U.S. Fish and Wildlife Service

FINAL ENVIRONMENTAL ASSESSMENT

Axtell Community Special Service District Water Project

Sanpete County, Utah

April 7, 2025

Prepared by:

Sunrise Engineering, Inc.,

and

U.S. Fish and Wildlife Service

Office of Conservation Investment, Region 6

SUNRISE ENGINEERING

TABLE OF CONTENTS

LIST OF TABLES

LIST OF ATTACHMENTS

1 INTRODUCTION

1.1 Background

The Axtell Community Special Service District (ACSSD) (Applicant) filed an easement application with the Utah Division of Wildlife Resources (UDWR) for a 24-foot-wide construction (temporary) easement (or approximately 7.99 acres) and a 16-foot-wide permanent access/maintenance easement (or approximately 5.33 acres) of land administered by UDWR for installation of approximately 14,500 feet (or about 2.7 miles) of 6- to 8-inch diameter HDPE water transmission pipeline and development of the Pole Canyon Springs. This segment of pipeline is a portion of approximately 30,800 feet (or about 5.8 miles) of water transmission line from the proposed Pole Canyon Spring development project that would supply culinary water to the ACSSD public drinking water system. The entire spring development and transmission pipeline project would be located approximately 5 miles (west project edge) to 9 miles (Pole Canyon Springs) east of Axtell, Sanpete County, Utah on UDWR-administered land, public lands administered by the U.S. Department of the Interior Bureau of Land Management (BLM) and private land, as shown in **Figure 1** of **Attachment A**. ACSSD currently has only one water source (the Michaelson Springs). In accordance with the State of Utah Rules for Public Drinking Water Systems, a community the size of Axtell is required to have at least two independent water sources. In addition, ACSSD currently has an agreement with the Willow Creek Irrigation Company to share the water from the Michaelson Springs. Due to increased demand and recent droughts, ACSSD has taken a higher portion of water from the spring than what their agreement allows. Developing the Pole Canyon Springs will resolve these issues by providing additional water and an independent water source.

The Pole Canyon Springs are located approximately 9 miles east of Axtel in Pole Canyon on property managed by UDWR. An all-terrain vehicle (ATV) road exists across UDWR and BLM properties from the eastern spring development area down to a stock watering pond near the intersection with Southfield Road. An existing, deteriorating concrete pipeline currently is in operation adjacent to the ATV road, and currently discharges into the stock watering pond. ACSSD and the Willow Creek Irrigation Company currently hold the easement to the existing pipeline alignment. The BLM has indicated that it would be preferable to issue a new easement for the new pipeline alignment since the new alignment would extend beyond the limits of the current pipeline easement and the existing pipeline may remain in service. As such, ACSSD has obtain a section (approximately 9,100 feet) of new easement following the ATV road to continue the proposed transmission line from the property line between the BLM and UDWR along the existing roadways until it exits the BLM property to the west.

This environmental assessment (EA) has been prepared to disclose the potential environmental consequences associated with the Applicant's proposed easement for approximately 14,500 feet of water transmission line and spring development on UDWR-administered land. This EA is a site-specific analysis of potential impacts that could result from the implementation of the Proposed Action or alternatives to the Proposed Action. This EA assists UDWR in project planning and ensuring compliance with the National Environmental Policy Act (NEPA)[1], and in making a determination as to whether any "significant" impacts could result from the analyzed actions.

1.2 Purpose of and Need for Project

UDWR is not a federal agency, and the U.S. Fish and Wildlife Service (USFWS) is the lead agency to review the EA on behalf of UDWR since the UDWR-administered land was purchased with federal funding for use as a wildlife reserve/management area (WMA). The proposed project is in the Twelver Mile WMA and the land was purchased through three transactions in 1942, 1958 and 1978, respectively. The primary purpose of the WTA is to provide winter habitat for mule deer and elk, which feed on sagebrush and other shrubs during the cold, snowy months. The higher elevations also provide fawning and calving habitat for mule deer and elk.

UDWR has a memorandum of understanding (MOU) with the Office of Conservation Investment (CI) of USFWS. This MOU is the agreement for the use of any federal funding that is "granted" to UDWR through this program and is specific to purchasing land with federal dollars. CI treats all easements as a disposal. In doing so, UDWR is required to follow all disposition instructions as posted in 2 CFR 200.311(c). These are the requirements that UDWR must meet for the easement. With these requirements, CI requires NEPA as per any federal land. In short, per the MOU, UDWR treats all properties purchased using federal dollars as federal property and thus has to follow all federal requirements.

The purpose of the federal action is to respond to the Applicant's application for an easement approval on UDWR-administered land within the Twelve Mile WMA in Pole Canyon of Sanpete County, Utah for the construction and operation of the proposed Pole Canyon Springs and associated pipeline that would connect to ACSSD's existing water conveyance system.

ACSSD's purpose is to obtain easement from UDWR for the construction and operation of the Pole Canyon Springs and installation of associated pipeline. The development of the springs and installation of the associated pipeline are needed to provide ASCCD with adequate and safe culinary water sources.

[1] Executive Order 14154, *Unleashing American Energy* (Jan. 20, 2025), and a Presidential Memorandum, *Ending Illegal Discrimination and Restoring Merit-Based Opportunity* (Jan. 21, 2025), require the Department to strictly adhere to the National Environmental Policy Act (NEPA), 42 U.S.C. §§ 4321 *et seq.* Further, such Order and Memorandum repeal Executive Orders 12898 (Feb. 11, 1994) and 14096 (Apr. 21, 2023). Because Executive Orders 12898 and 14096 have been repealed, complying with such Orders is a legal impossibility. The U.S. Fish and Wildlife Service verifies that it has complied with the requirements of NEPA, including the Department's regulations and procedures implementing NEPA at 43 C.F.R. Part 46 and Part 516 of the Departmental Manual, consistent with the President's January 2025 Order and Memorandum.

2 ALTERNATIVES

2.1 Alternative A – No Action Alternative

Under the No Action alternative, UDWR would not approve Applicant's easement application and the construction and operation of the Pole Canyon Springs and associated pipeline on UDWR-administered land would not occur. The existing condition of resources on UDWR-administered land would not change as a result of this alternative. ACSSD would need to find a different water source to meet the growing demands and State of Utah Division of Drinking Water (UDDW) requirements for public water systems. However, no appropriate source was identified in the general area during the feasibility study phase.

2.2 Alternative B – Proposed Action

Under the Proposed Action, UDWR would approve Applicant's easement application to construct, operate, maintain, and terminate the springs and associated pipeline.

2.2.1 Project Location

As shown in **Figure 1** of **Attachment A**, the easement on UDWR lands may be described as follows:
Salt Lake Meridian
T. 20 S., R. 2 E.,
UDWR Land: Sec. 21, S½SW¼ & S½SE¼; Sec. 26, S½NW¼, NE¼SW¼ & NW¼SE¼; Sec. 27, N½NW¼, W½NE¼ & SE¼NE¼; and Sec. 28, NW¼NW¼ & NE¼NE¼.

An easement application was submitted to UDWR for a 24-foot-wide construction (temporary) easement (or approximately 7.99 acres) and a 16-foot-wide permanent access/maintenance easement (or approximately 5.33 acres) of land administered by UDWR for installation of approximately 14,500 feet (or about 2.7 miles) of 6- to 8-inch diameter HDPE water transmission pipeline and development of the Pole Canyon Springs.

2.2.2 Water Transmission Pipeline

Approximately 14,500 feet of 6- to 8-inch diameter HDPE water transmission line would be buried at least 3 feet below grade within or adjacent to the existing and proposed access road prism on UDWR land. The waterline would transmit water from the proposed Pole Canyon Springs on UDWR land to proposed waterlines to be installed on BLM-administered land and private lands and then to an existing waterline that conveys water from the Michaelson Springs to ACSSD's water supply system.

2.2.3 Temporary and Permanent Access/Maintenance Road

The access road alignment is the same as that of the water transmission line. There is an existing 8- to 12-foot-wide ATV dirt road that would generally be used for the proposed pipeline corridor and access road. Road improvements would be made to the extent necessary for contractor access within the 30-foot-wide ROW on BLM land and 16-foot-wide on UDWR land. The pipeline portion on the private land would follow

an existing road. All project access roads can be accessed from Southfield Road. The permanent access road would be about 10-foot wide on BLM land and, as required by UDWR, 8-foot wide on UDWR land.

2.2.4 Construction

Construction of the project is anticipated to span over an approximately 6-month period. If weather permits, the construction work can be done within one season. If not possible due to weather reasons, the construction work may extend to two seasons. The work force will be determined by the contractor who wins the bid for the project. The use of heavy machinery is expected to include excavators, graders, loaders, dump trucks, haul trucks, pickup trucks, water trucks and trailers.

The construction window for the project is probably between May and November when the ground is free of snow and the construction site access is safe for construction workers and equipment. The actual construction start and end date will be determined by site accessibility and weather.

Due to the high elevation in the spring development area, construction work at the spring sites is anticipated to occur between June 1 through October 31 when the ground is free of snow.

2.2.5 Operation and Maintenance

Anticipated operation and maintenance (O&M) may include weed control and occasional infrastructure repairs such as mechanical valve replacements, pipe repairs, and spring stock fence repair. Frequency, duration, and magnitude of O&M activities will be minimal and only performed as required. This section explains how O&M would be accomplished:

2.2.5.1 Safety

The proposed improvements would be operated and maintained by ACSSD safely, correctly, and within environmental requirements stipulated by UDWR easement approval instrument and other federal, state, and local agency requirements.

2.2.5.2 Inspection and Maintenance Schedule

It is anticipated that ACSSD would visit the project area on an as-needed basis.

2.2.5.3 Work Schedules

Any site operations would be periodic, dictated by unexpected concerns that may arise.

2.2.5.4 Staging Areas

Staging areas include the two spring development sites, and one more staging area on UDWR land.

2.2.6 Summary of Surface Disturbance

As summarized in Table 2-1, the Proposed Action would result in a total temporary surface disturbance of approximately 10.64 acres with roughly 4.97 acres of permanent disturbance for the spring access road and spring O&M areas. The 4.97-acre permanent disturbance also includes approximately 2.5 acres of the existing ATV road. Thus, the new permanent disturbance is 2.47 acres on UDWR land.

Table 2-1: Proposed Surface Disturbance under the Proposed Action

Project Component	Land Status	ROW (miles)	Temporary Disturbance (acres)	Permanent Disturbance (acres)***
Pipeline*	UDWR	2.7	7.99	0.00
Access Road+	UDWR	2.7		2.67
Spring Site**	UDWR	--	2.00	2.30
Staging Area	UDWR		0.65	0.00
Total		**2.7**	**10.64**	**4.97**

Note: *A construction corridor width of 24 feet is used in surface disturbance estimates on UDWR land. ** Development of the springs is assumed to disturb approximately 1 acre of surface at each site and the fenced area for the two spring sites is 2.30 acres for maintenance. +Permanent access road to the spring is part of the pipeline ROW and 8 feet wide on UDWR land. The 4.97-acre permanent disturbance includes about 2.5 acres of the existing ATV road which most of the pipeline would follow. Thus, new permanent disturbance is 2.47 (4.97-2.5) acres on UDWR land.

2.2.7 Applicant-Committed Environmental Protection Measures (ACEPMs)

Resource-specific environmental protection measures that ACSSD is committed to as part of the Proposed Action are described in Table 2-2.

Table 2-2: Applicant-Committed Environmental Protection Measures (ACEPMs)

Resource	Protection Measure
Air Quality	ACSSD would use surface application of water from a water truck before and during surface clearing, and excavation activities to reduce fugitive dust emissions, when necessary. ACSSD would use surface application of water and reduced speed limits on dirt access roads or other unpaved, unvegetated surfaces as needed (for example, during high-wind conditions) to reduce fugitive dust emissions. Dragging or grading may be utilized to reduce road wear and dust generation on access roads. All internal combustion equipment would be kept in good working order. ACSSD would cover construction materials and stockpiled soils if they are a source of fugitive dust. During the construction period, the construction contractor shall conduct watering to minimize fugitive dust when necessary.
Invasive/Noxious Weeds	As part of the project O&M, the project proponent will begin noxious weed inventory and treatments the first spring season following disturbance, and the following season also. If the spread of noxious weeds is noted, the infested areas would be further evaluated to determine the appropriate remedial action and treatment. Appropriate weed control procedures, including target

Table 2-2: Applicant-Committed Environmental Protection Measures (ACEPMs)

Resource	Protection Measure
	species, timing of control, and method of control, would be determined in consultation with the UDWR personnel. Any noxious weeds that become established as a result of construction activities would be maintained in accordance with UDWR weed control methods by the project proponent.
Paleontological Resources	In the event that paleontological resources of potential scientific interest are encountered (including all vertebrate fossils and deposits of petrified wood) during project activities, the activities would be stopped within 10 feet of the discovery, and UDWR would be notified. Activity that might impact the identified paleontological find would be suspended until after the discovery has been evaluated, any necessary mitigation measures completed, and UDWR personnel has issued a written Notice to Proceed.
Erosion and Sediment Control (Soil and Water Resources)	During periods of adverse soil moisture conditions caused by climatic factors such as thawing, heavy rains, or snow, ACSSD would suspend construction activities. ACSSD would use best management practices (BMPs) for water management measures. These measures would include contour furrowing; terracing; reduction of steep cut and fill slopes; installing water bars in appropriate locations to control runoff and erosion; installing silt fences, weed-free hay bales, or other sediment control structures at appropriate locations; having suitable spill control and cleanup equipment and supplies readily available. BMPs would be followed to minimize the surface disturbance and erosion potential. ACSSD would inspect erosion controls in the spring and fall and after exceptional storm events. ACSSD's revegetation requirements include reshaping, recontouring, and/or resurfacing with growth medium, installation of water bars, and seeding on the contour. Removal of structures such as cattle guards, and signs would usually be required. Additional erosion control measures (e.g., fiber matting and barriers) to discourage road travel may be required by UDWR. ACSSD would employ additional protective measures, such as restrictions on surface entry during periods of excessive runoff, avoidance of selected areas, and special revegetation techniques, on lands containing unstable/highly erodible soils, as determined by UDWR personnel. Soil stockpiles and road berms, if scheduled to be left in place over the growing season, would be seeded with a UDWR-approved site-specific interim seed mix to reduce erosion, preserve the biological flora and fauna, and prevent the establishment of noxious weeds and other undesirable plant species. To provide for effective rehabilitation of the disturbed area, all available growth media, as practical, would be removed and stockpiled. Any trees removed would be separated from soils and stockpiled separately. ACSSD would cover stockpiled soils if needed to minimize wind and water erosion of the stockpiles. Since the project construction would disturb more than 1 acre of ground surface, the following environmental protection measure shall be implemented: The construction contractor shall be required to use best management practices (BMPs); comply with Utah Construction General Permit (CGP); develop a stormwater pollution prevention plan (SWPPP) and submit Notice of Intent (NOI) to the Utah Division of Water Quality (UDWQ) for a UPDES (Utah Pollution Discharge Elimination System) Permit before beginning any earth disturbing activities; and implement and maintain the project SWPPP according to CGP.

Table 2-2: Applicant-Committed Environmental Protection Measures (ACEPMs)

Resource	Protection Measure
	The construction contractor shall place any fuel tanks at least 100 feet from any stream (or dry wash).
Solid and Hazardous Waste	Project-related trash, garbage, debris, and foreign matter would be hauled from the site on a regular basis for disposal at an offsite authorized facility; no refuse would be disposed of onsite. The site would be maintained and left in a clean and safe condition. Burning would not be allowed in the project area. The construction contractor shall use double-walled fuel tanks that will be placed in staging areas. In the event hazardous or regulated materials, such as diesel fuel, are spilled, ACSSD would take immediate measures to control the spill. ACSSD would immediately clean up any spills under 25 gallons and would clean up any spills over 25 gallons within 24 hours and report the incident to UDWR AO and Utah Division of Environmental Response and Remediation (DERR). After cleanup, the oil, toxic fluids, or chemicals and any contaminated material would be removed from the site and disposed of at an approved disposal facility. All construction, operation, and maintenance activities would comply with all applicable Federal, State, and local laws and regulations regarding the use of hazardous substances and the protection of air and water quality.
Vegetation Resources	Removal and disturbance of vegetation would be kept to a minimum through construction site management (e.g. using previously disturbed areas and existing easements, limiting equipment/materials storage and staging area sites, etc.). Revegetation would normally be accomplished with native seedings only. Seed mixes would be representative of the indigenous species present in the adjacent habitat. Rationale for potential seeding with selected non-native species would be documented. Possible exceptions would include use of non-native species for a temporary cover crop to out-compete weeds. In all cases, seed mixes would be approved by UDWR personnel prior to planting. Efforts shall be made to minimize impacts to mature trees within the Douglas fir dominated woodland on UDWR land. Specifically, mature Douglas fir, white pine, and ponderosa pine with a diameter of 12 inches (diameter at breast height 4.5 feet from the ground) and larger be considered for avoidance.
Migratory Birds, UDWR SGCN, & UDWR Designated Habitat	Where possible, land clearing, surface disturbance would be timed to prevent destruction of active bird nests or young birds during the avian breeding season (April 1 through August 15, annually). If surface-disturbing activities are unavoidable during this period, a qualified biologist shall conduct a preconstruction survey of the construction corridor within UDWR land for the presence of active nests, UDWR SGCN and upland game birds immediately prior (within seven days) to the Contractor performing construction work. If active nests are located, or if other evidence of nesting is observed (mating, territorial defense, carrying of nesting material, transporting of food), the area shall be avoided to prevent destruction or disturbance of nests until the birds are no longer present. If UDWR SGCN mammals are identified in the spring area, construction work in the spring development area shall be reported to UDWR and take appropriate mitigation measures as determined by UDWR. Mow vegetation or collapse burrows outside breeding, nesting, and young rearing periods (September 1 to February 28) to reduce the likelihood of nesting species from establishing breeding territories, nests, or burrows.

Table 2-2: Applicant-Committed Environmental Protection Measures (ACEPMs)

Resource	Protection Measure
	No construction work shall be performed on UDWR land from December 1 through April 15 to minimize disturbance to wintering elk, moose, and mule deer. ACSSD shall provide UDWR with 1 acre-foot/year of water rights for UDWR to develop water sources for wildlife to minimize impacts to wildlife resulting from free water elimination by the proposed Pole Canyon spring development.
Public Health	To minimize these public health issues, the following environmental protection measures shall be implemented: 1) The construction area shall be clearly fenced, marked, or flagged at the outer boundaries to define the limits of construction activities. All construction workers shall be instructed that their activities shall be confined to locations within fenced, flagged, or marked areas. 2) Excavation of the pipeline trench, including the manner of supporting excavation and provisions for access to the trench, shall be in strict compliance with the current provisions for access, as determined by regulations of the Occupational Safety and Health Administration (OSHA). 3) Local ordinances shall be followed as they relate to public safety and could include a notice of closure of use in the area during the construction phase, barricades for open trenches, signing, etc. These measures would be implemented on all project lands.
Transportation	To minimize potential impacts to transportation, the following environmental protection measure or mitigation measure shall be implemented: The ACSSD shall require the construction contractor to develop a traffic control plan for review and approval prior to commencing construction activities. The construction contractor shall be required to follow standard traffic control procedures currently recommended by the Utah Department of Transportation (UDOT).

2.3 Alternatives Considered but Eliminated from Detailed Analysis

No other alternatives were considered since the project cannot avoid the UDWR land.

3 AFFECTED ENVIRONMENT/ENVIRONMENTAL CONSEQUENCES

This chapter describes (1) the affected environment, specifically the existing or baseline conditions, followed by (2) a description of the direct, indirect, and cumulative impacts projected to result from each alternative (40 CFR 1500-1508).

3.1 Environmental Setting

3.1.1 Direct, Indirect, Cumulative Impact Definitions

The analysis is guided by the regulations set forth by the Council on Environmental Quality (CEQ), which call for analysis of the direct, indirect, and cumulative impacts of the Proposed Action and the alternatives (40 CFR 1500-1508).

- Direct impacts are caused by an action and occur at the same time and place.
- Indirect impacts are caused by the action and are later in time or farther removed in distance but are still reasonably foreseeable.
- Cumulative impacts are those impacts resulting from the incremental impact of an action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions.

The direct and indirect impacts on resources are either short or long term in duration.

- Short-term impacts would generally last between one and five years.
- Long-term impacts would generally last longer than five years.

Impacts are quantified where possible. In the absence of quantifiable data, professional judgment was used to characterize the potential impacts.

NEPA also requires that effects be discussed in terms of context and intensity. In this EA, context refers to the location, type, or size of the area to be affected and intensity refers to the severity or level of magnitude of impact. Intensities of impacts to each resource have been described using the following guidance:

Negligible:	The impact is at the lower level of detection; there would be no measurable change.
Minor:	The impact is slight but detectable; there would be a small and possibly permanent change.
Moderate:	The impact is readily apparent; there would be a measurable change. This change would be obvious and noticeable but not severe.
Major:	The impact is severe; there would be a highly noticeable, long-term, or permanent measurable change.

Environmental data collected from the project area has been used to describe the Affected Environment and to predict environmental effects that could result from the Proposed Action or the No Action alternative. A

level of uncertainty is associated with any dataset when predicting outcomes, especially when natural systems are involved. The predictions described in this EA are intended to allow a comparison of alternatives while providing a method to determine whether activities proposed by the Applicant would be expected to comply with applicable federal, state and local regulations. The analyses of effects have been quantified to the extent possible and are based on available data obtained from various agency sources as referenced in this EA and through site observations. In the absence of quantifiable data, professional judgment was used to characterize the potential impacts.

The surface disturbance areas were estimated using GIS technology and AutoCad software. There may be slight variations in total acres among resources due to rounding, topography, and other factors. These variations are negligible and do not affect the analysis.

NEPA also requires that effects be discussed in terms of context and intensity. In this EA, context refers to the location, type, or size of the area to be affected, while intensity refers to the severity or level of magnitude of impact.

3.1.2 General Setting

The project area is in Sanpete Valley in Sanpete County, Utah and is in a geologic transition area between the more stable Colorado Plateau Physiographic Province to the east and the less stable Basin and Range Physiographic Province to the west (Fenneman, 1931). The elevations range from 5,500 feet to 8,050 feet in the project area, as shown in **Figure 1** of **Attachment A**. The closest weather station to the project area is in Gunnison, Utah. According to the weather record between 1981 and 2010 collected at the Gunnison, Utah weather station (Western Regional Climate Center, 2024), the average annual precipitation is about 11.0 inches; temperatures during the winters are cool with periods of very cold weather with average minimum/maximum temperatures in January of 11.2/37.6 degrees Fahrenheit (°F); and the summers are dry with average minimum/maximum temperatures in July of 52.2/91.4°F. The project area can be accessed through Southfield Road.

3.2 Land Use

3.2.1 No Action Alternative

Under the No Action alternative, no construction activities would occur. Therefore, there would be no direct, indirect, or cumulative effects to land use.

3.2.2 Proposed Action

3.2.2.1 General Land Use

The easement for the proposed waterline and spring development on UDWR land is in the Twelve Mile WMA. Additionally, the following recreational activities are also allowed: hunting, wildlife watching, hiking, horseback riding and OHV riding. Motorized vehicle use is restricted to existing roads. Although no seasonal

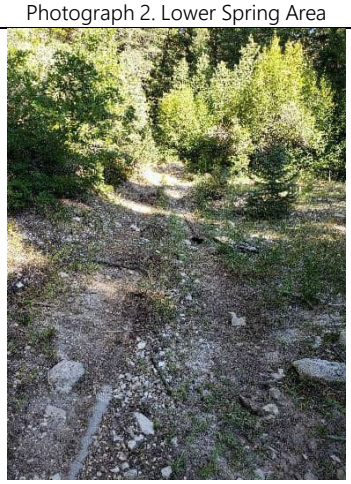
restrictions are in effect, the WMA is closed for any wildlife-disturbing activities from December 1 to April 15 to protect wintering deer and elk.

Site visits were conducted in 2022 and 2023. Photographs were taken from selected locations and are presented as follows:

Photograph 1. Upper Spring Area

Photograph 2. Lower Spring Area

Photograph 3. Western Section of Project Area (ATV Trail)



Photograph 4. Middle Section of Project Area (ATV Trail)

For photograph locations see **Figure 1** of **Attachment A**.

According to UDWR (2010), all activities occurring on UDWR lands are managed under the direction of Utah Administrative Code (UAC) R657-28. According to UAC R857-28-7, any other party that possesses a water right in which its point of diversion or place of use is located on UDWR lands must apply for and receive any necessary lease, termed easement, grazing permit, special use permit, contract or other form of authorization from UDWR before any trespass, conveyance structures, impoundments, or any land disturbance is initiated to perfect the right. Since ACSSD owns water rights on UDWR lands, the proposed project is allowed by UDWR.

3.2.2.2 Important Farmland and Prime Rangeland

Prime farmland is land best suited for producing food, feed, forage, fiber and oilseed crops as delineated by USDA Natural Resources Conservation Service (NRCS). An area defined to be prime farmland must be available to produce these crops, have been actively farmed within the previous 5 years, and in some instances qualifies only if irrigated.

NRCS was contacted by sending a consultation letter dated June 2, 2022. Mr. Bir Thapa of NRCS replied with an email and stated that "if your project does not involve any farm conversion, then you do not need to follow lengthy procedure for Farm Protection Policy Act". Correspondence with NRCS is provided in **Attachment B**.

To evaluate potential impacts of the proposed project on important farmland, soil data was obtained from the NRCS website (NRCS, 2024), as presented in **Figure 2** of **Attachment A**. Five soil types are present within the areas where surface disturbance would occur. A detailed soil description is also presented in **Attachment C**. **Table 3-1** provides a summary of the soil data relative to the proposed project components.

Table 3-1: Soil Data Summary

Soil Symbol	Description	Location	Farmland Classification
AV	Atepic-Badland association	Pipeline	Not prime farmland
FOD	Fontreen cobbly loam, 4-20% slopes	Pipeline	Not prime farmland
KEG	Kitchell gravelly loam, 25-65% slopes	Pipeline and Spring Areas	Not prime farmland
SCE2	Sanpete stony fine sandy loam, 5-30% slopes	Pipeline	Not prime farmland
RO	Rock Land	Pipeline	Not prime farmland

Table 3-1 indicates none of the soil types is classified as prime farmland or farmland of statewide importance. Therefore, the Proposed Action does not have any impact on important farmland or prime rangeland and no environmental measures are required.

3.2.2.3 Formally Classified Lands

As shown in Figure 2 of Attachment A, none of the following Formally Classified Lands would be affected by the proposed project:

- National parks and monuments
- National forests and grasslands
- National natural landmarks
- National battlefield park sites
- National historic sites and parks
- Wilderness areas
- Wild, scenic, and recreational rivers
- Wildlife refuges
- National seashores, lake shores and trails
- State parks
- National grasslands

Therefore, there would be no direct, indirect, or cumulative impact on Formally Classified Lands and environmental protection measures are not required.

3.3 Floodplains

A floodplain is flat or nearly flat land adjacent to a stream or river that experiences occasional or periodic flooding. It includes the floodway, which consists of the stream channel and adjacent areas that carry flood flows, and the flood fringe, which are areas covered by the flood that do not experience a strong current. A 100-year flood is calculated to be the level of flood water expected to be equaled or exceeded every 100 years on average. The 100-year flood is more accurately referred to as the 1% flood, since it is a flood that has a 1% chance of being equaled or exceeded in any single year. Based on the expected flood water level, a predicted area of inundation can be mapped out.

3.3.1 No Action Alternative

Under the No Action alternative, no construction activities would occur. Therefore, there would be no direct, indirect, or cumulative effects to floodplains.

3.3.2 Proposed Action

The Federal Emergency Management Agency (FEMA) website was reviewed for Flood Insurance Rate Maps (FIRMs) covering the project area. The project area is included by FIRMs 49039C1000C (FEMA, 2012). **Figure 3** of **Attachment A** presents the floodplain information and indicates that there is no floodplain within the project area. Therefore, the project would have no direct or indirect impact on floodplain.

As stated in Section 1.1, the entire waterline and spring development project would involve BLM and private lands to the west of the UDWR land. Approximately 820 feet of the waterline on BLM and private lands would be installed across the floodplain (Zone A). During the construction phase for the waterline on BLM and private lands, approximately 0.6 acres of temporary disturbance would occur on floodplain. This is the cumulative impact to floodplain since there is no other known project in the area. ACSSD shall obtain a floodplain development permit from Sanpete County before any construction work starts in the floodplain and strictly follow stipulations associated with the permit. As a result, BLM and UDDW considered the impact to floodplain is insignificant.

Therefore, the Proposed Action would have no significant cumulative impacts on floodplain.

3.4 Wetlands/Waters of the U.S.

Wetlands are defined as areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions (33 CFR 328.3[b], 40 CFR 230.3). For a wetland to qualify as jurisdictional by the U.S. Army Corps of Engineers (USACE) and therefore be subject to regulation under Section 404 of the Clean Water Act, the site must support a prevalence of hydrophytic

vegetation, hydric soils, and wetland hydrology. Other waters of the United States are sites that typically lack one or more of these three indicators.

3.4.1 No Action Alternative

Under the No Action alternative, no construction activities would occur. Therefore, there would be no direct, indirect, or cumulative effects to wetlands.

3.4.2 Proposed Action

The State of Utah requires a permit for activities that alter or are adjacent to "natural streams". Utah Administrative Rule R655-13-4 requires "sufficient water to sustain an ecosystem that distinguishes it from the surrounding upland environment" to be considered a "natural stream". Cardinal EC (Cardinal) conducted a jurisdictional determination analysis for the Pole Canyon drainage. The Cardinal report is provided in **Attachment C**. The following is a summary of Cardinal's report:

The Pole Canyon drainage is an approximately 6.0-mile-long drainage that drains Pole Canyon, serves as a collector for adjacent small canyons near Pole Canyon and terminates as a tributary drainage to Willow Creek. Results of the field inventory documented that approximately 1,300 feet (0.25 miles) of the upper Pole Canyon drainage support characteristics of an intermittent feature driven by spring-flow generated by the Pole Canyon spring system. From the upper spring development area, overland flow initiates as a low energy feature within a small wet meadow and redirected to an approximately 750-foot-long manmade ditch (1-3 feet wide) that diverts flow to the lower spring development area. From the upper portion of the lower spring development area, the spring flow moves across a second wet meadow (as sheet flow) with no discernable channel. From this location, all surface water flows return underground with no remaining surface features through the length of the Pole Canyon drainage within the project area.

No other evidence of perennial or intermittent surface water was documented below the lower spring development area within the Pole Canyon drainage. Cardinal classified the remaining portions of the Pole Canyon drainage as ephemeral transitioning to upland swale with minimal evidence of regular hydrology to drive or sustain an ecosystem that would distinguish it from the surrounding upland environment. No continual overland flow or downstream connection to other streams, creeks, wetlands, or other potentially jurisdictional features was documented beyond this location.

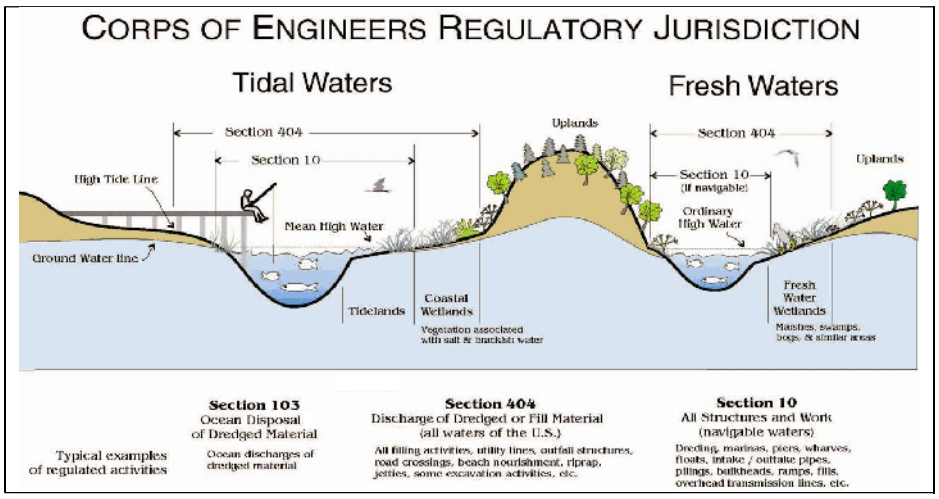
As proposed, the proposed buried waterline would be located within an existing waterline easement adjacent to an existing and unimproved two-track road and in general proximity to the Pole Canyon drainage. Construction would require an approximately 20- to 25-foot-wide construction corridor which would be reclaimed following installation of the pipeline. Based upon Cardinal's field review, the waterline crosses the Pole Canyon drainage seven times between the upper spring development area and the western extent of the project near Willow Creek. Five of these crossings would occur in sections of the Pole Canyon drainage that were identified as ephemeral or upland swale. Two of these crossings were identified on locations of the

Pole Canyon drainage identified as intermittent. However, these crossings occur on the diverted, manmade, sections between the upper and lower spring development areas.

The Pole Canyon spring complex is located near the top of Pole Canyon at approximately 8,000 feet elevation. While the Pole Canyon springs may consist of a complex of other surface features, Cardinal only evaluated those portions of the Pole Canyon springs in or near the project area. Cardinal identified two distinct wet meadows within the project area that occur within the upper and lower spring development areas. During both surveys, Cardinal documented hydric vegetation (*Carex* sp., *Juncus* sp., *Phalaris* sp., *Distichlis* sp. and aquatic vegetation), saturated low-chroma hydric soils, and clear evidence of surface and subsurface. Cardinal identified that the upper and lower spring development areas wet meadow wetlands as approximately 3,200 square feet (0.07 acres) and 13,750 square feet (0.32 acres), respectively.

Cardinal concluded that neither the Pole Canyon drainage nor Pole Canyon springs would be considered jurisdictional under USACE. Neither of these features support a significant nexus to traditional navigable waters, territorial seas, or interstate waters. Additionally, the Pole Canyon drainage is not a tributary of a traditional navigable water or an impoundment that is relatively permanent, standing, or continuously flowing body of water. While the presence of non-jurisdictional features within the boundary of a given project may not necessarily result in a permittable action, USACE remains the agency charged with approving Jurisdictional Determinations. While Cardinal's conclusions represent the summation of experience and understanding of current-day regulatory pathways associated with wetland delineation and permitting, and a clear determination of non-jurisdictional status is easily concluded, a formal non-jurisdictional determination can only be issued by USACE, should one be required.

The following exhibit illustrates USACE's regulatory jurisdiction. The meadow wetlands at the spring development sites do not meet the requirements as demonstrated in the following illustration. Therefore, development of the springs and installation of the waterline does not need a Section 404 or Section 10 permit.



USACE was contacted by sending a consultation letter dated June 2, 2022. However, no response was received from USACE. The letter to USACE is also provided in **Attachment D**.

Utah Code Section 73-3-29 requires any person, governmental agency, or other organization wishing to alter the bed or banks of a natural stream to obtain written authorization from the State Engineer prior to beginning work. As defined under Utah Administrative Code R655-13 (Rule R655-13), a natural stream is "any waterway, along with its fluvial system, that receives sufficient water to sustain an ecosystem that distinguishes it from the surrounding upland environment." As identified by the Utah Division of Water Rights (UDWRi), canals, ditches, or other manmade channels are not considered natural streams (UDWRi, 2023). Any anticipated impacts to natural streams within the State of Utah are managed through the state's Stream Alteration Program, administered by UDWRi. In cases where the impacts to the natural stream are jurisdictional under both state and federal law, UDWRi and USACE have issued Programmatic General Permit 10 (PGP-10) which allows an applicant to obtain both state approval and authorization under Section 404 of the Clean Water Act through a single application process (State Stream Alteration Program). In the unlikely event that a specific stream, river, or other regulated waterbody is determined to be USACE non-jurisdictional, impacts may still be regulated under UDWRi.

The upper reach of the Pole Canyon drainage between the upper and lower spring development areas did support flowing water and supported characteristics of a natural stream; however, these waters are confined to a manmade ditch thereby exempting it from jurisdiction under UDWRi.

Figure 4 of **Attachment A** is a wetland map obtained from the National Wetland Inventory (NWI) website and indicates that the proposed waterlines and spring development areas involve riverine wetlands. The riverine wetlands represent the Pole Canyon drainage. Pole Canyon is a dry wash and generally there is no flow. The information is consistent with Cardinal's assessment.

In summary, the Proposed Action will have no direct, indirect, or cumulative impact on jurisdictional wetlands since the Pole Canyon drainage does not have any jurisdictional wetlands. The meadows in the proposed spring development areas are the results of a manmade ditch. The Proposed Action may result in loss of 0.07 acres of non-jurisdictional wetlands in the upper spring development area and 0.32 acres in the lower spring development area. This is the direct and cumulative impact of the Proposed Action to manmade wetlands. Since the manmade wetlands are non-jurisdictional, no permits or mitigation measures are required.

3.5 Water Resources

3.5.1 No Action Alternative

Under the No Action alternative, no construction activities would occur. Therefore, there would be no direct, indirect, or cumulative effects to water resources.

3.5.2 Proposed Action

3.5.2.1 Surface Water

As shown in **Figure 1** of **Attachment A**, and discussed in Section 3.4.2, there is no perennial stream within the project area. Therefore, the proposed project would have no direct, indirect, or cumulative effect to surface water resources.

3.5.2.2 Groundwater

There are three sole source aquifers in Utah: Western Uinta Arch Paleozoic Aquifer System, Castle Valley Aquifer System, and Glen Canyon Aquifer System. However, none of the sole source aquifers are located within 80 miles of the proposed project area (**Attachment E**). Therefore, the proposed project would not have any impact on sole source aquifers and mitigation measures would not be required.

Groundwater is present in the project area. Spring developments would result in high turbidity of the groundwater in the spring development sites. However, this impact is localized and short term. Once the development is complete, this short-term localized impact would disappear. Therefore, there would be no long-term, or cumulative effects to groundwater resources and environmental protection measures are not required.

3.6 Air quality

3.6.1 No Action Alternative

Under the No Action alternative, no construction activities would occur. Therefore, there would be no direct, indirect, or cumulative effects to air quality.

3.6.2 Proposed Action

The proposed project was posted on the Utah Public Lands Policy Coordination Office's (UPLPCO's) Resource Development Coordinating Committee (RDCC) website (#82843) for state agencies' comments on the proposed project during the scoping period. RDCC is a clearinghouse for information on activities affecting state and public lands throughout Utah. RDCC includes representatives from state agencies that are generally involved or impacted by public lands management. RDCC coordinates the review of technical and policy actions that may affect the physical resources of the state and facilitates the exchange of information on those actions among federal, state and local government agencies. No comments were received from the Utah Division of Air Quality (UDAQ) after the comment period expired. Correspondence with RDCC is provided in **Attachment F**.

Construction of the proposed project does not require a permit from UDAQ since the project area is located within an attainment area for PM_{10}, $PM_{2.5}$, SO_2, ozone, and CO (Utah Department of Environmental Quality, 2024). However, during construction, dust emission levels would increase in the immediate area. This impact

is expected to be short term and limited to the time of construction. With the ACEPMs associated with air quality as described in **Table 2-2** in Section 2.2.7, the Proposed Action would have no significant direct, indirect, or cumulative effects to air quality.

3.7 Biological Resources

3.7.1 No Action Alternative

Under the No Action alternative, no construction activities would occur. Therefore, there would be no direct, indirect, or cumulative effects to biological resources.

3.7.2 Proposed Action

Cardinal conducted a biological resources survey for the proposed project. The survey area included the existing waterline easement plus a 25-foot buffer and a 0.5-mile buffer for the purpose of identifying the occurrence of Special Status Species and habitat capable of supporting Special Status Species. The biological report is included in **Attachment G**. The following sections incorporate the survey results.

3.7.2.1 Vegetation

NRCS ecological site characteristics identified in the project area supports big sagebrush (*Artemisia tridentata*), black sagebrush (*Artemisia nova*), pinyon-Utah juniper (*Juniperus osteosperma, Pinus edulis*), Doug fir (*Pseudosuga menziesii*), and bitterbrush (*Purshia tridentata*) (NRCS, 2022). The project and survey area are largely consistent with this course vegetative overview ranging from disturbed irrigated cropland/pasture in the west at lower elevations and moving east (and up-in elevation) through common Utah vegetation communities of sagebrush, pinyon-juniper shrubland/woodland, Gambel oak (*Quercus gambelii*) and mahogany (*Cerocarpus montamus*) scrub, and into mature stands of wooded Douglas fir and aspen (*Populus tremuloides*)-type woodlands. No unique or otherwise irreplaceable vegetation communities occur in the project or survey area.

During the construction phase of the Proposed Action, the direct impact is to disturb approximately 10.64 acres of land and permanently remove approximately 4.97 acres of vegetation along the access road and fenced O&M areas at the spring developments sites. An estimated 70 trees, including Doug firs, aspens, and pinon-junipers, on UDWR lands would need to be removed for access road construction and spring development. After the construction is complete, the temporarily removed vegetation would be restored through reseeding or naturalization. Removal of the estimated 70 trees would not change the general woody conditions in the area since there are a large number of similar trees in adjacent areas. With the ACEPMs in **Table 2-2** in Section 2.2.7, the potential impact to vegetation is considered minimal.

As stated in Section 1.1, the entire waterline and spring development project also involves BLM and private lands to the west of the UDWR land, the total temporary surface disturbance on BLM and private lands is estimated to be 13.75 acres with permanent disturbance of 2.09 acres for the access road through the BLM land to the UDWR land. Thus, the cumulative permanent disturbance is 7.06 acres on the UDWR and BLM

lands. The permanent disturbance includes about 4.0 acres of the existing ATV road which most of the pipeline would follow. Therefore, the new permanent disturbance is 3.06 (7.06-4.0) acres for the entire pipeline and spring development project.

Since there is no other known project in the area, the cumulative impact is also minimal.

