BUREAU OF RECLAMATION

Draft Environmental Assessment

Sumner Dam Radial Gates Project

Lake Sumner, De Baca County, New Mexico

Upper Colorado Basin

U.S. Department of the Interior **August 2025**

Mission Statements

The U.S. Department of the Interior protects and manages the Nation's natural resources and cultural heritage; provides scientific and other information about those resources; and honors its trust responsibilities or special commitments to American Indians, Alaska Natives, and affiliated Island Communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

Sumner Dam Radial Gates Project

De Baca County, New Mexico
Upper Colorado Basin – Albuquerque Area Office

This Environmental Assessment was prepared for Reclamation by BRIC, LLC under Contract No. 140R4018A0010

BRIC, LLC | Subsidiary of Diné Development Corporation
Albuquerque, NM 87113

Cover Photo: Sumner Dam radial gates as viewed from downstream. Source: BRIC, LLC.

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Acronyms and Abbreviations

AAO	Albuquerque Area Office
BMP	Best Management Practices
BRIC	A limited liability company and subsidiary of Diné Development Corporation
CCR	Combined City Region
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CFS	Cubic Feet per Second
CID	Carlsbad Irrigation District
CWA	Clean Water Act
CY	Cubic Yards
DOI	Department of the Interior
EA	Environmental Assessment
ESA	Endangered Species Act
FONSI	Finding of No Significant Impact
HAER	Historic American Engineering Record
HCPI	Historic Cultural Properties Inventory
HUC	Hydrologic Unit Code
IDT	Interdisciplinary Team
IPaC	Information for Planning and Consultation tool
ITA	Indian Trust Asset
MBTA	Migratory Bird Treaty Act
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NMCRIS	New Mexico Cultural Resources Information System
NMED	New Mexico Environment Department
NMSU	New Mexico State University
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places

Reclamation	Bureau of Reclamation
SHPO	State Historic Preservation Officer
SOD	Safety of Dams
TCP	Traditional Cultural Property
TMDL	Total Maximum Daily Load
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
WCM	Water Control Manual

1. Project Purpose

1.1 INTRODUCTION

The Sumner Dam Radial Gates Project, located on the Pecos River approximately sixteen miles northwest of Fort Sumner, in De Baca County, New Mexico (Figure 1). Sumner Dam impounds a reservoir (Lake Sumner) which contains a total storage capacity of 122,804 acre-feet (ac-ft) at elevation 4,282 feet (local project datum; Reclamation 2021). Sumner Dam is owned by Reclamation and operated by the Carlsbad Irrigation District (CID) to supply irrigation to downstream lands within CID. Sumner Dam is a rockfill and earth dam with a concrete spillway that is controlled by a weir and three radial gates, and an emergency spillway in the left abutment that consists of a concrete sill buried underneath four fuse plugs (earthen engineered berms with concrete walls). The height of the radial gates is 21 feet with a top elevation when closed of 4,275 feet. Lake Sumner currently provides about 35,200 ac-ft of conservation storage for irrigation. Sumner Dam is also managed to maintain instream flow requirements for the Pecos bluntnose shiner (*Notropis simus pecosensis*). In addition to irrigation storage and instream flows, Sumner Dam and Lake provide flood control and recreation opportunities, such as swimming, boating, and fishing. The U.S. Army Corps of Engineers (USACE) has flood control authority at Sumner Dam and Lake between elevations of 4,261 feet and 4,282 feet (overflow elevation of the spillway weir is 4,259 feet).

Sumner Dam and Lake (originally named Alamogordo Dam and Reservoir) were constructed in the 1930s by Reclamation as part of the Carlsbad Project and modified in the 1950s. In 1989, operations and maintenance (O&M) of Sumner Dam were transferred from Reclamation to CID, and in 1990 Reclamation issued maintenance recommendations for the radial gates. CID made some repairs to the radial gates in 2008 and 2011, which included grit blasting and painting primer on portions of the gates. The past maintenance and repairs have been insufficient to stem the deterioration of the radial gates. In areas where water has pooled behind the radial gates, the lower half of all gates have extensive corrosion, with some areas rusted through entirely. The upper portions of the gates appear to be in good condition except for a few rust stains. The wall plates have come loose from the concrete wall in many places and need to be replaced.

Due to the continued deterioration of the radial gates, Reclamation performed a risk analysis for Sumner Dam in 2018. The total risk of Sumner Dam was found to be above Reclamation's guidelines due to the deteriorated condition of the radial gates (Reclamation 2018). Based on these findings, Reclamation's Safety of Dams (SOD) Program issued a Category 1 O&M recommendation for rehabilitation of the radial gates (SOD-2018-A)—the highest potential risk and O&M priority. Per Reclamation Directives and Standards FAC 01-07, "Category 1 O&M Recommendations will be made for the correction of severe deficiencies where immediate responsive action is required to ensure structural safety and operational integrity of a facility."

Additionally, the 2020 Sumner Dam Issue Evaluation Risk Analysis recommended a Modified Flood Operations Plan be completed until the radial gates could either be repaired or replaced. Reclamation established a Modified Operation Plan and completed associated environmental compliance, including an environmental assessment (EA), in 2021 (Sumner Dam Modified Flood

Operations Plan EA). The USACE approved a temporary deviation to the Water Control Manual (WCM) proposed by Reclamation that includes gate operation restrictions until the radial gates are replaced. The Sumner Dam Modified Flood Operations Plan EA was amended in the fall of 2023 and will provide coverage for the current WCM deviation until the Sumner Radial Gate Project commences at which time an updated modification will be put in place during construction. This EA intends to cover the WCM deviation during construction, which will further limit the operational reservoir elevation to ensure adequate flood control space.

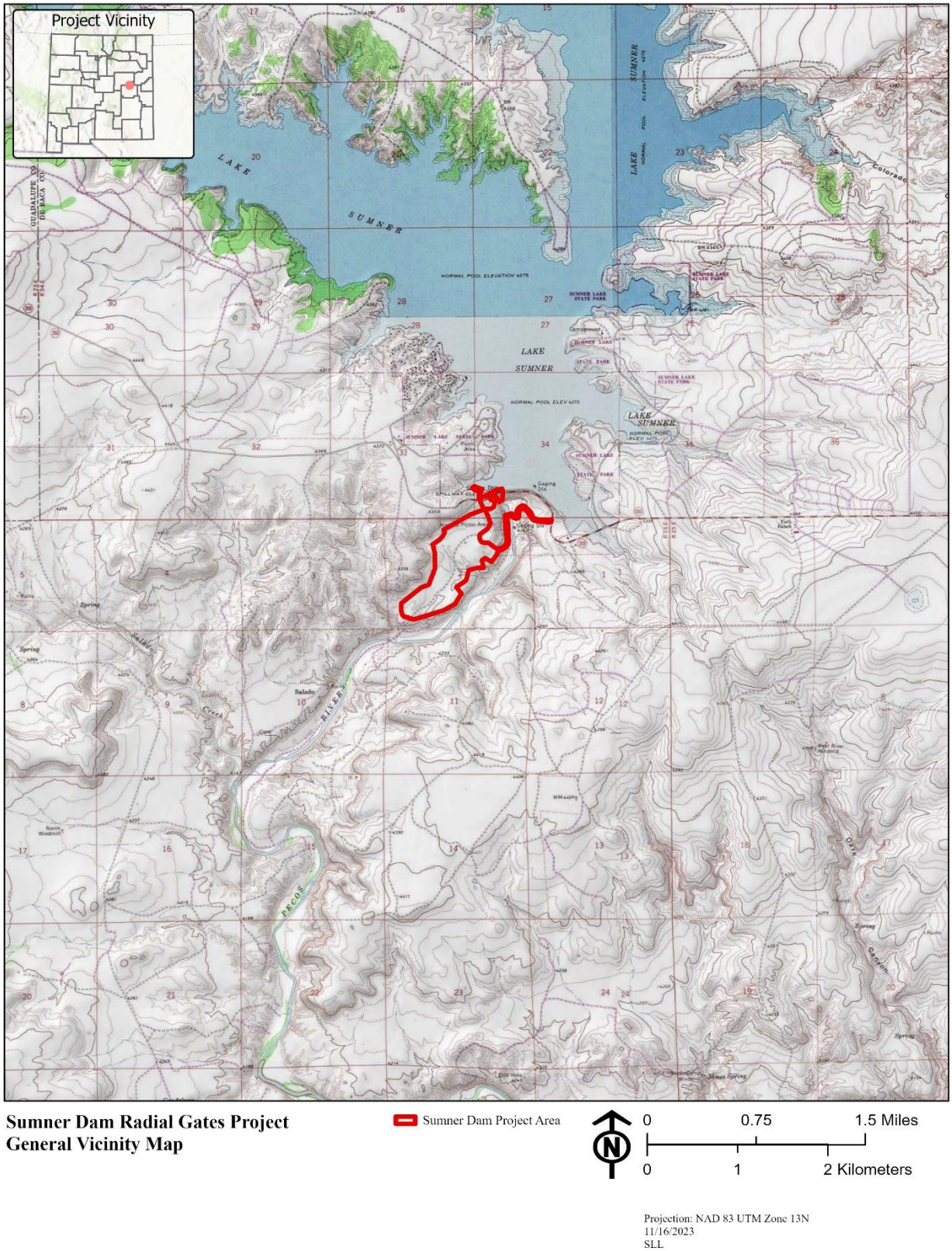
This EA analyzes two action alternatives for the Sumner Radial Gates Project (hereafter project or proposed project) and reasonably foreseeable effects on the environment for each alternative. The action alternatives are fully described in Section 2.2. The first is the Proposed Action Alternative consisting of replacing the three existing radial gates, modifying the hoisting bridge and equipment overlaying the existing concrete spillway, filling of the float wells, and placement of a construction bypass road and bridge. The second is the No New Mexico State Engineering Office (NMOSE) Permit Alternative, consisting of all proposed actions described for the Proposed Action Alternative except that a permit from the NMOSE would not be granted to temporarily store water in Brantley Reservoir during construction activities.

