Draft Environmental Assessment Two Rivers Community Solar Project Poudre Valley Rural Electric Association, Inc. Greeley, Weld County, Colorado

Prepared for—

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September 9, 2024

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Draft Environmental Assessment Two Rivers Community Solar Project Poudre Valley Rural Electric Association, Inc. Greeley, Weld County, Colorado

September 9, 2024

1.0 Purpose and Need

1.1 Project Description

Poudre Valley Rural Electric Association, Inc. (PVREA) is seeking financial assistance from the United States Department of Agriculture (USDA) Rural Development (RD), Rural Utilities Service (RUS) under its Powering Affordable Clean Energy (PACE) Program for the Two Rivers Community Solar Project (project). The grant would support the development and construction of a 2.0 megawatt (MW) alternating current (AC) solar facility on the west side of the city of Greeley (City) in Weld County, Colorado (project area).

The proposed project would cover approximately 14.3 acres of private land (Figure 1). The project area abuts an access road to the south, the Boomerang Ditch to the west, and oil and gas infrastructure to the east, and would be accessed via an existing two-track dirt road, north of the project area, off 95th Avenue. The project would include solar arrays and a distribution transformer and would tie into the existing Boomerang substation immediately north of the project area (Figure 2).

The power generated by the project would be integrated into the PVREA Community Solar Program (CSP). The CSP allows existing members to opt in to purchase energy generated on one of their community solar farms located in northern Colorado. The CSP currently serves up to 375 homes annually using 6,106 solar panels installed on three farms in Windsor and Fort Collins, Colorado. The CSP is currently fully subscribed, and interested members are placed on a waitlist upon joining the CSP.

The PACE Program is part of an effort to increase investments in clean, affordable, and reliable energy to Americans under the Inflation Reduction Act. PACE funding provides up to 60 percent loan forgiveness to applicants, depending on the type of community, to be served by the project. The project is under a 20 percent loan forgiveness.

This Environmental Assessment (EA) has been prepared pursuant to the National Environmental Policy Act (NEPA) of 1969, as implemented by the regulations promulgated by the President's Council on Environmental Quality (CEQ) (40 Code of Federal Regulations [CFR] Parts 1500-1508). NEPA compliance is required to qualify for RUS financing as part of the PACE Program. The purpose of this EA is to analyze the potential environmental impacts of the proposed project and to determine whether to prepare an environmental impact statement or a finding of no significant impact.



Two Rivers Community Solar Project

Section 18, T5N, R66W; 6th PM UTM NAD 83: Zone 13N; 514806mE, 4471990mN Longitude 104.825529°W, Latitude 40.398379°N USGS Bracewell, CO Quadrangle Weld County, Colorado

Figure 1 Vicinity Map

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1,500 Feet

Prepared for: Poudre Valley REA File: 24_067 Figure 1.mxd (GS) April 24, 2024



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750



Two Rivers Community Solar Project

Project Area



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Project Location

ERG ERO Resources Corp.



1.2 Purpose and Need

Federal Executive Order 14057: *Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability* aims to achieve 100 percent carbon pollution-free electricity and reduce greenhouse gas emissions by 65 percent by 2030 in the United States. Renewable energy development, such as solar photovoltaic generation facilities, will contribute to meeting these federal goals.

The purpose of the project is to increase the availability of clean and renewable energy to rural communities in Weld County, Colorado. The population of Weld County is predicted to increase by 12 percent between 2025 and 2030, which will likely increase energy demand across the county (State of Colorado 2024). PVREA's existing three community solar facilities are fully subscribed with a wait list of 319 customers. This demand has resulted in an immediate need to provide additional solar capacity, and this initiative aims to provide the renewable and carbon-free power needed. All generated output from the project would be injected into the electrical distribution system at the PVREA Boomerang substation.

RUS will decide whether to provide financial assistance to PVREA for the proposed project. Pursuant to NEPA, the National Historic Preservation Act of 1966 (NHPA), as amended; and RD policy and procedures (7 CFR 1970), this EA has been prepared to evaluate the environmental impacts of the construction and operation of the project for RUS review.

2.0 Alternatives Evaluated Including the Proposed Action

Two alternatives are evaluated in this EA: the Proposed Action and the No Action Alternative. These alternatives are described below in Section 2.1 Proposed Action and Section 2.2 No Action Alternative. Alternatives that were considered but dismissed from further evaluation are described in Section 2.3 Other Alternatives Considered but Dismissed.

2.1 Proposed Action

PVREA is proposing construction of a Community Solar facility on an approximately 14.3-acre site located in Section 18, Township 5 North, Range 66 West of the 6th Principal Meridian in Weld County, Colorado (Proposed Action; Figure 3). The solar power generation of the Proposed Action would consist of a 2.0 MW^{AC} single axis tracking solar array, a distribution transformer, and associated infrastructure. The project would be located on the west side of the City and would connect to the existing PVREA Boomerang substation (see Section 2.1.4 Transmission and Interconnection).

2.1.1 Project Design and Construction Methods

The Proposed Action would include solar arrays installed on 4 acres of the project area (Figure 3). Per code regulations, the area occupied by the solar panels and components would be fenced using chain link (seven-foot height) to prevent wildlife from passing through (NESC Section 19, Rule 190 and Section 11, Rule 110.A.1.a). No lighting would be used in the project area.

A 0.58-acre detention pond would be constructed in the western portion of the project area to reduce flood peaks and potential impacts associated with stormwater erosion per the Mile High Flood District (MHFD) guidelines for storm drainage design. MHFD has published a technical memorandum covering specific guidelines for recommended imperviousness associated with solar development (Figure 3). In addition to the solar panels and the perimeter fencing, the proposed equipment and components for the Proposed Action would consist of the following:

- Inverters
- Steel Pylons and Steel Racking
- Distribution Transformer
- AC Power Cables
- DC Power Cables
- Fiber Communication Cables
- Interconnection Breaker
- Interconnection Switchgear
- Interconnection Metering Enclosure
- Communications Enclosure
- Signage

The Proposed Action would require utility-scale solar equipment, such as solar panels, inverters, mounting structures, and electrical infrastructure, that are commercially available technology and that adhere to established industry standards. The project area benefits from relatively flat terrain,

minimizing ground disturbance associated with excavation and grading. The land would be leveled slightly to drive pylons but would not be stripped. In high-traffic areas, native species would be replanted to mitigate impacts on vegetation (see Section 2.1.5 Site Restoration and Decommissioning). Additionally, a construction setback of 25 feet from the project area boundary was incorporated during the design of the facility to ensure the proposed layout would cause the least disturbance to the land and potential resources.

2.1.2 Construction Schedule

Construction is anticipated to begin in the first quarter of 2025 and to be completed by the fourth quarter of 2025. Construction would take place Monday through Friday during normal working hours (7:00 a.m. to 5:00 p.m.). No construction would take place in the evenings or during the weekends.

2.1.3 Operation and Maintenance

The daily operations of the Proposed Action would rely on remote monitoring to efficiently distribute generated power. All electricity produced would be integrated into the PVREA Boomerang substation, ensuring complete consumption by local loads and preventing any backflow onto the Tri-State Generation and Transmission Association, Inc. (Tri-State)-owned transmission facilities and lines.

PVREA would employ a certified contractor to conduct operation and maintenance (O&M) of the facility. Prior to commissioning the facility, an O&M agreement would be established to govern upkeep procedures. The O&M contractor would conduct regular inspections, attend to any identified issues, and perform necessary repairs. The O&M contractor would also oversee site inspections, conduct tests, and ensure the cleanliness of the array, as required. PVREA would retain sole responsibility for managing all O&M activities associated with the distribution system linked to the facility. Project facilities would be inspected periodically based on the O&M contract terms.

2.1.4 Transmission and Interconnection

The project area is adjacent to the existing PVREA Boomerang substation, providing direct access to the grid. This action is not a part of the current funding phase and will be completed in the next phase of the project.

PVREA and Tri-State would enter into an interconnection agreement to connect the facility to the grid. An interconnection and system impact study would be undertaken by a consultant selected by PVREA prior to the start of construction. The study would address power suitability of the proposed facilities to export power, load flows, stability analysis, voltage impacts, short circuit analysis, and fault current analysis. The study would also identify and address all interconnection facilities necessary to interconnect both the Tri-State system and any affiliated transmission in the area that is not Tri-State owned.

2.1.5 Site Restoration and Decommissioning

The project area would be reseeded in high-traffic areas where equipment staging may have disturbed existing vegetation. The seeding would use native grass for these areas and be monitored.

PVREA would be responsible for site restoration and decommissioning of the facility at the end of its life. This work would consist of removing and disposing of solar panels and structures along with associated equipment. The useful life of the solar array is expected to be 25 years, after which PVREA would assume responsibility for its decommissioning. Site restoration is anticipated to be minor because the grade would not change from pre-construction elevations.

Decommissioning consists of removing and disposing of the solar panels and structures along with other associated equipment. PVREA intends to recycle as many components as possible, including solar panels, as more than 90 percent of the components in solar systems are recyclable. They are made of three primary materials: glass, silicon, and metal. PVREA is committed to environmentally-responsible disposal practices to minimize any adverse impact on the environment during the decommissioning process.







initiage Source. Google Earth@, June 11, 2021



Prepared for: Poudre Valley REA File: 24_067 Figure 3.mxd (GS) August 6, 2024

Proposed Action

Figure 3



2.2 No Action Alternative

Under the No Action Alternative, RUS would not fund the proposed project, and the project would not be constructed. The project area would not be developed by PVREA but could be purchased and developed by another party in the future. The existing three PVREA CSP facilities would continue to be fully subscribed, and there may be insufficient access to solar-generated power relative to the demand. Members would seek power from nonrenewable sources and continue to be placed on a waitlist for a CSP subscription.

2.3 Other Alternatives Considered but Dismissed

Alternatives for the project need to meet the purpose and need for the project while minimizing social and environmental impacts, pursuant to NEPA. PVREA has considered a Purchase Power Agreement (PPA) from third-party solar energy providers as an alternative to constructing a new solar facility. While this alternative would provide additional power for Community Solar members, it would not reliably meet the need for the project, as outlined in Section 1.2 Purpose and Need. The energy purchased through a PPA would not necessarily be provided via a new or expanded facility that increases the overall power availability in the state or the county. Additionally, local generation improves system power delivery efficiency, reducing the need to export power from another project at longer distances that would decrease overall power delivery efficiency. Therefore, this alternative would not directly contribute to increasing the availability and quality of solar power, depending on the specific providers and the source of the solar energy. Constructing a new, local facility is a more reliable and more direct way of increasing clean, affordable, efficient, and reliable energy to PVREEA's members.

Alternative technologies, such as wind, were also considered but eliminated due to the small size of the project area and because it is not located in a wind corridor with high wind energy potential. Other locations for a solar facility were considered but the parcel next to the substation provided the most advantageous location.

3.0 Affected Environment and Environmental Consequences

This section is organized by affected resource categories and, for each affected resource, discusses both (1) the existing environmental and socioeconomic baseline in the action area for each resource and (2) the effects and impacts of the Proposed Action and any alternatives on each resource. The effects and impacts of the Proposed Action considered here are changes to the human environment, whether adverse or beneficial, that are reasonably foreseeable and have a reasonably close causal relationship to the Proposed Action or alternatives. Table 1 lists resources identified and dismissed from further analysis along with the rationale for dismissal.

