughs at Bullwacker and Prospect Springs.

No Action Alternative
Under the No Action Alternative, no impacts would occur and therefore, there would be no cumulative effect.

CHAPTER 6
CONSULTATION AND COORDINATION

6.1 CONSULTATION WITH OTHERS

The following agencies and organizations were consulted during preparation of this EA:

Ron Damele	Director of Public Works, Eureka County
Tom Young, P.E.	Lumos and Associates
Eric Miskow	Nevada Natural Heritage Program
Robert Williams	U.S. Fish and Wildlife Service
Mike Podborny	Nevada Department of Wildlife

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CHAPTER 7
REFERENCES

Board of Eureka County Commissioners. 2000. Eureka County Master Plan. Eureka, Nevada.

Bureau of Land Management (BLM). 1984. Shoshone - Eureka Resource Management Plan, Environmental Impact Statement; Final. Battle Mountain, Nevada: U.S. Bureau of Land Management, Battle Mountain District Office. TIC: 241507.

_____. 1986. Shoshone - Eureka Resource Area Record of Decision. Battle Mountain, Nevada: U.S. Bureau of Land Management, Battle Mountain District Office.

_____. 2001. Manual H-4180-1, Rangeland Health Standards.

_____. 2008. BLM National Environmental Policy Act Handbook H-1790-1. U.S. Department of the Interior, Washington D.C.

_____. 2009a. GeoCommunicator National Integrated Land System. Accessed December 28, 2009, at http://www.geocommunicator.gov/GeoComm/index.shtm.

_____. 2009b. Herd Area and Herd Management Area Data - Fiscal Year 2009. Accessed December 28, 2009, at http://www.blm.gov/wo/st/en/prog/wild_horse_and_burro/wh_b_information_center/statistics_and_maps/ha_and_hma_data.html.

_____. 2009c. Legacy Rehost System (LR2000) Land and Mineral Records. Accessed December 28, 2009, at http://www.blm.gov/lr2000.

_____. 2009d. Manual M-4100, Grazing Administration.

Kautz Environmental Consultants, Inc. (KEC). 2009. A Cultural Resources Survey for the Eureka County Water Pipeline and Spring Box Replacement Project, Eureka County, Nevada.

Nevada Department of Agriculture's Noxious Weed Website, accessed at http://agri.state.nv.us/PLANT_NoxWeeds_index.htm.

Nevada Division of Water Resources, Department of Conservation & Natural Resources (NDWR). 1992. Nevada Water Facts – Introduction to Our Ground-Water Resources. Accessed December 2009 at http://water.nv.gov/WaterPlanning/wat-fact/ground.cfm.

Natural Resources Conservation Service (NRCS). 2006. Web Soil Survey of Diamond Valley Area, Nevada (Parts of Elko, Eureka, and White Pine Counties). Accessed at http://websoilsurvey.nrcs.usda.gov.

Nevada, State of. 1994. Best Management Practices Handbook. Nevada Division of Environmental Protection, Carson City, Nevada.

Perdiz Sport Shooting, Inc. 2005. Perdiz Sporting Clays – Home Page. Accessed December 29, 2009, at http://www.co.eureka.nv.us/Perdiz/perdiz.htm.

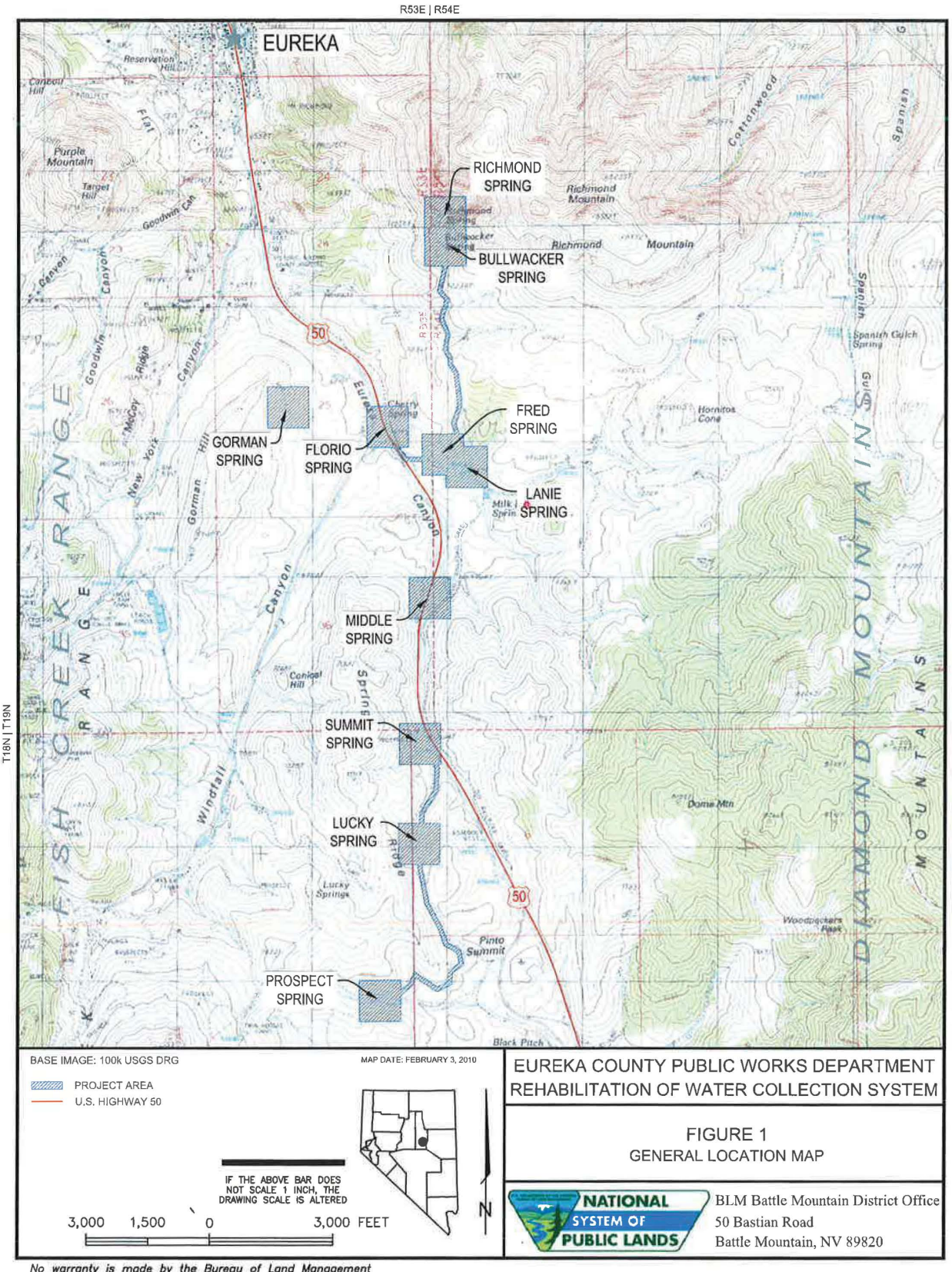
Soils Conservation Service (SCS). 1980. Soil Survey of Diamond Valley Area, Nevada (Parts of Elko, Eureka, and White Pine Counties). Prepared by the United States Department of Agriculture, Soils Conservation Service and United States Department of the Interior, Bureau of Land Management in cooperation with the University of Nevada Agricultural Experiment Station. Washington, D.C.: U. S. Government Printing Office.