3.7.2.2 Wildlife, Including Raptors and Other Special Status Species

Wildlife habitat within the Project includes dormant agricultural lands, sagebrush shrubland, pinyon-juniper shrubland, pinyon-juniper woodland, Doug-fir woodland, and a spring meadow/creek complex near Pole Canyon springs. Given the project's rural setting and difficulty of access to common two-wheel drive vehicles, most human related activity in the vicinity would include recreational activities such as OHV touring and hunting. Wildlife occurring in the project and survey area are expected to be somewhat acclimated to the presence of humans and human-related activities and take refuge in the dense vegetation away from the two-track ATV trail where encounters with humans are likely. Wildlife habitats identified within the project and survey area and common to Utah with the spring meadow/creek complex near the proposed Pole Canon spring sites likely offering the most significant value to wildlife in the vicinity as a source of water. Development of the springs would eliminate free water on surface at the spring sites and wildlife would lose the water sources. As discussed in **Table 2-2** of Section 2.2.7, ACSSD's provision of 1 acre-foot/year of water rights to UDWR for development of water sources at different locations would minimize the impact resulting from the loss of water sources at the spring sites.

Wildlife observations and evidence of wildlife within the project and survey area are summarized in **Table 3.2**.

Table 3-2: Wildlife Species Observed during Survey

Common Name	Scientific Name	Common Name	Scientific Name
Golden eagle	*Aquila chrysaetos*	House finch	Haemorhous mexicanus
Livestock	*Bos taurus*	Hare	*Lepus americanus*
Red-tailed hawk	*Buteo jamaicensis*	Mule deer	*Odocoileus hemionus*
Swainson's hawk	*Buteo swainsoni*	House sparrow	*Passer domesticus*
Coyote (scat)	*Canis latrans*	Woodpecker (audible)	*Picoides sp.*
Turkey vulture	*Cathartes aura*	Yellow warbler	*Setophaga petechia*
Elk (scat)	*Cervus canadensis*	Western meadowlark	*Sturnella neglecta*
Northern harrier	*Circus cyaneus*	Cottontail rabbit	*Sylvilagus sp.*
Northern flicker	*Colaptes auratus*	Gopher (mounds)	*Thomomys sp.*
Raven	*Corvus corax*	Western kingbird	*Tyrannus verticalis*
Dusky Grouse	*Dendragapus obscurus*	Unidentified rodent burrows	Unidentified Genus
Horned lark	*Eremophila alpestris*	Mourning dove	*Zenaida macroura*
American kestrel	*Falco sparverius*		

Implementation of the Proposed Action would have negligible to minor short-term impacts on wildlife populations and their habitat.

Heavy equipment uses, vehicular traffic, trenching and other activities related to the construction of the Proposed Action could minimally impact some wildlife species during the construction period. The noise/activity impact on wildlife would be temporary during the construction phase. Direct impacts would be short-term and localized to those portions of the project area that are currently undisturbed. Some small mammals and reptiles may be susceptible to injuries or mortality during the construction phase.

O&M of the waterline and springs would also have negligible impacts on wildlife. O&M activities include weed control within the permanent easement for two years after project construction is completed and occasional infrastructure repairs as needed. These activities, along with the allowed recreational activities within the WMA, could also result in injuries and/or mortalities of some small mammals and reptiles. Populations of wildlife species overall are unlikely to be adversely affected during construction, or O&M of the project.

The proposed project construction and O&M would unlikely alter feeding, breeding, or other behaviors from the current patterns, even during the construction phase of the Proposed Action. However, similar habitat is available on lands adjacent to the project area where these species could find refuge.

Cumulative impacts to wildlife from the Proposed Action consist of temporary impact to approximately 10.64 acres on UDWR land of existing wildlife habitat during the construction phase. Moreover, the waterline and spring development project would also result in temporary impact to roughly 13.75 acres on BLM and private lands. O&M of the waterline and springs may result in occasional temporary impact to minimal areas (generally should be less than 0.1 acres). There are no other known projects in the project area. However, since the Proposed Action would reclaim 5.67 acres on UDWR land and construction activities on BLM and private lands would reclaim 11.66 acres of temporary surface disturbance during the construction period, the overall cumulative impact to wildlife would be reduced in terms of total acres of disturbance.

3.7.2.3 Migratory Bird and Raptors

Migratory bird means any bird listed in 50 CFR 10.13, all native birds found commonly in the United States, with the exception of native resident game birds, are protected under the Migratory Bird Treaty Act (MBTA). This act makes it unlawful to pursue, hunt, take, capture, or kill; attempt to take, capture, or kill; or possess any migratory bird part, nest, egg, or product, manufactured or not (16 USC 703-712).

Impacts to migratory birds include direct loss of habitat due to removal of approximately 70 trees and removal of vegetation; abandonment of nests during breeding seasons because of noise or human activity; and potential mortality due to direct loss resulting from construction activities. There is suitable habitat adjacent to the project area that is available for nesting.

Indirect impacts to raptors under the Proposed Action could include a temporary relocation of prey away from the project area due to construction noise and activity within the proposed disturbance areas; however, there is suitable habitat for displaced prey adjacent to the project area that would be available for hunting. By implementing the ACEPMs presented in **Table 2-2** in Section 2.2.7, the direct and indirect impacts to migratory birds/raptors would be minimized. Cumulative impacts on migratory birds are similar to the cumulative impacts on wildlife species.

3.7.2.4 Special Status Species

Cardinal evaluated a total of 165 special status species for their potential to occur in the project and survey area. The list was developed from the UDWR statewide list of species of greatest conservation need (SGCN) listed in the Utah Wildlife Action Plan and includes 41 federally listed threatened (T), endangered (E), or candidate (C) Species by USFWS. The full list of special status species evaluated for this report, habitat description for each, and the rationale to identify the likelihood of occurrence within the project and survey area is included in **Appendix B** of **Attachment G**. Twenty-four Special Status Species were identified as potentially occurring in the project and survey area and have been carried forward for further analysis in the sections below. All other Special Status Species have been removed from further consideration in the report due to the lack of suitable habitat and/or the project is located outside the species' known range.

3.7.2.4.1 Federally Listed Species

Four federally listed species were identified as potentially occurring in the project and survey area and are shown in **Table 3.3** (USFWS, 2022). The monarch butterfly (*Danaus plexippus*), and Utah prairie dog (*Cynomys parvidens*), were identified as having a low likelihood of occurring within the project area. No other federally listed species are expected to occur within the survey area due to the lack of suitable habitat and/or the project's location outside the known range of these species. Those species brought forward for further discussion are addressed in the sections below. No USFWS designated critical habitat occurs in the project or survey area.

Table 3-3: Assessment of Federally Listed Species that May Occur within the Project Area

Species	Status	Habitat	Assessment
Monarch butterfly (*Danaus plexippus*)	C	This species winters on the California coast and return north into summer breeding ranges in the interior west and British Columbia. This species is dependent upon milkweed plants for their lifecycle. Habitats include wetlands, prairies, agricultural areas, and woodlands where milkweed grow.	Unlikely to Occur: This is a common migratory species in Utah and may occur as a migratory visitor to the project area. No milkweed plants were identified within the project or survey area. The project has no effect on this species.
Utah prairie dog (*Cynomys parvidens*)	T	Occur in grassland/herbaceous, burrowing in soil habitat in grasslands, in level mountain valleys, in areas with deep well-drained soil and vegetation that prairie dogs can see over or through. Found in central and southwestern quarter of the	May Occur: Project occurs in the low-intensity USFWS Utah prairie dog habitat polygon (USFWS, 2019). This species is documented to occur 8 miles northwest of the Project (UDWR, 2022a; UDWR, 2022b). Surveys confirmed that none of this

Species	Status	Habitat	Assessment
		state in Beaver, Garfield, Iron, Kane, Piute, Sevier, and Wayne counties.	species, or past evidence of this species, was identified in the project or survey area.
Ute ladies-tresses (*Spiranthes diluvialis*)	T	Occur in moist environments including alkaline wetlands, moist meadows, floodplains, flooded river terraces, sub-irrigated or spring-fed abandoned stream channels and valleys, lakeshores, irrigation canals, berms, levees, or irrigated meadows. Known from northern and south-central Utah	None: Spring meadow and wetland habitat occurs along the eastern end of the project area at 7,600 feet. The location of the spring is outside the elevation where this species is known to occur. The project area is outside the known range of this species in Utah. The project has no effect on this species.
Western yellow-billed cuckoo (*Coccyzus americanus*)	T	Prefers thick riparian vegetative communities with dense overstory of mature trees. Rare west of the Rocky Mountains; populations in Utah are found along the Green River near Vernal, near the town of Green River, and one portion of the San Juan River.	None: No suitable habitat is present in the project or survey area. The project has no effect on this species.

Cardinal's conclusion is that the Proposed Action has no effect on any federally listed species. USFWS was contacted about the "no effect" determination by sending a letter dated April 3, 2023, with Cardinal's biological report, but USFWS did not respond. The letter to USFWS is also provided in **Attachment G**. In accordance with the USFWS memo dated January 27, 2006, the agency does not issue concurrence letters for "no-effect" determinations. The memo is provided in **Attachment H**. Therefore, this memo is being issued in lieu of the concurrence for this environmental document.

3.7.2.4.2 UDWR Species of Greatest Conservation Need

Twenty-four UDWR SGCN were identified as potentially occurring in the project and survey area. **Table 3-4** includes all SGCN identified as potentially occurring in the project area and the rationale to identify the likelihood of occurrence of each species within the survey area.

Table 3-4: UDWR SGCN Identified as Potentially Occurring within Survey Area

Species	Habitat	Likelihood of Occurrence
Amphibians		
Northern leopard frog (*Lithobates pipiens*)	Highly aquatic frog found in streams, rivers, ponds, lakes, and meadows for breeding and overwintering. Widespread in Utah. Found in most counties in Utah found in elevations from 1,000 to 3,000 m.	May Occur: Suitable spring and wet meadow habitat occurs in the high elevation springs of Pole Canyon.
Western (boreal) toad (*Anaxyrus/Bufo boreas*)	Occurs in a wide range of habitats in multiple mountain ranges in Utah typically at high elevations >2,000 m. Occur in permanent water bodies in a variety of habitats, including riparian, mountain shrub, mixed conifer, and aspen-conifer assemblages. Breeding sites are in small pools,	May Occur: Suitable spring and wet meadow habitat occurs in the high elevation spring of Pole Canyon.

Species	Habitat	Likelihood of Occurrence
	beaver ponds, reservoirs, and backwaters and side-channels of creeks and rivers	
Birds		
Bald eagle (*Haliaeetus leucoceaphalus*)	Occur in coastal areas, bays, rivers, lakes. Forest stands containing nest trees vary from old-growth ponderosa pine to narrow strips of riparian vegetation surrounded by rangeland. Perch trees are also needed by bald eagles for roosting and foraging.	May Occur: May occur as a foraging visitor or resident during the winter. This species may nest in the vicinity; however, this species' preferred open river/lake shore nesting habitat is not present. This species was observed in the vicinity in 2006. (UDWR Special Status Species Biologist T. Pope indicates the potential to occur.)
Band-tailed pigeon (*Patagioenas fasciata*)	Occur in mountainous forest and woodland habitats in western North America. Uncommon summer and rare winter residents in Utah. Largest Utah breeding populations are in the Four Corners region, and in the central mountains from Cedar City to Nephi.	Unlikely to Occur: Suitable habitat is present in the project area but is uncommon in this region of Utah. (UDWR Designated Spring/Fall Crucial and Spring/Fall Substantial to occurs in the project area)
Black rosy-finch (*Leucosticte atrata*)	Found in alpine habitat of the central Rocky Mountains, nesting above treeline in cliffs or talus. Common in the Uinta and Wasatch Mountains during the breeding season, moving to sagebrush or shrubland in lower elevation valleys, benches, and foothills during winter.	May Occur: Suitable breeding habitat is present in the project area.
Boreal owl (*Aegolius funereus*)	Found throughout northern boreal forests in Alaska, Canada, and northern Eurasia, it uses high-elevation spruce and fir habitat in Utah. An obligate cavity nester, nests are often in old woodpecker holes. Occur in Utah from northern Utah from the Bear River Mountains, Wasatch Mountains and Uinta Mountains.	May Occur: Suitable breeding and nesting habitat is present in the project area.
Burrowing owl (*Athene cunicularia*)	Occur in desert, semi-desert shrubland, grasslands, and agricultural areas. Nesting habitat primarily consists of flat, dry, and relatively open terrain; short vegetation; and abandoned mammal burrows for nesting and shelter.	May Occur: Suitable breeding and nesting habitat is present in the project area.
Ferruginous hawk (*Buteo regalis*)	Occur in flat and rolling terrain in grassland or shrub steppe during breeding near cliffs, buttes, and creek banks. Ferruginous hawks occur in grasslands, agriculture lands, sagebrush/ saltbush/ greasewood shrub lands, and at the periphery of pinyon-juniper forests. Nest primarily in Juniper trees in Utah.	May Occur: Suitable breeding and nesting habitat is present in the project area.
Flammulated owl (*Psiloscops flammeolus*)	Common in mature, montane forests throughout Utah, though primarily in the north central and southwestern ranges. Nest and roost in old woodpecker holes or other cavities formed by large woodpeckers.	May Occur: Suitable breeding and nesting habitat is present in the project area.
Golden eagle (*Aquila chrysaetos*)	Found in open country with sufficient mammalian, avian, and reptilian prey, or carrion in winter. Nest primarily on cliffs, secondarily on trees or human structures.	May Occur: Suitable breeding and nesting habitat is present in the project area. Observed near the Project in 2005 and field surveys of

Species	Habitat	Likelihood of Occurrence
		2022. (UDWR Special Status Species Biologist T. Pope indicates the potential to occur.)
Greater sage-grouse (*Centrocercus urophasianus*)	Occurs in sagebrush plains, foothills, and mountain valleys. Sage-grouse breeding and nesting generally occurs in open canopy habitat including landing strips, old lakebeds or playas, low sagebrush flats, openings on ridges, roads, cropland, and burned areas.	Unlikely to Occur: May occur as a migratory or foraging visitor. The project area is outside locations where this species is documented to occur.
Lewis's woodpecker (*Melanerpes lewis*)	Breeding habitat is open ponderosa pine forest with a shrub/grass understory. Secondary breeding habitat includes aspen patches surrounded by shrubs, and riparian cottonwood bottoms.	May Occur: Suitable breeding and nesting habitat is present in the project area.
Northern pygmy owl (*Glaucidium gnoma*)	Common throughout the montane forests of Utah. Usually are found at higher elevations, but are known to descend in winter, sometimes appearing in urban areas.	May Occur: Suitable breeding and nesting habitat is present in the Project.
Olive-sided flycatcher (*Contopus cooperi*)	Occur in coniferous habitats throughout their range and in high elevation conifer forests and clearings in Utah.	May Occur: Suitable breeding and nesting habitat is present in the project area.
Peregrine falcon (*Falco peregrinus*)	Occur in a wide variety of habitats especially where there are suitable nesting cliffs including human population centers.	May Occur: May occur as a foraging visitor. Suitable breeding and nesting habitat is present near the project area.
Pinyon jay (*Gymnorhinus cyanocephalus*)	Occurs in riparian, shrubland/chaparral, and conifer woodland foothills and lower mountain slopes of western and southwestern U.S. and Mexico,	May Occur: Suitable breeding and nesting habitat is present in the project area. (UDWR Special Status Species Biologist T. Pope indicates the potential to occur.)
Insects		
Western bumble bee (*Bombus occidentalis occidentalis*)	Occurs throughout much of western U.S. in mixed woodlands, farmlands, urban areas, montane meadows and into the western edge of the prairie grasslands.	May Occur: This species may occur as a resident to the project.
Mammals		
American pika (*Ochotona princeps*)	Inhabit high-elevation talus slopes, boulder fields, and adjacent meadows, found in high mountainous area of western North America including the Rocky Mountains, Great Basin ranges, Sierra Nevada Mountains, and Cascade Mountains.	May Occur: This species may occur as a resident to the project area. No rocky scree slopes occur in the project but do occur in the general vicinity of the project area.
Chisel-toothed kangaroo rat (*Dipodomys microps celsus*)	Occur in desert shrubland and chaparral in valleys throughout most of the Great Basin and in southwestern Utah.	Unlikely to Occur: Suitable habitat occurs in the Project. This species could occur as a resident to the project area but is unlikely as the project area is located on the eastern edge of this species' known range.
Fringed myotis (*Myotis thysanodes*)	Occurs in xeric woodlands, such as juniper, ponderosa pine, and Douglas-fir; also in coniferous forests, woodlands, grasslands, and	May Occur: This species may occur as a foraging resident to the project

Species	Habitat	Likelihood of Occurrence
	shrublands and roost in caves, mines, and buildings. Occurrences are known in Cache, Duchesne, Uintah, Utah, Juab, Millard, Grand, Wayne, San Juan, Garfield, Kane, and Washington counties.	area. No hibernacula occur in the project area.
Kit fox (*Vulpes macrotis*)	Occur in desert areas dominated by sagebrush, desert scrub, or grasslands, found in desert regions statewide including the Great Basin, Mojave, and Colorado Plateau regions.	May Occur: This species may occur as a resident to the project area.
Little brown myotis (*Myotis lucifugus*)	Occur in a variety of habitats and roosts including houses and other humanmade structures. Occur statewide in Utah.	May Occur: This species may occur as a foraging resident to the project area. No hibernacula occur in the project area.
Spotted bat (*Euderma maculatum*)	Occupy a wide variety of habitat types near cliffs and rocky escarpments, where it roosts in cracks and crevices. Likely present statewide, although few observations have been made in the West Desert area.	May Occur: This species may occur as a foraging resident to the project area. No hibernacula occur in the project area.

Amphibians: Two SGCN amphibians were identified as potentially occurring within the Pole Canyon spring meadow/creek complex within the project area. While no species-specific surveys were completed to identify the presence or absence of these species, none of these species were identified during the 2020 and 2022 field surveys of the spring area. If present, these species would likely use the pools and standing water around the spring complex for daily refuge and foraging and for critical life-cycle events such as breeding, egg-laying, and hatching of young from April through July.

Birds: Fourteen SGCN birds were identified as potentially occurring within the Project. Depending upon the species and their preferred habitat, each of these species have the potential to occur as a migrating or foraging visitor, breed, nest, or occur as year-round resident in and near the Project. For the purposes of this report, the entire Project is considered avian habitat as these species represent ground, shrub, tree, and cliff nesting species. At the time of the 2020 and 2022 field surveys, no active avian nests were identified in the Project; however, this does not preclude an individual bird from establishing a nest in the Project in the future. It is expected that avian species use the project area year-round for refuge and foraging and use the project area to support breeding and nesting from April through July for non-raptors and from January 1 through August 31 for raptors.

Insects: The western bumble bee was identified as potentially occurring within the Project as a foraging visitor and resident. Surveys completed during the 2020 and 2022 field visits did not identify this species. If present, this species would likely be most active as a pollinator during the growing season across the entire Project.

Mammals: Seven SGCN mammals, including the species were identified as potentially occurring in the project area as foraging visitors, for breeding and young-rearing, or as year-round residents. Field surveys completed during the 2020 and 2022 field visits did not identify any of the SGNC mammals. If present, these species would likely use, depending upon the species, a diversity of habitats in the Project for daily refuge

and foraging and for critical life-cycle events such as breeding, and rearing of young from March through July.

Based on evaluation of existing data and field survey efforts, it is Cardinal's conclusion that the Proposed Action could minimize and avoid impacts to SGCN by implementing ACEPMs as discussed in **Table 2-2** in Section 2.2.7. With the implementation of ACEPMs, it is Cardinal's conclusion that impacts to SGCN would be short-term and temporary. Long-term impacts to SGCN are not anticipated.

None of the UDWR SGCN or UDWR designated habitats are afforded any species/habitat-specific statutory protection by the State of Utah for impacts associated with development; however, some of these species are afforded protection under existing federal regulation, such as the Endangered Species Act (ESA), Migratory Bird Treaty Act (MBTA) or Bald and Golden Eagle Protection Act (BGEPA), and by the State of Utah for the purposes of hunting, trapping, and possession. Although statutory protection may be limited, the Proposed Action does occur in the Twelve-Mile WMA, for which UDWR, as the land managing agency, may recommend impact reducing measures during seasonal periods when these species are most vulnerable to disturbance.

Development of the springs would eliminate free water on surface at the spring sites and UDWR SGCN would lose the water sources. As discussed in **Table 2-2** of Section 2.2.7, ACSSD's provision of 1 acre-feet/year of water rights to UDWR for development of water sources at different locations would minimize the impact resulting from the loss of water sources at the spring sites.

Project construction and O&M would not have much impact on wintering habitat for mule deer or elk since there would be no activities for construction or O&M during the winter months between December 1 and April 15 as the ground is most likely covered with snow on UDWR land.

In summary, potential impacts on UDWR SGCN would be similar to those on the general wildlife. With ACEPMs as described in **Table 2-2** in Section 2.2.7, the impacts on UDWR SGCN would be further reduced.

3.7.2.4.3 UDWR Designated Game Habitat

All 24 recognized UDWR designated game habitats were evaluated for their overlap with the project area using UDWR's online portal (UDWR, 2022d) and identified in **Appendix B** of **Attachment G**. Eight UDWR designated game habitats were identified within the project area and are summarized in **Table 3-5**. The UDWR designated habitat distribution, season of habitat use, and habitat values are determined by local UDWR wildlife biologists relying on observations, surveys, and predictive habitat modeling. The UDWR designated game habitats were developed by UDWR to promote management of game species habitats in Utah and identify sensitive seasonal use areas specific to each game species' seasonal needs. While the occurrence of these designated habitats does not affirm the presence or absence of a UDWR game species, UDWR recognizes these seasonal use areas to facilitate management of Utah's game species, including mule deer and elk that are the target species for protection of the WMA. Specifically, the seasonal use areas identify geographies and periods of time when individual game species are most vulnerable to disturbance

during periods of breeding, nesting, calving, or wintering. For the purposes of this report, habitats identified as "Crucial" will be carried forward for analysis.

Table 3-5: UDWR Game Species' Designated Wildlife Habitat and Recommended Seasonal Avoidance

Species	Habitat/Recommended Seasonal Avoidance
Utah Band-tailed Pigeon	Spring/Fall Crucial (April 1 to July 15) Spring/Fall Substantial (April 1 to July 15)
Utah Chukar	Year Long Crucial (April 1 to July 15)
Utah Dusky Grouse	Year Long Crucial (April 1 to July 15)
Utah Ruffed Grouse	Year Long Substantial (April 1 to July 15)
Utah Elk*	Summer/Winter Crucial (December 1 through April 15 restriction) Spring/Fall Substantial (Fawning May 15 to July 15 restriction)
Utah Moose	Winter Crucial (December 1 through April 15)
Utah Mule Deer*	Winter Crucial (December 1 through April 15) Winter/Spring Crucial (December 1 through April 15) Spring/Fall Substantial (Fawning May 15 to July 15)
Utah Snowshoe Hare	Year Long Substantial
Sources: UDWR (2022c). UDWR Wildlife Designated Habitat. Available at: https://dwr-data-utahdnr.hub.arcgis.com/search?collection=Dataset.	

Game Birds: Two crucial upland game bird habitats were identified within the project area and represent the sensitive seasonal use periods of three Utah game birds: the band-tailed pigeon, chukar, and dusky grouse. Both the Spring/Fall Crucial and Year Long Crucial designations indicate a recommended seasonal avoidance from April 1 to July 15, a period of time generally consistent with avian breeding and nesting season. With the ACEPMs discussed in **Table 2-2** in Section 2.2.7, the impact would further be reduced.

Big Game: Three crucial big game habitats were identified within the Project and represent the sensitive seasonal use periods of three Utah game mammals: elk, moose, and mule deer. The Summer/Winer Crucial, Winer Crucial, and Winter/Spring Crucial designations indicate a recommended seasonal restriction from December 1 to April 15, a period of time during the winter months where foraging resources are scarce, and the species are each vulnerable to disturbance. Temporary short-term impacts to these habitats may occur during the construction phase during ground disturbing activities through the removal of vegetation; however, all disturbed habitats would be reclaimed and would return to present-day condition over time.

Development of the springs would eliminate free water on surface at the spring sites and game species would lose the water sources. As discussed in **Table 2-2** of Section 2.2.7, ACSSD's provision of 1 acre-feet/year of water rights to UDWR for development of water sources at different locations would minimize the impact resulting from the loss of water sources at the spring sites.

With the ACEPMs discussed in **Table 2-2** in Section 2.2.7, the impact would further be reduced. Long-term impacts to these designated habitats are not anticipated.

3.8 Cultural Resources

3.8.1 No Action Alternative

Under the No Action alternative, no construction activities would occur. Therefore, there would be no direct, indirect, or cumulative effects to cultural resources.

3.8.2 Proposed Action

A cultural resource inventory was conducted by Bighorn Archaeological Consultants, LLC (Bighorn) within the area of potential effect (APE) for the proposed project (Bighorn, 2023). Bighorn conducted a ½-mile-wide Class I file search for reported cultural sites through the EEGO database administered by the Utah Division of State History. The file search gathered data on previously documented prehistoric and historic-era sites known to be present within and near the proposed project area for properties listed on the National Register of Historic Places (NRHP). The search revealed no NRHP listed properties or documented in-period historic architecture were plotted/listed within the survey area.

After the Class I file search, Bighorn conducted a field survey. Examination of the proposed project area resulted in no discovery of any eligible historic properties.

Moreover, the following tribes have been notified: Confederated Tribes of Goshute, Navajo Nation, Northwestern Band of Shoshone Nation, Paiute Indian Tribe of Utah, San Juan Southern Paiute, Skull Valley Band of Goshute, Ute Indian Tribe of the Uintah and Ouray Reservation and Ute Mountain Ute Tribe. To date, only the Paiute Indian Tribe of Utah responded with a letter. Ms. Dorena Martineau, Cultural Resource Director of the Paiute Indian Tribe of Utah, stated in her letter that the tribe did not have any objections pertaining to the project and was not aware of cultural resource sites, practices, or locations of importance in the tribe's traditional religions or culture. The other Indian Tribal agencies did not reply at the time this report was completed. Correspondence with Indian Tribes is provided in **Attachment I**.

Since the proposed project is not anticipated to have any effect on any eligible cultural sites, UDDW, the funding agency for the Proposed Action, determines "No Effect" on eligible historic properties and consulted SHPO. SHPO concurred with UDDW's determination of eligibility and "No Adverse Effect" for this undertaking. Correspondence with SHPO is provided in Attachment J.

3.9 Socio-Economic/Environmental Justice

Axtell, Utah is an incorporated community, but it is not a census-designated place (CDP). Therefore, there is no census data for Axtell. Since the project area is located in Sanpete County, the census data used in this section is for Sanpete County. According to the U.S. Census Bureau (2024a; 2024b), the population of Sanpete County was 28,437 in 2020, an increase of 615 or 2.2% since 2010. The ethnic makeup in 2020 was 85.4% white and 14.6% other races according to the 2020 U.S. census data. Approximately 14.8% of the population were below the poverty line, including 20.0% of those under the age of 18, and 6.6% of those over the age of 65 (U.S. Census Bureau, 2024c).

3.9.1 No Action Alternative

Under the No Action alternative, no construction activities would occur. Therefore, there would be no direct, indirect, or cumulative effects to socio-economic/environmental justice.

3.9.2 Proposed Action

Implementation of the Proposed Action would have long-term beneficial socio-economic impacts to the project area. The Proposed Action would improve the culinary water supply safety and adequacy in the ACSSD culinary water system. The project could potentially have a temporary beneficial impact by creating jobs and increasing revenue to local businesses during construction.

Implementation of the Proposed Action would not disproportionately (unequally) affect any low-income or minority communities within the project area because it would not involve major facility construction, population relocation, health hazards, hazardous waste, property takings, or substantial economic impacts. This action would therefore have no adverse human health or environmental effects on minority and low-income populations as defined by environmental justice policies and directives. Executive Order (EO) 12898 established environmental justice as a federal agency priority to ensure that minority and low-income groups are not disproportionately affected by federal actions. Moreover, all residents in the ACSSD's service area would have access to drinking water and pay the same rate structure. All residents who live within the ACSSD's service area would be permitted to connect to the improved system.

Therefore, the proposed project would not result in any significant direct, indirect, or cumulative adverse impacts associated with socio-economic/environmental justice and mitigation measures would not be required.

3.10 Other Resources

3.10.1 No Action Alternative

Under the No Action alternative, the proposed project would not be constructed and therefore no direct, indirect, or cumulative effects to energy, transportation, visual resource, or noise. However, the advantages of the proposed culinary water system improvements could not be realized. The current and future users of the water system would not have a safe and adequate water supply system. Therefore, the No Action alternative would have long-term direct adverse impacts to human health and safety of the ACSSD service area.

3.10.2 Proposed Action

3.10.2.1 Public Health and Safety

Excavation for spring development and trenching and backfilling related to pipeline installation could result in human health and safety issues. ACEPMs associated with public health and safety in **Table 2-2** of Section

2.2.7, public health and safety issues would be minimized. After construction of the Proposed Action is completed, the issues would disappear.

3.10.2.2 Energy

The proposed project is not related to energy. Therefore, the proposed project would not have direct, indirect, or cumulative impacts to energy and no mitigation measures are required.

3.10.2.3 Transportation

Construction activities are likely to directly impact the traffic on Southfield Road and may result in partial road closures. This impact would be short-term and disappear when the project construction is completed. The ACEPMs as described in **Table 2-2** of Section 2.2.7, the impact would be minimized.

3.10.2.4 Visual Impacts

Equipment for construction of the project and construction activities, where visible from Southfield Road, may be considered a temporary aesthetic nuisance for a short period of time by travelers on the road. Given the temporary duration of construction activities, this direct impact is considered less than significant.

Surface disturbance during construction of the proposed project would temporarily result in increased dust and haze, creating temporary direct impacts to visual resources. Completion of the proposed project would ultimately lessen the amounts of dust and haze through stabilization of the soil and restoration of plant cover. Re-vegetation, where necessary, and naturalization of the disturbed areas would also reduce the temporary project-related dust and haze over the long term.

Mitigation measures are not required for the impact to aesthetics.

3.10.2.5 Noise

Noise is a fundamental component of the human environment. High noise levels can be detrimental to the health and wellbeing of human and wildlife receptors located near the source of an obtrusive noise. While the physical intensity of a sound can be easily measured, the effect of a sound on a receptor is a complex and intangible value that must consider the combination of its intensity, duration, and time of day. Louder noises are perceived as acceptable if they last for short periods of time. Noise, which may be acceptable during the day, can be annoying or intolerable during evening or nighttime periods.

Construction of the proposed project would not generate much noise throughout the process. The noise effect would be temporary and would cease to occur following construction. Since the project area is at least 4 miles away from the closest population center (Mayfield), the noise impact to closest residents is considered minimal. Therefore, no mitigation measures are required.

4 CONSULTATION AND COORDINATION

4.1 List of Preparers and Reviewers

4.1.1 USFWS and UDWR

The following UDWR professionals have reviewed this EA and provided comments:

Amand Horvath, USFWS Fish and Wildlife Biologist, Sage Brush Ecosystem
Jay Ogawa, USFWS Realty Specialist
Jolene Rose, UDWR Wildlife Lands Specialist
T. Pope, UDWR Special Status Species Biologist

4.1.2 Sunrise Engineering, Inc.

Dao Yang, P.E., Project Environmental Engineer/Hydrogeologist
Derek Anderson, P.E., Environmental Division Manager
Mitchell Heap, E.I.T., Project Manager
Jesse Ralphs, P.E., Vice President

4.2 Groups and Agencies Consulted

Axtell Community Special Service District
Confederated Tribes of Goshute
Navajo Nation
Northwestern Band of Shoshone Nation
Paiute Indian Tribe of Utah
San Juan Southern Paiute
Skull Valley Band of Goshute
Utah Division of Wildlife Resources
Utah State Historic Preservation Office
U.S. Army Corps of Engineers
U.S. Department of Agriculture Natural Resources Conservation Service
U.S. Department of the Interior, Bureau of Land Management – Richfield, Utah Field Office
U.S. Fish and Wildlife Service
Utah Public Lands Policy Coordination Office
Ute Indian Tribe of the Uintah & Ouray Reservation
Ute Mountain Ute Tribe

5 REFERENCES

5.1 Referenced Cited

Bighorn Archaeological Consultant, LLC. 2023. A Cultural Resource Inventory for the Axtell Waterline Project, Sanpete County, Utah: UDSH Project Number: U20HO0883.

Federal Emergency Management Agency. 2012. Flood Insurance Map, Sanpete County and Incorporated Areas, Utah, Panel 1000 of 1075, Map Number 49039C1000C.

Fenneman, N.M. 1931. Physiography of the Western United States. New York, McGraw-Hill.

Natural Resource Conservation Service. 2022. Web Soli Survey Report and Ecological Site Characteristics of Project. Available at: https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm

Natural Resources Conservation Service. 2024. Web Soil Survey. Available at https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx. Accessed on March 11, 2024.

U.S. Census Bureau. 2024a. 2020 Race – DEC Redistricting Data (PL 94-171) for Sanpete County, Utah. Available at: https://data.census.gov/table?q=sanpete%20county,%20utah. Assessed on March 19, 2024.

U.S. Census Bureau. 2024b. 2010 Race – DEC Redistricting Data (PL 94-171) for Sanpete County, Utah. Available at: https://data.census.gov/table/DECENNIALPL2010.P1?q=sanpete%20county,%20utah. Assessed on March 19, 2024.

U.S. Census Bureau. 2024c. Poverty Status in the Past 12 Months for Sanpete County, Utah. Available at: https://data.census.gov/table?q=Sanpete%20County,%20Utah%20poverty%20&t=Income%20and%20Poverty. Assessed on March 19, 2024.

U.S. Fish and Wildlife Service. 2019. Utah Prairie Dog Survey Intensity Map. Published May 2, 2019.

U.S. Fish and Wildlife Service. 2022. Information, Planning, and Conservation System (IPaC) USFWS Listed Species occurring within vicinity of Project. Available online at http://ecos.fws.gov/ipac/.

Utah Department of Environmental Quality. 2024. Utah Non-Attainment Area. Available at https://utahdeq.maps.arcgis.com/apps/webappviewer/index.html?id=dcc4eacb53a942f2a4b74a36ae5ea118. Accessed on March 12, 2024.

Utah Division of Wildlife Resources. 2010. Habitat Management Plan for Wildlife Management Areas (WMAs) in South Sanpete County and Willow Creek in North Sevier County. Available at https://wildlife.utah.gov/public_meetings/info/2010-04-02.pdf. Accessed on March 11, 2024.

Utah Division of Wildlife Resources. 2022a. Natural Heritage Data Request for Federal and State-listed Species near the Project. Completed June 16, 2022.

Utah Division of Wildlife Resources. 2022b. Species of Greatest Conservation Need. May 2022. Available at: https://wildlife.utah.gov/pdf/WAP/2022-05-sgcn-list.pdf.

Utah Division of Wildlife Resources. 2022c. UDWR Designated Game Species Habitat Data Web Portal. Available at: https://dwr-data-utahdnr.hub.arcgis.com/search?collection=Dataset.

Utah Division of Wildlife Resources. 2022d. UDWR Prairie dog GRAMA request for occupied habitat information on the Utah prairie dog.

Western Regional Climate Center. Gunnison, Utah Weather Station (423514). 2024. Available at: https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ut3514. Accessed on March 11, 2024.

5.2 List of Acronyms Used in this EA

ACEPMs	Applicant-committed environmental protection measures
ACSSD	Axtell Community Special Service District
AO	Authorized officer
APE	Area of potential effect
ATV	All-terrain vehicle
BGEPA	Bald and Golden Eagle Protection Act
Bighorn	Bighorn Archaeological Consultants, LLC
BLM	U.S. Department of the Interior, Bureau of Land Management
BMP	Best management practice
C	Candidate species
Cardinal	Cardinal EC
CDP	Census-designated place
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CGP	Construction General Permit
DERR	Utah Division of Environmental Response and Remediation
E	Endangered species
EA	Environmental Assessment
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FIRMs	Flood Insurance Rate Maps
FLPMA	Federal Land Policy and Management Act of 1976, as amended
HDPE	High density polyethylene
MBTA	Migratory Bird Treaty Act
MOU	Memorandum of understanding
NEPA	National Environmental Policy Act

NOI	Notice of Intent
NRCS	Natural Resources Conservation Service
OSHA	Occupational Safety and Health Administration
RDCC	Resource Development Coordinating Committee
ROW	Rights-of-way
SGCN	Species of greatest conservation need
SHPO	Utah Historic Preservation Office
SWPPP	Stormwater pollution prevention plan
T	Threatened species
UAC	Utah Administrative Code
UDDW	Utah Division of Drinking Water
UDOT	Utah Department of Transportation
UDWQ	Utah Division of Water Quality
UDWR	Utah Division of Wildlife Resources
UDWRi	Utah Division of Water Rights
UPDES	Utah Pollution Discharge Elimination System
UPLPCO	Utah Public Lands Policy Coordination Office
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
WMA	Wildlife Management Area

Attachments

Attachment A	Figures
Attachment C	Correspondence with NRCS and Soil Data
Attachment D	Wetland Evaluation Report
Attachment E	Letter to USACE
Attachment F	Sole Source Aquifer Map
Attachment G	Correspondence with Utah Public Lands Policy Coordination Office
Attachment H	Letter to USFWS and Biological Evaluation Report
Attachment I	USFWS Memo Dated January 27, 2006
Attachment J	Correspondence with Indian Tribes
Attachment K	Correspondence with SHPO

Attachment A

Figures

ARAPIEN VALLEY

SOUTHFIELD ROAD

SOUTHFIELD ROAD

EXISTING MICHAELSON SPRING

Michaelson Springs

EXISTING MICHAELSON SPRINGS PIPELINE

POLE CANYON SPRINGS TO BE DEVELOPED

Pole Canyon

SANPETE CO

SEVIER CO

OLD INDIAN TREATY BOUNDARY

Willow Creek Reservoir

SPILLWAY ELEV 5716

Willow Creek Reservoir

Willow Creek

Clear Creek

JEEP

TRAIL

BASE MAP SOURCE: USGS 7.5-MINUTE (AT 1:24,000 SCALE) SERIES QUADRANGLE MAP FOR MAYFIELD, UTAH

NORTH

SCALE IN MILES

0 0.2 0.4

LEGEND

- Proposed Waterline on Private Land
- Existing Waterline
- Proposed Waterline on BLM Land
- Proposed Waterline on UDWR Land
- Proposed Staging Area on UDWR Land
- Proposed Spring Development
- BLM Land
- UDWR Wildlife Reserve/Management Area
- Private Land

AREA MAP

REV NO.	COMMENT	DATE

SUNRISE ENGINEERING
6875 SOUTH 900 EAST
SALT LAKE CITY, UTAH 84047
TEL 801.523.0100 FAX 801.523.0990
www.sunrise-eng.com

ACSSD

AXTELL WATER PROJECT ENVIRONMENTAL ASSESMENT PROJECT LOCATION MAP

SEI NO.	DESIGNED	DRAWN	CHECKED	SHEET NO.	
S08771	DY	DY	DSA	01of 04	FIG. 1

P:\Axtell Town\S07578 Axtell Preliminary Engineering\Design 3D\DWR-USFWS Project\2023 Map.dwg Mar 19, 2024 5:47pm dyang

EXISTING MICHAELSON SPRINGS

EXISTING MICHAELSON SPRINGS PIPELINE

POLE CANYON SPRINGS TO BE DEVELOPED

Willow Creek

NORTH

SCALE IN MILES

0 0.2 0.4

LEGEND

- Proposed Waterline on Private Land
- Existing Waterline
- Proposed Waterline on BLM Land
- Proposed Waterline on UDWR Land
- Proposed Staging Area on UDWR Land
- Proposed Spring Development

AV	Atepic–Badland Association
FOD	Fontreen Cobbly Loam
KEG	Kitchell Gravelly Loam
LdC2	Linoyer Very Fine Sandy Loam
P1	Skumpah–Xeric Haplogypsids Complex
RaC	Rapho Gravelly Fine Sandy Loam
SCE2	Sanpete Stony Fine Sandy Loam
SoD2	Sigurd Cobbly Fine Sandy Loam
SrB/SrC2	Skumpah Silt Loam

AREA MAP

REV NO.	COMMENT	DATE

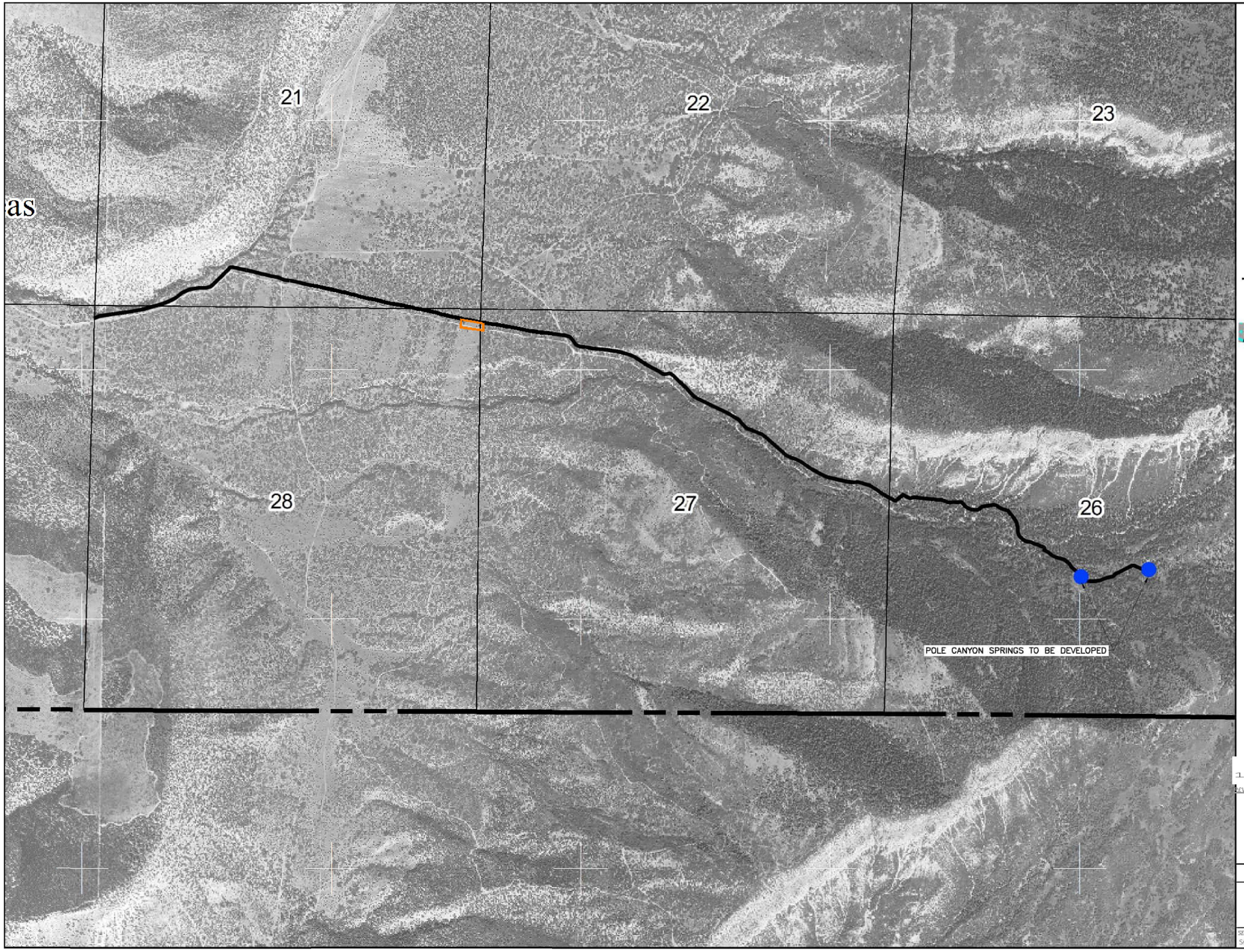
SUNRISE ENGINEERING
6875 SOUTH 900 EAST
SALT LAKE CITY, UTAH 84047
TEL 801.523.0100 FAX 801.523.0990
www.sunrise-eng.com

ACSSD

AXTELL WATER PROJECT ENVIRONMENTAL ASSESMENT SOIL MAP

SEI NO.	DESIGNED	DRAWN	CHECKED	SHEET NO.	FIG. 2
S08771	DY	DY	DSA	02 of 04	

P:\Axtell Town\S07578 Axtell Preliminary Engineering\Design 3D\DWR-USFWS Project\2023 May.dwg Mar 19, 2024 5:47pm dyang



m

SCALE
0 600' 1200'

WIE!m.