Resource Dismissed from Further Analysis	Rationale for Dismissal
Formally Classified Lands	The project area does not include any federally or state-classified lands such as national parks, forests, wildlife refuges, or other protected areas. Because the Proposed Action is on private land and does not affect any classified lands, this resource does not warrant further detailed analysis for this project.
Water Resources (Quantity and Quality)	The project area includes the Boomerang Ditch to the west. Construction activities would require minimal water for dust control and site preparation, resulting in short-term water usage. This use would be managed according to local regulations to prevent significant impacts on water quantity and quality. After construction, water use would return to preexisting levels, with minimal water needed for the operation and maintenance of the solar facility. Construction of a detention pond would reduce stormwater erosion and contribute to minimizing the impacts of the proposed project on water quality and soil loss. Given these factors, water resources do not warrant further detailed analysis for this project.
Coastal Resources	Coastal resources have been dismissed from further analysis for the Proposed Action. The project area is in Weld County, Colorado, which is an inland region with no coastal zones or resources. Since no marine or coastal ecosystems or shorelines are in the project area, coastal resources are not applicable and do not warrant further detailed analysis for this project.
Socioeconomic and Environmental Justice (EJ)	EJ as a resource has been dismissed from further analysis for the Proposed Action based on a comprehensive review of the demographic and socioeconomic data from Screening Tool for Equity Analysis of Projects and EJScreen for the census block groups overlapping the project area (10.14, 10.17, 40.62, and 40.72; DOT 2024; U.S. Environmental Protection Agency [EPA] 2024). The analysis reveals that these areas do not contain disadvantaged communities as defined by the Justice 40 Initiative or Environmental Protection Agency Inflation Reduction Act definitions. The percentages of low-income and minority populations are comparable to or lower than those in Weld County and the state of Colorado, and environmental and health indicators do not present extreme levels of concern. Given these findings, no further detailed analysis is warranted for this project.

Table 1. Resources identified and dismissed from further analysis and rationale for dismissal.

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Resource Dismissed from Further Analysis	Rationale for Dismissal
Noise	Existing noise sources in the project area include vehicular traffic on U.S. Highway 34 and intermittent local traffic on 95 th Avenue. Construction activities from the Proposed Action would cause intermittent noise, including the use of construction equipment and construction traffic, resulting in short-term noise impacts during the 9- to 12-month construction period. This noise would be limited to normal business hours and would not occur in the evenings or on the weekends; all applicable City of Greeley and Weld County construction noise ordinances would be observed.
	After construction is completed, it is assumed that noise levels in the project area would return to preexisting levels with the exception of day-to-day operations, which are anticipated to be minimal.
Aesthetics	The project area is characterized by relatively flat terrain and is surrounded by existing infrastructure, including oil and gas facilities and the Boomerang substation, which are already part of the visual landscape. Construction activities from the Proposed Action would introduce visual changes, including the installation of solar panels and associated infrastructure, resulting in temporary impacts on visual resources during the 9- to 12-month construction period. These visual changes are expected to be consistent with the existing industrial character of the area. There are no visual receptors, like residential, that have direct line of sight of the project area. Additionally, all applicable city and county mitigation measures on visual resources would be observed.
	After construction is completed, it is assumed that the visual landscape in the project area would be consistent with the pre-existing industrial character with the solar panels integrated into the existing infrastructure. Site restoration and decommissioning plans are in place to ensure long-term minimal visual impacts. Given these factors, aesthetic resources do not warrant further detailed analysis for this project.

3.1 Land Use / Land Ownership

3.1.1 General Land Use

3.1.1.1 Affected Environment

The project area is in the City of Greeley, Weld County, Colorado. The project area abuts an access road to the south, the Boomerang Ditch to the west, and oil and gas infrastructure to the east, and would be accessed via an existing two-track dirt road from 95th Avenue. The project area is currently vacant.

The project area is zoned H-A (Holding Agricultural; City of Greeley 2024a). The H-A zone district allows for many uses, mostly agricultural, rural residential, and oil and gas facilities (City of Greeley 2021).

3.1.1.2 Environmental Consequences

3.1.1.2.1 Proposed Action

The proposed photovoltaic use would be considered a utility service facility for zoning purposes, which is currently not allowed in the H-A zone district (City of Greeley 2021). In accordance with the City Development Code and the City's processes and policy, the project area would need to be rezoned and approved for use by special review prior to construction (City of Greeley 2024b). The rezoning category would be determined during the pre-application stage with the City (City of Greeley 2024b).

Parcels classified under H-A typically have no immediate development potential, and other parcels are available in the immediate vicinity of the project area to be used for agricultural purposes. Additionally, the project area has not been used for agricultural uses in recent years. Therefore, the Proposed Action would have minor impacts on land use in the project area and the surrounding area by triggering the need for land rezoning but would not prevent other immediate uses.

3.1.1.2.2 No Action Alternative

The No Action Alternative would have no impacts on land use and zoning in the project area because the land would remain vacant.

3.1.1.3 Mitigation

No mitigation measures are proposed, and no mitigation is anticipated to be needed because impacts on land use would be minimal.

3.1.2 Soils and Important Farmland

3.1.2.1 Affected Environment

The Farmland Protection Policy Act (FPPA) is intended to minimize the impacts of federal actions on the unnecessary and irreversible conversion of farmland to nonagricultural use. FPPA ensures that, to the greatest extent possible, federal actions are compatible with state and local governments, private programs, and policies to protect farmland. For purposes of the FPPA, farmland includes prime farmland, unique farmland, and land of statewide or local importance. Farmland subject to FPPA requirements does not have to be currently used for cropland and can be forestland, pastureland, or cropland.

The Natural Resources Conservation Service (NRCS) has mapped the soils in the project area as Nelson fine sandy loam, 3 to 9 percent slopes; Otero sandy loam, 1 to 3 percent slopes; Olney fine sandy loam, 1 to 3 percent slopes; and Vona loamy sand, 5 to 9 percent slopes (Table 2; Figure 4) (U.S. Department of Agriculture, NRCS 2024). Approximately 0.04 percent of the project area (0.05 acre) is classified as farmland of local importance, and 74.16 percent of the project area (10.62 acres) is classified as prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60, as defined in 7 CFR 658. The remainder of the project area is not classified as prime farmland (3.65 acres).

Map Unit Symbol	Map Unit	Farmland	Acres
38	Nelson fine sandy loam, 3 to 9 percent slopes	Farmland of local importance	0.05
51	Otero sandy loam, 1 to 3 percent slopes	Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60	4.92
47	Olney fine sandy loam, 1 to 3 percent slopes	Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60	5.70
74	Vona loamy sand, 5 to 9 percent slopes	Not prime farmland	3.65

Table 2. Soil classification.

3.1.2.2 Environmental Consequences

3.1.2.2.1 Proposed Action

Under the Proposed Action, soils and important farmlands would likely be disturbed during construction. Soil loss would occur directly from disturbance or indirectly via wind or water. Water that falls off the solar panels could also run to the panel dripline and fall on the soil surface, causing runoff downslope and soil erosion. However, construction of a detention pond would minimize impacts associated with stormwater runoff.

The Proposed Action would disturb approximately 0.05 acre of land mapped as farmland of local importance and 10.62 acres of prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60, according to the NRCS. These farmlands would become unavailable for agricultural uses. However, previous soil disturbance associated with oil and gas development, construction of an access road and parking lot, and soil grading and filling along the boundary of the project area indicate that a large portion of the project area is heavily disturbed and incompatible with agricultural uses (ERO 2024a). Additionally, no project components would be installed in the area mapped as farmland of local importance, and mitigation measures would be implemented to minimize soil disturbance (see Section 3.1.3 Mitigation). Therefore, the impacts from the Proposed Action on soils and important farmlands would be negligible.

3.1.2.2.2 No Action Alternative

The No Action Alternative would have no impacts on soils and important farmland because the land would not be developed. However, normal occurrences of soil erosion would be expected to occur if the project area is not developed.

3.1.3 Mitigation

Mitigation measures would be developed and implemented such as an erosion and sedimentation control plan using silt fences or hay bales, revegetating disturbed soils (e.g., part of the proposed landscaping activities), spraying with water for dust control, and maintaining project area soil stockpiles during construction to prevent soils from eroding and dispersing off-site.



Two Rivers Community Solar Project

Farmland of Local Importance

Prime Farmland if Irrigated and the Product of I

(Soil Erodibility) x C (Climate Factor) Does Not Exceed 60

Project Area Image Source: Google Earth©, June 11, 2021 0 100 200

Figure 4 Soils

Prepared for: Poudre Valley REA File: 24_067 Figure 4.mxd (GS) June 17, 2024



3.2 Wetlands and Floodplains

The Clean Water Act (CWA) protects the chemical, physical, and biological quality of waters of the U.S. (WOTUS). The U.S. Army Corps of Engineers (Corps) Regulatory Program administers and enforces Section 404 of the CWA. Under Section 404, a Corps permit is required for the discharge of dredged or fill material into wetlands and other WOTUS (streams, ponds, and other waterbodies). On May 25, 2023, the United States Supreme Court (Supreme Court) modified the definition of "waters of the U.S.," reducing the jurisdiction of the CWA over wetlands adjacent to bodies of water that do not have a continuous surface connection to other known WOTUS. Under Sackett v. Environmental Protection Agency, No. 21-454, the Supreme Court decided the "Clean Water Act extends only to wetlands with a continuous surface connection to bodies that are 'waters of the U.S.' in their own right so that they are indistinguishable from those waters" (598 U.S. 27 [2023]). The amended rule reduces the jurisdiction of the CWA over wetlands adjacent to bodies of water that do not have a continuous surface connection to other known WOTUS, as well as streams that do not have continuous flowing or relatively permanent water. The amended rule removes the "significant nexus" standard that was created under Rapanos v. United States, removes interstate wetlands from the definition of WOTUS, and revises the definition of "adjacent" to mean "having a continuous surface connection." Wetlands that do not have a contiguous surface connection to a jurisdictional traditionally navigable water or tributary are no longer jurisdictional, as well as ephemeral streams that do not have relatively permanent water. While ERO may provide its opinion on the likely jurisdictional status of wetlands and waters, the Corps will make the final determination of jurisdiction based on the current rulings.

To address the protection of state waters that are now no longer jurisdictional as a result of the ruling under *Sackett*, the Colorado Water Quality Control Commission has enacted an implementation policy (Water Quality Control Division, Colorado Department of Public Health and Environment 2023). The policy contemplates the Water Quality Control Division, Colorado Department of Public Health and Environment (WQCD, CDPHE) exercising enforcement discretion for discharges of dredged or fill material into state waters that are no longer subject to CWA Section 404 permitting. The implementation policy requires notification to the WQCD, CDPHE if a project would have required a CWA Section 404 permit but no longer does as a result of *Sackett*. The extent and timing of notification to the WQCD, CDPHE is dependent on the level of CWA Section 404 permitting that would have been previously required. The implementation policy is intended to be in effect "until a state regulatory program can be developed." The WQCD, CDPHE currently is evaluating creating a statewide wetland program to protect those aquatic resources no longer federally protected.

On March 28, 2024, ERO surveyed the project area for potential isolated wetlands, jurisdictional wetlands, and other WOTUS (2024 site visit). A *Wetland Delineation Report* was prepared for the project (Appendix A; ERO 2024b). Prior to the 2024 site visit, ERO reviewed the U.S. Geological Survey (USGS) Bracewell, Colorado topographic map; the National Hydrography Dataset; National Wetlands Inventory maps; and aerial photography to identify mapped streams and areas of open water that could indicate wetlands or WOTUS (U.S. Geological Survey 2024a; Google, Inc. 2024; U.S. Fish and Wildlife Service 2024b; U.S. Geological Survey 2024b).

3.2.1 Affected Environment

The project area is in the Greeley-Cache la Poudre River Hydrological Unit Code 10 (10) watershed of central Colorado. The majority of streams flow from west to east, out of the Front Range Mountains and foothills, into the Cache la Poudre River. The Cache la Poudre River converges with the South Platte River east of the City, just south of County Road 60.5. The South Platte River flows northeast-east and converges with the North Platte River, just west of Ogallala, Nebraska, to form the Platte River. The Platte River is tributary to the Missouri River. Most of the tributaries that flow into the Greeley-Cache la Poudre River watershed contain riparian corridors dominated by deciduous woodlands and transitional shrubs and grasslands as well as agricultural drainages.

No streams or open waters were observed in the project area during the 2024 site visit. The Boomerang Ditch flows along the western border of the project area (Figure 5). The Boomerang Ditch is shown as a canal ditch on the USGS Bracewell, Colorado topographic quadrangle (Figure 5) (USGS 2024). The Boomerang Ditch flows to an agricultural catchment near the corner of 95th Avenue and U.S. Highway 35, approximately 1.5 miles northwest of the project area. In the project area, an erosion swale with a small culvert is present on the northern edge of the project area but flows into uplands and has no upstream or downstream connections and is not associated with a wetland. No other areas of open water were observed in the project area during the 2024 site visit.