Tumbusch, M. L., and R. W. Plume. 2006. Hydrogeologic framework and groundwater in basin-fill deposits of the Diamond Valley Flow System, Central Nevada: U.S. Geological Survey Scientific Investigations Report 2006-5249.

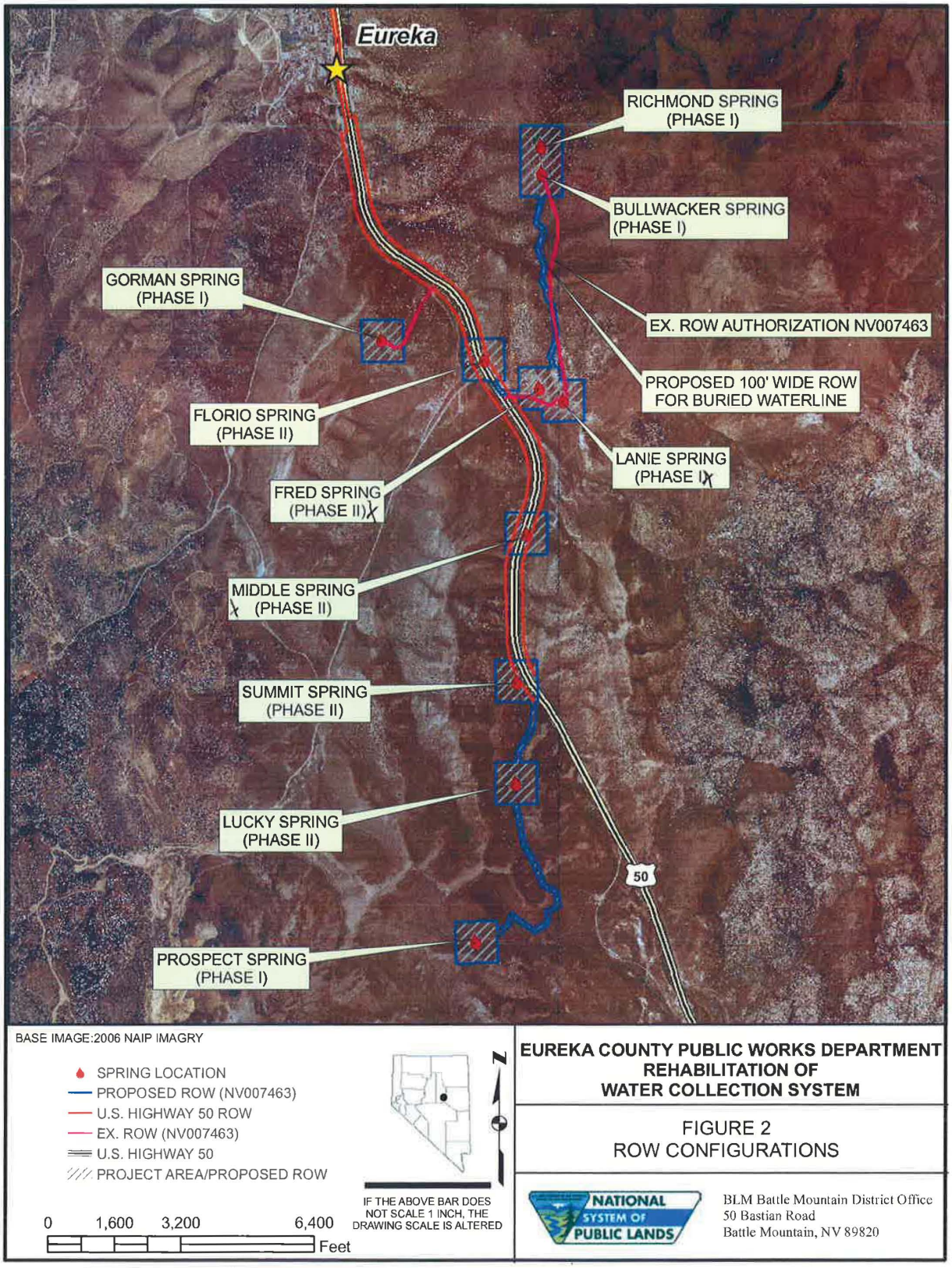
U.S. Census Bureau. 2009a. Poverty Definitions. Accessed December 29, 2009, at http://www.census.gov/hhes/www/poverty/definitions.html.

_____. 2009b. State and County Quick Facts. Accessed December, 2009, at http://quickfacts.census.gov/qfd/index.html.

FIGURES



No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data.