1.2 Purpose and Need for Action

The purpose and need of the proposed project is to provide a timely and long-term solution to the issues identified by Reclamation, including the risk of failure of the radial gates, and to ensure that Sumner Dam and Lake continue to provide irrigation, flood control, and recreation opportunities as authorized by Congress (See Section 1.4).

1.3 Decisions to be Made

In accordance with NEPA, Reclamation will approve the proposed project, approve the project with additional mitigation measures, or further evaluate the project through an Environmental Impact Statement. If Reclamation decides that the effects of the proposed project would not be significant, a Finding of No Significant Impact (FONSI) will be prepared for approval of Reclamation's proposed federal actions enabling this NEPA process to conclude.



Sumner Dam Radial Gates Project
General Vicinity Map

Figure 1. Vicinity (construction project area outlined in red) of the Sumner Dam Radial Gates Project, De Baca County, New Mexico.

1.4 RELATIONSHIP TO STATUTES, REGULATIONS OR OTHER PLANS

This EA has been prepared in accordance with NEPA and applicable regulations and policies. A variety of laws, their implementing regulations, executive orders, and other types of requirements also apply to federal actions and form the basis of the analysis presented in this EA. The NEPA process requires federal agencies to consider the potential environmental consequences of proposed actions and to enhance the environment through well-informed federal decisions.

Reclamation must comply with all applicable federal, Tribal, State, and local laws. These laws and regulations may include, but are not limited to, the following:

- The Endangered Species Act of 1973 (P.L. 94-325),
- The Migratory Bird Treaty Act of 1918 (MBTA), as amended (16 U.S.C. §§703-712),
- The Federal Water Pollution Control Act of 1948 (Clean Water Act), as amended (33 U.S.C. Chapter 26),
- The Clean Water Act of 1972, as amended (P.L. 95-217),
- The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) (42 U.S.C. Chapter 103),
- The Antiquities Act of 1906, as amended (P.L. 52-209),
- The National Historic Preservation Act (NHPA) of 1966, as amended (P.L. 89-665),
- The Archaeological and Historic Preservation Act of 1974 (P.L. 86-253),
- The Archaeological Resources Protection Act of 1979, as amended (P.L. 96-95),
- The American Indian Religious Freedom Act of 1978, as amended (42 U.S.C. §1996), and
- The Native American Graves Protection and Repatriation Act of 1990 (P.L. 101-601).

1.5 SCOPING, COORDINATION, AND PUBLIC REVIEW

Reclamation coordinated with CID, USACE, and the United States Fish and Wildlife Service (USFWS) New Mexico Ecological Services Field Office regarding water storage and flood control management at Sumner Dam. Preliminary modification designs for this EA have been refined based upon feedback and coordination with these operators. Reclamation held public scoping meetings on December 12, 2023, and January 30, 2024, and September 30, 2024, at the Fort Sumner Library and Fort Sumner Community House, respectively. A PowerPoint presentation was developed to provide background information, preliminary designs to date, and resources that may be impacted. Public comments received and responses from Reclamation can be found in Appendix A.

The interdisciplinary team (IDT) for this project consisted of resource specialists and engineers from Reclamation and contractors. Internal scoping by the IDT identified potential issues, developed the purpose and need, and developed a range of alternatives. Using input from the IDT, a list of issues this EA will analyze in detail was developed in accordance with NEPA and applicable regulations and policies. The key issues identified during internal scoping are summarized in the table below. The impact indicators provided are used to describe the affected environment and assess the impacts of the alternatives for each issue in Chapter 3.

Table 1. Issues Carried Forward for Analysis

Issue	Issue Statement	Impact Indicator
Issue 1	What are the potential impacts to soil from equipment and soil removal from construction activities?	Acres of soil impacted
Issue 2	What are the potential impacts to water quality and quantity?	Decreased water quality from sediment transport or spills/leaks of industrial fluids. Decreased water quantity for irrigation districts from construction activities.
Issue 3	What are the potential impacts to federally listed threatened and endangered species?	Take of threatened or endangered species due to construction activities. Acres of habitat available before and after construction of the Proposed Action. Changes in water quality.
Issue 4	What are the potential impacts to vegetation?	Acres of vegetation impacted
Issue 5	What are the potential impacts to the integrity of known cultural sites?	Cultural sites impacted
Issue 6	What are the potential impacts to waters of the U.S. and jurisdictional wetlands?	Acres of surface water and wetland areas impacted
Issue 7	What are the potential impacts to Indian Trust Assets?	Acres or amount of Indian Trust Assets to be impacted
Issue 8	What are the potential impacts to irrigation users, including socioeconomics?	Impacts to irrigation users and land uses and economics[1]

Issues considered by the IDT and determined not to need a detailed analysis are listed below in Table 2.

Table 2. Issues Not Carried Forward for Analysis

Resource	Rationale for Not Further Discussing in Detail
How would fugitive dust and emissions generated from ground disturbing activities impact air quality and visibility?	All areas in De Baca County, New Mexico are in attainment with the National Ambient Air Quality Standards. During site preparation and construction, air quality would temporarily be impacted by fugitive dust and pollution by exhaust emissions from motorized equipment. Air pollution from dust and exhaust emissions would cease at the completion of the Sumner Dam modifications. The temporary increase in emissions from site preparation and radial gates and hoist gate construction and spillway overlay would not be expected to result in exceeding the ambient air quality standards for any criteria pollutants in the project area or De Baca County because impacts will be temporary and limited primarily to the construction area and exhaust and emissions from equipment would be further diluted as they mix with the atmosphere in the larger area surrounding the project area. Fugitive dust from site preparation and construction activities would be controlled as necessary with the application of water or other dust suppressants.
How would the Proposed Action impact migratory birds?	Construction activities that occur during the breeding and nesting period between April 15 and August 15 within suitable nesting habitat or within 300 feet of suitable nesting habitat will have a pre-construction migratory bird nest survey conducted at least 5 days prior to activities. If any active nests are located within the project area and the contractor has determined that proposed construction activities cannot be avoided until after the birds have fledged (left the nest), then the contractor must coordinate with Reclamation biologists to contact the USFWS Migratory Bird Permit Office in Albuquerque, NM at 505-248-7882 to determine the appropriate next steps.
What are the potential impacts to introduction and spread of noxious weeds?	A biological site visit was conducted on the project area October 17, 2023. Six New Mexico Department of Agriculture listed weed species were observed in the project area. No herbicide use is proposed under the proposed action alternatives. Under the proposed action alternatives, design features would be implemented to prevent the establishment and spread of noxious weeds (See Section 2.2.3).
Would the Proposed Action use or produce hazardous materials?	No chemical subject to reporting under the Superfund Amendments and Reauthorization Act Title III in an amount equal to or greater than 10,000 pounds would be used, produced, stored, or disposed of annually in association with the proposed action alternatives. No extremely hazardous substances, as defined in 40 CFR 355, would be used, produced, stored, transported, or disposed of in association with the Proposed Action. Design features would be implemented to minimize or avoid impacts from solid wastes (See Section 2.2.3).

