FINDING OF NO SIGNIFICANT IMPACT

Owl Creek Irrigation District Water Delivery and Efficiency Improvement Project

OWL CREEK UNIT
PICK-SLOAN MISSOURI BASIN PROECT

FONSI # WY-4000-23-01

Department of the Interior
Bureau of Reclamation
Missouri Basin Region
Wyoming Area Office

June 2023

Finding of No Significant Impact

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PROPOSED ACTION

Reclamation intends to provide funding through the Department of the Interior's (DOI's) Sustain and Manage America's Resources for Tomorrow (WaterSMART) Grant to upgrade the Owl Creek Irrigation System facilities to improve system efficiencies and capacity and prevent a system failure that would result in the loss of irrigation capabilities and crop production failure. The purpose of the action is to provide funding through the DOI's WaterSMART Grant to upgrade the Owl Creek Irrigation System facilities that service approximately 103 different users and 4,415 acres within the Lucerne portion of the Owl Creek Irrigation District.

BACKGROUND

The Owl Creek Irrigation District (OCID) was initially formed in 1935 and now services approximately 4,400 acres of land and 103 users in the Lucerne Valley by diverting water from the Big Horn River into a 22-mile-long canal system for the production of grass, alfalfa, barley, beans, corn, and wheat. Some of the components of the system are nearly 70 years old and are becoming hard to maintain and repair. The system is dated and lacking in efficiency and capacity. There is a concern that any system failures would result in the loss of a significant portion of an irrigation season.

The OCID proposes to replace or upgrade irrigation facilities, specifically the access bridge, headgate, wasteway system, main pump station, and re-lift station, through partial funding from a WaterSMART Grant administered by the DOI. In addition to system reliability, facility upgrades would result in a reduction in electricity demand and provide a water supply that is more synchronized with the seasonal demands of agricultural activities in the Lucerne Valley.

ENVIRONMENTAL COMMITMENTS

Mitigation measures and environmental protection measures will be established prior to construction and implemented by all construction personnel. The measures are intended to minimize or eliminate the environmental effects associated with the proposed construction on the Owl Creek Irrigation System. These measures will be documented in a Stormwater Pollution Prevention Plan (SWPPP) will be developed prior to construction.

DECISION

Under the Proposed Action Alternative, Reclamation would approve a WaterSMART Grant for the following five facility replacement or upgrade activities.

1. Bridge replacement – Remove and replace an approximately 50-foot bridge spanning the inlet canal. Construct a temporary cofferdam approximately 15 feet upstream of the bridge to prevent the flow of water into the irrigation canal. Install approximately 70 feet of erosion control material (rip rap) along the banks, both upstream and downstream of the bridge.

2. Headgate replacement – Remove and replace the concrete portion of the Inlet Canal headgate, which supplies the entire pumped water right for the Lucerne area. This portion of the headgate is failing. Bank erosion is occurring on the downstream side of the headgate structure and requires the installation of rip rap material to stabilize the bank.

3. Wasteway system – Remove and replace the existing wasteway structure, including the sediment sluice and traveling screen. Stabilize the bank downstream of the wasteway structure and install rip rap.

4. Main pump station – Construct a new pump station building and remove and replace most components of the pump station, including the inlet works, pumps and motor controls, transformers, and approximately 800 feet of 36-inch canal pipeline.

5. Re-lift pump station – Remove and replace the existing transformers, pumps, motors, float equipment, and approximately 270 feet of 18- to 24-inch pipeline.

Based on the analysis presented in the environmental assessment, Reclamation concludes that a Finding of No Significant Impact (FONSI) is appropriate, and an environmental impact statement is not needed because:

1. No historic or prehistoric properties are located within the Project APE and therefore, there are no impacts to cultural resources. Additionally, tribal consultation has not resulted in concerns from the Arapaho or Eastern Shoshone Tribes of the Wind River Reservation.

2. There are no impacts related to populations levels, workforce, income, employment, housing availability, public services, or local tax revenues. There will be no disproportionate adverse impacts to environmental justice communities of concern.

3. Due to seasonal timing of construction activities and environmental protection measures, there will be no impacts to the Big Horn River, other surface waters, wetlands, aquatic life movement, or native fish populations.

4. Impacts on wildlife and natural resources will be negligible due to the localized and short-term nature of the construction activities.

Approved: LYLE MYLER Digitally signed by LYLE MYLER Date: 2023.06.07 12:45:11 -06'00'

Lyle D. Myler
Area Manager, Wyoming Area Office

Owl Creek Irrigation District Water Delivery and Efficiency Improvement Project Environmental Assessment

MARCH 2023

PREPARED FOR

Bureau of Reclamation

PREPARED BY

SWCA Environmental Consultants

OWL CREEK IRRIGATION DISTRICT WATER DELIVERY AND EFFICIENCY IMPROVEMENT PROJECT

ENVIRONMENTAL ASSESSMENT

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1 INTRODUCTION

1.1 Project Overview

The Owl Creek Irrigation District (OCID) diverts water from the Big Horn River to a main pump station and a re-lift station to provide water to the Lucerne area. Portions of the system (pumps and transformers) are nearly 70 years old; as such, they are becoming hard to maintain and are inefficient. There is a significant concern that failure of the aging infrastructure could result in the loss of a significant portion of an irrigation season.

The Bureau of Reclamation (BOR) would provide funding to upgrade system components and improve overall efficiency of the Owl Creek Irrigation system, including the repair or replacement of the access bridge, headgate, wasteway system, main pump station, and re-lift station. Funding from the BOR for the irrigation system upgrades creates a federal nexus, requiring that the Project comply with the National Environmental Policy Act (NEPA). This Environmental Assessment (EA) documents the potential environmental impacts of the proposed Project and inform the issuance of a Finding of No Significant Impact (FONSI).

1.2 Purpose and Need

1.2.1 Bureau of Reclamation's Purpose and Need

BOR's purpose and need is to consider and respond to the OCID's proposal to replace or upgrade irrigation facilities administered by the BOR and located on private lands in Hot Springs County, Wyoming. The proposal also includes the application for a WaterSMART (Sustain and Manage America's Resources for Tomorrow) Grant, which would allow the BOR to partially fund the Project. The need for this EA is established by the statutory and regulatory responsibilities of BOR under 40 CFR 1508.9 and 516 DM 1.12.

BOR will approve or deny OCID's application for funding through the WaterSMART Program based on the analysis of this EA.

1.2.2 Owl Creek Irrigation District's Purpose and Need

The purpose of the Project is to replace or upgrade irrigation facilities at the Lucerne (Lower) portion of the OCID to improve water delivery and efficiency. The Project consists of five facility areas identified for component replacement: a bridge, headgate, wasteway system, main pump station, and a re-lift station. Most of the components were originally constructed in the late 1950s. The specific pumps are no longer in production and there is little product information available. The components have been repaired numerous times as a result of long-term use but are currently in poor or failing condition. If the Inlet Canal headgate were to fail, it would be catastrophic for the Lucerne Valley irrigators. The Project will extend the life of the pumps and allow for more efficient operations and reduction of electrical energy use. The new pumps will be able to deliver water flows that are synchronized much better to irrigation demand. Additionally, the Project will enhance drought resiliency in the local watershed basin by reducing spillage from the irrigation system, therefore directly saving water.

2 ALTERNATIVES CONSIDERED AND ISSUES FOR ANALYSIS

This EA analyzes the potential effects that could result from the Proposed Action and No Action Alternative. The Proposed Action Alternative and the No Action Alternative, as described below, are the only alternatives evaluated in this EA. The No Action Alternative serves as a baseline for analyzing impacts from the Proposed Action Alternative.

2.1 Proposed Action Alternative

The existing Owl Creek Irrigation system is located in Hot Springs County, Wyoming, approximately 3 miles north of the town of Thermopolis, Wyoming. The proposed Project consists of five facility areas identified for component replacement: a bridge, headgate, wasteway system, main pump station, and a re-lift station. The specific activities associated with the five areas are as follows:

- Bridge replacement – Remove and replace an approximately 50-foot bridge spanning the inlet canal. Construct a temporary cofferdam approximately 15 feet upstream of the bridge to prevent the flow of water into the irrigation canal. Install approximately 70 feet of erosion control material (rip rap) along the banks, both upstream and downstream of the bridge.
- Headgate replacement – Remove and replace the concrete portion of the Inlet Canal headgate, which supplies the entire pumped water right for the Lucerne area. This portion of the headgate is failing. Bank erosion is occurring on the downstream side of the headgate structure and requires the installation of rip rap material to stabilize the bank.
- Wasteway system – Remove and replace the existing wasteway structure, including the sediment sluice and traveling screen. Stabilize the bank downstream of the wasteway structure and install rip rap.
- Main pump station – Construct a new pump station building and remove and replace most components of the pump station, including the inlet works, pumps and motor controls, transformers, and approximately 800 feet of 36-inch canal pipeline.
- Re-lift pump station – Remove and replace the existing transformers, pumps, motors, float equipment, and approximately 270 feet of 18- to 24-inch pipeline.

Under the Proposed Action, surface-disturbing activities would impact a total of 1.9 acres of private land.

Access to the five identified sites would be from State Highway 20 and West Sunnyside Lane. Project construction would begin in the fall of 2023, once the irrigation system ceases operation for the remainder of the year. Project activities are anticipated to be completed over a period of two years.

2.2 No Action Alternative

Under the No Action Alternative, the proposed improvements to the Owl Creek Irrigation system infrastructure would not occur. The irrigation system would continue to operate in its current state and provide water diverted from the Big Horn River to the Lucerne area.

2.3 Issues Eliminated from Detailed Analysis

In accordance with NEPA regulations, some resources were eliminated from evaluation because they are not present in or near the Project Study Area and/or would not be affected by the Proposed Action or the No Action Alternatives (Table 1).

Table 1. Impacts to Resources Resulting from the Proposed Action Alternative

Resource	Impact Determination	Rationale for Determination
Air Quality	Negligible impact	Impacts would be negligible as construction activities and operations would be required to comply with all applicable federal, state, and local requirements, construction equipment control requirements, and any other guidance regarding air quality emissions.
Invasive and Non-Native Species	Negligible impact	Impacts would be negligible as construction activities, including total surface disturbance and increased access to the areas, would be minimal and the irrigation system is currently in use.
Lands and Realty	None	No impacts to lands and realty would occur as the location has already been developed and is in use.
Noise	Negligible	Construction activities would be intermittent and short term. Construction would require applicable permits issued by Hot Springs County and equipment controls would comply with federal, state, and local requirements.
Soils	None	Construction activities would not impact soils or cause soils to impact other resources as the location has already been developed and is currently in use.
Transportation and Access	Negligible impact	Impacts would be negligible as traffic related to construction activities would be intermittent and short term.
Vegetation	None	Impacts would be negligible as construction activities, including total surface disturbance, would be minimal and the irrigation system is currently in use.
Visual Resources	None	Development of the facility would not impact visual resources as the irrigation system has already been developed and is in use.
Waste (Hazardous, Solid, and Sanitary)	None	Development of the facility would not result in impacts related to hazardous, solid, or sanitary waste disposal as construction activities would not produce hazardous waste and only a minimal volume of solid and sanitary waste. Solid and sanitary waste would be disposed of at established facilities.