The project area is located in an area of minimal flood hazard (Zone X) according to the Federal Emergency Management Agency National Flood Hazard Layer (08123C1514E).

3.2.2 Environmental Consequences

3.2.2.1 Proposed Action

No wetlands or WOTUS occur in the project area. The Proposed Action would have no impacts on wetlands, WOTUS, or floodplains.

No direct impacts on the Boomerang Ditch are anticipated as a result of the Proposed Action. However, construction could increase sedimentation to the Boomerang Ditch. Mitigation measures would be implemented to minimize the risk of impacts on the Boomerang Ditch (see Table 4 in Section 5.0).

3.2.2.2 No Action Alternative

No wetlands or WOTUS occur in the project area. The No Action Alternative would have no impacts on wetlands, WOTUS, or floodplains.

3.2.3 Mitigation

Erosion-control measures would contribute to avoiding sedimentation into waterways, including the Boomerang Ditch. If any activities are proposed in the Boomerang Ditch, ERO recommends evaluating to determine if the Boomerang Ditch is a potential WOTUS and if a Section 404 permit would be required.





National Hydrography Dataset Canal/Ditch

- **Freshwater Pond**

Freshwater Emergent Wetland

Riverine

100 200 n Feet

Ν

Wetlands and Waters

Prepared for: Poudre Valley REA File: 24_067 Figure 5.mxd (GS) June 17, 2024



Image Source: Google Earth©, June 11, 2021

3.3 Cultural Resources

A "cultural resource" is defined as an object, archaeological site, structure, or building constructed 50 or more years ago. A cultural resource listed in or eligible for listing in the National Register of Historic Places (54 United States Code [U.S.C.] §300101 et seq.) (NHPA, 1966, as amended) or the State Register of Historic Places is a "historic property." Pursuant to Section 106 of the NHPA, federal agencies must consider the undertaking's (i.e., the Proposed Action) potential effects on historic properties prior to permitting, funding, or conducting ground-disturbing activities.

RUS is the lead agency for the project because PVREA would receive financial assistance from the USDA RD RUS PACE Program. However, the USDA RD delegated its authority to their applicants pursuant to 36 CFR 800.2(c)(4) to comply with the four step Section 106 process and advocates for applicants to interact directly with the State Historic Preservation Officer (SHPO) and Tribal Historic Preservation Officer (THPO) pursuant to the 2018 programmatic agreement among the USDA RD, National Conference of SHPOs, and the Advisory Council on Historic Preservation. PVREA is, therefore, responsible for consulting with the SHPO and appropriate THPOs on the area of potential effects (APE), identification efforts, and undertaking effects evaluation. The APE for the Proposed Action was defined by RUS to include construction and excavation activity required to construct, modify, improve, or maintain any facilities; any right-of-way or easement areas necessary for the construction, operation, and maintenance of the project; all areas used for excavation of borrow material and habitat creation; and all construction staging areas, access routes, utilities, spoil areas, and stockpiling areas (approximately 14.3 acres).

3.3.1 Affected Environment

ERO conducted a Class III cultural resource survey of the APE to identify cultural resources and evaluate the potential effects of the limits of construction. The ERO limited results report documents the survey results that indicate that no cultural resources or historic properties are in the APE (ERO 2024c). RUS submitted a letter to SHPO on XXXX XX, 2024 with a finding of no historic properties affected in accordance with 36 CFR § 800.4(d)(1). SHPO concurred with the finding on 8/XX/24.

3.3.2 Environmental Consequences

3.3.2.1 Proposed Action

No historic properties are in the APE and, therefore, the Proposed Action would have no effects on historic properties.

3.3.2.2 No Action Alternative

No historic properties are in the APE and, therefore, the No Action Alternative would have no effects on historic properties.

3.3.3 Mitigation

3.3.3.1 Inadvertent Discovery

If any cultural resources are inadvertently unearthed or otherwise encountered during maintenance activities, pursuant to 36 CFR 800.13, work will cease in the area of the discovery until the resources can be identified and appropriate resource protection measures can be implemented. PVREA would notify RUS officials immediately of any discoveries.

3.3.3.2 Human Remains Inadvertent Discovery

Pursuant to Colorado Revised Statute Section 24-80-1302, PVREA will immediately notify the RUS, county coroner or medical examiner, and sheriff or police chief of any discovery of suspected human skeletal remains. PRVEA will stop all activities in the vicinity of the discovery and protect it until the coroner has taken legal custody of the remains or the state archaeologist authorizes resumption of construction activities following disinterment and coordination with the Colorado Council on Indian Affairs.

3.4 Biological Resources

3.4.1 General Fish, Wildlife and Vegetation

3.4.1.1 Affected Environment

The vegetation in the project area consists of upland mixed grassland with species such as aster (*Aster* sp.), blue grama (*Bouteloua gracilis*), common mullein (*Verbascum thapsus*), common sunflower (*Helianthus annuus*), curly dock (*Rumex crispus*), horseweed (*Erigeron canadensis*), kochia (*Bassia scoparia*), musk thistle (*Carduus nutans*), ragweed (*Ambrosia* sp.), rubber rabbitbrush (*Ericameria nauseosa*), Russian olive (*Elaeagnus angustifolia*), Russian thistle (*Salsola tragus*), sand dropseed (*Sporabolus cryptandris*), side oats grama (*Bouteloua curtipendula*), smooth brome (*Bromus inermis*), stink grass (*Eragrostis cilianensis*), switch grass (*Panicum virgatum*), witchgrass (*Panicum capillare*), and yucca (*Yucca* sp.) (ERO 2024b).

Many of the plant species occurring in the project area are nonnative species, including mullein, curly dock, kochia, musk thistle, Russian olive, Russian thistle, and stink grass. Musk thistle and Russian olive are List B species on the Colorado Department of Agriculture's Noxious Weed List, while common mullein is a List C species (Colorado Department of Agriculture 2024). List B Species are species for which the Commissioner of the Colorado Department of Agriculture, in consultation with the state noxious weed advisory committee, local governments, and other interested parties, develops and implements state noxious weed management plans designed to stop the continued spread of these species. For List C species, the state has developed state noxious weed management plans designed to support the efforts of local governing bodies to facilitate more effective integrated weed management on private and public lands. The goal of such plans is not to stop the continued spread of these species but to provide additional education, research, and biological control resources to jurisdictions that choose to require management of List C species.

The project area also provides habitat for a variety of small mammals and birds that use the project area for shelter, nesting, or to disperse to other areas (ERO 2024b). Birds potentially occurring in the project area are described below in Section 3.4.3 Migratory Birds. Black-tailed prairie dogs are known to occur in the project area and are an important component of the short and mesic grassland systems. Many wildlife species, such rabbits, skunks, small rodents, reptiles, and various invertebrates, use prairie dog burrows for safety and nesting and may occur in or near prairie dog colonies.

The project area does not contain any permanent water bodies that would support fish.

3.4.1.2 Environmental Consequences

3.4.1.2.1 Proposed Action

Under the Proposed Action, up to approximately 14.3 acres of vegetation would be removed in the project area to construct the Proposed Action facilities, including the solar panels and detention pond. This loss of vegetation would last for the duration of the project until the facility is decommissioned and restored. Ground disturbance has the potential to spread noxious weeds. Measures to prevent the spread of noxious weeds would be implemented as described below in Section 3.4.1.3 Mitigation. After decommissioning, the site would be restored and reseeded with native plant species.

PVREA intends to legally relocate the prairie dogs outside the project area prior to the start of construction. Potential effects on remaining wildlife during construction could include effects from increased noise from construction activities and increased human activity, which could result in changes in normal foraging behavior or displacement outside the project area. There is the potential for mortality of small mammals or reptiles occurring at the site, especially species that shelter in the prairie dog burrows during construction. These effects could adversely affect localized populations near the project area. Impacts on wildlife would also occur from destruction of habitat during construction. Removal of vegetation and ground disturbance in the project would remove up to approximately 14.3 acres of habitat for small mammals and other wildlife. Some wildlife species may reoccupy the site after construction; however, available wildlife habitat would be reduced due to the relocation of the prairie dog colony, removal of existing vegetation, and the presence of solar facilities and increased human activity at the site. Wildlife habitat impacted by the project would be restored at the end of the project lifespan, when the facility is decommissioned, and the site is reseeded with native plant species.

3.4.1.2.2 No Action Alternative

Under the No Action Alternative, the solar facility would not be constructed, and the project area would remain vacant. There would be no impacts on vegetation.

3.4.1.3 Mitigation

Introduction of nonnative/noxious plant species would be minimized by:

• Washing equipment prior to construction to prevent the introduction of invasive species seeds from earthmoving or hauling.

• Minimizing soil disturbance.

3.4.2 Listed Threatened and Endangered Species

3.4.2.1 Affected Environment

Federally threatened and endangered species are protected under the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 et seq.). Significant adverse effects on a federally listed species or its habitat require consultation with the U.S. Fish and Wildlife Service (Service) under Section 7 or Section 10 of the ESA.

Nine threatened, endangered and candidate species have the potential to occur in the project area (Table 3; Appendix B). A review of habitat requirements for each species and habitat characteristics in the project area during the 2024 site visit indicates that there is no potential habitat present. The project area consists entirely of uplands lacking species typically associated with Preble's meadow jumping mouse (Preble's) or Ute ladies'-tresses orchid (ULTO), and the project area lacks the woody/riparian overstory necessary for Preble's and wet meadow habitat that ULTO requires (Service 1992, Service 2004).

Affected by Mammals Preble's meadow Zapus hudsonius T Shrub riparian/wet meadows	tat		
Mammals Preble's meadow Zapus hudsonius T Shrub riparian/wet meadows No habi	tat		
Preble's meadow Zapus hudsonius T Shrub riparian/wet meadows No hab	tat		
jumping mouse (Preble's) preblei			
Tricolored bat Perimyotis subflavus PE Forested areas near riparian No habit	tat		
zones; caves, mines, and rock			
crevices are used as night			
roosts; human structures may			
be used for maternity colonies			
Birds			
Eastern black rail Laterallus jamaicensis T Dense, heavily vegetated No habit	tat		
ssp. <i>jamaicensis</i> wetlands with moist soils or			
shallow water with access to			
adjacent upland grassland areas			
Piping plover** Charadrius melodus T Sandy lakeshore beaches and No habitat	and no		
river sandbars depletions an	ticipated		
Whooping crane**Grus americanaEMudflats around reservoirs andNo habitat	and no		
in agricultural areas depletions an	ticipated		
Fish			
Pallid sturgeon**Scaphirhynchus albusELarge, turbid, free-flowing riversNo habitat	and no		
with a strong current and gravel depletions an	ticipated		
or sandy substrate			
Invertebrates			
Monarch butterfly Danaus plexippus C Dependent on milkweeds No habi	tat		
(Asclepiadoidea) as host plants			
and forage on blooming			
flowers; a summer resident			

Table 3. Federally threatened, endangered, and candidate species potentially found in the project area or potentially affected by the project.

Habitat Present or

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Common Name	Scientific Name	Status*	Habitat	Habitat Present or Potential to be Affected by Project?
Plants				
Ute ladies'-tresses orchid (ULTO)	Spiranthes diluvialis	Т	Moist to wet alluvial meadows, floodplains of perennial streams, and around springs and lakes below 7,800 feet in elevation	No habitat
Western prairie fringed orchid**	Platanthera praeclara	Т	Moist to wet prairies and meadows	No habitat and no depletions anticipated

*T = Federally Threatened Species; E = Federally Endangered Species; C = Candidate Species; PE = Proposed Endangered Species. **Water depletions in the South Platte River may affect the species and/or critical habitat in downstream reaches in other counties or states.

Source: Service 2024.

3.4.2.2 Environmental Consequences

3.4.2.2.1 Proposed Action

The Proposed Action would not affect the tricolored bat, eastern black rail, or monarch butterfly because of the lack of suitable habitat in the project area. The piping plover, whooping crane, pallid sturgeon, and western prairie fringed orchid are species that are affected by continued or ongoing water depletions to the Platte River System. The Proposed Action would not result in any depletions to the South Platte River. Because of the lack of habitat and depletions, the Proposed Action would not have any direct or indirect impacts on federally listed species.

3.4.2.2.2 No Action Alternative

Under the No Action Alternative, the solar facility would not be constructed, and the project area would remain vacant. There would be no impacts on species and habitats of concern from the No Action Alternative.