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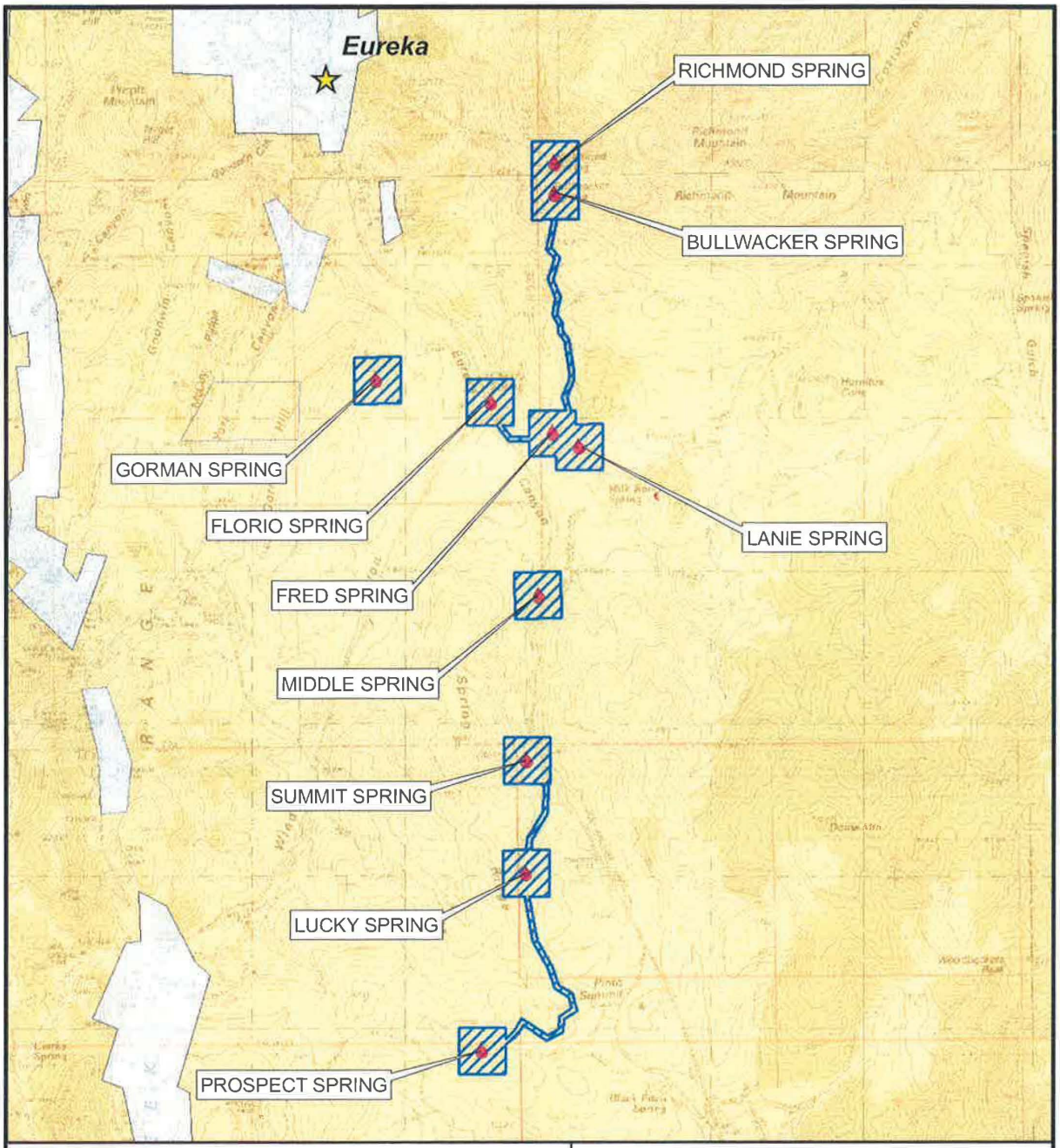

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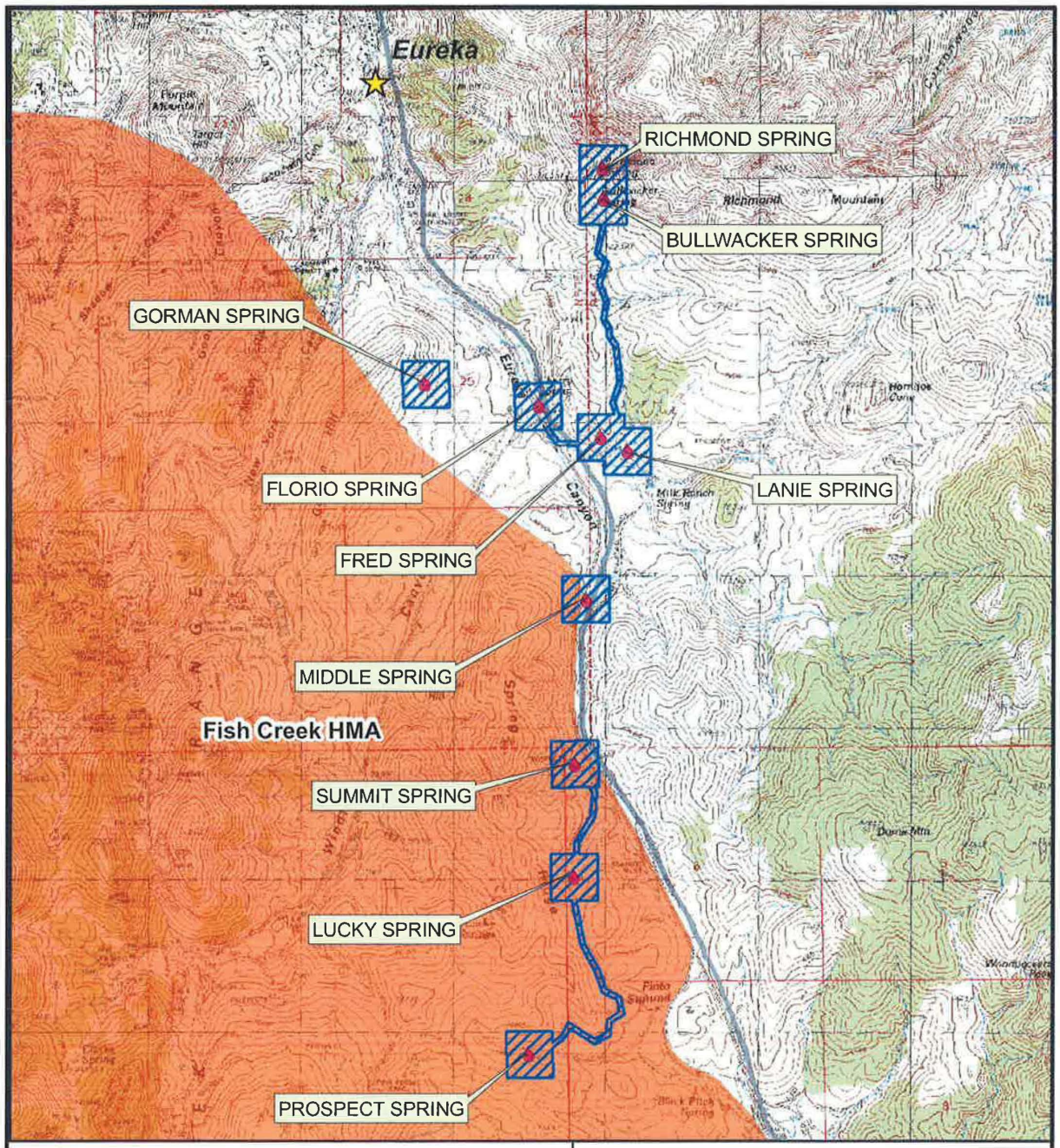