3 AFFECTED ENVIRONMENT

3.1 Cultural Resources

This section addresses the evaluation and consideration of the Projects potential effects on cultural resources and historic properties. NEPA mandates the integration of the National Historic Preservation Act (NHPA) (54 USC 300101 et seq.) and its implementing regulations (36 CFR 800, specifically 36 CFR 800.8 (a)). Section 106 of the NHPA (54 USC 306108) requires any federal agency that has direct or indirect jurisdiction over an undertaking to consider the effect of the undertaking on historic properties. The objective of this section is to evaluate and document the Project's potential impacts to cultural resources as required under NEPA and to consider the Project's effects on historic properties under Section 106 of the NHPA. In addition, both NEPA and NHPA outline requirements for Native American consultation in relation to federal undertakings to address issues of potential effects on resources of Native American concern; accordingly, this section summarizes Tribal consultation efforts for the proposed Project.

The term "cultural resources" refers to historic, aesthetic, and cultural aspects of the human environment. The NHPA defines historic properties as a subset of cultural resources that includes prehistoric or historic districts, sites, buildings, structures, or objects included in or eligible for the National Register of Historic Places (NRHP), which is maintained by the U.S. Secretary of the Interior. Historic properties include properties of traditional religious and cultural importance to a Native American Tribe or Native Hawaiian organization and that meet NRHP criteria. A property is significant if it meets at least one of the following four criteria (36 CFR 60):

A. It is associated with events that have made a significant contribution to the broad patterns of our history.

B. It is associated with the lives of persons significant in our past.

C. It embodies the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction.

D. It has yielded, or may be likely to yield, information important in prehistory or history.

To convey its significance, a property must retain aspects of integrity that contribute to its eligibility. Aspects of integrity include location, setting, design, workmanship, materials, feeling, and association (36 CFR 60).

The area of potential effects (APE) is used as the area of analysis to assess potential impacts and effects of the proposed Project on cultural resources and historic properties. The APE includes all Project disturbance areas associated with construction and work areas for the bridge, headgate, wasteway system, main pump station, and a re-lift station. Impacts that result from the undertaking at the same time and place (i.e., during construction) with no intervening causes are considered "direct" regardless of specific type (e.g., visual, physical, auditory, etc.). "Indirect" effects to historic properties are those that are caused by the undertaking that occur later in time or farther removed from the project site but that are still reasonably foreseeable. The physical APE for this Project is 11.0 acres encompassing the proposed Project disturbance including no less than 100-foot buffers around the disturbance. Because the Project is commensurate with the present built environment and the Owl Creek Irrigation system is existing, a visual APE was not defined.

ACR Consultants (ACR) conducted a Class III cultural resources inventory of the physical APE on July 18, 2022. Two irrigation canals (Dempsey Canal—48HO849 and Lucerne Irrigation Facilities—48HO1284) and one railroad (CB&Q Railroad—48HO492_62) were encountered during this inventory (Stubbs 2022). 48HO849 and 48HO492 are eligible for the NRHP but the portions with the APE are considered not contributing to those resources' eligibilities. 48HO1284 is considered not eligible for the NRHP. In addition, the APE crosses the Owl Creek Archaeological District (48HO1238). The district covers 45 sections in Hot Springs County. No prehistoric localities associated with the district are within the APE (Stubbs 2022).

The results of ACR's Class III cultural resources inventory were reviewed by the BOR. Under Section 106 of the NHPA and following Executive Order 13007, the BOR consulted the Eastern Shoshone Tribe and Arapaho Tribe of the Wind River Reservation to solicit information regarding potential effects to sites of religious or cultural significance and provided letters and copies of the results of the Class III cultural resources inventory on December 7 and 8, 2022. The BOR sent a letter of finding of no historic properties adversely affected to the Wyoming State Historic Preservation Office (SHPO) on

January 27, 2023 and received SHPO concurrence on February 9, 2023. No objections or comments were received from the Tribes. Appendix A contains the record of consultation.

3.2 Environmental Justice and Socioeconomics

Socioeconomics is defined to include the basic attributes associated with the human environment. The socioeconomic attributes considered in this section are (1) population; (2) workforce, income, and employment; (3) housing; (4) public services; (5) taxes and government revenue; and (6) environmental justice.

The area of potential socioeconomic impact is dependent upon the socioeconomic parameter being considered. However, unless otherwise noted, the analysis focuses on Hot Springs County because physical impacts (for example, changes in traffic patterns) and many of the economic impacts (for example, employment opportunities) would be contained to the county. The assessment of potential environmental justice issues focuses on census tracts and a smaller demographic unit called the census block group, which is a geographical unit used by the United States Census Bureau (USCB) that typically has between 600 and 3,000 residents and is the smallest geographical unit for which the USCB publishes sample data.

Each of the six attributes is evaluated by first characterizing existing conditions. This is followed by a summary discussion of how the proposed Project would affect each attribute during construction and then during operation (Section 4.2). Effects are characterized as follows.

- Negligible: These changes are generally not detectable among most individuals in the selected geography and would not affect the normal or routine activities of most individuals or communities.
- Minor: These changes would be detectable among most individuals in the geography but would not affect the normal or routine activities of most individuals or communities.
- Moderate: These changes would be detectable among most individuals in the geography and may affect the normal or routine activities of individuals or communities, but those effects would be within a range that is normally considered acceptable.
- Major: These changes would be detectable to most individuals in the geography and would affect the normal or routine activities of individuals or communities to a degree beyond what is normally considered acceptable.

3.2.1 Population

Hot Springs County is home to an estimated 4,673 individuals. Between the 2010 United States Census (Census) and the 2020 Census, the county population declined 0.5 percent (USCB 2010, 2020). The census block groups that contain the Project sites, Census Tract 9679, Block Group 1, and Census Tract 9679, Block Group 2, have populations of 960 and 894 individuals, respectively (Table 2).

3.2.2 Workforce, Income, and Employment

The United States Bureau of Labor Statistics (2022) reports that in December of 2022, Hot Springs County had an employed population of 2,219 and an unemployment rate of 2.9 percent. The USCB estimated the median household income to be $60,805 and that 10.2 percent of county households have incomes below the poverty level (USCB 2021). The largest industries in Hot Springs County, Wyoming, are (1) educational services, and health care and social assistance (703 people); (2) agriculture, forestry,

fishing and hunting, and mining (345 people); and (3) arts, entertainment, and recreation, and accommodation and food services (220 people).

3.2.3 Housing

Hot Springs County has 2,531 housing units, 446 of which are vacant. The median gross rent is $734 (USCB 2021).

3.2.4 Public Services

According to County Office.org (2023), Hot Springs County is home to one hospital (Hot Springs County Memorial Hospital), one police department (Thermopolis Police Department), one sheriff's office (Hot Springs County Sheriff's Office), and one fire department (Thermopolis Volunteer Fire Department).

3.2.5 Taxes and Government Revenues

Hot Springs County reported $6.9 million in total revenues for the fiscal year ending June 30, 2022, $3.1 million of which came from taxes (Hot Springs County 2022). Primary funding for the county government comes from property taxes assessed on the value of the property and on the value of minerals extracted within the county. The property tax totaled 1.2 percent of assessed value and funded the general county government, the county museum, the fair board, and the library.

3.2.6 Environmental Justice

The U.S. Environmental Protection Agency (EPA) defines environmental justice as "the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to development, implementation, and enforcement of environmental laws, regulations and policies." EPA goes on to state that meaningful involvement means "(1) potentially affected community residents have an appropriate opportunity to participate in decisions about a proposed activity that will affect their environment and/or health; (2) the public's contributions can influence the regulatory agency's decision; (3) the concerns of all participants involved will be considered in the decision-making process; and (4) the decision-makers seek out and facilitate the involvement of those potentially affected" (EPA 2022).

In 1997 the Council on Environmental Quality (CEQ) outlined methods for conducting environmental justice assessments which call for considering both (a) the racial and economic composition of affected communities and (b) health issues that may amplify effects on minority or low-income individuals (CEQ 1997). This is often referred to as an environmental justice screening.

Environmental justice screening is intended to identify minority and/or low-income communities that are sufficiently close to a project to potentially be affected. If such communities are identified, additional investigation may be warranted to determine if those communities are likely to be disproportionately and adversely affected.

Three environmental justice indices already developed for the area were used to facilitate environmental justice screenings for this Project.

1. The CEQ developed the Climate and Economic Justice Screening Tool (Version 1.0). This tool identifies communities that are disadvantaged based on census tracts, which are the smallest geographic unit for which the data sets they use are publicly available and nationally consistent. The tool relies on a series of economic, environmental, and health parameters (CEQ 2023).

2. The Center for Disease Control (CDC) developed the Environmental Justice Index using data from the USCB, the EPA, the U.S. Mine Safety and Health Administration, and the U.S. Centers for Disease Control and Prevention to rank the cumulative impacts of environmental injustice on health for every census tract in the United States (CDC 2023). The analysis is performed at the census tract level with the purpose of identifying areas most at risk for the health impacts of environmental burden.
3. The EPA developed the Environmental Justice Screening and Mapping Tool, EJScreen, to facilitate public access to high-resolution environmental and demographic information for locations throughout the United States. Data for select locations are readily compared to data for the rest of the state or the nation, which allows the user to identify places that could be candidates for environmental justice review, analysis, or outreach (EPA 2022). The tool does not establish criteria for identifying environmental justice communities.

The proposed Project is located within Census Tract 9679 in both block groups 1 and 2. Table 2 reports race/ethnicity data, income data, and CEQ and CDC Environmental Justice scores for Wyoming, Hot Springs County, and the block groups in Census Tract 9679. Table 3 reports the Environmental Justice Index scores from the EPA's EJScreen tool for Census Tract 9679; Census Tract 9679, Block Group 1; and Census Tract 9679, Block Group 2 in Hot Springs County, Wyoming.

Table 2. Population and Environmental Justice Data

Geography	Contains Project Site	Population[a]	Percent Minority[a]	Percent of Households Below Poverty Level[a]	CEQ Identified as Disadvantaged	CDC Environmental Justice Index Rank Percentile[b]
Wyoming	Yes	576,641	17.0	11.0	Not Available	Not Available
Hot Springs County	Yes	4,673	8.3	10.2	Not Available	Not Available
Census Tract 9679, Block Group 1	Yes	960	4.6	8.6	Partially	0.54
Census Tract 9679, Block Group 2	Yes	894	12.6	24.5	Partially	0.54

[a] U.S. Census Bureau 2021. Percent minority reflects the percentage of persons self-reporting as anything other than "white alone."

[b] Percentile rank among all U.S. census tracts. For example, a value of 0.85 signifies that 85 percent of census tracts in the nation likely experience less severe cumulative impacts on health and well-being than the census tract of interest, and that 15 percent of census tracts in the nation likely experience more severe cumulative impacts from environmental burden.

