

FINAL ENVIRONMENTAL ASSESSMENT

Northridge-12 FHCA Rebuild

Utah County, Utah

Prepared for:

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1.0 INTRODUCTION

1.1 Background, Purpose, and Need

The proposed federal action addresses Rocky Mountain Power's (RMP's) request for an easement on Utah Division of Wildlife Resources (UDWR)—administered land within the Timpanogos Wildlife Management Area (WMA) in Utah County, Utah. The easement is for the construction and operation of a buried distribution line along the Bonneville Shoreline Trail that would replace portions of an overhead power line and reduce exposure to wildfire risk.

Rocky Mountain Power identifies and designates certain areas as Fire High Consequence Areas (FHCA) where wildfires could pose a higher risk to the power grid and potentially cause widespread outages and damage. To reduce risks in FHCA, RMP is implementing a range of wildfire safety measures, including replacing aging overhead power lines with fire-resistant conductors, replacing wooden poles with steel poles, and implementing underground systems.

The project would occur on state land managed by UDWR (in whole or part) using Wildlife Restoration Act (16 U.S.C 669 et. Seq.) funds granted by the U.S. Fish and Wildlife Service (USFWS), with the initial acquisition of the WMA supported by federal funds in 1946. The Timpanogos WMA provides winter habitat for mule deer, elk, and Rocky Mountain bighorn sheep which feed on sagebrush and other shrubs during the winter months. UDWR is seeking approval from the USFWS Office of Conservation Investment (CI) to grant a 0.7661-acre easement for RMP to bury an existing overhead transmission line within the Timpanogos WMA.

The USFWS is the lead agency for reviewing this Environmental Assessment (EA) on behalf of UDWR. The EA documents potential analysis effects and complies with the National Environmental Policy Act (NEPA)¹. The EA, along with public comments, will inform the USFWS's determination of whether the proposed action is likely to pose significant impacts to the environment. If significant adverse effects are deemed unlikely, the USFWS would issue a Finding of No Significant Impact (FONSI), allowing UDWR to proceed with the easement. If significant impacts appear likely to result from the proposed action, the USFWS would prepare an Environmental Impact Statement (EIS) to more fully analyze the impacts before allowing UDWR to proceed with the easement.

2.0 ALTERNATIVES

2.1 Alternative A—No Action Alternative

Under the No Action Alternative, the UDWR would not approve the RMP easement application, and the construction and operation of the Northridge-12 FHCA Rebuild Project on UDWR—administered land would not occur. The existing condition of resources on UDWR—administered land would not change under this alternative. RMP would require a different method of implementing a wildfire mitigation strategy for long-term resilience across all seasons and weather conditions.

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.

2.2 Alternative B—Proposed Action

Under the Proposed Action, the UDWR would approve the RMP easement application to construct, operate, maintain, and terminate a buried transmission line. RMP chose the Proposed Action for maximum fire risk reduction. Prior to choosing this option, RMP evaluated re-framing the overhead line to steel poles and insulated conductors. This option was significantly more expensive than burying the powerline, did not provide as large a reduction in the wildfire risk, and was not carried forward for detailed analysis in this EA.

2.2.1 Project Location

As shown in the Project Overview Map of **Appendix A**, the easement on UDWR-administered land begins by tapping into the existing distribution line, heading east following the Bonneville Shoreline Trail across approximately 800 feet of private land, and continuing onto UDWR-managed land for an additional 3,300 feet before rejoining the existing overhead powerline on UDWR managed land.

An application was submitted by RMP to the UDWR for a 10-foot-wide easement in:

- Township 6 South, Range 2 East, Section 01
 - Township 6 South, Range 3 East, Section 06
- Salt Lake Base and Meridian

The easement would be 0.5104 acre more or less in Section 01 and 0.2557 acre more or less in Section 06 for a total of 0.7661 acres.

2.2.2 Electric Distribution Line

The overhead distribution line passes through an area in the region that has been identified by RMP as a FHCA. To reduce wildfire risk, RMP intends to remove the existing overhead distribution line and poles, replace two existing wooden poles with steel poles, and construct a new 4,100-foot underground conduit along the Bonneville Shoreline Trail. Poles and overhead distribution line on private land would also be removed as part of this effort. The old poles and conductor would be disposed of properly. Please see the Project Overview Map in **Appendix A**.

2.2.3 Construction Operations

Construction operations would be conducted with a tracked excavator to dig a 2-foot-wide by 3-foot-deep trench, a conduit trailer for installation of the conduit, bucket trucks for personnel and removal of embedded poles, and trailers for equipment. The 4,100-foot underground conduit will tap the existing distribution line near the Bonneville Shoreline Trail parking lot and be buried along the existing trail to limit the amount of new disturbance.

2.2.3.1 Temporary and Permanent Access

Vehicle access is from Cascade Drive, a public street in Orem, Utah, and along the Bonneville Shoreline Trail. Both would be used for access during construction and for permanent access when inspection and maintenance are required.

2.2.3.2 Construction Period

Construction is estimated to take 7 weeks and includes marking the boundaries of the construction zone, site preparation, underground conduit, and vault construction; de-energizing

and removal of the existing line; and reclamation of disturbed areas. Existing roads would be used to access the area, and no grading would be required.

2.2.3.3 Inspection and Maintenance Schedule

Periodic inspections and routine maintenance would be performed, as required, to keep the power line in safe and usable condition.

2.2.3.4 Construction Schedule

TABLE 1 PRELIMINARY CONSTRUCTION SCHEDULE	
Activity	Phase Timings
Mobilization	Week 1
Delineate and mark the boundaries of the construction zone	Week 1
Site preparation and surveying	Week 1 to 2
Underground conduit and vault construction	Week 2 to 4
De-energize existing line	Week 5
Wreck out existing overhead line	Week 5 to 6
Reclaim disturbed areas from wreck-out operations	Week 7

2.2.3.5 Staging Area

Construction equipment, vehicles, and supplies would be staged on private land approximately 8 miles northwest of the project area at the RMP American Fork Service Center. The staging area and the project area are shown on the Laydown Yard Map in **Appendix A**.

2.2.4 Applicant Committed Environmental Protection Measures

The following table explains key resource protection actions that would be taken by RMP, the construction contractor, or other relevant parties working on the project.

TABLE 2 APPLICANT COMMITTED ENVIRONMENTAL PROTECTION MEASURES	
Resource	Protection Measure
Air Quality	The construction contractor would complete and adhere to the Fugitive Dust Control Plan (FDCP) that was submitted to Utah Department of Environmental Quality (UDEQ), Division of Air Quality. The construction contractor would use surface applications of water or chemical stabilization before and during surface clearing and excavation activities to reduce fugitive dust emissions. The construction contractor 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. All internal combustion equipment would be kept in good working order. The construction contractor would cover construction materials and stabilize stockpiled soils.

TABLE 2 APPLICANT COMMITTED ENVIRONMENTAL PROTECTION MEASURES	
Resource	Protection Measure
Invasive/Noxious Weeds	All equipment used for construction would arrive clean, free of soil and debris capable of transporting noxious weed seeds, roots, or rhizomes. All personnel would ensure clothing and boots are free of any debris and seeds. Construction activities would not occur in areas with noxious weeds without consultation with UDWR to determine proper controls, whether mechanical or chemical removal, or by segregating the area from construction activities. Appropriate weed control procedures, including target species, timing of control, and method of control, would be determined in consultation with UDWR personnel. The contractor would perform weed control procedures as required.
Soil Resources	During periods of wet soil conditions, construction, operations, and maintenance activities would be suspended. If maintenance activities are required immediately, RMP would be responsible for the rehabilitation of the disturbed ground. Native soil disturbed during access and demolition of the existing overhead structures would be stockpiled on site with topsoil segregated and stabilized. The original grade would be restored, and the topsoil would be spread for reseeded and seeded with a UDWR-approved, site-specific seed mix to preserve the biological flora and fauna and prevent the establishment of noxious weeds. The construction contractor would be required to use best management practices to comply with the Utah Construction General Permit (CGP), to develop a stormwater pollution prevention plan (SWPPP), to submit a Notice of Intent to the Utah Division of Water Quality for a Utah Pollution Discharge Elimination System Permit before beginning any earth-disturbing activities, and to implement and maintain the project SWPPP, according to the CGP.

TABLE 2 APPLICANT COMMITTED ENVIRONMENTAL PROTECTION MEASURES	
Resource	Protection Measure
Solid and Hazardous Waste	Project-related trash, garbage, debris, and foreign matter would be hauled from the site daily for disposal at an off-site authorized facility; no refuse would be disposed of onsite. No burning would be allowed. No Polychlorinated Biphenyl would be used during construction, operation, or maintenance of the facilities. In the event hazardous or regulated materials are spilled, RMP or the construction contractor would take immediate measures to control the spill. RMP or the construction contractor 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 Authorized Officer and Utah Division of Environmental Response and Remediation. After cleanup, 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.
Vegetation Resources	Removal and disturbance of vegetation would be kept to a minimum through utilizing previously disturbed areas, existing easements, limiting equipment and materials storage, and staging areas. Revegetation would normally be accomplished with native seedings only. Seed mixes would be representative of the indigenous species present in the adjacent habitat and approved by the UDWR prior to use.
Migratory Birds, UDWR Species of Greatest Conservation Need (SGCN), and UDWR Designated Habitat	Where possible, surface disturbance would be avoided during the avian breeding/nesting season of April through July. If surface-disturbing activities are unavoidable during this period, a qualified biologist would conduct a preconstruction survey of the construction corridor within UDWR land for the presence of active migratory bird nests, UDWR SGCN, and upland game birds 7 to 10 days prior to the commencement of construction activities. If evidence of active nests or nesting behavior is observed, the area would be flagged and avoided to prevent destruction or disturbance of nests until the birds are no longer present. No construction work would be performed on UDWR land from December 1 through April 15 to minimize disturbance to wintering elk and mule deer.

TABLE 2 APPLICANT COMMITTED ENVIRONMENTAL PROTECTION MEASURES	
Resource	Protection Measure
Public Safety	To minimize any public safety issues, the construction area would be clearly fenced, marked, or flagged. Construction activities would be confined to locations within fenced, flagged, or marked areas. Excavation of the conduit trench, including the manner of supporting excavation and provisions for access to the trench, would comply with regulations of the Occupational Safety and Health Administration. Local ordinances could include a notice of closure of use in the area during the construction phase, barricades for open trenches, and signage. These measures would be implemented as required.
Cultural Resources	Coordination with the Metropolitan Water District of Salt Lake & Sandy (MWDSL) to determine the actual location of site 42Ut1134 (the <i>Salt Lake Aqueduct</i>) within the project Area of Potential Effect (APE) prior to any project-related ground disturbance would be required. The site would be avoided by boring beneath the aqueduct during new construction. Boring should begin at least 10 meters from the aqueduct and should be at least 1 meter below the aqueduct. If any new cultural resource discoveries are made during project construction, work would be paused, the UDWR archaeologist would be contacted, and the State Historic Preservation Office (SHPO) would be consulted regarding any significant findings. Construction would not occur in the discovery area until clearance was received from UDWR.

2.3 Alternatives Considered but Eliminated from Detailed Analysis

RMP analyzed replacing the wooden poles of the exiting transmission line with steel poles and insulated conductors. This alternative was less cost effective than burying new conduit, not as effective in reducing the wildfire risk, and continued the avian liability with above ground transmission infrastructure. For these reasons, this alternative was not preferred.

3.0 AFFECTED ENVIRONMENT/ENVIRONMENTAL CONSEQUENCES

This chapter describes the affected environment, specifically the existing or baseline conditions followed by a description of the projected direct, indirect, and reasonably foreseeable impacts resulting from each alternative.

3.1 Environmental Setting

3.1.1 Direct, Indirect, Reasonably Foreseeable Impact Definitions

Direct, indirect, and reasonably foreseeable impacts are defined below:

- 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.

- Reasonably foreseeable 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 actions.
- The direct and indirect impacts on resources are either short- or long-term in duration.
 - Short-term impacts would generally last between 1 and 5 years.
 - Long-term impacts would generally last longer than 5 years.

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 a 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 No Action Alternative and the Proposed Action. A level of uncertainty is present 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 RMP would be expected to comply with applicable federal, state, and local regulations.

The surface-disturbance areas were estimated using GIS technology. 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.

3.1.2 General Setting

The project area is east of Orem, Utah in Utah County, Utah at the base of the Wasatch Mountains within the Middle Rocky Mountains Province and bounded to the west by the Basin and Range Province. The Middle Rocky Mountains Province includes two major mountain ranges, the north-south-trending Wasatch and the east-west-trending Uintas, characterized by sharp ridge lines, U-shaped valleys, and glacial lakes. The elevations range from 4,800 feet to 5,300 feet in the project area. According to the weather record between 1981 and 2010 collected at the Orem, Utah weather station (Western Regional Climate Center, 2024), the average annual precipitation is about 13.0 inches; temperatures during the winters are cool, with average minimum/maximum temperatures in January of 19.9/36.4 degrees Fahrenheit (°F); the summers are dry with average minimum/maximum temperatures in July of 63.5/91.6 °F. The project area can be accessed from Cascade Drive.

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 reasonably foreseeable effects to current land use.

3.2.2 Proposed Action

The Timpanogos WMA, closed to all traffic after the Range Fire burned through it in October 2020, is currently open to the public for wildlife watching, hunting, hiking, and biking. Motorized vehicle access is prohibited except for Alta Canal Road during mule deer hunting season. No wildlife-disturbing activities are permitted from December 1 to April 15 to protect wintering deer and elk. Access to Timpanogos WMA would not change during or after the construction period due to the installation of underground conduit.

According to the Natural Resource Conservation Service Soil Survey Geographic Database, the project area is not prime farmland, and there is no farmland that would be converted to other uses. An existing, disturbed area, the Bonneville Shoreline Trail, would be used for installation of the underground conduit, which protects against any potential land conversion in the WMA.

The Proposed Action would have no direct, indirect, or reasonably foreseeable effect to the current land use of Timpanogos WMA.

3.3 Air Quality

3.3.1 No Action Alternative

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

3.3.2 Proposed Alternative

A review of UDEQ, Division of Air Quality data shows that the project area is in a location of PM 2.5 Serious Nonattainment. PM 2.5 is tiny particulate matter found in the air but invisible to the naked eye. Vehicle emissions, power plants, and wildfires are sources that can cause reduced visibility and damage to ecosystems.

UDEQ, Division of Air Quality requires an FDCP for all regions in Utah County west of the Wasatch Mountain range for any disturbance greater than 0.25 acre.

During construction, dust emission levels, and particulate matter from construction machinery would be expected to increase. Utilizing the Applicant Committed Environmental Protection Measures (ACEPM) associated with Air Quality in ACEPM **Table 2**, the Proposed Action could have a short-term, direct, and negligible effect on air quality during construction activities that would not persist after construction was completed. There would be no indirect, long-term, or reasonably foreseeable effects to air quality.

3.4 Aquatics

An Aquatics Resources Assessment (**Appendix B**) was conducted to ascertain whether any U.S. Army Corps of Engineers (USACE) jurisdictional Waters of the United States would be impacted and whether aquatics resources permitting would be required prior to construction.

3.4.1 No Action Alternative

Under the No Action Alternative, no construction activities would occur. Therefore, there would be no direct, indirect, or reasonably foreseeable effects to any aquatic resources.

3.4.2 Proposed Action

Three aquatic features were identified by the USFWS National Wetlands Inventory and U.S. Geological Survey National Hydrography Database. A pipeline, an intermittent stream, and a canal were identified, but none were present on aerial imagery. Slight topographic changes exist that could reflect a small, dry channel for the intermittent stream. It is mapped through both the existing overhead transmission line and the proposed underground conduit. See the Aquatic Resources Overview Map within **Appendix B** for specific locations.

To qualify as USACE jurisdictional and be subject to regulation under Section 404 of the Clean Water Act (CWA), the site must support a prevalence of hydrophytic vegetation, hydric soils, and wetland hydrology. None of these features satisfy any of these three criteria. To qualify, the site must also have continuous surface connection to traditionally navigable waters, relatively permanent bodies of water, or waters with relatively permanent flow. These three aquatic features exhibit none of these characteristics. It is reasonable to conclude these are not USACE jurisdictional waters, and there is no requirement for CWA permits.

The Federal Emergency Management Agency (FEMA) mapping of Flood Hazard Areas shows the Proposed Action within Zone X. Zone X is defined by FEMA as an area of minimal hazard where the annual flood risk is less than 0.2 percent, the 500-year flood.

There would be no direct, indirect, or reasonably foreseeable effects to any aquatic resource.

3.5 Biological 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 reasonably foreseeable effects to biological resources.

3.5.2 Proposed Action

A habitat assessment was conducted on October 28, 2024. The area surveyed included 150 feet on either side of the centerline of both the proposed underground alignment and the existing overhead transmission line alignment. This defined an area where the Proposed Action could directly or indirectly affect habitat. A map can be found in the Biological Assessment (BA) in **Appendix C**.

3.5.2.1 Vegetation

The dominant vegetation within the project area is Big Sagebrush Shrub/Scrub with some Gambel Oak. Vegetation observed during the habitat assessment included cheatgrass (*Bromus tectorum*), big sagebrush (*Artemisia tridentata*), oak brush (*Quercus macrocarpa*), rubber rabbitbrush (*Ericameria nauseosa*), and alfalfa (*Medicago sativa*).

Reclamation would occur where structures are removed, and new surface disturbance has resulted from the proposed action. Reclamation includes topsoil being spread for reseeding with a UDWR-approved seed mix. These measures are included in the ACEPM **Table 2**.

The Utah Noxious Weed Act (R68-9) defines five categories of noxious plants, directs county weed control boards that are responsible for control of noxious weeds, and determines penalties for noncompliance. A noxious and invasive weed survey was conducted by a qualified weed management specialist on January 10, 2025, using the same 150-foot survey buffer as the habitat

assessment. This survey area includes discoveries that would not be affected by the Proposed Action but could be of interest to the landowners.

On UDWR-managed land, there are four patches of Russian thistle (*Salsola tragus*) and one of an unknown mustard species along the proposed alignment of the underground conduit. Trenching or other construction activities or equipment could disturb these plants and potentially spread noxious weed seeds. The unknown mustard species is also present along the existing overhead line between two poles that are designated for removal. The surveyor found Dalmatian toadflax (*Linaria dalmatica*) south of the existing powerline along Cascade Drive. It is a Class 2 species which is considered a high priority for control.

On private land along the hillside below Cascade Drive, there are patches of Scotch thistle (*Onopordum acanthium*), Russian thistle (*Salsola tragus*), and the common reed (*Phragmites australis*). Scotch thistle and common reed are listed as Class 3 Containment species. These are noxious and invasive weeds not native to Utah that are widely spread and weed control efforts may be directed to reducing or eliminating new or expanding populations. Aerial imagery revealed a pipe under Cascade Drive that discharges water onto the embankment where the common reed was found.

The complete noxious weed memorandum can be found in **Appendix D**. A map of noxious weed locations is in **Appendix A**. Construction activities have the potential to disturb the noxious weeds and spread the seeds. To minimize any spread of noxious weeds, construction equipment and personnel would comply with the ACEPM of **Table 2**. The proposed action could have a direct, long-term, minor impact on noxious weeds.

3.5.2.2 Wildlife Threatened and Endangered Species

A BA was written to address the potential effects that could result from the implementation of the Proposed Action on species and their habitat that are legally protected under the Endangered Species Act (ESA) of 1973, as amended, avian species protected under the Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703–711), and the Bald and Golden Eagle Protection Act (BGEPA) (16 U.S.C. Section 668–668d). The complete BA is found in **Appendix C**.

The USFWS Information for Planning and Consultation tool (IPaC; IPaC 2024) identified two federally listed species that may occur within the project area and have the potential to be affected by the proposed project. The species were the Canada lynx (*Lynx canadensis*) and yellow-billed cuckoo (*Coccyzus americanus*). The Monarch butterfly (*Danaus plexippus*) is a threatened candidate species; however, as a candidate, the ESA does not protect them.

Canada lynx require habitat of old-growth boreal forests with dense undergrowth and high densities of snowshoe hare (*Lepus americanus*). The project area is primarily rocky hills with open grassland and scattered oak brush. The project area does not contain the forested habitat requirements to be considered suitable habitat for Canada lynx.

Yellow-billed cuckoo require habitat consisting of large tracks of riparian habitat with multistoried vegetation for nesting. Sites with strips of habitat less than 325 feet wide are rarely occupied. There is no riparian habitat present within the project area; therefore, it is not considered suitable habitat for yellow-billed cuckoo.

With a lack of suitable habitat, the Proposed Action would have no direct, indirect, or reasonably foreseeable effect to federally threatened and endangered listed species.

3.5.2.3 Wildlife Migratory Birds

Migratory birds, bald eagle (*Haliaeetus leucocephalus*) and golden eagle (*Aquila chrysaetos*) are protected species. The IPaC tool identified 25 migratory birds, including bald and golden eagles, as potentially being present in the project area. Apart from the bald and golden eagle, all the others are Birds of Conservation Concern (BCC); however, because they are not ESA-listed species, no USFWS Section 7 consultation is required. The list is included within the BA in **Appendix C**.

During the habitat assessment, minimal small mammal sign, such as scat and burrows, was observed. This could provide potential foraging habitat for bald and golden eagles, but the project area is not considered nesting habitat for eagles due to the lack of trees and cliffs.

Implementation of ACEPM **Table 2** for migratory birds, including seasonal construction activity restrictions and/or preconstruction surveys for active nests, would prevent any direct, indirect, or reasonably foreseeable effect to migratory birds.

3.5.2.4 Wildlife Utah Specific

The Utah Natural Heritage Program identified seven SGCN with the potential to occur within a 2-mile radius of the project area, and the Wildlife Habitat Analysis Tool identified 19 species with the potential to occur within the same 2-mile radius. None were observed during the habitat assessment; the complete list is included in the BA in **Appendix C**.