Proposed Waterline on UDWR Land

Proposed Staging Area 011 UOWR Land

Proposed Spring Development

Floodplain

AREA MAI?

Cut'MENI' 0.4TE

SUNRISE ENGINEERING

6815 SOUTH 900 EA<;T
SALT LAKE CITY, UTAH 84811

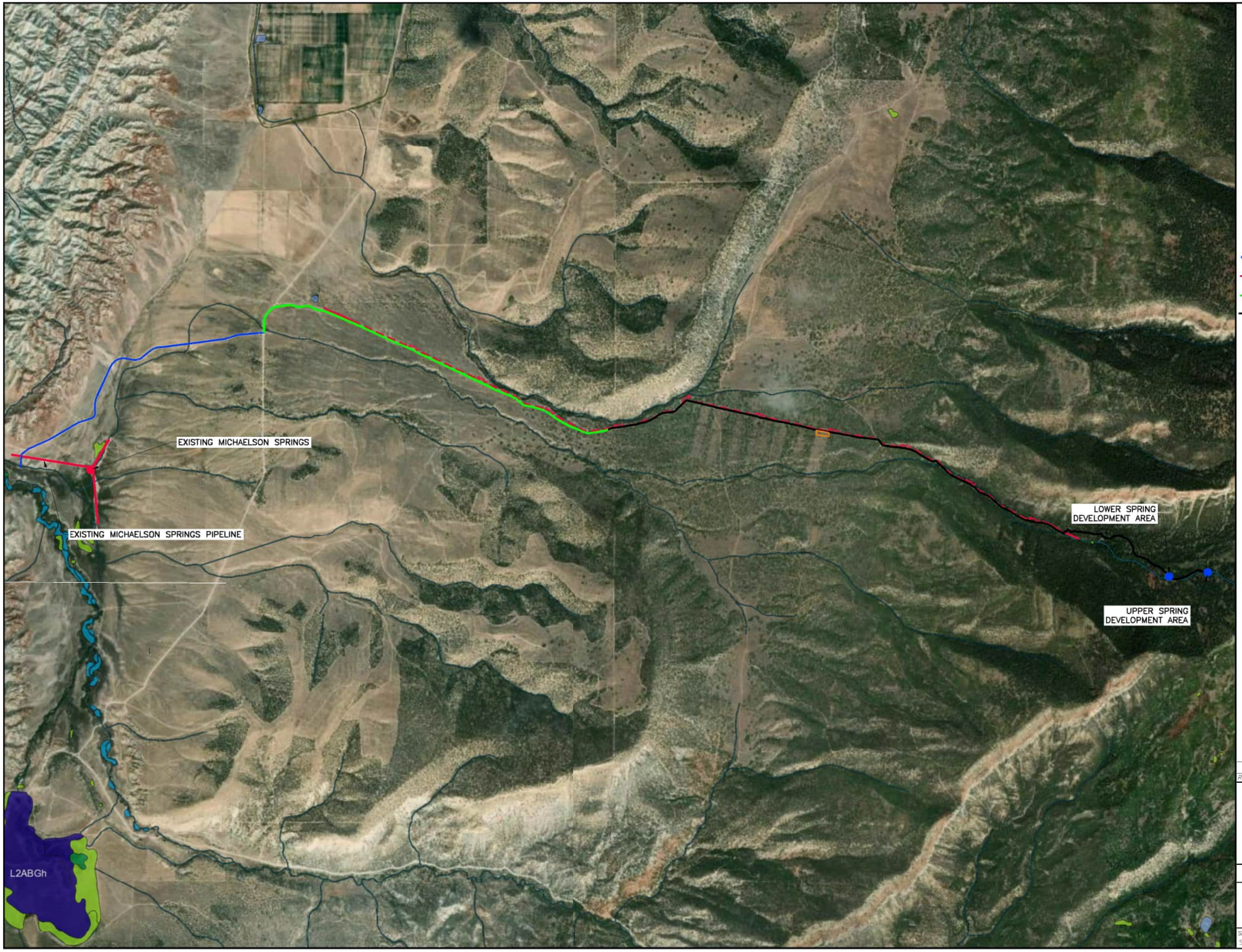
ACSSO

AXTELL WATER PROJECT
ENVIRONMENTAL ASSESMENT
FLOODPLAIN AP

rm.

DSA

FIG. 3



NORTH

SCALE IN MILES

0 0.2 0.4

LEGEND

- Proposed Waterline on Private Land
- Existing Waterline
- Proposed Waterline on BLM Land
- Proposed Waterline on UDWR Land
- Proposed Staging Area on UDWR Land
- Proposed Spring Development
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

AREA MAP

REV NO.	COMMENT	DATE

SUNRISE ENGINEERING
6875 SOUTH 900 EAST
SALT LAKE CITY, UTAH 84047
TEL 801.523.0100 FAX 801.523.0990
www.sunrise-eng.com

ACSSD

AXTELL WATER PROJECT
ENVIRONMENTAL ASSESMENT
WETLAND MAP

SEI NO.	DESIGNED	DRAWN	CHECKED	SHEET NO.	
S08771	DY	DY	DSA	04 of 04	FIG. 4

P:\Axtell Town\S07578 Axtell Preliminary Engineering\Design 3D\UWR-USFWS Project2023 Mtg.dwg Mar 19, 2024 5:48pm dyang

Attachment B

Correspondence with NRCS and Soil Data

Dao Yang

From: Thapa, Bir - NRCS, Salt Lake City, UT <Bir.Thapa@usda.gov>
Sent: Tuesday, June 21, 2022 3:57 PM
To: Dao Yang
Subject: RE: NEPA Waste Water Treatment plant proposal and Axtell Water Project

Mr. Yang,
If your project does not involve any farm conversion, then you do not need to follow lengthy procedure for Farm Protection Policy Act.
Thanks,
Bir

From: Dao Yang <dyang@sunrise-eng.com>
Sent: Thursday, June 16, 2022 4:07 PM
To: Thapa, Bir - NRCS, Salt Lake City, UT <Bir.Thapa@usda.gov>
Subject: RE: NEPA Waste Water Treatment plant proposal

Mr. Thapa,
The project does not involve any farmland conversion. All projects involve federal funding.
The wastewater treatment plant project near Rockville will occur within the existing treatment facility. Therefore, no farmland is involved.
The spring development project in Axtell will not convert any farmland. The spring site is high in the mountains where no farmland. The pipeline generally follows existing dirt roads. The pipeline will be buried at least 3 feet below grade. After the pipeline is installed, the land can be farmed if somebody wants to do so. Right now, no farmland is involved in this project.
If you have any questions, please let me know.
Thanks,
Dao

From: Thapa, Bir - NRCS, Salt Lake City, UT <Bir.Thapa@usda.gov>
Sent: Thursday, June 16, 2022 3:56 PM
To: Dao Yang <dyang@sunrise-eng.com>
Subject: FW: NEPA Waste Water Treatment plant proposal

Dear Mr. Yang,
Good afternoon!

Regarding your proposed Waste water Treatment Plant Improvement near Rockville, Utah, and Culinary Water System Improvement Project in Axtell, Utah, especially in relation to Farm Protection Policy Act (FPPA), I request to fill out the form Ad-1006 (attached) or NRCS CPA 106 for corridor. FPPA only applies if any one of the following three activities meets the condition:

1. Federal funds are involved
2. Irreversible conversion of prime, unique important farmland to non-agricultural use
3. None of the following exemptions to FPPA apply

Exemptions (land)
• Land not considered “farmland” under FPPA

– Land already “developed” or already irreversibly converted
• US Census urban areas maps
• Existing “footprint” including rights-of-way
– Land already committed to urban development
– Land committed to water storage

If above three conditions meet the requirement and exemption do not apply, then I require to fill out Parts I and III of form NRCS CPA 106 and submit appropriately scaled maps indicating the location of the project site (you have already done it). Also describe activities you are proposing. Based on my description, if you think it is exempt, then you no longer need any further action from your part.

Kindly let me know, if you need any further clarification.

Bir Thapa, Ph.D.
State Soil Scientist
USDA – NRCS, Utah

From: Howie, Richard - FPAC-NRCS, SALT LAKE CITY, UT <Richard.Howie@usda.gov>
Sent: Wednesday, June 8, 2022 1:07 PM
To: Thapa, Bir - NRCS, Salt Lake City, UT <Bir.Thapa@usda.gov>
Cc: Hamilton, Derek - NRCS, Salt Lake City, UT <derek.hamilton@usda.gov>; Warta, Leslie - FPAC-NRCS, Salt Lake City Utah <leslie.warta@usda.gov>; Schmitz, Clayton - NRCS, Salt Lake City, UT <clayton.schmitz@usda.gov>; Evenstad, Norm - NRCS, Salt Lake City, UT <norm.evenstad@usda.gov>
Subject: NEPA Waste Water Treatment plant proposal

Hello Bir & Team:

I am attaching this letter from Sunrise Engineering regarding a proposed wastewater treatment plant improvement project near Rockville, Utah. The town is in the process of performing an environmental review pursuant to (NEPA). I am placing the original letter on Dr. Bir Thapa’s desk.

Thank you,

Richard Howie
Administration Support Specialist
Natural Resources Conservation Service (NRCS)
125 S. State Street, Suite 4010
Salt Lake City, UT 84138
Office (801) 524-4574

Richard.howie@usda.gov

USDA United States Department of Agriculture
Natural Resources Conservation Service

subject the violator to civil or criminal penalties. If you believe you have received this message in error, please notify the sender and delete the email immediately.

SUNRISE ENGINEERING
Salt Lake City Office
6875 South 900 East, Midvale, Utah 84047 | TEL 801.523.0100 | FAX 801.523.0990

June 2, 2022

Bir Thapa
State Soil Scientist
USDA natural Resources Conservation Service
125 South State Street, Room 4402
Salt Lake City, UT 84138-1100

RE: Proposed Culinary Water System Improvement Project
Axtell, Utah

Dear Bir:

The Axtell Community Special Service District (ACSSD) is in the process of performing an environmental review pursuant to the National Environmental Policy Act (NEPA) to assess the potential environmental impacts of ACSSD's proposed culinary water system improvement project in Axtell of Sanpete County, Utah.

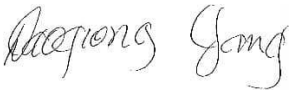
ACSSD's water system provides water to approximately 117 residential connections and two institutional connections. Sunrise Engineering, Inc. has recently completed a master plan for the water system in accordance with the State of Utah Rules Governing Drinking Water Systems (Rules). ACSSD's culinary water system is currently supplied solely by the Michaelson Springs. The Rules requires a public water supplier with more than 100 connections to have at least two reliable water sources. The system has a higher risk of water outages because there are no backup water sources. ACSSD decided to make the following improvements, as shown in the attached Figures 1 and 2, based on identified system deficiencies:

1. Develop the Pole Canyon Springs.
2. Replace approximately 19,000 feet of existing water transmission line.
3. Install approximately 10,500 feet of new waterline to connect the new springs to the existing waterline of the Michaelson Springs.

The proposed project would occur in portions of Sections 24 and 25, Township 20 South (T20S), Range 1 East (R1E) and portions of Sections 19, 20, 21, 26, 27, 28 and 29, T20S, R2E, Salt Lake Base and Meridian (SLBM). All pipelines would be buried at least 4 feet below grade. After construction of the project is complete, the disturbed area, where possible, would be restored to the existing contour to the extent practicable.

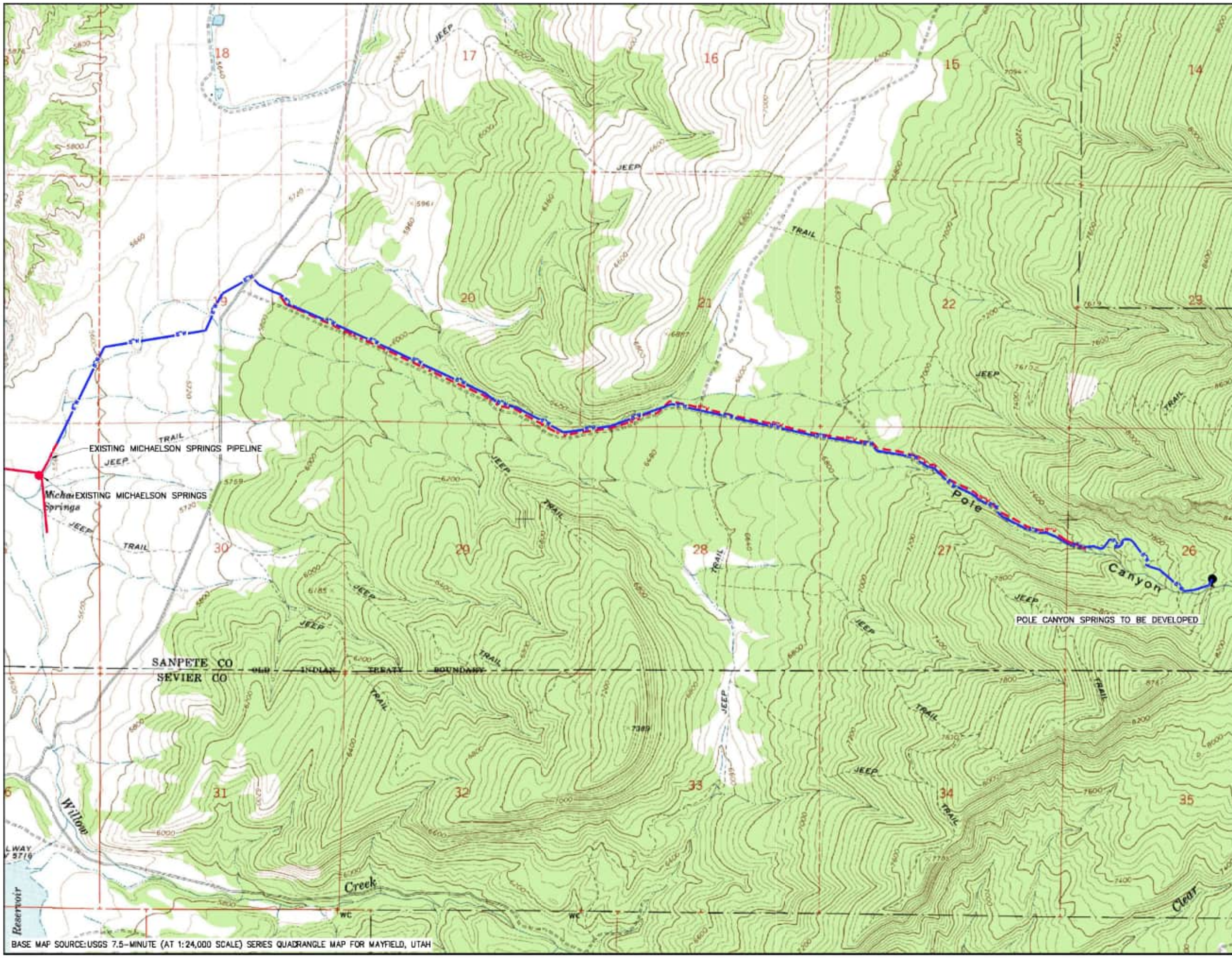
Please review the proposed project, demarcate prime and unique farmland, if any, in the proposed construction area on the enclosed figures and determine any impact. I would appreciate a response within 30 days. Thank you for your assistance.

Sincerely,
Sunrise Engineering, Inc.



Dao Yang, P.E.
Project Engineer/Hydrogeologist
dyang@sunrise-eng.com

Enclosure: Figures 1 and 2



SUNRISE ENGINEERING

6875 SOUTH 900 EAST
SALT LAKE CITY, UTAH 84047
TEL 801.523.0100 FAX 801.523.0990

AXTELL TOWN

POLE CANYON SPRING DEVELOPMENT
ENVIRONMENTAL ASSESMENT
PROJECT LOCATION MAP

FIG. 1

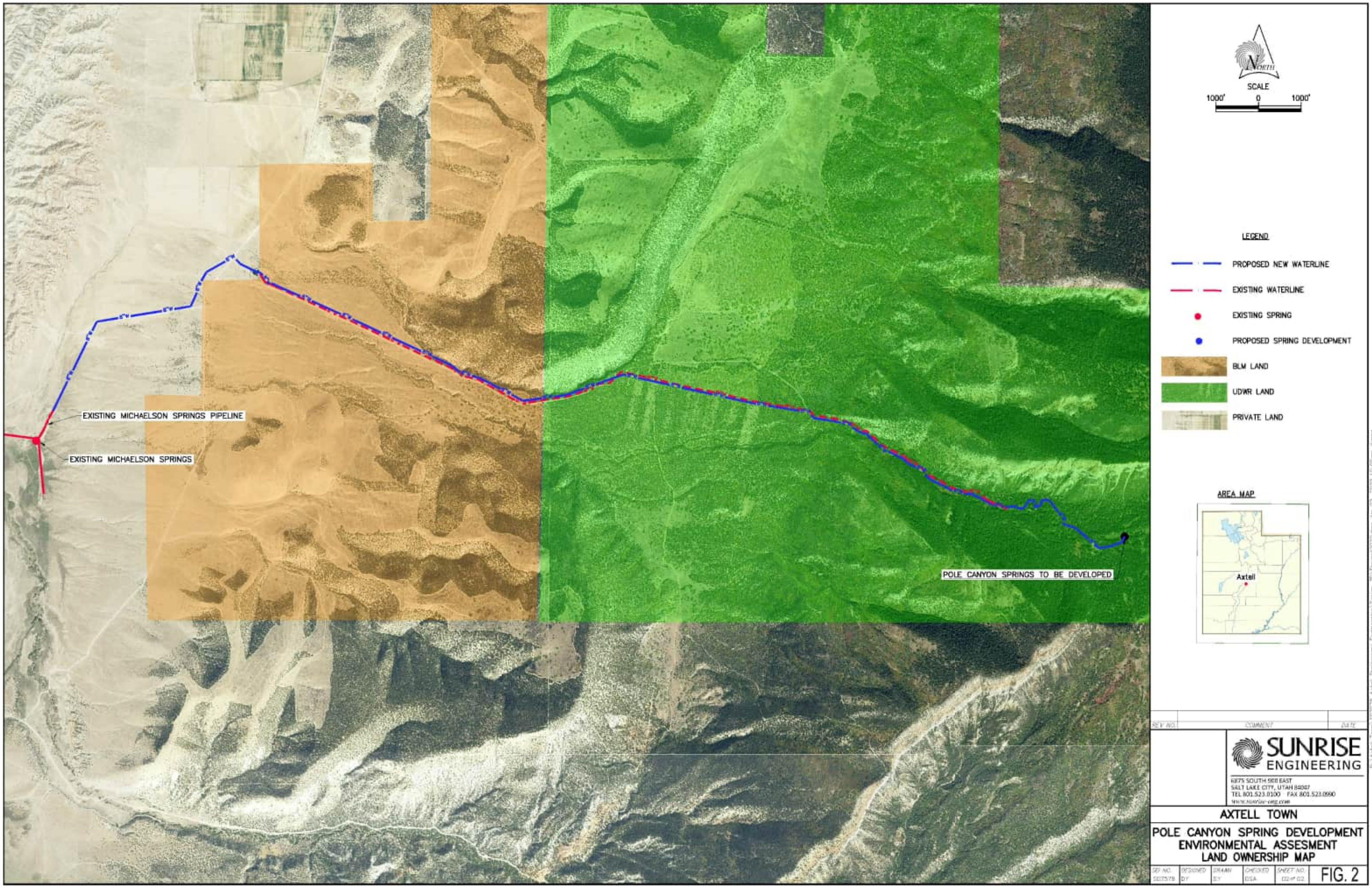

NORTH
SCALE
1000'
0
1000'
LEGEND
PROPOSED NEW WATERLINE
EXISTING WATERLINE
EXISTING SPRING
PROPOSED SPRING DEVELOPMENT
BLM LAND
UDWR LAND
PRIVATE LAND
AREA MAP
Axtell
EXISTING MICHAELSON SPRINGS PIPELINE
EXISTING MICHAELSON SPRINGS
POLE CANYON SPRINGS TO BE DEVELOPED
REV NO.
COMMENT
DATE
SUNRISE ENGINEERING
6875 SOUTH 900 EAST
SALT LAKE CITY, UTAH 84047
TEL 801.523.0100 FAX 801.523.0990
AXTELL TOWN
POLE CANYON SPRING DEVELOPMENT
ENVIRONMENTAL ASSESMENT
LAND OWNERSHIP MAP
SE NO. S07578
DESIGNED DY
DRAWN DY
CHECKED DSA
SHEET NO. 02 of 02

FIG. 2

Sanpete Valley Area, Utah, Parts of Utah and Sanpete Counties

AV—Atepic-Badland association

Map Unit Setting

National map unit symbol: j5rj
Elevation: 6,000 to 7,200 feet
Mean annual precipitation: 12 to 15 inches
Mean annual air temperature: 45 to 46 degrees F
Frost-free period: 100 to 110 days
Farmland classification: Not prime farmland

Map Unit Composition

Atepic and similar soils: 50 percent
Badland: 40 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Atepic

Setting

Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Colluvium and residuum derived from shale

Typical profile

A1 - 0 to 6 inches: channery clay loam
C1 - 6 to 11 inches: channery silty clay loam
C2ca - 11 to 17 inches: channery silty clay loam
Cr - 17 to 40 inches: weathered bedrock

Properties and qualities

Slope: 10 to 30 percent
Depth to restrictive feature: 10 to 20 inches to paralithic bedrock
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high (0.00 to 0.28 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 80 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 5.0
Available water supply, 0 to 60 inches: Very low (about 2.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: R028AY324UT - Upland Shallow Loam (Utah Juniper - Singleleaf Pinyon)
Hydric soil rating: No

Description of Badland

Setting

Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8e
Hydric soil rating: No

Minor Components

Fontreen, eroded

Percent of map unit: 5 percent

Borvant, eroded

Percent of map unit: 5 percent

Data Source Information

Soil Survey Area: Fishlake National Forest, Utah, East Part - Parts of Sevier, Piute, Wayne and Sanpete Counties
Survey Area Data: Version 4, Sep 1, 2022

Soil Survey Area: Manti-Lasal National Forest, Manti Division - Parts of Sanpete and Emery Counties
Survey Area Data: Version 4, Aug 31, 2022

Soil Survey Area: Sanpete Valley Area, Utah, Parts of Utah and Sanpete Counties
Survey Area Data: Version 16, Aug 30, 2022

Soil Survey Area: Sevier County Area, Utah
Survey Area Data: Version 12, Aug 30, 2022

Sanpete Valley Area, Utah, Parts of Utah and Sanpete Counties

FOD—Fontreen cobbly loam, 4 to 20 percent slopes

Map Unit Setting

National map unit symbol: j5tp
Elevation: 6,000 to 7,100 feet
Mean annual precipitation: 11 to 14 inches
Mean annual air temperature: 43 to 45 degrees F
Frost-free period: 80 to 100 days
Farmland classification: Not prime farmland

Map Unit Composition

Fontreen and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Fontreen

Setting

Landform: Alluvial fans
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Alluvium and colluvium derived from limestone, sandstone, shale and chert

Typical profile

A1 - 0 to 4 inches: cobbly loam
A2 - 4 to 15 inches: very gravelly loam
Bk - 15 to 58 inches: extremely gravelly loam
C - 58 to 66 inches: extremely gravelly loam

Properties and qualities

Slope: 4 to 20 percent
Surface area covered with cobbles, stones or boulders: 5.0 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 70 percent
Gypsum, maximum content: 2 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 5.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: B
Ecological site: R028AY338UT - Upland Stony Loam (Pinyon-Utah Juniper)
Hydric soil rating: No

Minor Components

Fontreen

Percent of map unit: 5 percent
Landform: Alluvial fans
Down-slope shape: Concave
Across-slope shape: Convex
Ecological site: R028AY338UT - Upland Stony Loam (Pinyon-Utah Juniper)
Hydric soil rating: No

Borvant

Percent of map unit: 5 percent
Landform: Fan remnants
Down-slope shape: Linear
Across-slope shape: Convex
Ecological site: R028AY320UT - Upland Shallow Hardpan (Pinyon-Utah Juniper)
Hydric soil rating: No

Clegg

Percent of map unit: 5 percent
Landform: Flats, alluvial fans
Landform position (three-dimensional): Talf
Down-slope shape: Concave
Across-slope shape: Concave, convex
Ecological site: R028AY310UT - Upland Loam (Bonneville Big Sagebrush) North

Hydric soil rating: No

Data Source Information

Soil Survey Area: Fishlake National Forest, Utah, East Part - Parts of Sevier, Piute, Wayne and Sanpete Counties
Survey Area Data: Version 4, Sep 1, 2022

Soil Survey Area: Manti-Lasal National Forest, Manti Division - Parts of Sanpete and Emery Counties
Survey Area Data: Version 4, Aug 31, 2022

Soil Survey Area: Sanpete Valley Area, Utah, Parts of Utah and Sanpete Counties
Survey Area Data: Version 16, Aug 30, 2022

Soil Survey Area: Sevier County Area, Utah
Survey Area Data: Version 12, Aug 30, 2022

Sanpete Valley Area, Utah, Parts of Utah and Sanpete Counties

KEG—Kitchell gravelly loam, 25 to 65 percent slopes

Map Unit Setting

National map unit symbol: 2tjrx
Elevation: 6,460 to 9,230 feet
Mean annual precipitation: 16 to 22 inches
Mean annual air temperature: 41 to 45 degrees F
Frost-free period: 70 to 90 days
Farmland classification: Not prime farmland

Map Unit Composition

Kitchell and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kitchell

Setting

Landform: Mountain slopes
Landform position (three-dimensional): Mountainflank
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Slope alluvium and colluvium derived from limestone, sandstone and shale

Typical profile

A1 - 0 to 5 inches: gravelly loam
A2 - 5 to 14 inches: gravelly loam
ABk - 14 to 22 inches: extremely cobbly loam
Bk1 - 22 to 46 inches: extremely stony loam
Bk2 - 46 to 60 inches: extremely stony loam

Properties and qualities

Slope: 25 to 65 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 60 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: B
Ecological site: R047XA408UT - Mountain Gravelly Loam (Douglas-fir)
Hydric soil rating: No

Minor Components

Unnamed soils
Percent of map unit: 15 percent
Hydric soil rating: No

Data Source Information

Soil Survey Area: Fishlake National Forest, Utah, East Part - Parts of Sevier, Piute, Wayne and Sanpete Counties
Survey Area Data: Version 4, Sep 1, 2022

Soil Survey Area: Manti-Lasal National Forest, Manti Division - Parts of Sanpete and Emery Counties
Survey Area Data: Version 4, Aug 31, 2022

Soil Survey Area: Sanpete Valley Area, Utah, Parts of Utah and Sanpete Counties
Survey Area Data: Version 16, Aug 30, 2022

Soil Survey Area: Sevier County Area, Utah
Survey Area Data: Version 12, Aug 30, 2022

Sanpete Valley Area, Utah, Parts of Utah and Sanpete Counties

SCE2—Sanpete stony fine sandy loam, 5 to 30 percent slopes, eroded

Map Unit Setting

National map unit symbol: j5x5
Elevation: 5,100 to 6,600 feet
Mean annual precipitation: 8 to 12 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 115 to 130 days
Farmland classification: Not prime farmland

Map Unit Composition

Sanpete, eroded, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Sanpete, Eroded

Setting

Landform: Alluvial flats, alluvial fans
Down-slope shape: Linear, concave
Across-slope shape: Linear, convex
Parent material: Alluvium derived from limestone, sandstone, and shale

Typical profile

A - 0 to 11 inches: stony fine sandy loam
Bk1 - 11 to 17 inches: very gravelly sandy loam
Bk2 - 17 to 47 inches: extremely gravelly sandy loam
C - 47 to 59 inches: very gravelly sandy loam

Properties and qualities

Slope: 5 to 30 percent
Surface area covered with cobbles, stones or boulders: 7.0 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 60 percent
Gypsum, maximum content: 2 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 5.0
Available water supply, 0 to 60 inches: Low (about 3.3 inches)

Sanpete Valley Area, Utah, Parts of Utah and Sanpete Counties

RO—Rock land

Map Unit Composition

Rock land: 95 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Rock Land

Setting

Landform: Mountain slopes
Landform position (three-dimensional): Mountainflank
Down-slope shape: Convex
Across-slope shape: Convex

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8s
Hydric soil rating: No

Minor Components

Shallow soils

Percent of map unit: 5 percent

Data Source Information

Soil Survey Area: Fishlake National Forest, Utah, East Part - Parts of Sevier, Piute, Wayne and Sanpete Counties
Survey Area Data: Version 4, Sep 1, 2022

Soil Survey Area: Manti-Lasal National Forest, Manti Division - Parts of Sanpete and Emery Counties
Survey Area Data: Version 4, Aug 31, 2022

Soil Survey Area: Sanpete Valley Area, Utah, Parts of Utah and Sanpete Counties
Survey Area Data: Version 16, Aug 30, 2022

Soil Survey Area: Sevier County Area, Utah
Survey Area Data: Version 12, Aug 30, 2022

Attachment C

Wetland Evaluation Report

Brighton, UT 84121

March 07, 2024

Jesse Ralphs, Vice President & Principal Engineer
Sunrise Engineering, Inc.
25 East 500 North,
Fillmore, Utah 84631

RE: Axtell City Special Service District Water Project – U.S. Army Corps of Engineers and Utah Division of Water Rights Jurisdictional Determination, Axtell, Utah.

Mr. Ralphs,

Cardinal EC has reviewed the Axtell Community Special Service District (ACSSD) Water Project to identify the presence of wetlands, streams, waterbodies, or other aquatic features within the Project, determine the jurisdictional status of each feature as defined by the U.S. Army Corps of Engineers (USACE) and the Utah Division of Water Rights (UDWRi), and identify/quantify the potential impacts to these features that could result from Project construction. This memo details Cardinal EC's evaluation of the Project, jurisdictional determinations and conclusions based on an evaluation of the Project in 2020 and 2022 against the backdrop of the current-day regulatory setting.

This review has concluded that no USACE-jurisdictional wetlands, waters of the U.S., or other regulated waterbodies occur within the Project, based on the 2023 Final Rule (2023 Rule) issued by the USACE and U.S. Environmental Protection Agency (EPA) on September 8, 2023. Cardinal EC has determined that the Pole Canyon drainage does not meet the criteria to be considered Waters of the U.S., nor does the drainage support a significant nexus to traditional navigable waters, the territorial seas, or interstate waters.

This review has concluded that no UDWRi-jurisdictional "natural streams" occur within the Project. During the field surveys, Cardinal EC concluded that the Pole Canyon drainage is an ephemeral feature that does not meet the definition of "natural stream" as defined by UDWRi. The upper reach of the Pole Canyon drainage between the Upper and Lower Spring Development Areas did support flowing water; however, these waters are confined to a man-made ditch thereby exempting it from jurisdiction under UDWRi. All other surface water flow, downstream of the Lower Spring Development Area, diverts belowground with no other surface water features for the remaining 6 miles of the Pole Canyon drainage to Willow Creek within the Project.

Project

The Project site is located within an existing waterline easement approximately 4.5 miles east of Axtell, Sanpete County, UT within private lands, the UDWR 12-mile Wildlife Management Area (WMA), and on lands managed by the Bureau of Land Management (BLM) Richfield Field Office in Township (T) 20 South (S) Range (R) 1 East (E) in portions of sections 24 and 25; and T 20 S, R 2 E, portions of sections 19, 20, 21, 26, 27, 28, and 29 (Figure 1.1). Its location is shown on the Mayfield, Utah, U.S. Geological Survey (USGS) 7.5' quadrangle.

The ACSSD, located in Axtell, Utah, has proposed improvement of its existing culinary water supply system for the rural residents of Axtell, Sanpete County, Utah. The Proposed Project is 5.83 miles long and would include construction of new 6- to 8-inch diameter buried water line, and improvement to the spring water collection system in Pole Canyon.

Methods

This memo is provided as a request for a jurisdictional determination for the wetlands, streams, waterbodies, or other aquatic features that may be affected during Project construction. Cardinal EC completed a desktop analysis of the Project to identify the potential occurrence of USACE jurisdictional wetlands and Waters of the U.S. and UDWRi jurisdictional "natural streams" prior to initiating the field evaluation. This included review of:

- U.S. Fish and Wildlife Service National Wetland Inventory data;
- Topographic map review to identify bluelines and other potential water-conveying features,

- Review of aerial imagery;
- Hydrologic geospatial data available from the United States Geological Survey and Department of Agriculture Natural Resources Conservation Service;
- Identification of Natural Resources Conservation Service (NRCS) list of soils in the Survey area and the soils' listing status as hydric;
- Review of aerial imagery; and
- Review of USACE and UDWRi regulatory setting.

Field work to identify USACE and UDWRi jurisdictional features included pedestrian transects in areas where the Project intercepted wetlands, streams, waterbodies, or other aquatic features in October 2020 and May 2022. All potentially jurisdictional features identified from the desktop analysis were investigated, photographed, documented, field verified, and reviewed for USACE and UDWRi jurisdictional status.

Wetlands and Waters of the U.S. were identified using methods described in the 1987 USACE Wetland Delineation Manual (USACE 1987) and the 2008 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0 (USACE 2008). A preliminary assessment of jurisdictional status of all delineated wetlands and Waters of the U.S. was conducted using USACE's Jurisdictional Determination Form Instructional Guidebook, Version 2.0. Waters of the U.S. were identified based on the current regulatory definition, and on the presence/absence of a defined channel bottom within intermittent stream systems as described in the USACE 2008 A Field Guide to the Identification of the Ordinary High-Water Mark in the Arid West Region of the United States (Lichvar and McColley 2008).

Identification of UDWRi jurisdictional features was completed using field techniques to document characteristics of features that meet the criteria to be considered a "natural stream".

Wetlands, Streams, and Waters of the U.S.

Pole Canon Drainage

The Pole Canyon drainage is an approximately 6.0-mile-long drainage that drains Pole Canyon, serves as a collector for adjacent small canyons near Pole Canyon and terminates as a tributary drainage to Willow Creek. Results of the field inventory documented that approximately 1,300 feet (0.25 mi.) of the upper Pole Canyon drainage support characteristics of an intermittent feature driven by spring-flow generated by the Pole Canyon spring system. From the Upper Spring Development Area, overland flow initiates as a low energy feature within a small wet meadow and redirected to an approximately 750-foot-long man-made ditch (1-3 feet wide) that diverts flow to the Lower Spring Development Area. From the upper Lower Spring Development Area, the spring flow moves across a second wet meadow (as sheet flow) with no discernable channel. From this location, all surface water flows return belowground with no remaining surface features through the length of the Pole Canyon drainage within the Project.

No other evidence of perennial or intermittent surface water was documented below the Lower Spring Development Project Area within the Pole Canyon drainage. Cardinal EC classified the remaining portions of the Pole Canyon drainage as ephemeral transitioning to upland swale with minimal evidence of regular hydrology to drive or sustain an ecosystem that would distinguish it from the surrounding upland environment. No continual overland flow or downstream connection to other streams, creeks, wetlands, or other potentially jurisdictional features was documented beyond this location.

As proposed, the Project's buried waterline would be located within an existing waterline easement adjacent to an existing and unimproved two-track road and in general proximity to Pole Canyon drainage. Construction would require an approximately 20- to 25-foot-wide construction corridor which would be reclaimed following installation of the pipeline. Based upon Cardinal EC's field review, the Project crosses the Pole Canyon drainage seven times between the Upper Spring Development Area and the western extent of the Project near Willow Creek. Five of these crossings would occur in sections of the Pole Canyon drainage that were identified as ephemeral or upland swale.

Two of these crossings were identified on locations of the Pole Canyon drainage identified as intermittent, however these crossings occur on the diverted, man-made, sections between the upper and lower spring development areas.

Pole Canyon Spring

The Pole Canyon spring complex is located near the top of Pole Canyon at approximately 8,000 feet elevation. While the Pole Canyon spring may consist of a complex of other surface features, Cardinal EC only evaluated only those portions of the Pole Canyon spring that occurred in or near the Project. Cardinal EC identified two distinct wet meadows within the Project that occur within the Upper and Lower Spring Development Areas. During both surveys, Cardinal EC documented hydric vegetation (*Carex* sp., *Juncus* sp., *Phalaris* sp., *Distichlis* sp. and aquatic vegetation), saturated low-chroma hydric soils, and clear evidence of surface and subsurface. Cardinal EC identified that the Upper and Lower Spring Development Area wet meadow wetlands as approximately 3,200 square feet (0.07 ac.) and 13,750 square feet (0.32 ac.) respectively. At this time the detail of the work proposed in the Upper and Lower Spring Development Areas is unknown. Cardinal EC has assumed that Project construction would result in temporary disturbance to all, or portions of, these wet meadows and that these areas would be reclaimed following construction. Cardinal EC has also assumed that a permanent spring collection system would be installed and could consist of one or more spring water collection boxes. The spring water collection system would remain as a permanent structure for the life of the Project resulting in approximately 50 square feet of permanent disturbance.

Regulatory Framework

U.S. Army Corps of Engineers

The Clean Water Act (CWA) regulates construction activities associated with Traditional Navigable Waters (Navigable Waters), tributaries of Navigable Waters, and wetlands adjacent to Navigable Waters. Section 404 of the CWA grants federal jurisdiction over Navigable Waters and their tributaries extending to the ordinary high-water mark (OHWM), in the absence of adjacent wetlands.

USACE and U.S. Environmental Protection Agency (USEPA) published the Jurisdictional Determination Form Instructional Guidebook (USACE and EPA 2007) to support an agency jurisdictional determination for a water body. All determinations for non-navigable, isolated waters must be submitted to USACE and USEPA headquarters for review before a final decision on the jurisdictional determination can be made. Only USACE can make a jurisdictional determination for Waters of the U.S., including wetlands.

Any impacts to wetlands or Waters of the U.S. require that a Joint Application for Permits be submitted and approved, as required under Section 404 of the CWA, for dredged or fill materials into Waters of the U.S., and for filling or dredging work within continuously flowing streams.

As of September 2023, the USACE now expressly asserts jurisdiction over: Waters which are currently used, or were used in the past, or may be susceptible to use, in interstate or foreign commerce; Territorial seas; Interstate waters; Impoundments; Tributaries of traditional navigable waters or impoundments that are relatively permanent, standing, or continuously flowing bodies of water; Wetlands with continuous surface connection to traditional navigable waters or relatively permanent, standing, or continuously flowing bodies of water qualifying as jurisdictional impoundments or tributaries.

Utah Division of Water Rights

Utah Code Section 73-3-29 requires any person, governmental agency, or other organization wishing to alter the bed or banks of a natural stream to obtain written authorization from the State Engineer prior to beginning work. As defined under Utah Administrative Code R655-13 (Rule R655-13) a natural stream is “Any waterway, along with its fluvial system, that receives sufficient water to sustain an ecosystem that distinguishes it from the surrounding upland environment.” As identified by UDWRi canals, ditches, or other man-made channels are not considered natural streams (UDWRi 2023). Any anticipated Impacts to natural streams within the state of Utah are managed through the state’s Stream Alteration Program, administered by UDWRi. In cases where the impacts to the natural stream are jurisdictional under both state and federal law, UDWRi and USACE have issued Programmatic General Permit 10 (PGP-10) which allows an applicant to obtain both state approval and authorization under Section 404 of the

Clean Water Act though a single application process (State Stream Alteration Program). In the unlikely event that a specific stream, river, or other regulated waterbody is determined to be USACE non-jurisdictional, impacts may still be regulated under UDWRi.

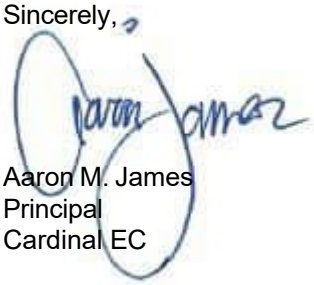
Conclusions

It is Cardinal EC's conclusion that neither Pole Canyon Drainage nor Pole Canyon Spring would be considered jurisdictional under USACE. Neither of these features support a significant nexus to traditional navigable waters, territorial seas, or interstate waters. Additionally, the Pole Canyon drainage is not a tributary of a traditional navigable water or an impoundment that is relatively permanent, standing, or continuously flowing body of water. While the presence of non-jurisdictional features within the boundary of a given project may not necessarily result in a permittable action, USACE remains the agency charged with approving Jurisdictional Determinations. While Cardinal EC's conclusions represent the summation of experience and understanding of current-day regulatory pathways associated with wetland delineation and permitting, and a clear determination of non-jurisdictional status is easily concluded, a formal non-jurisdictional determination can only be issued by USACE, should one be required.