Table 3. EPA Environmental Justice Indexes State Percentile for the Project Area

EJ Index	Census Tract 9679	Census Tract 9679, Block Group 1	Census Tract 9679, Block Group 2
Particulate Matter 2.5	21	23	19
Ozone	38	41	34
Diesel Particulate Matter	9	10	8
Air Toxics Cancer Risk	0	0	0
Air Toxics Respiratory Hazard Index	0	0	0
Traffic Proximity	34	35	32
Lead Paint	55	56	49

EJ Index	Census Tract 9679	Census Tract 9679, Block Group 1	Census Tract 9679, Block Group 2
Superfund Proximity	11	12	9
Risk Management Program Facility Proximity	24	27	23
Hazardous Waste Proximity	34	37	32
Underground Storage Tanks	22	23	21
Wastewater Discharge	53	57	42

Source: EPA 2023. EPA's Environmental Justice Screening and Mapping Tool (Version 2.1) and Standard Report for Census Tract 9679; Census Tract 9679, Block Group 1; and Census Tract 9679, Block Group 2 in Hot Springs County, Wyoming. Available online at: https://ejscreen.epa.gov/mapper/.

3.3 Water Resources

The Project area is located approximately 4,300 to 4,430 feet above mean sea level. The Project area is located within two watersheds, the Black Willow Draw-Bighorn River Watershed and the Lower Owl Creek Watershed (U.S. Geological Survey [USGS] 2023) (Figure 3). Within the Project area, there are eight National Hydrography Dataset (NHD)–mapped waterbodies (USGS 2023) and five National Wetlands Inventory (NWI)–mapped wetlands (U.S. Fish and Wildlife Service [USFWS] 2023a) (Table 4; Figures 1 and 2). Irrigation canals located within portions of the Project area utilize diverted water from the Bighorn River, a named, perennial stream; therefore, the principal uses of surface water in the Project area are irrigation. These canals are under the jurisdiction of the BOR.

Table 4. National Hydrography Dataset and National Wetlands Inventory Features Mapped within the Project Area

Aquatic Resource	Number of Features in Project Area	Length (linear feet) in Project Area	Area (acres) in Project Area
NHD Waterbody			
Canal/Ditch	6	657	–
Artificial Path	1	56	–
Swamp/Marsh	1	–	0.23
NWI Wetlands			
Freshwater emergent wetland	2	–	0.03
Riverine	3	–	0.23

Sources: USFWS (2023); USGS (2023)

Generally, surface water levels within the area, including the Bighorn River, increase during flooding events and after snowmelt and heavy precipitation events. The surface water levels within the irrigation canals are generally dependent on pump rates and precipitation events.

The Project is located above the Quaternary Alluvial Aquifer, Quaternary Terrace-Deposit Aquifer, and Mowry and Thermopolis Confining Units (USGS) (see Figure 3). The Project area receives groundwater from several aquifers.

The Federal Emergency Management Agency (FEMA) has not completed a study to determine the flood hazard for this portion of Hot Spring County (FEMA 2021); therefore, no flood data are currently available. Bighorn River is a large perennial stream that could pose flood hazard for the Project area.

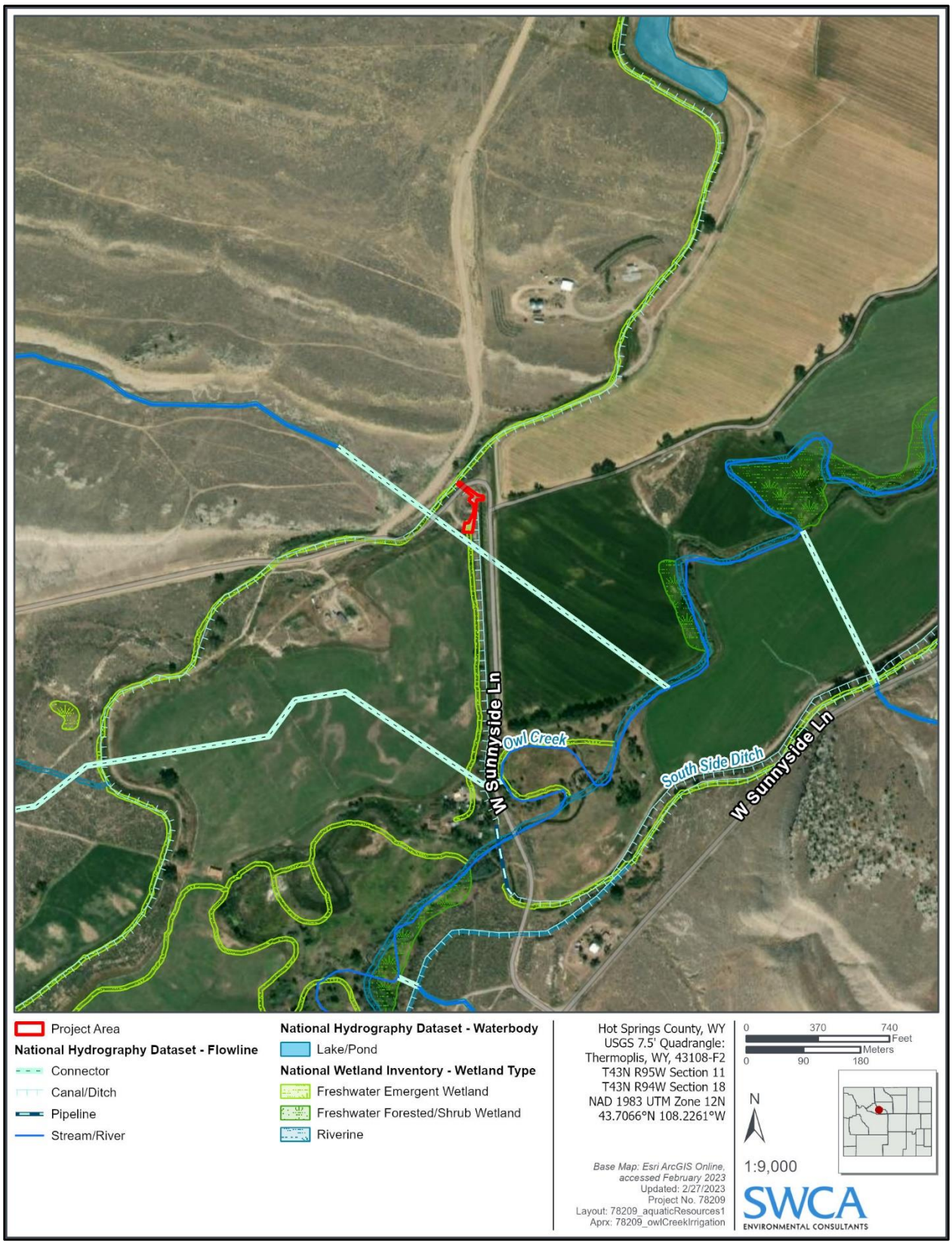


Figure 1. National Hydrography Dataset/National Wetlands Inventory–mapped features within the Project Area (Figure 1 of 2).

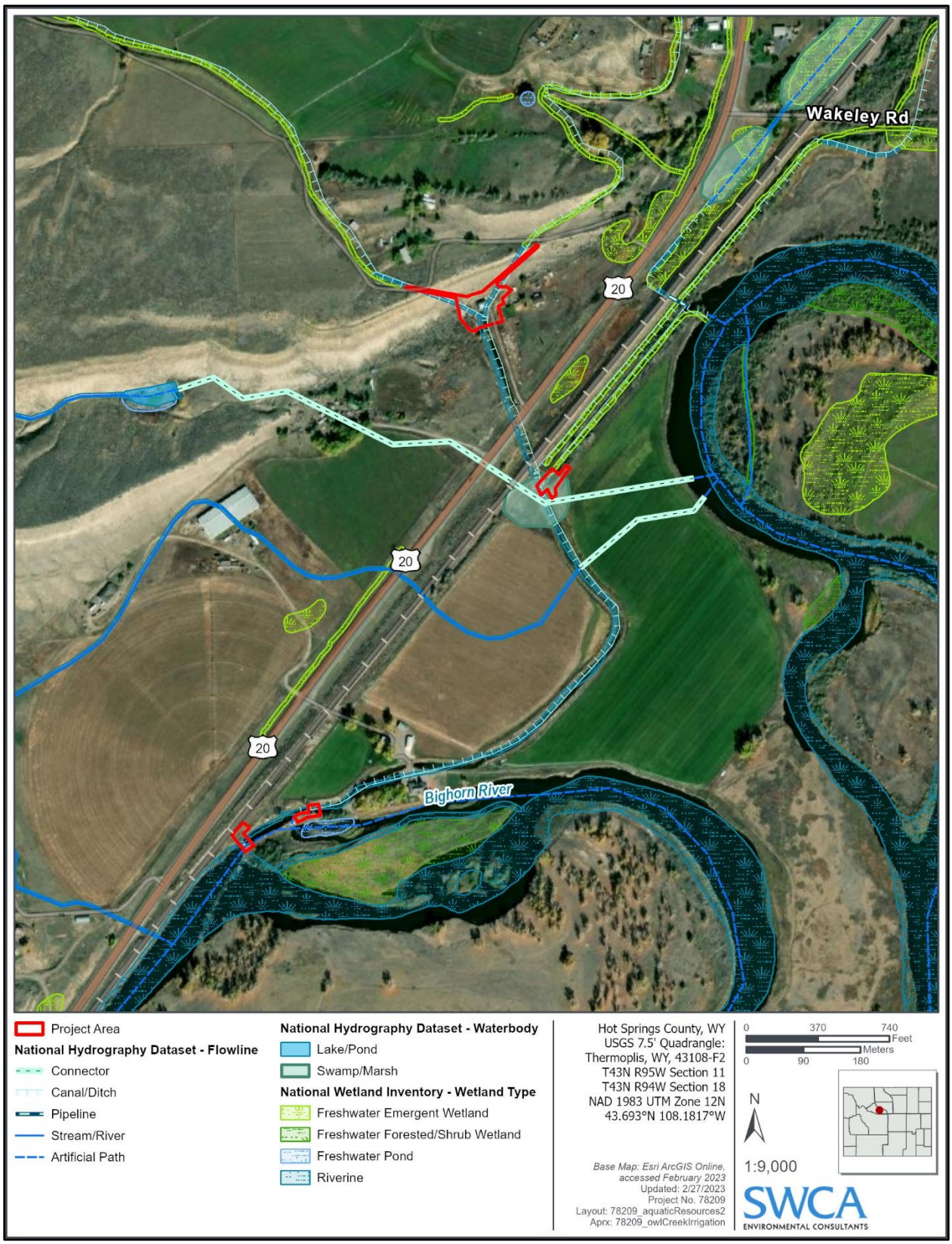


Figure 2. National Hydrography Dataset/National Wetlands Inventory–mapped features within the Project Area (Figure 2 of 2).