3.4.2.3 Mitigation

To avoid destruction of potential migratory bird nests, vegetation removal should be conducted outside of the April 1 through September 15 breeding season. Nest surveys would be conducted at least one week prior to construction.

3.4.3 Migratory Birds

3.4.3.1 Affected Environment

Migratory birds are protected by the Migratory Bird Treaty Act (MBTA). The MBTA, administered by the Service, protects migratory birds as well as their eggs and nests. Removal of active nests that results in the loss of eggs or young is prohibited under the MBTA. In Colorado, most birds (except grouse species and nonnative Eurasian collared dove, European starling, house sparrow, and rock pigeon) are protected under the MBTA. The Bald and Golden Eagle Protection Act prohibits the take of any eagle nest, whether active or inactive (16 U.S.C. 668-668c). In addition, Colorado Parks and Wildlife (CPW) has developed recommend seasonal buffer zones around raptor nests (Colorado Parks and Wildlife 2020). Buffer

recommendations vary by species, but typically range from a 0.25- to 0.5-mile radius for species likely to nest in or near the project area.

The project area contains habitat for migratory birds. A raptor survey was conducted at the site on March 24, 2024 (ERO 2024). No active or inactive songbird or raptor nests were observed in the project area during the survey; however, trees and shrubs, wetlands, and upland grasslands in and adjacent to the project area are potential nesting habitat for migratory birds. Bird species observed during the 2024 site visit included a western meadowlark (*Sturnella neglecta*), red-tailed hawks (*Buteo jamaicensis*), and killdeer (*Charadrius vociferus*). The red-tailed hawks were mostly observed perching on the powerlines east of the project area but did not show any signs of nesting. No bald or golden eagles or their nests were observed during raptor surveys.

Black-tailed prairie dog colonies, such as the one in the project area, provide habitat for numerous species, including the western burrowing owl (*Athene cunicularia* or burrowing owl). The burrowing owl is listed by the state of Colorado as a threatened species and is federally protected under the MBTA. No burrowing owls were observed during the 2024 site visit.

3.4.3.2 Environmental Consequences

3.4.3.2.1 Proposed Action

Potential effects on migratory birds during construction could include effects from increased noise from construction activities, which could result in changes in normal foraging behavior or displacement outside the project area. These effects could adversely affect localized populations in the project area. Direct mortality of birds would be unlikely because most species would leave the area during construction and mitigation measures will be implemented to avoid impacts, including preconstruction surveys and removing vegetation outside the breeding season, as described in Section 3.4.3.3 Mitigation. Burrowing owls, which nest in prairie dog burrows, could potentially be impacted during construction, if present, because they may respond to disturbance by retreating underground rather than leaving the area. Impacts on burrowing owls would be avoided by conducting burrows and during the burrowing owl breeding season from March 15 through October 31 (Colorado Parks and Wildlife 2021).

Impacts on migratory birds could also occur from destruction of habitat during construction. Removal of vegetation and ground disturbance in the project area would degrade the quality of foraging habitat. As described in Section 3.4.1 General Fish, Wildlife and Vegetation of this EA, the project would remove up to approximately 14.3 acres of vegetation which could provide habitat for migratory birds. Although some migratory bird use of the project area may occur after the project is constructed, most of this habitat loss would continue for the life of the project until the solar facility is decommissioned, and the project area is reseeded with native vegetation. After the project area is restored with native vegetation at the end of the project life span, migratory birds would be expected to recolonize the site.

3.4.3.2.2 No Action Alternative

Under the No Action Alternative, the solar facility would not be constructed, and the project area would remain vacant. There would be no impacts on migratory birds from the No Action Alternative.

3.4.3.3 Mitigation

To avoid destruction of potential migratory bird nests, vegetation removal should be conducted outside of the April 1 through September 15 breeding season. Nest surveys would be conducted at least one week prior to construction. If any construction activity is planned within 660 feet of any prairie dog burrows from March 15 through October 31, a burrowing owl survey would be conducted. If owls are present within 660 feet of the project area, activities would be restricted until the owls have migrated from the site, which can be determined through monitoring. Construction occurring from November 1 through March 14 would not require clearance surveys.

3.5 Air Quality

3.5.1 Affected Environment

The Clean Air Act (CAA), last amended in 1990, requires the EPA to establish National Ambient Air Quality Standards (NAAQS) for six pollutants, known as "criteria" pollutants. The criteria pollutants are carbon monoxide, ozone, nitrogen dioxide (NO_x), sulfur dioxide, particulate matter, and lead. Concentrations of criteria pollutants in a particular region that are higher than the EPA standards are considered nonattainment areas. For each nonattainment area, the state is required to provide a State Implementation Plan (SIP) to the EPA that will enforce, maintain, and implement measures to meet the NAAQS.

The project area is in the City of Greeley in Weld County, which is in the Denver-Boulder-Greeley-Ft. Collins-Loveland region, a severe nonattainment area for 8-Hour Ozone as determined by the EPA (EPA 2008). Ozone associated with the NAAQS is formed in the lower atmosphere by photochemical reactions involving hydrocarbons, nitrogen-containing gases, and sunlight. Fossil fuel combustion is a primary source of hydrocarbons and nitrogen-containing gases that form ozone in the lower atmosphere (EPA 2023).

3.5.2 Environmental Consequences

Based on regional and local air quality conditions, a qualitative (rather than quantitative) analysis of air quality impacts is provided for the project. The impact analysis compares the impacts of the Proposed Action and No Action Alternative and identifies mitigation measures as needed.

3.5.2.1 Proposed Action

The Proposed Action would generate short-term construction emissions during construction activities. Emissions of volatile organic compounds (VOC), NO_x, and fugitive dust would be generated because of construction equipment, material haul trucks, and construction worker vehicles. Construction activities are anticipated to last approximately 9 to 12 months, during which construction emissions would vary day by day based on the types of construction activities occurring. In accordance with EPA guidelines under the CAA, new developments can be established when the source will not cause or exacerbate a violation of NAAQS. The Proposed Action is not expected to cause or exacerbate a violation of NAAQS or further cause a violation of the SIP because impacts would be temporary and negligible. Although construction of the Proposed Action would generate air quality emissions that contribute to regional levels, based on the magnitude of the proposed construction activities, it is not anticipated that annual VOC or NO_x construction emissions would exceed the applicable minimum thresholds. Therefore, the direct impacts on regional air quality due to the construction period of the Proposed Action would be negligible.

3.5.2.2 No Action Alternative

Under the No Action Alternative, the solar facility would not be constructed, and the project area would remain vacant/undeveloped. No changes to the project area would occur, and there would be no additional impacts on air quality.

3.5.3 Mitigation

Mitigation measures would be implemented to control potential emissions of fugitive dust and reduce potential emissions from construction vehicles and equipment during construction. Mitigation measures may include, but are not limited to, the following:

- Apply water and chemical stabilizers in active construction areas and on haul roads, as necessary, to suppress dust.
- Post speed limit signs and enforce speeds in active construction areas and on haul roads.
- Water, perform soil compaction, and revegetate disturbed areas, as needed and appropriate for site conditions.
- Cover haul trucks, as appropriate, to reduce dust.
- Require the construction contractor to limit the idling equipment time.

3.6 Transportation

3.6.1 Affected Environment

The Colorado Department of Transportation is responsible for the design, construction, and maintenance of Colorado state highway systems as well as the portion of the federal highways and interstates within state boundaries. Arterials, connectors, and local roads in the project area and in the vicinity are constructed and maintained by the City of Greeley and Weld County.

The project area is bounded by U.S. Highway 34 to the northwest and 95th Avenue to the west. The project site can be accessed by exiting U.S. Highway 34 and turning left on 95th Avenue. An existing two-track dirt road provides access to the PVREA Boomerang substation and would be used to access the project area from 95th Avenue.

3.6.2 Environmental Consequences

3.6.2.1.1 Proposed Action

The Proposed Action may result in temporary (9 to 12 months) and minimal impacts on traffic flows around the project area such as congestion or delays. U.S. Highway 34 and 95th Avenue may have higher traffic flow rates during construction due to construction crews entering and exiting the project area. No detours are expected with the construction. Therefore, impacts on transportation would be minor and cease after construction.

3.6.2.1.2 No Action Alternative

No impacts on transportation would occur under the No Action Alternative.

3.6.3 Mitigation

No mitigation measures are proposed.

3.7 Human Health and Safety

3.7.1 Affected Environment

ERO performed a Phase I Environmental Site Assessment (Phase I ESA; ERO 2024a) to identify recognized environmental conditions (RECs) in the project area according to the "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process" (ASTM International E1527-13 2013) (ASTM 2021). The term REC refers to the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property due to a release to the environment, under conditions indicative of a release to the environment, or under conditions that pose a material threat of a future release to the environment. The Phase I ESA consisted of a review of historical information and federal, state, and local records; interviews with persons knowledgeable of the project area; and a site reconnaissance. The assessment revealed no evidence of RECs in connection with the project area.

Federal, state, and local records do not identify any records of sites or incidents typically associated with RECs on or near the project area except for six shut-in and temporarily abandoned oil and gas wells and two associated tank batteries adjoining the project area.

During the site reconnaissance, the project area was inspected by walking the perimeter and traversing the interior (ERO 2024a). The project area is undeveloped land with areas undergoing revegetation that were previously used as a construction laydown and storage yard and associated with buried pipelines. The topography in the vicinity of the project area generally slopes to the west southwest. Dirt roads were observed along all sides of the project area. The adjoining parcels are agricultural, used for oil and gas production and storage, a natural gas plant, and an electrical substation. The Boomerang Ditch is along the west boundary of the project area. This assessment has revealed no evidence of RECs, controlled RECs, or significant data gaps in connection with the project area.

3.7.2 Environmental Consequences

3.7.2.1.1 Proposed Action

The Proposed Action would not result in the release of hazardous materials to the environment. However, because of the presence of oil and gas wells adjoining the project area, the possibility of encountering subsurface methane from these wells cannot be ruled out.

3.7.2.1.2 No Action Alternative

No impacts on the environment related to hazardous materials release would occur under the No Action Alternative.

3.7.3 Mitigation

Mitigation for subsurface methane could be necessary, and conducting a subsurface soil vapor investigation is recommended to determine the potential for subsurface methane impacts on the project area and the Proposed Action. A vapor intrusion barrier would be included in the design of the work station and buildings to mitigate for potential subsurface methane.

3.7.4 Cumulative Impacts

Past, present, and reasonably foreseeable future actions that have impacted or could impact hazardous materials include past and ongoing oil and gas development in the vicinity of the project area (see Section 4.0 Cumulative Effects). The Proposed Action would have no impacts on hazardous materials in the vicinity of the project area. Combined with past, present, and reasonably foreseeable land uses in the vicinity of the project area, there would be negligible cumulative impacts on hazardous materials from the Proposed Action.

4.0 Cumulative Effects

CEQ NEPA implementing regulations, 40 CFR 1502.15, require that NEPA documents "succinctly describe the environment of the area(s) to be affected or created by the alternatives under consideration, including the reasonably foreseeable environmental trends and planned actions in the area(s)." This EA describes the impacts, or environmental consequences, of the Proposed Action and No Action Alternative and the potential impact of the reasonably foreseeable future trends and planned actions combined with the Proposed Action that could cumulatively impact specific resources evaluated in this EA following the requirements of 40 CFR 1502.15. Cumulative effects can result from individually minor but collectively significant actions taking place over time.

The proposed project area is located on the western edge of the City of Greeley in Weld County, Colorado. As the population grows, so does the need for residential and commercial development, road maintenance and improvement, and other services. Several development projects are under review by the City of Greeley in the vicinity of the project area. These projects include the construction of a wireless tower immediately east of the project area, improvements to the stormwater pond and compressor station located immediately south of the project area, a multifamily residential project approximately 1 mile northeast of the project area, planned unit development approximately 1.2 mile east of the project area, and a parking lot 1.4 miles east of the project area. Additionally, oil and gas wells continue to be constructed and operated in the vicinity of the project area. Ongoing residential and commercial development, including the Proposed Action, require road maintenance and improvement, which may have beneficial effects on socioeconomics through construction jobs and adverse effects on biological resources, air quality, and transportation.