The draft EA was available for a 30-day public comment period from September 18 to October 18, 2024. Notices were published in the Guadalupe County Communicator and De Baca County newspapers. Reclamation also posted notices on the Albuquerque Area Office's website. A summary of public comments and Reclamation's responses are provided in Appendix A of this EA.

2. Alternatives

2.1 No Action Alternative

Under the No Action Alternative, the Sumner Dam radial gates and hoist deck would not be replaced. In addition, there would be no changes to the sill elevation to match the upstream weir elevation, and a new concrete overlay over the existing spillway would not occur. Sumner Dam would remain a high safety risk with the potential for failure of the radial gates. The existing radial gates have extensive corrosion on the lower half, with some areas rusted through entirely. In addition, the wall plates have come loose from the concrete wall in many places. Reclamation would be out of compliance with its policy directives and Sumner Dam and Lake would require a new Modified Operations Plan. A new modified flood operations plan would further restrict use of the reservoir for irrigation purposes to maximize flood control capacity. Sumner Dam would fail to perform at least one of its Congressionally authorized purposes. The Master WCM for the Pecos River Basin would require reevaluation by USACE, the flood control authority.

2.2 Proposed Action Alternatives

2.2.1 Radial Gates Replacement (Proposed Action)

Under the Proposed Action, Reclamation would replace three radial gates, replace the hoist deck, and overlay the existing concrete spillway (see Figure 2). A bypass road and bridge would also be constructed just downstream of Sumner Dam to detour traffic off the spillway bridge and allow for movement of construction traffic as part of the Proposed Action. Up to 74 acres would immediately be impacted by this alternative (Figure 2; Table 3). Reclamation would implement Best Management Practices (BMPs) to reduce impacts to the river environment, water quality, bluntnose shiners, and reduce the risk of spills or leaks (See Section 2.2.3). If the Proposed Action is selected, construction is expected to be completed by the end of 2029. The bypass bridge designs will be finalized during the construction phase and will be required to utilize the alignment as identified in this EA. The construction bypass bridge will be a Mabey Compact 200 bridge, placed on foundations outside the Ordinary High-Water Mark (OHWM). If the bypass bridge designs are modified, Reclamation will reevaluate project footprint and impacts to determine if further NEPA is required.

Table 3. Proposed Action Activities and Estimated Ground Disturbance

Activity	Acres
Road improvements and bridge abutments	5.3
Staging and crane use area	16.9
Borrow pit	51.6
Total	**73.8**

Radial Gates and Hoist Deck Replacement

Radial Gates

The three existing counterweighted radial gates and associated wall plates would be removed and replaced with gates that are 45 foot wide by 16 feet tall and do not have a counterweight. The 5-foot difference between the existing gates and new gates would be made up by increasing the spillway sill elevation to match the upstream weir; this is discussed in more detail under spillway concrete overlay. Replacement of the three existing radial gates would require removal of the existing gates, wall plates, and associated appurtenant equipment. The new gates would reuse the existing embedded pins, which may require on-site machining, scaffolding, and a specialized lathe. The pins would be abrasively blasted with water to remove the coatings. The abrasive blast removal procedure would include measures, such as scaffolding or tenting the work areas, to ensure blast media and waste material are all adequately captured and not allowed to enter the spillway, removed off site, and disposed of at an approved facility. The new gates and stainless-steel wall plates and sill plates would be lowered into each gate bay in parts using cranes and reassembled in the bay for final installation. The existing pier section would be reinforced with steel. Structural analysis will determine the level of reinforcement and demolition needed for the piers.

Removal of the radial gates and wall plates could be completed by placing cranes on either side of Sumner Dam along State Road 203 (NM203) or placing a smaller crane into the exiting spillway (Figure 2). A smaller crane could be lowered into the existing spillway to remove the gates, wall plates, and ancillary infrastructure. The smaller crane could be located according to the gate being removed, allowing for shortened pick distances and lower crane capacity requirements. The use of a smaller crane requires further structural assessment of the spillway floor. Removal of the plates would also require cutting into the existing concrete piers to cut the embedded angles and anchors. Hand tools could be used to cut into concrete and existing anchors. For the purposes of our impacts analysis, we analyzed the impacts of radial gates removal that could use either of these potential crane placements.

A bulkhead would be installed in front (upstream) of the radial gates to reduce hazards to the construction site and downstream residents during a storm event. The radial gates normally provide protection to residents downstream in a storm event. Two radial gates would be blocked, and one would remain open. Flows from one open radial gate are not expected to exceed safe channel capacity downstream up to a 200-year-frequency storm event. A 3-day, 200-year storm was modeled by Reclamation's Upper Colorado Basin Regional Office Dam Safety Group using the most recent storms developed by the Denver Technical Service Center. In the model, two gates were closed, and one was open to simulate the conditions during the proposed construction activities.

Hoist Deck

Sumner Dam's existing hoist deck does not meet the load requirements of the proposed radial gate design and would need to be replaced with a hoist deck of a higher capacity within the existing

footprint. The existing hoist deck is divided into three 45-foot spans (one per gate) and lays on a bearing plate. The new hoist deck would consist of two adjacent prestressed/precast voided slab beams with cast-in-place reinforced concrete. The existing float wells would be filled with a combination of unreinforced cast-in-place concrete, reinforced cast-in-place concrete, and controlled low strength material. This would provide an additional bearing area for the replacement hoist deck. The new guardrails would be similar to the existing material with embedded posts added. A new chain link fence could be installed to replace what was removed for access to the construction site. Additionally, the existing power supply is not sufficient for the new hoisting equipment and would be replaced. The new hoist deck would be lowered into place using cranes.

Demolition of the hoist deck could be achieved using hand tools to cut the steel reinforcement and existing concrete structure. Removal of the existing hoist deck and ancillary infrastructure could require partial demolition of the spans depending on the weight capacity and radius of the cranes. Cranes would be used as described above for the removal of the radial gates. Power supply lines to the hoists would also be removed. All gates, wall plates, hoist materials, and ancillary equipment (e.g., hoist rails, guardrails) may be coated with hazardous materials (Reclamation 2022) that will be properly disposed of at an approved landfill.

Spillway Concrete Overlay

The spillway concrete sill elevation will be raised 5 feet to 4,259 feet to match the elevation of the existing upstream weir. Construction of the concrete overlay would involve roughening of the existing spillway concrete floor by hydrodemolition; installation of grouted anchors and/or dowels into the existing spillway sill, piers, and walls; form work; and placement of new reinforced concrete, most likely pumped to the point of placement from the roadway on either side of the existing spillway.

Access and Staging

Reclamation will use existing roads in addition to constructing the NM203 bypass route. The Proposed Action area can be reached through the eastern side of the spillway by taking NM203 off U.S. Highway 84. Alternatively, the Proposed Action area could be reached through the western side of the spillway by taking State roads 91 and 203 coming from Santa Rosa, NM. The hauling of construction equipment will travel along NM203 consistent with the 20-mph posted speed limit or slower. The construction equipment may be hauled through Fort Sumner along U.S Highway 60 (US60) and State Road 84 (NM84), which normally experience large volumes of traffic or heavy equipment. There would be a traffic control plan implemented during construction of the radial gates and hoist deck and spillway modifications. Staging areas for equipment and materials would be located near the Proposed Action area immediately adjacent to Sumner Dam (Figure 2).