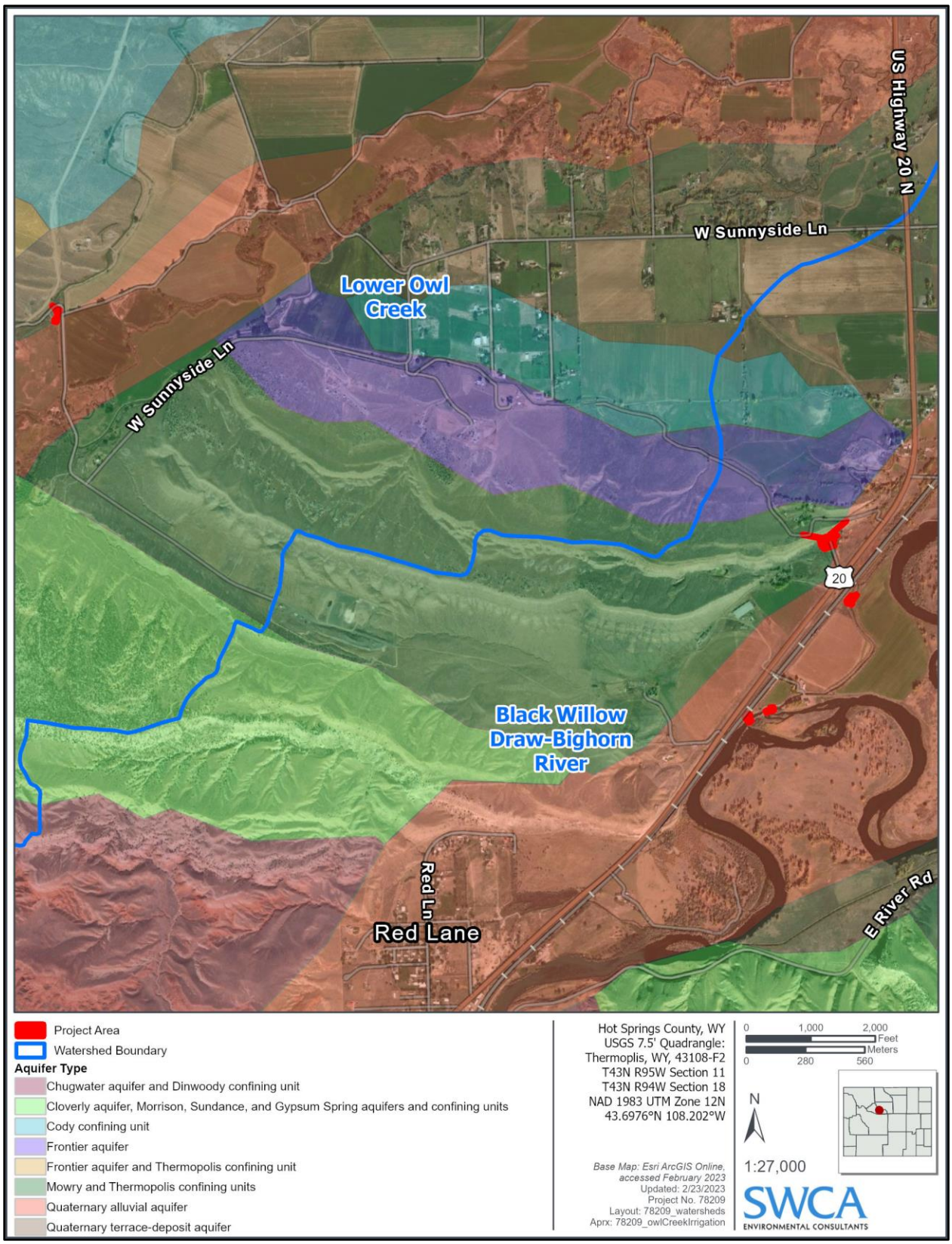


Figure 3. Hydrologic Unit Code Watersheds and Aquifers within the Project Area.

3.4 Biological Resources

3.4.1 Vegetation, Wildlife, and Fisheries

The analysis area for vegetation resources is the 1.89-acre Proposed Action area and the analysis area for general fish, wildlife, and raptor nests is the area within 0.50 mile of the Proposed Action area. Field reconnaissance was conducted on January 31, 2023.

GAP/LANDFIRE National Terrestrial Ecosystems data were used in a preliminary assessment of the vegetation in the Proposed Action area (USGS 2011). The USGS maintains this data, which consist of detailed vegetation and land cover data for the continental United States. The data rely on the ecological classification system developed by NatureServe to represent natural and semi-natural vegetation. Table 5 lists the GAP/LANDFIRE landcover classes in the Proposed Action area by acreage and percentage. Most of the Project area (19.57%) is classified as developed-roads.

Table 5. Landcover Classes in the Proposed Action Area

National Vegetation Classification Subclass	Acres	Percent of Proposed Action Area
Developed-Roads	0.37	19.57
Inter-Mountain Basins Big Sagebrush Shrubland	0.32	16.93
Interior West Ruderal Riparian Scrub	0.30	15.87
Developed-Low Intensity	0.25	13.23
Open Water	0.23	12.17
Western Cool Temperate Pasture and Hayland	0.18	9.42
Inter-Mountain Basins Big Sagebrush Steppe	0.08	4.23
Western Cool Temperate Urban Shrubland	0.05	2.43
Inter-Mountain Basins Mat Saltbush Shrubland	0.04	2.12
Interior West Ruderal Riparian Forest	0.03	1.59
Inter-Mountain Basins Greasewood Flat	0.03	1.59
Western North American Ruderal Wet Meadow & Marsh	0.01	0.48
Western Cool Temperate Urban Herbaceous	0.01	0.39
Total	**1.89**	**100%**

Source: USGS (2011)

During field reconnaissance on January 31, 2023, agricultural fields and riverine wetland habitats were observed within 0.5 mile of the Proposed Action area. Snow covered the ground; however, dominant vegetation observed included black greasewood (*Sarcobatus vermiculatus*), broom snakeweed (*Gutierrezia sarothrae*), crested wheatgrass (*Agropyron cristatum*), and western wheatgrass (*Pascopyrum smithii*).

The USFWS Information for Planning and Consultation (IPaC) report (Appendix C) identified nine species listed as USFWS Birds of Conservation Concern (BCC) that could occur within the Proposed Action (USFWS 2023a): black tern (*Chlidonias niger*), California gull (*Larus californicus*), Cassin's finch (*Carpodacus cassinii*), Franklin's gull (*Leucophaeus pipixcan*), olive-sided flycatcher (*Contopus cooperi*), pinyon jay (*Gymnorhinus cyanocephalus*), rufous hummingbird (*Selasphorus rufus*), western grebe (*Aechmophorus occidentalis*), and willet (*Tringa semipalmata*). Additionally, the USFWS IPaC

report identified the bald eagle (*Haliaeetus leucocephalus*) and golden eagle (*Aquila chrysaetos*), protected under the Bald and Golden Eagle Protection Act of 1940 (USFWS 2023b).

No USFWS BCC species were observed during the January 2023 field reconnaissance. Ravens (*Corvus corax*) and a few songbirds were observed from Highway 20, within 0.5 mile of the Proposed Action area. No bald or golden eagles or their nests were observed with 0.5 mile of the Proposed Action area during the January 2023 field reconnaissance. No eagle nesting habitat was observed within the Proposed Action area or within 0.5 mile of the Proposed Action area. Additionally, no raptors or raptor nests were observed, and no raptor nesting habitat was observed within the Proposed Action area or within 0.5 mile of the Proposed Action area. A man-made platform nest, near the re-lift pump station, was inactive and deteriorating. No additional wildlife species were observed.

3.4.2 Federally Threatened and Endangered Species

The USFWS IPaC report (see Appendix C) identified one federally threatened species and one candidate species that could occur within the Proposed Action (USFWS 2023b): Ute ladies'-tresses (*Spiranthes diluvialis*; federally threatened species) and monarch butterfly (*Danaus plexippus*; candidate species for federal listing). There are no critical habitats within the Proposed Action area for either species.

The USFWS was contacted regarding the potential impacts of the proposed Project and no additional consultation was requested (see Appendix C).

3.4.2.1 UTE LADIES'-TRESSES

The Ute ladies'-tresses is listed as threatened under the Endangered Species Act (USFWS 2023c). This orchid species is found in seasonally moist soils and wet meadows associated with perennial or seasonally flooded stream terraces, floodplains, oxbows, sub-irrigated or spring-fed abandoned stream channels and valleys, and lakeshores (Fertig et al. 2005). Ute ladies'-tresses require streamside or wet meadow habitats on sub-irrigated alluvial soils (Fertig et al. 2005). In Wyoming, this species is found mostly on low, flat floodplain terraces or abandoned oxbows adjacent to small perennial streams or rivers at elevations under 6,850 feet.

3.4.2.2 MONARCH BUTTERFLY

The monarch butterfly is a candidate species for federal listing and breeds year-round in many regions. In temperate climates, such as eastern and western North America, the monarch butterfly will undergo long-distance migration and live for an extended length of time. Monarch butterflies lay their eggs on their obligate milkweed host plant (primarily *Asclepias* spp.). Larvae emerge after 2 to 5 days and develop through five larval instars (the time between molts) over 9 to 18 days. The larvae feed on milkweed and sequester toxic chemicals (cardenolides) as a defense against predators. Larvae pupate into a chrysalis and emerge 6 to 14 days later as an adult butterfly. Multiple generations of monarch butterflies are produced during the breeding season and adults live approximately 2 to 5 weeks. Overwintering adults enter reproductive diapause and live 6 to 9 months (USFWS 2023d). Monarch butterflies found in Wyoming belong to a population that breeds east of the Rocky Mountains and overwinter in Mexico or to a population that breeds west of the Rocky Mountains and overwinter in California or northwestern Mexico (Monarch Watch 2010).

4 ENVIRONMENTAL IMPACTS AND MITIGATION

4.1 Cultural Resources

4.1.1 Environmental Impacts: Proposed Action

Under the Proposed Action Alternative, two of the three cultural resources known to exist within the APE would be directly affected by ground disturbance during construction activities for the Project. The Dempsey Canal (48HO849_1) would be physically impacted by the Project, but the segment is considered non-contributing to the overall eligibility of the resource and thus there would be no adverse effect to the resource as a whole. The Lucerne Irrigation System (48HO1284) would also be physically impacted by the Project but is recommended not eligible for the NRHP and thus no historic properties would be affected. An adverse effect can only be found for those cultural resources that are considered historic properties (36 CFR 800.5). The CB&Q Railroad (48HO492_62) would not be affected by the Project.

The APE for the re-lift pump station crosses the NRHP-eligible Owl Creek Archaeological District (48HO1238). No prehistoric localities associated with 48HO1238 are within the APE. The work to be performed at the re-lift pump station is commensurate with the existing disturbances. As such, there are no known historic properties or resources of Native American concern that would have adverse direct or indirect effects by the Proposed Action.

Although the results of the Class III cultural resources inventory conducted for this Project indicate that the risk of post review discoveries is low, an inadvertent discovery plan provides a way forward should discoveries be made. Training on the post review discovery plan would be conducted during pre-construction on-site training for construction workers.

4.1.2 Environmental Impacts: No Action Alternative

The No Action Alternative would not change the current conditions. Under the No Action Alternative, any effects of the current irrigation system on cultural resources in the APE would continue at the existing rate.

4.1.3 Consultation and Coordination

4.1.3.1 TRIBAL CONSULTATION

The BOR as the lead federal agency is responsible for Tribal consultation and identified and initiated consultation with tribes that may have ancestral ties and interest in the Project area. The BOR requested information under Section 106 of the NHPA regarding the identification of, or concerns with, cultural resources, including sites of religious and cultural significance pursuant to 36 CFR § 800.4(a)(4), that may be affected by the proposed undertaking and solicited comments or concerns regarding sacred sites on federal land or access to sacred sites on federal land under Executive Order 13007. Letters and the results of the Class III cultural resources inventory were sent to the Arapaho Tribe and Eastern Shoshone Tribe of the Wind River Reservation via priority mail and electronic mail on December 7 and 8, 2022.