The action area is also within crucial elk (*Cervus canadensis*) and mule deer (*Odocoileus hemionus*) winter habitat. To avoid the potential for impacts to elk or mule deer, seasonal construction activity restrictions would occur between November 1 and April 15.

With preconstruction surveys and seasonal construction restrictions, no direct, indirect, or reasonably foreseeable effect would occur for Utah-specific wildlife.

3.6 Cultural Resources

3.6.1 No Action Alternative

Under the No Action Alternative, no construction activities would occur. There would be no direct, indirect, or reasonably foreseeable effects to cultural resources.

3.6.2 Proposed Action

A cultural resources evaluation and resulting report were conducted in compliance with U.C.A. § 9-8-404 (similar to Section 106 of the National Historic Preservation Act of 1966, as amended). The project APE was calculated by GIS technology to equal 11.62 acres. The estimation is based upon:

- 1.21 survey miles including a 50-foot-wide survey area on UDWR-managed land for 7.29 acres
- 0.72 survey miles including a 50-foot-wide survey area on privately owned lands for 4.33 acres

3.6.2.1 Pre-Field Records Search

A background research review was conducted by Eocene Environmental Group, Inc. (Eocene) on the Utah SHPO's Sego and Utah Digital Asset Manager online cultural resources databases on October 24, 2024 (SHPO 2024). While there were 23 previously conducted cultural resource surveys within 0.5 mile of the Project APE, only two were conducted within 10 years and would

satisfy Utah SHPO guidelines; however, neither recent survey crossed a significant portion of the Project APE, so the entire APE was surveyed.

3.6.2.2 Field Survey

The Project APE was inventoried to Class III (intensive pedestrian) standards in 15-meter-wide transects except in areas of steep or hazardous terrain, which were evaluated to Class II (reconnaissance) standards. A total of 9.66 acres were evaluated to Class III standards and 1.96 acres evaluated to Class II standards. As a result of the new Class III/II inventory, two previously recorded cultural resource sites were documented, and two isolated occurrences were identified. Only one site, 42Ut1134, the Salt Lake Aqueduct, was determined Eligible for listing on the National Register of Historic Places. For one of the segments, no exposed portion of the pipeline and no associated features or artifacts were observed. A berm of disturbed soil and warning signage associated with the aqueduct were noted nearby, suggesting the location mapped in the Utah SHPO Sego database may be incorrect.

Eocene recommended coordination with the MWDSLS to determine the actual location of site 42Ut1134 within the project APE prior to any project-related ground disturbance; Eocene also recommended avoidance by boring beneath the aqueduct during new construction. Boring should begin at least 10 meters from the aqueduct and should be at least 1 meter below the aqueduct. If this recommendation is followed, implementation of the project would result in *No Adverse Effects* to the historic property.

Given the planned avoidance of site 42Ut1134 through coordination with MWDSLS and RMP engineering, the UDWR submitted a determination of *No Adverse Effect* to SHPO on January 13, 2025. Concurrence with this recommendation was granted January 21, 2025. A copy of the correspondence and the Cultural Resources Inventory Report is included in **Appendix E**.

If any new cultural resource discoveries are made during project construction, work would be paused, the UDWR archaeologist would be contacted, and Utah SHPO would be consulted regarding any significant findings.

By avoiding the historic property, the Proposed Action would have no direct, indirect, or reasonably foreseeable effects on cultural resources.

3.7 Other Resources

3.7.1 No Action Alternative

Under the No Action Alternative, no construction activities would occur; therefore, no direct, indirect, or reasonably foreseeable effects to public health and safety, noise, or visual resources would occur.

3.7.2 Public Health and Safety

Trenching, backfilling, removal of existing poles, and installation of new steel poles could result in a health or safety issue for the public unaware of the activities or inadvertently wandering into an active construction zone. As specified in **Table 2** of ACEPM, noticeable flagging, signage, and fencing would be employed to inform the public about construction activities and prevent any incursion into an active construction zone. If these warnings are observed by the public, there would be no direct, indirect, or reasonably foreseeable effect on public health and safety.

3.7.3 Noise

Within the city limits of Orem, Utah, there is a general ordinance prohibiting construction work between 10:30 p.m. and 7 a.m. The noise from construction equipment could potentially be heard within the city limits; however, the project area is outside of the city limits and adjacent to a shooting range. Construction work is planned for daylight hours. Any potential noise disturbance would only occur during construction, would be intermittent, and would cease at the conclusion of construction activities. The change in the ambient noise level would be a direct, negligible, short-term effect.

3.7.4 Visual Resources

Construction equipment would be visible to users of Cascade Drive, a nearby golf course, and the Bonneville Shoreline Trail. After this period of temporary disturbance, the permanent viewshed would be improved by the removal of the overhead distribution line. This would result in a direct, long-term, moderate, and positive effect on the area visual resources.

4.0 PUBLIC PARTICIPATION

The USFWS did not hold any public meeting for this proposed action, but the draft EA was available for public comment on their website from September 17, 2025–October 17, 2025 (<https://www.fws.gov/library/collections/office-conservation-investment-nepa-documents>). No public comments were received regarding the proposed easement.

5.0 LIST OF PREPARERS AND REVIEWERS

TABLE 3 LIST OF PREPARERS AND REVIEWERS	
Name	Title
<i>USFWS</i>	
Patricia Thompson	Fish and Wildlife Biologist
<i>UDWR</i>	
Chelsea Duke	Wildlife Lands Coordinator
Hailey Blair	Wildlife Lands Specialist
<i>Eocene Environmental Group</i>	
Jacob Norlin	Project Manager
William (Jim) Melton	NEPA Reviewer
Debra Budrow	NEPA Compliance
Ron Rodriguez	Senior Biologist

TABLE 3 LIST OF PREPARERS AND REVIEWERS	
Name	Title
Maribel Glass	Biologist
Kristen Gold	Biologist
Amanda Spencer	Biologist
Kristin Maier	Aquatics Specialist
Dave Sims	Senior GIS Technician
Matthew Gill	Senior GIS Technician
Maggie Draper	Editor
Natalie Noland	Editor
Aaron Larsen	Archaeologist
Jessica DelBozque	Archaeologist
Jennifer Bannick	Archaeologist
Kathryn A. Cantrell	Principal Investigator

6.0 REFERENCES

- Federal Emergency Management Agency (FEMA) 2020. Flood Insurance Rate Map Utah County, Utah
<https://msc.fema.gov/portal/availabilitySearch?addcommunity=490216&communityName=OREM,%20CITY%20OF#searchresultsanchor>
- Natural Resources Conservation Service (NRCS) 2024 Web Soil Survey Report
<https://websoilsurvey.nrcs.usda.gov/app/>
- Utah State Historic Preservation Office (SHPO)
- U.S. Fish and Wildlife Service (USFWS) 2024 Information for Planning and Consultation
<https://ipac.ecosphere.fws.gov/>
- Utah Department of Agriculture and Food (UDAF) 2024 State of Utah Noxious Weed List
<https://ag.utah.gov/plant-industry/noxious-weed-control-resources/state-of-utah-noxious-weed-list/>
- Utah Department of Environmental Quality 2024 Utah Non-Attainment Area
<https://deq.utah.gov/air-quality/area-designations-pm2-5-state-implementation-plan-development>
- Utah Division of Wildlife Resources (UDWR) 2024 Utah Wildlife Action Plan
https://wildlife.utah.gov/pdf/WAP/Utah_WAP.pdf
- Western Regional Climate Center (WRCC) Orem, Utah 2024 <https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ut6538>

7.0 LIST OF ABBREVIATIONS

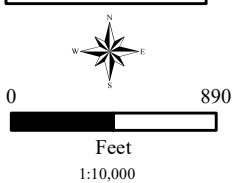
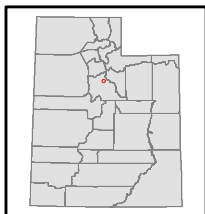
ACEPM	Applicant Committed Environmental Protection Measures
APE	Area of Potential Effect
BA	Biological Assessment
BCC	Birds of Conservation Concern
BGEPA	Bald and Golden Eagle Protection Act
CFR	Code of Federal Regulations
CGP	Construction General Permit
CI	Conservation Investment
CWA	Clean Water Act
FDCP	Fugitive Dust Control Plan
FHCA	Fire High Consequence Area
EA	Environmental Assessment
Eocene	Eocene Environmental Group, Inc.
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
MBTA	Migratory Bird Treaty Act
MOU	Memorandum of Understanding
MWDSLS	Metropolitan Water District of Salt Lake and Sandy
NEPA	National Environmental Policy Act
RMP	Rocky Mountain Power
SGCN	Species of Greatest Conservation Need
SWPPP	Stormwater Pollution Prevention Plan
SHPO	State Historic Preservation Office
UDEQ	Utah Department of Environmental Quality
UDWR	Utah Division of Wildlife Resources
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
WMA	Wildlife Management Area

APPENDIX A

PROJECT MAPS



UTAH COUNTY



Legend

Transmission Poles

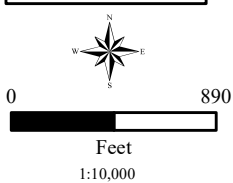
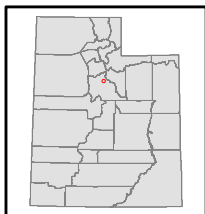
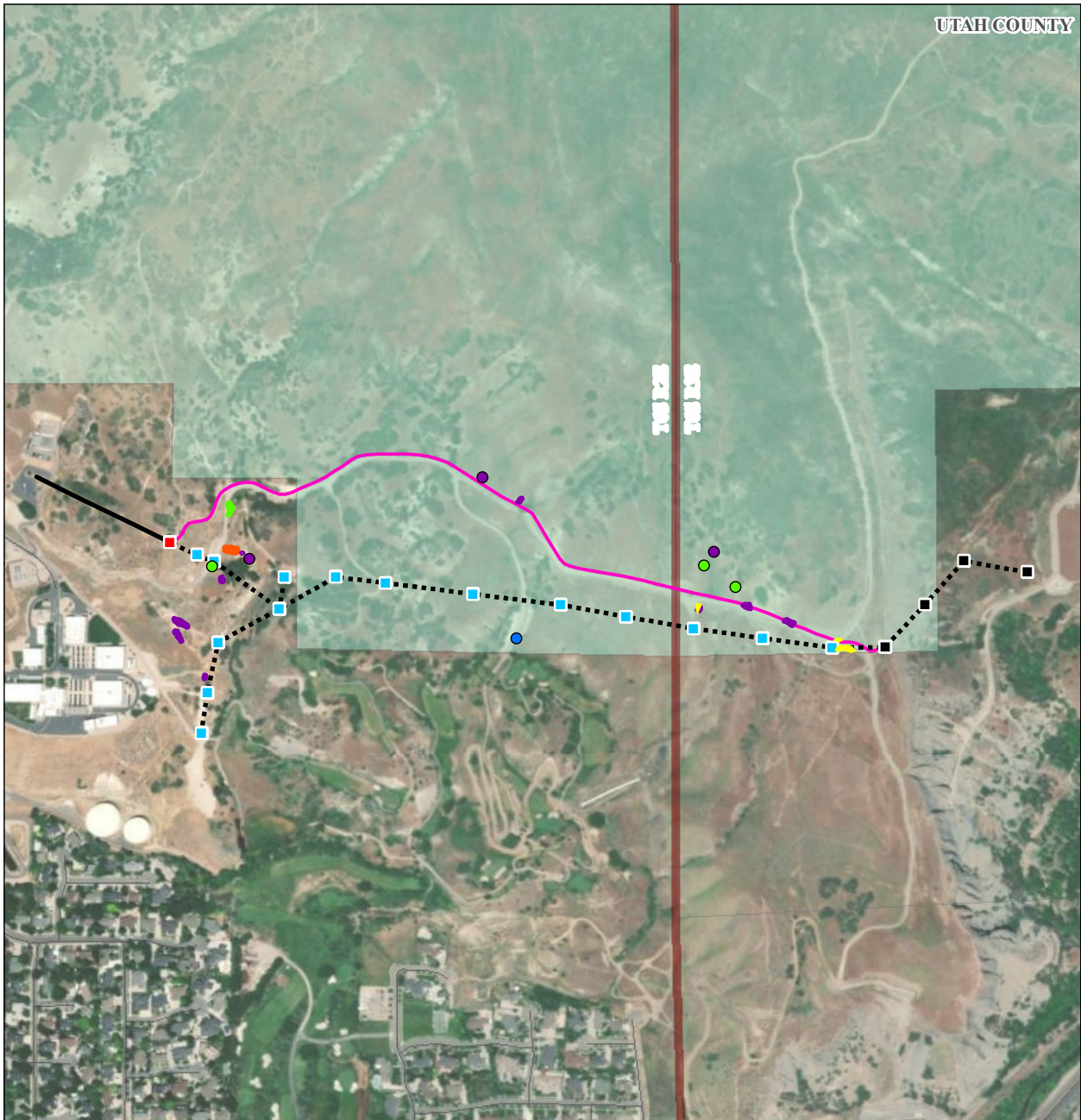
- Replace existing wood pole with steel pole.
- Tap existing, begin underground conduit install.
- Existing Overhead Distribution Line to Be Removed
- Proposed Underground Conduit
- Private
- UDWR

Project Overview

Rocky Mountain Power
Northridge 12 FHCA
Rebuild Project

Date: 3/21/2025
Projection: NAD_1983_UTM_Zone_12N





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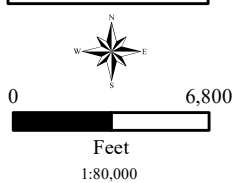
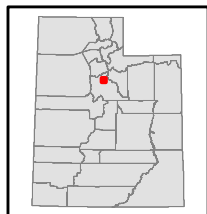
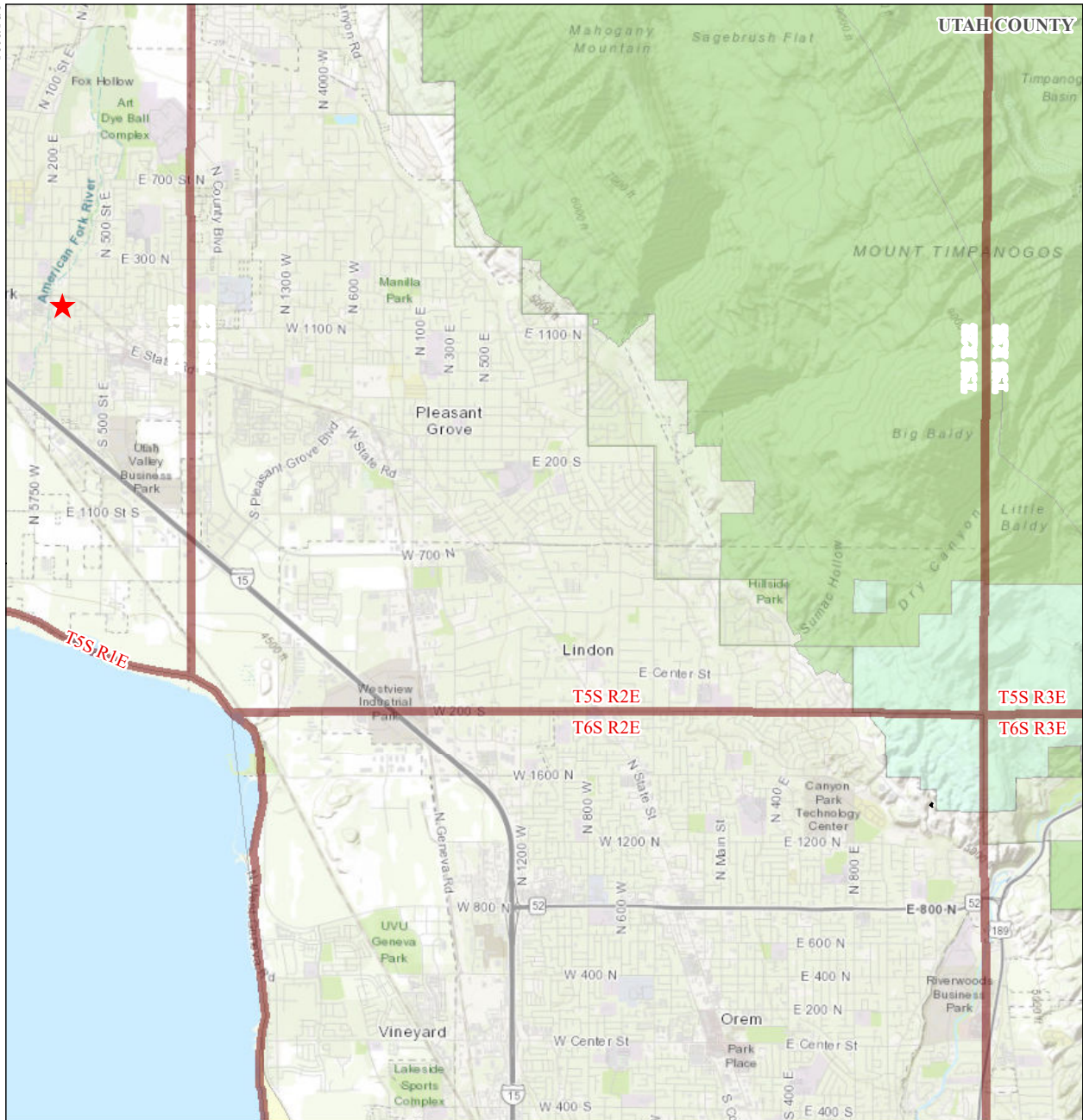
- | | |
|--|--|
| ● Dalmatian toadflax | ■ Tap existing, begin underground conduit install. |
| ● Russian thistle | Existing Overhead |
| ● Scotch thistle | ----- Distribution Line to Be Removed |
| ■ Phragmites | ----- Proposed Underground Conduit |
| ■ Russian thistle | ----- Existing Distribution Line to Remain |
| ■ Scotch thistle | Private |
| ■ Unk mustard | UDWR |
| ■ Remove wood pole/overhead conductor - abandon. | |
| ■ Replace existing wood pole with steel pole. | |

Noxious Weeds Survey Results

Rocky Mountain Power
Northridge 12 FHCA
Rebuild Project

Date: 3/21/2025
Projection: NAD_1983_UTM_Zone_12N





Legend

- ★ Laydown Yard and Equipment Storage
- Existing Overhead Distribution Line to Be Removed
- Proposed Underground Conduit
- Existing Distribution Line to Remain
- BLM
- Private
- UDWR
- USFS

Laydown Yard and Equipment Storage Location

Rocky Mountain Power
Northridge 12 FHCA
Rebuild Project

Date: 8/25/2025
Projection: NAD_1983_UTM_Zone_12N



APPENDIX B

AQUATIC RESOURCES MEMORANDUM

AQUATIC RESOURCES MEMORANDUM

Northridge-12 Fire High Concentration Area (FHCA) Rebuild Project—Rocky Mountain Power

Utah County, Utah

Prepared for:

Jens Jorgenson, Environmental Analyst
Transmission & Distribution—Rocky Mountain Power
801-247-4764
jens.jorgensen@pacificorp.com

Prepared by:

Eocene Environmental Group, Inc.
579 West Galena Park Place, Unit 102
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January 2025

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Table 2 Summary of Waterways in the Review Area	3

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Appendix B	Natural Resource Conservation Service Custom Soil Resource Report

INTRODUCTION

Eocene Environmental Group, Inc. (Eocene) is pleased to submit this Aquatic Resources Assessment Memorandum (memo) as part of the environmental compliance activities associated with the Northridge-12 FHCA Rebuild Project (Project) being conducted by Rocky Mountain Power (RMP) in Utah. The proposed Project is for the removal of an existing overhead power line and poles, the construction of a new underground conduit, and the replacement of four existing wood poles with steel poles.

This report will analyze the potential impacts to potential jurisdictional Waters of the United States (WOTUS) and evaluate the need for federal, state, and local permits. This memo provides a preliminary analysis, including methodology, description of aquatic features identified, and impact analysis, of all aquatic resources found with a desktop review of the Project area. Analysis within this memo is based on information available at the time of the review.

PROJECT LOCATION AND DESCRIPTION

Project Location

The proposed Project is northeast of the city of Orem in Utah County, Utah. The alignment runs primarily through undeveloped land. The underground conduit to be installed will run parallel to the Bonneville Shoreline Trail (**Appendix A**).

The Project area is within the following township and ranges:

- Township 6 South, Range 2 East
 - Section 01
- Township 6 South, Range 3 East
 - Section 06

The location of the Project area is within the Orem Geological Survey 7.5-minute quadrangle maps according to the United States Geological Survey (USGS) (USGS 2022a). The land ownership along the Project alignment is primarily state ownership (Timpanogos State Wildlife Area), with the western and eastern ends extending into private lands. State ownership accounts for approximately 7.3 acres and private ownership accounts for approximately 4.3 acres.

Project Description

The proposed Project is for the removal of an existing overhead transmission line and poles, the construction of a new underground conduit, and the replacement of four existing wood poles with steel poles. This construction plan was put forth in an effort to reduce RMP's exposure to wildfire risk. The existing overhead transmission line to be retired is approximately 6400 feet and the proposed underground conduit will be approximately 4100 feet. The limit of disturbance (LOD) will be approximately 11.6 acres, based on a disturbance width of 50 feet.

Eocene conducted this aquatic resource survey to ensure that jurisdictional WOTUS will not be impacted and determine whether aquatic resources permitting is needed before construction begins.

STUDY METHODS

Existing data was gathered for this desktop review to identify potential jurisdictional WOTUS. Information reviewed includes the following:

- Recent and historic aerial photography
- United States Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) Mapper (USFWS 2022)
- USGS National Hydrography Database (NHD) (USGS 2022b)
- Natural Resources Conservation Service (NRCS) soil maps (NRCS 2022)

Aquatic features are indicated on the aquatic resources maps in **Appendix A**. The NRCS Custom Soil Resource Report can be found in **Appendix B**.