NM203 Bypass

State Road 203 crosses Sumner Dam on a one-lane bridge above the radial gates. The bridge over the radial gates would be closed for the duration of construction of the Proposed Action due to the close proximity to the construction area and the 15-ton load rating for the bridge (BOR 2021), which does not safely accommodate most construction equipment. A bypass bridge for use by the construction contractor would be installed downstream of Sumner Dam before the bridge over the radial gates is closed (Figure 2). The bypass bridge will be open to the public but may be subject to short, attended closures as needed for construction; any interruptions to normal traffic flow will be accompanied by construction signage, flagging, and safety personnel. The bypass bridge will remain in service until the project is complete. Subject to potential agreements with the New Mexico Department of Transportation (NMDOT), the bypass bridge may remain open to the public past

construction. The crossing installed would be a portable bridge that spans the Pecos River with concrete bridge abutments constructed outside the river and its floodplain.

Existing roads within the State Park that access the river below Sumner Dam would be used to access the bypass bridge. Road alignment changes will be necessary due to the existing road's sharp curves and grade drop to the river; the existing road would be demolished and reconstructed to bypass Sumner Dam (Figure 3). In addition, concrete abutments on both sides of the bypass bridge would be constructed to connect the east and west segments of the reconstructed bypass road. Most of the reconstructed road alignment will follow the existing road corridor in the state park to reduce impacts of undisturbed areas. Approximately 2.7 acres of asphalt will be demolished and replaced, and 5.3 acres of new ground could be disturbed to widen the road to ensure adequate width and grades to safely pass construction traffic and construct the bypass bridge abutments. The ground disturbance estimate includes a 5-foot construction buffer on both sides of the road and an additional 2-foot buffer on one side for pedestrians. The existing road asphalt will be demolished, hauled, and removed from the site for appropriate disposal. Excavated rock and soil along the existing road alignment will be removed and stockpiled at one of the existing borrow areas. The removed soil may be reused for road construction depending on the soil type and suitability. Additional fill soil for road construction will be taken from the identified borrow areas. New road basecourse will be imported from an off-site commercial source. Since the bypass will be used by the public, the new road, bridge, and abutments will be designed to meet NMDOT design standards for low-volume roads. Best management practices would be implemented to minimize impacts to project area and surrounding environment (See Section 2.2.3).

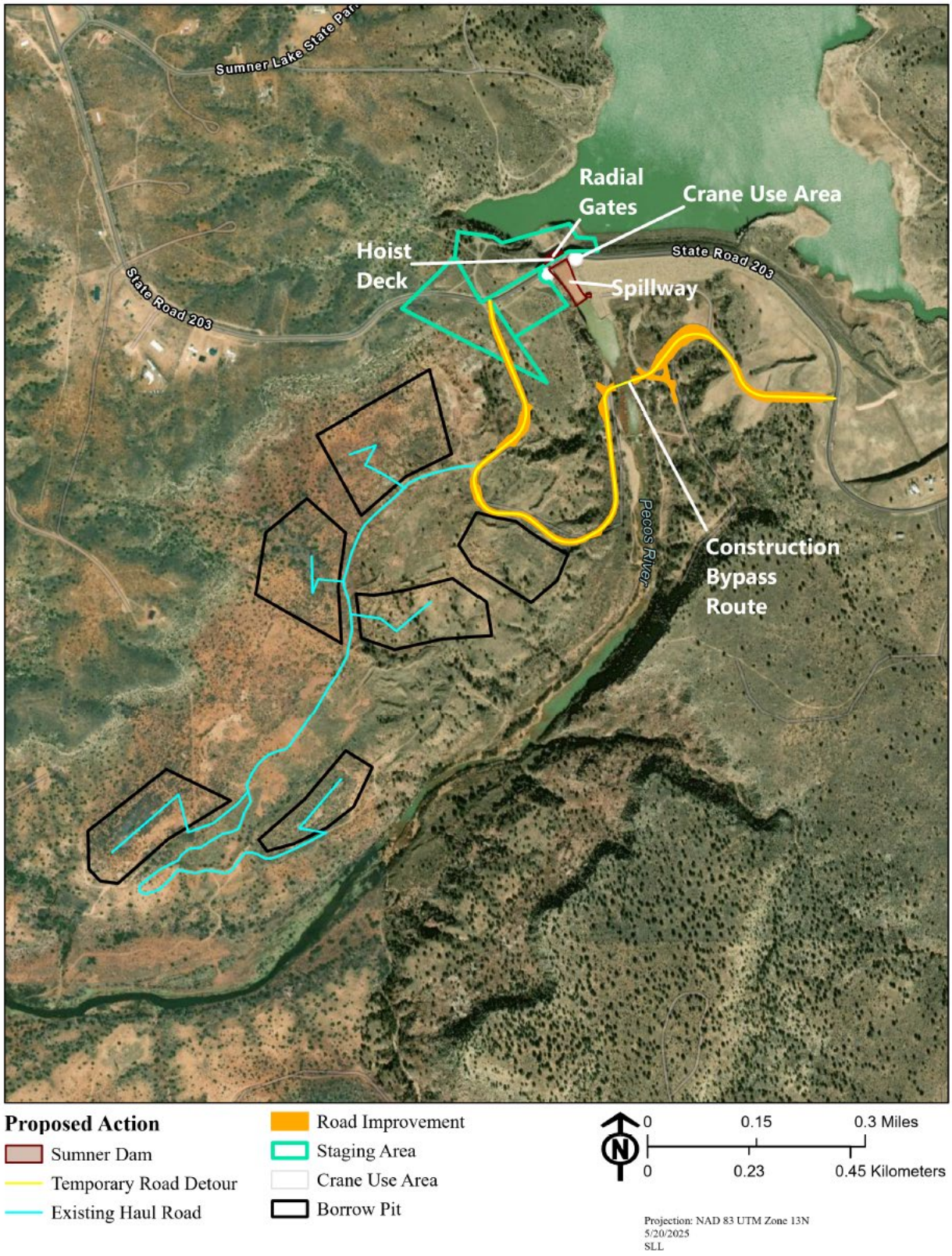


Figure 2. Proposed Radial Gates Replacement, Hoist Deck Replacement, Spillway Overlay, and Road Improvement Areas of Disturbance for the Proposed Action.

CID Water Storage

CID irrigation storage capacity at Lake Sumner is based on elevation and decreases annually as sediment accumulates, with the difference incrementally increasing CID's allowable irrigation storage at Santa Rosa Reservoir upstream. Prior to the implementation of the WCM deviation in 2021, total conservation storage at Lake Sumner was limited to elevation 4,259 feet (Project Datum). With the interim risk reduction deviation to the WCM (due to gate deterioration) in place, conservation storage is limited to elevation 4,259 feet at Lake Sumner, which correlates to 31,767 ac-ft of irrigation storage for CID per the 2025 Pecos River storage entitlements calculation.

Construction on the radial gates would further limit CID's irrigation storage in Lake Sumner to elevation 4,245 feet (Project Datum) to ensure adequate flood control capacity during construction. This would restrict CID's entitlement storage at Lake Sumner to less than 10,000 ac-ft for the duration of construction. While the difference in storage at Lake Sumner can be transferred to Santa Rosa, actual storage in Santa Rosa depends on precipitation in the upper portion of the watershed each year. CID and Reclamation are seeking a permit from the NMOSE to temporarily store an additional 40,000 acre-feet of water downstream in Brantley Reservoir, for a total storage volume of 80,000 ac-ft, until construction of the Sumner Dam Radial Gates Project is complete. The additional storage at Brantley Reservoir will not exceed the total entitlement storage allotment for CID of 176,500 ac-ft, divided among Santa Rosa Reservoir, Lake Sumner, Brantley Reservoir, and Avalon Reservoir.

This Proposed Action assumes that the NMSOE grants the temporary storage permit. Under the granted permit, CID will release water as needed to maintain the recommended elevation in Lake Sumner from Sumner Dam to Brantley Reservoir via the primary outlet (not over the spillway) into the Pecos River. The water would then flow in the Pecos River for over 200 river miles to Brantley Reservoir, located about 15 miles northwest of Carlsbad, NM.

2.2.2 Replacement of Three Radial Gates, Except No NMOSE Permit (No NMOSE Permit Action)

Under this alternative, all activities would be the same as described for the Proposed Action Alternative except that a permit from the NMOSE would not be granted to temporarily store water in Brantley Reservoir during construction activities.

Figure 3. Road Improvements for Bypass Access Route.

2.2.3 Design Features, Stipulations, and BMPs

The following Design Features, Stipulations, and BMPs are applicable to both the Proposed Action Alternative and the No NMSOE Permit Action Alternative. The following list provides currently anticipated features and BMPs, however the list is not all-inclusive and may be modified by the contractor during construction as necessary to control and reduce impacts.