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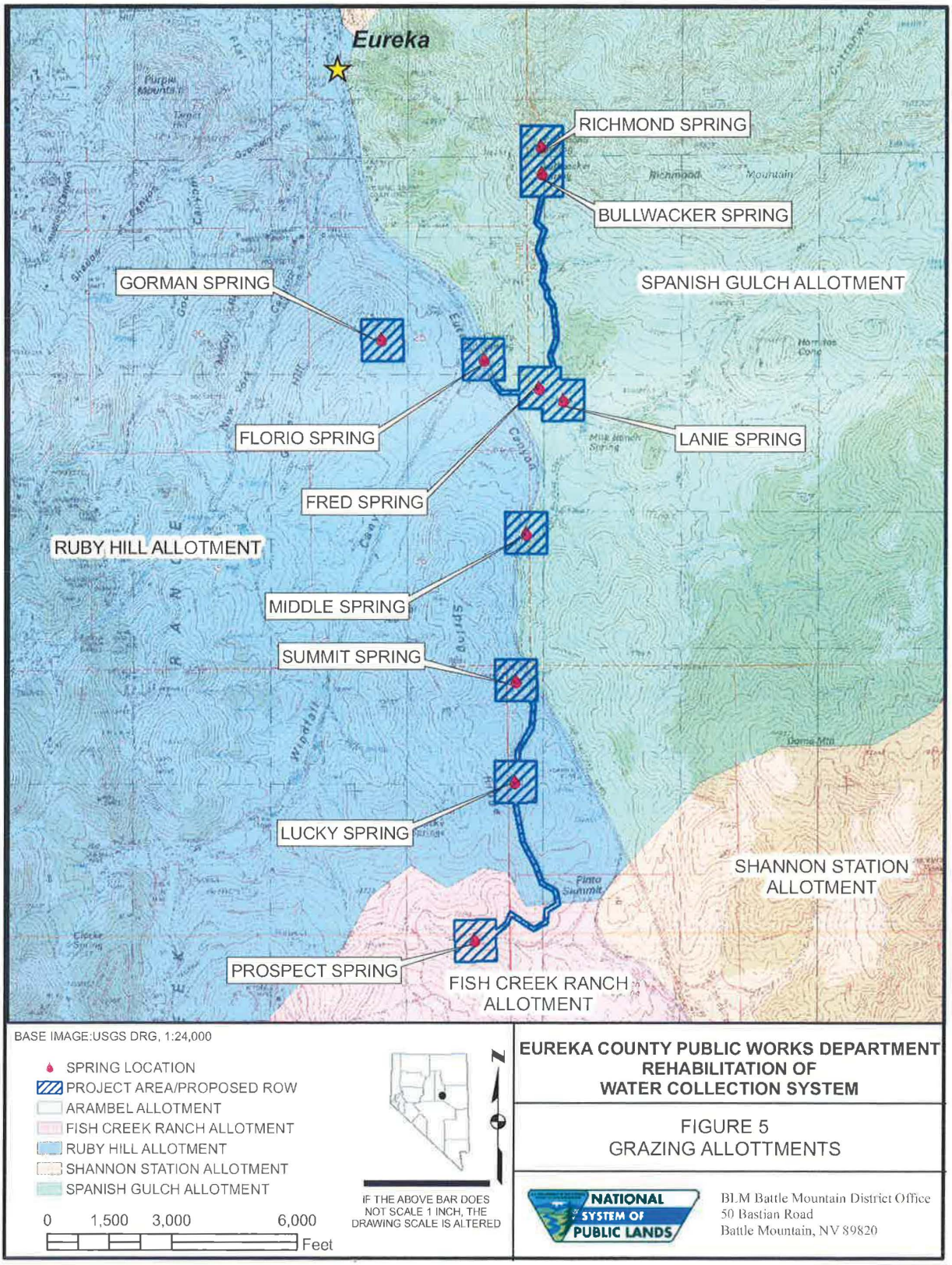