No responses from the Tribes have been received to date.

4.1.3.2 ADDITIONAL PUBLIC INVOLVEMENT

The BOR has determined that the Project would have no adverse effects on historic properties and sent a letter of finding of no historic properties adversely affected to the Wyoming SHPO on January 27, 2023. Based on their review of the Class III cultural resources inventory report, the Wyoming SHPO concurred with the eligibility recommendations for cultural resources discovered during the Class III investigation and the determination of no adverse effects on February 9, 2023.

4.2 Environmental Justice and Socioeconomics

4.2.1 Environmental Impacts: Proposed Action

4.2.1.1 POPULATION

During construction, between 10 to 30 workers may be on-site. After the construction period, the number of workers on-site would be similar to the number of workers currently on-site.

The estimated peak of 30 workers during construction would represent 0.6 percent of the county population. Thus, impacts to population levels are characterized as minor during construction, with no impacts to population occurring once construction is completed.

4.2.1.2 WORKFORCE, INCOME, AND EMPLOYMENT

During the 6-month construction period, approximately 10 to 30 workers will be employed. While these employment opportunities are important at the level of the individual and the firm, impacts to the workforce, income, and employment would not be detected by most community members. No change in workforce, income, or employment is anticipated during operation. Thus, impacts to workforce, income, and employment are characterized as negligible during construction and there would be no impacts during operation.

4.2.1.3 HOUSING

During construction, up to 30 workers may be on-site. Once construction is complete, the number of workers would return to the current level.

The Project-related change in demand for housing would likely be limited to a small number of units for workers who may temporarily relocate to the area during construction. Many workers who will be in the area for shorter periods of time would likely utilize local hotels and motels or RV parks. These construction-related increases in housing demand would not be detected by most community residents and are characterized as negligible. No impacts would occur during operation.

4.2.1.4 PUBLIC SERVICES

While there is a potential that a construction-related injury could result in increased demand for police or medical services, the probability of such an event is relatively low and, if such an event did occur, the duration would be short lived.

Thus, impacts to public services are judged to be negligible during construction and there would be no impacts during operation.

4.2.1.5 TAXES AND GOVERNMENT REVENUES

Construction and operation of the Project would not have an impact on Hot Springs County taxes or revenue.

4.2.1.6 ENVIRONMENTAL JUSTICE

As shown in Table 2, the CEQ identifies Census Tract 9679 as partially disadvantaged because lands of federally recognized tribes cover 19 percent of the tract and are considered disadvantaged; however, tribal lands are more than 5 miles from the Project locations and are not expected to be impacted by Project activities. Census Tract 9679, Block Group 2 has a higher percentage of minority residents (12.6 percent) and households with incomes below the poverty level (24.5 percent) than Hot Springs County (8.3 percent and 10.2 percent respectively); however, Project sites in the block group are located in rural agricultural areas and adverse impacts to environmental justice communities are not expected.

The EPA's Environmental Justice Indexes scoring at or above the 80th percentile are an indication that further review may be needed; however, as shown in Table 3, the highest index in the Project area is the 57th percentile.

Given the absence of adverse impacts on environmental justice communities of concern and the Project impacts outlined in Section 3.2, Environmental Justice and Socioeconomics, of the EA, the Project is not expected to disproportionately and adversely impact any populations.

4.2.2 Environmental Impacts: No Action Alternative

No new impacts to socioeconomic resources or environmental justice communities are anticipated under this alternative.

4.3 Water Resources

4.3.1 Environmental Impacts: Proposed Action

Direct impacts to the Bighorn River will be avoided. Temporary construction impacts to the existing irrigation channels located within the Project area are possible; however, construction will be completed from October to March when the irrigation system is not in use. Because the impacts to the irrigation channels will only involve the repair or replacement of the previously constructed access bridge, headgate, wasteway system, main pump station, and re-lift station, there will not be significant impacts to the channels.

According to correspondence with the U.S. Army Corps of Engineers on January 27, 2023, the Project is considered normal farming activity and falls under the 404(f)(1) exemption for normal farming activities (see Appendix B). There are no permanent impacts to surface waters or wetlands proposed that will require mitigation. Any temporary disturbance from construction will be returned to preconstruction conditions and revegetated with wetland and riparian seed mix, as practicable.

All water resources in the area could be impacted by an accidental release of pollutants, such as fuel spills and/or runoff. Petroleum, oil, and lubricants would be used in the operation and maintenance of heavy construction equipment and vehicles, and there would also be some use of paints, solvents, and cleaners. Otherwise, only nonhazardous waste would be generated from construction and maintenance activities. Spills could occur from equipment fuel used to power equipment during construction. To reduce the

chance of accidental releases, the Project would develop and implement a Spill Prevention Control and Countermeasure Plan, which would contain measures to control runoff and discharge of pollutants. The plan would also outline measures for cleanup and management of any potential spills.

Appropriate soil erosion and sediment controls will be used and maintained in effective operating condition during construction, and all exposed soil and other fills will be permanently stabilized at the earliest practicable date.

The Project will be designed and constructed to minimize adverse effects to aquatic life movement, including native fish populations. To protect native fish populations, construction will be completed from October to March when the irrigation system is not being used.

4.3.2 Environmental Impacts: No Action Alternative

No new impacts to water resources are anticipated under this alternative.

4.4 Biological Resources

4.4.1 Environmental Impacts: Proposed Action

4.4.1.1 VEGETATION, WILDLIFE, AND FISHERIES

Impacts of the Proposed Action on vegetation would be negligible as construction activities, including total surface disturbance, would be minimal and the irrigation system is currently in use.

Short-term negative impacts to migratory birds include noise, dust, and visual intrusions during construction of the Proposed Action, which may cause individuals to leave or avoid the immediate vicinity of disturbance. Temporary construction effects would mainly involve displacement of individuals from disturbed areas and adjacent habitats (i.e., wildlife avoidance). Displaced individuals could be forced into neighboring territories, where they would compete with already established individuals for limited food supplies and other resources. Potential temporary impacts from construction may also include nest or burrow abandonment or loss of eggs or young. This would result in a decrease in reproductive success for certain species. Direct mortality may result from collisions with vehicles. These impacts would be localized rather than landscape-wide and would occur over a short period as construction activities for the Proposed Action would be intermittent and short term.

Field reconnaissance conducted on January 31, 2023, indicates that no suitable eagle or other raptor species nesting habitat is present within the Proposed Action area; therefore, nesting habitat would not be directly impacted by the Proposed Action. However, eagles or other raptor species may avoid foraging in or traveling through the Proposed Action area, particularly during construction because of the presence of human activity and vehicles. This would apply to a localized area.

4.4.1.2 FEDERALLY THREATENED AND ENDANGERED SPECIES

4.4.1.2.1 Ute Ladies'-tresses

Field reconnaissance conducted on January 31, 2023, indicates that no suitable habitat for the Ute ladies'-tresses is present in the Proposed Action area. Additionally, the Proposed Action area is outside of the occupancy range map for this species (Wyoming Natural Diversity Database 2023). Impacts from the Proposed Action would be negligible as construction activities, including total surface disturbance, would

be minimal and the irrigation system is currently in use. Therefore, it is SWCA's professional opinion that the Proposed Action would have no direct or indirect effects on the Ute ladies'-tresses.

4.4.1.2.2 Monarch Butterfly

Field reconnaissance conducted on January 31, 2023, and aerial imagery analysis indicate that the grassy areas within and adjacent to the Proposed Action area have potential to contain milkweed that could be used by the monarch butterfly. Very little information about monarch butterflies in Wyoming exists and data are being gathered by community science to better understand populations in the state (University of Wyoming 2022). However, because milkweed is a relatively common species and can be found in a variety of areas including ditches, it is SWCA's professional opinion that the Proposed Action would have no direct or indirect effects on the monarch butterfly.

4.4.2 Environmental Impacts: No Action Alternative

No new impacts to biological resources are anticipated under this alternative.

5 LITERATURE CITED

Centers for Disease Control (CDC). 2023. Environmental Justice Index Rank. Available at: https://ephtracking.cdc.gov/qrd/1231. Accessed February 28, 2023.

Council on Environmental Quality (CEQ). 1997. Environmental Justice Guidance Under the National Environmental Policy Act. Available at: https://www.epa.gov/environmentaljustice/ceq-environmental-justice-guidance-under-national-environmental-policy-act. Accessed October 10, 2022.

_____. 2023. Climate and Economic Justice Screening Tool (Version 1.0). Available at: https://screeningtool.geoplatform.gov/en/. Accessed February 28, 2023.

County Office.org. 2023. Browse by Office: Police Departments, Sheriff Departments, Hospitals, and Fire Departments. Available at: https://www.countyoffice.org/. Accessed February 28, 2023.

Federal Emergency Management Agency (FEMA). 2021. National Flood Hazard Layer. Available at: https://www.fema.gov/national-flood-hazard-layer-nfhl. Accessed February 2023.

Fertig, W., R. Black, and P. Wolken. 2005. *Rangewide Status Review of Ute Ladies'-Tresses* (Spiranthes diluvialis). Prepared for U.S. Fish and Wildlife Service and Central Utah Water Conservancy District. Available at: https://www.fws.gov/sites/default/files/documents/2005%20Rangewide%20Status%20Review%20for%20Ute%20ladies%27-tresses.pdf. Accessed February 2023.

Hot Springs County. 2022. Basic Financial Statements for the Year Ended June 30, 2022, with Independent Auditors' Report Thereon. Available at: https://hscounty.com/departments/clerk#audited-financial-statements. Accessed February 28, 2023.

Monarch Watch. 2010. Monarch Butterfly Fall & Spring Migrations. Available at: https://www.monarchwatch.org/blog/uploads/2010/05/monarchwatch-map-1200x903.jpg. Accessed February 2023.

Stubbs, Donna. 2022. A Class III Cultural Resource Survey of the Owl Creek Irrigation District Water Delivery and Efficiency Project in Hot Springs County, Wyoming. ACR Report No. 1374. Report on file at the Wyoming Cultural Records Office.

University of Wyoming. 2022. Monarchs & Milkweeds. Available at: https://www.wyobiodiversity.org/index.php/community-science/monarchs-milkweeds. Accessed February 2023.

U.S. Bureau of Labor Statistics. 2022. Local Area Unemployment Statistics: Labor force data by county, not seasonally adjusted, latest 14 months. Available at: https://www.bls.gov/lau/tables.htm. Accessed February 28, 2023.

U.S. Census Bureau (USCB). 2010. Decennial Census 2010. Quick Facts for Wyoming and Hot Springs County, WY. Available at: https://www.census.gov/quickfacts/fact/table/US/PST045222. Accessed February 28, 2023.

_____. 2020. Decennial Census 2020. Quick Facts for Wyoming and Hot Springs County, WY. Available at: https://www.census.gov/quickfacts/fact/table/US/PST045222. Accessed February 28, 2023.

_____. 2021. American Community Survey 5-Year Estimates 2017-2021. Tables DP03, DP04, B03002, and B17017: Geographies = State of Wyoming; Hot Springs County, WY; Census Block Groups in Hot Springs County, WY. Available at: https://data.census.gov/advanced. Accessed February 28, 2023.