General

- The Contractor shall not allow construction, storage, or parking of vehicles or equipment outside the proposed project area footprint.
- The construction footprint for the proposed actions shall be kept to the minimum width required to complete construction and utilize previously disturbed areas wherever possible.

Equipment and Operations

- Equipment will be refueled at least 100 feet (outside of the floodplain) from the Pecos River.
- Fuel, oil, hydraulic fluid, or substances of this nature will be stored within sealed, storage containers or facilities that are located outside the floodplain and provide secondary containment per the Contractor-prepared site-specific Storm Water Pollution Prevention Plan (SWPPP) and use SWPPP criteria for storage and refueling.
- Appropriate spill containment and clean-up materials will be onsite and construction and other on-site staff will have proper training to conduct spill containment and cleanup as needed.
- Prior to being onsite, all equipment will undergo high-pressure spray cleaning and inspection prior to initial operation in the project area.
- All equipment will be checked each morning for leaks. Leaking equipment will be removed from the project site until repaired and cleaned.
- Equipment will be parked overnight on pre-determined locations on high ground away from the Pecos River.

Natural Resources

- Equipment will be cleaned and free of plant and soil residue. All construction equipment will be pressure washed and/or steam cleaned before entering the watershed to ensure that all equipment, machinery, rocks, gravel, and other materials are cleaned and weed free and inspected daily for leaks. If equipment is used in an area containing invasive or noxious weeds, it will be cleaned before it is moved to another location.
- Construction areas, equipment yards, stockpile areas and materials, and other disturbed areas will be protected from stormwater and construction water runoff and reduce runoff into the Pecos River with appropriate BMPs (e.g. berms, silt fence, covering soils, dust abatement, concrete wash areas, and trackout pads) as described in the contractor-prepared SWPPP.
- Following construction, disturbed soils will be recontoured and revegetated according to the contractor-prepared SWPPP with a native seed mixture to stabilize the loose soils.
- Construction activities are planned to be year-round and will occur during the migratory bird breeding and nesting season (April 15 to August 15). Construction activities that occur during the nesting season within suitable nesting habitat or within 300 feet of suitable nesting habitat will have a pre-construction migratory nesting survey completed at least 5

days prior to construction activities. If an active nest is found, then there is no disturbance within a minimum distance of 100 feet until the young fledge or the nest fails. If any active nests are located within the project area and the contractor has determined that project activities cannot be avoided until after the birds have fledged (left the nest), then the contractor must coordinate with Reclamation biologists to contact the USFWS Migratory Bird Permit Office in Albuquerque, NM at 505-248-7882 to determine appropriate next steps. Reclamation's Albuquerque Area Office biologist should be consulted prior to contacting the USFWS. Active nests may only be removed with a permit issued from the USFWS Migratory Bird Permit Office in Albuquerque. A permit may authorize active nest removal by a qualified biologist with bird handling experience or by a permitted bird rehabilitator.

Cultural Resources

- If previously unknown archeological resources or skeletal remains are discovered, ground disturbance will be stopped in the area of any discovery, protective measures will be implemented, and procedures outlined in 36 CFR Part 800 will be followed, as applicable. The Archeologist for Reclamation's Albuquerque Area Office (AAO) and the New Mexico State Historic Preservation Officer (SHPO) will be notified of the discovery. Resources will be evaluated for their National Register of Historic Places (NRHP) significance by the SHPO, and adequate mitigation of project impacts will be implemented. Work will not commence until the SHPO has given approval.
- Six sites recommended as undetermined would be flagged and disturbance would not occur within 50 feet of the site boundary.
- A Level 2 Historic American Engineering Record (HAER) documentation will be completed for Sumner Dam before construction is started to mitigate adverse impacts to cultural resources and is currently underway.

2.3 ALTERNATIVES CONSIDERED BUT DISMISSED

Reclamation considered a number of alternative designs to the proposed actions, including those detailed below.

Radial Gates Replacement with Cofferdam––Reclamation considered using an earthen cofferdam constructed immediately upstream of the Sumner Dam as a temporary access route during construction activities instead of a downstream bypass bridge. A cofferdam is an enclosure built to allow an area to be pumped dry for construction work to occur. A cofferdam also protects the construction area during flood events. However, this alternative was dismissed because of the higher estimated construction costs and inability to safely release flood pulses that exceed the outlet works capacity. Reclamation determined that a cofferdam would not provide the same level of safety for residents downstream during construction as bulkheads. The Proposed Action Alternative will install bulkheads in front of the existing radial gates. If a flood event occurs, bulkheads will provide better flood management.

Replacement of Three Radial Gates and Culvert Road Bypass––This action alternative would have all the same elements as described for the Proposed Action Alternative, except the temporary bypass across the river for construction access would consist of a temporary culvert crossing over

the Pecos River downstream of the spillway. The crossing would place reinforced concrete pipe (RCP) culverts in the Pecos River and compacted backfill sourced from borrow pits southwest of the spillway on top of the culverts (Figure 2). This alternative would require instream work and placement of materials into the Pecos River channel. This alternative design was dismissed because Reclamation determined that it would have greater environmental and flood management impacts to the Pecos River than the Proposed Action Alternatives with a portable bridge. Reclamation was also concerned with the anticipated level of long-term maintenance to control and repair scour at the crossing.

Removal of the Radial Gates—A third alternative element considered but dismissed was decommissioning and removing the three existing radial gates. This alternative design was considered, but dismissed because it does not meet the federal dam safety guidelines (Reclamation 2020). Removal of the radial gates would take away the flood control capabilities and storage above the remaining spillway crest weir (elevation 4259 ft (Project Datum)). The uncontrolled spillway could release significantly higher flows than the safe channel capacity (Reclamation 2020). This alternative would also not meet the purpose and need because it would not allow Sumner Dam and Lake to meet irrigation and flood control project purposes.

Decommission the Radial Gates and Raise the Weir—A fourth alternative element considered but dismissed was to decommission the radial gates and raise the weir by three feet to increase storage. This alternative design was considered and dismissed because raising the weir would not allow larger precipitation events to be fully captured within Lake Sumner and would require water to flow down the spillway (Reclamation 2023). In addition, as stated above, removal of the radial gates would remove flood control capabilities and storage above the remaining crest. The uncontrolled spillway could release significantly higher flows than the safe channel capacity increasing safety risks downstream. This alternative design would also not meet the purpose and need because it would not allow Sumner Dam and Lake to meet irrigation and flood control project purposes.

Replacement of the Radial Gates without the Bypass Bridge—Reclamation considered implementing the proposed action of replacing the radial gates without the construction of a bypass road and bridge. This alternative was dismissed since construction and O&M access across the Pecos River will be required at all times during construction. When the existing dam bridge over the radial gates is closed during construction, a bypass will be necessary for construction access to both sides of the Dam and the radial gates construction area.

3. Affected Environment and Environmental Consequences

This chapter describes the existing conditions relevant to the issues presented in Table 1 and provides a comparative analysis of the reasonably foreseeable impacts of the alternatives. Only those resources and conditions having the potential to be affected by the alternatives are discussed and analyzed within this section.

As described above in section 2.2.1, the impacts analysis area can be divided into two distinct areas. The first is the construction project area consisting of the work at the gates, the road and bridge, and the spoil locations. The second is the water management changes during construction consisting of maintaining a lower reservoir elevation at Lake Sumner due to the restriction and construction needs, and to maintain that elevation water must be released throughout the construction period year-round. These will be referred as the project area and the water area, see Figure 4.

3.1 Soil Resources

3.1.1 Affected Environment

The affected environment for soils is identified as the Sumner Dam Radial Gates project area (Figure 2) and water area (i.e., Laker Sumner, Pecos River, and Brantley Reservoir) where soil could be affected from ground disturbance by the proposed alternatives. There are three soil map units in the project area (Table 4). The predominant soil adjacent to Sumner Dam and along the banks of the Pecos River is identified as Latom-Rock outcrop complex. This soil consists of fine, sandy loam soil formed from redbed colluvium and alluvium derived from sandstone and shale deposits. The Ima-Gallen association soil type is the dominant soil within the project area followed by Latom-Rock outcrop. The Ima-Gallen association soil type is typically found in areas with land formations of hillslopes, toe/footslopes and convex downslopes (NRCS 2024). The Natural Resources Conservation Service's (NRCS) Web Soil Survey website (http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm) provides complete soil information.