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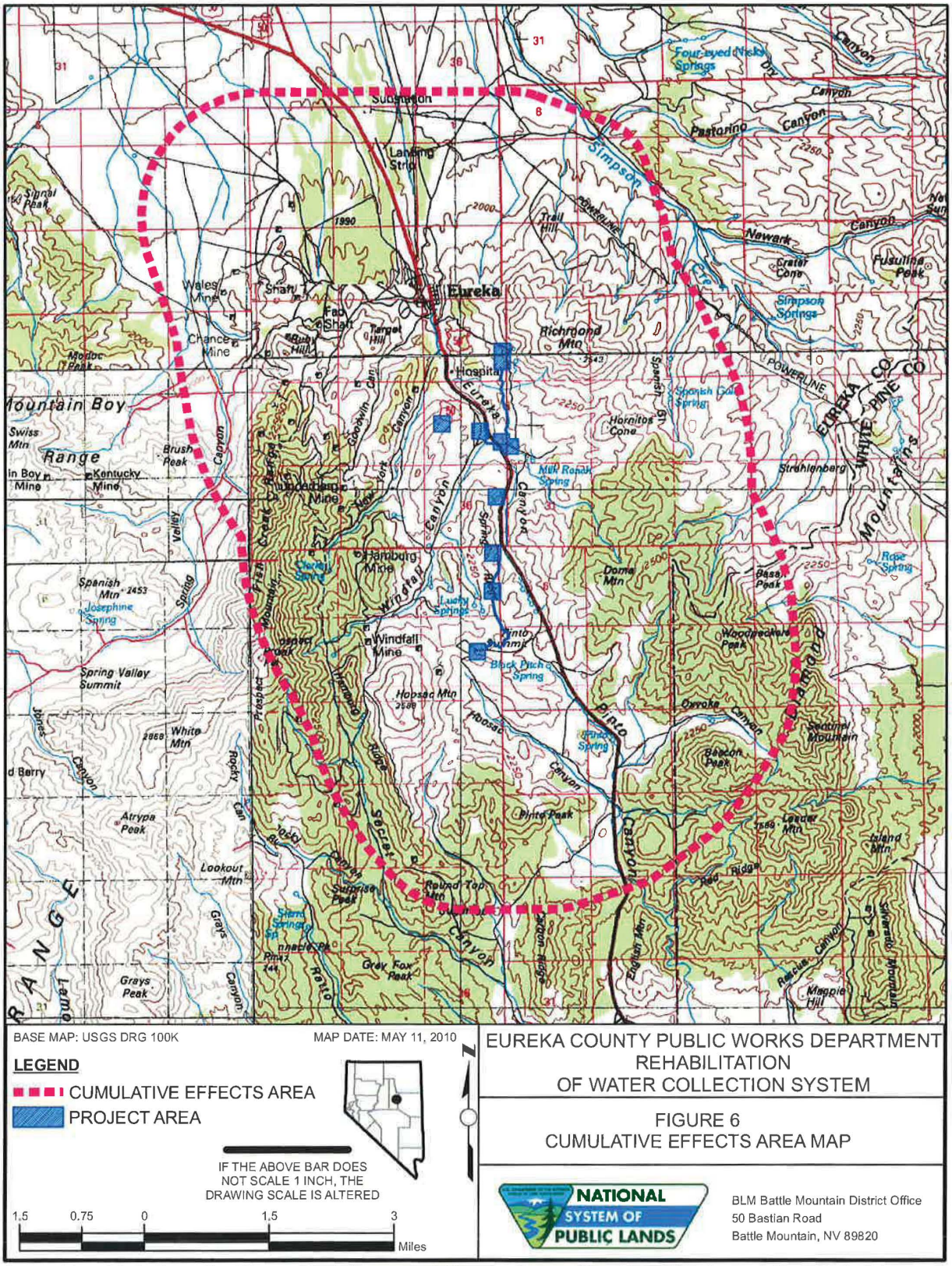


BASE MAP: USGS DRG 100K

MAP DATE: MAY 11, 2010

LEGEND

CUMULATIVE EFFECTS AREA

PROJECT AREA

IF THE ABOVE BAR DOES NOT SCALE 1 INCH, THE DRAWING SCALE IS ALTERED

1.5 0.75 0 1.5 3 Miles

N

EUREKA COUNTY PUBLIC WORKS DEPARTMENT
REHABILITATION
OF WATER COLLECTION SYSTEM

FIGURE 6
CUMULATIVE EFFECTS AREA MAP

NATIONAL SYSTEM OF PUBLIC LANDS

BLM Battle Mountain District Office
50 Bastian Road
Battle Mountain, NV 89820

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data.

APPENDIX A

Photographs

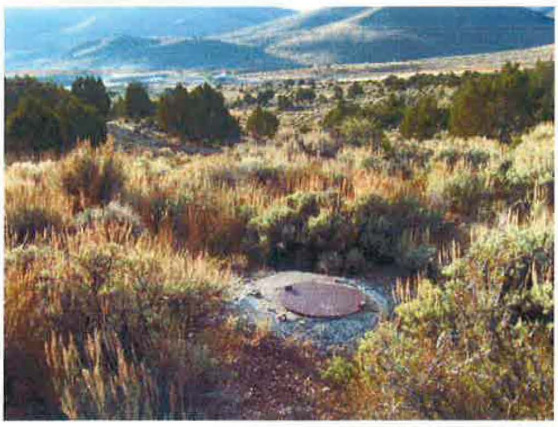
Photograph 1
Richmond Spring

Photograph 2
Bullwhacker Spring

Photograph 3
Bullwhacker to Lanie Pipeline Corridor. The pipeline follows the road shown in the center of the photograph.

Photograph 4
Lanie Spring. View upstream to spring source.

Photograph 5
Lanie Spring. Existing box.



Photograph 6
Gorman Spring. View into Windfall Canyon, Shooting facility in the background.