It is Cardinal EC's conclusion that the upper reach of the Pole Canyon drainage between the Upper and Lower Spring Development Areas did support flowing water; however, these waters are confined to a man-made ditch thereby exempting it from jurisdiction under UDWRi. All other portions of the Pole Canyon drainage within the Project were identified as ephemeral to upland swale, supported no other surface water features, and would not be considered UDWRi jurisdictional as they do not support characteristics of a "natural stream".

Please feel free to contact me directly if you have any questions. I can be reached via email at aaron.james@cardinal-ec.com or by phone at (801) 719-9132.

Sincerely,



Aaron M. James
Principal
Cardinal EC

Attachments:
References
Figures of upper Pole Canyon drainage and Upper and Lower Spring Development Areas
Photos

References:

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. Report No. FWS/OBS79/31. http://www.charttiff.com/pub/WetlandMaps/Cowardin.pdf. U.S. Department of the Interior, Fish and Wildlife Service, Office of Biological Services, Washington, D.C. Government Printing Office, Washington, D.C.

Lichvar, R.W. 2013. The National Wetland Plant List 2013 Wetland Ratings. U.S. Army Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory. Hanover, New Hampshire.

Natural Resources Conservation Service (NRCS). 2022a. Web Soil Survey of the Wetland Survey Area. Available ahttps://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspxt. Accessed May 2022.

NRCS. 2022b. National List of Hydric Soils, Query by State for Utah. Available at https://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/use/hydric/. Accessed February 3, 2021.

Relocation of Natural Streams, Utah Code Annotated § 73-3-29 (2014).

Stream Alterations, Utah Administrative Code R655-13 (2019).

U.S. Army Corps of Engineers, (USACE). 1987. U.S. Army Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1. NTIS No. AD A176 912. http://el.erdc.usace.army.mil/wetlands/pdfs/wlman87.pdf. U.S. Army Corps of Engineers, Environmental Laboratory, Waterways Experiment Station, Vicksburg, Mississippi. January.

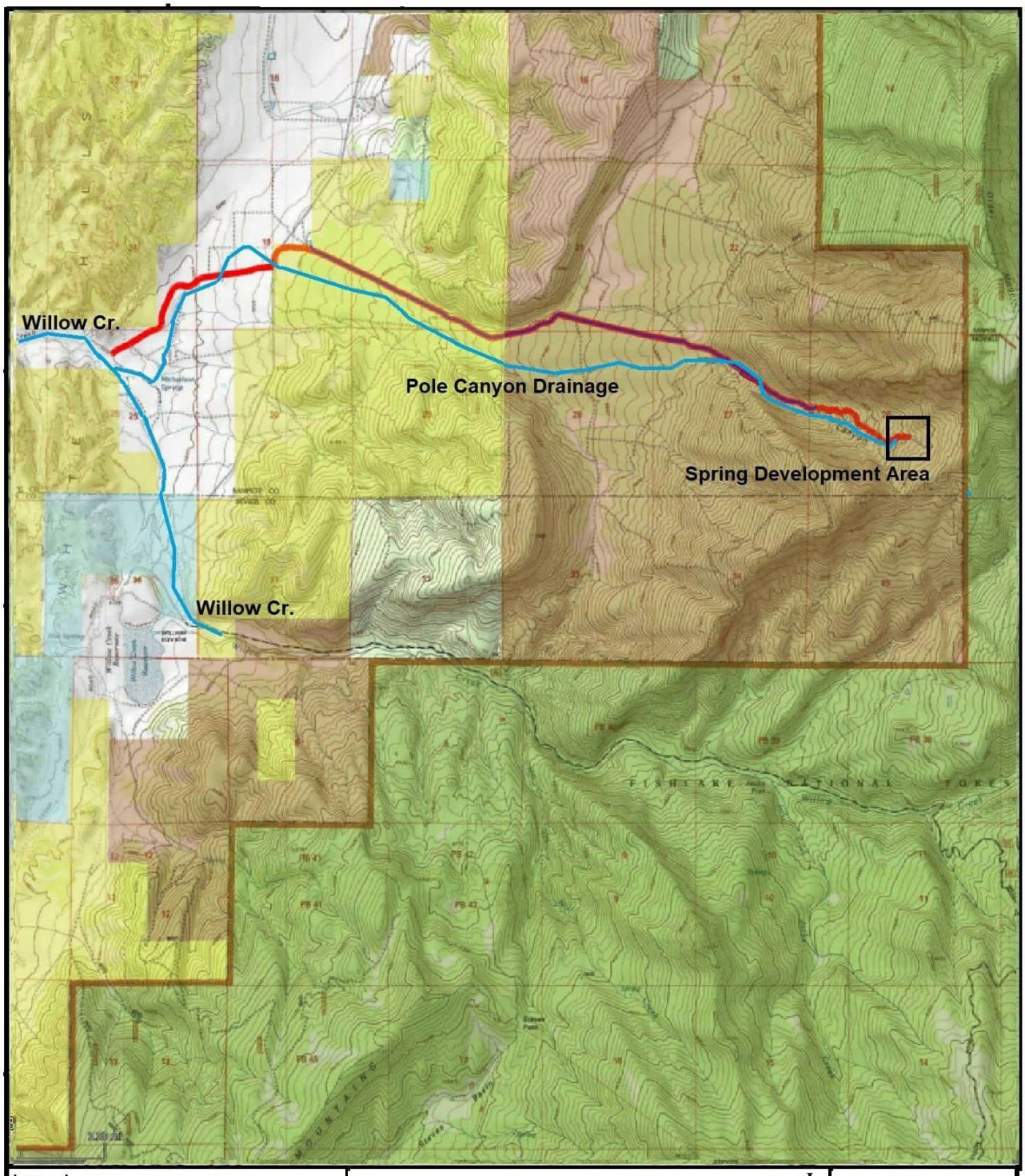
USACE. 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0). U.S. Army Corps of Engineers Engineer Research and Development Center. Vicksburg, MS.

USACE and USEPA. 2007. U.S. Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook. U.S. Army Corps of Engineers and the U.S. Environmental Protection Agency. May 30.

United States Department of Agriculture, Natural Resources Conservation Service (NRCS). 2022. Soil Survey Geographic (SSURGO) database for Lehi Area, Utah - Part of Utah County. Available online at http://websoilsurvey.nrcs.usda.gov.

United States Department of the Interior, United States Fish and Wildlife Service (USFWS). 2022. National Wetlands Inventory (NWI) Mapper. Available online at http://www.fws.gov/wetlands/data/mapper.

Utah Division of Water Rights (UDWRi). 2023. Stream Alteration Program Fact Sheet SA-1, State Stream Alteration Program. Revised: March 2, 2023. Available at: https://waterrights.utah.gov/strmalt/whitepapers/whitepaper04.pdf.



Legend

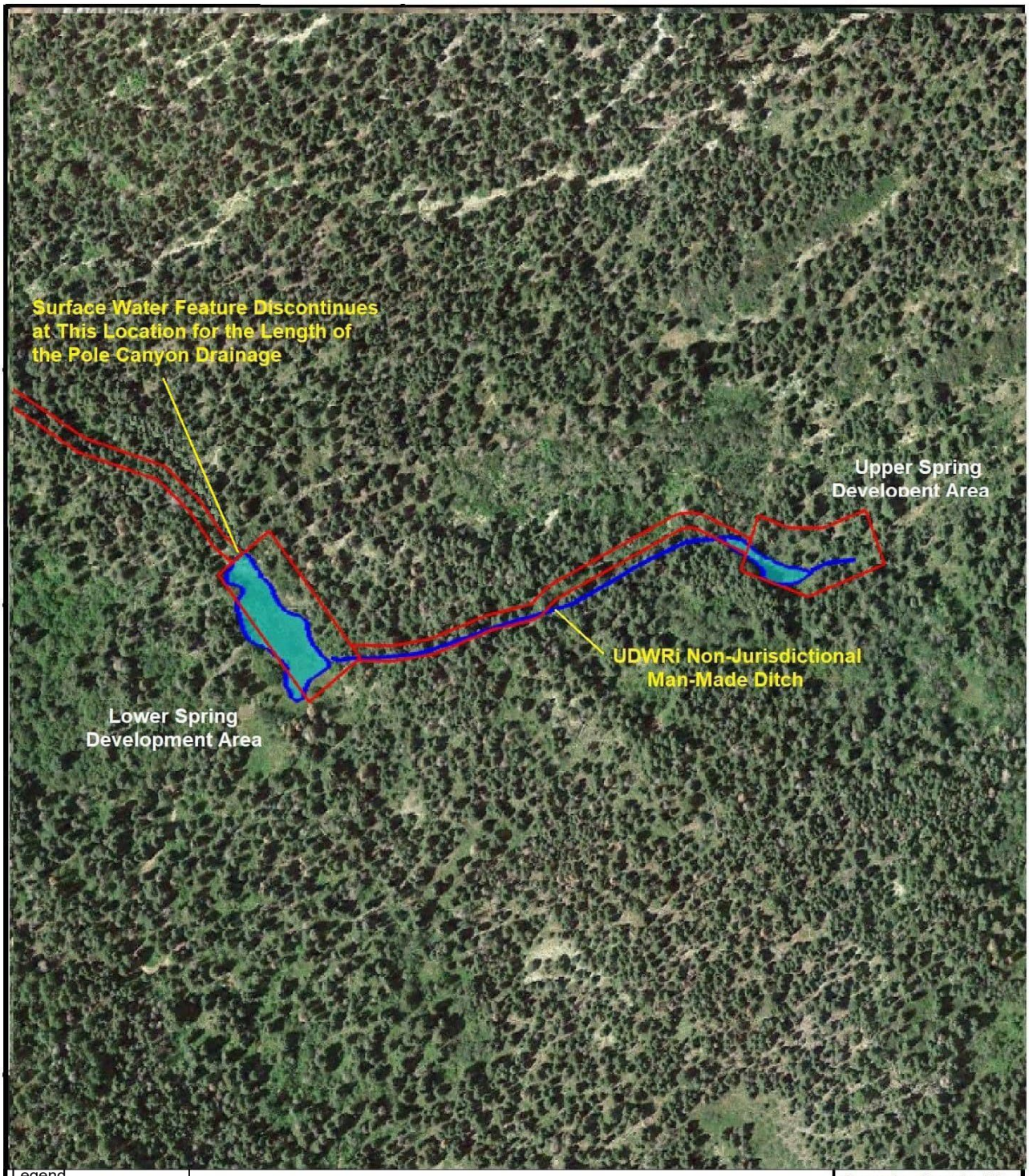
- Proposed Action
- Existing Cement Waterline
- SITLA
- usFs
- Bureau of Land Management
- Private Ownership
- UDWR

Proposed

0 2mi

Mayfield, Utah 7.5 minute USGS Topographic Map

Sanpete County, UT
T20S R1E, T20S R2E



Legend

D Proposed Action

Q Wet Meadow

Appx. Surface Water

FlowLocatoin

Pole Ca yon Spring Development Area

Sanpete County, UT
r20s R1E,r20s R2E

0 650 ft.

Aerial Imagery 2020

Photographs of Axtell Community Special Service District Pole Canyon Drainage

Upper Spring Development Area

Upper Spring Development Area

Lower Spring Development Area

Lower Spring Development Area

Photographs of Axtell Community Special Service District Pole Canyon Drainage

Portion of man-made ditch between Upper and Lower Spring Development Areas

Portion of man-made ditch between Upper and Lower Spring Development Areas

Portion of Pole Canyon Drainage below Lower Spring Development Area classified as Ephemeral

Portion of Pole Canon Drainage Project Crossing classified as Ephemeral (Crossing location near the mouth of Pole Canyon)

Photographs of Axtell Community Special Service District Pole Canyon Drainage

Portion of Pole Canon Drainage Project Crossing classified as Ephemeral (Crossing location near the mouth of Pole Canyon)

Portion of Pole Canon Drainage Project Crossing classified as Ephemeral to Upland Swale (Crossing location 1.3 mi. upstream of Willow Creek)

Portion of Pole Canon Drainage Project Crossing classified as Upland Swale (Crossing location 1.0 mi. upstream of Willow Creek)

Portion of Pole Canon Drainage Project Crossing classified as Upland Swale

Attachment D

Letter to USACE

SUNRISE ENGINEERING
Salt Lake City Office
6875 South 900 East, Midvale, Utah 84047 | TEL 801.523.0100 | FAX 801.523.0990

June 2, 2022

Ms. Hollis Jencks
U.S. Army Corps of Engineers Utah Regulatory Office
533 West 2600 South, Suite 150
Bountiful, UT 84010

RE: Proposed Culinary Water System Improvement Project
Axtell, Utah

Dear Ms. Jencks,

The Axtell Community Special Service District (ACSSD) is in the process of performing an environmental review pursuant to the National Environmental Policy Act (NEPA) to assess the potential environmental impacts of ACSSD's proposed culinary water system improvement project in Axtell of Sanpete County, Utah.

ACSSD's water system provides water to approximately 117 residential connections and two institutional connections. Sunrise Engineering, Inc. has recently completed a master plan for the water system in accordance with the State of Utah Rules Governing Drinking Water Systems (Rules). ACSSD's culinary water system is currently supplied solely by the Michaelson Springs. The Rules requires a public water supplier with more than 100 connections to have at least two reliable water sources. The system has a higher risk of water outages because there are no backup water sources. ACSSD decided to make the following improvements, as shown in the attached Figures 1 and 2, based on identified system deficiencies:

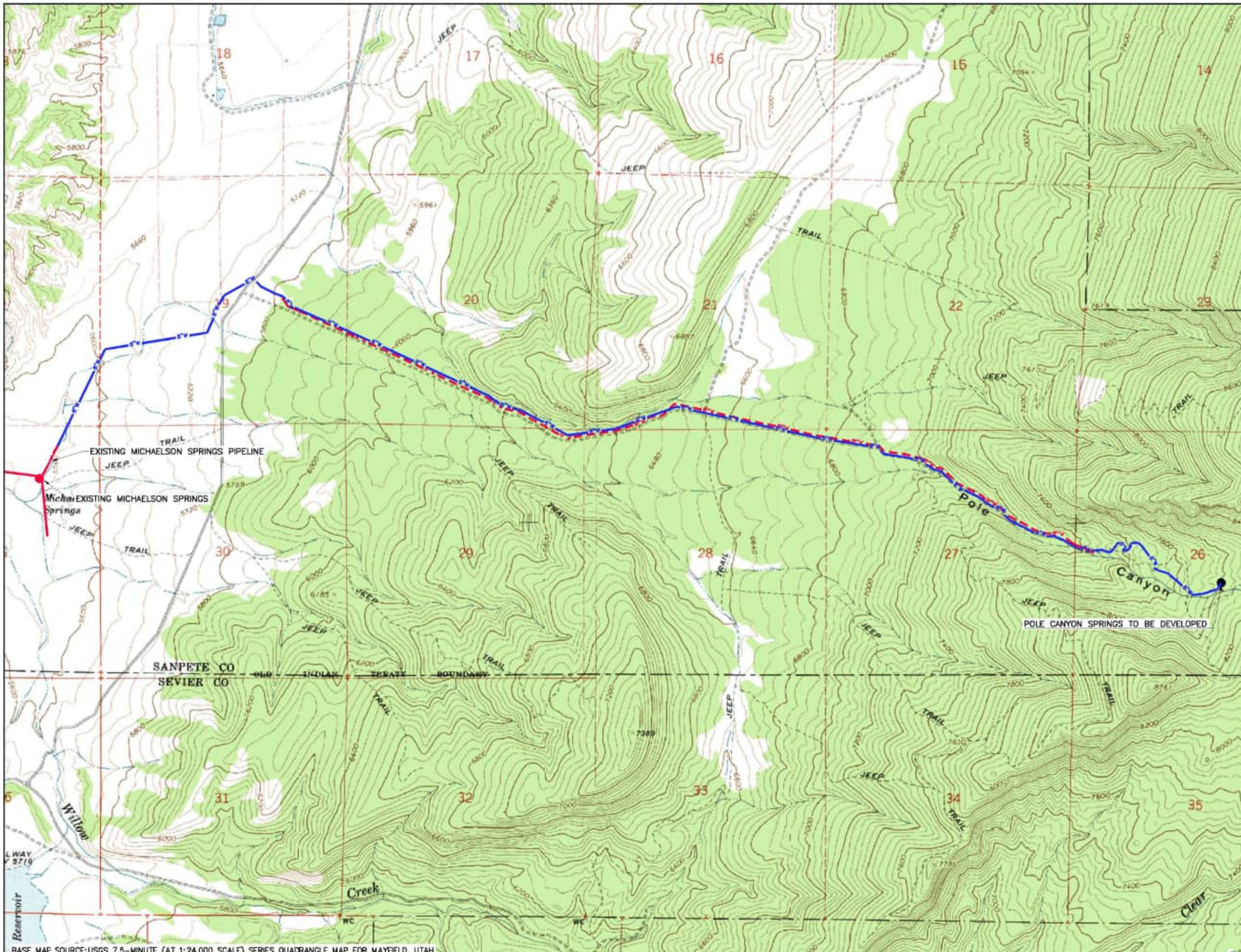
1. Develop the Pole Canyon Springs.
2. Replace approximately 19,000 feet of existing water transmission line.
3. Install approximately 10,500 feet of new waterline to connect the new springs to the existing waterline of the Michaelson Springs.

The proposed project would occur in portions of Sections 24 and 25, Township 20 South (T20S), Range 1 East (R1E) and portions of Sections 19, 20, 21, 26, 27, 28 and 29, T20S, R2E, Salt Lake Base and Meridian (SLBM). All pipelines would be buried at least 4 feet below grade. After construction of the project is complete, the disturbed area, where possible, would be restored to the existing contour to the extent practicable.

Please review the project and I would appreciate a response within 30 days. Thank you for your assistance.

Sincerely,
Sunrise Engineering, Inc.

Dao Yang, P.E.
Project Engineer/Hydrogeologist
dyang@sunrise-eng.com
Enclosure: Figures 1 and 2



REV NO.	COMMENT	DATE

SUNRISE ENGINEERING

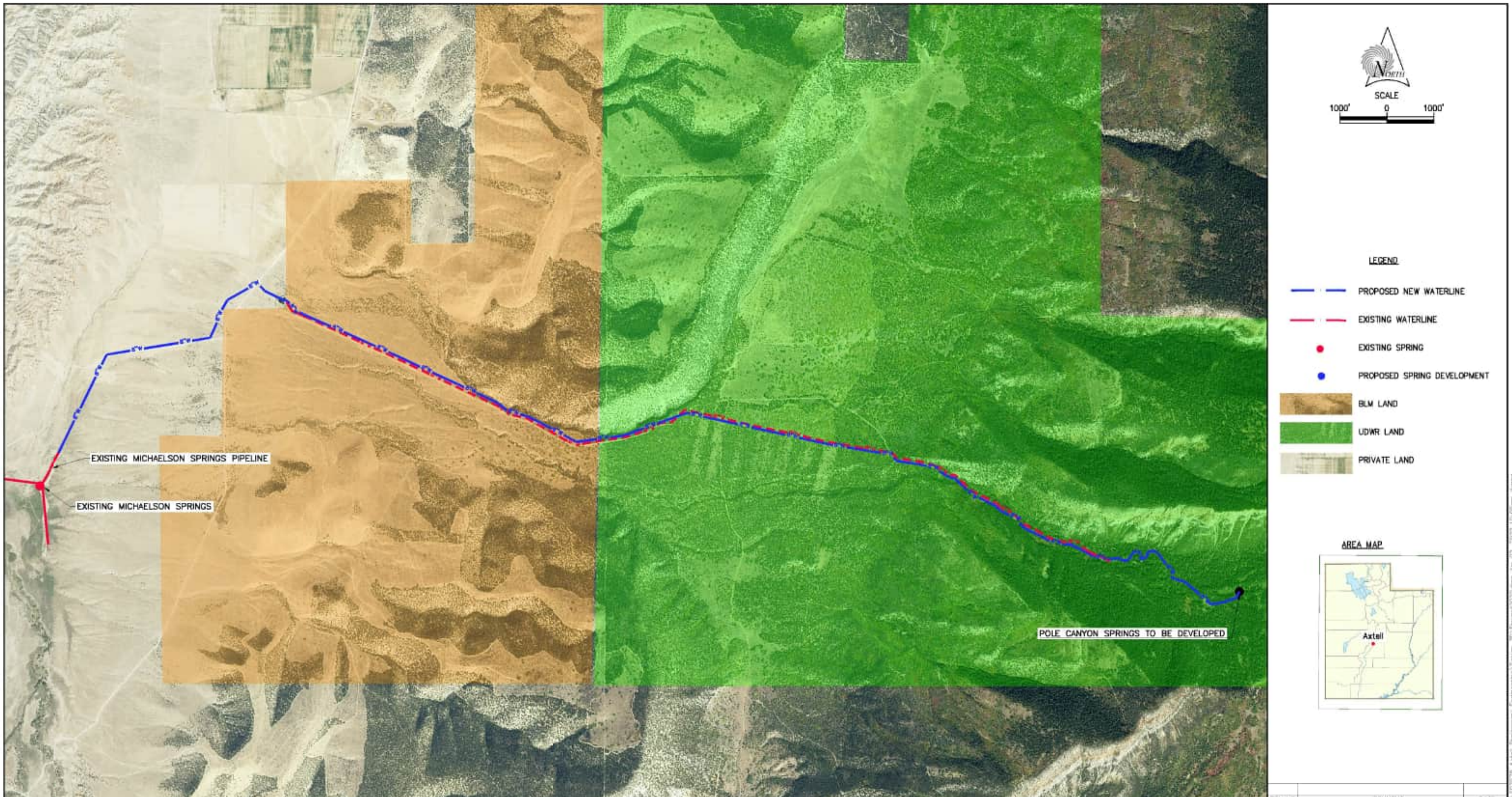
6875 SOUTH 900 EAST
SALT LAKE CITY, UTAH 84047
TEL 801.523.0100 FAX 801.523.0990
www.sunrise-eng.com

AXTELL TOWN

POLE CANYON SPRING DEVELOPMENT ENVIRONMENTAL ASSESMENT PROJECT LOCATION MAP

SEI NO.	DESIGNED	DRAWN	CHECKED	SHEET NO.	
S07578	DY	DY	DSA	01 of 02	FIG. 1

BASE MAP SOURCE: USGS 7.5-MINUTE (AT 1:24,000 SCALE) SERIES QUADRANGLE MAP FOR MAYFIELD, UTAH



REV NO.	COMMENT	DATE

SUNRISE ENGINEERING
6875 SOUTH 900 EAST
SALT LAKE CITY, UTAH 84047
TEL 801.523.0100 FAX 801.523.0990
www.sunrise-eng.com

AXTELL TOWN

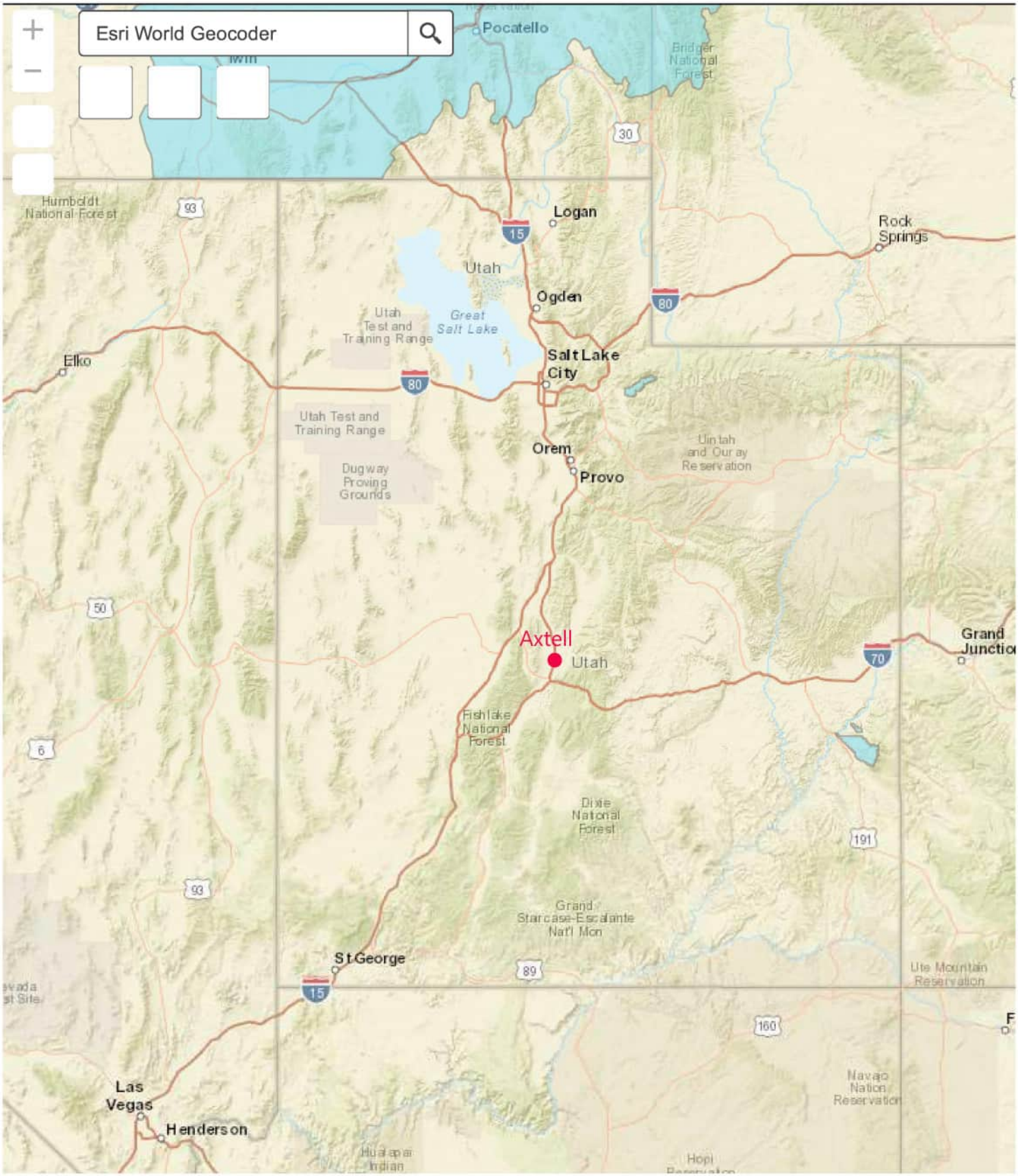
POLE CANYON SPRING DEVELOPMENT ENVIRONMENTAL ASSESMENT LAND OWNERSHIP MAP

SE NO.	DESIGNED	DRAWN	CHECKED	SHEET NO.	
S07578	DY	DY	DSA	02 of 02	FIG. 2

Attachment E

Sole Source Aquifer Map

Sole Source Aquifers



60mi

39.903 -112.955 Degrees

Attachment F

Correspondence with Utah Public Lands Policy Coordination Office

Dao Yang

From: Sindy Smith <sindysmith@utah.gov>
Sent: Thursday, June 30, 2022 2:34 PM
To: Dao Yang
Subject: Re: Axtell Community Special Service District's Culinary Water System Improvement Project

Dao,

No comments received on this project. I'm taking Friday off. The project will be closed.

Best,

Sindy

On Fri, Jun 3, 2022 at 7:58 AM Dao Yang <dyang@sunrise-eng.com> wrote:

> Thanks!

From: Sindy Smith <sindysmith@utah.gov>
Sent: Friday, June 3, 2022 7:48 AM
To: Dao Yang <dyang@sunrise-eng.com>
Subject: Re: Axtell Community Special Service District's Culinary Water System Improvement Project

Dao,

The RDCC Project No. for this project is 82843. The comment period closes July 1st.

Best,

Sindy

On Thu, Jun 2, 2022 at 3:43 PM Sindy Smith <sindysmith@utah.gov> wrote:

> Will do.

On Thu, Jun 2, 2022 at 3:42 PM Dao Yang <dyang@sunrise-eng.com> wrote:

> Sindy,
>
> Please post the attached project to your RDCC website.
>
> Thanks,
>
> Dao

DAO YANG, P.E.
Project Manager/Hydrogeologist

dyang@sunrise-eng.com
6875 South 900 East, Salt Lake City, Utah 84047
TEL 801.838.8326 CELL 801.243.3314
sunrise-eng.com

--

Sindy Smith

RDCC Coordinator

Resource Development Coordinating Committee

Public Lands Policy Coordinating Office

State of Utah

3760 S. Highland Drive

Third Floor

Salt Lake City, Utah. 84106

sindysmith@utah.gov

publiclands.utah.gov

Mobile: 385-522-0007

--

Sindy Smith

RDCC Coordinator

Resource Development Coordinating Committee

Public Lands Policy Coordinating Office

State of Utah

3760 S. Highland Drive

Third Floor

Salt Lake City, Utah. 84106

sindysmith@utah.gov

publiclands.utah.gov

Mobile: 385-522-0007

This e-mail message is for the sole use of the intended recipient(s) and may contain privileged or confidential information. Unauthorized use, distribution, review or disclosure is prohibited.

--
Sindy Smith
RDCC Coordinator
Resource Development Coordinating Committee
Public Lands Policy Coordinating Office

State of Utah

3760 S. Highland Drive

Third Floor

Salt Lake City, Utah. 84106

sindysmith@utah.gov

publiclands.utah.gov

Mobile: 385-522-0007

SUNRISE ENGINEERING
Salt Lake City Office
6875 South 900 East, Midvale, Utah 84047 | TEL 801.523.0100 | FAX 801.523.0990

June 2, 2022

Ms. Sindy Smith, RDCC Coordinator
Utah Resource Development Coordinating Committee
Public Lands Policy Coordination Office
5110 State Office Building
P.O. Box 141107
Salt Lake City, UT 84114-1107
Via Email: sindysmith@utah.gov

RE: Proposed Culinary Water System Improvement Project
Axtell, Utah

Dear Ms. Smith:

The Axtell Community Special Service District (ACSSD) is in the process of performing an environmental review pursuant to the National Environmental Policy Act (NEPA) to assess the potential environmental impacts of ACSSD's proposed culinary water system improvement project in Axtell of Sanpete County, Utah.

ACSSD's water system provides water to approximately 117 residential connections and two institutional connections. Sunrise Engineering, Inc. has recently completed a master plan for the water system in accordance with the State of Utah Rules Governing Drinking Water Systems (Rules). ACSSD's culinary water system is currently supplied solely by the Michaelson Springs. The Rules requires a public water supplier with more than 100 connections to have at least two reliable water sources. The system has a higher risk of water outages because there are no backup water sources. ACSSD decided to make the following improvements, as shown in the attached Figures 1 and 2, based on identified system deficiencies:

1. Develop the Pole Canyon Springs.
2. Replace approximately 19,000 feet of existing water transmission line.
3. Install approximately 10,500 feet of new waterline to connect the new springs to the existing waterline of the Michaelson Springs.

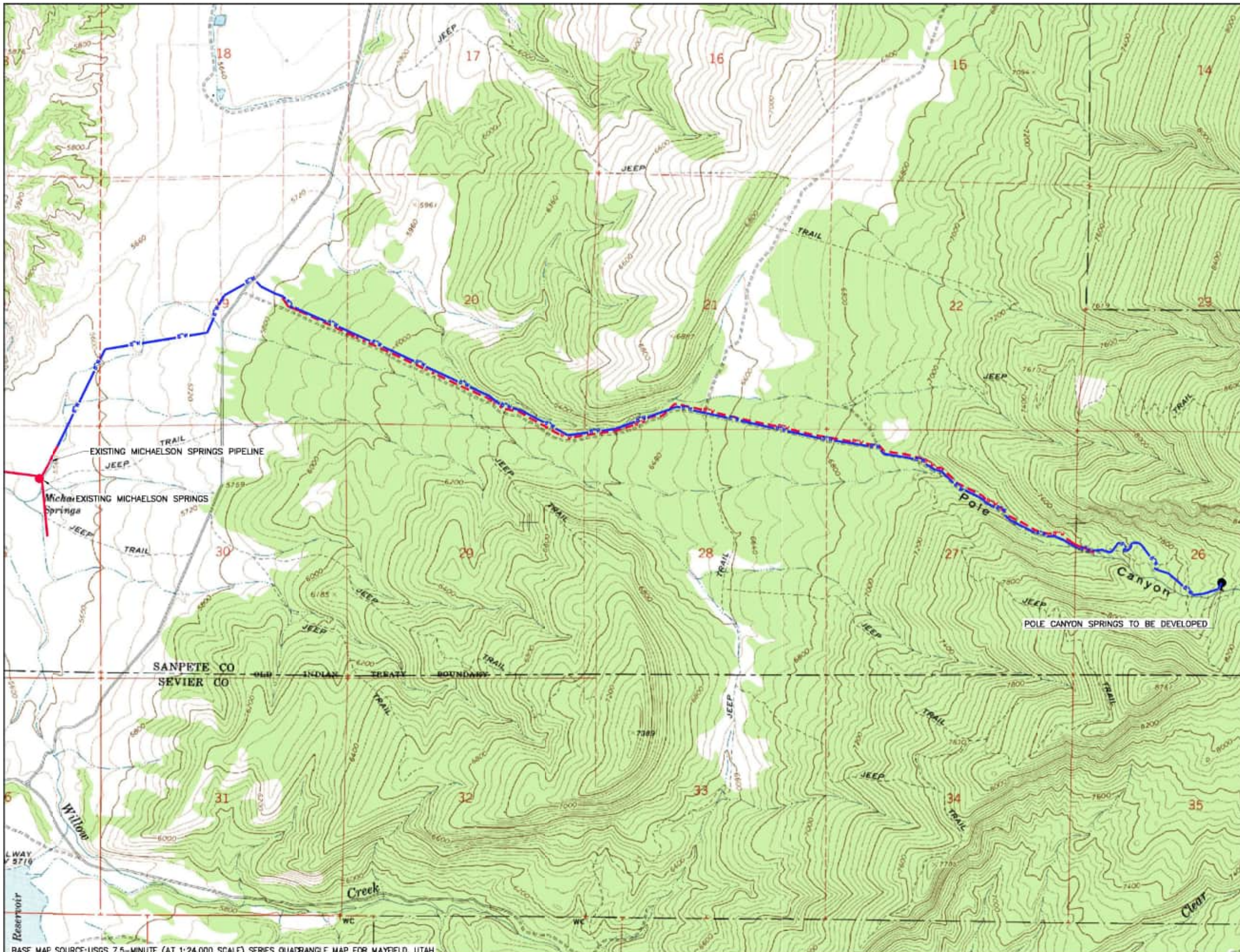
The proposed project would occur in portions of Sections 24 and 25, Township 20 South (T20S), Range 1 East (R1E) and portions of Sections 19, 20, 21, 26, 27, 28 and 29, T20S, R2E, Salt Lake Base and Meridian (SLBM). All pipelines would be buried at least 4 feet below grade. After construction of the project is complete, the disturbed area, where possible, would be restored to the existing contour to the extent practicable.

Please post the project on the Public Lands Policy Coordination Committee's Resource Development Coordinating Committee (RDCC) website for comments and return comments to me in writing.

Thank you for your assistance.

Sincerely,
Sunrise Engineering, Inc.

Dao Yang, P.E.
Project Manager/Hydrogeologist
dyang@sunrise-eng.com
Enclosure: Figures 1 and 2



BASE MAP SOURCE: USGS 7.5-MINUTE (AT 1:24,000 SCALE) SERIES QUADRANGLE MAP FOR MAYFIELD, UTAH

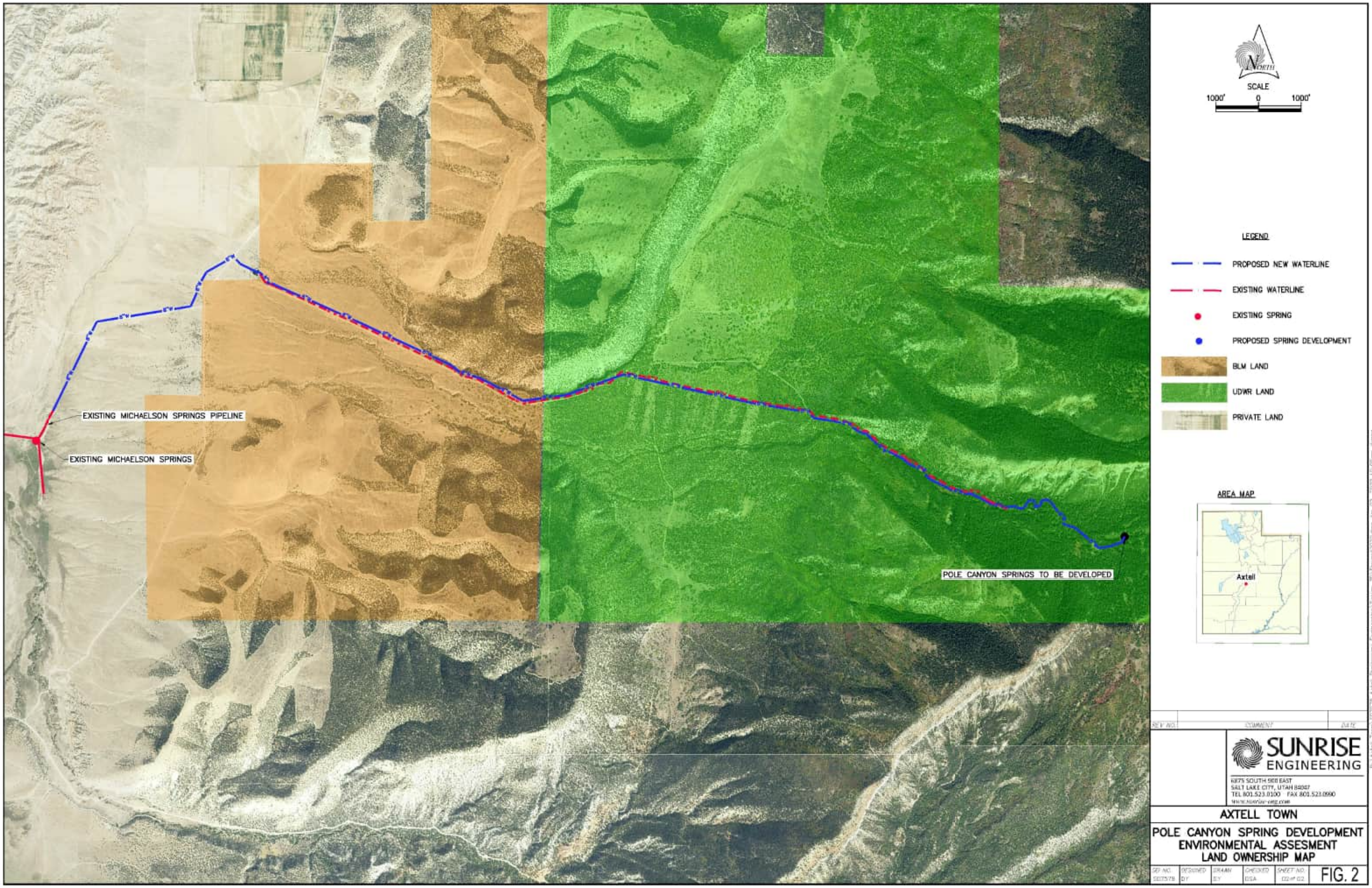
REV NO.	COMMENT	DATE

SUNRISE ENGINEERING
6875 SOUTH 900 EAST
SALT LAKE CITY, UTAH 84047
TEL 801.523.0100 FAX 801.523.0990
www.sunrise-eng.com

AXTELL TOWN

POLE CANYON SPRING DEVELOPMENT
ENVIRONMENTAL ASSESMENT
PROJECT LOCATION MAP

SEI NO.	DESIGNED BY	DRAWN BY	CHECKED	SHEET NO.	
S07578	DY	DY	DSA	01 of 02	FIG. 1



REV NO.	COMMENT	DATE

SUNRISE ENGINEERING
6875 SOUTH 900 EAST
SALT LAKE CITY, UTAH 84047
TEL 801.523.0100 FAX 801.523.0990

AXTELL TOWN

POLE CANYON SPRING DEVELOPMENT
ENVIRONMENTAL ASSESMENT
LAND OWNERSHIP MAP

SE NO.	DESIGNED	DRAWN	CHECKED	SHEET NO.	
S07578	DY	DY	DSA	02 of 02	FIG. 2

Attachment G

Letter to USFWS and Biological Evaluation Report

SUNRISE ENGINEERING
Salt Lake City Office
6875 South 900 East, Midvale, Utah 84047 | TEL 801.523.0100 | FAX 801.523.0990

April 3, 2023

Paul Abate
Fish and Wildlife Supervisor
US Fish & Wildlife Service
2369 West Orton Circle, Suite 50
West Valley City, UT 84119-7603
Via Email: utahfieldoffice_esa@fws.gov

RE: ACSSD's Proposed Culinary Water System Improvements Project
Axtell, Utah

Mr. Abate:

The Axtell Community Special Service District (ACSSD) is in the process of performing an environmental review pursuant to the National Environmental Policy Act (NEPA) for the Utah Division of Drinking Water in order to assess the potential environmental impacts of ACSSD's proposed culinary water system improvements project in Axtell of Sanpete County, Utah.

ACSSD's water system provides water to approximately 117 residential connections and two institutional connections. Sunrise Engineering, Inc. has recently completed a master plan for the water system in accordance with the State of Utah Rules Governing Drinking Water Systems (Rules). ACSSD's culinary water system is currently supplied solely by the Michaelson Springs. The Rules requires a public water supplier with more than 100 connections to have at least two reliable water sources. The system has a higher risk of water outages because there are no backup water sources. ACSSD decided to make the following improvements, as shown in the attached Figure 1, based on identified system deficiencies:

1. Develop the Pole Canyon Springs.
2. Replace approximately 19,000 feet of existing water transmission line.
3. Install approximately 10,500 feet of new waterline to connect the new springs to the existing waterline of the Michaelson Springs.

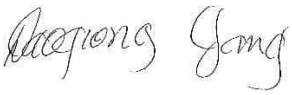
The proposed project would occur in portions of Sections 24 and 25, Township 20 South (T20S), Range 1 East (R1E) and portions of Sections 19, 20, 21, 26, 27, 28 and 29, T20S, R2E, Salt Lake Base and Meridian (SLBM). All pipelines would be buried at least 4 feet below grade. After construction of the project is complete, the disturbed area, where possible, would be restored to the existing contour to the extent practicable.