EXISTING CONDITIONS

Land Use

The USGS National Land Cover Database identified the Project area, in decreasing acreage, as “shrub/scrub,” “deciduous forest,” “evergreen forest,” “developed, open space,” “herbaceous,” “developed, medium intensity,” and “development, low intensity” land (USGS 2022d). Shrub/scrub land accounts for over 90 percent of the Project area. This area receives recreation use along the Bonneville Shoreline Trail, which parallels the proposed underground conduit. Hikers, dog walkers, bikers, and horse riders all frequent this trail due to the close proximity to the Salt Lake City valley. The Orem City Rifle Range is also located on the west side of the Project area.

Vegetation

Most of the Project area appears to be vegetated by shrubby and herbaceous plants. However, some areas appear to have denser deciduous vegetation. Gambel/scrub oak (*Quercus gambelii*) is a prominent plant found along the Bonneville Shoreline trail, along with various wildflowers. Since satellite imagery is the primary tool used to determine vegetation presence, it is not known whether noxious species are in the Project area. It is advisable to take precautions, such as cleaning machinery regularly, to prevent the potential spread of noxious species.

Soils

The NRCS soils surveys indicate 2 native soil types within the review area (NRCS 2022). **Table 1** lists each soil type and whether it meets the NRCS hydric soils criteria. The soil mapping for this area is incomplete and therefore does not equate to the full acreage of the LOD. The NRCS custom resource report, including a description and map for all soils contained within the review area, can be found in **Appendix B**.

TABLE 1 NATIVE SOIL TYPES IN THE REVIEW AREA			
Map Unit Name	Acres in Review Area	Percent of Review Area	NRCS Hydric Soil
Pleasant Grove-Terrace escarpments complex, 30 to 60 percent slopes, eroded	7.4	63.6	No
Rake extremely stony loam, 20 to 70 percent slopes, eroded	1.3	11.3	No
Totals for Area of Interest	8.7	74.9	--

OBSERVATIONS

Desktop review identified three aquatic features mapped by the NWI and NHD within the review area (**Table 2**). The aquatic features are listed from west to east.

Note that a qualified Eocene field specialist observed a white pipe that was exposed east of the Bonneville Shoreline Trail, while conducting a weed survey in January 2025. This pipe had a small amount of water flowing out/eastward onto the ground resulting in overland flow just north of the LOD. The pipe was located at approximately 40.3243172, -111.6663188. The flow path did not appear to cross the aquatic review area and thus will not be discussed further within this report.

TABLE 2 SUMMARY OF WATERWAYS IN THE REVIEW AREA			
Feature Number	NWI Classification	NHD Classification	Satellite Imagery
Aquatic Feature 1	Not classified by NWI	Pipeline	Not present on imagery
Aquatic Feature 2	Intermittent Riverine Streambed Seasonally Flooded	Intermittent Stream/River	Not present on imagery*
Aquatic Feature 3	Unknown Riverine Unconsolidated Bottom Semipermanently Flooded Excavated	Canal/Ditch	Not present on imagery
*While no obvious aquatic channel is seen on satellite imagery, topography that insinuates potential for a channel is still present			

Aquatic Feature 1

Aquatic Feature 1 is mapped by the NHD as a water pipeline. The feature is not present on satellite imagery, nor does it exist in the NWI database.

Aquatic Feature 2

Aquatic Feature 2 is mapped by the NWI as an intermittent riverine streambed, seasonally flooded feature and by the NHD as an intermittent stream/river. The feature is mapped through both the existing overhead transmission line and the proposed underground conduit. This feature is not present on satellite imagery; however, slight topographic changes exist that could reflect a small dry channel in the field.

Aquatic Feature 3

Aquatic Feature 3 is mapped by the NWI as an unknown riverine unconsolidated bottom, semi - permanently flooded, excavated feature and by the NHD as a canal/ditch. This feature is not present on satellite imagery and does not have any topographic indicators that would insinuate a channel exists.

CONCLUSION

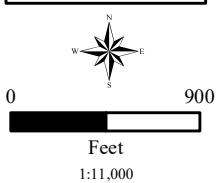
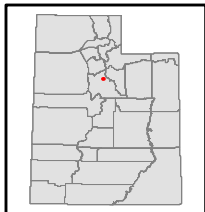
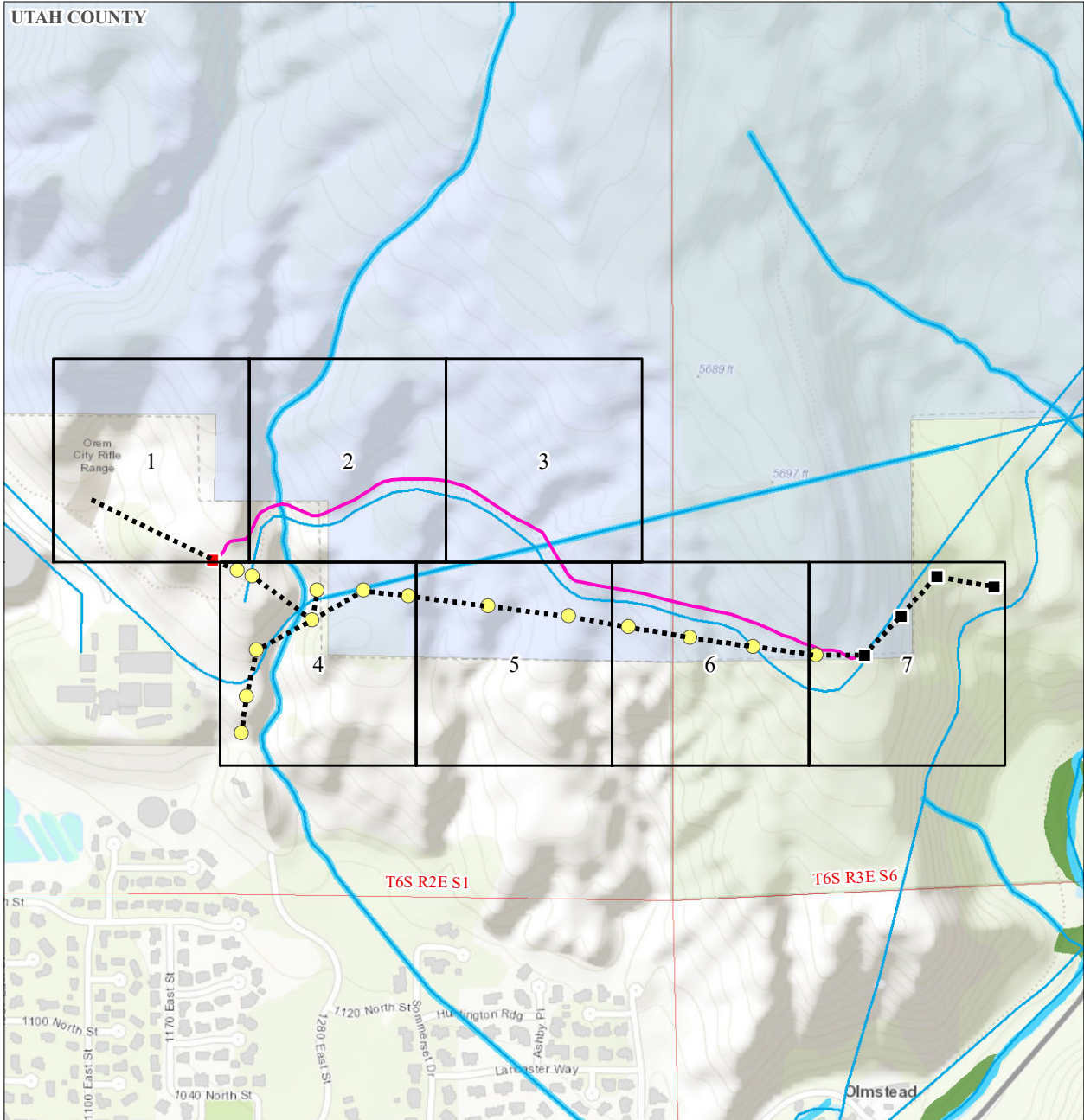
Of the 11.6-acre review area, 3 aquatic features were identified from the NHD and NWI. Of the three features, none are visible on satellite imagery. Stormwater pollution prevention measures should be taken regardless, and a stormwater pollution prevention plan should be assembled before construction, as it is required for projects greater than 1 acre. Furthermore, since there are potentially noxious weeds in the Project area, Eocene recommends cleaning machinery regularly to prevent the spread of noxious species.

REFERENCES

- National Resources Conservation Service (NRCS). 2022. Web Soil Survey Tabular Data: Washington County Area, Utah. U.S. Department of Agriculture. <https://web-soilsurvey.sc.egov.usda.gov/App>.
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- _____. 2022d. National Land Cover Database. <https://www.usgs.gov/centers/eros/science/national-land-cover-database>.

APPENDIX A

AQUATIC RESOURCES MAPS



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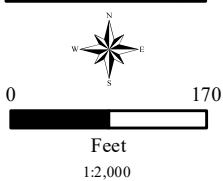
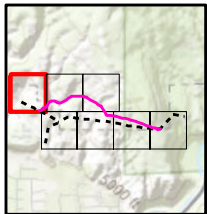
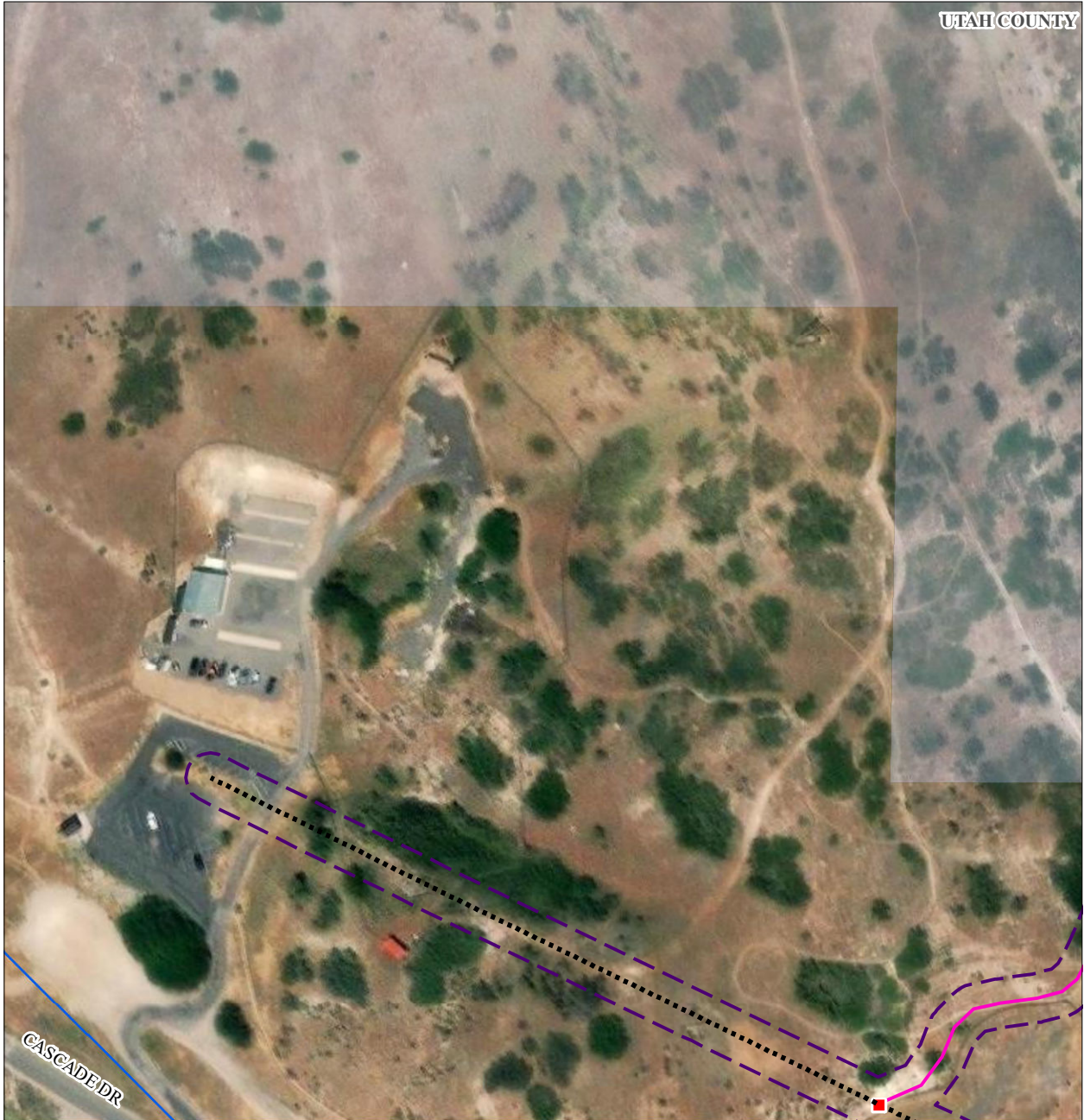
- Remove wood pole/overhead conductor
- Replace existing wood pole with steel pole
- Begin underground conduit install
- Existing Overhead Transmission
- Proposed Underground Conduit
- Detail Map
- NHD Waterway
- NWI - Freshwater Forested/Shrub Wetland
- NWI - Freshwater Pond
- NWI - Riverine
- Private
- UDWR

Aquatic Resources Overview Map

Rocky Mountain Power
Northridge-12 FHCA

Date: 10/16/2024
Projection: NAD_1983_UTM_Zone_12N





Legend

- Begin underground conduit install
- Existing Overhead Transmission
- Proposed Underground Conduit
- [] Limit of Disturbance (50 Feet Wide)
- NHD Waterway
- Private
- UDWR

Aquatic Resources Detail Map

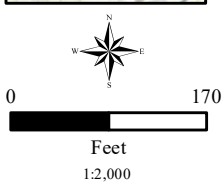
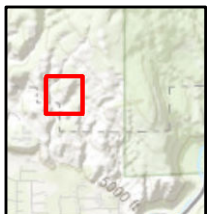
Rocky Mountain Power
Northridge-12 FHCA

Panel 1 of 7

Date: 10/16/2024
Projection: NAD_1983_UTM_Zone_12N



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- Proposed Underground Conduit
- Limit of Disturbance (50 Feet Wide)
- NHD Waterway
- NWI - Riverine
- Private
- UDWR

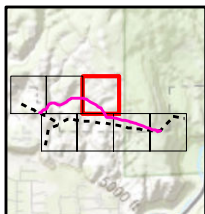
Aquatic Resources Detail Map

Rocky Mountain Power
Northridge-12 FHCA

Panel 2 of 7

Date: 10/16/2024
Projection: NAD_1983_UTM_Zone_12N





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-  Proposed Underground Conduit
-  Limit of Disturbance (50 Feet Wide)
-  NHD Waterway
-  NWI - Riverine
-  UDWR

Aquatic Resources Detail Map

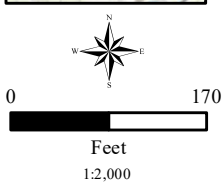
Rocky Mountain Power
Northridge-12 FHCA

Panel 3 of 7

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Legend

- Remove wood pole/overhead conductor
- Existing Overhead Transmission
- Limit of Disturbance (50 Feet Wide)
- NHD Waterway
- NWI - Riverine
- Private
- UDWR

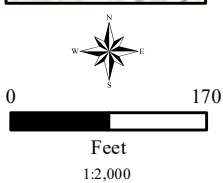
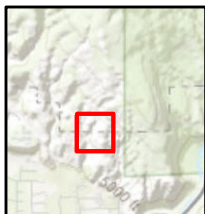
Aquatic Resources Detail Map

Rocky Mountain Power
Northridge-12 FHCA

Panel 4 of 7

Date: 10/16/2024
Projection: NAD_1983_UTM_Zone_12N





Legend

- Remove wood pole/overhead conductor
- Existing Overhead Transmission
- Proposed Underground Conduit
- Limit of Disturbance (50 Feet Wide)
- NHD Waterway
- NWI - Riverine
- Private
- UDWR

Aquatic Resources Detail Map

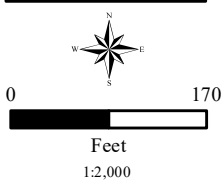
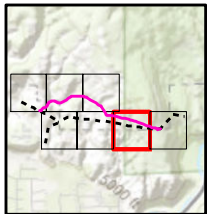
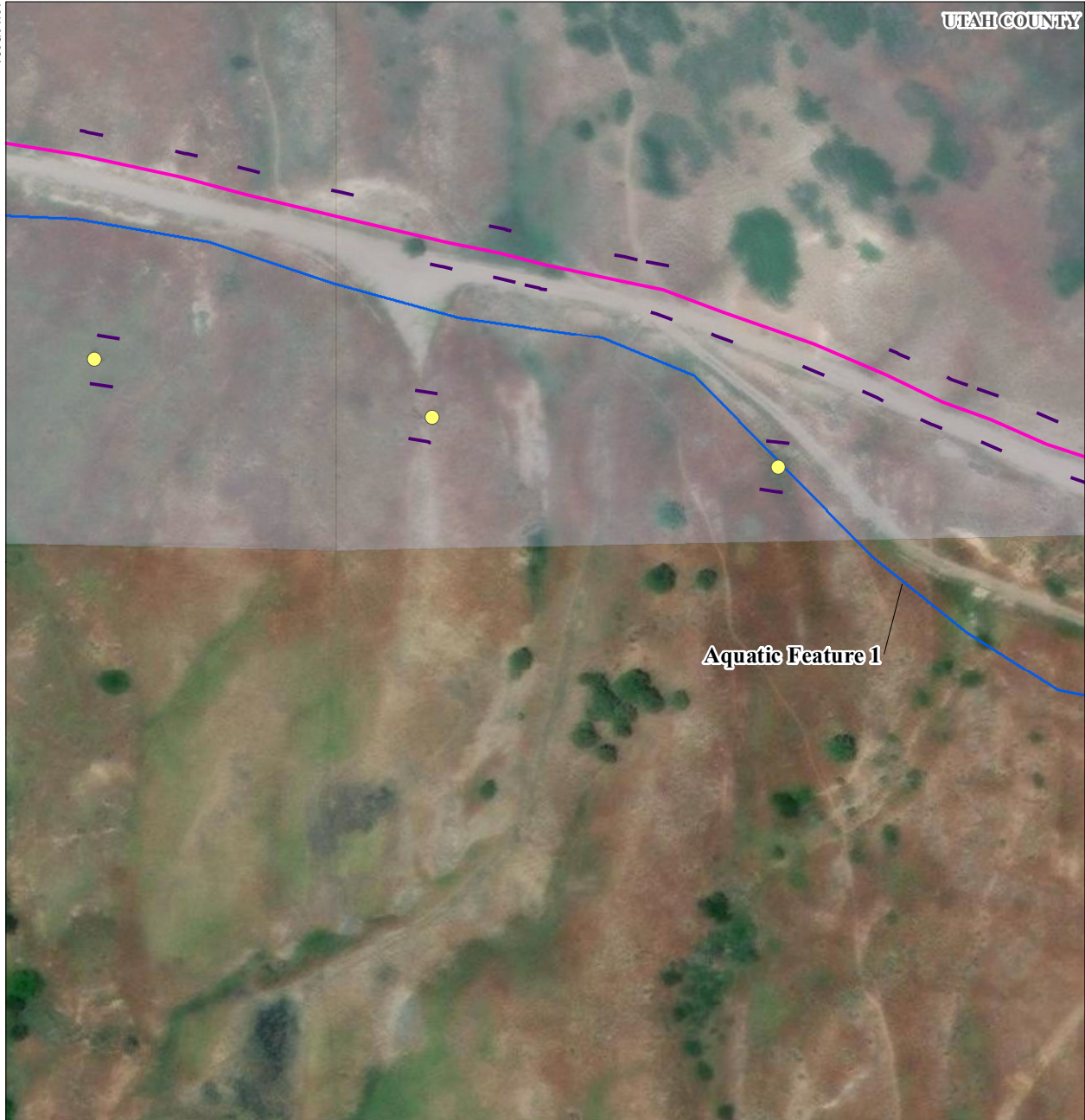
Rocky Mountain Power
Northridge-12 FHCA

Panel 5 of 7

Date: 10/16/2024
Projection: NAD_1983_UTM_Zone_12N



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Legend

- Remove wood pole/overhead conductor
- Existing Overhead Transmission
- Proposed Underground Conduit
- Limit of Disturbance (50 Feet Wide)
- NHD Waterway
- Private
- UDWR

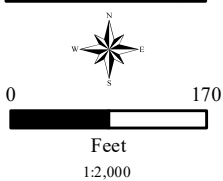
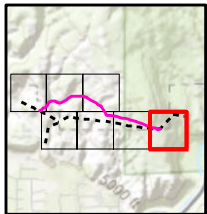
Aquatic Resources Detail Map

Rocky Mountain Power
Northridge-12 FHCA

Panel 6 of 7

Date: 10/16/2024
Projection: NAD_1983_UTM_Zone_12N





Legend

- Remove wood pole/overhead conductor
- Replace existing wood pole with steel pole
- Existing Overhead Transmission
- Proposed Underground Conduit
- Limit of Disturbance (50 Feet Wide)
- NHD Waterway
- Private
- UDWR