Table 4. Soils Mapped in the Sumner Dam Radial Gates Project Area.

Map Unit	Symbol	Textures	Parent Materials
Gallen-Torriorthents association, 15 to 35 percent slopes	34	Very gravelly sandy loam Very gravelly loamy sand	Redbed alluvium derived from sandstone and shale
Ima-Gallen association, 2 to 7 percent slopes	37	Fine sandy loam Gravelly sandy loam	Redbed alluvium derived from sandstone and shale, and gravelly slope alluvium derived from igneous, metamorphic and sedimentary rock
Latom-Rock outcrop complex, 3 to 20 percent slopes	57	Fine sandy loam, Bedrock	Redbed colluvium and alluvium derived from sandstone and shale

Source: U.S. Department of Agriculture NRCS Soil Survey Staff 2024.

3.1.2 Impacts from the No Action

Under the No Action Alternative, no direct impacts to soil resources are expected as no ground disturbance would occur. The No Action Alternative would result in the continuation of the current soil conditions in the proposed project area. There are reasonably foreseeable impacts from a failure of the radial gates and subsequent risk of uncontrolled flood events due to the continued deterioration of the radial gates. The safe channel capacity downstream of Sumner Dam is approximately 8,500 cubic feet per second (cfs). A single radial gate failure (considered the most likely failure mode) would increase flows in the channel downstream of Sumner Dam by an estimated 3,500 cfs. Simultaneous failure of all three radial gates would increase flows downstream by an estimated 10,500 cfs, however this failure scenario is unlikely, and the actual flows would be expected to be less since portions of the radial gate(s) remaining in place would restrict flows (Reclamation 2018).

The higher risk to soil resources does not come directly from failure of the radial gate(s), but from subsequent uncontrolled flood events. The flow rates estimated above assumed a "sunny day" failure with the lake's water surface elevation at the winter storage level. During flood control situations, water surface elevations in the lake could be much higher, and the Pecos River could see large inflows downstream of the Dam. Inoperable radial gates would eliminate any ability to control floods, thus elevating the risk of exceeding safe channel capacity (Reclamation 2023). The potential increased flow from radial gates failure or uncontrolled floods could result in the transport of increased sediment amounts immediately downstream to the Pecos River from churning up sediment in the stilling basin area. A stilling basin is located at the downstream side of the dam and reduces energy of water flowing down the spillway to prevent overtopping and protects the area near Sumner Dam and the Dam itself from erosion.

3.1.3 Impacts from the Proposed Action

Under the Proposed Action Alternative, approximately 74 acres of soils would be disturbed from removal of vegetation and preparing the project area for installation of the support abutments for the bypass portable bridge and road improvements (Figure 2). Construction activities for removal and installation of the radial gates and hoist deck and overlay of the spillway would occur within the existing Sumner Dam footprint and would not require soil disturbance. Soils associated with the

project area for installation of the bypass portable bridge and associated improvements to existing roads could be structurally mixed, displaced, and exposed to wind and water erosion. Soils where the abutments and road improvements would occur have a moderate water erosion potential; erosion potential is for areas that lack vegetation and are smooth (NRCS 2024). The potential for increased water and wind erosion would depend on precipitation and wind events, but it is expected that the risk of erosion would be low due to the generally flat terrain in the project area and implementation of BMPs. BMPs could include but are not limited to stockpiling and covering soil onsite and watering soils to reduce dust and minimizing the risk of soil erosion (See Section 2.2.3). Excess soils excavated from construction of the support abutments and the bypass road will be stockpiled at the borrow areas.

Soils in construction areas would experience soil compaction from heavy equipment use, which would reduce water infiltration capability of soils and soil aeration. The magnitude of soil compaction would depend on the soil texture and the type and weight of the equipment being used. The soils in the project area are gravelly sandy loams that are prone to compaction when moist. Implementing BMPs during construction and excavation activities such as no construction activities to be performed during periods when the soil is too wet to adequately support construction equipment or using existing roads, when possible, would be expected to minimize risk of soil compaction.

Soils in the project area could also be contaminated by oils and fuels associated with construction equipment. However, implementing BMPs, such as not fueling or servicing equipment in the field and containing cleaning up spills immediately, would be expected to reduce potential impacts to soils from petroleum products. Overall, impacts to soils would be minor and localized with implementation of BMPs to reduce soil compaction and erosion and soil impacts would be limited to the existing borrow pits, road improvement footprint, and bridge abutments. Furthermore, once construction is completed, road improvement areas not part of the road alignment would be graded and recontoured to previous existing conditions.

For the water area, reasonably foreseeable impacts from bypassing water during construction activities to Brantley Reservoir include 1- lower water levels at Lake Sumner, 2- more frequent, and less fluctuation if the block releases are not needed. low flows along the Pecos River from Lake Sumner to Brantley Reservoir, and 3- higher water levels at Brantley Reservoir. Lower water levels at Lake Sumner would be expected to expose shorelines, which could increase water and wind erosion. Higher water levels at Brantley Reservoir could also increase erosion potential along shorelines, with increased water levels waves could become stronger along the shorelines increasing erosion potential. The bypass water flows into the Pecos River would be expected to be up to 80 cfs, which would not be expected to increase scour of the channel downstream or soil erosion rates and bypass flows would continue to be relatively sediment-free, and year-round bypass will reduce the need for block releases thus more stable flows in the river channel.

3.1.4 Impacts from the No NMOSE Permit Action Alternative

Impacts from No NMOSE Permit Action Alternative would be the same as described for the Proposed Action Alternative. Without the NMOSE permit, the disturbed areas, onsite construction activities, and other aspects of the work that might impact soils should not be appreciably different if the permit is obtained prior to construction.

3.2 WATER QUALITY AND QUANTITY

3.2.1 Affected Environment

The affected environment for water quality and quantity includes surface waters under the water area (i.e., Lake Sumner, Pecos River, and Brantley Reservoir) that could be affected by the proposed alternatives (Figure 4). The project area falls within two watersheds, the Pecos Headwaters Watershed (hydrologic unit code (HUC 13060001) and the Upper Pecos Watershed (HUC 13060003). Sumner Dam is the boundary between these two watersheds—Pecos Headwaters and Upper Pecos. The Pecos Headwaters Watershed encompasses most of the northern project area including Lake Sumner and the Upper Pecos Watershed runs through the southernmost portion of the project area. The Pecos River, which runs downstream from Sumner Dam into the Upper Pecos Watershed area, is a perennial river and a jurisdictional water of the U.S. Peak flows occur in the monsoon season from heavy rain events. Monsoons in the summer months may result in high flows of mostly short duration. The average annual maximum stream flow between 2000 to 2020 for the water monitoring station below Sumner Dam (USGS station 08384500) is 1,499 cfs. The average annual maximum stream flow ranged from 1,300 cfs (2000) to 1,700 cfs (2021).

Salinity levels in the Pecos River upstream are elevated due to natural (i.e., geological) and anthropogenic (i.e., groundwater discharge and irrigation and municipal return flows) factors (USGS 2019). The construction of the dams along the Pecos River have reduced stream flows and flood frequency that previously diluted the naturally saline groundwater inflows, resulting in increased naturally high-salinity groundwater inflows relative to overall streamflow (Hoagstrom 2009). All salinity concentrations between Lake Sumner to Brantley Reservoir originate along the Pecos River reach between Acme and Artesia (USGS 2019). The saline inputs include spring inflow and underflow at Bitter Lake National Wildlife Refuge, inflow from the Rio Hondo, and outflows from Lea Lake, with these sources contributing approximately 75–80 percent of saline concentrations that reach Brantley Reservoir (USGS 2019). From Artesia to Carlsbad, all major ion concentrations decrease downstream from Brantley Reservoir except bicarbonate (USGS 2019). Periodic releases of fresh water from Sumner Dam are stored in Brantley Reservoir, reducing saline concentrations in Brantley Reservoir (Robertson 1997, USGS 2019). Inflows from fresh groundwater between Artesia and Carlsbad to the Pecos River and inflows from Avalon Reservoir may be helping to reduce salinity levels in this portion of the Pecos River from Brantley Reservoir to Carlsbad (USGS 2019).