A biological resources survey has been complected by Cardinal EC, LLC. The survey indicates that the implementation of the proposed project will have no effect on special status species (see attachments).

Accordingly, a determination of No Effect to any federally listed species has been made for the project as described above.

We understand that your office no longer provides concurrence for "no effect" determinations. However, please do not hesitate to contact me with any questions that you might have regarding the proposed project or the determination provided above.

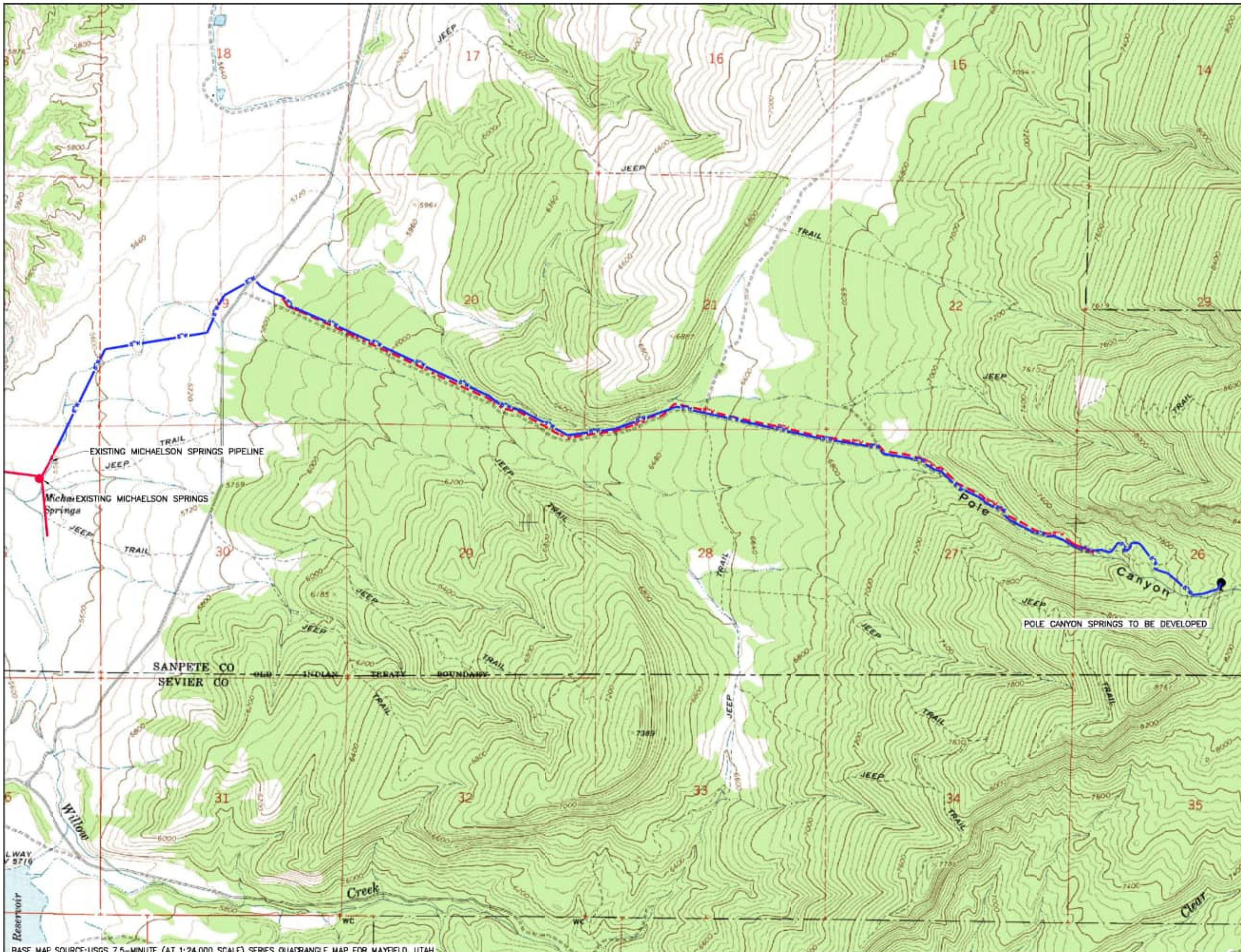
Sincerely,
Sunrise Engineering, Inc.



Dao Yang, P.E.
Project Engineer/Hydrogeologist
dyang@sunrise-eng.com

Enclosure: Figure 1 and Biological Resources Survey Report

Figure



BASE MAP SOURCE:USGS 7.5-MINUTE (AT 1:24,000 SCALE) SERIES QUADRANGLE MAP FOR MAYFIELD, UTAH

NORTH

SCALE 1000' 0 1000'

LEGEND

- PROPOSED NEW WATERLINE
- EXISTING WATERLINE
- EXISTING SPRING
- PROPOSED SPRING DEVELOPMENT

AREA MAP

REV NO.	COMMENT	DATE

SUNRISE ENGINEERING
6875 SOUTH 900 EAST
SALT LAKE CITY, UTAH 84047
TEL 801.523.0100 FAX 801.523.0990
www.sunrise-eng.com

AXTELL TOWN

POLE CANYON SPRING DEVELOPMENT
ENVIRONMENTAL ASSESMENT
PROJECT LOCATION MAP

SEI NO.	DESIGNED BY	DRAWN BY	CHECKED	SHEET NO.	
S07578	DY	DY	DSA	01 of 02	FIG. 1

Biological Resources Survey Report

Biological Resources Survey

Axtell Water Supply Project -
Sanpete County, Utah

Document Information

Prepared for	Sunrise Engineering
Project Name	Biological Resources Survey, Axtell Water Supply Project
	Sanpete County, Utah
Date	January 2023

Prepared for:

Sunrise Engineers
6875 South 900 East
Salt Lake City, UT 84047

Prepared by:

Cardinal EC, LLC
12080 East Big Cottonwood Canyon Rd.
ESW 208
Solitude, UT 84121

Table of Contents

Appendices

Table

Figures

1 INTRODUCTION

This report and associated field surveys were completed by Cardinal EC, LLC (Cardinal) on behalf of Sunrise Engineering in support of the proposed Axtel Culinary Water Supply Project (Proposed Project) to identify the presence of sensitive biological resources that may be affected by the Proposed Project. Sensitive biological resources include: U.S. Fish and Wildlife Service-listed species, listed species' habitats, and designated critical habitats; Utah Division of Wildlife Resources, Species of Greatest Conservation Need; and Utah Division of Wildlife Resources designated game species' seasonal use areas.

Cardinal EC conducted a data review and performed field surveys to document Special Status Species and game species' seasonal use areas occurring, or having the potential to occur, within or near the Project. For the purposes of this report, Special Status Species include: species listed as threatened, endangered, candidate, or proposed by the U.S. Fish and Wildlife Service (USFWS) and Utah Division of Wildlife Resources (UDWR) Species of Greatest Conservation Need (SGCN). This report documents the findings of both the data review and the biological resources field surveys conducted in October 2020 and May 2022.

1.1 PROJECT LOCATION

The Project site is located within an existing waterline easement approximately 4.5 miles east of Axtell, Sanpete County, UT within private lands, the UDWR 12-mile Wildlife Management Area (WMA), and on lands managed by the Bureau of Land Management (BLM) Richfield Field Office in Township (T) 20 South (S) Range (R) 1 East (E) in portions of sections 24 and 25; and T 20 S, R 2 E, portions of sections 19, 20, 21, 26, 27, 28, and 29 (Figure 1.1). Its location is shown on the Mayfield, Utah, U.S. Geological Survey (USGS) 7.5' quadrangle.

1.2 PROJECT DESCRIPTION AND SURVEY AREA

The Axtell Community Special Service District (ACSSD) located in Axtell, Utah has proposed improvement of its existing culinary water supply system for the rural residents of Axtell, Sanpete County, Utah. The Proposed Project is 5.65 miles long and would include replacement of approximately 3.63 miles of existing waterline, proposed construction of 2.02 miles of new 10-inch diameter buried water line, and improvement to the spring water collection system in Pole Canyon. Construction and installation of the buried waterline would occur within the existing waterline and spring easements adjacent to an existing unimproved road/jeep trail. All disturbance associated with installation of the buried waterline would be reclaimed following construction. The improved spring water collection system will remain in place for the life of the Proposed Project. Construction equipment staging and material storage would occur within previously disturbed areas along the existing roadway and waterline easements. Additional staging areas would be developed as needed and reclaimed entirely following construction. An approximately 25-foot-wide temporary construction footprint would be required for waterline construction resulting in a total temporary construction footprint of approximately 17.12 acres within existing roadways and previously approved/disturbed pipeline easements. An approximately 1.11-acre area around the springs would be required for installation of the spring water collection system resulting temporary disturbance within the existing spring easements. After construction, the disturbed areas would be restored to the existing contour, reclaimed, and reseeded. The spring water collection system would remain as a permanent structure for the life of the Project resulting in approximately 50 square feet of permanent disturbance.

Construction entails installation of a buried culinary water supply line in previously approved easements and disturbed areas using a combination of trench cutting equipment, pipe laying equipment, backhoes, excavators, and support vehicles. The construction will result in short-term temporary impacts in previously disturbed areas along and near the existing roadways and waterline easements. Installation and

construction of the spring water collection system improvements will entail excavation using similar equipment. The Project may require the cutting or removal of trees where vegetation has overgrown in the existing waterline easement. All areas would be reclaimed following construction. Following installation of the buried waterline and spring water collection system, construction equipment and workers would leave the area as no other ground disturbing activities would be required during operation. Ground disturbance during operations is anticipated if the buried utility is accidentally severed, and will be limited to the areas immediately around the severed line. At this time, the construction schedule is unknown.

The Project occurs within and along the shoulders of an existing unimproved dirt road and in undeveloped areas around the spring in Pole Canyon. The Survey Area includes the Proposed Project areas plus 0.5 mi. buffer for the purposes of identifying Special Status Species.

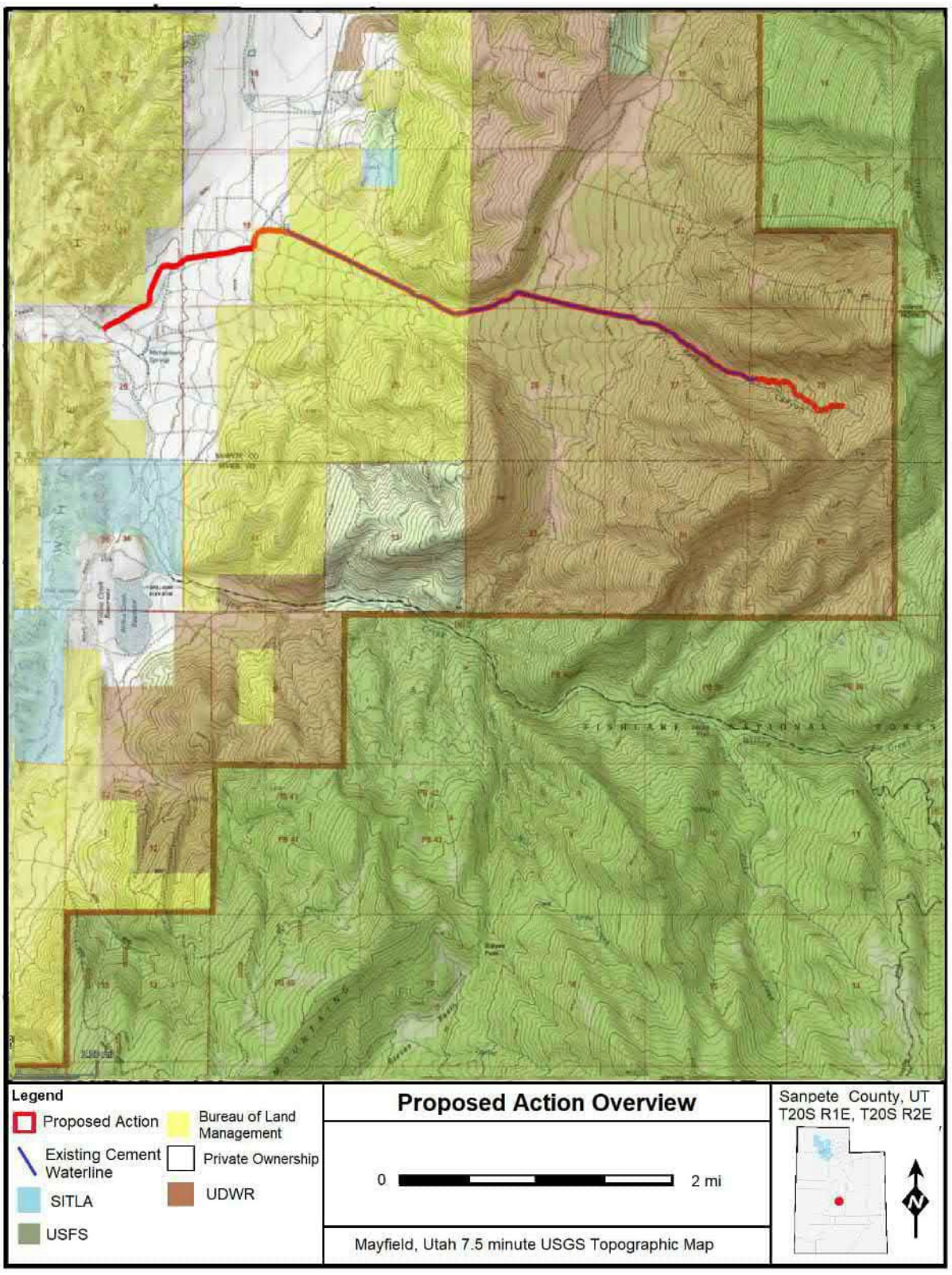


Figure 1.1 - Map Showing the Location of the Project. Mayfield, UT, 7.5 quadrangle.

2 METHODS

A data review was conducted prior to completion of field work in order to gather existing information and assist in the evaluation of the likelihood of occurrence of Special Status Species within the Survey Area. The data review entailed an evaluation of online resources, and review of agency publications to determine the presence or potential occurrence of Special Status Species within the Project. This data review included:

> USFWS Federally Listed and Proposed Endangered, Threatened, and Candidate Species and Critical Habitat in Survey Area as identified by the USFWS Information, Planning, and Conservation System (IPaC) (USFWS 2022b) and Critical Habitat Mapper (USFWS 2022a);

> Review of the May 02, 2019 Utah Prairie Dog Survey Intensity Map (USFWS 2019);

> UDWR Natural Heritage Database request (UDWR 2022a);

> UDWR GRAMA request for occupied habitat information on the Utah prairie dog (UDWR 2022d);

> Review of UDWR list of Species of Greatest Conservation Need (UDWR 2022b);

> Review of UDWR Wildlife Action Plan for species descriptions and location information (UDWR 2022f);

> Consultation with UDWR staff on the likelihood of occurrence of Special Status Species; and

> Review of aerial photography and topographic maps.

A field survey of the Project Area was conducted by biologist Aaron James on October 2020 and May 2022. The field survey included 30-meter-wide pedestrian transects (or narrower) within the Project to provide 100 percent visual coverage for the purpose of identifying Special Status Species and habitat capable of supporting Special Status Species. The Survey Area was inventoried for the presence habitat capable of supporting Special Status Species using a combination of 30-meter-wide pedestrian transects, binoculars, spotting scopes, and vantage points from the Project and public roads. When observed, all locations of Special Status Species, habitat capable of supporting Special Status Species were recorded with a GPS.

The field survey followed the USFWS 2018 Utah Prairie Dog Occupancy and Habitat Survey Protocol for Federal Section 7 Consultation (USFWS 2018) to identify the presence of Utah prairie dogs and habitat capable of supporting the Utah prairie dog. 100% of the Project and suitable Utah prairie dog habitat with the Action Area (Project plus 1,000-foot-buffer) were surveyed for the presence of Utah prairie dogs and habitat capable of supporting the Utah prairie dog. For the purposes of this report the Survey Area is synonymous with the Utah prairie dog Action Area. Areas that were identified as unsuitable Utah prairie dog habitat including were excluded from analysis.

3 FINDINGS

The Project is located in southern Sanpete County, Utah on a combination of private lands, lands managed by the BLM, and lands managed by UDWR. The Project occurs adjacent to existing gravel roadways and along an unimproved two-track Jeep/OHV trail in rural Utah. The Project and Survey Area range in elevation from 5,500 ft. to the west in the Arapien Valley and 7,700 ft. to the east into Pole Canyon of the Wasatch Plateau. The Project and Survey Area occur in locations that have a high to low level of previous and on-going human disturbance associated previous/dormant agricultural activities, ATV/ORV use, and recreational activities. Aerial imagery of the Project and Survey Area is depicted in Figure 3.1. Photographs of the Project are included in Appendix A.

3.1 VEGETATION

The NRCS ecological site characteristics desktop review identified the Project and Survey Area supports Big Sagebrush (Artemisia tridentata), Black Sagebrush (Artemisia nova), Pinyon-Utah Juniper (Juniperus osteosperma, Pinus edulis), Doug-fir (Pseudotsuga menziesii), and Bitterbrush (Purshia tridentata) (NRCS 2022). The Project and Survey Area are largely consistent with this course vegetative overview ranging from disturbed irrigated cropland/pasture in the west at lower elevations and moving east (and up-in elevation) through common Utah vegetation communities of sagebrush, pinyon-juniper shrubland/woodland, Gambel oak (Quercus gambelii) and mahogany (Cerocarpus montamus) scrub, and into mature stands of wooded Douglas fir and aspen (Populus tremuloides)-type woodlands. No unique or otherwise irreplaceable vegetation communities occur in the Project or Survey Area.

3.2 WILDLIFE

Wildlife habitat within the Project includes dormant agricultural lands, sagebrush shrubland, pinyon-juniper shrubland, pinyon-juniper woodland, Doug-fir woodland, and a spring meadow/creek complex near Pole Canyon spring. Given the Project's rural setting and difficulty of access to common two-wheel drive vehicles, most human related activity in the vicinity would include recreational activities such as OHV touring and hunting. Wildlife occurring in the Project and Survey Area are expected to be somewhat acclimated to the presence of humans and human-related activities and take refuge in the dense vegetation away from the two-track Jeep/OHV trail where encounters with humans are likely. Wildlife habitats identified within the Project and Survey Area and common to Utah with the spring meadow/creek complex near Pole Canon Spring likely offering the most significant value to wildlife in the vicinity as a source of water. Wildlife observations and evidence of wildlife within the Project are summarized in Table 3.1.

Table 3.1 - Wildlife Species Observed in the Survey Area

Species	Common Name
Aquila chrysaetos	Golden eagle
Bos taurus	Livestock
Buteo jamaicensis	Red-tailed hawk
Buteo swainsoni	Swainson's hawk
Canis latrans	Coyote (scat)

Table 3.1 - Wildlife Species Observed in the Survey Area

Species	Common Name
Cathartes aura	Turkey vulture
Cervus canadensis	Elk (scat)
Circus cyaneus	Northern harrier
Colaptes auratus	Northern flicker
Corvus corax	Raven
Dendragapus obscurus	Dusky Grouse
Eremophila alpestris	Horned lark
Falco sparverius	American kestrel
Haemorhous mexicanus	House finch
Lepus americanus	Hare
Odocoileus hemionus	Mule deer
Passer domesticus	House sparrow
Picoides sp.	Woodpecker (audible)
Setophaga petechia	Yellow warbler
Sturnella neglecta	Western meadowlark
Sylvilagus sp.	Cottontail rabbit
Thomomys sp.	Gopher (mounds)
Tyrannus verticalis	Western kingbird
Unidentified Genus	Unidentified rodent burrows
Zenaida macroura	Mourning dove

3.3 SPECIAL STATUS SPECIES

A total of 165 Special Status Species were evaluated for their potential to occur in the Project and Survey Area (UDWR 2022b). This list was developed from the UDWR state-wide list of SGCN and includes 41 USFWS-listed species. The full list of Special Status Species evaluated for this report, habitat description for each, and the rationale to identify the likelihood of occurrence within the Project and Survey Area is included in Appendix B. Twenty-four Special Status Species were identified as potentially occurring in the Project and Survey Area and have been carried forward for further analysis in the sections below. All other Special Status Species have been removed from further consideration in this report due to the lack of suitable habitat and/or the Project is located outside the species' known range.

3.3.1 USFWS-listed Species

Four USFWS-listed species were identified as potentially occurring in the Project and Survey Area and are shown in Table 3.2 (USFWS 2022b). The Monarch butterfly, USFWS-listed candidate, and Utah prairie dog, USFWS-listed threatened, were identified as having a low likelihood of occurring with the Project. No other USFWS-listed are expected to occur within the Survey Area due to the lack of suitable habitat and/or the Project's location outside the known range of these species. Those species brought forward for further

discussion are addressed in the sections below. No USFWS designated critical habitat occurs in the Project or Survey Area.

Table 3.2 – USFWS-listed species Identified as Potentially Occurring Within the Survey Area.

Species	Status	Habitat	Likelihood of Occurrence
Monarch butterfly *Danaus plexippus*	C	This species winters on the California coast and return north into summer breeding ranges in the interior west and British Columbia. This species is dependent upon milkweed plants for their lifecycle. Habitats include wetlands, prairies, agricultural areas and woodlands where milkweed grow.	Unlikely to Occur: This is a common migratory species in Utah and may occur as a migratory visitor to the Project. No milkweed plants were identified in the Project.
Utah prairie dog *Cynomys parvidens*	T, SGCN	Occur in grassland/herbaceous, burrowing in soil habitat in grasslands, in level mountain valleys, in areas with deep well-drained soil and vegetation that prairie dogs can see over or through. Found in central and southwestern quarter of the state in Beaver, Garfield, Iron, Kane, Piute, Sevier, and Wayne counties.	May Occur: Project occurs in the low-intensity USFWS Utah prairie dog habitat polygon (USFWS 2019). This species is documented to occur 8 miles northwest the Project (UDWR 2022a, UDWR 2022b). Surveys confirmed that none of this species, or past evidence of this species, was identified in the Project or Survey Area.
Ute Ladies' Tresses *Spiranthes diluvialis*	T, SGCN	Occur in moist environments including alkaline wetlands, moist meadows, floodplains, flooded river terraces, sub-irrigated or spring-fed abandoned stream channels and valleys, lakeshores, irrigation canals, berms, levees, or irrigated meadows. Known from northern and south-central Utah	None: Spring meadow and wetland habitat occurs along the eastern end of the Project at 7,600 ft. The location of the spring is outside the elevation where this species is known to occur. The Project is outside the known range of this species in Utah.
Western yellow-billed cuckoo *Coccyzus americanus*	T, SGCN	Prefers thick riparian vegetative communities with dense overstory of mature trees. Rare west of the Rocky Mountains; populations in Utah are found along the Green River near Vernal, near the town of Green River, and one portion of the San Juan River.	None: No suitable habitat is present in the Project.

Status: USFWS-listed species T-threatened, E-endangered, C- candidate, P-proposed, EP-NE – experimental population, non-essential. SGCN – UDWR Species of Greatest Conservation Need. **Sources**: IPaC Survey Results (USFWS 2022b, UDWR 2022a, UDWR 2022d).

Utah prairie dog

The Utah prairie dog, listed threatened under the Endangered Species Act, was identified as potentially occurring in the Project during the data review, but was not identified within the Survey Area during the October 2020 or May 2022 field surveys (Figure 3.2). The Project occurs in USFWS's Utah Prairie Dog Low-Intensity Survey Areas (USFWS 2019), and are known to occur in areas near Gunnison, Utah approximately 8 miles northwest of the Project (UDWR 2022d). Results of the data review identified that potential habitat occurs within the western portions of the Project; areas of disturbance likely associated with past agricultural uses and disturbed sagebrush shrublands. A qualified Utah prairie dog biologist surveyed the Project and Survey Area in October 2022 and May 2022 using the low-intensity methods. No Utah prairie dogs, or evidence of their past use, was documented in the Project or Survey Area. No impacts to this species would occur as a result of the Project.

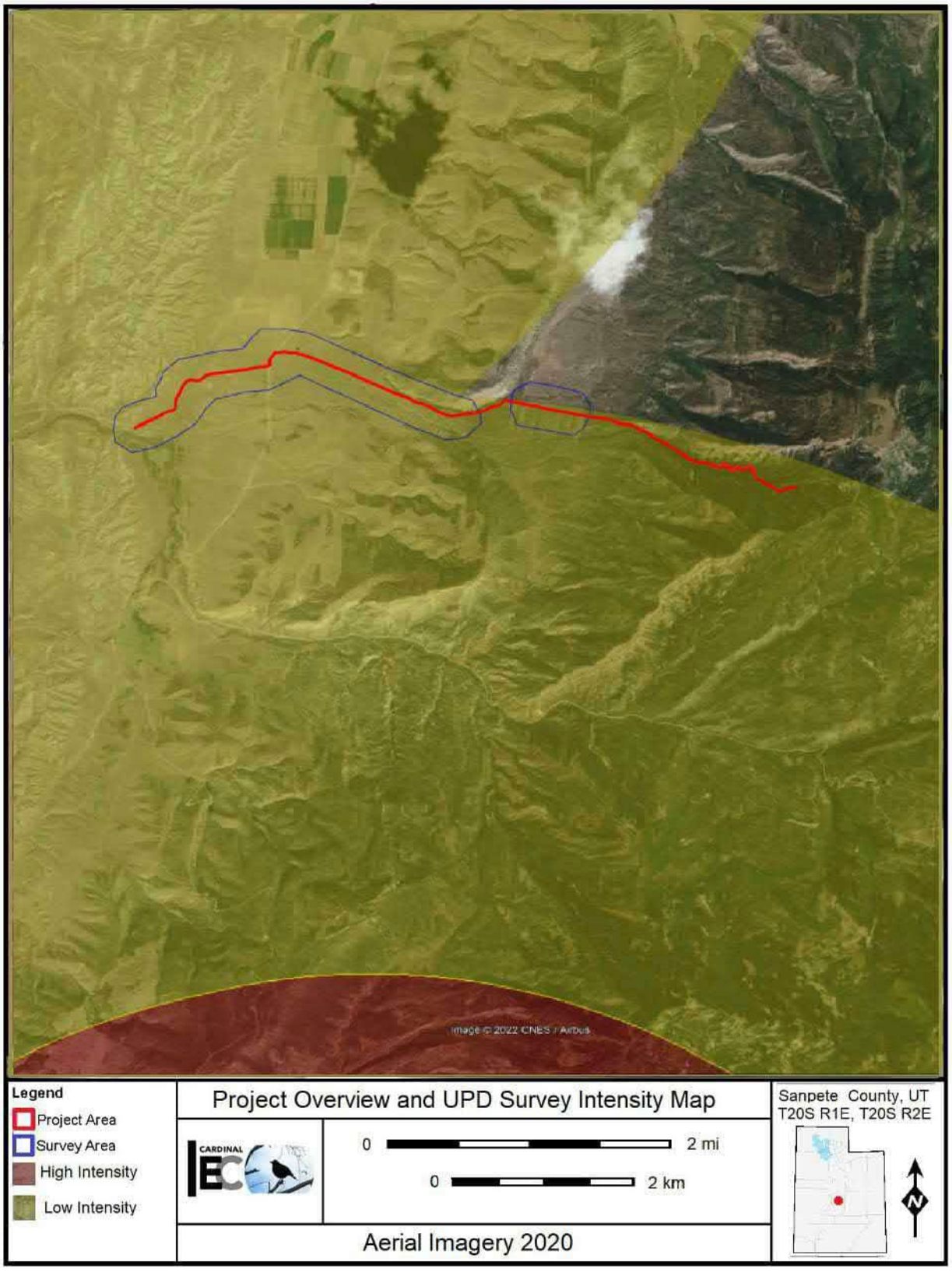


Figure 3.1 – Aerial Image of Project, 1,000 ft Buffer Survey Area, and Utah Prairie Dog Survey Intensity Map Data

Monarch butterfly

The monarch butterfly, listed candidate under the Endangered Species Act, was identified as potentially occurring in the Project and Survey Area. Neither this species, nor its preferred forage (milkweed), was observed during the field survey; however, this species could occur as a migratory visitor to the Project. For the purposes of this report, the entire Project would be considered suitable Monarch butterfly migratory habitat. No impacts to this species are expected to occur. The monarch butterfly is listed as a USFWS-candidate species, receives no statutory protection under the Endangered Species Act, and will therefore be removed from further consideration in this report.

3.3.2 UDWR - Species of Greatest Conservation Need

Twenty-four UDWR SGCN were identified as potentially occurring in the Project and Survey Area. Table 3.3 includes all SGCN identified as potentially occurring in the Project and the rationale to identify the likelihood of occurrence of each species within the Survey Area. Those species brought forward for further discussion are addressed in the sections below.

. **Table 3.3 – UDWR SGCN Identified as Potentially Occurring Within the Survey Area**

Species	Habitat	Likelihood of Occurrence
Amphibians		
Northern leopard frog (Lithobates pipiens)	Highly aquatic frog found in streams, rivers, ponds, lakes, and meadows for breeding and overwintering. Widespread in Utah. Found in most counties in Utah found in elevations from 1,000 to 3,000 m.	May Occur: Suitable spring and wet meadow habitat occurs in the high elevation springs of Pole Canyon.
Western (boreal) toad (Anaxyrus/Bufo boreas)	Occurs in a wide range of habitats in multiple mountain ranges in Utah typically at high elevations >2,000 m. Occur in permanent water bodies in a variety of habitats, including riparian, mountain shrub, mixed conifer, and aspen-conifer assemblages. Breeding sites are in small pools, beaver ponds, reservoirs, and backwaters and side-channels of creeks and rivers	May Occur: Suitable spring and wet meadow habitat occurs in the high elevation spring of Pole Canyon.
Birds		
Bald eagle (Haliaeetus leucoceaphalus)	Occur in coastal areas, bays, rivers, lakes. Forest stands containing nest trees vary from old-growth ponderosa pine to narrow strips of riparian vegetation surrounded by rangeland. Perch trees are also needed by bald eagles for roosting and foraging.	May Occur: May occur as a foraging visitor or resident during the winter. This species may nest in the vicinity; however, this species' preferred open river/lake shore nesting habitat is not present. This species was observed in the vicinity in 2006 (UDWR 2022). (UDWR Special Status Species Biologist T. Pope indicates the potential to occur)
Band-tailed pigeon (Patagioenas fasciata)	Occur in mountainous forest and woodland habitats in western North America. Uncommon summer and rare winter residents in Utah. Largest Utah breeding populations are in the Four Corners region, and in the central mountains from Cedar City to Nephi.	Unlikely to Occur: Suitable habitat is present in the Project, but is uncommon in this region of Utah. (UDWR Designated Spring/Fall Crucial and Spring/Fall Substantial t occurs in the Project)
Black rosy-finch (Leucosticte atrata)	Found in alpine habitat of the central Rocky Mountains, nesting above treeline in cliffs or talus. Common in the Uinta and Wasatch Mountains	May Occur: Suitable breeding habitat is present in the Project.

. **Table 3.3 – UDWR SGCN Identified as Potentially Occurring Within the Survey Area**

Species	Habitat	Likelihood of Occurrence
	during the breeding season, moving to sagebrush or shrubland in lower elevation valleys, benches, and foothills during winter.	
Boreal owl (Aegolius funereus)	Found throughout northern boreal forests in Alaska, Canada, and northern Eurasia, it uses high-elevation spruce and fir habitat in Utah. An obligate cavity nester, nests are often in old woodpecker holes. Occur in Utah from northern Utah from the Bear River Mountains, Wasatch Mountains and Uinta Mountains.	May Occur: Suitable breeding and nesting habitat is present in the Project.
Burrowing owl (Athene cunicularia)	Occur in desert, semi-desert shrubland, grasslands, and agricultural areas. Nesting habitat primarily consists of flat, dry, and relatively open terrain; short vegetation; and abandoned mammal burrows for nesting and shelter.	May Occur: Suitable breeding and nesting habitat is present in the Project.
Ferruginous hawk (Buteo regalis)	Occur in flat and rolling terrain in grassland or shrub steppe during breeding near cliffs, buttes, and creek banks. Ferruginous hawks occur in grasslands, agriculture lands, sagebrush/ saltbush/ greasewood shrub lands, and at the periphery of pinyon-juniper forests. Nest primarily in Juniper trees in Utah.	May Occur: Suitable breeding and nesting habitat is present in the Project.
Flammulated owl (Psiloscops flammeolus)	Common in mature, montane forests throughout Utah, though primarily in the north central and southwestern ranges. Nest and roost in old woodpecker holes or other cavities formed by large woodpeckers.	May Occur: Suitable breeding and nesting habitat is present in the Project.
Golden eagle (Aquila chrysaetos)	Found in open country with sufficient mammalian, avian, and reptilian prey, or carrion in winter. Nest primarily on cliffs, secondarily on trees or human structures.	May Occur: Suitable breeding and nesting habitat is present in the Project. Observed near the Project in 2005 (UDWR 2022g) and field surveys of 2022. (UDWR Special Status Species Biologist T. Pope indicates the potential to occur 2022)
Greater sage-grouse (Centrocercus urophasianus)	Occurs in sagebrush plains, foothills, and mountain valleys. Sage-grouse breeding and nesting generally occurs in open canopy habitat including landing strips, old lakebeds or playas, low sagebrush flats, openings on ridges, roads, cropland, and burned areas.	Unlikely to Occur: May occur as a migratory or foraging visitor. The Project is outside locations where this species is documented to occur.
Lewis's woodpecker (Melanerpes lewis)	Breeding habitat is open ponderosa pine forest with a shrub/grass understory. Secondary breeding habitat includes aspen patches surrounded by shrubs, and riparian cottonwood bottoms.	May Occur: Suitable breeding and nesting habitat is present in the Project.
Northern pygmy owl (Glaucidium gnoma)	Common throughout the montane forests of Utah. Usually are found at higher elevations, but are known to descend in winter, sometimes appearing in urban areas.	May Occur: Suitable breeding and nesting habitat is present in the Project.

. **Table 3.3 – UDWR SGCN Identified as Potentially Occurring Within the Survey Area**

Species	Habitat	Likelihood of Occurrence
Olive-sided flycatcher (Contopus cooperi)	Occur in coniferous habitats throughout their range and in high elevation conifer forests and clearings in Utah.	May Occur: Suitable breeding and nesting habitat is present in the Project.
Peregrine falcon (Falco peregrinus)	Occur in a wide variety of habitats especially where there are suitable nesting cliffs including human population centers.	May Occur: May occur as a foraging visitor. Suitable breeding and nesting habitat is present near the Project.
Pinyon jay (Gymnorhinus cyanocephalus)	Occurs in riparian, shrubland/chaparral, and conifer woodland foothills and lower mountain slopes of western and southwestern U.S. and Mexico,	May Occur: Suitable breeding and nesting habitat is present in the Project. (UDWR Special Status Species Biologist T. Pope indicates the potential to occur 2022)
Insects		
Western bumble bee (Bombus occidentalis occidentalis)	Occurs throughout much of western U.S. in mixed woodlands, farmlands, urban areas, montane meadows and into the western edge of the prairie grasslands.	May Occur: This species may occur as a resident to the Project.
Mammals		
American pika (Ochotona princeps)	Inhabit high-elevation talus slopes, boulder fields, and adjacent meadows, found in high mountainous area of western North America including the Rocky Mountains, Great Basin ranges, Sierra Nevada Mountains, and Cascade Mountains.	May Occur: This species may occur as a resident to the Project. No rocky skree slopes occur in the Project but do occur in the general vicinity of the Project.
Chisel-toothed kangaroo rat (Dipodomys microps celsus)	Occur in desert shrubland and chaparral in valleys throughout most of the Great Basin and in southwestern Utah.	Unlikely to Occur: Suitable habitat occurs in the Project. This species could occur as a resident to the Project, but is unlikely as the Project is located on the eastern edge of this species' known range.
Fringed myotis (Myotis thysanodes)	Occurs in xeric woodlands, such as juniper, ponderosa pine, and Douglas-fir; also in coniferous forests, woodlands, grasslands, and shrublands and roost in caves, mines, and buildings. Occurrences are known in Cache, Duchesne, Uintah, Utah, Juab, Millard, Grand, Wayne, San Juan, Garfield, Kane, and Washington counties.	May Occur: This species may occur as a foraging resident to the Project. No hibernacula occur in the Project.
Kit fox (Vulpes macrotis)	Occur in desert areas dominated by sagebrush, desert scrub, or grasslands, found in desert regions statewide including the Great Basin, Mojave, and Colorado Plateau regions.	May Occur: This species may occur as a resident to the Project.
Little brown myotis (Myotis lucifugus)	Occur in a variety of habitats and roosts including houses and other humanmade structures. Occur statewide in Utah.	May Occur: This species may occur as a foraging resident to the Project. No hibernacula occur in the Project.
Long-eared myotis (Myotis evotis)	Occur in a diverse array of habitats, including lowland, montane, and subalpine woodlands, forests, shrublands, and meadows, wooded	May Occur: This species may occur as a foraging resident to the

. **Table 3.3 – UDWR SGCN Identified as Potentially Occurring Within the Survey Area**

Species	Habitat	Likelihood of Occurrence
	stream courses, and areas over water bodies. Occur statewide in Utah.	Project. No hibernacula occur in the Project.
Spotted bat (Euderma maculatum)	Occupy a wide variety of habitat types near cliffs and rocky escarpments, where it roosts in cracks and crevices. Likely present statewide, although few observations have been made in the West Desert area.	May Occur: This species may occur as a foraging resident to the Project. No hibernacula occur in the Project.

Amphibians

Two SGCN amphibians were identified as potentially occurring within the Pole Canyon Spring meadow/creek complex within the Project. While no species-specific surveys were completed to identify the presence or absence of these species, none of these species were identified during the 2020 and 2022 field surveys of the spring area. If present, these species would likely use the pools and standing water around the spring complex for daily refuge and foraging and for critical life-cycle events such as breeding, egg-laying, and hatching of young from April through July.

Birds

Fourteen SGCN birds were identified as potentially occurring within the Project. Depending upon the species and their preferred habitat, each of these species have the potential to occur as a migrating or foraging visitor, breed, nest, or occur as year-round resident in and near the Project. For the purposes of this report, the entire Project is considered avian habitat as these species represent ground, shrub, tree, and cliff nesting species. At the time of the 2020 and 2022 field surveys, no active avian nests were identified in the Project; however, this does not preclude an individual bird from establishing a nest in the Project in the future. It is expected that avian species use the Project year-round for refuge and foraging and use the Project to support breeding and nesting from April through July for non-raptors and from January 1 through August 31 for raptors.

Insects

The western bumble bee was identified as potentially occurring within the Project as a foraging visitor and resident. Surveys completed during the 2020 and 2022 field visits did not identify this species. If present, this species would likely be most active as a pollinator during the growing season across the entire Project.

Mammals

Seven SGCN mammals were identified as potentially occurring in the Project as foraging visitors, for breeding and young-rearing, or as year-round residents. Field surveys completed during the 2020 and 2022 field visits did not identify any of the SGNC mammals. If present, these species would likely use, depending upon the species, a diversity of habitats in the Project for daily refuge and foraging and for critical life-cycle events such as breeding, and rearing of young from March through July.

UDWR – Designated Game Habitat

All 24 recognized UDWR designated game habitats were evaluated for their overlap with the Project using UDWR's online portal (UDWR 2022d) and identified in Appendix B. Eight UDWR designated game habitats were identified within the Project and are summarized in Table 3.4. The UDWR designated habitat distribution, season of habitat use, and habitat values are determined by local UDWR wildlife biologists relying on observations, surveys, and predictive habitat modeling. The UDWR designated game habitats were developed by UDWR to promote management of game species habitats in Utah and identify sensitive seasonal use areas specific to each game species' seasonal needs. While the occurrence of these designated habitats does not affirm the presence or absence of a UDWR game species, the UDWR

recognizes these seasonal use areas to facilitate management Utah's game species. Specifically, the seasonal use areas identify geographies and periods of time when individual game species are most vulnerable to disturbance during periods of breeding, nesting, calving, or wintering. For the purposes of this report, habitats identified as "Crucial" will be carried forward for analysis.

Table 3.4 – UDWR Game Species' Designated Wildlife Habitat and Recommended Seasonal Avoidance.

Species	Habitat/Recommended Seasonal Avoidance
Utah Band-tailed Pigeon	Spring/Fall Crucial (April 1 to July 15) Spring/Fall Substantial (April 1 to July 15)
Utah Chukar	Year Long Crucial (April 1 to July 15)
Utah Dusky Grouse	Year Long Crucial (April 1 to July 15)
Utah Ruffed Grouse	Year Long Substantial (April 1 to July 15)
Utah Elk	Summer/Winter Crucial (December 1 through April 15 restriction) Spring/Fall Substantial (Fawning May 15 to July 15 restriction)
Utah Moose	Winter Crucial (December 1 through April 15)
Utah Mule Deer	Winter Crucial (December 1 through April 15) Winter/Spring Crucial (December 1 through April 15) Spring/Fall Substantial (Fawning May 15 to July 15)
Utah Snowshoe Hare	Year Long Substantial
Sources: UDWR. 2022c. UDWR Wildlife Designated Habitat. Available at: https://dwr-data-utahdnr.hub.arcgis.com/search?collection=Dataset	

Game Birds

Two crucial upland game bird habitats were identified within the Project and represent the sensitive seasonal use periods of three Utah game birds: the band-tailed pigeon, chukar, and dusky grouse. Both the Spring/Fall Crucial and Year Long Crucial designations indicate a recommended seasonal avoidance from April 1 to July 15, a period of time generally consistent with avian breeding and nesting season.

Big Game

Three crucial big game habitats were identified within the Project and represent the sensitive seasonal use periods of three Utah game mammals: elk, moose, and mule deer. The Summer/Winer Crucial, Winer Crucial, and Winter/Spring Crucial designations indicate a recommended seasonal restriction from December 1 to April 15, a period of time during the winter months where foraging resources are scarce and the species are each vulnerable to disturbance. Temporary short-term impacts to these habitats may occur during the construction phase during ground disturbing activities through the removal of vegetation; however, all disturbed habitat would be reclaimed and would return to present-day condition over time. Long-term impacts to these designated habitats are not anticipated as the Project is a replacement of existing infrastructure with no changes in use.