U.S. Environmental Protection Agency (EPA). 2022. Environmental Justice webpage. Available at: https://www.epa.gov/environmentaljustice/learn-about-environmental-justice. Page last updated on September 6, 2022. Accessed February 28, 2023.

_____. 2023. EPA's Environmental Justice Screening and Mapping Tool (Version 2.1). Mapper. Printable Standard Report for Census Tract 9679; Census Tract 9679, Block Group 1; and Census Tract 9679, Block Group 2. Available at: https://ejscreen.epa.gov/mapper/. Accessed February 28, 2023.

U.S. Fish and Wildlife Service (USFWS). 2023a. National Wetlands Inventory. U.S. Fish and Wildlife Service, Ecological Services. Available at: http://www.fws.gov/wetlands/Data/State-Downloads.html. Accessed February 2023.

———. 2023b. Information for Planning and Consultation. Online search tool. Available at: https://ipac.ecosphere.fws.gov. Accessed February 2023.

———. 2023c. Ute Ladies'-tresses (*Spiranthes diluvialis*). Available at: https://ecos.fws.gov/ecp/species/2159. Accessed February 2023.

———. 2023d. Species Profile for Monarch Butterfly (*Danaus plexippus*). Available at: https://ecos.fws.gov/ecp/species/9743. Accessed February 2023.

U.S. Geological Survey (USGS). 2011. GAP/LANDFIRE National Terrestrial Ecosystems. Gap Analysis Program. Available at: https://www.usgs.gov/core-science-systems/science-analytics-and-synthesis/gap/science/land-cover. Accessed February 2023.

———. 2023. National Hydrography Dataset. Available at: http://nhd.usgs.gov/index.html. Accessed February 2023.

Wyoming Natural Diversity Database (WYNDD). 2023. Data Explorer. Available at: https://wyndd.org/data_explorer.php. Accessed February 2023.

APPENDIX A

Record of Tribal Consultation

WYOMING STATE Historic Preservation OFFICE

February 09, 2023

Denise Tugman

Bureau of Reclamation
Wyoming Area Office
P.O. Box 1630
Mills, WY 82644-1630

re: Proposed Owl Creek Irrigation District Water Delivery and Efficiency Project, Hot Springs County, Wyoming, DBU_WY_2023_95, DBI_WY_2022_461, DBPR_WY_2022_636

Dear Ms. Tugman:

Thank you for consulting with the Wyoming State Historic Preservation Office (SHPO) regarding the above referenced undertaking. We have reviewed the associated report and find the documentation meets the Secretary of the Interior's Standards for Archaeology and Historic Preservation (48 FR 44716-42).

We concur with your finding that the following sites are not eligible for listing in the National Register of Historic Places (NRHP) and no further work or protective measures are necessary;

Smithsonian Number	Site Name	Current Eligibility	Effect
HO 1284	Lucerne Irrigation System	Not Eligible	Not Applicable

We concur that the following sites are eligible for listing in the NRHP but will not be affected by the undertaking as planned;

Smithsonian Number	Site Name	Current Eligibility	Effect
HO 1238	Owl Creek Archaeological District	Eligible	No Effect

We concur that the following sites are eligible for listing in the NRHP but will not be adversely affected by the undertaking as planned;

Smithsonian Number	Site Name	Current Eligibility	Effect
HO 492	CHICAGO, BURLINGTON, & QUINCY RAILROAD	Eligible	No Adverse Effect
HO 849_1	DEMPSEY CANAL	Eligible	No Adverse Effect

We recommend that the undertaking proceed in accordance with state and federal laws subject to the following stipulation:

If any cultural materials are discovered during construction, work in the area shall halt immediately, the federal agency must be contacted, and the materials evaluated by an archaeologist or historian meeting the Secretary of the Interior's Professional Qualification Standards (48 FR 22716, Sept. 1983).

This letter should be retained in your files as documentation of a SHPO concurrence with your finding of no historic properties adversely affected. Please refer to SHPO project DBI_WY_2022_461 on any future correspondence regarding this undertaking. If you have any questions, please contact me at 307-777-8594.

Sincerely,



Brian Beadles

United States Department of the Interior

BUREAU OF RECLAMATION
Missouri Basin Region
Wyoming Area Office
P.O. Box 1630
Mills, WY 82644-1630

IN REPLY REFER TO:

WY-4301
2.1.1.04

VIA ELECTRONIC MAIL ONLY

Ms. Sara Needles,
Deputy Director/State Historic Preservation Officer
Wyoming Department of State Parks and Cultural Resources
sara.needles@wyo.gov

Subject: Proposed Owl Creek Irrigation District Water Delivery and Efficiency Project, Hot Springs County, Wyoming (DBP_WY_2021_3; DBPR_WY_2022_636; DBI_WY_2022_461; and DBU_WY_2023_95)

Dear Ms. Needles:

In compliance with Title 36, Code of Federal Regulations (CFR), Part 800, that implement Section 106 of the National Historic Preservation Act, and all other laws, regulations, and directives that are pertinent to this Federal undertaking, the Bureau of Reclamation Wyoming Area Office is consulting with you regarding the subject project. In addition, all supporting documentation has been uploaded to WyoTrack (DBP_WY_2021_3; DBPR_WY_2022_636; DBI_WY_2022_461; and DBU_WY_2023_95), per Wyoming State Historic Preservation Office (SHPO) requirements.

LOCATION AND DESCRIPTION OF PROPOSED UNDERTAKING

The Bureau of Reclamation Wyoming Area Office is proposing to authorize the Owl Creek Irrigation District (OCID) to replace and upgrade irrigation facilities, including the Inlet Canal, Pump Station No. 1, and the Relift Pump Station located in portions of Section 11, T43N, R95W and Section 18, T43N, R94W, 6th P.M., Hot Springs County, Wyoming (Figure 1, OCID 2021).

The OCID has been awarded funds through a WaterSMART grant to partially fund this undertaking. The U.S. Department of the Interior's WaterSMART program focuses on improving water conservation and helping water-resource managers make sound decisions about water use. The program provides leadership by identifying strategies to ensure that this and future generations will have sufficient supplies of clean water for drinking, economic activities, recreation, and ecosystem health.

The Lucerne (Lower) portion of the OCID proposes to replace or upgrade irrigation facilities that divert water from the Big Horn River and distributes to three service canals (Relift Canal, Lucerne Canal, and Dempsey Canal) via two separate pump stations; 1) the main pump station, and 2) the Relift pump station. Major components of the proposed undertaking include the following:

1. New headgate structure on the Big Horn River and improvements to the inlet canal which conveys river water from the diversion to the main pump station,

2. Demolish existing main pump station and replace with new building, new pumps, new electrical controls and transformers, and new pressurized discharge piping, and

3. Rehabilitation of the Relift pump station with new pumps and electrical controls.

This project will result in estimated annual electrical power savings of 640,000 to 840,000 kWh, enough energy to power 60-80 average homes per year. The new pumps will be able to deliver water flows that are synchronized much better to irrigation demand, thereby creating a direct-flow water savings estimated to be 2,976 acre-feet per year.

CULTURAL RESOURCE INVESTIGATION

In July 2022, Mr. Kevin O'Dell with ACR Consultants, Inc.(ACR), conducted a Class III cultural resources inventory for the proposed water delivery and efficiency project (Figure 2, ACR 2022). The APE included evaluation of cultural resources within project footprints, buffer areas around the pump stations and a 100' wide corridor centered on the Inlet Canal. As Reclamation previously discussed with Mr. Beadles, ACR used *A Field Guide to Irrigation in the Lower Rio Grande Valley* (Knight 2009), as a reference guide for site evaluations and National Register of Historic Places (NRHP) recommendations.

Results of this inventory include updating one previously recorded segment of the Dempsey Canal (48HO849_1), recording a linear segment of the CB&Q Railroad (48HO492_62), and recording the Lucerne Irrigation System (48HO1284). Please refer to the attached report titled *A Class III Cultural Resource Survey of the Owl Creek Irrigation District Water Delivery and Efficiency Project in Hot Springs County, Wyoming* for detailed evaluations and recommendations.

The newly recorded segment of the CB&Q Railroad (48HO492_62) is recommended as non-contributing to the NRHP. The previously recorded segment of the Dempsey Canal (48HO849_1) was previously determined to be non-contributing. Although this undertaking may affect both of these segments there will be no adverse effect to the sites as a whole. The newly recorded site, 48HO1284, is the Lucerne Irrigation System. The site is recommended not eligible for the NRHP. The site will be impacted by the undertaking; however, no historic properties will be affected. A small portion of the project area (the Relift Pump Station) is located within the NRHP-eligible Owl Creek Archaeological District (48HO1238). The work to be performed at the Relift Pump Station is commiserate with the existing disturbances.

Therefore, this undertaking will not adversely affect the setting of known historic properties. Please refer to the following table for a summary of effects to historic properties:

Summary of Site NRHP Eligibility and Project Effects			
Site Number	**NRHP Eligibility**	**Impacted by Project (Yes/No)**	**Project Effects**
48HO492_62, CB&Q RR	Eligible – Non-contributing	No	No Adverse effect
48HO849, Dempsey Canal	Eligible	Yes	No Adverse effect
48HO1238, Owl Creek Archaeological District	Eligible	No	No Adverse effect
48HO1284, Lucerne Irrigation District	Not Eligible	Yes	No effect

Reclamation coordinated consultation and review of the proposed undertaking and Class III investigation on December 8, 2022, with the Northern Arapaho Tribal Chairman/Tribal Historic Preservation Officer (THPO), and the Eastern Shoshone Tribal Chairman/THPO. No objections or comments were received from the Tribes.

FINDING OF NO HISTORIC PROPERTIES ADVERSELY AFFECTED

Based upon the results of the cultural resource investigation conducted by ACR, preliminary coordination with Mr. Brian Beadles regarding ACR's NRHP evaluations and recommendations, Tribal consultation, Reclamation has determined a finding of No Historic Properties Adversely Affected by the proposed undertaking, in accordance with the "Programmatic Agreement Among the U.S. Department of The Interior - Bureau of Reclamation, the U.S. Department of Agriculture -Natural Resources Conservation Service, the U.S. Department of Agriculture - Forest Service Intermountain Region and Rocky Mountain Region, the U.S. Department of the Interior Fish and Wildlife Service - Mountain - Prairie Region, the U.S. Department of the Interior - National Park Service - Grand Teton National Park, the Wyoming State Historic Preservation Officer, Eastern Shoshone Tribe, Northern Arapaho Tribe, and the Advisory Council on Historic Preservation Regarding the Management of Irrigation Facilities in the State of Wyoming" (DBP_WY_2021_3).

Thank you for your consideration of the proposed undertaking. We understand no comment from your office within 30 days will constitute concurrence with our determination of No Historic Properties Adversely Affected. Should you have questions, please call me at 307-261-5607 or e-mail at dtugman@usbr.gov.