Aquatic Resources Detail Map

Rocky Mountain Power
Northridge-12 FHCA

Panel 7 of 7

Date: 10/16/2024
Projection: NAD_1983_UTM_Zone_12N



APPENDIX B

NATURAL RESOURCE CONSERVATION SERVICE CUSTOM SOIL RESOURCE REPORT



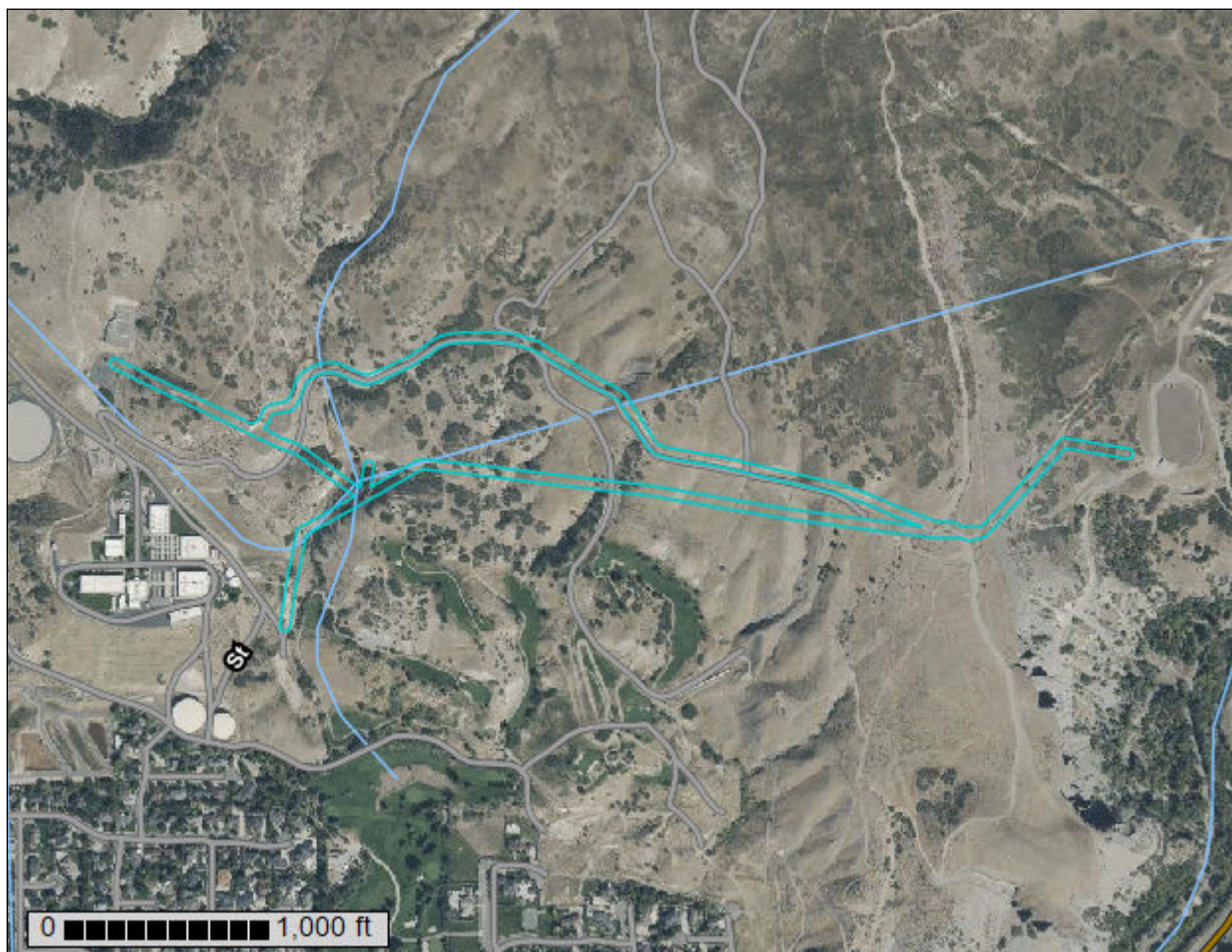
United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for Uinta National Forest Area, Utah, Parts of Juab, Sanpete, Utah, and Wasatch Counties; and Utah County, Utah - Central Part



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

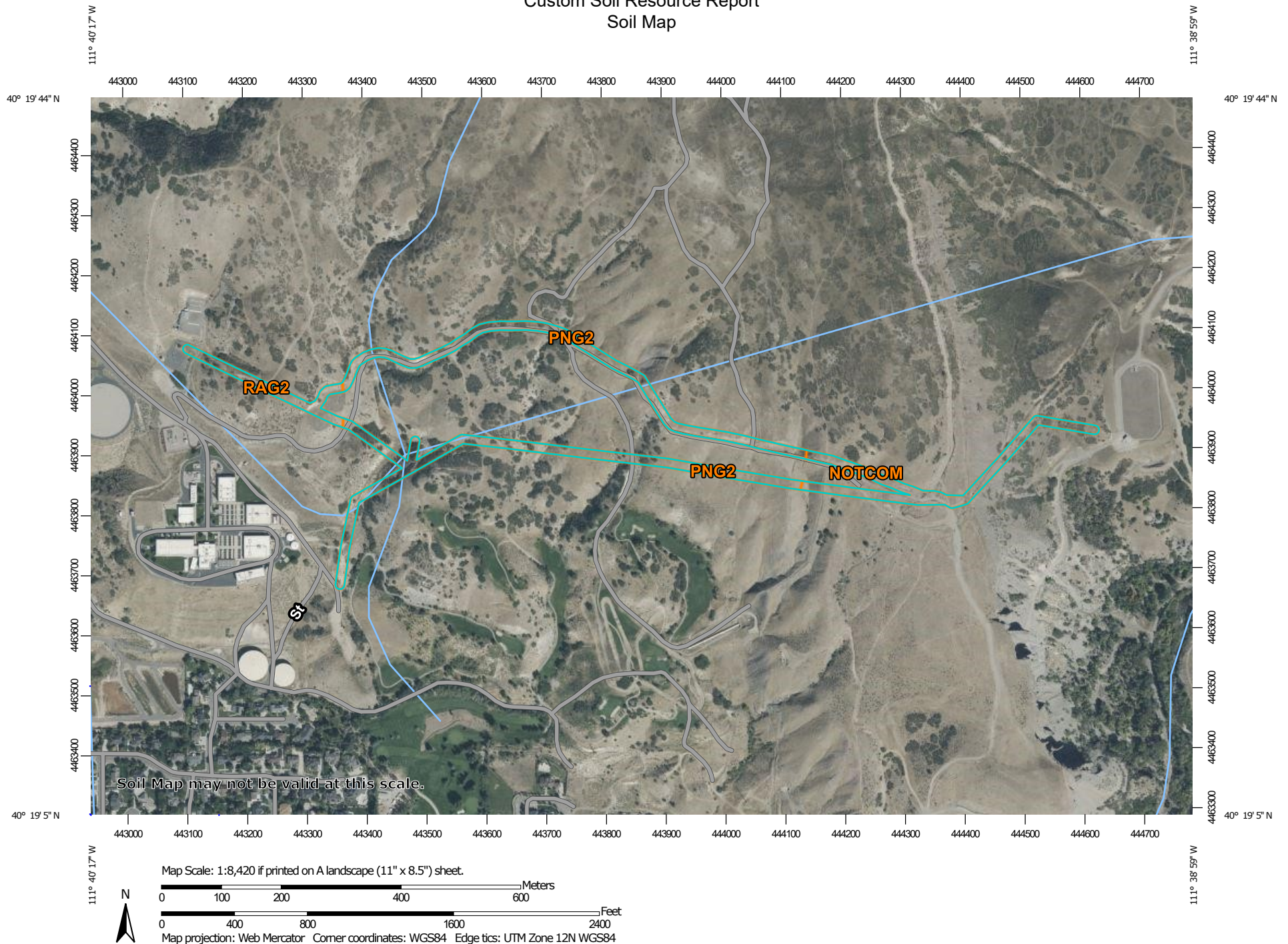
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identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map



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MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at scales ranging from 1:20,000 to 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Uinta National Forest Area, Utah, Parts of Juab, Sanpete, Utah, and Wasatch Counties

Survey Area Data: Version 7, Aug 28, 2024

Soil Survey Area: Utah County, Utah - Central Part

Survey Area Data: Version 17, Aug 28, 2024

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

MAP LEGEND

MAP INFORMATION

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 17, 2023—Sep 25, 2023

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
No map units selected for this soil survey area.			
Subtotals for Soil Survey Area		0.0	0.0%
Totals for Area of Interest		11.6	100.0%

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
PNG2	Pleasant Grove-Terrace escarpments complex, 30 to 60 percent slopes, eroded	7.4	63.6%
RAG2	Rake extremely stony loam, 20 to 70 percent slopes, eroded	1.3	11.3%
Subtotals for Soil Survey Area		8.7	74.9%
Totals for Area of Interest		11.6	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not

mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Utah County, Utah - Central Part

PNG2—Pleasant Grove-Terrace escarpments complex, 30 to 60 percent slopes, eroded

Map Unit Setting

National map unit symbol: j6yt
Elevation: 4,600 to 5,700 feet
Mean annual precipitation: 14 to 18 inches
Mean annual air temperature: 46 to 50 degrees F
Frost-free period: 150 to 170 days
Farmland classification: Not prime farmland

Map Unit Composition

Pleasant grove and similar soils: 80 percent
Terrace escarpments: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pleasant Grove

Setting

Landform: Alluvial fans
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Colluvium and/or slope alluvium derived from limestone, quartzite and shale

Typical profile

A11&A12 - 0 to 2 inches: stony loam
A13 - 2 to 21 inches: cobbly loam
C1ca - 21 to 38 inches: very cobbly loam
C2ca - 38 to 49 inches: very cobbly fine sandy loam
C3ca - 49 to 60 inches: very cobbly loam

Properties and qualities

Slope: 30 to 60 percent
Surface area covered with cobbles, stones or boulders: 10.0 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: 30 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 10.0
Available water supply, 0 to 60 inches: Moderate (about 6.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: B
Ecological site: R028AY306UT - Upland Gravelly Loam (Bonneville Big Sagebrush)

Hydric soil rating: No

Description of Terrace Escarpments

Setting

Landform: Escarpments

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Lacustrine deposits derived from mixed sources

RAG2—Rake extremely stony loam, 20 to 70 percent slopes, eroded

Map Unit Setting

National map unit symbol: j6zl

Elevation: 5,100 to 6,500 feet

Mean annual precipitation: 15 to 18 inches

Mean annual air temperature: 45 to 48 degrees F

Frost-free period: 130 to 150 days

Farmland classification: Not prime farmland

Map Unit Composition

Rake and similar soils: 97 percent

Minor components: 3 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Rake

Setting

Landform: Hills

Landform position (three-dimensional): Side slope

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Colluvium derived from limestone and quartzite

Typical profile

A1 - 0 to 6 inches: extremely stony loam

B2t - 6 to 13 inches: extremely cobbly clay loam

C1cam - 13 to 32 inches: indurated

C2ca - 32 to 37 inches: very stony sandy loam

Properties and qualities

Slope: 20 to 70 percent

Surface area covered with cobbles, stones or boulders: 13.0 percent

Depth to restrictive feature: 10 to 20 inches to petrocalcic

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.07 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 70 percent

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Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: Very low (about 0.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: D

Ecological site: R047XA446UT - Mountain Shallow Loam (mountain big sagebrush)

Hydric soil rating: No

Minor Components

Rock outcrop

Percent of map unit: 3 percent

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APPENDIX C

BIOLOGICAL ASSESSMENT

BIOLOGICAL ASSESSMENT

Northridge 12 Fire High Concentration Area Rebuild Project

Utah County, Utah

Prepared for:

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Prepared by:

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January 2025

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Appendix B	Project Photographs

INTRODUCTION

Rocky Mountain Power (RMP) proposes to complete the Northridge 12 Fire High Consequence Area (FHCA) Rebuild Project (Project) in Utah County, Utah. The overhead distribution line currently passes through a region that has been identified by RMP as a FHCA. In order to reduce wildfire risk, RMP intends to remove the existing overhead distribution line and poles, replace four existing wooden poles with steel poles, and construct a new underground conduit. RMP contracted Eocene Environmental Group, Inc. (Eocene) to conduct a habitat assessment for threatened and endangered (T&E) species that may have the potential to occur within or near the proposed Project area. A habitat assessment was performed on October 28, 2024. The results of this assessment are documented below.

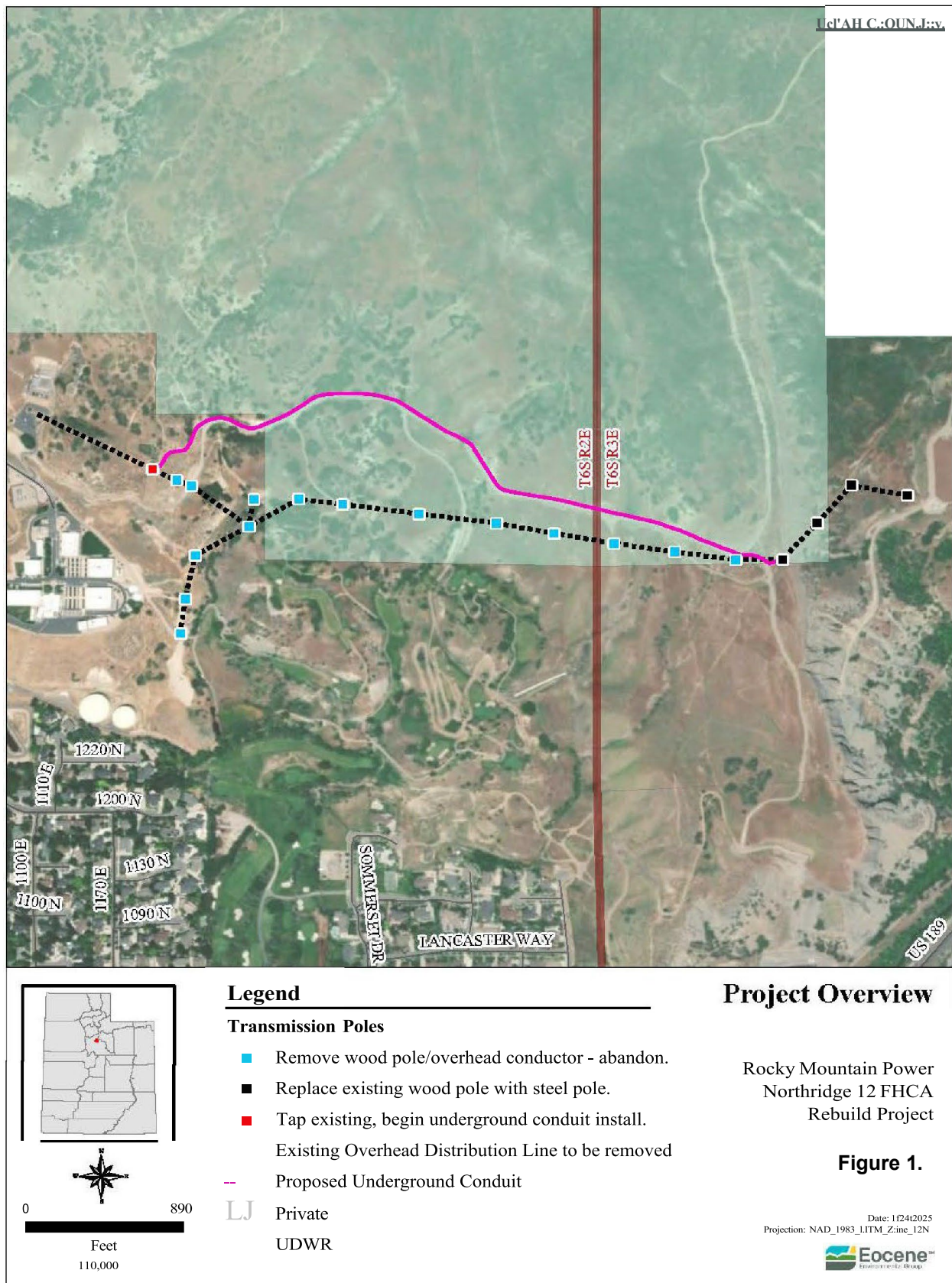
Species Assessment

This Biological Assessment (BA) was written to address the potential effects that could result from the implementation of the proposed Project on species and their habitat that are legally protected under the Endangered Species Act (ESA) of 1973, as amended. For informational purposes, this BA also identifies the occurrences for Bureau of Land Management (BLM)–sensitive species, avian species protected under the Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703–711), and the Bald and Golden Eagle Protection Act (BGEPA) (16 U.S.C. Section 668–668d) that may occur within the proposed Project area. The U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) identified two federally listed species that may occur within the Project area and have the potential to be affected by the proposed Project. The species identified were the Canada lynx (*Lynx canadensis*) and yellow-billed cuckoo (*Coccyzus americanus*). IPaC also identified one candidate species with the potential to occur with the Project area: the monarch butterfly (*Danaus plexippus*), a candidate species proposed for official listing as a threatened species. However, because the monarch butterfly is a candidate species, this species will not be addressed in the BA, as candidate species are not listed under the ESA. The Utah Natural Heritage Program (UNHP) Report did not detect any federally listed species within a 2-mile radius of the Project area. The Utah Division of Wildlife Resources (UDWR) launched the Wildlife Habitat Analysis Tool (WHAT) to replace the UNHP; similarly, this tool also did not detect federally listed species within a 2-miles radius of the Project area. The IPaC, UNHP, and WHAT reports are included in **Appendix A**.

PROJECT LOCATION AND DESCRIPTION

Project Location

The proposed Project is located in the city of Orem at the base of the Wasatch Mountains in Utah County, Utah. The existing overhead distribution line is located south of the Bonneville Shoreline Trail, and the proposed underground conduit will parallel the trail. The overhead distribution line and proposed underground conduit are located on UDWR and private land. The Project is located within the following Public Land Survey System township, range, and sections: Township 6 South, Range 2 East, Section 1; Township 6 South, Range 3 East, Section 6 as depicted on the Utah County Geological Survey 7.5-minute U.S. Geological Survey topographical map (**Figure 1**).



Project Description

The overhead distribution line currently passes through an area in the region that has been identified by RMP as a FHCA. In order to reduce wildfire risk, RMP intends to remove the existing overhead distribution line and poles, replace four existing wooden poles with steel poles, and construct a new underground conduit. RMP will remove 15 wooden pole structures and overhead conductor from the existing overhead distribution line. The old poles and conductor will be removed and disposed of accordingly. The remaining four wooden poles closest to Highway 189 will be replaced with 45-foot steel poles. The steel poles meet the wildfire standards for RMP. RMP will replace existing poles with embedded steel poles and place them approximately 3 to 5 feet from the old poles. Once this process is complete, the old poles will be removed and properly disposed of. Operations will be conducted with line-truck equipment with an auger. Spoils from the auger will be backfilled and the excess will be spread around the site. The proposed underground conduit will tap the existing distribution line near the Bonneville Shoreline Trail parking lot. The new underground conduit will parallel the Bonneville Shoreline Trail. The proposed underground conduit will be approximately 4,100 feet long. RMP will place the underground line adjacent to the existing trail to minimize the amount of disturbance to the proposed Project area. The limit of disturbance (LOD) would be approximately 11.6 acres, based on a disturbance width of 50 feet around the alignment.

ACTION AREA

The action area is defined as all areas that could be affected directly or indirectly by the federal action and not merely the immediate area involved in the action (50 Code of Federal Regulation [CFR] 402.02). Therefore, the action area includes areas where all permanent and temporary ground disturbance may occur, in addition to any species-specific buffers put in place. Permanent ground disturbance will occur where the four steel poles are placed. Temporary ground disturbance will occur in areas where the wooden pole structures and overhead conductor from the existing overhead distribution line will be removed. Temporary ground disturbance will occur along Bonneville Shoreline Trail where the new underground conduit will be installed. Temporary ground disturbance will also occur in areas where equipment and materials are staged. All permanent and temporary areas of disturbance will remain within the Project area's LOD. Construction-related impacts are not expected to extend beyond the Project area's LOD.

A 300-foot-wide biological survey buffer was applied to the Project's alignment. This buffer was determined based on anticipated levels of construction-related disturbance (e.g., noise, dust, etc.) within the Project area, as well as activities that may impact biological resources. Therefore, the action area consists of the Project's area and a 300-foot biological buffer. This buffer was put in place to evaluate and minimize potentially adverse impacts on biological resources in the action area.

AFFECTED ENVIRONMENT

Vegetation

The dominant ecological system within the action area is Inter-Mountain Basins Big Sagebrush Shrubland; other ecological systems present within the action area include Rocky Mountain Gambel Oak-Mixed Montane Shrubland, Colorado Plateau Pinyon-Juniper Woodland, and Developed-Low Intensity (LANDFIRE 2025). The dominant vegetation observed within the action area included cheatgrass (*Bromus tectorum*), big sagebrush (*Artemisia tridentata*), oak brush (*Quercus macrocarpa*), rubber rabbitbrush (*Ericameria nauseosa*), and alfalfa (*Medicago sativa*).

In addition, no weeds listed under the Utah containment noxious weeds list were detected within the action area.

Soils and Geology

According to the U.S. Department of Agriculture Natural Resources Conservation Service Web Soil Survey, the action area consists of five soil types (NRCS 2025). The primary soil type found within the action area is Pleasant Grove-Terrace escarpments complex. The soil types found within the action area are summarized in **Table 1**. Approximately 25 percent of the action area was 'NOTCOM,' meaning did not have available digital data.