3.4 MIGRATORY BIRDS AND RAPTORS

Potential avian nesting habitat within the Project was surveyed for the occurrence of nesting avian species. No active nests were observed during the October 2022 and May 2021 field surveys; however, it is very likely that numerous active nests occur in the vicinity of the Project. The Project supports avian nesting habitat capable of supporting tree, cavity, cliff, shrub, and ground-nesting protected by the Migratory Bird Treaty Act (MBTA) and Bald and Golden Eagle Protection Act (BGEPA). As proposed, the Project would

result in temporary impacts to nesting habitats supporting tree, cavity, shrub, and ground-nesting avian species protected by the MBTA.

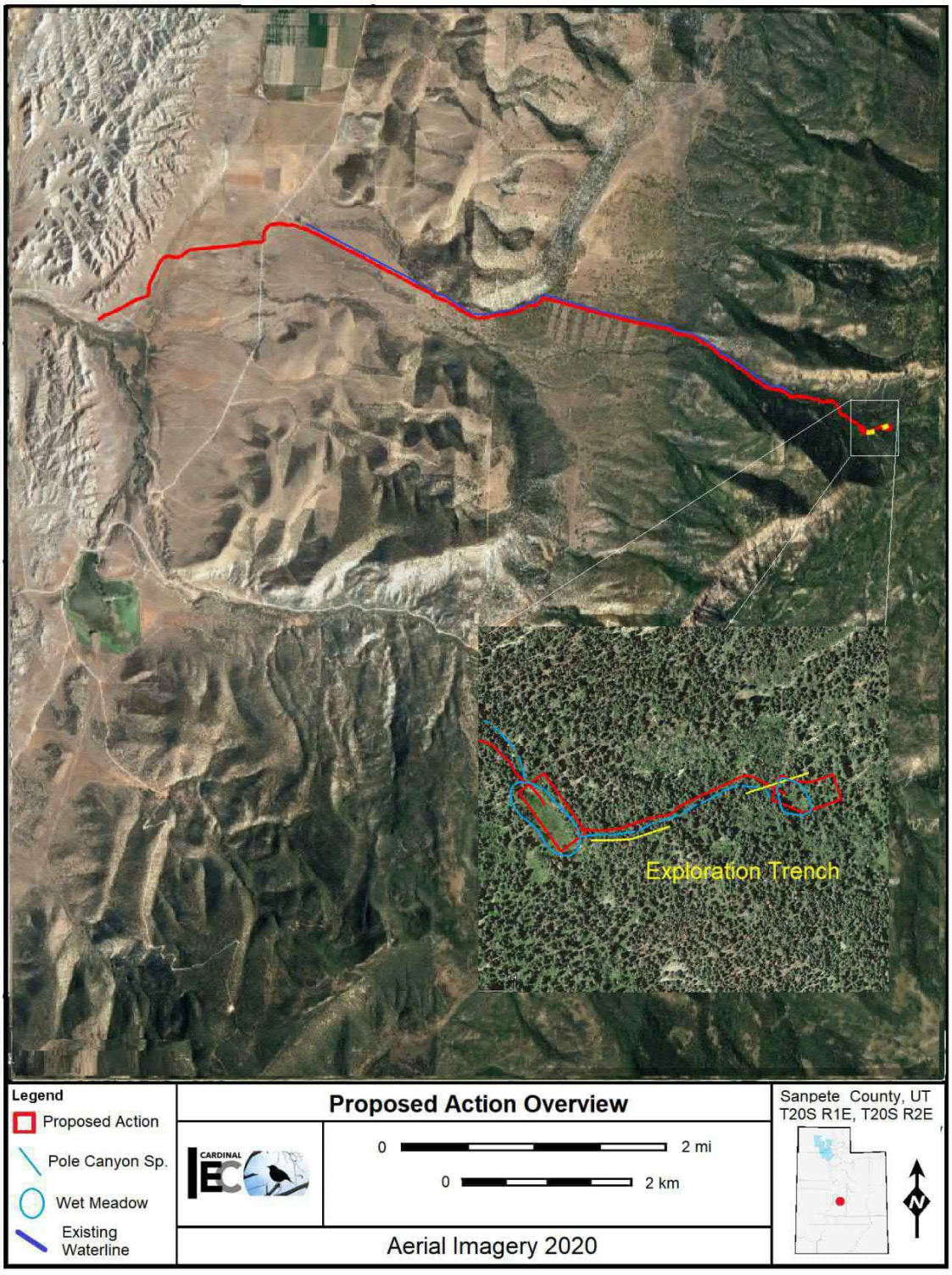


Figure 3.2 – Aerial Image of Project.

4 DISCUSSION AND RECOMMENDATIONS

By request of Sunrise Engineering, Cardinal EC completed biological resource surveys of the Axtell Culinary Water Supply Project, plus a 1,000-foot buffer in October 2020 and May 2022. The Proposed Project would include installation of approximately 5.65 miles of 10-inch diameter buried water line and improvement to the spring water collection system in Pole Canyon. 3.63 miles of the 5.65-mile Proposed Project would include replacement of the existing waterline. Construction and installation of the buried waterline would occur within the existing waterline easement located adjacent/and within an existing unimproved road/jeep trail. The improved spring water collection system will remain in place for the life of the Proposed Project. Construction equipment staging and material storage would occur within previously disturbed areas along the existing roadway and approved waterline easements. Additional staging areas would be developed as needed and reclaimed entirely following construction. An approximately 25-foot- wide temporary construction footprint would be required for construction resulting in a total temporary construction footprint of approximately 17.12 acres within existing roadways and previously approved/disturbed pipeline easements. An approximately 1.11-acre area around the springs would be temporarily disturbed during construction within the existing spring easements. After construction, the disturbed areas (approximately 18.23 acres) would be restored to the existing contour, reclaimed, and reseeded and would return to present-day conditions over time. The spring water collection system would remain as a permanent structure for the life of the Project resulting in approximately 50 square feet of permanent disturbance.

Construction entails installation of a buried culinary water supply line in previously approved easements and disturbed areas using a combination of trench cutting equipment, pipe laying equipment, backhoes, excavators, and support vehicles. The construction will result in short-term temporary impacts in previously disturbed areas along and near the existing roadways and waterline easements. Installation and construction of the spring water collection system improvements will entail excavation using similar equipment. The Project may require the cutting or removal of trees where vegetation has overgrown in the existing waterline easement. Following installation of the buried waterline and spring water collection system, construction equipment and workers would leave the area as no other ground disturbing activities would be required during operation. Ground disturbance during operations is anticipated if the buried utility is accidentally severed, and will be limited to the areas immediately around the severed line. At this time, the construction schedule is unknown.

One USFWS-listed species was identified as potentially occurring in the Project, was evaluated, and, through protocol surveys, determined to be absent from the Project. Based upon review of the existing USFWS/UDWR data, the field survey results, the existing disturbance regime, and the Project's temporary disturbance, it is Cardinal EC's conclusion that the Project would result in no impacts to USFWS-listed species, their habitats, or designated critical habitat. Based upon the evaluation of UDWR SGCN and designated habitat, it is Cardinal EC's conclusion that the Project could greatly reduce or eliminate impacts to SGCN by timing construction to avoid species' critical life-cycle periods. If impact minimization measures are followed, it is Cardinal EC's conclusion that impacts to SGCN and UDWR designated game habitats would be short-term and temporary. No long-term impacts are anticipated as the project is a replacement of existing infrastructure, within an existing easement, with no proposed changes in use.

4.1 Vegetation

Assuming a 25-foot-wide construction footprint, the Project would result short-term temporary impacts to 17.12 acres of annual invasive grassland, sagebrush shrubland, pinyon-juniper shrubland/woodland, Gambel oak shrubland, and Douglas fir/aspen forest woodlands. It is Cardinal EC's understanding that these vegetation communities are not afforded statutory protection in Utah, beyond timber harvest requests;

however, impacts to these communities can be evaluated and recommendations made by a lead or cooperating agency under a National Environmental Protection Act (NEPA) process should one occur. Since the Project would result in short-term temporary disturbance associated with installation of the buried waterline, vegetation within the Project would regrow in the years following construction. Removal of trees will likely occur in the Project resulting in the loss of a small number of individual trees that occur in the pipeline easement.

In consultation with UDWR, staff have requested that efforts be made to minimize impacts to mature trees within the Douglas fir dominated woodland in Pole Canyon. Specifically, UDWR has requested that mature Douglas fir, white pine, and ponderosa pine (Pinus ponderosa) with a diameter of 12 inches (Diameter at breast height 4.5 feet from the ground) and larger be considered for avoidance. No other impact avoidance recommendations have been proposed for other trees/vegetation communities in the Project.

4.1.1 Recommendations

Coordinate with UDWR and the construction contractor to select a construction footprint that reduces disturbance to vegetation and mature trees where feasible. This could include Project design and installation of the waterline in areas that are previously disturbed, such as the existing dirt road. Reclamation procedures could also be employed that allow for segregation and replacement of topsoil and shrub remnants as well as identification of a seed mix that has proven successful in the area.

4.1.2 Actions Needed

Identify and locate the Project waterline alignment on the ground and coordinate with UDWR to identify feasible routes and route alternatives in concert with UDWR's mature tree recommendations.

4.2 SPECIAL STATUS SPECIES

USFWS-Listed Species

Four USFWS-listed species were evaluated for their potential to occur in the Project. One USFWS-listed species, the Utah prairie dog listed threatened, was identified as potentially occurring in the Project. The Project and Survey Area were subject to UDWR Utah prairie dog data review, USFWS low-intensity protocol surveys, and identified that this species is not present within the Project or Survey Area. Given that no USFWS-listed species occur in the Project or Survey Area, it is Cardinal EC's conclusion that the Project would result in no impacts to USFWS-listed species, their habitats, or designated critical habitat.

UDWR - Species of Greatest Conservation Need

One hundred sixty-five UDWR SGCN were evaluated for their potential to occur in the Project. Twenty-four SGCN species were carried forward for analysis in this report. Based on evaluation of existing data and field survey efforts, it is Cardinal EC's conclusion that the Project could minimize and avoid impacts to SGCN by timing the construction effort outside SGCN critical life-cycle periods. If impact minimization measures are followed, it is Cardinal EC's conclusion that impacts to SGCN would be short-term and temporary construction-related impacts. Long-term impacts to SGCN are not anticipated as the Project is a replacement of existing infrastructure, within an existing easement, and includes no changes in previously approved use.

None of the UDWR SGCN or UDWR designated habitats are afforded any species/habitat-specific statutory protection by the state of Utah for impacts associated with development; however, some of these species are afforded protection under existing federal regulation, such as the ESA, MBTA or BGEPA, and by the state of Utah for the purposes of hunting, trapping, and possession. Although statutory protection may be limited, the Project does occur on the Twelve-mile WMA, for which UDWR, as the land managing agency, may recommend impact reducing measures during seasonal periods when these species are most vulnerable to disturbance.

Amphibians

SGCN amphibians, if present, would likely use the pools and standing water around the spring complex for daily refuge, foraging, and for critical life-cycle events from April through July. Temporary short-term impacts to these species' habitat may occur during the construction phase; however, the disturbed areas will be reclaimed upon completion and would return to current-day conditions over time. Additionally, the Project may result in displacement or mortality of slow-moving individuals in the immediate areas of construction. No long-term impacts are anticipated.

Birds (SGCN)

Depending upon the species and their preferred habitat, each SGCN bird species have the potential to occur as a migrating or foraging visitor, breed, nest, or occur as year-round resident in and near the Project. Temporary short-term impacts to these species may occur during the construction phase during ground disturbing activities, and could include displacement or mortality to individuals, particularly if an active nest is destroyed; however, most individuals will likely flee the immediate area during construction and return to the area unaffected when construction is complete. No long-term impacts are anticipated.

Insects

The SGCN insect species would likely be most active as a pollinator during the growing season across the entire Project. Temporary short-term impacts to these species may occur during the construction phase of this Project and could include removal of habitat; however, the disturbed areas will be reclaimed upon completion and would return to current-day conditions over time. Direct impacts to this species are not anticipated as the construction equipment is slow moving. Long-term impacts are not anticipated.

Mammals

The SGCN mammals identified as potentially occurring in the Project would use a diversity of habitats in the Project for daily refuge and foraging and for critical life-cycle events such as breeding, and rearing of young from April through July. Temporary short-term impacts to these species may occur during the construction phase by the removal of habitat; however, the disturbed areas will be reclaimed upon completion and would return to current-day conditions over time. Project impacts could also include displacement or mortality of slow-moving individuals particularly if individuals are in burrows or in trees that are disturbed or removed; however, most individuals will likely flee the immediate area during construction and return to the area unaffected when construction is complete. No long-term impacts are anticipated.

UDWR – Designated Game Habitat

Twenty-four UDWR designated game species' habitats were evaluated for their overlap with the Project. Of these, six designated habitats occur in and near the Project that could support one or more of UDWR's game species and seasonal restrictions of April 1 to July 15 and December 1 to April 15 to minimize disturbance. Temporary short-term impacts to these habitats may occur during the construction phase through the removal of vegetation; however, all disturbed habitats would be reclaimed and would return to present-day condition over time. Long-term impacts to these designated habitats are not anticipated.

4.2.1 Recommendations

USFWS-Listed Species

No USFWS-listed species occur within the Project or Survey Area. No recommendations are proposed at this time. If, in the future, a USFWS-listed species is identified within the Project, it is recommended that immediate consultation with USFWS be initiated. Regardless of previous approvals, timing, or Project, USFWS-listed species receive federal statutory protection under the Endangered Species Act.

UDWR – Species of Greatest Conservation Need

Amphibians

Although neither the presence or absence of these species has been formally determined, Cardinal EC recommends conducting ground-disturbing activities outside these species' critical periods from April to July around the Pole Canyon spring/creek complex. If construction outside these periods is unavoidable, it is recommended that a pre-construction survey be completed to identify the presence or absence of these species or consultation be initiated with UDWR to identify a suitable schedule or method of construction that meets the UDWR conservation goals for these species.

Birds

Cardinal EC recommends conducting ground-disturbing activities outside the active nesting season to minimize impacts these species. To reduce the potential for impacts construction should be completed outside April through July 15 for non-raptors and from January 1 through August 31 for raptors. If construction outside these periods is unavoidable, it is recommended that a pre-construction survey be completed to identify the presence or absence of nesting birds in and near the Project and establish a protective buffer around the avian active nests that would prevent disruption to nesting and young rearing activities. If active nests are present, and the protective buffers prove prohibitive to initiation of construction, a biological monitor could be employed to monitor the active nests during construction to determine the if construction is negatively affecting the active nest. Additionally, consultation could be initiated with UDWR to identify a suitable schedule or method of construction that meets the UDWR conservation goals for these species.

Insects

To minimize impacts to this species habitat, Cardinal EC recommends completing reclamation on all disturbed areas with an approved seed mix that includes plant species common to this species habitat.

Mammals

Cardinal EC recommends conducting ground disturbing activities outside the times when these species are most vulnerable during breeding and rearing of young, generally recognized as a period of time from March through July. If construction outside these periods is unavoidable, it is recommended that a pre-construction survey be completed to identify the presence or absence of these species (pika and kit fox) within and near the Project and establish a protective buffer around the burrow or den prevent disruption to nesting and young rearing activities. For bat species, active brood rearing areas may occur in trees and would be difficult to identify, therefore removal of trees should also occur after this period. If the protective buffers prove prohibitive to initiation of construction, a biological monitor could be employed to monitor the active young rearing locations during construction to determine the if construction is negatively affecting the den or burrow. Additionally, consultation could be initiated with UDWR to identify a suitable schedule or method of construction that meets the UDWR conservation goals for these species.

UDWR – Designated Game Habitat

Cardinal EC recommends following UDWR impact avoidance periods: seasonal no-work restriction from April 1 to July 15 to minimize impacts to upland game birds and December 1 through April 15 to minimize disturbance to wintering elk, moose, and mule deer. If construction outside these periods is unavoidable, it is recommended that a pre-construction survey be completed to identify the presence or absence of game species occurring in and near the Project and identify active nests and other activity areas that would be sensitive to construction activity. If present, a protective buffer should be employed to minimize impacts to these species. If the protective buffers prove prohibitive to initiation of construction, a biological monitor could be employed to monitor the active nests and activity areas during construction to determine the if construction is negatively affecting these species. Additionally, consultation could be initiated with UDWR

to identify a suitable schedule or method of construction that meets the UDWR conservation goals for these species.

4.2.2 Actions Needed

ACSSD should identify and locate the Project waterline alignment on the ground and coordinate with the construction contractor to identify an appropriate construction schedule and method that minimizes impacts to Special Status Species and UDWR designated game habitats. Cardinal EC has prepared Table 4.1 to assist in development of a construction schedule. If construction overlaps with one or more of the recommended seasonal avoidance periods, pre-construction surveys should be completed to identify the presence of Special Status Species and develop the appropriate impact reducing measures to initiate construction.

Table 4.1 - Seasonal Wildlife Use Table

Species	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sept	Oct	Nov	Dec
UDWR frog/toad												
UDWR mammals**,***												
UDWR game bird												
UDWR big game												
Nesting birds (MBTA)												
Nesting raptor* (MBTA and BGEPA)												

MBTA – Migratory Bird Treaty Act; BGEPA – Bald and Golden Eagle Protection Act

*Raptor specific – UDWR has identified bald eagle and golden eagle within 2 mi. of the Project area. The recommended spatial avoidance for these two birds is 1.0 mi. and 0.5 mi. for the nests respectively with a seasonal avoidance from Jan 1 through Aug 31. These spatial and seasonal restrictions represent the most conservative spatial and seasonal restrictions, though most raptors are similar.

** generally, bats rear their young from May to June and disperse in July, although this could change depending on species-specific cycles and seasonal weather (avoidance of critical life-cycle events)

*** generally, most non-game mammals generally rear their young Mar through June and disperse in July, although this could change depending on species-specific cycles and seasonal weather (avoidance of critical life-cycle events)

4.3 MIGRATORY BIRDS AND RAPTORS

The Project supports potential ground and shrub nesting bird and raptor habitat and displacement of resident nesting birds could occur during ground disturbing activities if nests are not avoided. Resident birds are expected to flee construction areas and seek refuge in adjacent habitats during periods of active construction and return to the Project unaffected. Since many avian species are most vulnerable during nesting, efforts should made to avoid or offset the potential impacts to avian species during nesting periods. Project construction is not expected to result in any long-term irreversible affects to avian species if construction is timed outside breeding and nesting periods.

4.3.1 Recommendations

The following USFWS approved impact avoidance protocols could be used to offset potential impacts to avian species and maintain compliance with the MBTA and BGEPA: 1) Complete all construction to avoid the active avian nesting period from April 1 to July 15 for non-raptors and from March 1 to August 31 for raptors in suitable habitat; 2) If work must occur during the active avian nesting season, a) conduct a pre-construction survey, identify active nests, and buffer active nests according to USFWS guidelines (Romin and Muck 2002); or b) provide a biological monitor to ensure that impacts to active nesting locations are minimized during construction; or 3) mow vegetation or collapse burrows outside breeding, nesting, and

young rearing periods (September 1 to February 28) to reduce the likelihood of nesting species from establishing breeding territories, nests, or burrows.

4.3.2 Actions Needed

Conduct ground disturbing activities to minimize impacts to nesting birds between September 1 and December 31 or conduct a pre-construction nesting bird survey if ground disturbing activities occur during the recommended species-specific avoidance buffers identified in the previous section (Table 4.1).

5 REFERENCES

Natural Resource Conservation Service (NRCS). 2022. Web Soli Survey Report and Ecological Site Characteristics of Project. Available at: https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm

Romin and Muck. 2022. Utah Field Office Guidelines for Raptor Protection From Human and Land Use Disturbances.

United States Department of the Interior, United States Fish and Wildlife Service (USFWS). 2018. Utah Prairie Dog Occupancy and Habitat Survey Protocol for Federal Section 7 Consultation, June 2018.

USFWS. 2019. Utah Prairie Dog Survey Intensity Map. Published May 02, 2019.

USFWS. 2022a. USFWS Critical Habitat Online Portal. Available at: https://ecos.fws.gov/ecp/report/table/critical-habitat.html.

USFWS 2022b. Information, Planning, and Conservation System (IPaC) USFWS Listed Species occurring within vicinity of Project. Available online at http://ecos.fws.gov/ipac/.

Utah Division of Wildlife Resources (UDWR). 2022a. Natural Heritage Data Request for Federal and State-listed Species near the Project. Completed June 16, 2022.

UDWR. 2022b. Species of Greatest Conservation Need. May 2022. Available at: https://wildlife.utah.gov/pdf/WAP/2022-05-sgcn-list.pdf.

UDWR. 2022c. UDWR Designated Game Species Habitat Data Web Portal. Available at: https://dwr-data-utahdnr.hub.arcgis.com/search?collection=Dataset

UDWR. 2022d. UDWR Prairie dog GRAMA request for occupied habitat information on the Utah prairie dog.

UDWR. 2022f. UDWR Wildlife Action Plan and September 2022 Amendment. Available at: https://wildlife.utah.gov/wildlife-action-plan.html.

UDWR. 2022g. UDWR Wildlife Web Portal, Species of Greatest Conservation Need. Available at: https://utahdnr.maps.arcgis.com/apps/webappviewer/index.html?id=f2a182a16a4b45698d9d96b962852302.

Personal Communication:

Farmer, Mark. UDWR Habitat Program Manager. Calls and emails regarding the potential for special status species to occur within the Project, seasonal avoidance recommendations, and identification of mature tree protection measures.

Seamons, Jossee. UDWR Impact Biologist. Calls and emails regarding the potential for special status species to occur within the Project and seasonal avoidance recommendations.

Hill, Shane. UDWR Impact Biologist. Calls and emails regarding the potential for special status species to occur within the Project and seasonal avoidance recommendations.

Pope, Teri. UDWR, Special Status Species Biologist. Calls and emails regarding the potential for special status species to occur within the Project.

Biological Resources Survey,
Axtell Water Supply Project,
Sanpete County, Utah

APPENDIX A

PROJECT PHOTOGRAPHS

Project Western End – Annual Invasive Grassland and Greasewood Community

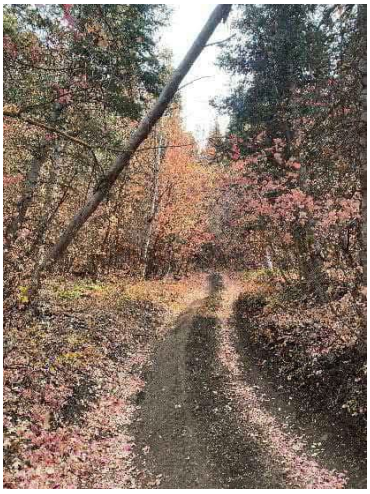
Project Western End – Sagebrush shrubland

Project Western End – Annual Invasive Community and Sagebrush Shrubland and Stock Pond

Project Central Portions – Pinyon-Juniper Shrubland

Project Central Portions – Pinyon-Juniper Shrubland

Project Pinyon Juniper Woodland and Bitterbrush



Project Douglas fir/Oak/Maple Woodland

Project Douglas Fir/Aspen Woodland and Pole Canyon Spring Wet Meadow

Project Doug Fir Woodland

Project Doug Fir Woodland and top of Pole Canyon Spring, upper most extent of spring Exploration Trench

Project Doug Fir Woodland and top of Pole Canyon Spring, lower extent of spring Exploration Trench

Picture of coterie 219aj (c.) pictured right. SR-89 pictured left.	Photo of Coterie 219aj (b.) along fence line beyond vehicle (disturbed crop) and south of SR-89 (foreground) view south. Project located on north side of SR-89.

Biological Resources Survey,
Axtell Water Supply Project,
Sanpete County, Utah

APPENDIX B

TABLE OF SPECIAL STATUS SPECIES

Table 1 – Table of U.S. Fish and Wildlife Service-listed and Utah Division of Wildlife Resources-listed Species, Habitat Descriptions and Likelihood of Occurrence in the Proposed Axtel Culinary Water Supply Project.

Species Name	Status	Habitat Description	Likelihood of Occurrence
Amphibians (5); USFWS-listed (0), Potentially Occur (2 - SGCN)			
Arizona toad (Bufo microscaphus)	SGCN	Found in lowland riparian habitat, only in the Virgin River Basin in Washington, Kane, and San Juan counties, Utah.	None: The Project is outside the known range of this species.
Columbia spotted frog (Rana luteiventris)	SGCN	Inhabits a range of aquatic habitats including isolated desert springs, riverine wetlands, and high-altitude riparian areas. Breeds in shallow, warm water, often close to shore and emergent vegetation, located in the Bonneville Basin in Utah in the Wasatch Mountains, the San Pitch River Drainage, in Juab, Sanpete, Summit, Utah, Tooele, and Wasatch counties. Currently, there are seven localized populations that comprise the Wasatch Front population or DPS. The largest known concentration is currently in the Heber Valley; the remaining six locations are Jordanelle/Francis, Springville Hatchery, Holladay Springs, Mona Springs Complex/Burraston Ponds, Fairview, and Vernon.	None: Isolated springs occur in the Project, but this species is not expected to occur in the Project. This species occurs in aquatic habitats of Sanpete County, likely closely associated with the Sevier River and San Pitch drainages which are outside the Project.
Northern leopard frog (Lithobates pipiens)	SGCN	Highly aquatic frog found in streams, rivers, ponds, lakes, and meadows for breeding and overwintering. Widespread in Utah. Found in most counties in Utah found in elevations from 1,000 to 3,000 m.	May Occur: Suitable spring and wet meadow habitat occurs in the high elevation springs of Pole Canyon.
Relict leopard frog (Lithobates onca)	SGCN	Inhabits springs, streams, and wetlands with clean, clear water, found in the Virgin and Muddy River basins in Washington County, Utah.	None: The Project is outside the known range of this species.
Western (boreal) toad (Anaxyrus/Bufo boreas)	SGCN	Occurs in a wide range of habitats in multiple mountain ranges in Utah typically at high elevations >2,000 m. Occur in permanent water bodies in a variety of habitats, including riparian, mountain shrub, mixed conifer, and aspen-conifer assemblages. Breeding sites are in small pools, beaver ponds, reservoirs, and backwaters and side-channels of creeks and rivers	May Occur: Suitable spring and wet meadow habitat occurs in the high elevation spring of Pole Canyon.

Table 1 – Table of U.S. Fish and Wildlife Service-listed and Utah Division of Wildlife Resources-listed Species, Habitat Descriptions and Likelihood of Occurrence in the Proposed Axtel Culinary Water Supply Project.

Species Name	Status	Habitat Description	Likelihood of Occurrence
Birds (27); USFWS listed (5) – Potentially Occur (14 - SGCN)			
American bittern (Botaurus lentiginosus)	SGCN	Found throughout the state in marshes and wetland habitats in summer, it migrates to open water in the southern US, Mexico, and the Caribbean in winter. Species is uncommon and infrequently detected.	None: No suitable habitat is present in the Project.
American white pelican (Pelecanus erythrorhynchos)	SGCN	In Utah they are a common summer, and occasional winter, resident at the Great Salt Lake and surrounding wetlands; also found occasionally at fresh water bodies throughout Utah.	None: No suitable habitat is present in the Project.
Bald eagle (Haliaeetus leucoceaphalus)	SGCN	Occur in coastal areas, bays, rivers, lakes. Forest stands containing nest trees vary from old-growth ponderosa pine to narrow strips of riparian vegetation surrounded by rangeland. Perch trees are also needed by bald eagles for roosting and foraging.	May Occur: May occur as a foraging visitor or resident during the winter. This species may nest in the vicinity; however, this species' preferred open river/lake shore nesting habitat is not present. This species was observed in the vicinity in 2006 (UDWR 2022). (UDWR Special Status Species Biologist T. Pope indicates the potential to occur 2022)
Band-tailed pigeon (Patagioenas fasciata)	SGCN	Occur in mountainous forest and woodland habitats in western North America. Uncommon summer and rare winter residents in Utah. Largest Utah breeding populations are in the Four Corners region, and in the central mountains from Cedar City to Nephi.	Unlikely to Occur: Suitable habitat is present in the Project, but is uncommon in this region of Utah. (UDWR Designated Spring/Fall Crucial and Spring/Fall Substantial t occurs in the Project)
Bendire's thrasher (Toxostoma bendirei)	SGCN	Inhabits lowland (Mojave) desert habitats from southeast California to central New Mexico and from southern Utah to northern Mexico. Extremely limited habitat extent in Utah. Most observations are from Washington County.	None: No suitable habitat is present in the Project. The Project is outside this species' known range in Utah.
Black rosy-finch (Leucosticte atrata)	SGCN	Found in alpine habitat of the central Rocky Mountains, nesting above treeline in cliffs or talus. Common in the Uinta and Wasatch Mountains during the breeding season, moving to sagebrush or shrubland in lower elevation valleys, benches, and foothills during winter.	May Occur: Suitable breeding habitat is present in the Project.
Black swift (Cypseloides niger)	SGCN	Occurs in mountainous regions of the western United States, known only to nest near or behind waterfalls with suitable characteristics including water, high relief, inaccessibility, shade, unobstructed flyways and ledges or cracks for nest placement. Known to occur in the Mt.	None: No suitable habitat is present in the Project.

Table 1 – Table of U.S. Fish and Wildlife Service-listed and Utah Division of Wildlife Resources-listed Species, Habitat Descriptions and Likelihood of Occurrence in the Proposed Axtel Culinary Water Supply Project.

Species Name	Status	Habitat Description	Likelihood of Occurrence
		Timpanogos area of the Wasatch Mountains, Salt Lake County and Duchesne County in the Uinta Mountains.	
Boreal owl (Aegolius funereus)	SGCN	Found throughout northern boreal forests in Alaska, Canada, and northern Eurasia, it uses high-elevation spruce and fir habitat in Utah. An obligate cavity nester, nests are often in old woodpecker holes. Occur in Utah from northern Utah from the Bear River Mountains, Wasatch Mountains and Uinta Mountains.	May Occur: Suitable breeding and nesting habitat is present in the Project.
Burrowing owl (Athene cunicularia)	SGCN	Occur in desert, semi-desert shrubland, grasslands, and agricultural areas. Nesting habitat primarily consists of flat, dry, and relatively open terrain; short vegetation; and abandoned mammal burrows for nesting and shelter.	May Occur: Suitable breeding and nesting habitat is present in the Project.
California condor (Gymnogyps californianus)	E-EXP, SGCN	Occur mountainous country at low and moderate elevations, especially rocky and brushy areas near cliffs. Condor colonies often roost in snags, tall open-branched trees, or cliffs, often near important foraging grounds. A small population has been established in northern Arizona and southern Utah since 1996 through releases of captive-reared birds. This population is classified as “experimental, non-essential” under the species recovery program. Nearly all of this experimental population spends time in Utah between spring and fall each year.	None: No suitable habitat is present in the Project. The Project is outside this species’ known range in Utah.
Caspian tern (Hydroprogne caspia)	SGCN	Nest singly or colonially on remote islands and beaches associated with playa and lentic wetland habitats. Uncommon summer residents, breeding colonies are typically on islands and dikes associated with Great Salt Lake wetlands, though nesting has been documented at Utah Lake and Neponset Reservoir.	None: No suitable habitat is present in the Project. The Project is outside this species known range in Utah.
Columbina sharp-tailed grouse (Tympanuchus phasianellus)	SGCN	Occur in grassland associated with transitional zones between sagebrush communities, mountain shrub, and riparian communities. Found in northern Utah in grassland and shrubland areas of Box Elder, Cache, Weber and Morgan counties.	None: The Project is outside the known range of this species.

Table 1 – Table of U.S. Fish and Wildlife Service-listed and Utah Division of Wildlife Resources-listed Species, Habitat Descriptions and Likelihood of Occurrence in the Proposed Axtel Culinary Water Supply Project.

Species Name	Status	Habitat Description	Likelihood of Occurrence
Ferruginous hawk (Buteo regalis)	SGCN	Occur in flat and rolling terrain in grassland or shrub steppe during breeding near cliffs, buttes, and creek banks. Ferruginous hawks occur in grasslands, agriculture lands, sagebrush/ saltbush/ greasewood shrub lands, and at the periphery of pinyon-juniper forests. Nest primarily in Juniper trees in Utah.	May Occur: Suitable breeding and nesting habitat is present in the Project.
Flammulated owl (Psiloscops flammeolus)	SGCN	Common in mature, montane forests throughout Utah, though primarily in the north central and southwestern ranges. Nest and roost in old woodpecker holes or other cavities formed by large woodpeckers.	May Occur: Suitable breeding and nesting habitat is present in the Project.
Golden eagle (Aquila chrysaetos)	SGCN	Found in open country with sufficient mammalian, avian, and reptilian prey, or carrion in winter. Nest primarily on cliffs, secondarily on trees or human structures.	May Occur: Suitable breeding and nesting habitat is present in the Project. Observed near the Project in 2005 (UDWR 2022). (UDWR Special Status Species Biologist T. Pope indicates the potential to occur 2022)
Greater sage-grouse (Centrocercus urophasianus)	SGCN	Occurs in sagebrush plains, foothills, and mountain valleys. Sage-grouse breeding and nesting generally occurs in open canopy habitat including landing strips, old lakebeds or playas, low sagebrush flats, openings on ridges, roads, cropland, and burned areas.	Unlikely to Occur: May occur as a migratory or foraging visitor. The Project is outside locations where this species is documented to occur.
Gunnison sage-grouse (Centrocercus minimus)	T, SGCN	Occurs in sagebrush plains, foothills, and mountain valleys in eastern Utah found in a limited area of eastern San Juan County and slightly more widely distributed in western Colorado. Sage-grouse breeding and nesting generally occurs in open canopy habitat including landing strips, old lakebeds or playas, low sagebrush flats, openings on ridges, roads, cropland, and burned areas.	None: The Project is outside the known range of this species.
Lewis's woodpecker (Melanerpes lewis)	SGCN	Breeding habitat is open ponderosa pine forest with a shrub/grass understory. Secondary breeding habitat includes aspen patches surrounded by shrubs, and riparian cottonwood bottoms.	May Occur: Suitable breeding and nesting habitat is present in the Project.

Table 1 – Table of U.S. Fish and Wildlife Service-listed and Utah Division of Wildlife Resources-listed Species, Habitat Descriptions and Likelihood of Occurrence in the Proposed Axtel Culinary Water Supply Project.

Species Name	Status	Habitat Description	Likelihood of Occurrence
Mexican spotted owl (Strix occidentalis lucida)	T, SGCN	Nest in caves, roosts in trees and on ledges of deep, long canyons. Found in canyons and forests from Utah and Colorado to central Mexico. In Utah, is sparsely distributed throughout the canyons of southern and eastern Utah.	None: No suitable habitat is present in the Survey Area. The Survey Area is located outside this species' known range in Utah.
Northern pygmy owl (Glaucidium gnoma)	SGCN	Common throughout the montane forests of Utah. Usually are found at higher elevations, but are known to descend in winter, sometimes appearing in urban areas.	May Occur: Suitable breeding and nesting habitat is present in the Project.
Olive-sided flycatcher (Contopus cooperi)	SGCN	Occur in coniferous habitats throughout their range and in high elevation conifer forests and clearings in Utah.	May Occur: Suitable breeding and nesting habitat is present in the Project.
Peregrine falcon (Falco peregrinus)	SGCN	Occur in a wide variety of habitats especially where there are suitable nesting cliffs including human population centers.	May Occur: May occur as a foraging visitor. Suitable breeding and nesting habitat is present near the Project.
Pinyon jay (Gymnorhinus cyanocephalus)	SGCN	Occurs in riparian, shrubland/chaparral, and conifer woodland foothills and lower mountain slopes of western and southwestern U.S. and Mexico,	May Occur: Suitable breeding and nesting habitat is present in the Project. (UDWR Special Status Species Biologist T. Pope indicates the potential to occur 2022)
Snowy plover (Charadrius nivosus)	SGCN	Nests on coastal beaches, and inland at salt flats, playas, river sandbars, alkaline lakes, and agricultural ponds. Nest mainly in northern Utah in playa habitats surrounding Great Salt Lake.	None: No suitable habitat is present in the Project. The Project is located outside this species' known range in Utah.
Southwestern willow flycatcher (Empidonax traillii extimus)	E, SGCN	Breeds in low-elevation areas of southwestern desert riparian systems. A small breeding population, the only one known in Utah, exists along the Virgin River in and around St. George.	None: No suitable habitat is present in the Project. The Project is located outside this species' known range in Utah.

Table 1 – Table of U.S. Fish and Wildlife Service-listed and Utah Division of Wildlife Resources-listed Species, Habitat Descriptions and Likelihood of Occurrence in the Proposed Axtel Culinary Water Supply Project.

Species Name	Status	Habitat Description	Likelihood of Occurrence
Western yellow-billed cuckoo (Coccyzus americanus)	T, SGCN	Prefers thick riparian vegetative communities with dense overstory of mature trees. Rare west of the Rocky Mountains; populations in Utah are found along the Green River near Vernal, near the town of Green River, and one portion of the San Juan River.	None: No suitable habitat is present in the Project. Identified as potentially occurring during 2022 USFWS IPaC review.
White-faced ibis (Plegadis chihi)	SGCN	Prefers emergent and open-water habitats, and flooded or irrigated farmland. Great Salt Lake hosts the largest nesting colony anywhere.	None: No suitable habitat is present in the Project.
Crustacean (2); USFWS-listed (0); Potentially Occur (0)			
Pylose crayfish (Pacifastacus gambelii)	SGCN	Found in cool water ponds, lakes, and stream or river habitats, found only in the northern portion of Utah in Box Elder, Cache, Rich, Weber, Morgan, Davis, Salt Lake and Summit Counties.	None: No suitable habitat is present in the Project. The Project is located outside this species' known range in Utah.
Utah amphipod (Stygobromus utahensis)	SGCN	Cave dwelling endemic, found only one location in a cave in Pole Creek Cave, 37 km NNW of Roosevelt, Duchesne County, Utah.	None: No suitable habitat is present in the Project. The Project is located outside this species' known range in Utah.
Fishes (22); USFWS-listed (8); Potentially Occur (0)			
Bear Lake sculpin (Cottus extensus)	SGCN	Benthic species found from shoreline to 53m depth, native only to Bear Lake.	None: No suitable habitat is present in the Project. The Project is located outside this species' known range in Utah.
Bear Lake whitefish (Prosopium abyssicola)	SGCN	Found at depths greater than 40m, native only to Bear Lake.	None: No suitable habitat is present in the Project. The Project is located outside this species' known range in Utah.
Bluehead sucker (Catostomus discobolus)	SGCN	Occurs in mainstem and tributary locations of the Colorado, Snake, and Bonneville River Basin. Is able to persist in some reservoirs.	None: No suitable habitat is present in the Project. The Project is located outside this species' known range in Utah.
Bonneville cisco (Prosopium gemmifer)	SGCN	Occur in deep cool water, native only to Bear Lake.	None: No suitable habitat is present in the Project. The Project is located outside this species' known range in Utah.
Bonneville cutthroat trout (Oncorhynchus clarkia utah)	SGCN	Occur in multiple habitat types, ranging from high-elevation mountain streams and lakes to low-elevation grassland streams in the Bonneville Basin of Utah,	None: No suitable habitat is present in the Project. Documented near the Project in 2002 (UDWR 2022)

Table 1 – Table of U.S. Fish and Wildlife Service-listed and Utah Division of Wildlife Resources-listed Species, Habitat Descriptions and Likelihood of Occurrence in the Proposed Axtel Culinary Water Supply Project.

Species Name	Status	Habitat Description	Likelihood of Occurrence
		Wyoming, Idaho and Nevada, found in Bear Lake and Strawberry Reservoir.	
Bonneville whitefish (Prosopium spilonotus)	SGCN	Found at depths to 40 m, native only to Bear Lake.	None: No suitable habitat is present in the Project. The Project is located outside this species' known range in Utah.
Bonytail (Gila elegans)	E, SGCN	Occur in swift, deep canyon bound reaches in the Colorado River Basin.	None: No suitable habitat is present in the Project. The Project is located outside this species' known range in Utah.
Colorado pikeminnow (Ptychocheilus lucius)	E, SGCN	Occur in medium to large rivers, where they can be found in habitats ranging from deep turbid rapids to flooded lowlands. Young of the species prefer slow-moving backwaters. Found only in the Colorado River Basin.	None: No suitable habitat is present in the Project. The Project is located outside this species' known range in Utah.
Colorado River cutthroat trout (Oncorhynchus clarkii pleuriticus)	SGCN	Occur in streams and high lakes in the Colorado River Basin.	None: No suitable habitat is present in the Project. The Project is located outside this species' known range in Utah.
Desert sucker (Catostomus clarkii)	SGCN	Found in small to medium size rivers with gravel substrate, found in the Virgin River Basin in Utah, the lower Colorado River and other systems in the desert southwest.	None: No suitable habitat is present in the Project. The Project is located outside this species' known range in Utah.
Flannelmouth sucker (Catostomus latipinnis)	SGCN	Occur in large rivers, where they are often found in deep pools of slow-flowing, low gradient reaches.in the main-stem Colorado River, as well as in many of the Colorado River's large tributaries, and usually absent from impoundments.	None: No suitable habitat is present in the Project. The Project is located outside this species' known range in Utah.
Humpback chub (Gila cypha)	T, SGCN	Occur in eddies and sheltered shorelines maintained by high spring flows in deep, swift, canyon-bound reaches of large rivers. Native to Colorado River system.	None: No suitable habitat is present in the Project. The Project is located outside this species' known range in Utah.
June sucker (Chasmistes liorus)	T, SGCN	Occurs in lakes and spawns in tributary rivers, found only in Utah Lake and the Provo River.	None: No suitable habitat is present in the Project. The Project is located outside this species' known range in Utah.
Least chub (Iotichthys phlegethontis)	C, SGCN	Occurs only in scattered springs, wetlands, and streams in the Bonneville Basin of western Utah.	None: No suitable habitat is present in the Project. The Project is located outside this species' known range in Utah.

Table 1 – Table of U.S. Fish and Wildlife Service-listed and Utah Division of Wildlife Resources-listed Species, Habitat Descriptions and Likelihood of Occurrence in the Proposed Axtel Culinary Water Supply Project.