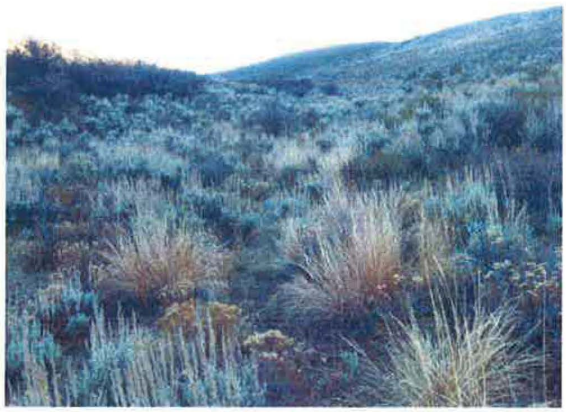
Photograph 7
Florio Spring. At spring source, looking downstream.

Photograph 8
Middle Spring

Photograph 9
Summit Spring. Landscape view of Summit Spring area. Spring source is left of center.

Photograph 10
Summit Spring. Downstream of spring source looking downstream toward US-50.

Photograph 11
Lucky Spring. Existing spring box.



Photograph 12
Lucky to Summit Spring pipeline corridor. The pipeline would cross left to right (uphill to downhill) in the center of the photograph.

Photograph 13
Lucky Spring. Looking uphill, Lucky Spring is behind the shrubs next to the cut (white patch).

Photograph 14
Prospect to Lucky Spring pipeline corridor.

Photograph 15
Prospect Spring.
Downstream of spring source looking downstream

APPENDIX B

Agency Correspondence

DEPARTMENT OF WILDLIFE

Eureka Field Office
P.O Box 592, Eureka, NV 89316-0592
775-237-5276 FAX 775-237-7614

June 29, 2010

Mr. Gerald M. Smith, District Manager
Bureau of Land Management
Battle Mountain District Office
50 Bastian Road
Battle Mountain, NV 89820

Re: Eureka County Spring Rehabilitation Project, NV-B010-2009-0076-EA, Eureka County Public Works Right-Of-Way Amendment #N007463.

Dear Mr. Smith,

I visited the project area on June 2, 2010 to evaluate the need for water available for wildlife. The two appropriate locations to have water available for wildlife would be at Richmond Spring or Bullwacker Spring and Prospect Spring. Richmond Spring and Bullwacker Spring are very close to each other and water from one of these sources made available to wildlife would suffice. Prospect Spring is at the far south end of the project area and water at this site would also benefit wildlife. The other seven springs either do not have surface water or other water sources are nearby providing water for wildlife. The minimal loss of some water from these few spring would not be a major impact to wildlife in the area. Thank you for these considerations on this project.

Sincerely,

Mike Podborny, Biologist

mp/MP
cc: Eureka County, Public Works
JBR
NDOW, Habitat Division, Eastern Region

DEPARTMENT OF WILDLIFE

Eureka Field Office
P.O Box 592, Eureka, NV 89316-0592
775-237-5276 FAX 775-237-7614

December 1, 2009

David Worley, Senior Biologist
JBR Environmental Consultants, Inc
595 Double Eagle Court, Suite 2000
Reno, NV 89521

RE: Eureka County Spring Rehab Project, JBR # B.A09322.00

Dear Mr. Worley,

As we talked on the phone mule deer, sage grouse and Chukar Partridge are some of the wildlife species in the project area of the Eureka County Spring Rehab Project. We understand that all springs will be fenced since this will be a municipal water supply. Any water available to wildlife outside of the fenced springs and away from the spring sources would be appreciated. The fences should be designed to keep all large ungulates out and should be 8 feet in height and made of chain link or woven wire with minimal spaces between gates and posts. We have successful used an 8' Commercial Game Fence to keep deer, elk and antelope out of agricultural fields and haystacks in Nevada. Chain link or cyclone fencing should also work. The importance of any fence material is that it is a single roll 8 feet in height and not 2 separate rolls tied together. This eliminates maintenance headaches in the future. Thank you for considering our ideas and we look forward to working with you on this project.

Sincerely,

Mike Podborny

Mike Podborny, Biologist

ALLEN BIAGGI
Director

Department of Conservation
and Natural Resources

JENNIFER E. NEWMARK
Administrator

JIM GIBBONS
Governor

Nevada Natural Heritage Program
Richard H. Bryan Building
901 S. Stewart Street, suite 5002
Carson City, Nevada 89701-5245
U.S.A.

tel: (775) 684-2900
fax: (775) 684-2909

STATE OF NEVADA
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

Nevada Natural Heritage Program

http://heritage.nv.gov

26 October 2009

David Worley
JBR Environmental Consultants, Inc.
595 Double Eagle Court, Suite 2000
Reno, NV 89521

RE: Data request received 22 October 2009

Dear Mr. Worley:

We are pleased to provide the information you requested on endangered, threatened, candidate, and/or At Risk plant and animal taxa recorded within or near the Eureka County Spring Rehab Project area. We searched our database and maps for the following, a two kilometer radius including:

Township 18N	Range	53E	Sections	All
Township 19N	Range	53E	Sections	All
Township 18N	Range	54E	Sections	All
Township 19N	Range	54E	Sections	All

There are no at risk taxa recorded within the given area. However, habitat may be available for, the western small-footed myotis, *Myotis ciliolabrum*, a Nevada Bureau of Land Management Sensitive Species. We do not have complete data on various raptors that may also occur in the area; for more information contact Ralph Phenix, Nevada Department of Wildlife at (775) 688-1565. Additionally, there are active Greater Sage-grouse (*Centrocercus urophasianus*) leks within your project area. For more information please contact Shawn Espinosa at NDOW (775) 688-1523 to further assess any potential Impacts your project may potentially incur. Note that all cacti, yuccas, and Christmas trees are protected by Nevada state law (NRS 527.060-.120), including taxa not tracked by this office.

Please note that our data are dependent on the research and observations of many individuals and organizations, and in most cases are not the result of comprehensive or site-specific field surveys. Natural Heritage reports should never be regarded as final statements on the taxa or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments.

Thank you for checking with our program. Please contact us for additional information or further assistance.