Sincerely,

DENISE TUGMAN

Digitally signed by DENISE TUGMAN
Date: 2023.01.27 09:26:50 -07'00'

Denise D. Tugman
Area Archaeologist

Attachments (3)

Figure 1- Project Location Map (OCID 2021)
Figure 2 - Project Location and CR Survey Map (ACR 2022)
Class III Cultural Resource Survey Report (ACR 2022)

cc: Mr. Brian Beadles,
Deputy State Historic Preservation Officer
Wyoming State Historic Preservation Office
brian.beadles@wyo.gov

United States Department of the Interior

BUREAU OF RECLAMATION
Missouri Basin Region
Wyoming Area Office
P.O. Box 1630
Mills, WY 82644-1630

IN REPLY REFER TO:

WY-4301
2.1.1.04

VIA PRIORITY MAIL EXPRESS and ELECTRONIC MAIL

Honorable John St. Clair
Chairman, Eastern Shoshone Tribe of the
Wind River Reservation. Wyoming
P O Box 538
Fort Washakie, WY 82514
jstclair@easternshoshone.org

Mr. Joshua Mann
THPO Director, Eastern Shoshone Tribe of the
Wind River Reservation, Wyoming
P.O. Box 538
Fort Washakie, WY 82514
jmann@easternshoshone.org

Subject: National Historic Preservation Act Section 106 Consultation for the Proposed Owl Creek Irrigation District Water Delivery and Efficiency Project, Hot Springs County, Wyoming

Dear Chairman St. Clair and THPO Director Mann:

The Bureau of Reclamation Wyoming Area Office is proposing to authorize the Owl Creek Irrigation District (OCID) to replace and upgrade irrigation facilities, including the Inlet Canal, Pump Station No. 1, and the Relift Pump Station located in portions of Section 11, T43N, R95W and Section 18, T43N, R94W, 6th P.M., Hot Springs County, Wyoming (Figure 2, OCID 2021).

The OCID has been awarded funds through a WaterSMART grant to partially fund this undertaking. The U.S. Department of the Interior's WaterSMART program focuses on improving water conservation and helping water-resource managers make sound decisions about water use. The program provides leadership by identifying strategies to ensure that this and future generations will have sufficient supplies of clean water for drinking, economic activities, recreation, and ecosystem health.

This action requires compliance with Title 54 USC § 306108, commonly known as Section 106 of the National Historic Preservation Act, its implementing regulations found at 36 CFR Part

800, and as per Executive Order 13007. Reclamation is contacting you to solicit information about potential effects to sites of religious and cultural significance as your Tribe has been identified as potentially having knowledge of cultural resources in the vicinity of the proposed project areas.

Project Description:

The Lucerne (Lower) portion of the OCID proposes to replace or upgrade irrigation facilities that divert water from the Big Horn River and distributes to three service canals (Relift Canal, Lucerne Canal, and Dempsey Canal) via two separate pump stations; 1) the main pump station, and 2) the Relift pump station. Major components of the proposed undertaking include the following:

1. New headgate structure on the Big Horn River and improvements to the inlet canal which conveys river water from the diversion to the main pump station,

2. Demolish existing main pump station and replace with new building, new pumps, new electrical controls and transformers, and new pressurized discharge piping, and

3. Rehabilitation of the Relift pump station with new pumps and electrical controls.

This project will result in estimated annual electrical power savings of 640,000 to 840,000 kWh, enough energy to power 60-80 average homes per year. The new pumps will be able to deliver water flows that are synchronized much better to irrigation demand, thereby creating a direct- flow water savings estimated to be 2,976 acre-feet per year.

In July 2022, Mr. Kevin O'Dell with ACR Consultants, Inc.(ACR), conducted a Class III cultural resources inventory for the proposed water delivery and efficiency project (Figure 2, ACR 2022). The APE included evaluation of cultural resources within project footprints, buffer areas around the pump stations and a 100' wide corridor centered on the Inlet Canal.

Results of this inventory include updating one previously recorded segment of the Dempsey Canal (48HO849_1), recording a linear segment of the CB&Q Railroad (48HO492_62), and recording the Lucerne Irrigation System (48HO1284). Please refer to the enclosed report titled *A Class III Cultural Resource Survey of the Owl Creek Irrigation District Water Delivery and Efficiency Project in Hot Springs County, Wyoming* for detailed evaluations and recommendations.

The newly recorded segment of the CB&Q Railroad (48HO492_62) is recommended as non-contributing to the National Register of Historic Places (NRHP). The previously recorded segment of the Dempsey Canal (48HO849_1) was previously determined to be non-contributing. Although this undertaking may affect both of these segments there will be no adverse effect to the sites as a whole. The newly recorded site, 48HO1284, is the Lucerne Irrigation System. The site is recommended not eligible for the NRHP. The site will be impacted by the undertaking;

however, no historic properties will be affected. A small portion of the project area (the Relift Pump Station) is located within the NRHP-eligible Owl Creek Archaeological District (48HO1238). The work to be performed at the Relift Pump Station is commiserate with the existing disturbances. Therefore, this undertaking will not adversely affect the setting of known historic properties. Please refer to the following table for a summary of effects to historic properties:

Summary of Site NRHP Eligibility and Project Effects			
Site Number	**NRHP Eligibility**	**Impacted by Project (Yes/No)**	**Project Effects**
48HO492_62, CB&Q RR	Eligible – Non-contributing	No	No Adverse effect
48HO849, Dempsey Canal	Eligible	Yes	No Adverse effect
48HO1238, Owl Creek Archaeological District	Eligible	No	No Adverse effect
48HO1284, Lucerne Irrigation District	Not Eligible	Yes	No effect

At this time, Reclamation is requesting information under Section 106 of the NHPA regarding, the identification of, or concerns with, cultural resources, including sites of religious and cultural significance pursuant to 36 CFR § 800.4(a)(4), that may be affected by the proposed undertaking. Comments or concerns regarding sacred sites on Federal land or access to sacred sites on Federal land under Executive Order 13007 are also requested. If the location and nature of these resources is sensitive or confidential, this information may be withheld from public disclosure as outlined in the regulations at 36 CFR § 800.11(c).

Please provide comments in writing within 30 days of date of this letter. If no comments or concerns are received, Reclamation would proceed with the Section 106 process, and intends to submit a finding of No Historic Properties Adversely Affected for the proposed undertaking to the Wyoming State Historic Preservation Officer for consideration according to 36 CFR Part 800.5.

Should you have questions or concerns, please feel free to contact me at 307-261-5671 or Denise Tugman, Area Archaeologist at 307-261-5607 or by e-mail at dtugman@usbr.gov.

Sincerely,

LYLE MYLER Digitally signed by LYLE MYLER
Date: 2022.12.08 07:10:37 -07'00'

Lyle D. Myler
Area Manager

Enclosures (3)
Figure 1- Project Location Map (OCID 2021)
Figure 2 - Cultural Resource Survey Map (ACR 2022)
Class III Cultural Resource Survey Report (ACR 2022)

cc: Resource Management Division, Mills, WY
Attention: WY-4301 (Denise Tugman)

United States Department of the Interior

BUREAU OF RECLAMATION
Missouri Basin Region
Wyoming Area Office
P.O. Box 1630
Mills, WY 82644-1630

IN REPLY REFER TO:

WY-4301
2.1.1.04

VIA PRIORITY MAIL EXPRESS and ELECTRONIC MAIL

Honorable Lloyd Goggles
Chairman, Arapaho Tribe of the
Wind River Reservation
533 Ethete Road
P O Box 396
Ethete, WY 82520
lloyd.goggles@northernarapaho.com

Mr. Ben Ridgley, Director
THPO, Arapaho Tribe of the
Wind River Reservation
P.O. Box 67
St. Stephens, WY 82524
benridgley007@gmail.com

Subject: National Historic Preservation Act Section 106 Consultation for the Proposed Owl Creek Irrigation District Water Delivery and Efficiency Project, Hot Springs County, Wyoming

Dear Chairman Goggles and THPO Director Ridgley:

The Bureau of Reclamation Wyoming Area Office is proposing to authorize the Owl Creek Irrigation District (OCID) to replace and upgrade irrigation facilities, including the Inlet Canal, Pump Station No. 1, and the Relift Pump Station located in portions of Section 11, T43N, R95W and Section 18, T43N, R94W, 6th P.M., Hot Springs County, Wyoming (Figure 2, OCID 2021).

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This action requires compliance with Title 54 USC § 306108, commonly known as Section 106 of the National Historic Preservation Act, its implementing regulations found at 36 CFR Part 800, and as per Executive Order 13007. Reclamation is contacting you to solicit information about potential effects to sites of religious and cultural significance as your Tribe has been identified as potentially having knowledge of cultural resources in the vicinity of the proposed project areas.

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Should you have questions or concerns, please feel free to contact me at 307-261-5671 or Denise Tugman, Area Archaeologist at 307-261-5607 or by e-mail at dtugman@usbr.gov.

Sincerely,

LYLE MYLER Digitally signed by LYLE MYLER
Date: 2022.12.07 13:56:32 -07'00'

Lyle D. Myler
Area Manager

Enclosures (3)
Figure 1- Project Location Map (OCID 2021)
Figure 2 - Cultural Resource Survey Map (ACR 2022)
Class III Cultural Resource Survey Report (ACR 2022)

cc: Resource Management Division, Mills, WY
Attention: WY-4301 (Denise Tugman)

APPENDIX B

Record of U.S. Army Corps of Engineers Consultation

Chris Dunne

Subject: FW: Irrigation Infrastructure Replacement - Owl Creek

---

From: Kostra, Alexander A KOSTRA, ALEXANDER A CIV USARMY CENWO (US) <Alexander.A.Kostra@usace.army.mil>
Sent: Friday, January 27, 2023 4:01 PM
To: Joe Johnston <joe.johnston@westernhce.com>
Cc: Ryan Altenburg <ryan@westernhce.com>
Subject: RE: Irrigation Infrastructure Replacement - Owl Creek

Hi Joe.

It is my understanding the bridge was originally constructed to maintain the Ag irrigation ditch system and the new bridge (replacement) would serve the same purpose. Staff consensus is the bridge replacement, and the other proposed Ag irrigation maintenance activities, would be considered normal farming activities and, therefore, would be fall under the 404(f)(1) exemption for "normal farming" activities.

Please let me know if you have any further questions.

Regards,
Alex Kostra
Senior Project Manager
U.S. Army Corps of Engineers
Wyoming Regulatory Office
2232 Dell Range Blvd, Ste 210
Cheyenne, WY 82009
O. 307-772-2300

From: Joe Johnston <joe.johnston@westernhce.com>
Sent: Monday, January 23, 2023 11:42 AM
To: Kostra, Alexander A KOSTRA, ALEXANDER A CIV USARMY CENWO (US) <Alexander.A.Kostra@usace.army.mil>
Cc: Ryan Altenburg <ryan@westernhce.com>
Subject: [URL Verdict: Neutral][Non-DoD Source] Irrigation Infrastructure Replacement - Owl Creek

Good morning Alex,

I hope your Christmas and New Year were good, and you're off to a good start for 2023!

Our project is moving quickly with design, and we need to know the determination you have come to regarding this project, especially the bridge. Have you had the time to coordinate with the other local USACE personnel to confirm the regional viewpoint of irrigation improvements that will not affect the flow conditions of the Big Horn River?

Also, our subconsultant, SWCA, will likely contact you about the same project as they are working on the NEPA needs for the project.

Thank you for your time.
Joe

Joe Johnston, P.E.