Section 303(d) of the Clean Water Act (CWA) states that authorized states are required to develop lists of impaired waters that do not meet the water quality standards. The Pecos River segment from Santa Rosa Reservoir to Sumner Reservoir has been identified as impaired due to nutrient and *E. coli* exceedances (NMED 2024). The NMED has identified Lake Sumner as impaired due to mercury exceedances and an associated fish consumption advisory (NMED 2024). Total maximum daily loads (TMDL) for E. coli and nutrient exceedances are being prepared were expected to be completed in 2024 (NMED 2024), however are still pending. These TMDLs may require monitoring and reduction of certain water quality parameters in any discharges to impaired waters.

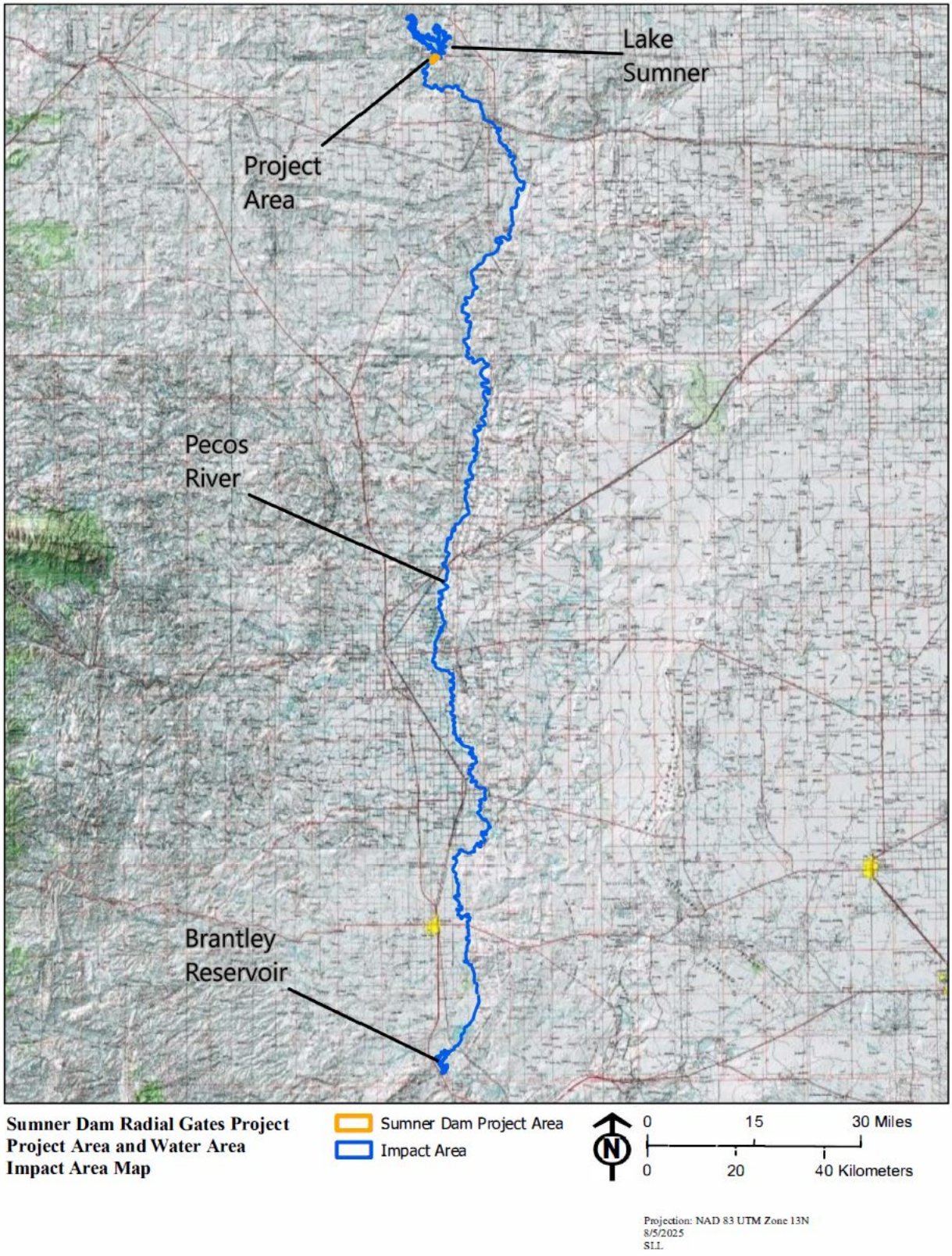


Figure 4. Impact Analysis Area for the Project Area and the Water Area

Water Storage

Sumner Dam is currently one of four impoundments on the mainstem of the Pecos River in New Mexico that are authorized to store irrigation water for CID. CID is the only entity that has irrigation storage on the Pecos River in New Mexico, with a storage entitlement of 31,767 ac-ft (part of the entitlement storage allotment below) in Lake Sumner per the 2025 Pecos River Storage Entitlements calculations. Other portions of Lake Sumner's conservation pool include the minimum pool of 2,500 ac-ft and estimated accumulated sediment. The total allowed storage in Lake Sumner is referred to as the conservation storage pool, which is 35,917 ac-ft for 2025. There is also a flood pool of 88,200 ac-ft in addition to the conservation pool. The total entitlement storage allotment for CID is 176,500 acre-feet, divided among four reservoirs—Santa Rosa Reservoir, Lake Sumner, Brantley Reservoir, and Avalon Reservoir.

Under the WCM, CID may store an additional 20,000 ac-ft of water in Lake Sumner from November 1st to April 30th. Entitlement storage may therefore exceed 31,767 ac-ft before May 1st. If winter storage is full, the reservoir elevation will exceed 4,261 feet but must be drawn down before April 30th (Reclamation 2020). This additional winter storage is not allowed under the current WCM deviation to reduce the risk of gate failure.

3.2.2 Impacts from the No Action

Under the No Action Alternative, no direct impacts to water quality or quantity are expected as no ground disturbance or construction activities would occur. The radial gates would be expected to continue to deteriorate and the risk of failure of the radial gates would remain as well as the risk of subsequent uncontrolled flood events. The inability to control flood events at Sumner Dam could necessitate renegotiation of existing agreements, allocations, and compacts regarding irrigation storage and flood control space that could alter the way the Pecos River is managed. The failure of the radial gates could also result in flood control storage shifted to other project reservoirs, possibly affecting physical storage space in the reservoirs and impacting project operations. Winter storage for CID irrigation delivery at Lake Sumner is not allowed by the WCM deviation (Reclamation 2021) and any irrigation season storage is only allowed under the premise that the radial gates would be replaced. If the radial gates are not replaced, USACE is likely to require additional risk reductions which could include further reducing CID storage capability at Lake Sumner and requiring CID storage in other reservoirs.

The safe channel capacity downstream of Sumner Dam is approximately 8,500 cfs. A single radial gate failure (considered the most likely failure mode) would increase flows in the channel downstream of Sumner Dam by an estimated 3,500 cfs. Simultaneous failure of all three radial gates would increase flows downstream by an estimated 10,500 cfs, however this failure scenario is unlikely, and the actual flows would be expected to be less since portions of the radial gate(s) remaining in place would restrict flows (Reclamation 2018).

The higher risk does not come directly from failure of the radial gate(s), but from subsequent uncontrolled flood events. The flow rates estimated above assumed a "sunny day" failure with the lake's water surface elevation at the winter storage level. During flood control situations, water surface elevations in the lake could be much higher, and the Pecos River could see large inflows downstream of the Dam. Inoperable radial gates would eliminate any ability to control floods, thus elevating the risk of exceeding safe channel capacity (Reclamation 2023). Failure of the radial gates would be expected to impact water quality from increased flows, which increase sediment amounts immediately downstream to the Pecos River from churning up sediment in the stilling basin area.