Sincerely,

Eric S. Miskow
Biologist /Data Manager

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Nevada Fish and Wildlife Office
1340 Financial Blvd., Suite 234
Reno, Nevada 89502
Ph: (775) 861-6300 ~ Fax: (775) 861-6301

November 6, 2009
File No. 2010-SL-0038

Mr. David Worley
JBR Environmental Consultants, Inc.
595 Double Eagle Court, Suite 2000
Reno, Nevada 89521

Dear Mr. Worley:

Subject: Species List Request for Springs Rehabilitation Project, Eureka County, Nevada

This responds to your letter received on October 23, 2009, requesting a species list for the Springs Rehabilitation Project in Eureka County, Nevada. To the best of our knowledge, no listed, proposed, or candidate species occur in the subject project areas. This response fulfills the requirements of the Fish and Wildlife Service (Service) to provide a list of species pursuant to section 7(c) of the Endangered Species Act of 1973 (Act), as amended, for projects that are authorized, funded, or carried out by a Federal agency.

The Nevada Fish and Wildlife Office no longer provides species of concern lists. Most of these species for which we have concern are also on the sensitive species list for Nevada maintained by the State of Nevada's Natural Heritage Program (Heritage). Instead of maintaining our own list, we are adopting Heritage's sensitive species list and partnering with them to provide distribution data and information on the conservation needs for sensitive species to agencies or project proponents. The mission of Heritage is to continually evaluate the conservation priorities of native plants, animals, and their habitats, particularly those most vulnerable to extinction or in serious decline. Consideration of these sensitive species and exploring management alternatives early in the planning process can provide long-term conservation benefits and avoid future conflicts.

TAKE PRIDE IN AMERICA

For a list of sensitive species by county, visit Heritage's website at www.heritage.nv.gov. For a specific list of sensitive species that may occur in the project area, you can obtain a data request form from the website or by contacting Heritage at 901 South Stewart Street, Suite 5002, Carson City, Nevada 89701-5245, (775) 684-2900. Please indicate on the form that your request is being obtained as part of your coordination with the Service under the Act. During your project analysis, if you obtain new information or data for any Nevada sensitive species, we request that you provide the information to Heritage at the above address. Furthermore, certain species of fish and wildlife are classified as protected by the State of Nevada (see http://www.leg.state.nv.us/NAC/NAC-503.html). Before a person can hunt, take, or possess any parts of wildlife species classified as protected, they must first obtain the appropriate license, permit, or written authorization from the Nevada Department of Wildlife (visit http://www.ndow.org or call 775-777-2300).

We are concerned that the proposed project may impact the greater sage-grouse *(Centrocercus urophasianus*), a species listed as sensitive under the Heritage Program. On February 26, 2008, the Service published in the Federal Register an initiation of a status review for the species as threatened or endangered under the Act. The Western States Sage and Columbian Sharp-tailed Grouse Technical Committee, under direction of the Western Association of Fish and Wildlife Agencies, has developed and published guidelines to manage and protect sage grouse and their habitats in the Wildlife Society Bulletin (Connelly *et al.* 2000). We ask that you consider incorporating these guidelines (http://ndow.org/wild/sg) into the proposed project. On a more local level, the Sage Grouse Conservation Plan for Nevada and Portions of Eastern California was completed in June 2004. The Plan is available online at: http://www.ndow/org/wild/sg/plan/index.shtm. We encourage you to adopt all appropriate management guidance from this Plan as you implement your proposed action.

We note that the pygmy rabbit (*Brachylagus idahoensis*) may occur within the planning area and could be affected by it. On January 8, 2008, the Service published a substantial 90-day finding on a petition to list the pygmy rabbit as threatened or endangered under the Act, thus initiating a status review of the species. Draft survey guidelines have been developed for this species and are available upon request from the Nevada Fish and Wildlife Office. We encourage you to survey the proposed project area for pygmy rabbits prior to any ground disturbing activities and to consider the needs of this species as you complete project planning and implementation.

Because wetlands, springs, or streams may occur in the vicinity of the project area, we ask that you be aware of potential impacts project activities may have on these habitats. Discharge of fill material into wetlands or waters of the United States is regulated by the U.S. Army Corps of Engineers (COE) pursuant to section 404 of the Clean Water Act of 1972, as amended. We recommend you contact the COE's Regulatory Section, 300 Booth Street, Room 2103, Reno, Nevada 89509, (775) 784-5304, regarding the possible need for a permit.

Based on the Service's conservation responsibilities and management authority for migratory birds under the Migratory Bird Treaty Act of 1918 (MBTA), as amended (16 U.S.C. 703 *et seq.*), we are concerned about potential impacts the proposed project may have on migratory birds in the area. Given these concerns, we recommend that any land clearing or other surface

disturbance associated with proposed actions within the project area be timed to avoid potential destruction of bird nests or young, or birds that breed in the area. Such destruction may be in violation of the MBTA. Under the MBTA, nests with eggs or young of migratory birds may not be harmed, nor may migratory birds be killed. Therefore, we recommend land clearing be conducted outside the avian breeding season. If this is not feasible, we recommend a qualified biologist survey the area prior to land clearing. If nests are located, or if other evidence of nesting (*i.e.*, mated pairs, territorial defense, carrying nesting material, transporting food) is observed, a protective buffer (the size depending on the habitat requirements of the species) should be delineated and the entire area avoided to prevent destruction or disturbance to nests until they are no longer active.

Please reference File No. 2010-SL-0038 in future correspondence concerning this species list. If you have any questions regarding this correspondence or require additional information, please contact me or James Harter at (775) 861-6300.

Sincerely,

Robert D. Williams
State Supervisor

Simpson Creek Ranch

James E. & Vera L. Baumann
P.O. Box 308
Eureka, NV 89316

September 7, 2010

Bureau of Land Management
Mount Lewis Field Office
50 Bastian Road
Battle Mountain, Nevada 89820

Certified Mail #7007 2680 0002 5574 1396

RE: Eureka County Spring Rehabilitation Project, NV-B010-2009-0076-EA, Eureka County Public Works Right of Way Amendment #N-007463

Greetings,

As the licensed permittees within the area of the Eureka County Public Works Department Right-of-Way Amendment and Rehabilitation of Eureka's Water Collection System projects, we are respectfully submitting the following comments.