TABLE 1 SOIL TYPES WITHIN THE ACTION AREA		
Soil Type	Acres in Action Area	Percent of Action Area
Dry Creek cobbly loam, thin surface variant, 30 to 60 percent slopes, eroded	2.8	2.2
Hillfield-Layton complex, 30 to 60 percent slopes	0.7	0.6
Pleasant Grove stony loam, 10 to 25 percent slopes, eroded	2.5	1.9
Pleasant Grove-Terrace escarpments complex, 30 to 60 percent slopes, eroded	72.0	55.9
Rake extremely stony loam, 20 to 70 percent slopes, eroded	17.9	13.9
Subtotals for Soil Survey Area	95.9	74.5
NOTCOM	32.8	25.5
Totals for Action Area	128.7	100.0

A desktop review of Utah's geological survey data indicated these geological formations exist within the action area—QTmb, Mmc, Qlg, Qls, Mgb, and Qms:

- **QTmb:** Mega-breccia (Quaternary; Cenozoic)
- **Mmc:** Manning Canyon Shale (Upper Mississippian; Mississippian; Carboniferous; Paleozoic)
- **Qlg:** Lacustrine gravel and sand deposits (Pleistocene; Quaternary; Cenozoic)
- **Qls:** Lacustrine sand deposits (Pleistocene; Quaternary; Cenozoic)
- **Mgb:** Great Blue Limestone (Upper Mississippian; Mississippian; Carboniferous; Paleozoic)
- **Qms:** Slides and sumps (Holocene; Quaternary; Cenozoic)

Aquatic Resources

A review of aerial imagery, the USFWS National Wetlands Inventory (NWI), and USFWS IPaC identified that the action area overlaps one wetland. The wetland is approximately 3.94 acres and classified by the NWI as a Riverine with the attribute rule of R4SBA. Detailed information on aquatic features within the action area can be found in Eocene's *Aquatic Resources Memorandum*, which is available upon request.

Migratory Birds

Migratory birds are protected under the MBTA (16 U.S.C. 703–712). Under the MBTA, it is unlawful to “take,” kill, or possess migratory birds, their parts, nests, or eggs (Romin and Muck 2002). “Take” includes pursuing, shooting, poisoning, wounding, killing, capturing, collecting, molesting, or disturbing (50 CFR 22.3). The USFWS also affords protections to some bird species designated as Birds of Conservation Concern (BCC). Bird species listed as USFWS BCC may also fall under the BGEPA. The IPaC online tool identified the following avian species with the potential to occur within the action area.

- American Avocet (*Recurvirostra americana*)
- American White Pelican (*Pelecanus erythrorhynchos*)
- Bald Eagle (*Haliaeetus leucocephalus*)
- Black Rosy Finch (*Leucosticte atrata*)
- Black Swift (*Cypseloides niger*)
- Broad-Tailed Hummingbird (*Selasphorus platycercus*)
- California Gull (*Larus californicus*)
- Calliope Hummingbird (*Selasphorus calliope*)
- Cassin's Finch (*Haemorhous cassinii*)
- Clark's Grebe (*Aechmophorus clarkii*)
- Evening Grosbeak (*Coccothraustes vespertinus*)
- Flammulated Owl (*Psiloscoops flammeolus*)
- Forster's Tern (*Sterna forsteri*)
- Franklin's Gull (*Leucophaeus pipixcan*)
- Golden Eagle (*Aquila chrysaetos*)
- Lewis's Woodpecker (*Melanerpes lewis*)
- Long-Eared Owl (*Asio otus*)
- Northern Harrier (*Circus hudsonius*)
- Olive-Sided Flycatcher (*Contopus cooperi*)
- Pinyon Jay (*Gymnorhinus cyanocephalus*)
- Rufous Hummingbird (*Selasphorus rufus*)
- Sage Thrasher (*Oreoscoptes montanus*)
- Virginia's Warbler (*Leiothlypis virginiae*)
- Western Grebe (*Aechmophorus occidentalis*)
- Willet (*Tringa semipalmata*)

These birds are of particular concern because they occur on the USFWS BBC list; however, as they are not listed species, no Section 7 consultation is required. Additionally, none of the birds listed were observed within the action area during the time of the habitat assessment.

Bald and Golden Eagles

Bald and Golden eagles are protected under the BGEPA [16 U.S.C. 668] and the MBTA. Similar to the MBTA, the BGEPA prohibits the “take” of any bald or golden eagle [50. CFR 22.3]. It is illegal to “take,” possess, sell, purchase, barter, or transport any bald or golden eagle, alive or dead, or any part, nest, or egg thereof (Romin and Muck 2002). According to IPaC, there are bald

eagles and/or golden eagles present within the action area. According to eBird, a citizen science project that collects bird data, the last sighting for bald and golden eagles on the Bonneville Shoreline Trail was on February 22, 2024, where both species were observed.

The habitat within the action area is primarily rocky hills with open grassland and scattered patches of oak brush. During the habitat assessment, minimal small mammals sign, such as scat or burrows, was observed. However, the action area does contain suitable habitat for a variety of small prey and could serve as potential foraging habitat for bald and golden eagles. The action area is not considered suitable nesting habitat for bald and golden eagles due to the absence of trees and cliffs habitat. Therefore, it is unlikely that bald or golden eagles will nest in the action area. Additionally, no bald or golden eagles were observed at the time of the habitat assessment.

Wildlife

The UNHP identified the following species of greatest conservation need listed in the Utah Wildlife Action Plan with the potential to occur within a 2-mile radius of the action area:

- Columbia Spotted Frog (*Rana luteiventris*)
- Green River Pebblesnail (*Fluminicola coloradoensis*)
- Least Chub (*Notropis phlegathontis*)
- Northern Leopard Frog (*Lithobates pipiens*)
- Peregrine Falcon (*Falco peregrinus*)
- Townsend's Big-Eared Bat (*Corynorhinus townsendii*)
- Western Bumble Bee (*Bombus occidentalis*)

The WHAT tool also identified the following species with the potential to occur within a 2-mile radius of the action area.

- Peregrine Falcon (*Falco peregrinus*)
- Utah Wood-Nymph (*Cercyonis pegala utahensis*)
- Large Marble Butterfly (*Euchloe ausonides*)
- Monarch Butterfly (*Danaus plexippus*)
- Brown Hive (*Euconulus fulvus*)
- Green River Pebblesnail (*Fluminicola coloradoensis*)
- West Coast Lady Butterfly (*Vanessa annabella*)
- Carved Glyph (*Glyphyalinia indentata*)
- Toquerville Springsnail (*Pyrgulopsis kolobensis*)
- Spruce Snail (*Microphysula ingersollii*)
- Columbia Spotted Frog (*Rana luteiventris*)
- Hunt's Bumblebee (*Bombus huntii*)
- Brown Gardensnail (*Cornu aspersum*)
- Marsh Pondsail (*Stagnicola elodes*)
- Western Glass-Snail (*Vitrina pellucida*)
- Rocky Mountainsnail (*Oreohelix strigosa*)
- Tadpole Physa (*Physa gyrina*)
- Quick Gloss (*Zonitoides arboreus*)
- Forest Disc (*Discus whitneyi*)

None of the wildlife species or special-status species identified by the UNHP or WHAT were observed within the action area during the habitat assessment conducted on October 28, 2024.

The action area is also within crucial elk (*Cervus canadensis*) and mule deer (*Odocoileus hemionus*) winter habitat. To avoid the potential for impacts to elk or mule deer, construction activities will not occur between November 1 and April 15. The surface disturbance restrictions for migratory birds, including bald and golden eagles, elk, and mule deer, extend for the majority of the year; as a result, it may be necessary to conduct some construction activities during these restriction periods. Therefore, applicant-committed measures will be implemented, such as biological monitoring and/or daily preconstruction clearance surveys to ensure no sensitive species are present or would be affected during construction.

FEDERALLY LISTED SPECIES AND DESIGNATED CRITICAL HABITAT CONSIDERED

The USFWS IPaC report identified two ESA-listed species with the potential to occur within the action area. The species are Canada lynx and yellow-billed cuckoo. It was determined through a habitat assessment that no suitable habitat occurs within the action area for Canada lynx or yellow-billed cuckoo. **Table 2** summarizes the rationale for this determination.

TABLE 2 ESA-LISTED SPECIES SUMMARY		
Species	Status	Potential for Species Occurrence in the Action Area/Effects Determination
<i>Mammal</i>		
Canada lynx (<i>Lynx canadensis</i>)	Threatened	Canada lynx requires old-growth boreal forests with dense undergrowth and high densities of snowshoe hare (<i>Lepus americanus</i>). The action area is primarily rocky hills with open grassland and scattered oak brush. The action area does not contain the forested habitat requirements to be considered suitable habitat for Canada lynx. The nearest designated critical habitat for Canada lynx is approximately 100 air-miles west of Bear Lake in Wyoming. Based on these habitat requisites and the lack of characteristics occurring in the action area, a <i>No Effect</i> determination has been rendered for this species and will not be addressed further.
<i>Birds</i>		
Yellow-billed cuckoo (<i>Coccyzus americanus</i>)	Threatened	Yellow-billed cuckoos require large tracts of riparian habitat with multi-storied vegetation for nesting. Sites with strips of habitat less than 325 feet wide are rarely occupied. There is no riparian habitat present within the action area; therefore, the action area is not considered suitable yellow-billed cuckoo habitat. The nearest designated critical habitat for yellow-billed cuckoo is south of Vernal, Utah along the Green River approximately 80-air miles from the proposed action area. Based on these habitat requisites and the lack of characteristics occurring in the action area, a <i>No Effect</i> determination has been rendered for this species and will not be addressed further.

Of the two species listed in **Table 2**, no species were identified with the potential to occur within the action area. The IPaC also identified the candidate species, monarch butterfly; however, this species is not analyzed in this BA as it is not a federally listed species under the ESA, as amended.

CONCLUSION AND DETERMINATION OF EFFECTS

Conclusion

A habitat assessment was conducted on October 28, 2024, to determine suitable habitat for ESA-listed species within the action area. No suitable habitat was located within the action area for either of the two listed species during the habitat assessment. In addition, no special-status species were observed during the field review, nor were any bald or golden eagles or migratory birds.

Determination of Effects

Federally listed species protected under the ESA that may occur within or near the action area were identified using information obtained from IPaC. This report is included in **Appendix A**. Determinations of effects for the species of concern within the action area and designated critical habitat, if applicable, are shown in **Table 3**.

TABLE 3 EFFECTS DETERMINATIONS OF LISTED THREATENED AND ENDANGERED SPECIES		
Species	Species Effect Determination	Designated Critical Habitat Effect Determination
Canada lynx (Lynx canadensis)	<i>No Effect</i>	The nearest designated critical habitat for Canada lynx is approximately 100-air miles east of Bear Lake, Utah in Wyoming.
Yellow-billed cuckoo (Coccyzus americanus)	<i>No Effect</i>	The nearest designated critical habitat for yellow-billed cuckoo is south of Vernal, Utah along the Green River approximately 80-air miles from the proposed action area.

COMPLIANCE WITH MANAGEMENT DIRECTION

Endangered Species Act

The ESA of 1973 requires that actions of federal agencies do not jeopardize or adversely modify critical habitat of federally listed species. No critical habitat for any listed species would be impacted with implementation of the Project.

Best Available Science

Consideration of the Best Available Scientific Information

The techniques and methodologies used in the analysis in this BA are considered the best available science. The analysis includes a summary of the credible scientific evidence, which is relevant to evaluating reasonably foreseeable adverse impacts. The analysis also identifies methods used and references the scientific sources relied on. The conclusions are based on scientific analysis that includes a thorough review of relevant scientific information; consideration of responsible opposing views; acknowledgment of incomplete or unavailable information, scientific uncertainty and risk; and the collective knowledge of the Project area by interdisciplinary team members through integration of science with local conditions.

Scientific literature used includes the following:

1. Recovery and/or conservation plans and strategies for T&E
2. USFWS publications related to species addressed in the Project area
3. UDWR and other publications on life history/management/counts/range maps related to species in the Project area
4. Life history for threatened, endangered, and sensitive species (focal species)
5. Breeding bird counts specific to the state or region, where available
6. Publications on Utah migratory birds of concern
7. Consultation with UDWR biologists

REFERENCES

- LANDFIRE. 2025. U.S. Forest Service Landfire *Wildland Fire & Natural Resource Management*. Retrieved from: <https://www.landfire.gov/viewer/>
- NRCS. 2025. U.S. Department of Agriculture Natural Resource Conservation Service Web Soil Survey. Retrieved from: <https://websoilsurvey.nrcs.usda.gov/app/>
- Romin L. A. and Muck J. A. 2002. U.S. Fish and Wildlife Service Utah Field Office Guidelines for Raptor Protection From Human and Land Use Disturbances. Retrieved from: chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.fws.gov/sites/default/files/documents/Utah_Field_Office_Raptor_Guidance.pdf

APPENDIX A

INFORMATION FOR PLANNING AND CONSULTATION REPORT, UTAH
NATURAL HERITAGE PROGRAM REPORT, AND WILDLIFE HABITAT
ANALYSIS REPORT



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Utah Ecological Services Field Office
2369 West Orton Circle, Suite 50
West Valley City, UT 84119-7603
Phone: (801) 975-3330 Fax: (801) 975-3331



In Reply Refer To:

01/09/2025 21:45:02 UTC

Project Code: 2025-0039917

Project Name: RMP's Northridge 12 FHCA Rebuild Project

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf>

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see <https://www.fws.gov/program/migratory-bird-permit/what-we-do>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see <https://www.fws.gov/library/collections/threats-birds>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/partner/council-conservation-migratory-birds>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Utah Ecological Services Field Office

2369 West Orton Circle, Suite 50

West Valley City, UT 84119-7603

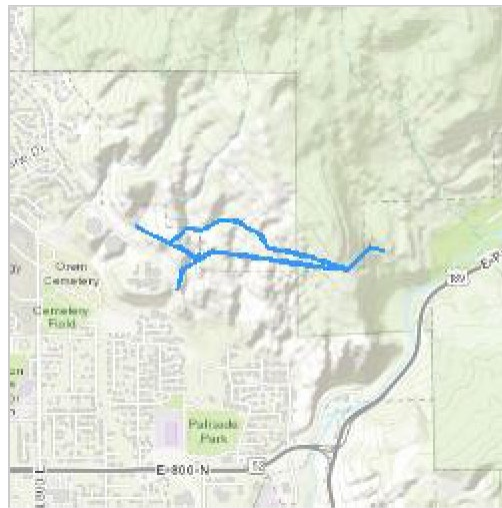
(801) 975-3330

PROJECT SUMMARY

Project Code: 2025-0039917
Project Name: RMP's Northridge 12 FHCA Rebuild Project
Project Type: Distribution Line - Maintenance/Modification - Above Ground
Project Description: To upgrade/replace wooden transmission poles with steel ones to meet RMP wildfire standards

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@40.323681699999995,-111.66159609971604,14z>



Counties: Utah County, Utah

ENDANGERED SPECIES ACT SPECIES

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Canada Lynx <i>Lynx canadensis</i> Population: Wherever Found in Contiguous U.S. There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3652	Threatened

BIRDS

NAME	STATUS
Yellow-billed Cuckoo <i>Coccyzus americanus</i> Population: Western U.S. DPS There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

INSECTS

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> There is proposed critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743	Proposed Threatened

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency: Eocene Environmental Group
Name: Maribel Glass
Address: 444 S Main St
Address Line 2: Suite A6
City: Cedar City
State: UT
Zip: 84720
Email: mglass@transcon.com
Phone: 9155256955



Utah Division of Wildlife Resources
Utah Natural Heritage Program
1594 W. North Temple
PO Box 146301
Salt Lake City, UT 84116

Report Number: 15800
July 25, 2024

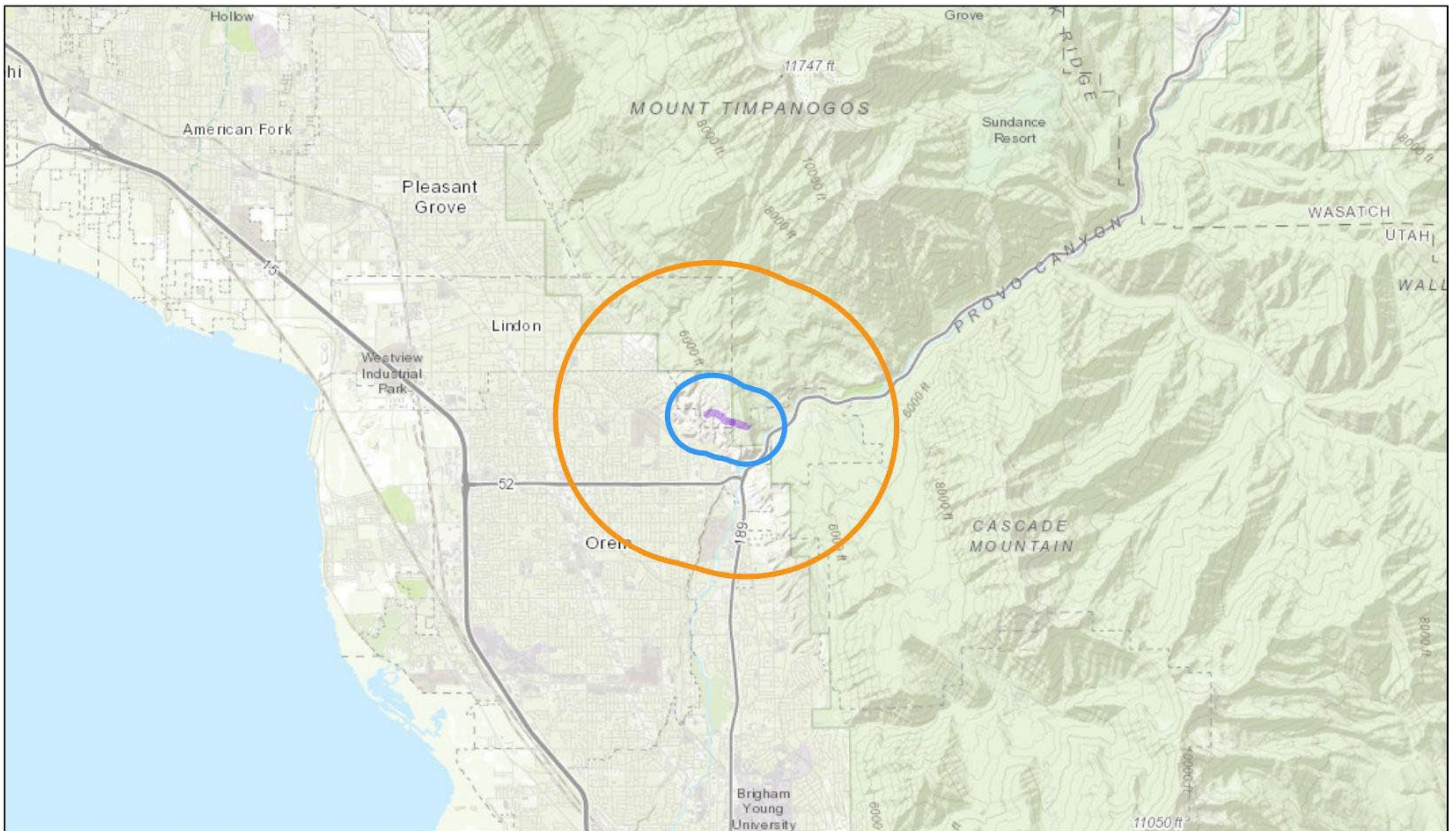
Utah Natural Heritage Program Online Species Search Report

Project Information

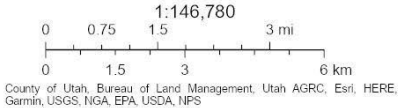
Project Name
RMP's Northridge 12 FHCA Project

Project Description
Proposal for RMP Project near Orem, Utah

Location Description
Utah County



July 25, 2024



Animals within a 1/2 mile radius

Common Name	Scientific Name	State Status	U.S. ESA Status	Last Observation Year
Green River Pebblesnail	Fluminicola coloradoensis	SGCN		2020
Northern Leopard Frog	Lithobates pipiens	SGCN		1992
Peregrine Falcon	Falco peregrinus	SGCN		2006
Townsend's Big-eared Bat	Corynorhinus townsendii	SGCN		2012

Plants within a 1/2 mile radius

Common Name	Scientific Name	State Status	U.S. ESA Status	Last Observation Year
No Species Found				

Animals within a 2 mile radius

Common Name	Scientific Name	State Status	U.S. ESA Status	Last Observation Year
Columbia Spotted Frog	Rana luteiventris	SGCN		1941
Green River Pebblesnail	Fluminicola coloradoensis	SGCN		2022
Least Chub	Iotichthys phlegethontis	SGCN		1931
Northern Leopard Frog	Lithobates pipiens	SGCN		1992
Peregrine Falcon	Falco peregrinus	SGCN		2006
Townsend's Big-eared Bat	Corynorhinus townsendii	SGCN		2012
Western bumble bee	Bombus occidentalis	SGCN		2013

Plants within a 2 mile radius

Common Name	Scientific Name	State Status	U.S. ESA Status	Last Observation Year
No Species Found				

Definitions

State Status

SGCN	Species of greatest conservation need listed in the Utah Wildlife Action Plan
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U.S. Endangered Species Act

LE	A taxon that is listed by the U.S. Fish and Wildlife Service as "endangered" with the probability of worldwide extinction
LT	A taxon that is listed by the U.S. Fish and Wildlife Service as "threatened" with becoming endangered
LE;XN	An "endangered" taxon that is considered by the U.S. Fish and Wildlife Service to be "experimental and nonessential" in its designated use areas in Utah
C	A taxon for which the U.S. Fish and Wildlife Service has on file sufficient information on biological vulnerability and threats to justify it being a "candidate" for listing as endangered or threatened
PT/PE	A taxon "proposed" to be listed as "endangered" or "threatened" by the U.S. Fish and Wildlife Service

Disclaimer

The information provided in this report is based on data existing in the Utah Division of Wildlife Resources' central database at the time of the request. It should not be regarded as a final statement on the occurrence of any species on or near the designated site, nor should it be considered a substitute for on-the-ground biological surveys. Moreover, because the Utah Division of Wildlife Resources' central database is continually updated, any given response is only appropriate for its respective request.

The UDWR provides no warranty, nor accepts any liability, occurring from any incorrect, incomplete, or misleading data, or from any incorrect, incomplete, or misleading use of these data.

The results are a query of species tracked by the Utah Natural Heritage Program, which includes all species listed under the U.S. Endangered Species Act and species on the Utah Wildlife Action Plan. Other significant wildlife values might also be present on the designated site. Please [contact](#) UDWR's regional habitat manager if you have any questions.