When combined with past, present, and reasonably foreseeable future actions, the Proposed Action would have short-term negligible adverse effects on air quality, short-term minor adverse effects on biological resources and transportation, and long-term minor adverse effects on prime and unique farmland. Short-term beneficial effects on socioeconomic resources would occur from the Proposed Action. No impacts would occur on aquatic fauna and habitat, cultural resources, or visual resources. The Proposed Action would have no significant adverse cumulative effects on any resource.

5.0 Summary of Mitigation

Table 4 lists the mitigation measures that would be implemented to minimize and eliminate impacts on environmental resources.

Resource	Mitigation Measures / Environmental Commitments
General	A comprehensive interconnection and system impact study would be undertaken
	by a consultant selected by PVREA prior to the start of construction.
Land Use and Soils	 An erosion and sedimentation control plan will be developed using silt fences or hay bales. The project area soil stockpiles will be maintained during construction to prevent soils from eroding and dispersing off-site. Disturbed soils will be revegetated using a native seed mix.
	 Spraying with water will be used for dust control.
Wetlands and Floodplains	 Erosion-control measures would contribute to avoiding sedimentation into waterways. If any activities are proposed in the Boomerang Ditch, ERO recommends evaluating to determine if the Boomerang Ditch is a potential WOTUS and if a Section 404 permit would be required.
Cultural Resources	 Inadvertent Discovery - If any cultural resources are inadvertently unearthed or otherwise encountered during maintenance activities, pursuant to 36 CFR 800.13, work will cease in the area of the discovery until the resources can be identified and appropriate resource protection measures can be implemented. PVREA would notify RUS officials immediately of any discoveries. Human Remains Inadvertent Discovery - Pursuant to Colorado Revised Statute Section 24-80-1302, PVREA will immediately notify the RUS, county coroner or medical examiner, and sheriff or police chief of any discovery of suspected human skeletal remains. PRVEA will stop all activities in the vicinity of the remains or the state archaeologist authorizes resumption of construction activities following disinterment and coordination with the Colorado Council on Indian Affairs.
Biological Resources	 Introduction of nonnative/noxious plant species would be minimized by: Washing equipment prior to construction to prevent the introduction of invasive species seeds from earthmoving or hauling. Minimizing soil disturbance. The project area would be reseeded in high-traffic areas where laying down of equipment may have disturbed existing vegetation. The seeding would use native grass for these areas and be monitored. There would be reseeding postconstruction to assure stable growth in impacted areas. To avoid destruction of potential migratory bird nests, vegetation removal should be conducted outside of the April 1 through September 15 breeding season. Nest surveys would be conducted at least one week prior to construction. If any construction activity is planned within 660 feet of any prairie dog burrows from March 15 through October 31, a burrowing owl survey would be conducted. If owls are present within 660 feet of the project area, activities would be restricted until the owls have migrated from the site, which can be determined through monitoring. Construction occurring from November 1 through March 14 would not require clearance surveys.

Table 4. Summary of mitigation measures for the Proposed Action.

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Resource	Mitigation Measures / Environmental Commitments
Air Quality	Apply water and chemical stabilizers in active construction areas and on haul
	roads, as necessary, to suppress dust.
	 Post speed limit signs and enforce speeds in active construction areas and on haul roads.
	• Water, perform soil compaction, and revegetate disturbed areas, as needed and appropriate for site conditions.
	Cover haul trucks, as appropriate, to reduce dust.
	Require the construction contractor to limit the idling equipment time.
Human Health and Safety	Mitigation for subsurface methane could be necessary, and ERO recommends
	conducting a subsurface soil vapor investigation to determine the potential for
	subsurface methane impacts on the project area and the Proposed Action.

6.0 Coordination, Consultation, and Correspondence

Preparation of this EA is being coordinated with appropriate tribal, congressional, federal, state, and local interests as well as other interested parties. The USDA RUS RD, SHPO, and the tribes listed below were contacted during project development. Initiation letters were sent to the SHPO and interested tribes on March 7, 2024. The following tribes were contacted:

- Apache Tribe of Oklahoma;
- Cheyenne and Arapaho Tribes, Oklahoma;
- Comanche Nation, Oklahoma;
- Fort Belknap Indian Community of the Fort Belknap Reservation of Montana; and
- Northern Cheyenne Tribe of the Northern Cheyenne Indian Reservation, Montana.

On XXXX XX, 2024, the RUS sent Finding letters to the Colorado SHPO and the above listed tribes. The mailing was expanded to include the Northern Arapaho Tribe of the Wind River Reservation, Wyoming based on an updated Tribal Directory Assessment Tool (TDAT) query. The letters included the Limited-Results Cultural Resource Survey Form and the Draft EA as attachments. The letters conveyed that based on the results of the Limited-Results Cultural Resource Survey Form a finding of no historic properties affected in accordance with 36 CFR § 800.4(d)(1) is appropriate for the Proposed Action. The Colorado SHPO concurred with the determination on XXXX XX, 2024. Tribal responses XXXX.

7.0 References

- ASTM International (ASTM). 2021. Annual Book of ASTM Standards. Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process. Philadelphia: ASTM E1527-21.
- City of Greeley. 2021. Greeley Development Code. Chapter 4 Zoning Districts and Uses. <u>https://greeleygov.com/docs/default-source/community-development/general/land-use-sheets.pdf?sfvrsn=2</u>. Accessed April 2024.
- City of Greeley. 2024a. Property Facts Web Application. <u>https://gis.greeleygov.com/portal/apps/experiencebuilder/experience/?data_id=dataSource_3-185a80c23b9-layer-33%3A21734&id=c63424e6b3f54b1b8473b65eab380657&page=home&views=view_1. Accessed. April 2024.</u>
- City of Greeley. 2024b. Personal communication between Jeff Woeber (City of Greeley) and Lili Perreault (ERO Resources Corporation).
- Colorado Parks and Wildlife. 2020. Recommended Buffer Zones and Seasonal Restrictions for Colorado Raptors. <u>https://cpw.state.co.us/Documents/WildlifeSpecies/LivingWithWildlife/Raptor-Buffer-Guidelines.pdf</u>. Accessed May 2024.
- Colorado Parks and Wildlife. 2021. Recommended Survey Protocol and Actions to Protect Nesting Burrowing Owls. Colorado Parks and Wildlife. <u>https://cpw.state.co.us/Documents/WildlifeSpecies/LivingWithWildlife/Recommended-Survey-Protocol-Burrowing-Owls.pdf</u>. Accessed May 2024.
- ERO Resources Corporation (ERO). 2024a. Phase I Environmental Site Assessment, Two Rivers Community Solar Project, East of 95th Avenue, Greeley, Colorado. Prepared for Poudre Valley Rural Electric Association, Inc. April.
- ERO Resources Corporation (ERO). 2024b. Threatened and Endangered Species Habitat Assessment 27464 County Road 25, Greeley, Colorado. Prepared for Poudre Valley Rural Electric Association, Inc. April.
- ERO Resources Corporation (ERO). 2024c. Cultural Resources Limited Results Form. Prepared for Poudre Valley Rural Electric Association, Inc. May.
- Google, Inc. 2024. "Google Earth Pro." Online database. Google Earth Pro. 2024. <u>https://earth.google.com/web</u>. Accessed April 2024.
- State of Colorado. 2024. Information Marketplace: Weld County Population Growth. <u>https://data.colorado.gov/Demographics/Weld-County-Population-Growth/785j-j9uz</u>. Accessed May 2024.
- U.S. Department of Transportation (DOT). 2024. Screening Tool for Equity Analysis of Projects (STEAP). https://maps.dot.gov/fhwa/steap/#:~:text=The%20Screening%20Tool%20for%20Equity,and%20oth er%20socioeconomic%20data%20analyses. Accessed May 2024.
- U.S. Environmental Protection Agency (EPA). 2024. EJScreen: Environmental Justice Screening and Mapping Tool. https://www.epa.gov/ejscreen. Accessed May 2024.
- U.S. Fish and Wildlife Service. 1992. "Interim Survey Requirements for Ute Ladies'-Tresses Orchid (Spiranthes Diluvialis)." Interim Survey Requirements.

https://www.fws.gov/sites/default/files/documents/SPDI_interimSurveyRequirements_1992_revise d%202017.pdf.

- U.S. Fish and Wildlife Service. 2024a. Information for Planning and Consultation (IPaC) Resource List. 2024. https://ecos.fws.gov/ipac/.
- U.S. Fish and Wildlife Service. 2024b. National Wetlands Inventory Wetlands Mapper. 2024. https://fwsprimary.wim.usgs.gov/wetlands/apps/wetlands-mapper/.
- U.S. Geological Survey. 2024a. Bracewell, CO. U.S. Geological Survey. https://ngmdb.usgs.gov/topoview/viewer/#11/40.3162/-104.7646. Accessed April 2024.
- U.S. Geological Survey. 2024b. National Hydrography Dataset. U.S. Department of the Interior, U.S. Geological Survey. <u>https://apps.nationalmap.gov/viewer/</u>. Accessed April 2024.
- Water Quality Control Division, Colorado Department of Public Health and the Environment. 2023. "Enforcement of Unpermitted Discharges of Dredged and Fill Material into State Waters." https://oitco.hylandcloud.com/cdphermpop/docpop/docpop.aspx.
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Appendix A Wetland Delineation Report



Consultants in Natural Resources and the Environment

Wetland Delineation Report Two Rivers Community Solar Project Weld County, Colorado

Prepared for—

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April 24, 2024

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Executive Summary

Poudre Valley REA retained ERO Resources Corporation (ERO) to conduct a wetland delineation for the Two Rivers Community Solar Project in Weld County, Colorado (project area; Figure 1). ERO conducted a wetland delineation, as described in this report, to facilitate compliance with the Clean Water Act (CWA).

The CWA protects the chemical, physical, and biological quality of waters of the U.S. (WOTUS). The U.S. Army Corps of Engineers (Corps) Regulatory Program administers and enforces Section 404 of the CWA. Under Section 404, a Corps permit is required for the discharge of dredged or fill material into wetlands and other WOTUS (streams, ponds, and other waterbodies). On May 25, 2023, the United States Supreme Court (Supreme Court) modified the definition of "waters of the U.S.", reducing the jurisdiction of the CWA over wetlands adjacent to bodies of water that do not have a continuous surface connection to other known WOTUS. Under Sackett v. Environmental Protection Agency, No. 21-454, the Supreme Court decided the "Clean Water Act extends only to wetlands with a continuous surface connection to bodies that are 'waters of the U.S.' in their own right so that they are indistinguishable from those waters" (598 U.S. 27 [2023]). The amended rule reduces the jurisdiction of the CWA over wetlands adjacent to bodies of water that do not have a continuous surface connection to other known WOTUS, as well as streams that do not have continuous flowing or relatively permanent water. The amended rule removes the "significant nexus" standard that was created under Rapanos v. United States, removes interstate wetlands from the definition of WOTUS, and revises the definition of "adjacent" to mean "having a continuous surface connection." Wetlands that do not have a contiguous surface connection to a jurisdictional traditionally navigable water or tributary are no longer jurisdictional, as well as ephemeral streams that do not have relatively permanent water. While ERO may provide its opinion on the likely jurisdictional status of wetlands and waters, the Corps will make the final determination of jurisdiction based on the current rulings.

The aquatic resource findings in the project area include:

- Total project area of 14.3 acres;
- 0 wetlands totaling 0 acre(s); and
- 0 ordinary high water mark(s) totaling 0 acre.

Wetland Delineation Report Two Rivers Community Solar Project Weld County, Colorado

April 24, 2024

Introduction

Poudre Valley REA retained ERO Resources Corporation (ERO) to conduct a wetland delineation for the Two Rivers Community Solar Project (project) in Weld County, Colorado (project area; Figure 1). ERO assessed the project area for potential isolated wetlands, jurisdictional wetlands, and other waters of the U.S. (WOTUS).