- As Eureka County taxpayers, we certainly question the economics of this project and believe that the expense of this project is not worth the small amount of water that will be generated.
- We understand that the springs, if developed, will only be used for the irrigation of ball fields and parks within the townsite of Eureka and will not be incorporated into the current water system for human consumption.
- Eureka County has alternate sources and avenues to obtain additional water for the townsite of Eureka. Eureka County has an existing water system in southern Diamond Valley and has the option and ability to purchase an additional active irrigation well that would add anywhere from 800-2200 gallons per minute to the existing water system, or the option of drilling an additional new water well that could be integrated into the current system.
- The springs identified in the above projects are the ***only*** source of water for us as the permittees, to water our livestock and for any and all wildlife or sheep use.
- On page 23 of the August 2010 Environment Assessment relating to the above project, paragraph 3.3.18, the statement "Only sheep are permitted to utilize the Spanish Gulch Allotment" is incorrect. We are the current livestock permittees and have a license to graze cattle in that area. Cattle have grazed that area since 1866 and sheep did not move into the country and use that area until 1914, when A.C. Florio brought in sheep. Please refer to the *Diamond Valley Unit Adjudication and Allotment Agreement* dated 1965, pages two and three, between James Ithurralde and John and Kay Hunter. Please make the correction to the EA to include livestock grazing.
- We feel that if there is ever a loss of AUM's, or the inability to graze livestock due to a lack of water in the areas of the above identified projects, we should receive reasonable monetary compensation from Eureka County for our losses.
- ***Even though this water basin has not yet been adjudicated, we can prove that we hold a prior (1866) vested water right to the springs located within the area of Eureka County's proposed projects.***
- Interestingly enough Eureka County has never contacted or included us in any of the discussions involving the above proposed projects on these springs even though they all know that we graze cattle there.

Sincerely,

James E. Baumann
Vera L. Baumann

Nevada State Clearinghouse

From: Compton, Terri [tcompton@dot.state.nv.us]
Sent: Thursday, September 16, 2010 8:52 AM
To: Nevada State Clearinghouse
Subject: FW: Rehab of Eureka's Water Collection System

Reese,

Could you please forward these comments on to the proper channels as NDOT's official comments. I think Kathie is getting these requests from another source that I'm not cc'd on. Thanks, Terri

---

From: Weaver, Kathleen
Sent: Wednesday, September 15, 2010 3:54 PM
To: Compton, Terri
Subject: FW: Rehab of Eureka's Water Collection System

Terri, below are my comments on BLM Environmental Assessment DOI-BLM-NV-B010-2009-0076-EA for Eureka County Public Works Department Right-of-Way Amendment Rehabilitation of Eureka Water Collection System. This is the one for which you could not find the Clearinghouse request for comments. I believe comments would be due to the Clearinghouse today as comments are due to BLM Friday 17 Sept. Thanks for processing this for me. Kathie x1703

Comments regarding Environmental Assessment DOI-BLM-NV-B010-2009-0076-EA Eureka County Public Works Department Right-of-Way Amendment Rehabilitation of Eureka Water Collection System:

The title designating this a rehabilitation project seems to be an understatement. This appears to be a reconstruction project as described in 2.1, paragraph 1.

2.1.3 "Waterlines" paragraph 1, on page five of the Environmental Assessment should also list NDOT standards as a requirement for any work which will occur within NDOT right of way.

2.5.2, paragraph 1 on page 7 of the Environmental Assessment does not address the possibility that an additional well might be a more viable, long term source of potable water than the spring supplies.

3.3.4, paragraph 1 on page 14 of the Environmental Assessment states, "...which represents three-fourths to one-third...". Should it state "... one-fourth to one-third..."?

4.1.4, paragraph 1 on page 25 of the Environmental Assessment does not address the demand for temporary housing during construction.

NDOT requests that it be identified as the ultimate authority to determine whether existing facilities, within its right of way, may be abandoned in place or removed at Eureka County's expense.

NDOT right of way is directly impacted at the following locations: Florio, Middle, and Summit Springs collection sites; the transmission line connecting Lanie and Florio Springs; and the transmission line connecting Bullwacker and Lanie Springs, the latter of which does not show on Figure 1, but is noted in the text in section 3.3.1, paragraph 2 . Perhaps on this latter item the text meant to note that the tie-in from Lanie Spring into the existing transmission line would encroach into NDOT right of way. If not, at what location is the Bullwacker to Lanie Springs line coincident with NDOT right of way? No mention is made of rehabilitating other existing transmission lines that are coincident with NDOT right

of way. Will any other existing transmission lines, within NDOT right of way, that carry the spring water from any of these spring collection sites into the Town of Eureka also be rehabilitated? If so, it would be helpful for the affected agencies to be able to review the project in its entirety, rather than being afforded only a phased review.

Is the right of way that will be coincident with NDOT right of way solely for the rehabilitated Eureka water collection system? Will Eureka's right-of-way be revocable if none of the springs can deliver potable water to the Town of Eureka?

Three of the spring collection sites (Fred Spring, Middle Spring, and Summit Spring) are within NDOT right of way. There is insufficient site development detail in the Environmental Assessment to ascertain how well the collection sites will be insulated from surface or subsurface flows that originate or pass through the NDOT right of way or if the spring collection sites might be subject to infiltration of substances that emanate from within NDOT right of way. This could be far from an ideal location for drinking water collection given the volume of hazardous substances that are legally transported along the US 50 corridor. Eureka County should mitigate any issue as it relates to concerns or issues from roadway impacts, known now and any that may develop in the future. NDOT requests that if these three springs, or any of the other of the collection sites or transmission lines, are subject to surface or subsurface flows from or through NDOT right of way, or if infiltration through the soils into the water supply from NDOT right of way are possible, that NDOT be held harmless by Eureka County and that Eureka County assume responsibility for any third party actions that occur as a result of contamination involving NDOT right of way.