Species Name	Status	Habitat Description	Likelihood of Occurrence
Northern leatherside chub (Lepidomeda copei)	SGCN	Occur in unaltered reaches with no or few non-native fishes. Occur in the Bear River Green River and Snake River basins of UT, ID, NV, and WY.	None: No suitable habitat is present in the Project. The Project is located outside this species' known range in Utah.
Razorback sucker (Xyrauchen texanus)	E, SGCN	Occur in slow backwater habitats and impoundments of the Colorado River System.	None: No suitable habitat is present in the Project. The Project is located outside this species' known range in Utah.
Roundtail chub (Gila robusta)	SGCN	Occur in murky pools near strong currents in the main-stem Colorado River and in the Colorado River's large tributaries.	None: No suitable habitat is present in the Project. The Project is located outside this species' known range in Utah.
Southern leatherside chub (Lepidomeda aliciae)	SGCN	Endemic to Utah and found in slow-flowing pools and backwaters, usually over substrates consisting of mud or sand, of creeks and small to medium-sized rivers in the Bonneville Basin. Introduced populations of leatherside chubs (species uncertain) occur in the Strawberry, Green, and Fremont rivers within the Upper Colorado River Basin.	None: No suitable habitat is present in the Project. The Project is located outside this species' known range in Utah.
Virgin chub (Gila seminuda)	E, SGCN	Occur in rocky runs, rapids, pools, and undercut banks in deeper areas with swift but not turbulent water, found in the Virgin and Muddy drainages in Washington County, Utah, Arizona, and Nevada.	None: No suitable habitat is present in the Project. The Project is located outside this species' known range in Utah.
Virgin spinedce (Lepidomeda mollispinis)	SGCN	Found in runs and pools, mostly in deeper water, over sand, and near cover such as boulders or overhanging trees and shrubs. Restricted to Virgin River Basin in Washington County, Utah.	None: No suitable habitat is present in the Project. The Project is located outside this species' known range in Utah.
Woundfin (Plagopterus argentissimus)	E, SGCN	Found in moderately flowing runs with sand substrates or habitats adjacent to riffles. Restricted to Virgin River Basin in Washington County, Utah.	None: No suitable habitat is present in the Project. The Project is located outside this species' known range in Utah.
Yellowstone cutthroat trout (Oncorhynchus clarkii bouvieri)	SGCN	Occurs in cold streams and high lakes in the Raft River and Goose Creek drainages of northwestern Utah in Box Elder County, Utah.	None: No suitable habitat is present in the Project. The Project is located outside this species' known range in Utah.
Insects (5); USFWS-listed (1); Potentially Occur (2 [1 SGNC also listed USFWS-C, 1 – SGCN])			
Coral Pink Sand Dunes tiger beetle (Cicindella albissima)	SGCN	Occurs in active sandy dunal environments at the Coral Pink Sand Dunes, Kane County, UT.	None: No suitable habitat is present in the Project. The Project is located outside this species' known range in Utah.

Table 1 – Table of U.S. Fish and Wildlife Service-listed and Utah Division of Wildlife Resources-listed Species, Habitat Descriptions and Likelihood of Occurrence in the Proposed Axtel Culinary Water Supply Project.

Species Name	Status	Habitat Description	Likelihood of Occurrence
Great Basin silverspot butterfly (Speyeria nokomis nokomis)	SGCN	Occur in streamside meadows and open seepage areas with an abundance of violets in generally desert landscapes. Colonies often isolated. One occurrence has been documented within the past 20 years in Colorado.	None: No suitable habitat is present in the Project. The Project is located outside this species' known range in Utah.
Mojave poppy bee (Perdita meconis)	SGCN	Occurs in the Mojave Desert where gypsum soils and poppy plants, this species host plant, occur in Washington County, Utah, Southeastern California, southern Nevada, and northwestern Arizona.	None: No suitable habitat is present in the Project. The Project is located outside this species' known range in Utah.
Monarch butterfly (Danaus plexippus plexippus)	C, SGCN	This species winters on the California coast and return north into summer breeding ranges in the interior west and British Columbia. This species is dependent upon milkweed plants for their lifecycle. Habitats include wetlands, prairies, agricultural areas and woodlands where milkweed grow	Unlikely to Occur: This species may occur as a migrating visitor. No suitable milkweed habitat is present in the Project. Identified as potentially occurring during 2022 USFWS IPaC review.
Western bumble bee (Bombus occidentalis occidentalis)	SGCN	Occurs throughout much of western U.S. in mixed woodlands, farmlands, urban areas, montane meadows and into the western edge of the prairie grasslands.	May Occur: This species may occur as a resident to the Project.
Mammals (26); 5 USFWS-listed (3); Potentially Occur (8 –-SGCN])			
Allen's big-eared bat (Idionycteris phyllotis)	SGCN	Occur in a range of habitats including shrublands, woodlands, and forests roosting in cracks in cliffs, mines, large boulder piles, and under exfoliating bark of large ponderosa pine snags. Utah from the LaSal Mountains, Henry Mountains, Capitol Reef National Park, Grand Staircase-Escalante National Monument, and St. George southward.	None: The Project is located outside this species' known range in Utah.
American pika (Ochotona princeps)	SGCN	Inhabit high-elevation talus slopes, boulder fields, and adjacent meadows, found in high mountainous area of western North America including the Rocky Mountains, Great Basin ranges, Sierra Nevada Mountains, and Cascade Mountains.	May Occur: This species may occur as a resident to the Project. No rocky skree slopes occur in the Project but do occur in the general vicinity of the Project.
Black-footed ferret (Mustela nigripes)	E-EXP, SGCN	Occur in areas where prairie dogs occur. In Utah, black-footed ferrets occur in the Coyote Basin/Snake John Reef area of Uintah County, Utah beginning in 1999.	None: No prairie dogs occur in the Project. The Project is located outside this species' known range in Utah.

Table 1 – Table of U.S. Fish and Wildlife Service-listed and Utah Division of Wildlife Resources-listed Species, Habitat Descriptions and Likelihood of Occurrence in the Proposed Axtel Culinary Water Supply Project.

Species Name	Status	Habitat Description	Likelihood of Occurrence
Botta's pocket gopher (Thomomys bottae robustus)	SGCN	Occur in underground dens in western Utah. Range includes the vicinity of the Skull Valley, Lakeside Mountains, Cedar Mountains, Camels Back Ridge, and Granite Peak area, primarily in Tooele County. Elevational range is approximately 1,310-1,710 meters.	None: The Project is located outside this species' known range in Utah.
Canadian lynx (Lynx canadensis)	T, SGCN	Occur in montane coniferous forest. Alaska and Canada south through the Rocky Mountains, northern Great Lakes region, and northern New England with Uinta Mountains considered peripheral lynx habitat.	None: Suitable forest habitat occurs in the Project. The Project is outside this species known range in Utah. This species is known to occur in the northeastern and southeastern portions of Utah.
Chisel-toothed kangaroo rat (Dipodomys microps celsus)	SGCN	Occur in desert shrubland and chaparral in valleys throughout most of the Great Basin and in southwestern Utah.	Unlikely to Occur: Suitable habitat occurs in the Project. This species could occur as a resident to the Project, but is unlikely as the Project is located on the eastern edge of this species' known range.
Dark kangaroo mouse (Microdipodops megacephalus)	SGCN	Occur in sandy, semi-desert shrubland with sparse vegetative cover in the Great Basin, specifically along the historical margins of Lake Bonneville in Utah.	None: No suitable habitat is present in the Project. The Project is located outside this species' known range in Utah.
Dwarf shrew (Sorex nanus)	SGCN	Occur in sedge marsh, subalpine meadow, dry brushy slopes, arid shortgrass prairie, dry stubble fields, and pinyon-juniper woodlands of high-elevation habitats in Utah, but known to occur in Utah only from the Abajo Mountains and the Uinta Mountains.	None: The Project is located outside this species' known range.
Fringed myotis (Myotis thysanodes)	SGCN	Occurs in xeric woodlands, such as juniper, ponderosa pine, and Douglas-fir; also in coniferous forests, woodlands, grasslands, and shrublands and roost in caves, mines, and buildings. Occurrences are known in Cache, Duchesne, Uintah, Utah, Juab, Millard, Grand, Wayne, San Juan, Garfield, Kane, and Washington counties.	May Occur: This species may occur as a foraging resident to the Project. No hibernacula occur in the Project.
Gray wolf (Canis lupus)	SGCN	Occur in a variety of habitats from tundra, woodlands, forests, grasslands, and deserts. Once common in Utah but extirpated by early settlers. Individuals dispersing from populations in Idaho and Wyoming have successfully reached Utah, but as yet no territories have been established. May occur in northern Utah in Box Elder, Cache, Rich, Weber, Morgan, Summit, and Davis Counties.	None: Suitable habitat occurs in the Project. The Project is outside this species' known range.

Table 1 – Table of U.S. Fish and Wildlife Service-listed and Utah Division of Wildlife Resources-listed Species, Habitat Descriptions and Likelihood of Occurrence in the Proposed Axtel Culinary Water Supply Project.

Species Name	Status	Habitat Description	Likelihood of Occurrence
Gunnison's prairie dog (Cynomys gunnisoni)	SGCN	Occur in sparsely vegetated, arid flats, particularly in areas dominated by short grasses Utah, Colorado, Arizona, and New Mexico largely restricted to the Four Corners region. Occur only in Grand and San Juan counties, east of the Colorado River in Utah.	None: The Project is outside this species' known range.
Idaho pocket gopher (Thomomys idahoensis)	SGCN	Occur in mountain foothill shrubland and a higher tolerance for rocky soils than the northern pocket gopher, found in Rich and Daggett counties of Utah.	None: The Project is outside this species' known range.
Kit fox (Vulpes macrotis)	SGCN	Occur in desert areas dominated by sagebrush, desert scrub, or grasslands, found in desert regions statewide including the Great Basin, Mojave, and Colorado Plateau regions.	May Occur: This species may occur as a resident to the Project.
Little brown myotis (Myotis lucifugus)	SGCN	Occur in a variety of habitats and roosts including houses and other humanmade structures. Occur statewide in Utah.	May Occur: This species may occur as a foraging resident to the Project. No hibernacula occur in the Project.
Long-eared myotis (Myotis evotis)	SGCN	Occur in a diverse array of habitats, including lowland, montane, and subalpine woodlands, forests, shrublands, and meadows, wooded stream courses, and areas over water bodies. Occur statewide in Utah.	May Occur: This species may occur as a foraging resident to the Project. No hibernacula occur in the Project.
Long-legged myotis (Myotis volans)	SGCN	Occur primarily in mountainous areas wooded with coniferous trees, but also may be found in riparian and desert. Occur statewide in Utah.	May Occur: This species may occur as a foraging resident to the Project. No hibernacula occur in the Project.
Virgin River montane vole (Microtus montanus rivularis)	SGCN	Occur in meadows and fields in mountain valleys and geographically restricted to a small area in extreme southwestern Utah.	None: The Project is outside this species' known range.
Preble's shrew (Sorex preblei)	SGCN	Occur in many types of habitats, but shows affinity for wetland areas. Found in Utah from only three localities in the northwestern part of the state in Tooele and Box Elder counties) on the southern shore of the Great Salt Lake, both its distribution in neighboring states and its ecology suggest that it may occur in almost any part of Utah except the extreme southwestern corner.	None: The Project is located outside this species' known range.
Pygmy rabbit (Brachylagus idahoensis)	SGCN	Species is a sagebrush obligate requiring areas with tall dense sagebrush. Distribution in Utah includes Rich County; Box Elder County; Ibapah Valley; Southern	None: The Project is located outside this species' known range.

Table 1 – Table of U.S. Fish and Wildlife Service-listed and Utah Division of Wildlife Resources-listed Species, Habitat Descriptions and Likelihood of Occurrence in the Proposed Axtel Culinary Water Supply Project.

Species Name	Status	Habitat Description	Likelihood of Occurrence
		Great Basin; and valleys of the Sevier and Awapa Plateaus.	
Spotted bat (Euderma maculatum)	SGCN	Occupy a wide variety of habitat types near cliffs and rocky escarpments, where it roosts in cracks and crevices. Likely present statewide, although few observations have been made in the West Desert area.	May Occur: This species may occur as a foraging resident to the Project. No hibernacula occur in the Project.
Towsend's big-eared bat (Corynorhinus townsendii)	SGCN	Occur in sagebrush steppe, pinyon-juniper, mountain shrub, and mixed conifer associations. The primary habitat component, however, is the availability of caves or mines for roost sites. Common and occur statewide in Utah.	May Occur: This species may occur as a foraging resident to the Project. No hibernacula occur in the Project.
Utah prairie dog (Cynomys parvidens)	T, SGCN	Occur in grassland/herbaceous, burrowing in soil habitat in grasslands, in level mountain valleys, in areas with deep well-drained soil and vegetation that prairie dogs can see over or through. Found in central and southwestern quarter of the state in Beaver, Garfield, Iron, Kane, Piute, Sevier, and Wayne counties.	May Occur: Identified as potentially occurring during 2022 USFWS IPaC review. Project occurs within the USFWS Utah Low Intensity Prairie Dog Survey Buffer. None of this species or abandoned colonies were identified during the October 2020 field survey or May 2022 field survey.
Western red bat (Lasiurus blossevillii)	SGCN	Occur in riparian habitats, xeric scrub, pine oak forest, grasslands, and croplands generally near water. Found in Utah in a north–south geographical band from extreme north-central Utah to the extreme southwest. Extremely rare in Utah.	Unlikely to Occur: Rare in Utah but may occur as a foraging visitor to the Project.
White-tailed prairie dog (Cynomys leucurus)	SGCN	Occur in open shrublands, semi-desert grasslands, and open valleys in underground burrows, found in eastern Utah in Rich, Summit, Daggett, Uintah, Duchesne, Carbon, Emery, and Grand Counties and northwestern Colorado, Wyoming, and a small area in southern Montana.	None: The Project is outside this species' known range.
Wolverine (Gulo gulo)	SGCN	Occur in high-elevation boreal forests, tundra, and western mountains in areas with persistent spring snowpack, found on the northern slopes of the Unita Mountains. More recent sightings of this species occur in Davis County Utah.	None: The Project is outside this species known range in Utah.
Yuma myotis (Myotis yumanensis)	SGCN	Occur in in a wide variety of upland and lowland habitats, including riparian, desert scrub, moist woodlands, and forests, usually near open water. Occur	May Occur: This species may occur as a foraging resident to the Project. No hibernacula occur in the Project.

Table 1 – Table of U.S. Fish and Wildlife Service-listed and Utah Division of Wildlife Resources-listed Species, Habitat Descriptions and Likelihood of Occurrence in the Proposed Axtel Culinary Water Supply Project.

Species Name	Status	Habitat Description	Likelihood of Occurrence
		statewide with exception to the extreme northwest and southeast corner.	
Mollusks (47); USFWS-listed (0); Potentially Occur (0)			
Bear lake springsnail (Pyrgulopsis pilsbryana)	SGCN	Found only in springs and streams around Bear Lake in Rich County, Utah.	None: The Project is outside this species known range in Utah.
Bifid duct pyrg (Pyrgulopsis peculiaris)	SGCN	Found in isolated desert springs in Millard County, Utah and White Pine County, Nevada.	None: The Project is outside this species known range in Utah.
Black Canyon Pyrg (Pyrgulopsis plicata)	SGCN	Endemic to one spring complex in Utah. Known only from a complex of springs in Black Canyon, East Fork Sevier River, Garfield County, Utah.	None: The Project is outside this species known range in Utah.
Brian Head Mountainsnail (Oreohelix parawanensis)	SGCN	Terrestrial snail known only from near the summit of Brian Head Peak in Iron County.	None: The Project is outside this species known range in Utah.
Carinate Glenwood pyrg (Pyrgulopsis inopinata)	SGCN	Found in two freshwater springs at one locality in Glenwood, Sevier County, and from another spring 5.4 km south of Sigurd, Sevier County.	None: The Project is outside this species known range in Utah.
Cloaked physa (Physa megalochlamys)	SGCN	Found primarily in marshes and ponds with seasonally fluctuating water levels and perennial waterbodies in Snake Valley in northwestern Millard County. Also known to occur in Colorado and Wyoming with possible geographic range extending to Cache and Box Elder Counties.	None: The Project is outside this species known range in Utah.
Coarse rams-horn (Planorbella binneyi)	SGCN	Occur in freshwater lakes, creeks, canals, and ponds. Found in Utah from the north-central (Davis, Salt Lake, and Utah counties), south-central (Piute County), southwestern (Washington County), and possibly from the northeastern (Daggett County) parts of the state. Occur in scattered locations statewide in Utah.	None: This species may occur as a resident to the Project. Mollusk (snail) surveys completed by UDWR in 2021 did not identify this or other SGCN mollusks in the Project.
Cross snaggletooth (Gastrocopta quadridens)	SGCN	Terrestrial snail found (historically) in moderate to high elevation habitats. Found in Fish Lake in Sevier County and Lamb's Canyon, Salt Lake County and possibly occurs throughout the Wasatch Mountains and the High Plateaus of Utah.	Unlikely to Occur: Habitat capable of supporting this species occurs in the Project; however, this species is only reported historically in two locations in Utah. Mollusk (snail) surveys completed by UDWR in 2021 did not identify this or other mollusks in the Project.

Table 1 – Table of U.S. Fish and Wildlife Service-listed and Utah Division of Wildlife Resources-listed Species, Habitat Descriptions and Likelihood of Occurrence in the Proposed Axtel Culinary Water Supply Project.

Species Name	Status	Habitat Description	Likelihood of Occurrence
Deseret mountainsnail (Oreohelix peripherica)	SGCN	Occur in terrestrial mountain habitats under vegetation and associated leaf litter, of mountain maple, scrub oak, balsam root in rocky limestone or quartzite substrate, found in portions of Box Elder, Cache, and Weber counties.	None: The Project is outside this species known range in Utah.
Desert springsnail (Pyrgulopsis deserta)	SGCN	Occur in freshwater springs in Washington County.	None: The Project is outside this species known range in Utah.
Desert tryonia (Tryonia porrecta)	SGCN	Occur in warm freshwater springs found in Great Basin specifically the Bonneville Basin including Tooele, Utah, and Juab counties in north-central and west-central Utah.	None: The Project is outside this species known range in Utah.
Eureka mountainsnail (Oreohelix eurekensis)	SGCN	Occur in rocky terrestrial mountain habitats in grassy areas with interspersed stands of sagebrush juniper and scrub oak. Found across northern/central Utah in a geographic east-west band in Juab, Tooele, Duchesne, Uintah, and Grand counties in the East Tintic Mountains, the south slope of the Uinta Mountains, the Deep Creek Mountains, and the East Tavaputs Plateau.	None: Habitat to support this species occurs in the Project. The species occurs through isolated locations in central Utah north to south; however, the Project is outside locations where this species is known to occur in Utah. Mollusk (snail) surveys completed by UDWR in 2021 did not identify this or other SGCN mollusks in the Project.
Fat-whorled pondsnail (Stagnicola bonnevillensis)	SGCN	Occur in warm freshwater spring outflows associated with Pleistocene Lake Bonneville soil deposits. Found in northwestern Utah in Box Elder County.	None: The Project is outside this species known range in Utah.
Fossaria (Fossaria techella)	SGCN	Occur in freshwater springs and swampy meadow habitats, identified in Duchesne, Iron, and Garfield counties and possibly occurring across Utah between these counties.	None: The Project is outside this species known range in Utah.
Green River pebblesnail (Fluminicola coloradoensis)	SGCN	Occur in freshwater habitats of the Green River drainage of Wyoming, Idaho, and Utah.	None: The Project is outside this species known range in Utah.
Hamlin Valley pyrg (Pyrgulopsis hamlinensis)	SGCN	Occur in freshwater mountain springs, found only in Beaver County, Utah.	None: The Project is outside this species known range in Utah.
Kanab ambersnail (Oxyloma kanabense)	SGCN	Occur in freshwater habitats with emergent vegetation in southern Kane County Utah and northern Arizona.	None: The Project is outside this species known range in Utah.

Table 1 – Table of U.S. Fish and Wildlife Service-listed and Utah Division of Wildlife Resources-listed Species, Habitat Descriptions and Likelihood of Occurrence in the Proposed Axtel Culinary Water Supply Project.

Species Name	Status	Habitat Description	Likelihood of Occurrence
Lamb rams-horn (Planorbella oregonensis)	SGCN	Occur in freshwater habitat, from Salt Springs, a spring complex, including Blue Lake, on the Elko County, Nevada-Tooele County, Utah.	None: The Project is outside this species known range in Utah.
Lindahl's pyrg (Pyrgulopsis lindahlae)	SGCN	Habitat information limited on UDWR and NatureServe Explorer. Occur in the Virgin River drainage, Utah. (Hershler, Liu, Forsyth, Hovingh & Wheeler, 2017)	None: The Project is outside this species known range in Utah.
Longitudinal gland pyrg (Pyrgulopsis anguina)	SGCN	Occur in freshwater springs in the Snake Valley and Clay Spring in northwestern Millard County.	None: The Project is outside this species known range in Utah.
Lyrate mountainsnail (Oreohelix haydeni)	SGCN	Occur in rocky limestone terrestrial mountain habitat dominated by balsam root, bitterbrush, maple, sagebrush, and wild cherry, found in Cache, Rich, Weber, Morgan, Salt Lake, and Tooele counties.	None: The Project is outside this species known range in Utah.
Mill Creek mountainsnail (Oreohelix howardi)	SGCN	Occur in terrestrial habitats on north-facing slopes in moist coniferous forest, found only in Mill Creek Canyon, Salt Lake County.	None: The Project is outside this species known range in Utah.
Mitered vertigo (Vertigo concinnula)	SGCN	Occur in rocky forested montane habitat in litter associated with aspen and fir trees. Found in Salt Lake, Sevier, Box Elder, and San Juan counties, Utah.	None: The Project is outside this species known range in Utah.
Montane snaggletooth (Gastrocopta pilsbryana)	SGCN	Occur in terrestrial forested montane canyon habitats in Garfield and Iron counties Utah.	None: The Project is outside this species known range in Utah.
Mountain marshsnail (Stagnicola montanensis)	SGCN	Occur in clear cold freshwater springs and associated marshes in Cache and Summit counties in the extreme north-central part of the state and from Beaver County in south-central Utah.	None: Habitat to support this species occurs in the Project. The Project occurs in isolated locations across central Utah north to south; however, the Project is outside locations where this species is known to occur in Utah. Mollusk (snail) surveys completed by UDWR in 2021 did not identify this or other SGCN mollusks in the Project.
Northwest Bonneville pyrg (Pyrgulopsis variegate)	SGCN	Occurs in small fresh groundwater springs in the West Desert (of the Great Basin) of Utah and Nevada. In Utah, this species lives in the most northwestern portion of Tooele County and the far western portion of Box Elder County.	None: The Project is outside this species known range in Utah.

Table 1 – Table of U.S. Fish and Wildlife Service-listed and Utah Division of Wildlife Resources-listed Species, Habitat Descriptions and Likelihood of Occurrence in the Proposed Axtel Culinary Water Supply Project.

Species Name	Status	Habitat Description	Likelihood of Occurrence
Nuwuvi pyrg (Pyrgulopsis nuwuvi)	SGNC	Habitat information limited on UDWR and NatureServe Explorer. Occur in the Virgin River drainage, Utah. (Hershler, Liu, Forsyth, Hovingh & Wheeler, 2017)	None: The Project is outside this species known range in Utah.
Otter Creek pyrg (Pyrgulopsis fusca)	SGCN	Occurs in flowing fresh groundwater springs in three locations in southern Utah, one location is in Piute County, and two locations in Sevier County at 6,700 to 7,300 ft.	None: The Project is outside this species known range in Utah.
Pine Grove pyrg (Pyrgulopsis pinetorum)	SGCN	No information available on UDWR or NatureServe Explorer. Aquatic snail that occurs in springs of Washington County, UT.	None: The Project is outside this species known range in Utah.
Ribbed dagger (Pupoides hordaceus)	SGCN	Terrestrial snail that occurs in deep juniper litter accumulations in xeric, low elevation juniper woodlands. Known in location in Garfield County, Utah.	None: The Project is outside this species known range in Utah.
Rocky Mountain duskysnail (Colligyrus greggi)	SGCN	Freshwater snail lives in springs in the upper Snake River Basin and the northeastern Great Basin, in Idaho, Utah, and Wyoming. In Utah, scientific collectors have found it in only two springs, both in Cache County.	None: The Project is outside this species known range in Utah.
Rustic ambersnail (Succinea rusticana)	SGCN	Occurs in in riparian areas near rivers, streams, lakes, bogs and springs in three localities in three counties in north-central Utah in Rich, Morgan Counties.	None: The Project is outside this species known range in Utah.
Santa Clara pyrg (Pyrgulopsis santaclarensis)	SGCN	Occur in springs with high water quality, and they often occur within a limited distance from the springhead The currently understood distribution of Santa Clara pyrg is a spring-fed ditch adjacent to the Left Fork of the Santa Clara River, in the Pine Valley Mountains of Washington County, Utah. The entire known distribution is within Dixie National Forest.	None: The Project is outside this species known range in Utah.
Sierra ambersnail (Catinella stretchiana)	SGCN	Land snail native to the western United States. As currently understood, the distribution of Sierra ambersnail in Utah is limited to one site near Brigham City in Box Elder County.	None: The Project is outside this species known range in Utah.
Sluice snaggletooth (Gastrocopta ashmuni)	SGCN	Terrestrial snail that occurs in leaf accumulations in mesic juniper, pinon pine, and oak forest on bedrock outcrops. Known historically from one location in Zion National Park in Washington County, although parts of the park extend into Kane and Iron counties.	None: The Project is outside this species known range in Utah.

Table 1 – Table of U.S. Fish and Wildlife Service-listed and Utah Division of Wildlife Resources-listed Species, Habitat Descriptions and Likelihood of Occurrence in the Proposed Axtel Culinary Water Supply Project.

Species Name	Status	Habitat Description	Likelihood of Occurrence
Smooth Glenwood pyrg (Pyrgulopsis chamberlini)	SGCN	Occur in two freshwater springs with aquatic vegetation and hard surfaces near the town of Glenwood in Sevier County, Utah.	None: The Project is outside this species known range in Utah.
Southern tightcoil (Ogaridiscus subrupicola)	SGCN	Terrestrial snail limited to one site in each of three states: Oregon, Idaho and Utah. The Utah population of southern tightcoil lives in a small cave in Tooele County, an ecological setting that is unique among Utah's mollusks.	None: The Project is outside this species known range in Utah.
Striate gem (Hawaiia neomexicana)	SGCN	Terrestrial snail from two locations in eastern Washington County and one location in southwestern Garfield County.	None: The Project is outside this species known range in Utah.
Sub-globose snake pyrg (Pyrgulopsis saxatilis)	SGCN	Springsnail endemic to Gandy Warm Spring of Snake Valley, Millard County, Utah, near the Nevada state line.	None: The Project is outside this species known range in Utah.
Thin-lip vallonia (Vallonia perspectiva)	SGCN	Terrestrial snail that occupies barrens, woodland - mixed, bare rock/talus/scree. Known from locations in Washington and Garfield Counties.	None: The Project is outside this species known range in Utah.
Top-heavy column (Pupilla syngenes)	SGCN	Terrestrial snail. Very little is known about historic and current occurrences in Utah. Occur in Well-drained hillsides in arid country, not under dense forest canopy; found among grass and under rocks. Identified location as Utah, Tooele, Horse Valley accessed at on Invert E Base.	None: The Project is outside this species known range in Utah.
Utah physa (Physella utahensis)	SGCN	Occurs in small, shallow spring-fed pools with variable vegetative substrate cover. Historically occurred in a few springs in northeastern Box Elder County and southwestern Tooele County, Utah Lake, from which it is now considered extirpated and four springs in Juab County and one spring in Garfield County.	None: The Project is outside this species known range in Utah.
Western pearlshell (Margaritifera falcata)	SGCN	Freshwater mussel, occurs in Utah, at 11 known historical localities, all in the northwestern part of the state. Occupies small, low gradient, streams with cold, well-oxygenated water. Identified in Utah County along the Weber River and noted to occur in Box Elder, Rich, Salt Lake, and Summit Counties.	None: The Project is outside this species known range in Utah.

Table 1 – Table of U.S. Fish and Wildlife Service-listed and Utah Division of Wildlife Resources-listed Species, Habitat Descriptions and Likelihood of Occurrence in the Proposed Axtel Culinary Water Supply Project.

Species Name	Status	Habitat Description	Likelihood of Occurrence
Wet-rock physa (Physella zionis)	SGCN	Occur in wet sandstone cliffs above the Virgin River, in Zion and Orderville canyons in Zion National Park in Washington County. Individuals occur in the water that seeps from cliff walls in these canyons with vegetative communities that typically include algae, maidenhair fern, columbine, and cardinal flowers with the occasional, incidental specimens of this species in outflow streams below the cliffs, and rarely, in the rivers.	None: The Project is outside this species known range in Utah.
Widelip pondsnail (Stagnicola traski)	SGCN	Freshwater snail occurring in north-central Utah below the mouth of Ogden Canyon in Weber County, and a few miles west of Magna in Salt Lake County. Occur in small, sluggish streams, sloughs, rivers, streams, creeks, lakes, marshes and ponds.	None: The Project is outside this species known range in Utah.
Winged floater (Anodonta nutalliana)	SGCN	Freshwater mussel documented to occur in Salt Lake, Davis, Utah, and Piute Counties in Utah.	None: The Project is outside this species known range in Utah.
Yavapai mountainsnail (Oreohelix yavapai cummingsi)	SGCN	Terrestrial snail consists of two localities in San Juan County, Utah. One is on Navajo Mountain, while the other is in the Abajo Mountains near Monticello. Associated primarily with limestone outcrops and rocky soils under Douglas-fir, Rocky Mountain juniper, and Utah juniper, sagebrush and bunch grasses.	None: The Project is outside this species known range in Utah.
Plants (31); USFWS-listed (24); Potentially Occur (0)			
Autumn Buttercup (Ranunculus aestivalis)	E, SGCN	Occur in fresh water seeps and springs on surfaces of drier peaty hummocks in semi-arid and sagebrush-dominated communities at elevations of 1,938 to 1,965 m. Endemic to the Sevier River Valley of Garfield County, Utah.	None: The Project is outside the known range of this species.
Barneby Ridge-cress (Lepidium barnebyanum)	E, SGCN	Occur in pinyon-juniper communities on poorly developed soils derived from white, marly shale outcrops of the Uinta Formation at 1890 and 1985 m elevation. Endemic to Duchesne County, Utah.	None: The Project is outside the known range of this species.
Barneby's Reed Mustard (Hesperidanthus barnebyi)	E, SGCN	Occur in mixed desert shrub communities of shadscale, Eriogonum, and Ephedra in sparsely vegetated sites on steep, eroding north to northeast facing slopes in fine-textured red clay soils rich in selenium and gypsum of	None: The Project is outside the known range of this species.

Table 1 – Table of U.S. Fish and Wildlife Service-listed and Utah Division of Wildlife Resources-listed Species, Habitat Descriptions and Likelihood of Occurrence in the Proposed Axtel Culinary Water Supply Project.

Species Name	Status	Habitat Description	Likelihood of Occurrence
		the Moenkopi Formation, Chinle Formation and Carmel Formation. Endemic to the southern portion of the San Rafael Swell in southern Emery County and Capitol Reef National Park in central Wayne County.	
Cisco Milkvetch (Astragalus sabulosus)	SGCN	Occurs in Salt desert shrub communities on the slopes of barren to semi-barren, gullied, selenium-bearing clay hills of the Mancos and Cedar Mountain formations. 1354-1585 m elevation. Endemic restricted to only 3 locations in Grand County, Utah.	None: The Project is outside the known range of this species.
Clay Phacelia (Phacelia argillacea)	E, SGCN	Occurs on steep slopes in sparse juniper-pinyon and mountain brush communities with sumac and serviceberry. Endemic of Utah County, Utah.	None: The Project is outside the known range of this species.
Clay Reed-mustard (Hesperidanthus argillaceus)	T, SGCN	Occurs shadscale, Indian ricegrass, pygmy sagebrush, and other mixed desert shrub communities on precipitous, typically north-facing slopes at-the-surface bedrock, scree, and fine-textured soils, often clay soils rich in gypsum (shale barrens) overlain with sandstone talus Occurs about the zone of contact between the Tertiary lower Uinta Formation and the Evacuation Creek Member of the upper Green River shale Formation. Endemic to a small area in the Uinta Basin, Uintah County, Utah.	None: The Project is outside the known range of this species.
Deseret Milkvetch (Astragalus desereticus)	SGCN	Occurs within juniper-sagebrush communities on open, steep, naturally disturbed south and west (rarely north) facing slopes of sandy-gravelly soils of the Moroni Formation between 1,645 and 1,740 m elevation. Endemic of Utah County, Uta	None: The Project is outside the known range of this species.
Despain Pincushion Cactus (Pediocactus despainii)	E, SGCN	Occur on Desert pavements of cobble or pebble in pinyon-juniper woodlands, hills, benches and flats, of open, semi-arid grassland with scattered junipers and pinyon pines 1500-1800 m. Endemic to central Utah, occurring in Wayne and Emery Counties.	None: The Project is outside the known range of this species.
Dwarf Bearclaw-poppy (Arctomecon humilis)	E, SGCN	Occur in gypsiferous shale in the Mojave Desert. Endemic to Washington County, Utah.	None: The Project is outside the known range of this species.

Table 1 – Table of U.S. Fish and Wildlife Service-listed and Utah Division of Wildlife Resources-listed Species, Habitat Descriptions and Likelihood of Occurrence in the Proposed Axtel Culinary Water Supply Project.

Species Name	Status	Habitat Description	Likelihood of Occurrence
Gierisch's Globemallow (Sphaeralcea gierischii)	E, SGCN	Occur in creosote bush, black bush, saltbush, communities in gypsum outcrops associated with Harrisburg Member of the Kaibab Formation in northern Mohave County, Arizona and Washington County, Utah.	None: The Project is outside the known range of this species.
Goose Creek Milkvetch (Astragalus anserinus)	SGCN	Occurs in deeply weathered, sandy, white rhyolitic ash of the Salt Lake Formation, sometimes overlain by a thin veneer of black glassy sinter gravel of apparent volcanic origin. It occurs in drainage bottoms, lower to upper slope and crest positions, typically within open Utah juniper, sagebrush, rabbitbrush, and grassland. Endemic to the Goose Creek drainage in northwestern Utah.	None: The Project is outside the known range of this species.
Graham's Beardtongue (Penstemon grahamii)	SGCN	Occur in gravelly clay soils on semi-barren knolls of white calcareous shale (Green River Formation) in the pinon-juniper woodland zone at high elevations and at low elevations in sparse desert shrubland. Specifically, this species occurs on exposed raw shale knolls and slopes derived from Parachute Creek and Evacuation Creek, both part of the Green River Formation. Endemic southern margin of the Uinta Basin of northeastern Utah in Uintah Carbon and Duchesne counties.	None: The Project is outside the known range of this species.
Heliotrope Milkvetch (Astragalus montii)	T, SGCN	Occur in high elevation barren areas in communities of cushion plants and other low-growing species scattered within a more extensive subalpine conifer forest. It occurs on shallow, very rocky soils derived from Flagstaff Limestone. It is known only from Tertiary Flagstaff Limestone, in openings in spruce-fir forest or at plateau margins, at approximately 3,350 to 3,450 meters elevation. Endemic to the Wasatch Plateau of central Utah Sanpete and Sevier counties.	None: Habitat capable of supporting this species is not present within the Project. Identified as potentially occurring in the Project through USFWS-IPaC results.
Isley's Milkvetch (Astragalus iselyi)	SGCN	Occur in seleniferous and gypsiferous sandy to gravelly clay slopes of the uranium-rich soils derived from the Morrison, Paradox and Mancos formations at 1525 to 2010 m elevation in pinyon-juniper and desert scrub communities. Endemic of southeastern Utah, known to occur in Grand-and San Juan County.	None: The Project is outside the known range of this species.

Table 1 – Table of U.S. Fish and Wildlife Service-listed and Utah Division of Wildlife Resources-listed Species, Habitat Descriptions and Likelihood of Occurrence in the Proposed Axtel Culinary Water Supply Project.

Species Name	Status	Habitat Description	Likelihood of Occurrence
Jones Cycladenia (Cycladenia humilis var. jonesii)	T, SGCN	Occurs in Desert Shrub communities on barren gypsiferous clay hills that form the steep sides and lower slopes of mesas in the canyonlands section of the Colorado Plateau. The species is an edaphic endemic, occurring only on gypsiferous, saline soils of the Summerville, Cutler, and Chinle formations. These soils are shallow, fine textured but with some rock fragments. It occurs in sparsely vegetated plant communities of mixed desert scrub, juniper, or wild buckwheat-Mormon tea endemic to the Colorado Plateau Ecoregion of Arizona and Utah.	None: The Project is outside the known range of this species.
Kodachrome Bladderpod (Physaria tumulosa)	E, SGNC	Occurs on extremely dry, sparsely vegetated, white shale knolls with thin soils derived from the Windsor Member of the Carmel Formation. It is associated with scattered Utah Juniper (*Juniperus osteosperma*) within Bouteloua grassland. Endemic to Utah and found only in Kane County.	None: The Project is outside the known range of this species.
Last Chance Townsendia (Townsendia aprica)	T, SGCN	Occur in pinyon-juniper and salt desert shrub communities on barren, silty, silty clay, or gravelly clay soils of the Mancos Shale Formation at 1695-2440 m elevation. A narrow endemic of south-central Utah in Emery, Sevier, and Wayne counties.	None: The Project is outside the known range of this species.
Maguire Primrose (Primula maguirei) (Primula cusickiana maguirei)	T, SGCN	Damp ledges, crevices, and over-hanging rocks along canyon walls. Almost always on north-facing, moss covered limestone cliffs at or near the canyon bottom in shallow dolomitic soils of the Laketown and Fish Haven geologic formations 1350-1700 m elevation. A narrow endemic of Logan Canyon in Cache County, Utah.	None: The Project is outside the known range of this species.
Navajo Sedge (Carex specuicola)	T, SGCN	Occur in seep and spring habitats and hanging gardens with moist, sandy to silty soils of shady seep-spring pockets or alcoves in rock faces with somewhat limited soil development. 1740-1830 m elevation in San Juan County, Utah.	None: The Project is outside the known range of this species.
Paradox Milkvetch (Astragalus holmgreniorum)	E, SGCN	Occur in the upper elevational limit of the creosote desert shrub communities on gravelly clay hills at 820-850 m elevation. Endemic of an area near the Arizona-Utah border south of St. George Washington County, Utah.	None: The Project is outside the known range of this species.

Table 1 – Table of U.S. Fish and Wildlife Service-listed and Utah Division of Wildlife Resources-listed Species, Habitat Descriptions and Likelihood of Occurrence in the Proposed Axtel Culinary Water Supply Project.

Species Name	Status	Habitat Description	Likelihood of Occurrence
Pariette Cactus (Sclerocactus brevispinus)	T, SGCN	Occur in highly saline and alkaline fine soils, restricted to clay badlands within a single geologic formation in Utah. Occurs on exposed clay hills and in saltbush and sagebrush flats in areas that are sparsely vegetated. 1400-1500 m. Known only from a single area a few miles across in the Pariette Draw region of Duchesne County, Utah.	None: The Project is outside the known range of this species.
Shivwits Milkvetch (Astragalus ampullarioides) (Astragalus eremiticus var. ampullarioides)	E, SGCN	Gypsiferous substrates, in "boils" on the Chinle Formation. Endemic to a single geological formation in one area of Washington Co., Utah.	None: The Project is outside the known range of this species.
Shrubby Reed-mustard (Hesperidanthus suffretescens)	E, SGCN	Occur in Mixed desert shrub communities and, at some locations, in pinyon -juniper and desert shrub, on semi-barren, white-shale layers of the Evacuation Creek Member of the Green River Formation. Endemic to semi-barren, white-shale layers of the Green River formation in the Uinta Basin of northeastern Utah.	None: The Project is outside the known range of this species.
Siler Pincushion Cactus (Pediocactus sileri)	T, SGCN	Soils derived from the Moenkopi Formation, high in gypsum and soluble salts. In these soils, the species is found in a variety of plant communities from low elevation (about 850 m) Mohave Desert scrub up to conifer woodlands and grasslands at 1650 m elevation. Endemic to a narrow strip along the Arizona-Utah border in Washington and Kane Counties	None: The Project is outside the known range of this species.
Stage Station/Cisco Milkvetch (Astragalus sabulosus var. vehiculus)	SGCN	Occurs in shadscale, woody-aster, galleta communities on the Morrison Formation at 1,370-1,465 m. Endemic to the Courthouse Wash of southwestern Grand County, Utah	None: The Project is outside the known range of this species.
Uinta Basin Hookless Cactus (Sclerocactus wetlandicus)	T. SGCN	Occur in salt desert shrub communities and pinon-juniper woodlands on river benches, valley slopes, and rolling hill. Gravel-covered clay hills, desert grasslands, saltbush, and rabbitbrush flats Known only from Duchesne and Uintah counties, Utah.	None: The Project is outside the known range of this species.
Ute Ladies' Tresses (Spiranthes diluvialis)	T, SGCN	Occur in moist environments including alkaline wetlands, moist meadows, floodplains, flooded river terraces, sub-irrigated or spring-fed abandoned stream channels and valleys, lakeshores, irrigation canals,	None: Spring meadow and wetland habitat occurs along the eastern end of the Project at 7,600 ft. The location of the spring is outside the elevation where this species is known to occur. The Project is outside the known range of this species in Utah. Identified as

Table 1 – Table of U.S. Fish and Wildlife Service-listed and Utah Division of Wildlife Resources-listed Species, Habitat Descriptions and Likelihood of Occurrence in the Proposed Axtel Culinary Water Supply Project.