For additional information about species listed under the Endangered Species Act and their Critical Habitats that may be affected by activities in this area or for information about Section 7 consultation under the Endangered Species Act, please visit <https://ecos.fws.gov/ipac/> or contact the [U.S. Fish and Wildlife Service Utah Ecological Services Field Office](#) at (801) 975-3330 or utahfieldoffice_esa@fws.gov.

Please contact our office at (801) 538-4759 or habitat@utah.gov if you require further assistance.

Your project is located in the following UDWR region(s): Central region

Report generated for:

Maribel Glass
Eocene Environmental Group
444 S Main St
Cedar City, UT 84720
(915) 525-6955
mglass@eocene.com





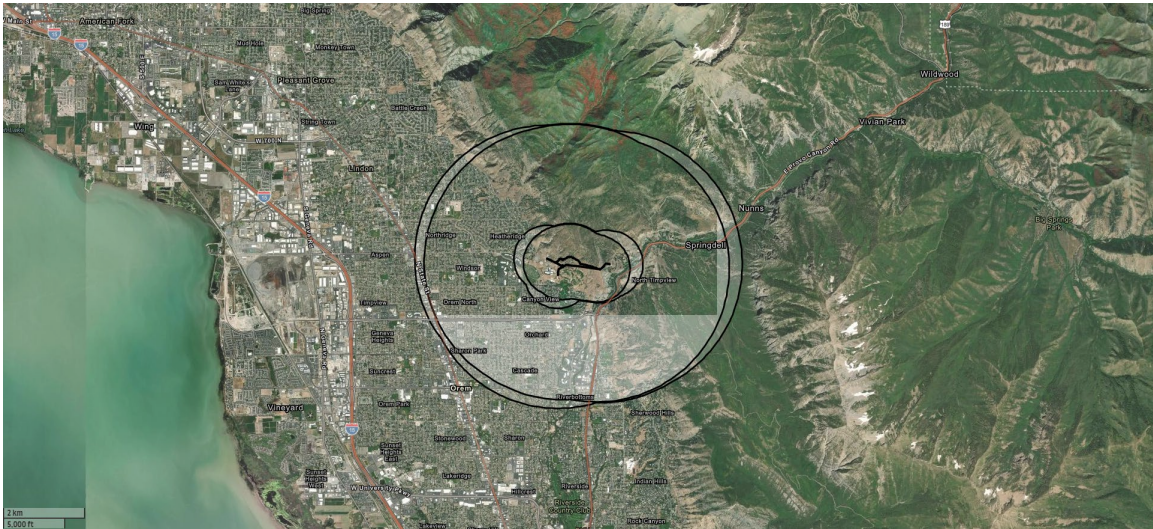
Utah Division of Wildlife Resources
1594 W. North Temple
Salt Lake City, UT 84116
(801) 538-4700, wildlife.utah.gov



Report Number: meg_16622
Report Date: 2025-01-16 18:25:38

Northridge 12 Fire High Concentration Area Rebuild Project

Location: Utah County, Utah
Description: To reduce wildfire risk, RMP intends to replace four existing wooden poles with steel poles, remove the existing overhead distribution line, and construct a new underground distribution line.



Project Area of Interest with a half-mile and two-mile radius.

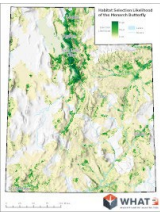
Half-Mile Radius

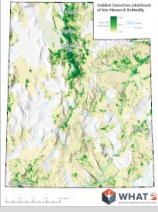
Species Name	Scientific Name	UWAP Status	ESA Status	Last Reported Date	SDHM
Peregrine Falcon	<i>Falco peregrinus</i>	SGCN	None	2001-04-01	

Species Name	Scientific Name	UWAP Status	ESA Status	Last Reported Date	SDHM
Green River Pebblesnail	<i>Fluminicola coloradoensis</i>	SGCN	None	2020-04-06	
Rocky Mountainsnail	<i>Oreohelix strigosa</i>	None	None	1939-05-27	
Western Glass-snail	<i>Vitrina pellucida</i>	None	None	1942-PRE	
	<i>Bombus griseocollis</i>	None	None	2018-07-31	
Peregrine Falcon	<i>Falco peregrinus</i>	SGCN	None	2001-04-01	
Green River Pebblesnail	<i>Fluminicola coloradoensis</i>	SGCN	None	2020-04-06	
Rocky Mountainsnail	<i>Oreohelix strigosa</i>	None	None	1939-05-27	

Two-Mile Radius

Species Name	Scientific Name	UWAP Status	ESA Status	Last Reported Date	SDHM
Peregrine Falcon	<i>Falco peregrinus</i>	SGCN	None	2003-06-21	
Utah Wood-Nymph	<i>Cercyonis pegala utahensis</i>	None	None	1988-07-22	

Species Name	Scientific Name	UWAP Status	ESA Status	Last Reported Date	SDHM
Large Marble Butterfly	<i>Euchloe ausonides</i>	None	None	2001-04-24	
Monarch butterfly	<i>Danaus plexippus</i>	None	None	2022-10-14	 Full View
Brown Hive	<i>Euconulus fulvus</i>	None	None	2019-05-05	
Green River Pebblesnail	<i>Fluminicola coloradoensis</i>	SGCN	None	2022-02-18	
West Coast Lady Butterfly	<i>Vanessa annabella</i>	None	None	2019-05-02	
Carved Glyph	<i>Glyphyalinia indentata</i>	None	None	1942-PRE	
Quick Gloss	<i>Zonitoides arboreus</i>	None	None	1939-05-27	
Toquerville Springsnail	<i>Pyrgulopsis kolobensis</i>	None	None	2020-04-11	
Spruce Snail	<i>Microphysula ingersollii</i>	None	None	1939-05-27	
Forest Disc	<i>Discus whitneyi</i>	None	None	1939-05-27	

Species Name	Scientific Name	UWAP Status	ESA Status	Last Reported Date	SDHM
Tadpole Physa	<i>Physa gyrina</i>	None	None	1989-05-07	
Rocky Mountainsnail	<i>Oreohelix strigosa</i>	None	None	2020-04-05	
Western Glass-snail	<i>Vitrina pellucida</i>	None	None	1942-PRE	
Brown Gardensnail	<i>Cornu aspersum</i>	None	None	2018-08-16	
Marsh Pondsnaill	<i>Stagnicola elodes</i>	None	None	1989-05-07	
	<i>Bombus huntii</i>	None	None	2023-07-23	
Columbia Spotted Frog	<i>Rana luteiventris</i>	SGCN	None	1926-05-02	
Peregrine Falcon	<i>Falco peregrinus</i>	SGCN	None	2003-06-21	
Monarch butterfly	<i>Danaus plexippus</i>	None	None	2022-10-14	 Full View
Large Marble Butterfly	<i>Euchloe ausonides</i>	None	None	2001-04-24	

Species Name	Scientific Name	UWAP Status	ESA Status	Last Reported Date	SDHM
Utah Wood-Nymph	<i>Cercyonis pegala utahensis</i>	None	None	1988-07-22	
Brown Hive	<i>Euconulus fulvus</i>	None	None	2019-05-05	
West Coast Lady Butterfly	<i>Vanessa annabella</i>	None	None	2019-05-02	
Carved Glyph	<i>Glyphyalinia indentata</i>	None	None	1942-PRE	
Green River Pebblesnail	<i>Fluminicola coloradoensis</i>	SGCN	None	2022-02-18	
Quick Gloss	<i>Zonitoides arboreus</i>	None	None	1939-05-27	
Toquerville Springsnail	<i>Pyrgulopsis kolobensis</i>	None	None	2020-04-11	
Spruce Snail	<i>Microphysula ingersollii</i>	None	None	1939-05-27	
Rocky Mountainsnail	<i>Oreohelix strigosa</i>	None	None	2020-04-05	
Western Glass-snail	<i>Vitrina pellucida</i>	None	None	1942-PRE	
Forest Disc	<i>Discus whitneyi</i>	None	None	1939-05-27	

Species Name	Scientific Name	UWAP Status	ESA Status	Last Reported Date	SDHM
Tadpole Physa	<i>Physa gyrina</i>	None	None	1989-05-07	
Marsh Pondsnaill	<i>Stagnicola elodes</i>	None	None	1989-05-07	
Brown Gardensnail	<i>Cornu aspersum</i>	None	None	2018-08-16	
	<i>Bombus huntii</i>	None	None	2023-07-23	
Columbia Spotted Frog	<i>Rana luteiventris</i>	SGCN	None	1926-05-02	

Definitions

State Status	
SGCN	Species of greatest conservation need listed in the Utah Wildlife Action Plan (UWAP) and also included in the Utah Field Guide
U.S. Endangered Species Act	
LE	A taxon that is listed by the U.S. Fish and Wildlife Service as "endangered" with the probability of worldwide extinction
LT	A taxon that is listed by the U.S. Fish and Wildlife Service as "threatened" with becoming endangered
LE;XN	An "endangered" taxon that is considered by the U.S. Fish and Wildlife Service to be "experimental and nonessential" in its designated use areas in Utah
C	A taxon for which the U.S. Fish and Wildlife Service has on file sufficient information on biological vulnerability and threats to justify it being a "candidate" for listing as endangered or threatened
PT/PE	A taxon "proposed" to be listed as "endangered" or "threatened" by the U.S. Fish and Wildlife Service

Species Distribution and Habitat Suitability Models

Species distribution and habitat suitability models (SDHMs) can inform wildlife management decisions such as habitat protection, enhancement, and restoration. They may also help assess environmental impacts by identifying species' habitats. When reevaluating SDHMs with new information, they can help identify or track changes or trends in habitat quality. SDHMs assess habitats' spatial arrangement and connectivity, identify crucial habitats, or describe the environmental conditions a species selects. SDHMs provide an understanding of the impacts of invasive species spread and identify suitable areas for species translocations/re-introductions.

SDHMs show a predicted suitable habitat for a species based on various biotic and abiotic environmental factors. These models may be useful for statewide evaluation but should not be considered verified species presence or absence. Field survey information should be utilized to verify the presence or absence of taxa when making species-specific decisions. Models produced by the Utah Division of Wildlife Resources (DWR) were conducted using a blend of Generalized Linear Models, Generalized Additive Models, Random Forest Models, Boosted Regression Tree Models, and Maximum Entropy Models.

Mitigation Strategies

Typical recommendations to consider and help guide project activities to avoid, minimize or mitigate impacts on wildlife and their habitats from project disturbances are displayed below for some wildlife species found within/near your project area.

Common Name	Strategy
Elk	Avoid disturbance in crucial winter habitats Dec. 1 - Apr. 15. Avoid, minimize or mitigate impacts from large-scale development that occur within crucial elk habitats. Voluntary mitigation is recommended at a 4:1 ratio, meaning 4 acres of improved or conserved habitat for every 1 acre of disturbance.
mule deer	Avoid disturbance in crucial winter habitats Dec. 1 - Apr. 15. Avoid, minimize or mitigate impacts from large-scale development that occur within crucial elk habitats. Voluntary mitigation is recommended at a 4:1 ratio, meaning 4 acres of improved or conserved habitat for every 1 acre of disturbance.

The DWR understands that mitigation strategies might conflict. Please reach out to DWR staff to develop strategies to minimize impacts on wildlife while still achieving project goals. Your project is located in the following UDWR region(s):

DWR Region Full Name	Regional Phone	Impact Analysis Biologist	Email	Phone
Central Region	801-491-5678	Josee Seamons	jseamons@utah.gov	385-421-1277

This project area contains multiple valuable wildlife habitats, where standard recommendations may conflict or be overburdensome. We strongly recommend reaching out to our team of experts for tailored/project-specific suggestions and solutions and DWR staff may contact you.

Wildlife Action Plan

The [Utah Wildlife Action Plan](#) (UWAP) is Utah's guiding document for native species conservation. The DWR encourages parties to use the UWAP in their environmental planning, as it provides a conservation framework to prevent future listings under the ESA.

Disclaimer

The information provided in this report is based on data existing in the Utah Division of Wildlife Resources' central database at the time of the request. It should not be regarded as a final statement on the occurrence of any species on or near the designated site, nor should it be considered a substitute for on-the-ground biological surveys. Moreover, because the Utah Division of Wildlife Resources' central database is continually updated, any given response is only appropriate for its respective request.

The Utah DWR provides no warranty nor accepts any liability occurring from any incorrect, incomplete, or misleading data or from any incorrect, incomplete, or misleading use of these data.

The results include a query of species tracked by the Utah Natural Heritage Program and Utah Division of Wildlife Resources, which includes all species listed under the U.S. Endangered Species Act, species in the Utah Wildlife Action Plan, and other species. Other significant wildlife values might also be present on the designated site.

For additional information about species listed under the Endangered Species Act and their Critical Habitats that may be affected by activities in this area or for information about Section 7 consultation under the Endangered Species Act, please visit <https://ecos.fws.gov/ipac/> or contact the U.S. Fish and Wildlife Service Utah Ecological Services Field Office at (801) 975-3330 or utahfieldoffice_esa@fws.gov.

The "Not For Consultation" watermark is meant to inform users that this tool is not a substitute for the U.S. Fish and Wildlife Service (USFWS) environmental review process. While this tool provides courtesy information on ESA species for context, the U.S. Fish and Wildlife Service is the authority on Information for Planning and Consultation Endangered Species Act Reviews. Additionally, the Wildlife Habitat Analysis Tool provides information to assist in analysis but does not replace coordination and consultation with Utah Division of Wildlife Resource biologists who can often serve as an expert resource for site-specific information.

Supplemental Data

Unmapped Corridors

Unmodeled Corridors:

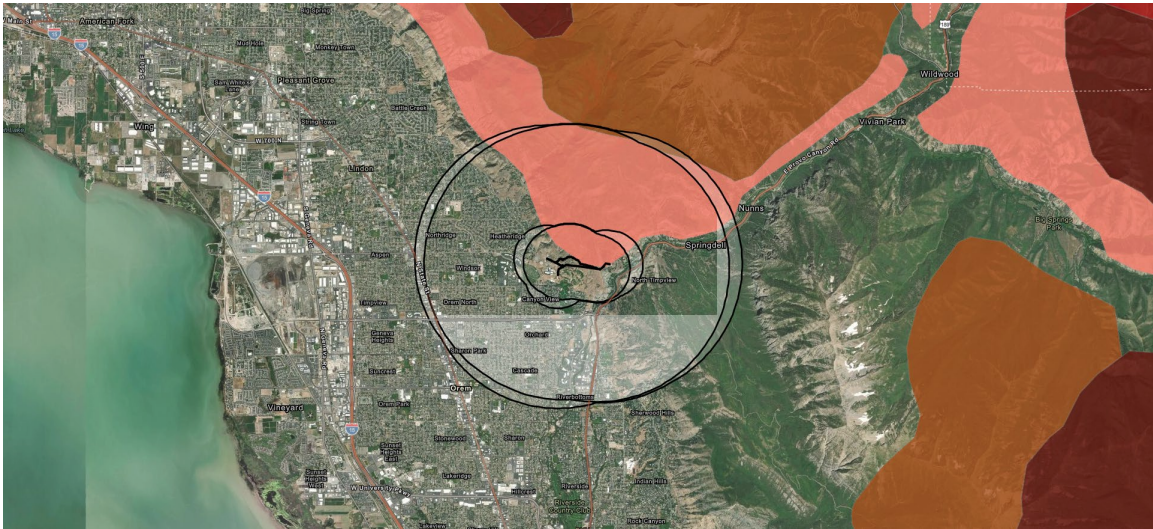
Present

Wildlife Habitat Information

Species	Season	Value	Comments
Band-Tailed Pigeon	spring-fall	substantial	
California Quail	year-long	crucial	
Chukar	year-long	substantial	
Elk	winter	crucial	
Mule Deer	winter	crucial	
Ring-Necked Pheasant	year-long	substantial	
Wasatch - Timpanogos	summer/fall	RMBS	Detected

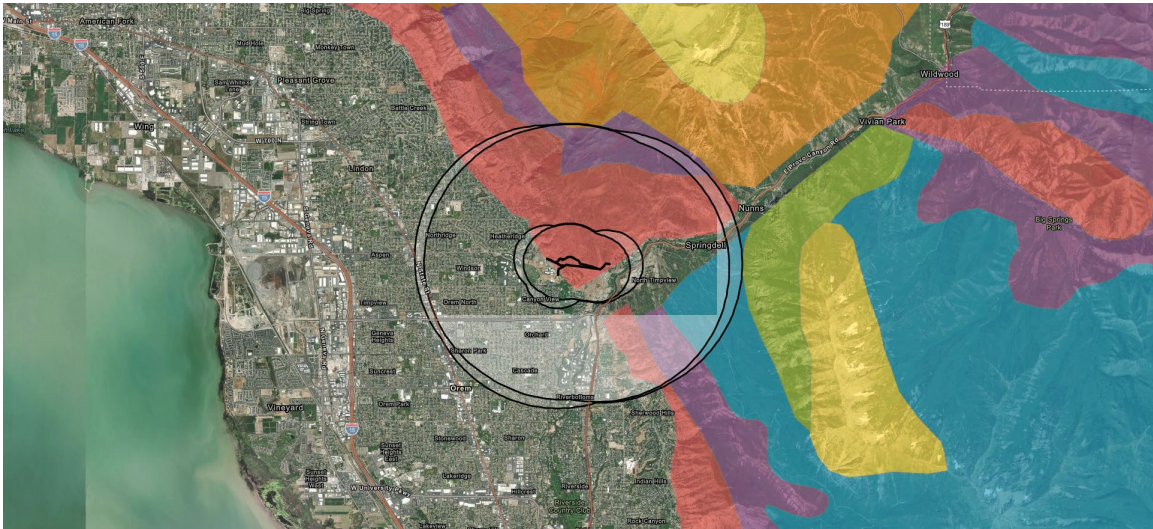
Species	Season	Value	Comments
Ruffed Grouse	year-long	substantial	

Elk Habitat



Season	Species	Value	Comments
winter	Elk	crucial	

Mule Deer Habitat



Comments	Season	Species	Value
	winter	Mule Deer	crucial

Report Generated For

Name: Maribel Glass

Organization: Eocene Environmental Group

Email: mglass@eocene.com

Phone: (915)-525-6955

End of Report

Thank you for using the Utah Wildlife Habitat Analysis tool. Feel free to reach out to the department for additional information or assistance.

APPENDIX B

PROJECT PHOTOGRAPHS



Photo 1. Photograph of the Bonneville Shoreline Trail.



Photo 2. Photograph depicting the rocky hills with open grassland and scattered patches of oak brush.



Photo 3. Photograph of one of the wooden pole structures to be removed surrounding by grass and scattered oak bush.



Photo 4. Photograph of the habitat and wooden pole structure facing the Wasatch Mountains.



Photo 5. Photograph at one of the wooden poles looking west towards the city of Orem, Utah.



Photo 6. Photograph depicting the rock slopes on the hillside.

APPENDIX D

NOXIOUS WEED MEMORANDUM

NOXIOUS AND INVASIVE WEED MEMORANDUM

From: Maribel Glass, Eocene Environmental Group, Inc.

To: Jens Jorgensen, Rocky Mountain Power

Date: February 27, 2025

Subject: Rocky Mountain Power's Northridge 12 Fire High Concentration Area Rebuild Project

INTRODUCTION

Rocky Mountain Power (RMP) proposes to complete the Northridge 12 Fire High Consequence Area (FHCA) Rebuild Project (Project) in Orem, Utah. The overhead distribution line currently passes through a region that has been identified by RMP as a FHCA. In order to reduce wildfire risk, RMP intends to remove the existing overhead distribution line and poles, replace four existing wooden poles with steel poles, and construct a new underground conduit. The existing overhead distribution line is located south of the Bonneville Shoreline Trail, and the proposed underground conduit will parallel the trail. The overhead distribution line and proposed underground conduit are located on Utah Division of Wildlife Resources (UDWR) and private land. The Project is located within the following Public Land Survey System township, range, and sections: Township 6 South, Range 2 East, Section 1; Township 6 South, Range 3 East, Section 6, as depicted on the Utah County Geological Survey 7.5-minute U.S. Geological Survey topographical map (**Appendix A**).

RMP contracted Eocene Environmental Group, Inc. (Eocene) to conduct a noxious and invasive weed survey of the Project area prior to the implementation of the Project. The purpose of this survey is to detect weed infestations early on to prevent new Project-related infestations and avoid the spread of existing weeds. An Eocene biologist conducted an invasive and noxious weed survey on January 10, 2025. The results of this survey are presented below.

UTAH NOXIOUS WEED ACT

The Utah Noxious Weed Act (R68-9) is a rule in the Utah Administrative Code (Utah Code 4-17-101) that outline laws and codes pertaining to noxious weeds. There are 54 weeds defined as 'noxious' and designated into five classes: Class 1A (Early Detection Rapid Responses [EDRR] Watch List), Class 1 (EDRR), Class 2 (Control), Class 3 (Containment), and Class 4 (Prohibited for sale or propagation) (**Appendix B, Table B-1**). The following is the definition of each class:

- **Class 1A (EDRR Watch List):** Noxious and invasive weeds not native to the state of Utah and *not known* to exist in the state that pose a serious threat to the state and should be considered as a very high priority.
- **Class 1 (EDRR):** Noxious and invasive weeds not native to the state of Utah that *are known* to exist in the state in very limited populations and pose a serious threat to the state and should be considered as a very high priority.
- **Class 2 (Control):** Noxious and invasive weeds not native to the state of Utah, that pose a threat to the state and should be considered a high priority for control. Weeds listed in the control list are known to exist in varying populations, and the concentration of these weeds is at a level where control or eradication may be possible.