The Clean Water Act (CWA) protects the chemical, physical, and biological quality of WOTUS. The U.S. Army Corps of Engineers' (Corps) Regulatory Program administers and enforces Section 404 of the CWA. Under Section 404, a Corps permit is required for the discharge of dredged or fill material into wetlands and other WOTUS (streams, ponds, and other waterbodies). Since the regulatory program was initiated, the definition of WOTUS has changed frequently due to United States Supreme Court (Supreme Court) decisions and new rules proposed by presidential administrations. On August 29, 2023, the U.S. Environmental Protection Agency and Corps announced a final rule amending the 2023 definition of "waters of the U.S." to conform with the Supreme Court ruling under Sackett v. Environmental Protection Agency, No. 21-454. The amended rule reduces the jurisdiction of the CWA over wetlands adjacent to bodies of water that do not have a continuous surface connection to other known WOTUS, as well as streams that do not have continuous flowing or relatively permanent water. The amended rule removes the "significant nexus" standard that was created under Rapanos v. United States, removes interstate wetlands from the definition of WOTUS, and revises the definition of "adjacent" to mean "having a continuous surface connection." Wetlands that do not have a contiguous surface connection to a jurisdictional traditionally navigable water or tributary are no longer jurisdictional, as well as ephemeral streams that do not have relatively permanent water. While ERO may provide its opinion on the likely jurisdictional status of wetlands and waters, the Corps will make the final determination of jurisdiction based on the current rulings.

To address the protection of state waters that are now no longer jurisdictional as a result of the ruling under *Sackett*, the Colorado Water Quality Control Commission has enacted an implementation policy (Water Quality Control Division, Colorado Department of Health and the Environment 2023). The policy contemplates the Division exercising enforcement discretion for discharges of dredged or fill material into state waters that are no longer subject to CWA Section 404 permitting. The implementation policy requires notification to the Division if a project would have required a CWA Section 404 permit but no longer does as a result of *Sackett*. The extent and timing of notification to the Division is dependent on the level of CWA Section 404 permitting that would have been previously required. The implementation policy is intended to be in effect "until a state regulatory program can be developed." The Division

currently is evaluating creating a statewide wetland program to protect those aquatic resources no longer federally protected.

Location

The project area is in Section 18, Township 5 North, Range 66 West of the 6th Principal Meridian in Weld County, Colorado (Figure 1). The UTM coordinates of the approximate center of the project area are NAD 83: 514806mE, 4471990mN, Zone 13 North. The longitude/latitude of the project area is 104.825529°W/40.398379°N. The elevation of the project area ranges from 4,910 to 4,960 feet above sea level.

Project Area Description

The project area abuts an access road to the south, Boomerang Ditch to the west, Boomerang substation to the north, and oil and gas structures to the east (Figure 2). The project area consists of upland mixed grassland with species such as annual ragweed (*Ambrosia artemisiifolia*), aster (*Aster* sp.), blue grama (*Bouteloua gracilis*), common mullein (*Verbascum thapsus*), common sunflower (*Helianthus annuus*), curly dock (*Rumex crispus*), horseweed (*Erigeron canadensis*), kochia (*Bassia scoparia*), musk thistle (*Carduus nutans*), rubber rabbitbrush (*Ericameria nauseosa*), Russian olive (*Elaeagnus angustifolia*), Russian thistle (*Salsola tragus*), sand dropseed (*Sporabolus cryptandris*), side oats grama (*Bouteloua curtipendula*), smooth brome (*Bromus inermis*), stinkgrass (*Eragrostis cilianensis*), switchgrass (*Panicum virgatum*), witchgrass (*Panicum capillare*), and yucca (*Yucca sp.*) (Photo 1 and Photo 2, attached). A small erosional swale with a small culvert is also present on the northern end of the project area (Figure 2; Photo 3, attached). No wetlands are associated with the swale. Prairie dogs are also present throughout the project area (Photo 4, attached).

Soils

The Natural Resources Conservation Service (NRCS) has mapped the soils in the project area as Olney fine sandy loam, 1 to 3 percent slopes; Otero sandy loam, 1 to 3 percent slopes; Vona loamy sand, 5 to 9 percent slopes; and Nelson fine sandy loam, 3 to 9 percent slopes (U.S. Department of Agriculture [USDA], NRCS 2024). Olney fine sandy loams, Otero sandy loams, and Nelson fine sandy loams are found in well-drained plains and are considered nonhydric. Vona loamy sands are found in hills or hillslopes and are also considered nonhydric.



UTM NAD 83: Zone 13N; 514806mE, 4471990mN Longitude 104.825529°W, Latitude 40.398379°N USGS Bracewell, CO Quadrangle Weld County, Colorado

Prepared for: Poudre Valley REA File: 24_067 Figure 1.mxd (GS) April 24, 2024

Ν

1,500 Feet



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750



Two Rivers Community Solar Project





Figure 2 Existing Conditions

Prepared for: Poudre Valley REA File: 24_067 Figure 2.mxd (GS) April 24, 2024



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Hydrological Setting

The project area is in the Greeley-Cache La Poudre River Hydrological Unit Code 10 (HUC 10) watershed of central Colorado. The majority of streams flow from west to east, out of the Front Range Mountains and foothills, into the Cache La Poudre River. The Cache La Poudre River converges with the South Platte River east of Greeley, just south of County Road 60.5. The South Platte River flows northeast-east and converges with the North Platte River, just west of Ogallala, Nebraska, to form the Platte River. The Platte River is tributary to the Missouri River. Most of the tributaries that flow into the Greeley-Cache La Poudre River watershed contain riparian corridors dominated by deciduous woodlands and transitional shrubs and grasslands as well as agricultural drainages.

Methods

Wetland Delineation

On March 28, 2024, Marie Russo and Jared Dubiel with ERO surveyed the project area for potential isolated wetlands, jurisdictional wetlands, and other WOTUS (2024 site visit). Prior to the 2024 site visit, ERO reviewed the U.S. Geological Survey (USGS) Bracewell, Colorado topographic map; the National Hydrology Dataset; National Wetlands Inventory maps; and aerial photography to identify mapped streams and areas of open water that could indicate wetlands or WOTUS (U.S. Geological Survey 2024a; Google, Inc. 2024; U.S. Fish and Wildlife Service 2024; U.S. Geological Survey 2024b).

ERO conducted the wetland delineation following the methods for routine on-site wetland determinations in areas of less than 5 acres, as described in the 1987 *Corps of Engineers Wetlands Delineation Manual*, and used methods in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual*: *Great Plains Region (Version 2.0)* to record data on vegetation, soils, and hydrology on routine determination forms (Appendix B) (Environmental Laboratory 1987; Corps 2010). The Corps defines wetlands as "areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas" (33 Code of Federal Regulations [CFR] 328.2[c]). Wetland boundaries were determined by a visible change in vegetation community, soils, topographic changes, and other visible distinctions between wetlands and uplands.

The wetland indicator status of plant species was identified using the *National Wetland Plant List*, taxonomy was determined using *Flora of Colorado*, and nomenclature was determined using the *PLANTS Database* (Corps 2020; Ackerfield 2015; USDA, NRCS 2023a). Commonly occurring plant species in the project area, including the wetland indicator status, are listed in Appendix C. If present, hydric soils were identified using field observation for hydric soil indicators accepted by the Corps. Soil data were not always collected if hydrophytic vegetation and hydrology was present and did not appear altered (Environmental Laboratory 1987; Corps 2010). In addition, soil data were not collected in conditions where there was a clear lack of indicators of hydrophytic vegetation and wetland hydrology. Where soil

data were collected, a Munsell soil color chart was used to determine soil color (*Munsell Soil-Color Charts: With Genuine Munsell Color Chips*, n.d.).

Intermittent, ephemeral, and perennial drainages with characteristics of a defined streambed, streambank, ordinary high water mark (OHWM), and other erosional features also were identified. The OHWM identifies the lateral jurisdictional limits of nonwetland WOTUS. Federal jurisdiction over nonwetland WOTUS extends to the OHWM, defined in 33 CFR 328.3 as "the line on the shore established by fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas." The Corps defines "stream bed" as "the substrate of the stream channel between the OHWMs. The substrate may be bedrock or inorganic particles that range in size from clay to boulders."

The boundaries of identified wetlands and other characteristics of potential WOTUS were mapped using a Trimble Global Positioning System (GPS) unit. Data were differentially corrected using the CompassCom base station. All differential correction was completed using Trimble Pathfinder Office 5.9 software. GPS data were incorporated using ESRI[®] ArcGIS Desktop software. Additionally, where appropriate, wetlands were drawn on georectified aerials and then digitized.

Jurisdictional Assessment

To assist the Corps in making a preliminary jurisdictional determination, ERO reviewed the proximity and potential surface water connection of wetlands to known jurisdictional WOTUS using aerial photo interpretation and information from the wetland survey. Using the amended rule (described in detail in the *Introduction* section), wetlands that do not have a contiguous surface connection to a jurisdictional traditionally navigable water or tributary are no longer jurisdictional, as well as ephemeral streams that do not have relatively permanent water. Wetlands that have a contiguous surface water connection and waters that have relatively permanent water and a contiguous surface connection to the South Platte River, a known jurisdictional water, are likely jurisdictional.

Description of Wetlands and Other Waters

ERO surveyed the project area for wetlands and other waters. Data were collected from various locations in the project area to document the characteristics of uplands and wetlands and the transition areas between them. Each data point (DP) was given a label that corresponds to a location shown on Figure 2 and routine wetland determination forms in Appendix B. The following sections contain information on potential surface water connections of wetlands and other waters in the project area. 0 acre of stream channel occur in the project area (Figure 2).

Streams and Open Water

The project area is in HUC 10 1019000710. There are no streams or open waters in the project area. Boomerang Ditch flows along the western border of the project area (Figure 2). Boomerang Ditch is shown as a canal ditch on the USGS Bracewell, Colorado topographic quadrangle (Figure 1) (USGS 2024). Boomerang Ditch flows to an agricultural catchment near the corner of 95th Avenue and U.S. Highway 35, approximately 1.5 miles northwest of the project area and, therefore, is likely nonjurisdictional. In the project area, an erosion swale is present on the northern edge of the project area but flows into uplands and has no upstream or downstream connections (Photo 3). No other areas of open water were observed in the project area during the 2024 site visit.

Wetlands

No wetlands were observed in the project area. One data point (DP1) was collected to document potential wetlands in the project area. Vegetation at DP1 is dominated by switchgrass and kochia. At DP1, indicators of vegetation were met. However, no pit was dug for soils due to lack of accompanying facultative wetland species and lack of hydrology indicators. Additionally, DP1 is located in a soil series that contains 0 percent hydric inclusions (USDA, NRCS 2024). The hydrology indicator geomorphic position was met (see Appendix B for additional details for DP1).

Summary

The wetland delineation identified no potential WOTUS, including wetlands, in the project area. An erosional feature was identified; however, due to the erosional conditions of the project area, it would not be a regulated WOTUS. The Boomerang Ditch is adjacent to the project area but flows into an agricultural catchment approximately 1.5 miles northwest of the project area with no other surface connections to a WOTUS and, therefore, is likely nonjurisdictional. If any activities are proposed in the Boomerang Ditch, ERO recommends evaluating to determine if the Boomerang Ditch is a potential WOTUS and if a Section 404 permit would be required. No other potential wetlands or waters were identified. Therefore, no further action is necessary.

References

- Ackerfield, Jennifer. 2015. *Flora of Colorado*. First Edition. Fort Worth, Texas: Botanical Research Institute of Texas.
- Environmental Laboratory. 1987. "Corps of Engineers Wetlands Delineation Manual." Wetlands Research Program Technical Report Y-87-1. Vicksburg, Mississippi: U.S. Army Engineer Waterways Experiment Station.

https://www.lrh.usace.army.mil/Portals/38/docs/USACE%2087%20Wetland%20Delineation%20 Manual.pdf.

- Google, Inc. 2024. "Google Earth Pro." Online database. Google Earth Pro. 2024. https://earth.google.com/web.
- Lichvar, R.W. 2016. "The National Wetland Plant List: 2016 Wetland Ratings." *Phytoneuron*, no. 30: 1–17.