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Built on Grit

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APPENDIX C

IPaC Report and Record of U.S. Fish and Wildlife Consultation

From: Salgado, Kevin on behalf of WyomingES, FW6
To: Salgado, Kevin
Subject: Fw: [EXTERNAL] Bureau of Reclamation Owl Creek Irrigation Project
Date: Tuesday, February 28, 2023 11:02:25 AM
Attachments: OCID Estimated Distrurbance Areas.kmz
IPaC_ Explore Location resources_OCID.pdf

U.S. Fish and Wildlife Service
Based on the information provided, you may consider this project to be in compliance with the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.). The project should be reanalyzed by our office if any new information indicates there may be effects to protected species or their habitats.

NATHAN DARNALL Digitally signed by NATHAN DARNALL
Date: 2023.02.28 12:52:00 -07'00'

for Field Supervisor, U.S. Fish and Wildlife Service, Wyoming Field Office, 334 Parsley Boulevard, Cheyenne, WY 82007

Wyoming Field Office
U.S. Fish and Wildlife Service
334 Parsley Boulevard
Cheyenne, Wyoming 82007
WyomingES@fws.gov
For a species list, visit https://ecos.fws.gov/ipac/
Office information https://www.fws.gov/wyominges/

From: Darnall, Nathan <nathan_darnall@fws.gov>
Sent: Tuesday, February 28, 2023 8:46 AM
To: WyomingES, FW6 <WyomingES@fws.gov>
Subject: FW: [EXTERNAL] Bureau of Reclamation Owl Creek Irrigation Project

Nathan Darnall, Deputy Field Supervisor
Wyoming Field Office, U.S. Fish and Wildlife Service
334 Parsley Boulevard, Cheyenne, Wyoming 82007
Office: 307.757.3708 Cell: 307.286.1334
Email: nathan_darnall@fws.gov
Office mailbox: WyomingES@fws.gov

From: Chris Dunne <Chris.Dunne@swca.com>
Sent: Thursday, February 2, 2023 1:31 PM
To: Darnall, Nathan <nathan_darnall@fws.gov>
Cc: Mallory Patino <Mallory.Patino@swca.com>
Subject: [EXTERNAL] Bureau of Reclamation Owl Creek Irrigation Project

This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.

Hi Nathan,

I am working to produce an Environmental Assessment for the Bureau of Reclamation. The project is a component repair/replacement project for the Owl Creek Irrigation system that includes 5 relatively small areas in Hot Springs County just to the north of Thermopolis. Four sites are in close

proximity to the Big Horn River (kmz file attached) and construction activities would occur in the fall/winter once the irrigation has been shut down for the season. I ran the IPaC report (also attached) and came up with potential habitat for Monarch Butterfly and Ute Ladies'-tresses orchid. My senior wildlife biologist gave me your contact information as a starting point for determining if the action may impact either of these species.

I can probably provide you with additional site-specific information but didn't want to over-load this email. Please let me know what other information you need. If it would be easier to talk through the details, you can call me on my cell number below.

Thank you in advance for your assistance.

Christopher Dunne
Natural Resources Project Manager

SWCA Environmental Consultants
1892 South Sheridan Avenue
Sheridan, WY 82801
307.204.3376 Phone
970.420.3291 Cell

SWCA®
ENVIRONMENTAL CONSULTANTS

SWCA's purpose is to preserve natural and cultural resources for tomorrow while enabling projects that benefit people today.

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United States Department of the Interior

FISH AND WILDLIFE SERVICE
Wyoming Ecological Services Field Office
334 Parsley Boulevard
Cheyenne, WY 82007-4178
Phone: (307) 772-2374 Fax: (307) 772-2358
Email Address: wyominges@fws.gov

In Reply Refer To:
Project Code: 2023-0060081
Project Name: Owl Creek

March 24, 2023

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 (ESA) 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 note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the ESA, 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 ECOS-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 ECOS-IPaC system by completing the same process used to receive the enclosed list.

Please feel free to contact us if you need more information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. We also encourage you to visit the Wyoming Ecological Services website at https://fws.gov/office/wyoming-ecological-services.

The purpose of the ESA 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 ESA 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://media.fisheries.noaa.gov/dam-migration/esa_section7_handbook_1998_opr5.pdf.

We also recommend you consider the following information when assessing impacts to federally listed species, as well as migratory birds, and other trust resources:

Colorado River and Platte River Systems: Federal agencies must consult with the Service under section 7 of the ESA for projects in Wyoming that may lead to water depletions or have the potential to impact water quality in the Colorado River system or the Platte River system, because these actions my affect threatened and endangered species inhabiting the downstream reaches of these river systems. In general, depletions include evaporative losses and/or consumptive use of surface or groundwater within the affected basin, often characterized as diversions minus return flows. Project elements that could be associated with depletions include, but are not limited to: ponds, lakes, and reservoirs (e.g., for detention, recreating, irrigation, storage, stock watering, municipal storage, and power generation); hydrostatic testing of pipelines; wells; dust abatement; diversion structures; and water treatment facilities. For more information on consultation requirements for the Platte River species, please visit https://fws.gov/partner/platte-river-recovery-implementation-program and for the Colorado River species, please visit https://coloradoriverrecovery.org/uc/.

Migratory Birds: The Migratory Bird Treaty Act (16 U.S.C. 703-712; MBTA), enacted in 1918, prohibits the taking of any migratory birds, their parts, nests, or eggs except as permitted by regulations. Section 703 of the MBTA states, “Unless and except as permitted by regulations ... it shall be unlawful at any time, by any means or in any manner, to ... take, capture, kill, attempt to take, capture, or kill, or possess ... any migratory bird, any part, nest, or eggs of any such bird....” Except for introduced species and some upland game birds, almost all birds occurring in the wild in the United States are protected (50 CFR 10.13).

The Service has identified bird species of highest conservation priority in the 2021 Birds of Conservation Concern Report (https://www.fws.gov/migratorybirds/pdf/management/birds-of-conservation-concern-2021.pdf). In accordance with the Fish and Wildlife Conservation Act (16 USC 2912 (a)(3)), this report identifies “species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become candidates for listing” under the ESA. This report is intended to stimulate coordinated and proactive conservation actions among federal, state, and private partners. Even if there is no federal nexus, the Project can take proactive, voluntary actions to benefit migratory birds. The following website contains recommendations for the protection of migratory birds (https://www.fws.gov/

program/migratory-birds). Guidance for minimizing impacts to migratory birds for projects that include communication towers can be found at https://www.fws.gov/sites/default/files/documents/usfws-communication-tower-guidance.pdf.

The Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d; Eagle Act) prohibits knowingly taking, or taking with wanton disregard for the consequences of an activity, any bald or golden eagles or their body parts, nests, or eggs, which includes collection, molestation, disturbance, destruction, or killing. Eagle nests are protected whether they are active or inactive. Removal or destruction of nests, or causing abandonment of a nest could constitute a violation of the Eagle Act. Projects affecting eagles may require development of an eagle conservation plan (https://www.fws.gov/library/collections/bald-and-golden-eagle-management). Additionally, wind energy projects should follow the wind energy guidelines (https://www.fws.gov/media/land-based-wind-energy-guidelines) for minimizing impacts to migratory birds and bats.

In addition to MBTA and the Eagle Act, **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 avoiding and minimizing incidental take of migratory birds, please visit https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-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 ESA. Please include the Project Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office using our WyomingES@fws.gov email address or the letterhead address above.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Migratory Birds
- Wetlands

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:

Wyoming Ecological Services Field Office
334 Parsley Boulevard
Cheyenne, WY 82007-4178
(307) 772-2374

PROJECT SUMMARY

Project Code: 2023-0060081
Project Name: Owl Creek
Project Type: Irrigation
Project Description: Irrigation system improvements
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@43.696157299999996,-108.1811204411054,14z



Counties: Hot Springs County, Wyoming

ENDANGERED SPECIES ACT SPECIES

There is a total of 2 threatened, endangered, or candidate species on this species list.

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

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

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

---

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

INSECTS

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

FLOWERING PLANTS

NAME	STATUS
Ute Ladies'-tresses *Spiranthes diluvialis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2159	Threatened

CRITICAL HABITATS

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

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

MIGRATORY BIRDS

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

---

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Jan 1 to Aug 31
Black Tern *Chlidonias niger* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3093	Breeds May 15 to Aug 20

NAME	BREEDING SEASON
Olive-sided Flycatcher *Contopus cooperi* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3914	Breeds May 20 to Aug 31
Willet *Tringa semipalmata* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 20 to Aug 5

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

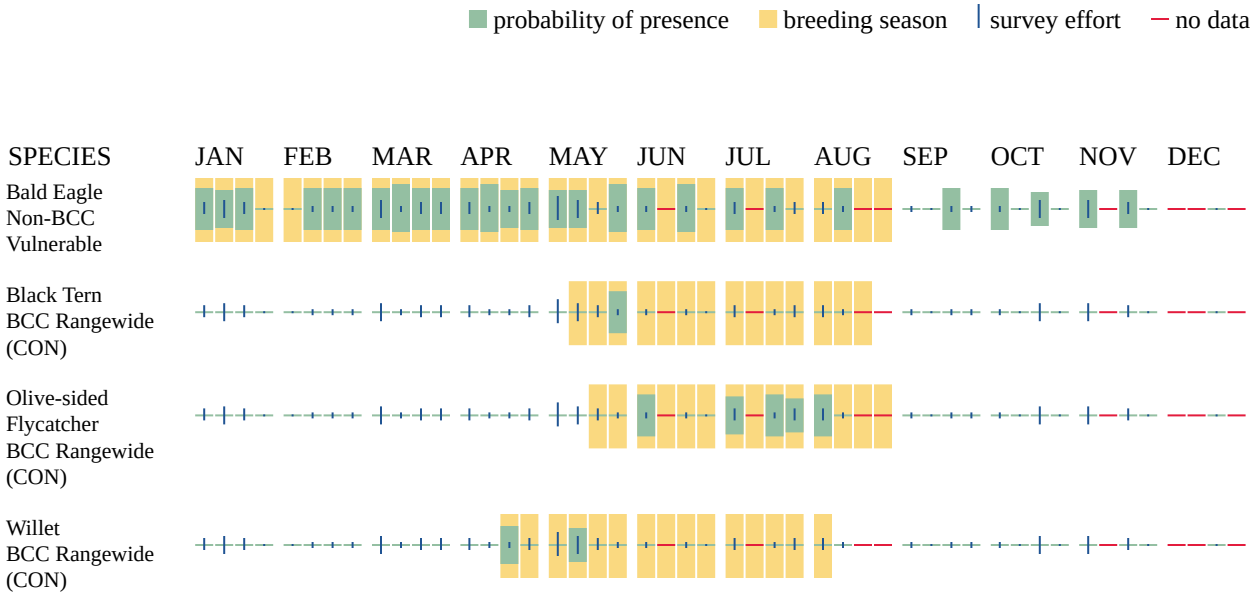
Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Additional information can be found using the following links:

- Birds of Conservation Concern https://www.fws.gov/program/migratory-birds/species
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf

MIGRATORY BIRDS FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.
Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very

helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?
The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?
The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?
To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects
For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?
If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report
The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of

certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

WETLANDS

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

FRESHWATER EMERGENT WETLAND

- PEM1Cx

RIVERINE

- R4SBCx
- R5UBFx
- R2UBH

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LEAD AGENCY CONTACT INFORMATION

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