- **Class 3 (Containment):** Noxious and invasive weeds not native to the state of Utah that are widely spread. Weeds listed in the containment noxious weeds list are known to exist in various populations throughout the state and weed control efforts may be directed at reducing or eliminating new or expanding weed populations. These weeds generally pose a threat to the agricultural industry and agricultural products.
- **Class 4 (Prohibited):** Noxious and invasive weeds that are not native to the state of Utah and pose a threat to the state through the retail sale or propagation in the nursery and greenhouse industry. Prohibited noxious weeds are annual, biennial, or perennial plants that the commissioner designates as having the potential or are known to be detrimental to human or animal health, the environment, public roads, crops, or other property (UDAF 2022).

Noxious and Invasive Weed Inventory

Of the 54 designated noxious and invasive weed species, the following have been documented as occurring in Utah County, Utah (EDDMapS2025):

Class 1A (EDRR Watch List):

- Syrian beancaper (*Zygophyllum fabago*)
- Plumeless thistle (*Carduus acanthoides*)

Class 1B (EDRR):

- Garlic mustard (*Alliaria petiolate*)
- Purple starthistle (*Centaurea calcitrapa*)
- African mustard (*Brassica tournefortii*)
- Giant reed (*Arundo donax*)
- Japanese knotweed (*Polygonum cuspidatum*)
- Blueweed (Vipers bugloss) (*Echium vulgare*)
- Elongated mustard (*Brassica elongata*)
- Common St. Johnswort (*Hypericum perforatum*)
- Oxeye daisy (*Leucanthemum vulgare*)
- Cutleaf vipergrass (*Scorzonera laciniata*)

Class 2 (Control):

- Leafy spurge (*Euphorbia esula*)
- Medusahead (*Taeniatherum caput-medusae*)
- Spotted knapweed (*Centaurea stoebe*)
- Purple loosestrife (*Lythrum salicaria*)
- Squarrose knapweed (*Centaurea virgata*)
- Yellow starthistle (*Centaurea solstitialis*)
- Yellow toadflax (*Linaria vulgaris*)
- Diffuse knapweed (*Centaurea diffusa*)
- Black henbane (*Hyoscyamus niger*)
- Dalmatian toadflax (*Linaria dalmatica*)

Class 3 (Containment):

- Russian knapweed (*Acroptilon repens*)
- Houndstongue (*Cynoglossum officinale*)
- Perennial pepperweed (Tall whitetop) (*Lepidium latifolium*)
- Phragmites (Common reed) (*Phragmites australis* ssp.)
- Tamarisk (Saltcedar) (*Tamarix ramosissima*)
- Hoary cress (*Lepidium draba*)
- Canada thistle (*Cirsium arvense*)
- Poison hemlock (*Conium maculatum*)
- Musk thistle (*Carduus nutans*)
- Quackgrass (*Elymus repens*)
- Jointed goatgrass (*Aegilops cylindrica*)
- Bermudagrass (*Cynodon dactylon*)
- Johnson Grass (*Sorghum halepense*)
- Scotch thistle (Cotton thistle) (*Onopordum acanthium*)
- Field bindweed (Wild Morning-glory) (*Convolvulus* spp.)
- Puncturevine (Goathead) (*Tribulus terrestris*)

Class 4 (Prohibited):

- Myrtle spurge (*Euphorbia myrsinites*)
- Dames Rocket (*Hesperis matronalis*)
- Russian olive (*Elaeagnus angustifolia*)

SURVEY AND RESULTS

A noxious and invasive weed survey was conducted by a qualified weed management specialist on January 10, 2025, prior to any construction-related ground-disturbing activities. A 300-foot plant buffer was applied to the Project's alignment (Project area). During the preconstruction noxious and invasive weed survey, the weed management specialist documented Scotch thistle (*Onopordum acanthium*), a Class 3: Containment weed species, within the Project area. Three Scotch thistle plants were observed along the Cascade Drive at UTM coordinates: Northing 443373, Easting 4463938 (**Appendix C, Photo 2**). Eight Scotch thistles plants were observed north of the Bonneville Shoreline Trail at UTM coordinates: Northing 444176, Easting 4463907 (**Appendix C, Photo 3**). There was also a large patch of 15 to 20 individual Scotch thistle plants on the hillside of Cascade Drive at UTM coordinates Northing 443401, Easting 4464029; there were also 4 to 5 new basal rosettes (**Appendix C, Photo 7 and Photo 8**).

The weed specialist also detected dalmatian toadflax (*Linaria dalmatica*), a Class 2 species which is considered a high priority for control. The dalmatian toadflax was documented along Cascade Drive at UTM coordinates: Northing 443840, Easting 4463828 (**Appendix C, Photo 4**). Additionally, the weed specialist detected common reed (*Phragmites australis*), a Class 3 species which is widely spread and generally poses a threat to the agricultural industry. A large patch of common reed was documented near the outflow of a buried pipe along the Bonneville Shoreline Trail at UTM coordinates: Northing 443420, Easting 4463965 (**Appendix C, Photo 5**). The weed specialist did note the presence of Russian thistle (*Salsola tragus*), though it is not listed in Utah county. Russian thistle was found throughout the entire Project area, ranging from 2 to 50 individual plants (**Appendix C, Photo 1**). Lastly, an unknown mustard plant was documented along the Bonneville Shoreline Trail at UTM coordinates: Northing 444344, Easting 4463814

(**Appendix C**, *Photo 6*). The plant was senesced and unable to be identified. The plant was documented with the potential to be one of the three mustard species listed within the noxious and invasive plant list for Utah County.

CONCLUSION

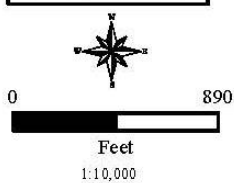
On January 10, 2025, a weed specialist conducted a noxious and invasive weed survey. The weed specialist documented Scotch thistle, dalmatian toadflax, and common reed within the Project area. Scotch thistle plants were located in the Project area along Cascade Drive and the Bonneville Shoreline Trail. The number of individuals ranged from 3 to 20 individual plants at different life stages. New basal rosettes were detected in addition to mature and senesced individuals. The dalmatian toadflax was documented along Cascade Drive and a large patch of common reed was documented at a trickle of water from a buried pipe along the Bonneville Shoreline Trail. No other species listed within the Utah County noxious and invasive weed list were detected within the Project area at the time of survey. The weed specialist did make notes of Russian thistle throughout the Project area. An unknown species of mustard was detected but unable to be identified; there is a possibility this plant is one of the three mustard species listed in the Utah noxious and invasive list. Surveys are recommended to commence during the growing and flowering season.

REFERENCES

- Utah Department of Agriculture and Food (UDAF). 2022. Retrieved from: <https://ag.utah.gov/plant-industry/noxious-weed-control-resources/state-of-utah-noxious-weed-list/>
- Early Detection and Distribution Mapping System (EDDMapS). 2025. Retrieved from: https://www.eddmaps.org/tools/recordsbysubject.cfm?id=us_ut&CFID=10505269&CFTOKEN=b0fd6dd4a3a60c66-D264A5AA-D93F-B3A2-57843E28C31E1314

APPENDIX A

PROJECT MAP



Legend

Transmission Poles

- Remove wood pole/overhead conductor - abandon.
- Replace existing wood pole with steel pole.
- Tap existing, begin underground conduit install.
- Existing Overhead Distribution Line to be removed
- Proposed Underground Conduit
- Private
- UDWR

Project Overview

Rocky Mountain Power
Northridge 12 FHCA
Rebuild Project

Date: 1/24/2025
Projection: NAD_1983_UTM_Zone_12N



APPENDIX B

2022 UTAH STATE NOXIOUS WEED LIST

TABLE B 1
2022 STATE OF UTAH NOXIOUS WEED LIST

Common Name	Scientific Name
<i>Class 1A: Early Detection Rapid Response (EDRR)</i>	
Common crupina	<i>Crupina vulgaris</i>
African rue	<i>Peganum harmala</i>
Small bugloss	<i>Anchusa arvensis</i>
Mediterranean sage	<i>Salvia aethiopis</i>
Spring millet	<i>Milium vernale</i>
Syrian beancaper	<i>Zygophyllum fabago</i>
Ventenata (North Africa grass)	<i>Ventenata dubia</i>
Plumeless thistle	<i>Carduus acanthoides</i>
Malta starthistle	<i>Centaurea melitensis</i>
<i>Class 1B: Early Detection Rapid Response (EDRR)</i>	
Camelthorn	<i>Alhagi maurorum</i>
Garlic mustard	<i>Alliaria petiolata</i>
Purple starthistle	<i>Centaurea calcitrapa</i>
Goatsrue	<i>Galega officinalis</i>
African mustard	<i>Brassica tournefortii</i>
Giant reed	<i>Arundo donax</i>
Japanese knotweed	<i>Polygonum cuspidatum</i>
Blueweed (Vipers bugloss)	<i>Echium vulgare</i>
Elongated mustard	<i>Brassica elongata</i>
Common St. Johnswort	<i>Hypericum perforatum</i>
Oxeye daisy	<i>Leucanthemum vulgare</i>
Cutleaf vipergrass	<i>Scorzonera laciniata</i>
<i>Class 2: Control</i>	
Leafy spurge	<i>Euphorbia esula</i>
Medusahead	<i>Taeniatherum caput-medusae</i>
Rush skeletonweed	<i>Chondrilla juncea</i>
Spotted knapweed	<i>Centaurea stoebe</i>
Purple loosestrife	<i>Lythrum salicaria</i>
Squarrose knapweed	<i>Centaurea virgata</i>
Dyers woad	<i>Isatis tinctoria</i>
Yellow starthistle	<i>Centaurea solstitialis</i>
Yellow toadflax	<i>Linaria vulgaris</i>
Diffuse knapweed	<i>Centaurea diffusa</i>
Black henbane	<i>Hyoscyamus niger</i>
Dalmatian toadflax	<i>Linaria dalmatica</i>
<i>Class 3: Containment</i>	
Russian knapweed	<i>Acroptilon repens</i>
Houndstongue	<i>Cynoglossum officinale</i>
Perennial pepperweed (Tall whitetop)	<i>Lepidium latifolium</i>
Phragmites (Common reed)	<i>Phragmites australis ssp.</i>
Tamarisk (Saltcedar)	<i>Tamarix ramosissima</i>
Hoary cress	<i>Lepidium draba</i>
Canada thistle	<i>Cirsium arvense</i>
Poison hemlock	<i>Conium maculatum</i>
Musk thistle	<i>Carduus nutans</i>
Quackgrass	<i>Elymus repens</i>
Jointed goatgrass	<i>Aegilops cylindrica</i>

TABLE B 1
2022 STATE OF UTAH NOXIOUS WEED LIST

Common Name	Scientific Name
Bermudagrass	<i>Cynodon dactylon</i>
Johnson Grass	<i>Sorghum halepense</i>
Scotch thistle (Cotton thistle)	<i>Onopordum acanthium</i>
Field bindweed (Wild Morning-glory)	<i>Convolvulus spp.</i>
Puncturevine (Goathead)	<i>Tribulus terrestris</i>
<i>Class 4: Prohibited</i>	
Cogongrass (Japanese blood grass)	<i>Imperata cylindrica</i>
Myrtle spurge	<i>Euphorbia myrsinites</i>
Dames Rocket	<i>Hesperis matronalis</i>
Scotch broom	<i>Cytisus scoparius</i>
Russian olive	<i>Elaeagnus angustifolia</i>
Source: https://ag.utah.gov/plant-industry/noxious-weed-control-resources/state-of-utah-noxious-weed-list/	

APPENDIX C

PROJECT PHOTOGRAPHS



Photo 1. Photograph of Russian thistle within the Project area.



Photo 2. Photograph of Scotch thistle along the Cascade Drive at Northing 443373, Easting 4463938.



Photo 3. Photograph of Scotch thistle north of the Bonneville Shoreline Trail at Northing 444176, Easting 4463907.



Photo 4. Photograph of Dalmatian toadflax was documented along Cascade Drive at Northing 443840, Easting 4463828.



Photo 5. A large patch of common reed documented near at flowing stream at Northing 443420, Easting 4463965.



Photo 6. Unknown mustard plant along the Bonneville Shoreline Trail at Northing 444344, Easting 4463814.



Photo 7. Photo of a large patch of 15-20 individual Scotch thistle plants on the hillside of Cascade Drive at Northing 443401, Easting 4464029.



Photo 8. Photo of Scotch thistle basal rosette on the hillside of Cascade Drive at Northing 443401, Easting 4464029.

APPENDIX E

CULTURAL RESOURCES INVENTORY REPORT AND STATE HISTORIC PRESERVATION CORRESPONDENCE

COVER PAGE

**Must Accompany All Project Reports
Submitted to the Utah SHPO**



UDSH Project Number: **U24E10756**

Report Title: *Cultural Resources Inventory Report, Rocky Mountain Power's Northridge 12 Fire High Concentration Area Rebuild Project, Utah County, Utah*

Report Date: January 2025

Report Author(s): Aaron D. Larsen

Org. Project Number: 20200053

County(ies): Utah County

Principal Investigator: Kathryn A. Cantrell

Record Search Date(s): November 13, 2024

Intensive Acres Surveyed (<15m intervals): 9.66

USGS 7.5' Series Map Reference(s): Orem, Utah

Township 6 South, Range 2 East, Section 1

Township 6 South, Range 3 East, Section 6

Field Supervisor(s): Jennifer Bannick

Recon/Intuitive Acres Surveyed (<15m intervals): 1.96

Sites Reported	Count	Smithsonian Trinomials
Revisits (no updated site forms)	0	
Updates (updated site forms provided)	2	42UT1134, 42UT1893
New recordings (site forms provided)	0	
Total Count of Archaeological Sites in APE	2	42UT1134, 42UT1893
Historic Structures (structures forms provided)	0	
Total National Register Eligible Sites	1	42UT1134

*Please list all site numbers per category. Number strings are acceptable (e.g., "42TO1-13; 42TO15"). Cells should expand to accommodate extensive lists.

Checklist of Required Items for Submittal to SHPO

- ☒ "Born Digital" Report in a PDF/A format
 - ☒ SHPO Cover Sheet
 - ☒ File Name is the UDSH Project Number with no hyphens or landowner suffixes
- ☒ "Born Digital" Site forms in PDF/A format
 - ☒ UASF with embedded maps and photos
 - ☒ File name is Smithsonian Trinomial without leading zeros (e.g., 42TO13, not 42TO00013)
 - ☒ Photo requirements (including size and quality)
- ☒ Archaeological Site Tabular Data
 - ☒ Single spreadsheet for each project
 - ☒ Follows UTSHPPO template (info here: <https://goo.gl/7SLMqi>)
- ☒ GIS data
 - ☒ Zipped polygon shapefile or geodatabase of survey (if different from APE) or other activity area with required field names and variable intensity denoted
 - ☒ Zipped polygon shapefile or geodatabase of site boundaries with the required field name



Short Cultural Resources Inventory Report Form

State Project Number: U24E10756

Report Title: *Cultural Resources Inventory Report, Rocky Mountain Power's Northridge 12 Fire High Concentration Area Rebuild Project, Utah County, Utah*

Report Date: January 2025

Report Author(s): Aaron D. Larsen

Principal Investigator: Kathryn A. Cantrell

Person-Days for Survey: A total of one person-day of survey for Jennifer Bannick on November 13, 2024.

Acreage: APE: 11.62 Intensive: 9.66 Recon/Intuitive: 1.96
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Project Background

Rocky Mountain Power (RMP) is proposing to construct a new underground transmission line while removing an existing modern overhead transmission line as part of *Rocky Mountain Power's Northridge 12 Fire High Concentration Area Rebuild Project* (Project) in Utah County, Utah (Utah Antiquities Project Number **U24E10756**). The Project area is located on 7.29 acres (1.21 survey miles) of Utah Department of Natural Resources (DNR), Utah Division of Wildlife Resources (DWR)–managed lands and 4.33 acres (0.72 survey miles) of privately owned lands.

The 11.62-acre proposed Project Area of Potential Effect (APE) is located on the southwest-facing slope of Mount Timpanogos, north of Provo Canyon and the community of Orem in Utah County, Utah. The Project is located within portions of Township 6 South, Range 2 East, Section 1 and Township 6 South, Range 3 East, Section 6 of the Salt Lake Baseline and Meridian and crosses the Orem, Utah, 7.5-minute U.S. Geological Survey (USGS) topographic quadrangle map (USGS 2023). Of the 11.62-acre Project APE, 7.29 acres are located on DWR–managed lands and 4.33 acres are located on privately owned lands (**Appendix A**).

As part of the proposed Project, RMP requested a cultural resources evaluation of the Project APE in Utah County, Utah. RMP retained Eocene Environmental Group, Inc. (Eocene) to conduct the cultural resources evaluation and resulting report were conducted in compliance with U.C.A. § 9-8-404 (similar to Section 106 of the National Historic Preservation Act of 1966, as amended).

The Project APE was inventoried to Class III (intensive pedestrian) standards in 15-meter transects except in areas of steep or hazardous terrain, which were evaluated to Class II (reconnaissance) standards. This resulted in a total of 9.66 acres evaluated to Class III standards and 1.96 acres evaluated to Class II standards.

Area of Potential Effect Definition

The Project APE totals 11.62 acres and is located on the southwest-facing slope of Mount Timpanogos on DWR–managed and privately owned land north of Provo Canyon and the community of Orem in Utah County, Utah. The Class III (intensive pedestrian) cultural resources inventory was conducted in 15-meter transects throughout the Project APE except in areas of steep or hazardous terrain. This resulted in a total Project APE of 11.62 acres with 9.66 acres surveyed to Class III standards and 1.96 acres surveyed to Class II standards (**Table 1**).

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**TABLE 1
TOTAL PROJECT AREA***

	Federal	DNR (DWR Timpanogos State Wildlife Management Area)	Private	Total
Class II Inventory Acreage	0.00	0.63	1.33	1.96
Class III Inventory Acreage	0.00	6.66	3.00	9.66
Total Project Mileage	0.00	1.21	0.72	1.93
Total Project Acreage	0.00	7.29	4.33	11.62

*Notes: Class III inventory mileage is based on 15-meter-wide transects (0.167 acre).

Identification Strategies (archaeological, historical, and ethnographic)

The desktop background research review, the Class III cultural resources inventory, and this resulting report have been completed by Eocene, and conducted in compliance with U.C.A. § 9-8-404 (similar to Section 106 of the National Historic Preservation Act of 1966, as amended). The desktop review was conducted on October 24, 2024, and the cultural resources inventory was conducted on November 13, 2024, for a total of one person-day of fieldwork. Kathryn A. Cantrell served as Principal Investigator, Jennifer Bannick served as Field Director, and Aaron D. Larsen served as Report Author.

Location(s) and Date(s) of Pre-Field Records Search

1. Utah Division of State History: October 24, 2024
2. Federal/State Office: N/A
3. Historic Records/Maps: October 24, 2024
4. Other: N/A

Results of Pre-Field Records Search (sites and projects within agency-defined APE buffer and/or site leads from research)

A background research review was conducted on the Utah State Historic Preservation Office's (SHPO) Sego and Utah Digital Asset Manager (UDAM) online cultural resources databases on October 24, 2024 (SHPO 2024). The results of this literature review indicate there are a total of 23 previously conducted cultural resource surveys (**Table 2**) within 0.5 mile of the Project APE. Of these, four previously conducted surveys are mapped as overlapping, immediately adjacent to, or crossing a portion of the current Project APE. Of the overlapping previously conducted surveys, only two were conducted within 10 years and satisfy Utah SHPO guidelines. Neither recent cultural resource survey crossed a significant portion of the Project APE. As such, no portion of the Project area was excluded from new Class III intensive pedestrian cultural resource survey due to previous survey efforts. Previous surveys near the area are related to pipeline, waterline, power line development, as well as vegetation management, and archaeological data collection.

**TABLE 2
PREVIOUS CULTURAL SURVEYS WITHIN 0.5 MILE OF THE PROJECT AREA OF POTENTIAL EFFECT**

Survey No.	Survey Name	Organization	Date	In/Out*
U76UA0192	A Survey of Archaeological and Historical Resources within the Alpine Aqueduct Area of the Central Utah Project	University of Utah	1976	In

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**TABLE 2
PREVIOUS CULTURAL SURVEYS WITHIN 0.5 MILE OF THE PROJECT AREA OF POTENTIAL EFFECT**

Survey No.	Survey Name	Organization	Date	In/Out*
U77UA0304	A Survey of the Archaeological and Historical Resources Within the Bonneville Unit of the Central Utah Project: Jordan Aqueduct Section 4	University of Utah	1977	Out
U79BE0457	Report of Cultural Resources Clearance Survey (Request NR CUPO-79-20, CUWCD Access Road)	Bureau of Reclamation (BOR)	1979	Out
U81BE1015	A Cultural Resources Survey of the Alpine Aqueduct Reach 3 and Road Relocation Alignments, Municipal and Industrial System	BOR	1981	Out
U81BE1016	Report of Cultural Resources Clearance Survey (Request NR CU-81-15, Jordan Aqueduct Reach 4 and Alpine Aqueduct Reach 3 Test Pits)	BOR	1981	Out
U86BC0761	CRI of the Proposed SR-189 Upgrade from Wildwood, Provo Canyon, to Heber City, Wasatch County	Office of Public Archaeology, Brigham Young University	1986	Out
U92NP0477	A Cultural Resource Inventory of the Proposed Orem City Alta Springs Storage Tank, Utah County, UT	Neilson Consulting Group	1992	In
U01EP0773	A Cultural Resource Inventory of the Provo Reservoir Canal, Utah County, UT	EarthTouch, LLC	2001	Out
U07A10715	Provo River Diversions	Alpine Archaeological Group	2007	Out
U10CW0060	Provo Reach Realignment, Spanish Fork Reservoir Canal Pipeline	CH2MHill	2010	Out
U10ST0566	PRCEP Parallel Pipeline	SWCA Environmental Consultants (SWCA)	2010	Out
U11ST0653	A Cultural Resources Inventory of Staging and Fill Areas for the Spanish Fork Provo Reservoir Canal, Provo Reach 2 Pipeline Project in Utah County, Utah	SWCA	2011	Out
U11ST0744	ULS Pipeline Orem Reach Geotechnic	SWCA	2011	Out
U11ST1088	PRECP Monitoring Report	SWCA	2011	Out
U12ST0359	A Cultural Resources Inventory of the Orem Reach Realignment of the Spanish Fork Canyon-Provo Reservoir Canal Pipeline Project in Utah County, Utah	SWCA	2012	Out
U14ST0671	Cultural Resource Monitoring for the Orem Reach 1a of the Spanish Fork-Provo Reservoir Canal Pipeline Project in Utah County, Utah	SWCA	2014	Out
U14ZP0417	An Archaeological Resource Investigation of the Olmsted Hydroelectric Plant Replacement Project, Utah County, Utah	Project Engineering Consultants	2014	In
U16HX0872	An Archaeological Investigation of the Olmsted Hydroelectric Plant Access Road	Horrocks Engineers	2016	Out
U21SH0453	Cultural Resources Inventory in Support of the Range Fire Emergency Watershed Protection (EWP)	Utah Natural Resources Conservation Service	2021	In
U21UQ0715	A Cultural Resources Inventory of the Proposed Timpanogos WMA Shrub Plantings Project, Utah County, Utah	DWR	2021	Out
U22HX0280	Alpine Aqueduct Reach 1 Replacement and Resiliency Project	Horrocks Engineers	2022	Out

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TABLE 2
PREVIOUS CULTURAL SURVEYS WITHIN 0.5 MILE OF THE PROJECT AREA OF POTENTIAL EFFECT

Survey No.	Survey Name	Organization	Date	In/Out*
U22UQ0195	Cultural Resources Survey of the 2022 Timpanogos WMA Fire Rehabilitation Shrub Planting Project	DWR	2022	Out
U23UQ0239	An Archaeological Survey of the 2023 Proposed Timpanogos Shrub Plantings Project, Utah	DWR	2023	Out

*Note: "In" is a project crossing or overlapping some portion of the APE (also blue text); "Out" is a project mapped outside the APE. "In" projects conducted within the past 10 years are also highlighted in blue.