- *Munsell Soil-Color Charts: With Genuine Munsell Color Chips*. n.d. 2009 year revised, 2012 production. Grand Rapids, MI.
- U.S. Army Corps of Engineers. 2010. "Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region (Version 2.0)." Vicksburg, Mississippi. https://usace.contentdm.oclc.org/utils/getfile/collection/p266001coll1/id/7613.
- ———. 2020. "National Wetland Plant List, Great Plains."
- U.S. Department of Agriculture, Natural Resources Conservation Service. 2023. "PLANTS Database." PLANTS Database. 2023. https://plants.sc.egov.usda.gov/home.
- ----. 2024. "Web Soil Survey." 2024. https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm.
- U.S. Fish and Wildlife Service. 2024. "National Wetlands Inventory Wetlands Mapper." 2024. https://fwsprimary.wim.usgs.gov/wetlands/apps/wetlands-mapper/.
- U.S. Geological Survey. 2024a. "Bracewell, CO." U.S. Geological Survey. https://ngmdb.usgs.gov/topoview/viewer/#11/40.3162/-104.7646.
- ———. 2024b. "National Hydrography Dataset." U.S. Department of the Interior, U.S. Geological Survey. https://apps.nationalmap.gov/viewer/.
- Water Quality Control Division, Colorado Department of Health and the Environment. 2023. "Enforcement of Unpermitted Discharges of Dredged and Fill Material into State Waters." https://oitco.hylandcloud.com/cdphermpop/docpop/docpop.aspx.
- Weber, William A., Ronald C. Wittmann, and Linna Weber Müller-Wille. 2012. *Colorado Flora: Eastern Slope, Fourth Edition. A Field Guide to the Vascular Plants.* University Press of Colorado.

WETLAND DELINEATION REPORT TWO RIVERS COMMUNITY SOLAR PROJECT WELD COUNTY, COLORADO MARCH 28, 2024



Photo 1 - Overview of the project area and typical vegetation. View is northwest.



Photo 2 - Russian olive (*Elaeagnus angus ifolia*) and typical vegetation in the southeast portion of the project area. View is north.

WETLAND DELINEATION REPORT TWO RIVERS COMMUNITY SOLAR PROJECT WELD COUNTY, COLORADO MARCH 28, 2024



Photo 3 - Erosion swale on the northern edge of the project area. View is east.



Photo 4 - Typical prairie dog burrows on northern edge of project area. View is west.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Two Rivers Community Solar Project	City/County: Weld County Sampling Date: Mar 28. 202
Applicant/Owner: PVREA	State: CO Sampling Point: DP1
Investigator(s): Marie Russo and Jared Dubiel	Section, Township, Range: Section 18, Township 5 North, Range 66 🎬
Landform (hillslope, terrace, etc.): slight depression	_ Local relief (concave, convex, none): <u>concave</u> Slope (%): <u>0</u>
Subregion (LRR): G Lat: 40	D.398379°N Long: 104.825529°W Datum: NAD83
Soil Map Unit Name: Olney fine sandy loam, 1 to 3 percent	slopes NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of ye Are Vegetation, Soil, or Hydrology significantly	ear? Yes No (If no, explain in Remarks.) y disturbed? Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	g sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No Remarks: No Xes	Is the Sampled Area within a Wetland? Yes <u>No</u> No

VEGETATION – Use scientific names of plants.

301	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 50)	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC
2				(excluding FAC-):
3				Total Number of Dominant
4.				Species Across All Strata: (B)
		= Total Cov	er	Demont of Dominant Species
Sapling/Shrub Stratum (Plot size: 15')			01	That Are OBL, FACW, or FAC: 100 (A/B)
1.				
2.				Prevalence Index worksheet:
3				Total % Cover of: Multiply by:
0				OBL species x 1 =
4			·	FACW species x 2 =
5				FAC species x 3 =
Herb Stratum (Plot size: 5'		= I otal Cov	er	FACU species
Panicum virgatum	80	ΙΥ	FAC	
o Brassia scoparia	10	N	FACU	
	-	<u> </u>		
3	-		. <u> </u>	Prevalence Index = B/A =
4				Hydrophytic Vegetation Indicators:
5	_			1 - Rapid Test for Hydrophytic Vegetation
6				2 Dominanco Tost is >50%
7				\square 2 - Dominance results > 30 %
8				\square 3 - Prevalence index is ≤ 3.0
9				4 - Morphological Adaptations (Provide supporting
10.				Broblematic Hydrophytic Vegetation ¹ (Evaluin)
	90	= Total Cov	er	
Woody Vine Stratum (Plot size:)			01	¹ Indicators of hydric soil and wetland hydrology must
1.				be present, unless disturbed or problematic.
2.				Hydrophytic
		= Total Cov	er	Vegetation
% Bare Ground in Herb Stratum 10	·	10101000	CI	Present? Yes <u>X</u> No <u></u>
Remarks:				1

SOIL

Depth	Matrix	<u> </u>	Redo	x Feature	S			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	_Loc ²	Texture	Remarks
					·			
¹ Type: C=C	oncentration D=D	enletion RM=F	Reduced Matrix CS	S=Covered	d or Coate	d Sand G	rains ² Locat	ion [.] PI =Pore Lining M=Matrix
Hvdric Soil	Indicators: (App	licable to all L	RRs. unless other	rwise not	ed.)		Indicators fo	r Problematic Hydric Soils ³ :
Histosol	(A1)		Sandy (Gleved Ma	atrix (S4)		1 cm Mue	ck (A9) (LRR I, J)
Histic Er	oipedon (A2)		Sandy F	Redox (S5	5)		Coast Pr	airie Redox (A16) (LRR F, G, H)
Black Hi	istic (A3)		Stripped	d Matrix (S	, 6)		🔲 Dark Sur	face (S7) (LRR G)
Hydroge	en Sulfide (A4)		Loamy	Mucky Mir	neral (F1)		🔲 High Plai	ins Depressions (F16)
Stratified	d Layers (A5) (LRF	R F)	Loamy	Gleyed Ma	atrix (F2)		(LRR	H outside of MLRA 72 & 73)
🔲 1 cm Μι	uck (A9) (LRR F, G	G, H)	Deplete	d Matrix (F3)		Reduced	Vertic (F18)
Depleted	d Below Dark Surfa	ace (A11)	E Redox I	Dark Surfa	ace (F6)		Red Pare	ent Material (TF2)
H Thick Da	ark Surface (A12)		L Deplete	d Dark Su	irface (F7))	L Very Sha	allow Dark Surface (TF12)
	Aucky Mineral (S1))		Depressio	ns (F8)		U Other (Ex	xplain in Remarks)
<u> </u>	Mucky Peat or Pea	it (S2) (LRR G,	H) L High Pla	ains Depre	essions (F	16)	"Indicators of	hydrophytic vegetation and
<u> </u>	icky Peat or Peat ((S3) (LRR F)	(ML	RA /2 & /	3 of LRR	H)	wetland h	lydrology must be present,
Postrictivo	avor (if procent)							sturbed of problematic.
Tupo	Layer (il present)	•						
Type	ah a a) :							
Depth (In	cnes):						Hydric Soli Pi	resent? res <u>no</u> <u>no</u>
Remarks:								
No soil pit v	was duq due to	the lack of	wetland hydrol	oav indi	cators			
				ogy mai	outoro.			
HYDROLO	GY							
Wetland Hy	drology Indicator	'S:						
Primary India	cators (minimum o	f one required:	check all that appl	V)			Secondary	Indicators (minimum of two required)
Surface	Water (A1)		Salt Crust	(B11)				e Soil Cracks (B6)
	ter Table ($\Delta 2$)			vertebrate	e (B13)			ely Vegetated Concave Surface (B8)
	on (A3)			Sulfide Or	dor $(C1)$			age Patterns (B10)
	larks (B1)			n Water T	Table (C2)			ed Phizospheres on Living Poots (C3)
	at Doposite (B2)			Dhizoenho	ros on Liv	ing Poots		ed Rhizospheres on Living Roots (CS)
	(D2)			(inzusprie		ing Roots		sh Burrows (C8)
	ousits (D3)			of Doduor	d Iron (C)	•		stien Visible on Asriel Imagen (CO)
	at of Crust (D4)					+)		anon visible on Aenai Imagery (C9)
	DOSIIS (B5)	- Line		Surrace (orphic Position (D2)
	on visible on Aeria	ai imagery (B7)		biain in Re	emarks)			
U water-S	tained Leaves (B9	")					L Frost-I	Heave Hummocks (D7) (LRR F)
Surface wat	er Present?			cnes):		—		
Water Table	Present?		o <u> </u>	ches):		_		
Saturation P	resent?	Yes 📕 N	o 🔜 Depth (in	ches):		_ Wetl	and Hydrology F	Present? Yes 🔟 No 🔼
Describe Re	corded Data (strea	am gauge, mon	itoring well, aerial	photos, pr	evious ins	pections).	if available:	
						- //		
Remarks:								

Appendix C Plant Species List

Common Name	Scientific Name	Wetland Indicator Status ¹				
Herbaceous						
Annual ragweed	Ambrosia artemisiifolia	Facultative Upland				
Aster	Aster sp.	Unknown				
Blue grama	Bouteloua gracilis	Upland				
Common mullein	Verbascum thapsus	Upland				
Common sunflower	Helianthus annuus	Facultative Upland				
Curly dock	Rumex crispus	Facultative				
Horseweed	Erigeron canadensis	Facultative Upland				
Kochia	Bassia scoparia	Facultative Upland				
Musk thistle	Carduus nutans	Facultative Upland				
Russian thistle	Salsola tragus	Facultative Upland				
Sand dropseed	Sporobolus cryptandrus	Facultative Upland				
Side oats grama	Bouteloua curtipendula	Upland				
Smooth brome	Bromus inermis	Upland				
Stinkgrass	Eragrostis cilianensis	Facultative Upland				
Switchgrass	Panicum virgatum	Facultative				
Witchgrass	Panicum capillare	Facultative				
Shrubs						
Rubber rabbitbrush	Ericameria nauseosa	Upland				
Yucca	Yucca sp.	Upland				
Trees						
Russian olive	Elaeagnus angustifolia	Facultative Upland				

Obligate Wetland—Occurs with an estimated 99 percent probability in wetlands.

Facultative Wetland—Estimated 67 percent to 99 percent probability of occurrence in wetlands.

Facultative—Equally likely to occur in wetlands and nonwetlands (34 percent to 66 percent probability).

Facultative Upland—67 percent to 99 percent probability in nonwetlands, 1 percent to 33 percent in wetlands.

Upland—>99 percent probability in nonwetlands in this region.

Source: (Ackerfield 2015; Lichvar 2016; USDA, NRCS 2023; Weber et al. 2012).

Appendix B Information for Planning and Consultation List of Threatened and Endangered Species



United States Department of the Interior

FISH AND WILDLIFE SERVICE Colorado Ecological Services Field Office Denver Federal Center P.O. Box 25486 Denver, CO 80225-0486 Phone: (303) 236-4773 Fax: (303) 236-4005



In Reply Refer To: Project Code: 2024-0122986 Project Name: Two Rivers Community Solar 09/25/2024 18:23:05 UTC

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/whatwe-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:

Colorado Ecological Services Field Office

Denver Federal Center P.O. Box 25486 Denver, CO 80225-0486 (303) 236-4773

PROJECT SUMMARY

Project Code:2024-0122986Project Name:Two Rivers Community SolarProject Type:Power Gen - SolarProject Description:Solar project in Weld County.Project Location:Vertice County - Solar

The approximate location of the project can be viewed in Google Maps: <u>https://www.google.com/maps/@40.3980177,-104.82577044953723,14z</u>



Counties: Weld County, Colorado

ENDANGERED SPECIES ACT SPECIES

There is a total of 8 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. Note that 2 of these species should be considered only under certain conditions.