Species Name	Status	Habitat Description	Likelihood of Occurrence
		berms, levees, or irrigated meadows. Known from northern and south-central Utah	potentially occurring during 2022 USFWS IPaC review.
Welsh's Milkweed (Asclepias welshii)	T, SGCN	Coral Pink sand dunes in sagebrush, juniper, and ponderosa pine communities at 1700 to 1900 meters. Occupies both the crest and lee slopes of dunes, adjusting readily to changes in depth of the sand. Occurs on the Coral Pink Sand Dunes and the Sand Hills 8 miles northeast of the Dunes, both in Kane County, Utah.	None: The Project is outside the known range of this species.
White River Beardtongue (Penstemon scariosus var. albifluvis)	SGCN	Occur Pinyon-juniper-desert shrub or desert shrub communities on substrates composed of fine textured soils and shale fragments weathered from the Green River Formation; across slopes to 35 degrees; and at elevations between 5,120 (1561 m) and 6,680 (2036 m) feet. Endemic to Raven Ridge near the White River in Rio Blanco County, Colorado, westward into Bonanza, southern Uintah County., Utah, to the vicinity of Evacuation Creek, a distance of about 20 miles.	None: The Project is outside the known range of this species.
Winkler's Pincushion Cactus (Pediocactus winklerii)	T, SGCN	Occurs in alkaline silty-loam or clay-loam, fine-textured soils in desert pavements of cobble, pebble, or fossil oyster shell and gypsum soils, primarily derived from the Dakota Formation, on the tops and sides of rocky hills, benches and gentle slopes, most abundantly on sites with a southern exposure. Found only in Emery County and Wayne County in Utah. Grows in small populations widely scattered over a small area, from near Notom in central Wayne County to near Fremont Junction in southwestern Emery County and near Ferron in western Emery County.	None: The Project is outside the known range of this species.
Wright Fishhook Cactus (Sclerocactus wrightiae)	E, SGCN	Occurs in Barren, alkaline soils with widely scattered shrubs, perennial herbs, bunch grasses, or scattered pinyon and juniper at 1,460-1,865 m elevation. It is endemic to east-central Utah, where it is known from western Emery County, southeastern Sevier County, central Wayne County, and a small strip within Garfield County. It occurs near the Fremont River and the San Rafael Swell.	None: The Project is outside the known range of this species.

Table 1 – Table of U.S. Fish and Wildlife Service-listed and Utah Division of Wildlife Resources-listed Species, Habitat Descriptions and Likelihood of Occurrence in the Proposed Axtel Culinary Water Supply Project.

Species Name	Status	Habitat Description	Likelihood of Occurrence
Reptile (4); USFWS-listed (1)			
Gila monster (Heloderma suspectum)	SGCN	Occur in the Mojave Desert near cliffs, boulders, and rocky sites in creosote brush desert in the southwest corner of Utah in Washington County.	None: The Project is outside the known range of this species.
Midget Faded Rattlesnake (Crotalus oreganus concolor)	SGCN	Restricted to Green River Basin of eastern Utah, western Colorado, and extreme SW Wyoming. Occur in canyon habitats of the Colorado River drainage in rocky, cliffy habitats along rivers and tributaries.	None: The Project is outside the known range of this species.
Mojave Desert Tortoise (Gopherus agassizii)	T, SGCN	Occur in desert shrublands of the Mojave Desert. Found only in the SW corner of the state in Washington County, Utah.	None: The Project is outside the known range of this species.
Pyro/Sonoran Mountain kingsnake (Lampropeltis pyromelana)	SGCN	Occur in forested and mountainous habitat, often along streams or rocky areas throughout Utah. Listed as occurring in Washington, Salt Lake, Beaver, Iron, and Wasatch County.	Unlikely to Occur: Habitat to support this species occurs in the Project. Uncommon to rare across its range, but reportedly widely distributed across central Utah north to south.
UDWR Wildlife UDWR designated distribution, season of habitat use, and habitat values are determined by local wildlife biologist relying on observations, surveys, and predictive habitat modeling.			
Utah Band-tailed Pigeon Habitat	Designated Habitat	Present: Spring/Fall Substantial (April 1 to July 15) Spring/Fall Crucial (April 1 to July 15)	
Utah Rocky Mountain Bighorn Sheep Habitat	Designated Habitat	None: The Survey Area is outside this UDWR designated habitat.	
Utah Bison Habitat	Designated Habitat	None: The Survey Area is outside this UDWR designated habitat	
Utah Black Bear Habitat	Designated Habitat	None: The Survey Area is outside this UDWR designated habitat	
Utah California Bighorn Sheep Habitat	Designated Habitat	None: The Survey Area is outside this UDWR designated habitat	
Utah California Quail Habitat	Designated Habitat	None: The Survey Area is outside this UDWR designated habitat	
Utah Chukar Habitat	Designated Habitat	Present:	

Table 1 – Table of U.S. Fish and Wildlife Service-listed and Utah Division of Wildlife Resources-listed Species, Habitat Descriptions and Likelihood of Occurrence in the Proposed Axtel Culinary Water Supply Project.

Species Name	Status	Habitat Description	Likelihood of Occurrence
		Year Long Crucial (April 1 to July 15)	
Utah Columbian Sharp-tailed Grouse Habitat	Designated Habitat	None: The Survey Area is outside this UDWR designated habitat	
Utah Dusky Grouse Habitat	Designated Habitat	Present: Year Long Crucial (April 1 to July 15)	
Utah Elk Habitat	Designated Habitat	Present: Summer/Winter Crucial (December 1 through April 15 restriction) covers Spring/Fall Substantial (Fawning May 15 to July 15 restriction)	
Utah Gambel's Quail Habitat	Designated Habitat	None: The Survey Area is outside this UDWR designated habitat	
Utah Greater Sage-grouse	Designated Habitat	None: The Survey Area is outside this UDWR designated habitat	
Utah Hungarian Partridge Habitat	Designated Habitat	None: The Survey Area is outside this UDWR designated habitat	
Utah Moose Habitat	Designated Habitat	Present: Crucial Winter (December 1 through April 15)	
Utah Mountain Goat Habitat	Designated Habitat	None: The Survey Area is outside this UDWR designated habitat.	
Utah Mule Deer Habitat	Designated Habitat	Present: Winter Crucial (December 1 through April 15) Winter/Spring Crucial (December 1 through April 15) Spring/Fall Substantial (Fawning May 15 to July 15 restriction)	
Utah Pronghorn Habitat	Designated Habitat	None: The Survey Area is outside this UDWR designated habitat.	
Utah Ring-necked Pheasant Habitat	Designated Habitat	None: The Survey Area is outside this UDWR designated habitat.	
Utah Rocky Mountain Bighorn Sheep Habitat	Designated Habitat	None: The Survey Area is outside this UDWR designated habitat.	

Table 1 – Table of U.S. Fish and Wildlife Service-listed and Utah Division of Wildlife Resources-listed Species, Habitat Descriptions and Likelihood of Occurrence in the Proposed Axtel Culinary Water Supply Project.

Species Name	Status	Habitat Description	Likelihood of Occurrence
Utah Ruffed Grouse Habitat	Designated Habitat	Present: Year Long Substantial (April 1 to July 15)	
Utah Snowshoe Hare Habitat	Designated Habitat	Present: Year Long Substantial	
Utah Turkey Habitat	Designated Habitat	None: The Survey Area is outside this UDWR designated habitat.	
Utah White-tailed Ptarmigan Habitat	Designated Habitat	None: The Survey Area is outside this UDWR designated habitat.	
Utah White-winged Dove Habitat	Designated Habitat	None: The Survey Area is outside this UDWR designated habitat.	

Status: Status: E – USFWS Endangered; T –USFWS Threatened; C –USFWS Candidate; EXP – Experimental Non-essential Population; SGCN – UDWR Species of Greatest Conservation Need, Designated Habitat – UDWR Designated Wildlife Habitat

Sources:

Hershler, R.; Liu, H.-P.; Forsyth, C.; Hovingh, P.; Wheeler, K. (2017). "Partial revision of the Pyrgulopsis kolobensis complex (Caenogastropoda: Hydrobiidae), with resurrection of P. pinetorum and description of three new species from the Virgin River drainage, Utah". Journal of Molluscan Studies. 83: 161–171.Invert E Base. 2022. Database of Invertebrates. Available at: https://www.invertebase.org/portal/collections/individual/index.php?occid=604&clid=0.
Nature Serve Explorer. 2022. Nature Serve Explorer. Available at: https://explorer.natureserve.org/
Utah Division of Wildlife Resources (UDWR). 2015. 2015-2025 Utah Wildlife Action Plan. Available at: https://wildlife.utah.gov/pdf/WAP/Utah_WAP.pdf
UDWR. 2021. UDWR Wildlife Action Plan October 2021 Update. Available at: https://wildlife.utah.gov/pdf/WAP/2021-10-sgcn-list.pdf
UDWR. 2022. Utah Species Field Guide (UDWR 2022). Available at: https://fieldguide.wildlife.utah.gov/
UDWR. 2022. UDWR Greater Sage-grouse Management Habitat Mapper (UDWR 2022). Available at: https://utahdnr.maps.arcgis.com/apps/webappviewer/index.html?id=f2a182a16a4b45698d9d96b962852302
UDWR. 2022. UDWR Wildlife Designated Habitat (UDWR 2022). Available at: https://dwr-data-utahdnr.hub.arcgis.com/search?collection=Dataset
U.S. Fish and Wildlife Service. 2021. USFWS IPaC Explorer (USFWS 2021c). Available at: https://ipac.ecosphere.fws.gov/

Attachment H

USFWS Memo Dated January 27, 2006

United States Department of the Interior

FISH AND WILDLIFE SERVICE

UTAH FIEW OFFICE

2369 WEST ORTON CIRCLE, SUITE 50

WEST VALLEY CITY, UTAH 84119

In Reply Refer To
FWS/R6
ES/UT
TA-0125

January 27, 2006

Dear Interested Parties:

In the past, our office has responded to requests for species lists and requests for concurrence on "no effect" determinations. We believed that these procedures were mutually beneficial as they maintained good interagency coordination on all project activities and provided clear documentation of section 7 consultations for your files. Due to current funding allocations and increased workload, the Utah Field Office is changing priorities and eliminating some of our current section 7 procedures. We wanted to make you aware of these changes and recommend that you also provide this information to project-level consultants, as appropriate.

1) Species lists will no longer be provided in letter format. Current county species lists can be obtained from the U.S. Fish and Wildlife Service website: http://mountain-prairie.fws.gov/endspp/CountyLists/UTAH.htm
We recommend that you check this website on a regular basis to confirm that you are using the most current list.

2) We will no longer provide concurrence for "no effect" determinations. Federal agencies can individually analyze and conclude that a project has "no effect" to a listed species. Written concurrence from our office is not required for "no effect" determinations. If you are unsure if a project will affect a listed species, please call and we can discuss proposed actions. At this time, we will still provide written concurrence for projects that "may affect" listed species, either by informal concurrence letters or formal biological opinions (50 CFR 402).

We appreciate your continued interest in conserving endangered species. If further assistance is needed or you have any questions, please contact Laura Ramin, at (801) 975-3330 extension 142.

Sincerely,

Henry R. Maddux
Utah Field Supervisor

Attachment I

Correspondence with Indian Tribes

THE PAIUTE INDIAN TRIBE OF UTAH

440 North Paiute Drive • Cedar City, Utah 84721 • (435) 586-1112 • Fax (435) 867-2659

June 15, 2022

Dao Yang, P. E./Project Engineer/Hydrologist
Sunrise Engineering
Salt Lake City Office
6875 South 900 East
Midvale, Utah 84047

Dear Mr. Yang,

SUBJECT: ***Proposed Culinary Water System Improvement Project***

Paiute Indian Tribe of Utah is in receipt of your correspondence and has reviewed the material dated June 2, 2022 and do not have any objections pertaining to the above-named project. Currently we are not aware of cultural resource sites, practices, or locations of importance in the tribe's traditional religions or culture. As you are aware the tribe supports the identification and avoidance of prehistoric sites and traditional cultural properties.

The Paiute Indian Tribe of Utah sincerely appreciates your accomplishments and consideration you and your staff have made to consult with the tribes.

Sincerely,

Dorena Martineau/Cultural Resource Director
Paiute Indian Tribe of Utah
440 North Paiute Drive
Cedar City, Utah 84721
P 435-586-1112
E dmartineau@utahpaiutes.org W www.utahpaiutes.org

SUNRISE ENGINEERING

Salt Lake City Office
6875 South 900 East, Midvale, Utah 84047 | TEL 801.523.0100 | FAX 801.523.0990

June 2, 2022

Ms. Dorena Martineau
Paiute Indian Tribe of Utah
440 North Paiute Drive
Cedar City, UT 84721-6181

RE: Proposed Culinary Water System Improvement Project
Axtell, Utah

Dear Ms. Dorena:

The Axtell Community Special Service District (ACSSD) is in the process of performing an environmental review pursuant to the National Environmental Policy Act (NEPA) to assess the potential environmental impacts of ACSSD's proposed culinary water system improvement project in Axtell of Sanpete County, Utah.

ACSSD's water system provides water to approximately 117 residential connections and two institutional connections. Sunrise Engineering, Inc. has recently completed a master plan for the water system in accordance with the State of Utah Rules Governing Drinking Water Systems (Rules). ACSSD's culinary water system is currently supplied solely by the Michaelson Springs. The Rules requires a public water supplier with more than 100 connections to have at least two reliable water sources. The system has a higher risk of water outages because there are no backup water sources. ACSSD decided to make the following improvements, as shown in the attached Figures 1 and 2, based on identified system deficiencies:

1. Develop the Pole Canyon Springs.
2. Replace approximately 19,000 feet of existing water transmission line.
3. Install approximately 10,500 feet of new waterline to connect the new springs to the existing waterline of the Michaelson Springs.

The proposed project would occur in portions of Sections 24 and 25, Township 20 South (T20S), Range 1 East (R1E) and portions of Sections 19, 20, 21, 26, 27, 28 and 29, T20S, R2E, Salt Lake Base and Meridian (SLBM). All pipelines would be buried at least 4 feet below grade. After construction of the project is complete, the disturbed area, where possible, would be restored to the existing contour to the extent practicable.
Please review the project and I would appreciate a response within 30 days. Thank you for your assistance.

Sincerely,
Sunrise Engineering, Inc.

Dao Yang, P.E.
Project Engineer/Hydrogeologist
dyang@sunrise-eng.com

Enclosure: Figures 1 and 2

SUNRISE ENGINEERING
Salt Lake City Office
6875 South 900 East, Midvale, Utah 84047 | TEL 801.523.0100 | FAX 801.523.0990

May 5, 2023

Mr. Rupert Steele, Chairperson
Confederated Tribes of Goshute
HC 61 Box 6104
195 Tribal Center Road
Ibapah, UT 84034

RE: Proposed Culinary Water System Improvement Project
Axtell, Utah

Dear Mr. Steele:

The Axtell Community Special Service District (ACSSD) is in the process of performing an environmental review pursuant to the National Environmental Policy Act (NEPA) for the Utah Division of Drinking Water in order to assess the potential environmental impacts of ACSSD's proposed culinary water system improvement project in Axtell of Sanpete County, Utah.

ACSSD's water system provides water to approximately 117 residential connections and two institutional connections. Sunrise Engineering, Inc. has recently completed a master plan for the water system in accordance with the State of Utah Rules Governing Drinking Water Systems (Rules). ACSSD's culinary water system is currently supplied solely by the Michaelson Springs. The Rules requires a public water supplier with more than 100 connections to have at least two reliable water sources. The system has a higher risk of water outages because there are no backup water sources. ACSSD decided to make the following improvements, as shown in the attached Figure 1, based on identified system deficiencies:

1. Develop the Pole Canyon Springs.
2. Install approximately 31,710 feet of new waterline to connect the new springs to the existing waterline of the Michaelson Springs.

The proposed project would occur in portions of Sections 24 and 25, Township 20 South (T20S), Range 1 East (R1E) and portions of Sections 19, 20, 21, 26, 27, 28 and 29, T20S, R2E, Salt Lake Base and Meridian (SLBM). All pipelines would be buried at least 4 feet below grade. After construction of the project is complete, the disturbed area, where possible, would be restored to the existing contour to the extent practicable.

Please review the project and return comments to me in writing. Thank you for your assistance.

Sincerely,
Sunrise Engineering, Inc.

Dao Yang, P.E.
Project Engineer/Hydrogeologist
dyang@sunrise-eng.com

Enclosure: Figure 1

SUNRISE ENGINEERING

Salt Lake City Office
6875 South 900 East, Midvale, Utah 84047 | TEL 801.523.0100 | FAX 801.523.0990

May 5, 2023

Mr. Richard Begay
Navajo Nation, Arizona, New Mexico & Utah
P.O. Box 4950
Window Rock, AZ 86515

RE: Proposed Culinary Water System Improvement Project
Axtell, Utah

Dear Mr. Begay:

The Axtell Community Special Service District (ACSSD) is in the process of performing an environmental review pursuant to the National Environmental Policy Act (NEPA) to assess the potential environmental impacts of ACSSD's proposed culinary water system improvement project in Axtell of Sanpete County, Utah.

ACSSD's water system provides water to approximately 117 residential connections and two institutional connections. Sunrise Engineering, Inc. has recently completed a master plan for the water system in accordance with the State of Utah Rules Governing Drinking Water Systems (Rules). ACSSD's culinary water system is currently supplied solely by the Michaelson Springs. The Rules requires a public water supplier with more than 100 connections to have at least two reliable water sources. The system has a higher risk of water outages because there are no backup water sources. ACSSD decided to make the following improvements, as shown in the attached Figures 1 and 2, based on identified system deficiencies:

1. Develop the Pole Canyon Springs.
2. Replace approximately 19,000 feet of existing water transmission line.
3. Install approximately 10,500 feet of new waterline to connect the new springs to the existing waterline of the Michaelson Springs.

The proposed project would occur in portions of Sections 24 and 25, Township 20 South (T20S), Range 1 East (R1E) and portions of Sections 19, 20, 21, 26, 27, 28 and 29, T20S, R2E, Salt Lake Base and Meridian (SLBM). All pipelines would be buried at least 4 feet below grade. After construction of the project is complete, the disturbed area, where possible, would be restored to the existing contour to the extent practicable.

Please review the project and I would appreciate a response within 30 days. Thank you for your assistance.

Sincerely,
Sunrise Engineering, Inc.

Dao Yang, P.E.
Project Engineer/Hydrogeologist
dyang@sunrise-eng.com
Enclosure: Figures 1 and 2

SUNRISE ENGINEERING
Salt Lake City Office
6875 South 900 East, Midvale, Utah 84047 | TEL 801.523.0100 | FAX 801.523.0990

May 5, 2023

Mr. Dennis Alex, Chairperson
Northwestern Band of Shoshone Nation
Ogden Tribal Office
2575 Commerce Way
Ogden, Utah 84401-3201

RE: Proposed Culinary Water System Improvement Project
Axtell, Utah

Dear Mr. Alex:

The Axtell Community Special Service District (ACSSD) is in the process of performing an environmental review pursuant to the National Environmental Policy Act (NEPA) for the Utah Division of Drinking Water in order to assess the potential environmental impacts of ACSSD's proposed culinary water system improvement project in Axtell of Sanpete County, Utah.

ACSSD's water system provides water to approximately 117 residential connections and two institutional connections. Sunrise Engineering, Inc. has recently completed a master plan for the water system in accordance with the State of Utah Rules Governing Drinking Water Systems (Rules). ACSSD's culinary water system is currently supplied solely by the Michaelson Springs. The Rules requires a public water supplier with more than 100 connections to have at least two reliable water sources. The system has a higher risk of water outages because there are no backup water sources. ACSSD decided to make the following improvements, as shown in the attached Figure 1, based on identified system deficiencies:

1. Develop the Pole Canyon Springs.
2. Install approximately 31,710 feet of new waterline to connect the new springs to the existing waterline of the Michaelson Springs.

The proposed project would occur in portions of Sections 24 and 25, Township 20 South (T20S), Range 1 East (R1E) and portions of Sections 19, 20, 21, 26, 27, 28 and 29, T20S, R2E, Salt Lake Base and Meridian (SLBM). All pipelines would be buried at least 4 feet below grade. After construction of the project is complete, the disturbed area, where possible, would be restored to the existing contour to the extent practicable.

Please review the project and I would appreciate a response within 30 days. Thank you for your assistance.

Sincerely,
Sunrise Engineering, Inc.

Dao Yang, P.E.
Project Engineer/Hydrogeologist
dyang@sunrise-eng.com

Enclosure: Figure 1

SUNRISE ENGINEERING
Salt Lake City Office
6875 South 900 East, Midvale, Utah 84047 | TEL 801.523.0100 | FAX 801.523.0990

May 5, 2023

Ms. Carlene Yellowhair, President
San Juan Southern Paiute
P.O. Box 2950
Tuba City, AZ 86045

RE: Proposed Culinary Water System Improvement Project
Axtell, Utah

Dear Ms. Yellowhair:

The Axtell Community Special Service District (ACSSD) is in the process of performing an environmental review pursuant to the National Environmental Policy Act (NEPA) for the Utah Division of Drinking Water in order to assess the potential environmental impacts of ACSSD's proposed culinary water system improvement project in Axtell of Sanpete County, Utah.

ACSSD's water system provides water to approximately 117 residential connections and two institutional connections. Sunrise Engineering, Inc. has recently completed a master plan for the water system in accordance with the State of Utah Rules Governing Drinking Water Systems (Rules). ACSSD's culinary water system is currently supplied solely by the Michaelson Springs. The Rules requires a public water supplier with more than 100 connections to have at least two reliable water sources. The system has a higher risk of water outages because there are no backup water sources. ACSSD decided to make the following improvements, as shown in the attached Figure 1, based on identified system deficiencies:

1. Develop the Pole Canyon Springs.
2. Install approximately 31,710 feet of new waterline to connect the new springs to the existing waterline of the Michaelson Springs.

The proposed project would occur in portions of Sections 24 and 25, Township 20 South (T20S), Range 1 East (R1E) and portions of Sections 19, 20, 21, 26, 27, 28 and 29, T20S, R2E, Salt Lake Base and Meridian (SLBM). All pipelines would be buried at least 4 feet below grade. After construction of the project is complete, the disturbed area, where possible, would be restored to the existing contour to the extent practicable.

Please review the project and I would appreciate a response within 30 days. Thank you for your assistance.

Sincerely,
Sunrise Engineering, Inc.

Dao Yang, P.E.
Project Engineer/Hydrogeologist
dyang@sunrise-eng.com

Enclosure: Figure 1

SUNRISE ENGINEERING
Salt Lake City Office
6875 South 900 East, Midvale, Utah 84047 | TEL 801.523.0100 | FAX 801.523.0990

June 2, 2022

Mr. Tino Batt, Chairman
Shoshone-Bannock Tribes of the Fort Hall Reservation
P.O. Box 306
Fort Hall, ID 83203

RE: Proposed Culinary Water System Improvement Project
Axtell, Utah

Dear Mr. Batt:

The Axtell Community Special Service District (ACSSD) is in the process of performing an environmental review pursuant to the National Environmental Policy Act (NEPA) to assess the potential environmental impacts of ACSSD's proposed culinary water system improvement project in Axtell of Sanpete County, Utah.

ACSSD's water system provides water to approximately 117 residential connections and two institutional connections. Sunrise Engineering, Inc. has recently completed a master plan for the water system in accordance with the State of Utah Rules Governing Drinking Water Systems (Rules). ACSSD's culinary water system is currently supplied solely by the Michaelson Springs. The Rules requires a public water supplier with more than 100 connections to have at least two reliable water sources. The system has a higher risk of water outages because there are no backup water sources. ACSSD decided to make the following improvements, as shown in the attached Figures 1 and 2, based on identified system deficiencies:

1. Develop the Pole Canyon Springs.
2. Replace approximately 19,000 feet of existing water transmission line.
3. Install approximately 10,500 feet of new waterline to connect the new springs to the existing waterline of the Michaelson Springs.

The proposed project would occur in portions of Sections 24 and 25, Township 20 South (T20S), Range 1 East (R1E) and portions of Sections 19, 20, 21, 26, 27, 28 and 29, T20S, R2E, Salt Lake Base and Meridian (SLBM). All pipelines would be buried at least 4 feet below grade. After construction of the project is complete, the disturbed area, where possible, would be restored to the existing contour to the extent practicable.

Please review the project and I would appreciate a response within 30 days. Thank you for your assistance.

Sincerely,
Sunrise Engineering, Inc.

Dao Yang, P.E.
Project Engineer/Hydrogeologist
dyang@sunrise-eng.com
Enclosure: Figures 1 and 2

SUNRISE ENGINEERING

Salt Lake City Office
6875 South 900 East, Midvale, Utah 84047 | TEL 801.523.0100 | FAX 801.523.0990

May 5, 2023

Ms. Candace Bear, Chairperson
Skull Valley Band of Goshute
407 Skull Valley Road
Skull Valley, UT 84029

RE: Proposed Culinary Water System Improvement Project
Axtell, Utah

Dear Ms. Bear:

The Axtell Community Special Service District (ACSSD) is in the process of performing an environmental review pursuant to the National Environmental Policy Act (NEPA) for the Utah Division of Drinking Water in order to assess the potential environmental impacts of ACSSD's proposed culinary water system improvement project in Axtell of Sanpete County, Utah.

ACSSD's water system provides water to approximately 117 residential connections and two institutional connections. Sunrise Engineering, Inc. has recently completed a master plan for the water system in accordance with the State of Utah Rules Governing Drinking Water Systems (Rules). ACSSD's culinary water system is currently supplied solely by the Michaelson Springs. The Rules requires a public water supplier with more than 100 connections to have at least two reliable water sources. The system has a higher risk of water outages because there are no backup water sources. ACSSD decided to make the following improvements, as shown in the attached Figure 1, based on identified system deficiencies:

1. Develop the Pole Canyon Springs.
2. Install approximately 31,710 feet of new waterline to connect the new springs to the existing waterline of the Michaelson Springs.

The proposed project would occur in portions of Sections 24 and 25, Township 20 South (T20S), Range 1 East (R1E) and portions of Sections 19, 20, 21, 26, 27, 28 and 29, T20S, R2E, Salt Lake Base and Meridian (SLBM). All pipelines would be buried at least 4 feet below grade. After construction of the project is complete, the disturbed area, where possible, would be restored to the existing contour to the extent practicable.

Please review the project and return comments to me in writing. Thank you for your assistance.

Sincerely,
Sunrise Engineering, Inc.

Dao Yang, P.E.
Project Engineer/Hydrogeologist
dyang@sunrise-eng.com

Enclosure: Figure 1

SUNRISE ENGINEERING
Salt Lake City Office
6875 South 900 East, Midvale, Utah 84047 | TEL 801.523.0100 | FAX 801.523.0990

June 2, 2022

Mr. Luke Duncan, Chairperson
Ute Indian Tribe of the Uintah & Ouray Reservation
P.O. Box 190
Fort Duchesne, UT 84026

RE: Proposed Culinary Water System Improvement Project
Axtell, Utah

Dear Mr. Duncan:

The Axtell Community Special Service District (ACSSD) is in the process of performing an environmental review pursuant to the National Environmental Policy Act (NEPA) to assess the potential environmental impacts of ACSSD's proposed culinary water system improvement project in Axtell of Sanpete County, Utah.

ACSSD's water system provides water to approximately 117 residential connections and two institutional connections. Sunrise Engineering, Inc. has recently completed a master plan for the water system in accordance with the State of Utah Rules Governing Drinking Water Systems (Rules). ACSSD's culinary water system is currently supplied solely by the Michaelson Springs. The Rules requires a public water supplier with more than 100 connections to have at least two reliable water sources. The system has a higher risk of water outages because there are no backup water sources. ACSSD decided to make the following improvements, as shown in the attached Figures 1 and 2, based on identified system deficiencies:

1. Develop the Pole Canyon Springs.
2. Replace approximately 19,000 feet of existing water transmission line.
3. Install approximately 10,500 feet of new waterline to connect the new springs to the existing waterline of the Michaelson Springs.

The proposed project would occur in portions of Sections 24 and 25, Township 20 South (T20S), Range 1 East (R1E) and portions of Sections 19, 20, 21, 26, 27, 28 and 29, T20S, R2E, Salt Lake Base and Meridian (SLBM). All pipelines would be buried at least 4 feet below grade. After construction of the project is complete, the disturbed area, where possible, would be restored to the existing contour to the extent practicable.

Please review the project and I would appreciate a response within 30 days. Thank you for your assistance.

Sincerely,
Sunrise Engineering, Inc.

Dao Yang, P.E.
Project Engineer/Hydrogeologist
dyang@sunrise-eng.com

Enclosure: Figures 1 and 2

SUNRISE ENGINEERING

Salt Lake City Office
6875 South 900 East, Midvale, Utah 84047 | TEL 801.523.0100 | FAX 801.523.0990

May 5, 2023

Mr. Manuel Heart, Chairman
Ute Mountain Ute Tribe
P.O. Box JJ
Towaoc, CO 81321

RE: Proposed Culinary Water System Improvement Project
Axtell, Utah

Dear Mr. Heart:

The Axtell Community Special Service District (ACSSD) is in the process of performing an environmental review pursuant to the National Environmental Policy Act (NEPA) for the Utah Division of Drinking Water in order to assess the potential environmental impacts of ACSSD's proposed culinary water system improvement project in Axtell of Sanpete County, Utah.

ACSSD's water system provides water to approximately 117 residential connections and two institutional connections. Sunrise Engineering, Inc. has recently completed a master plan for the water system in accordance with the State of Utah Rules Governing Drinking Water Systems (Rules). ACSSD's culinary water system is currently supplied solely by the Michaelson Springs. The Rules requires a public water supplier with more than 100 connections to have at least two reliable water sources. The system has a higher risk of water outages because there are no backup water sources. ACSSD decided to make the following improvements, as shown in the attached Figure 1, based on identified system deficiencies:

1. Develop the Pole Canyon Springs.
2. Install approximately 31,710 feet of new waterline to connect the new springs to the existing waterline of the Michaelson Springs.

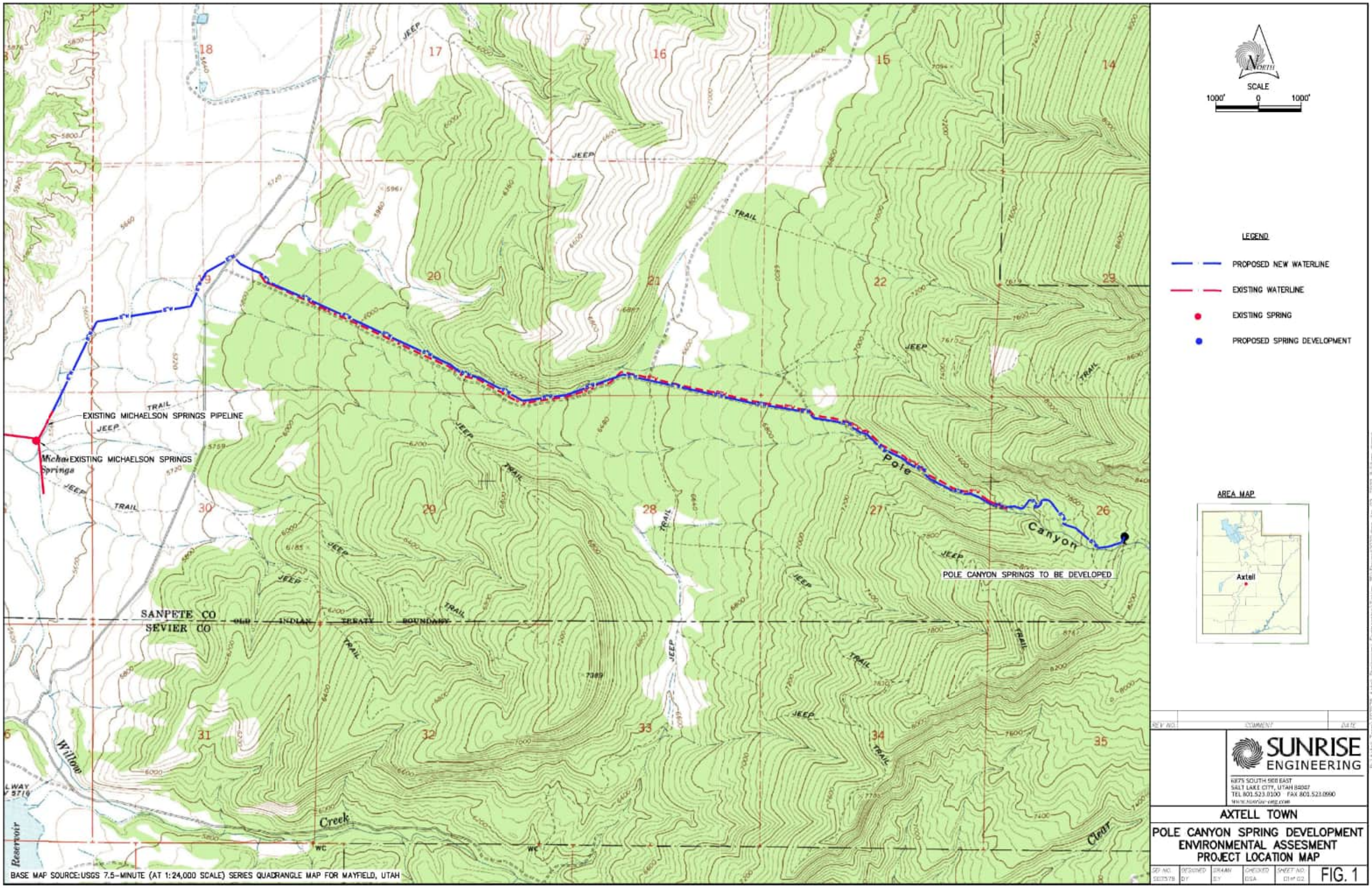
The proposed project would occur in portions of Sections 24 and 25, Township 20 South (T20S), Range 1 East (R1E) and portions of Sections 19, 20, 21, 26, 27, 28 and 29, T20S, R2E, Salt Lake Base and Meridian (SLBM). All pipelines would be buried at least 4 feet below grade. After construction of the project is complete, the disturbed area, where possible, would be restored to the existing contour to the extent practicable.

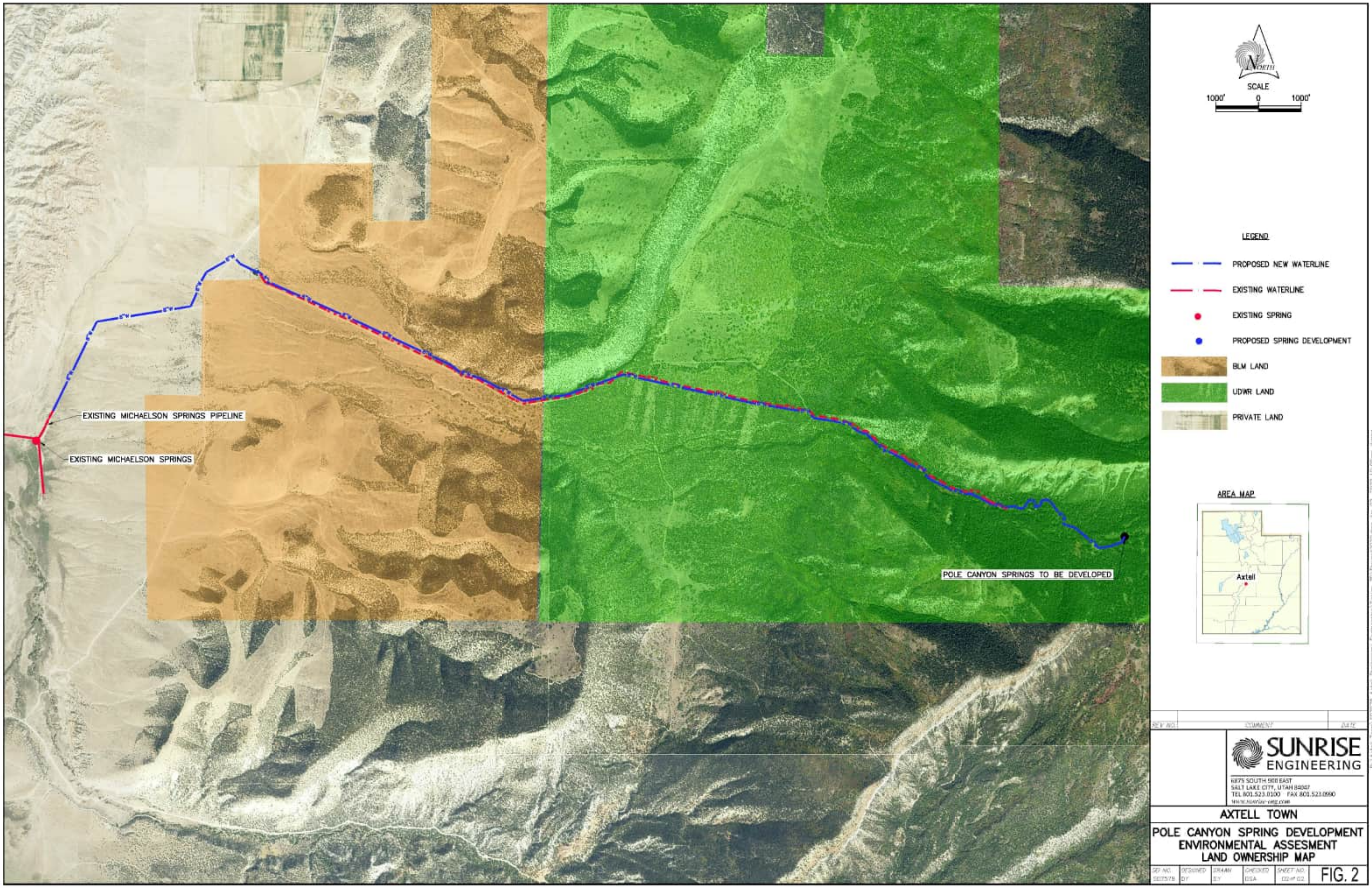
Please review the project and return comments to me in writing. Thank you for your assistance.

Sincerely,
Sunrise Engineering, Inc.

Dao Yang, P.E.
Project Engineer/Hydrogeologist
dyang@sunrise-eng.com

Enclosure: Figure 1


NORTH
SCALE
1000' 0 1000'
LEGEND
PROPOSED NEW WATERLINE
EXISTING WATERLINE
EXISTING SPRING
PROPOSED SPRING DEVELOPMENT
AREA MAP
Axtell
EXISTING MICHAELSON SPRINGS PIPELINE
EXISTING MICHAELSON SPRINGS
POLE CANYON SPRINGS TO BE DEVELOPED
Pole Canyon
SANPETE CO
SEVIER CO
OLD INDIAN TREATY BOUNDARY
Willow Creek
BASE MAP SOURCE: USGS 7.5-MINUTE (AT 1:24,000 SCALE) SERIES QUADRANGLE MAP FOR MAYFIELD, UTAH
REV NO. COMMENT DATE
SUNRISE ENGINEERING
6875 SOUTH 900 EAST
SALT LAKE CITY, UTAH 84047
TEL 801.523.0100 FAX 801.523.0990
AXTELL TOWN
POLE CANYON SPRING DEVELOPMENT
ENVIRONMENTAL ASSESMENT
PROJECT LOCATION MAP
FIG. 1



REV NO.	COMMENT	DATE

SUNRISE ENGINEERING
6875 SOUTH 900 EAST
SALT LAKE CITY, UTAH 84047
TEL 801.523.0100 FAX 801.523.0990
www.sunrise-eng.com

AXTELL TOWN

POLE CANYON SPRING DEVELOPMENT ENVIRONMENTAL ASSESMENT LAND OWNERSHIP MAP

SE NO.	DESIGNED	DRAWN	CHECKED	SHEET NO.	
S07578	DY	DY	DSA	02 of 02	FIG. 2

Attachment J

Correspondence with SHPO

Spencer J. Cox
Governor

Deidre M. Henderson
Lieutenant Governor

Jill Remington Love
Executive Director
Utah Department of Cultural and Community Engagement

Utah SHPO

Christopher Merritt
State Historic Preservation Officer
Utah State Historic Preservation Office

June 30, 2023

Michael Grange
Assistant Executive Secretary
Utah Dept of Environmental Quality - Drinking Water, Division of
Salt Lake City, Utah 84114

RE: Axtell SSD Spring and Waterline Project

For future correspondence, please reference Case No. 23-1508

Dear Mr. Grange,

The Utah State Historic Preservation Office received your submission and request for our comment on the above-referenced undertaking on June 29, 2023.

We concur with your determinations of eligibility and effect for this undertaking.

This letter serves as our comment on the determinations you have made within the consultation process specified in §36CFR800.4. If you have questions, please contact me by email at rmcgrath@utah.gov.

Sincerely,

Ryan P McGrath

Ryan McGrath
Archaeologist

State of Utah
SPENCER J. COX
Governor

DEIDRE HENDERSON
Lieutenant Governor

Department of
Environmental Quality

Kimberly D. Shelley
Executive Director

DIVISION OF DRINKING WATER
Tim Davis
Director

June 9, 2023

Christopher W. Merritt, Ph.D., RPA
Deputy SHPO, Antiquities Section Coordinator
Utah Division of State History
300 Rio Grande Street
Salt Lake City, Utah 84101-1182

Dear Dr. Merritt:

Subject: Axtell Community Special Service District – Drinking Water Infrastructure Improvement Project

As the Agency Official, we wish to consult with you pursuant to State of Utah UCA 9-8-404 about the proposed undertakings associated with this drinking water improvement project located on a mix of private property and Federal land in Sanpete County which is funded by a grant from the American Rescue Plan Act of 2021 (ARPA).

Axtell Community Special Service District is proposing to develop the Pole Canyon Spring, install approximately 6 miles of water transmission line from the new spring to the existing waterline, and develop an existing maintenance road for spring access. The area of potential effect (APE) includes approximately 28 acres which includes the spring redevelopment, maintenance road, and six miles of water transmission line.

A reasonable and good faith effort was made to identify and gather sufficient information to determine if cultural resources were present within the APE. Identification efforts included a records search and/or pedestrian survey of 19 acres. The records search included four previously recorded cultural resource inventories – no new archeological sites or eligible properties were found within ½ mile of the project area. Inventory of the project area was completed by walking a single 15 m (50 ft.) wide pedestrian transect centered over the proposed area to provide intensive coverage. The survey found no new cultural sites or isolated finds in the project area. Documentation of these findings are provided in the enclosed report:

> *A Cultural Resource Inventory for the Axtell Waterline Project, Sanpete County, Utah prepared by* Bighorn Archaeological Consultants, LLC in May 2023.

Based on this information, **the Utah Division of Drinking Water has determined that the proposed undertaking will result in "no historic properties affected."** However, if cultural resources are discovered during construction, all work in the immediate vicinity (30 meters) will cease and SHPO will be contacted for consultation.

Please call me at (801) 674-2563 or e-mail mgrange@utah.gov if you have any questions regarding this letter.

Sincerely,

Michael J. Grange, P.E.
Assistant Executive Secretary

MJG/ks

Attachment:

cc: Travis Blackburn, Axtell Community Special Service District, travisaqha@yahoo.com
Jesse Ralphs, Sunrise Engineering, jralphs@sunrise-eng.com
Dao Yang, Sunrise Engineering, dyang@sunrise-eng.com