Background research indicated there are 10 previously recorded cultural resources within 0.5 mile of the Project APE. Of these, two cultural resource sites were mapped within the Project APE during the literature review (Table 3).

TABLE 3
PREVIOUSLY IDENTIFIED CULTURAL RESOURCE SITES
WITHIN 0.5 MILE OF THE PROJECT AREA OF POTENTIAL EFFECT

Site No.	Description	Eligibility	In/Out*
42UT107	Prehistoric rock art	Undetermined	Out
42UT406	Prehistoric open camp	Undetermined	Out
42UT947	Historic ditch (<i>Provo Reservoir/Murdock Ditch</i>)	Undetermined	Out
42UT1134	Historic Aqueduct (<i>Salt Lake Aqueduct</i>)	Determined Eligible	In
42UT1758	Historic building (<i>Olmsted Station Power House</i>)	Determined Eligible	Out
42UT1821	Historic pipeline (<i>Provo City Culinary Water Pipeline</i>)	Determined Eligible	Out
42UT1822	Historic pipeline (<i>Provo City Culinary Water Pipeline</i>)	Determined Eligible	Out
42UT1892	Historic canal (<i>Blue Cliff Canal</i>)	Determined Not Eligible	Out
42UT1893	Historic ditch (<i>Alta Ditch</i>)	Determined Not Eligible	In
42UT1894	Historic pipeline (<i>Alta Ditch Replacement Pipeline</i>)	Determined Not Eligible	Out

*Note: "In" is a site mapped within or crossed by some portion of the APE (also blue text); "Out" is a site mapped outside the APE.

In addition to the Sego and UDAM literature review (described above), Eocene consulted a number of historic documents and records, including Bureau of Land Management (BLM) land records (e.g., historic General Land Office [GLO] records, land patents, mining records, grazing records, Master Title Plat records, etc.); the Historic Utah Buildings (HUB) site; and Utah Division of Water Rights (DWR) records (BLM 2024a, 2024b, 2024c, 2024d, 2024e; HUB 2024; DWR 2024). As a result of the historic document review, the GLO records, land patents, and water rights records yielded historic resources in or very near the Project APE.

Historic Structures

The Utah SHPO HUB online database was reviewed for the Project area and accessed through the HUB website on October 24, 2024. Records indicate that there are 28 historic structures within 0.5 mile of the proposed Project APE, none of which are located within or adjacent to the Project APE (Table 4). These historic building types mapped near the Project APE are

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all related to the Olmsted Campus, excluding two residential structures (ID 105340 and 121129); these structures date from 1903 to 1940, with all 28 considered Eligible/Contributing (HUB 2024).

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TABLE 4
PREVIOUSLY IDENTIFIED HISTORIC STRUCTURES WITHIN 0.5 MILE OF THE PROJECT AREA OF POTENTIAL EFFECT

Property ID No.	Property Name	Street Address	Construction Year	Plan Type	Style	Original Use	Eligibility	National Register of Historic Places (NRHP) Status	In/Out*
117811	Olmsted Station Power House	Off US 189	1903		Victorian Eclectic	Energy Facility	Eligible/Contributing	NR Individually Listed Property	Out
135233	Olmsted Oil House	1050 N 1630 E	1967	Shed			Eligible/Contributing	Not Listed	Out
135234	Olmsted Root Cellar	1050 N 1630 E	1903	Cellar			Eligible/Contributing	Not Listed	Out
135235	Olmsted Pressure Box	1050 N 1630 E	1917			Energy Facility	Eligible/Contributing	Not Listed	Out
135236	Olmsted Long Garage	1050 N 1630 E	1936	Garage		Transportation (Gen)	Eligible/Contributing	Not Listed	Out
135238	Olmsted Carpenter Shop	1050 N 1630 E	1903	Bungalow	Victorian Eclectic	Work of Art	Eligible/Contributing	Not Listed	Out
135239	Olmsted Brick Stable	1050 N 1630 E	1903	Barn-Other	Arts & Crafts	Animal Facility	Eligible/Contributing	Not Listed	Out
135240	Olmsted Brick Garage	1050 N 1630 E	1910	Garage	Bungalow	Transportation (Gen)	Eligible/Contributing	Not Listed	Out
135241	Olmsted Blacksmith Shop	1050 N 1630 E	1917	Workshop			Eligible/Contributing	Not Listed	Out
105340		1266 N 800 E	1920	Bungalow	Bungalow	Single Dwelling	Eligible/Contributing	Not Listed	Out
121129		740 E Bowl Dr	1955	Ranch	Minimal Traditional	Single Dwelling	Eligible/Contributing	Not Listed	Out
113691	Home of Ideas	Olmsted Campus	1937	Other Early 20 th Century	International	Residential (Gen)	Eligible/Contributing	Not Listed	Out
113182	Root Cellar/Spring House	Olmsted Campus	1903	Cellar			Eligible/Contributing	Not Listed	Out
112933	Quarters Building	Olmsted Campus	1903	Other Commercial/Public	2 nd Renaissance Revival	Institutional Housing	Eligible/Contributing	Not Listed	Out
112929	Talrace	Olmsted Campus	1904	Canal/Ditch		Energy Facility	Eligible/Contributing	Not Listed	Out
110108	Thornhill Cottage/Double Cottage	Olmsted Campus	1906	Bungalow	Bungalow	Residential (Gen)	Eligible/Contributing	Not Listed	Out
113238	Pedestrian Bridge	Olmsted Campus	1935	Bridge		Pedestrian Related	Eligible/Contributing	Not Listed	Out
110109	Retaining Wall	Olmsted Campus	1917	Wall		Landscape (General)	Eligible/Contributing	Not Listed	Out
113236	Carpenter Shop	Olmsted Campus	1904	Workshop	Victorian Eclectic	Multiple Uses	Eligible/Contributing	Not Listed	Out
112930		Olmsted Campus	1915	Bridge		Pedestrian Related	Eligible/Contributing	Not Listed	Out
113184		Olmsted Campus	1940	Bridge		Waterworks	Eligible/Contributing	Not Listed	Out
113185	Pump Station	Olmsted Campus	1910			Waterworks	Eligible/Contributing	Not Listed	Out
112934	Pressure Box	Olmsted Campus	1917	Other Early 20 th Century		Energy Facility	Eligible/Contributing	Not Listed	Out
113235	Power House	Olmsted Campus	1903	Arcaded Block	Arts & Crafts	Energy Facility	Eligible/Contributing	Not Listed	Out
113342	Brick Garage	Olmsted Campus	1910	Garage	Arts & Crafts	Transportation (Gen)	Eligible/Contributing	Not Listed	Out
113422	Long Garage	Olmsted Campus	1936	Garage		Industrial Storage	Eligible/Contributing	Not Listed	Out
112974	Blacksmith Shop	Olmsted Campus	1917	Double Cell	Early 20 th Century, Other		Eligible/Contributing	Not Listed	Out
113419	Brick Stable	Olmsted Campus	1903	Barn/Other	Victorian Eclectic	Animal Facility	Eligible/Contributing	Not Listed	Out

*Note: "In" is a structure mapped within or crossed by some portion of the APE (also blue text); "Out" is a structure mapped within the 0.5-mile study area but outside the APE.

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Historic General Land Office Records

Historic GLO maps and plats were reviewed for the Project APE and accessed through the BLM website on October 24, 2024. Original cadastral surveys for Township 6 South, Range 2 East (1856, 1871, 1873, 1875, 1933) and Township 6 South, Range 3 East (1856, 1871, 1882, 1896) were perused. These surveys indicate there are historic roads near the proposed Project APE (**Table 5**).

TABLE 5 HISTORIC GENERAL LAND OFFICE MAPS			
Date	Township	Range	Historic Features near the Project Area
1871	6 South	2 East	Roads (<i>Wood Road, Road to Pleasant Grove</i>)
1871	6 South	3 East	Roads (<i>Provo Canyon Road, Wood Road</i>)
1882	6 South	3 East	Road (<i>Provo Canyon Road</i>)

Additional historic maps were accessed from both the USGS TopoView topographic map viewer created by the National Geologic Map Database Project and the Utah Geological Survey Aerial Imagery Collection (UDNR 2024; USGS 2024). Historic topographic maps in the vicinity of the Project indicate the presence of historic developments, including:

- Roads (1885 Salt Lake, Utah 1:250,000 scale topographic map)
- Roads, railroad, powerhouse, canals, tunnel, trails, transmission lines (1948, 1950 Orem, Utah 1:24,000 scale topographic map)

Land Patent Records

Historic land patent records within the Project APE were also reviewed and accessed through the BLM website on October 24, 2024. These historic resources indicate 12 land patents near the Project APE, with dates ranging from 1876 to 1920. These include John Baker (3/20/1876), Joseph B. Keeler (7/18/1887), Enos Carter (12/10/1890), Mary Quinney (12/10/1890), George W. Tilberry (2/13/1899), James Speirs (11/3/1905), the State of Utah (11/12/1900, 11/21/1908, 7/15/1910, 11/26/1910, 7/26/1912) and Lester W. Magnum (4/12/1920) (BLM 2024b).

Water Rights Records

Historic water rights records within the Project APE were reviewed and accessed through the DWR records website on October 24, 2024. These historic resources indicate that there are well over 100 water rights within 0.5 mile of the Project APE, including surface, underground, diversion, and well rights (Utah Division of Water Rights 2024).

Date(s) of Survey

November 13, 2024

Description of Findings

The Class III/II inventory area (Project APE) was characterized by a highly disturbed landscape on the southwest-facing slope of Mount Timpanogos, north of Provo Canyon and the community of Orem. Survey conditions consisted of partly cloudy skies and cool temperatures. For most of the inventory, ground surface visibility ranged from good to excellent, averaging 60 to 80 percent depending on vegetation (**Figures 1 to 4**). Vegetation within the APE is dominated by Gambel oak and maple scrub, cheatgrass, and assorted forbs and grasses. Tall grasses obstructed the ground view significantly in many areas

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of the Project APE, dense scrub prevented access to other areas, and there were areas of steep slopes and significant disturbance due to development (**Figures 5 to 7**). There is modern debris originating from adjacent trails and roads that was noted but not recorded throughout the Project APE.

As a result of the new Class III/II inventory, two previously recorded cultural resource sites were documented, and two isolated occurrences (IOs) were identified during the inventory (IO-01 and IO-02; **Figures 8 and 9**). These identified resources are further described below.

42UT1134 Salt Lake Aqueduct

Site 42UT1134 is the historic Salt Lake Aqueduct located within the current Project area along the southwest flank of Mount Timpanogos in Utah County, Utah. The site was originally recorded in 2000 by Baseline Data, Inc. (Baseline) and determined Eligible for listing on the NRHP under Criteria A and C; additional segments were recorded by EarthTouch, Inc. (EarthTouch) in 2007, Sagebrush Consultants, LLC (Sagebrush) in 2011, and Horrocks Engineers (Horrocks) in 2022, all recommending the site as Eligible for listing under Criterion A (Allison 2000; Billat and Billat 2007; Lefrance 2022; Pagano 2011).

The Salt Lake Aqueduct was constructed by the Metropolitan Water District of Salt Lake City (now Metropolitan Water District of Salt Lake & Sandy [MWDSLS]) between 1939 and 1951 as part of the Deer Creek Project, one of the first major federally funded water projects in Utah (Allison 2000; Bowman and Beisner 2008; MWDSLS 2024). The aqueduct is primarily a buried pipeline constructed from 20-foot lengths of formed concrete pipe that measure 69 inches in diameter in the interior of the pipe (MWDSLS 2024). The aqueduct carries water from the Provo River at the Deer Creek Reservoir down Provo Canyon to the community of Orem, then north along the Wasatch Front to Salt Lake City near Fort Douglas and the University of Utah. The aqueduct remains in use, providing 10 to 15 percent of the culinary water used by Salt Lake City (Bowman and Beisner 2008; MWDSLS 2024).

In 2024, Eocene revisited a segment originally recorded by Horrocks in 2022 in Township 6 South, Range 2 East, Section 1. No exposed portion of the pipeline and no associated features or artifacts were observed. A berm of disturbed soil and warning signage associated with the aqueduct were noted nearby, suggesting the location mapped in the Utah SHPO Sego database is incorrect. Previous recordings tended to utilize aerial imagery to approximate the site location, increasing the likelihood that the site location is incorrectly mapped.

Eocene recommends site 42UT1134 as Eligible for inclusion on the NRHP under Criterion A. Eocene further recommends coordination with MWDSLS to determine the actual location of site 42UT1134 within the Project APE prior to any project-related ground disturbance and recommends avoidance by boring beneath the aqueduct during new construction. Boring should begin at least 10 meters from the aqueduct and should be at least 1 meter below the aqueduct. If this recommendation is followed, implementation of the Project would result in *No Adverse Effects* to the historic property.

42UT1893 Alta Ditch

Site 42UT1893 is the historic Alta Ditch located along the southwest flank of Mount Timpanogos in Utah County, Utah. The site was originally recorded in 2014 by Project Engineering Consultants, Ltd. (PEC) and determined Not Eligible for listing on the NRHP under any Criteria (Steele 2014).

The Alta Ditch was initially constructed in 1875, and the associated canal company was incorporated in 1893 (Steele 2014). The ditch transported water from Guard Quarters Spring in Provo Canyon to the mouth of Provo Canyon, then down to the Provo Bench (Steele 2014). The water rights were traded to Orem City in the late 1950s in exchange for water from the Olmsted pressure house drawn from the Provo River using the Alta Ditch replacement pipeline (Steele 2014).

In 2024, Eocene revisited the two segments in Township 6 South, Range 3 East, Section 6 that were previously recorded by PEC. Two ditch segments were recorded: **Feature 01, Segment 01 (F-01, S-01)** consists of an open concrete-lined ditch with

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a steel headgate at one terminus; **Feature 01, Segment 02 (F-01, S-02)** consists of alternating concrete-lined or steel-lined open ditch with a steel culvert passing under a modern dirt road. Both segments are heavily silted and overgrown, reinforced with steel rebar, and appear as previously recorded.

Eocene recommends that site 42UT1893 is Not Eligible for inclusion on the NRHP under any Criteria, and that implementation of the Project would result in No Effect.

Isolated Occurrences

Two IOs were identified within the Project APE. The IOs include a historic road and an indeterminate pipeline and are both recommended as Not Eligible for NRHP listing under any Criteria (**Figures 8 and 9; Table 6**).

TABLE 6 NEWLY IDENTIFIED ISOLATED OCCURRENCES WITHIN THE PROJECT AREA OF POTENTIAL EFFECT*					
IO Number	Temporal Affiliation	Simple Description	Detailed Description	UTM E	UTM N
IO-01	Historic	Historic road	IO-01 is a gravel road that extends roughly east-west along the southwestern foothills of Mount Timpanogos nearing Squaw Peak. The road is sometimes improved with gravel and sometimes bare dirt; it varies in width from a smaller 8-foot-wide trail to a 20-foot-wide road beginning near the Orem Utah Police Gun Range, and Eocene recorded a 4,500-foot segment of the road in 2024. There are some small drains along some portions of either side of the road, and it appears to be generally well maintained. The road is visible on historic aerials from the late 1950s but not on GLO maps for the late 1800s (NETROnline 2024).	443891	4463971
IO-02	Unknown	Pipeline	IO-02 is a large pipeline that measures at least 19 inches in diameter; Eocene documented a 460-foot section of the pipeline in 2024 which exits from a hillside in the southwestern foothills of Mount Timpanogos and extends downhill in a roughly north-south direction. This appears to be the Alta Aqueduct that runs toward the Olmsted Reservoir (near the mouth of Provo Canyon) from near the Don A. Christiansen Regional Water Treatment Plant, north of 800 North in Orem. The original construction date of the pipeline is difficult to pinpoint. It does not appear on historic topographic maps until 1993 but may have been in place as early as the 1970s as a faint line appearing on historic aerials (NETROnline 2024).	444458	4463875
*Note: UTM coordinates are provided in NAD'83 Zone 12; "UTM-E" represents the Easting and "UTM-N" represents the Northing.					

Conclusion and Management Recommendations

Eocene archaeologists conducted a Class III/II inventory of approximately 7.29 acres of DWR-managed lands and 4.33 acres of privately owned lands located on the southwest-facing slope of Mount Timpanogos, north of Provo Canyon and the community of Orem in Utah County, Utah, on November 13, 2024. No portion of the Project APE was excluded from Class III inventory due to prior survey efforts. Approximately 9.66 acres of the Project APE were evaluated to Class III (intensive pedestrian) cultural resources inventory standards and surveyed in 15-meter transects throughout the proposed Project

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APE. Approximately 1.96 acres were surveyed to Class II (reconnaissance) standards due to steep or hazardous terrain or impassibly dense scrub vegetation. This investigation was requested by RMP to determine if any significant cultural resources that could be affected by the proposed undertaking were present within the Project APE.

As a result of the Class III/II inventory, it was determined that two cultural resource sites (42UT1134 and 42UT1893) and two IOs (IO-01 and IO-02) are located within the Project APE. Site 42UT1134 was previously determined Eligible for the NRHP under Criterion A for its close association with events that are important to the history of the region. Site 42UT1893 was previously determined Not Eligible for the NRHP under any Criteria. Additionally, both IOs are recommended Not Eligible for the NRHP.

Eocene recommends coordination with the Metropolitan Water District of Salt Lake & Sandy to determine the actual location of site 42UT1134 (the *Salt Lake Aqueduct*) within the Project APE prior to any Project-related ground disturbance and recommends avoidance by boring beneath the aqueduct during new construction. Boring should begin at least 10 meters from the aqueduct and should be at least 1 meter below the aqueduct. If this recommendation is followed, Eocene recommends the proposed Project will result in *No Adverse Effects* to historic properties.

If any previously undetected or unreported cultural features or deposits are encountered during future Project-related activities, these activities must be discontinued in the immediate area of the feature(s) and a DWR archaeologist must be consulted to evaluate their nature and significance.

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References

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Required Materials:

- ☒ 7.5' Quadrangle Base map(s) for Project Area (*Project Results Map*)
- ☐ 7.5' Quadrangle Base map (s) for Surveyed Area (if different than #1)



Figure 1. Project overview showing the southern arm of the Project APE. View to the west. Photo taken November 13, 2024.



Figure 2. Project overview showing the western arm of the Project APE. View to the west. Photo taken November 13, 2024.



Figure 3. Project overview showing the eastern arm of the APE with Kyhv Peak in the background. View to the east. Photo taken November 13, 2024.



Figure 4. Project overview showing the central survey area with Utah Lake in the distance. View to the west. Photo taken November 13, 2024.



Figure 5. Project overview showing steep Class II survey areas in the southern Project APE. View to the south. Photo taken November 13, 2024.



Figure 6. Project overview showing a Class II area in the southern portion of the APE within a private shooting range. View to the west. Photo taken November 13, 2024.



Figure 7. Project overview showing a Class II area in the western portion of the Project APE with dense scrub vegetation. View to the southeast. Photo taken November 13, 2024.



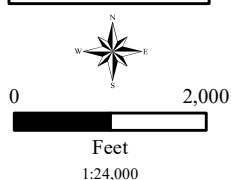
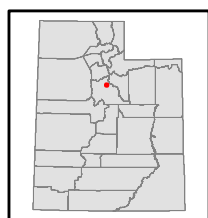
Figure 8. Overview facing east showing IO-01 historic road. Photo taken November 13, 2024.



Figure 9. Overview facing southeast showing IO-02 potentially historic pipeline. Photo taken November 13, 2024.

APPENDIX A

PROJECT RESULTS MAP



 IO
 Site
 Survey Area - Class II
 Survey Area - Class III
 Private
 UDWR
 USFS

Rocky Mountain Power
Northridge 12 FHCA Rebuild
U24E10756

Date: 11/26/2024
Projection: NAD 1983 UTM Zone 12N