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. <u>NOAA Fisheries</u>, 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
Preble's Meadow Jumping Mouse Zapus hudsonius preblei	Threatened
There is final critical habitat for this species. Your location does not overlap the critical habitat.	
Species profile: <u>https://ecos.fws.gov/ecp/species/4090</u>	
General project design guidelines:	
https://ipac.ecosphere.fws.gov/project/BDXZCRU52JEHBNMBQEW2FG2S2A/	
documents/generated/6861.pdf	
BIRDS	
NAME	STATUS

Threatened Eastern Black Rail Laterallus jamaicensis ssp. jamaicensis No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10477 Threatened Piping Plover Charadrius melodus Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered. There is **final** critical habitat for this species. Your location does not overlap the critical habitat. This species only needs to be considered under the following conditions: Project includes water-related activities and/or use in the N. Platte, S. Platte, and Laramie River Basins which may affect listed species in Nebraska. Species profile: https://ecos.fws.gov/ecp/species/6039 Endangered Whooping Crane Grus americana Population: Wherever found, except where listed as an experimental population There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/758

FISHES

NAME	STATUS
Pallid Sturgeon Scaphirhynchus albus	Endangered
No critical habitat has been designated for this species.	
This species only needs to be considered under the following conditions:	
 Project includes water-related activities and/or use in the N. Platte, S. Platte, and Laramie 	
River Basins which may affect listed species in Nebraska.	
Species profile: <u>https://ecos.fws.gov/ecp/species/7162</u>	

INSECTS

NAME

STATUS Monarch Butterfly Danaus plexippus Candidate No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743

FLOWERING PLANTS

NAME	STATUS
Ute Ladies'-tresses Spiranthes diluvialis	Threatened
No critical habitat has been designated for this species.	
Species profile: <u>https://ecos.fws.gov/ecp/species/2159</u>	
Western Prairie Fringed Orchid Platanthera praeclara	Threatened
No critical habitat has been designated for this species.	
Species profile: <u>https://ecos.fws.gov/ecp/species/1669</u>	

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:Private EntityName:Lili PerreaultAddress:835 E Second AveCity:DurangoState:COZip:81301EmailIperreault@eroresources.comPhone:9842895698

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Rural Utilities Service

Appendix C Cultural Resources Limited Results Form

This form (#1420) is for small scale limited results projects - block surveys less than 160 acres with linear surveys under four miles. Additionally, there should be no sites and a maximum of four Isolated Finds. This form must be typed.

I. IDENTIFICATION

- 1. Report Title (include County): <u>Limited Results Cultural Resource Survey of the Two</u> <u>Rivers Community Solar Project, Weld County, Colorado</u>
- 2. Date of Field Work: May 2, 2024
- 3. Form completed by: Marie Matsuda

Date: May 28, 2024

4. Survey Organization/Agency: <u>ERO Resources Corporation (ERO)</u> Principal Investigator: <u>Jonathan Hedlund</u>

Principal Investigator's Signature:

Other Crew: N/A

Spather flattent

Address: 1626 Cole Boulevard, Suite 100, Lakewood, Colorado 80401

- Lead Agency / Land Owner: <u>U.S. Department of Agriculture Rural Utilities Service</u> Contact: <u>Gregory Korosec, Cultural Resource Specialist</u> Address: <u>1400 Independence Avenue SW, Room 2230, Stop 1570, Washington, DC</u> <u>20250</u>
- 6. Client: Poudre Valley Rural Electric Association
- 7. Permit Type and Number: <u>CO State Permit 84050</u>
- 8. Report / Contract Number: WL.RD.NR6
- 9. Comments: None

II. DESCRIPTION OF UNDERTAKING / PROJECT

10. Type of Undertaking: Poudre Valley Rural Electric Association is proposing to install a 2.0 megawatt solar community for the rural electric cooperatives membership (project) in Greeley, Colorado (project area; Figure 1). The project is seeking financial assistance from the United States Department of Agriculture Rural Development, Rural Utilities Service (RUS) under its Power Affordable Clean Energy Program and, therefore, requires compliance with Section 106 (54 United States Code [U.S.C.] § 306108) of the National Historic Preservation Act (1966, as amended; 54 U.S.C. § 300101 et seq.).

The RUS defined the area of potential effects (APE) as the limits of disturbance for the construction and maintenance of solar facilities, right-of-way or easement areas

Limited-Results Archaeological Survey Form (Page 2 of 9)

acquired for the project, all areas of excavation, staging areas, access, utilities, spoil area, borrow areas, and stockpiling areas. ERO conducted a Class III cultural resource survey of the APE to identify cultural resources and assess potential project impacts on potential historic properties.

- 11. Size of Undertaking (acres): <u>14.3</u> Size of Project (if different): <u>N/A</u>
- 12. Nature of the Anticipated Disturbance: <u>Anticipated disturbances include staging and</u> <u>operating heavy equipment; and construction of solar facilities, access routes, and</u> <u>borrow areas.</u>
- 13. Comments: None

III. PROJECT LOCATION

Please attach a photocopy of USGS Quad. Clearly showing the project location. The Quad. Should be clearly labeled with the Prime Meridian, Township, Range, Section(s), Quad. Map name, size, and date. Please do not reduce or enlarge the photocopy.

- 14. Description: <u>The APE is in west Greeley, Weld County, Colorado, southwest of U.S.</u> <u>Highway (US) 34 and northwest of UC Health Greeley Hospital (Figure 2).</u>
- 15. Legal Location: Quad. Map: Bracewell, CO

Date(s): <u>1980</u>

Principal Meridian: 6th

NOTE: Only generalized subdivision ("quarter quarters") within each section is needed

Township: 5NRange: 66WSec.: 18Lot 1If section(s) is irregular, explain alignment method:

16. Total number of acres surveyed: 14.3

17. Comments: None

IV. ENVIRONMENT

18. General Topographic Setting: <u>The APE general landscape is characterized by plains</u>, <u>and low-lying hills dissected by intermittent streams and drainages (Figure 3)</u>.

Current Land Use: Land use is limited to utility and transmission lines in the APE.

19. Flora: <u>Vegetation consists of upland mixed grassland with species such as annual</u> ragweed (*Ambrosia artemisiifolia*), aster (*Aster* sp.), blue grama (*Bouteloua gracilis*), common mullein (*Verbascum thapsus*), common sunflower (*Helianthus annuus*), curly dock (*Rumex crispus*), horseweed (Erigeron *canadensis*), kochia (*Bassia scoparia*), musk thistle (*Carduus nutans*), rubber rabbitbrush (*Ericameria nauseosa*), Russian olive (*Elaeagnus angustifolia*), Russian thistle (*Salsola tragus*), sand dropseed (Sporabolus cryptandris), side oats grama (Bouteloua curtipendula), smooth brome (Bromus inermis), stinkgrass (Eragrostis cilianensis), switchgrass (Panicum virgatum), witchgrass (Panicum capillare), and yucca (Yucca sp.).

- 20. Soils/Geology: <u>Based on the Web Soil Survey data compiled by the Natural Resources</u> <u>Conservation Service, soil series represented in the APE are Olney fine sandy loam,</u> <u>Otero sandy loam, Vona loamy sand, and Nelson fine sandy loam, (Natural Resources</u> <u>Conservation Service 2024). Deposits are mapped as Middle Holocene to Upper</u> <u>Pleistocene eolian sediment and Middle Pleistocene gravel (Palkovic 2020).</u>
- 21. Ground Visibility: Ground visibility ranges from 10 to 100 percent.
- 22. Comments: None

V. LITERATURE REVIEW

23. Location of File Search: Office of Archaeology and Historic Preservation (OAHP) (File Search No. 26151)

Date: <u>April 24, 2024</u>

- 24. Previous Survey Activity In the project area: No previous surveys overlap the APE.
- In the general region: <u>Surveys in the general region were conducted for US 34 (WL.E.R10),</u> <u>a substation (WL.E.NR23), and gas pipelines (WL.E.R10 and MC.E.R83).</u>
- 25. Known Cultural Resources In the project area: <u>No previously recorded cultural</u> <u>resources are in the APE.</u>
- In the general region (summarize): <u>Based on previous cultural resource survey data,</u> <u>Indigenous resources in the general region have been infrequently recorded. Historical</u> <u>resources are primarily ditches and canals, historical buildings, a transmission line, and</u> <u>the Great Western Railroad.</u>
- 26. Expected Results: <u>A review of historical topographic maps and aerial images indicates that the APE was used for agricultural purposes since at least 1948 (Nationwide Environmental Title Research 2024). Approximately 75 percent of the APE is disturbed from construction. A 1984 aerial shows a buried utility line and a footprint for associated utility infrastructure in the southwest APE leading from an unnamed dirt road. In 2006, a linear graded area parallels the western boundary of the APE, and by 2009 an additional utility line is visible to the north. In 2023, a large staging area was graded (Google, Inc. 2024). ERO expects that there will be few resources and would be limited to historical agricultural debris.</u>

VI. STATEMENT OF OBJECTIVES

27. <u>ERO conducted a systematic pedestrian survey of the APE in 15-meter or less</u> transects to identify unknown cultural resources.

VII. FIELD METHODS

- 28. Definitions Site: <u>A site is a locus of human activity (older than 50 years) with evidence</u> to suggest interpretable one-time use or repeated use and/or multiple activities; onetime use sites include an isolated human burial or a concentration of cultural material representing flaked stone and ground stone artifacts in spatial association.
- IF: <u>An Isolated Find is a single artifact, or small collection of artifacts of a similar typology,</u> <u>that reflects a single event, loci, or activity.</u>
- 29. Describe Survey Method: <u>ERO archaeologist Marie Matsuda surveyed the APE in 15-</u> meter transects (or less).

VIII. RESULTS

30. List IFs if applicable. None.

A.Smithsonian Number: <u>N/A</u>

Description: N/A

31. Using your professional knowledge of the region, why are there none or very limited cultural remains in the project area? Is there subsurface potential?: <u>ERO conducted a desktop review of the APE prior to conducting fieldwork to determine if any historical buildings or structures were located in the APE and to evaluate the extent of previous ground disturbance. The OAHP file search (No. 26151) indicated that no previously documented cultural resources were in the APE. Historical topographic maps and aerial imagery of the area show no potential historic period resources in the APE (U.S. Geological Survey 1902, 1910, 1933, 1950, 1969, 1970). Aerial imagery depicts large graded areas in the north and west APE. Deposits in the APE are mapped as Middle Holocene to Upper Pleistocene eolian sediment and Middle Pleistocene gravel deposit (Palkovic 2020). Although Holocene deposits are present, aerial imagery indicates that most of the APE is disturbed by recent grading, buried utility lines, and bioturbation; therefore, there is low potential for intact buried cultural resources (Google, Inc. 2024).</u>

ERO archaeologist Marie Matsuda surveyed the APE on May 2, 2024. ERO observed disturbances across the APE including prairie dog activities, gas lines, and a 110-meter by 75-meter graded area (Figure 4, Figure 5, and Figure 6). No cultural resources were present. ERO examined prairie dog holes and found no cultural resources in the back dirt piles, indicating there are no cultural materials buried in the APE.

Limited-Results Archaeological Survey Form (Page 5 of 9)

Based on ERO's survey results, there is no cultural material in the APE. ERO recommends a finding of *no historic properties affected* for the undertaking pursuant to 36 Code of Federal Regulations 800.4(d)(1).

References:

Google, Inc.

2024 Google Maps Street View. *Google Maps*. Online database, google.com/maps.

Nationwide Environmental Title Research

2024 Historic Aerials. *National Environmental Title Research LLC*. Online database, https://www.historicaerials.com/viewer.

Natural Resources Conservation Service

2024 Web Soil Survey. Electronic document,

http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm, accessed January 16, 2024.

Palkovic, M. J.

2020 Geologica Map of the Bracewell Quadrangle, Weld County, Colorado. Open-File Report OF-20-03. Colorado Geological Survey.

U.S. Geological Survey

1902 Greeley, Colorado. Topographic map. 1:125,000. Denver, Colorado.

1910 Greeley, Colorado. Topographic map. 1:250,000. Denver, Colorado.

1933 Greeley, Colorado. Topographic map. 1:250,000. Denver, Colorado.

1950 Bracewell, Colorado. Topographic map. 1:24,000. Denver, Colorado.

1969 Bracewell, Colorado. Topographic map. 1:24,000. Denver, Colorado.

1970 Bracewell, Colorado. Topographic map. 1:24,000. Denver, Colorado.



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Figure 3. Project area overview; yellow flag indicating buried gas line, view to the east. Photo number: IMG_5124. Date: 5.2.2024



Figure 4. Project area overview; gas line marker on the right of the photograph; view to the west. Photo number: IMG_5128. Date: 5.2.2024


Figure 5. Prairie dog disturbance in the northern portion of the APE; view to the northwest. Photo number: IMG_5121. Date: 5.2.2024



Figure 6. Graded area; view to the northeast. Photo number: IMG_5125. Date: 5.2.2024