3.2.3 Impacts from the Proposed Action

Construction activities for removal and installation of the radial gates and hoist deck and overlay of the spillway would occur within the existing Sumner Dam footprint and would not impact water quality because it would not require soil disturbance. The radial gates and hoist deck would be removed using cranes located along NM203 (see Figure 2), with hand tools used to cut the hoist deck into segments. Furthermore, all materials removed from the existing radial gates and hoist deck would be prevented from entering the spillway to the Pecos River and all materials would be disposed of following all required local, state, and federal laws. The concrete overlay of the existing spillway would also occur within the existing footprint of the concrete spillway while dry and not require soil disturbance. Therefore, there would be no impacts to water quality from removal and constriction of new radial gates and hoist deck and overlaying of the existing spillway.

The construction bypass bridge would span the river with the concrete support abutments installed outside the Pecos River and its floodplain. Soils would be disturbed from installation of the bridge, its abutments, and 6,100 linear feet of road realignment needed to ensure the bypass bridge meets NMDOT design standards for low volume roads. However, implementing BMPs, such as stockpiling and covering soils or placing sediment barriers along abutment construction areas (e.eg, silt fences, fiber logs), would reduce the potential for soil to enter the river and increase turbidity or sediment loads. Water quality within the project area could be impacted temporarily by increased sediment concentrations and turbidity until soil moving activities were completed for installation of the bypass bridge and associated road improvements. Both installation of the new radial gates and road improvements are expected to have minor, temporary impacts to water quality with implementation of BMPs to reduce soil movement and potential sediment transportation, and increased sediment concentrations and turbidity would be diluted by the Pecos River flows and end with completion of construction.

All construction activities would occur outside the Pecos River OHWM and fill material would not be placed within the river. A CWA Section 404 Permit would not be required as long as fill material is not placed into the Pecos River, a water of the U.S. (Appendix B). A SWPPP would be prepared and implemented during construction to reduce potential impacts to water quality and disturbance to surrounding riparian area.

There may be potential for accidental spills or release of materials (e.g., oil, gas, concrete) that could impact water quality. Potential impacts to water quality from accidental spills would be incidental during construction. BMPs, design features, and adherence to the conditions of the USACE permits would minimize the potential for adverse effects from accidental spills or construction activities. BMPs that would be implemented to reduce potential impacts to water quality include but are not limited to steam cleaning equipment, daily inspection of construction equipment for leaks, removing leaking equipment from the site; keeping fuels, oils, and lubricants in a sealed storage container or off-site; and refueling at least 100 feet from the river.

The proposed replacement of the radial gates and associated infrastructure, hoist deck and overlay of the spillway would restore the full functionality of the radial gates and reservoir storage capability. The amount of water available for winter storage for CID would not decrease during construction activities but would be stored in Brantley Reservoir until construction is completed. CID and Reclamation are seeking a permit from NMOSE to temporarily store up to an additional 40,000 ac-ft in Brantley Reservoir, providing a total storage volume in Brantley of 80,000 ac-ft, until construction of the Sumner Dam Radial Gates Project is complete. Under the Proposed Alternative, Reclamation

assumes the permit is granted. Under the permit, CID would release water from Lake Sumner where it would flow 223.8 river miles down to Brantley Reservoir along the Pecos River. The travel time for block releases during typical water operations from Sumner Dam to Brantley Reservoir is about 5 days (Reclamation and NMOSE 2006). Water flow would not be disrupted by the proposed radial gates construction activities because planned water release is via the primary outlet into the Pecos River not over the spillway. Therefore, water quantity for CID irrigation users would not be impacted by the proposed Radial Gates Project.

The Fort Sumner Irrigation District (FSID) also provides irrigation deliveries off of the Pecos River; however, their deliveries will not be impacted by the proposed Radial Gates Project. FSID's water is not stored in Lake Sumner, but bypasses through the lake in a quantity/rate determined by the inflows into Lake Sumner.

Although past studies found average annual evaporation rates at Brantley Reservoir and Lake Sumner to be 84 and 89 inches per unit area, respectively, Brantley Reservoir is less impacted from evapotranspiration due to the additional amount of bank storage present (Reclamation and NMOSE 2006). Bank storage is water that is temporarily stored in the permeable soil banks and bed of Brantley Reservoir during higher water levels and are returned to the reservoir during lower water levels. Bank storage is present at Brantley Reservoir from the connection with Major Johnson Aquifer and as the pool elevation changes, water moves in or out of the bank storage. In addition, the bypass flows into the Pecos River would be expected to maintain a continuous flow reducing the likelihood of river drying along this reach. Therefore, temporarily storing an additional 40,000 ac-ft of water in Brantley Reservoir would not be expected to impact water quantity available to CID for irrigation deliveries.

Storing water at Brantley Reservoir would not be expected to impact water quality from salinity for CID because salinity levels are reduced with the periodic releases of fresh water from Sumner Dam to be stored in Brantley Reservoir (Robertson 1997, USGS 2019). In addition, salinity levels are diluted from inflows of fresh groundwater between Artesia and Carlsbad and inflows from Avalon Reservoir before delivering water to CID irrigation users (USGS 2019). Thus, temporarily storing up to an additional 40,000 ac-ft at Brantley Reservoir would not be expected to impact water quality from salinity compared to storing water at Lake Sumner.

For the water area, reasonably foreseeable impacts from bypassing water during construction activities to Brantley Reservoir include increased water and wind erosion at both Lake Sumner and Brantley Reservoir from exposed shorelines and increased wave action along the shorelines from winds, respectively, that may increase sediment loads in the reservoirs. The bypass water flows into the Pecos River would not be expected to increase sediment loads entering the river. The flow rates would be expected to be a maximum of 80 cfs which would not scour the channel downstream and bypass flows would continue to be relatively sediment-free from Lake Sumner. The change in water flows in the river below Lake Sumner could reduce the need for block releases, or at least would be smaller in volume, and cause overall less bankline erosion because the flows will be spread out while construction occurs.

3.2.3 Impacts from the No NMOSE Permit Action Alternative

Impacts to water quality from the No NMOSE Permit Action Alternative for construction activities would be the same as described for the Proposed Action Alternative. As discussed above, water flow would not be disrupted by the proposed construction activities because water is released via the

primary outlet into the Pecos River not over the spillway. Impacts to water quantity would be different.

The amount of water available to CID for irrigation deliveries would decrease without a NMOSE Permit allowing an additional 40,000 ac-ft of water storage at Brantley Reservoir during construction activities. The water storage would increase at Santa Rosa Dam until the current conservation storage limit of 40,000 ac-ft at Brantley Reservoir is reached. Once the storage limit is reached, water would be sent downstream and would not be available to CID for irrigation deliveries. Water quantity loss could be 13% under a best-cast scenario [153,000 ac-ft (40,000 at Brantley, 8,000 at Sumner, 4,000 at Avalon, and 101,000 at Santa Rosa) of the 176,500 ac-ft entitlement for the Carlsbad Project] of CID conservation storage, but likely higher than 13% under non-ideal conditions. The degree of impact to CID conservation storage is dependent on timing, location, and size of precipitation events that occur during the proposed construction activities; about 3 years.

3.3 RIPARIAN AND WETLAND RESOURCES

3.3.1 Affected Environment

The affected environment for riparian and wetland resources encompasses Lake Sumner and the Pecos River and its floodplains within and immediately adjacent to the Sumner Dam Radial Gates project area (Figure 3) because this is the area that could be reasonably expected to be impacted by the proposed alternatives. The proposed project area has been mapped by the National Wetland Inventory as riverine wetlands—Riverine Lower Perennial Unconsolidated Bottom Permanently Flooded (R2UBH), Riverine Lower Perennial Seasonally Flooded (R4SBC), and riverine unknown perennial unconsolidated bottom permanently flooded (R5UBH) (USFWS 2024a). The riparian area along the Pecos River is dominated by Russian olive (*Elaeagnus angustifolia*), salt cedar (*Tamarix ramosissima*), cottonwood (*Populus deltoides*), Alkali sacaton (*Sporobolus airoides*), narrow leaf willow (*Salix exigua*). No wetland areas were observed adjacent to or within the Pecos River floodplain (BRIC 2024a).

Jurisdictional Waters of the United States, including wetlands, are protected under several rules and regulations including federal guidelines outlined by the CWA Sections 401, 402, and 404, Executive Orders 11988 (Floodplain Management) 11990 (Protection of Wetlands), and state regulations promulgated by the New Mexico Environment Department Surface Water Quality Bureau. Appropriate CWA permits would be obtained if needed prior to starting the proposed radial gates project.

3.3.2 Impacts from the No Action

Under the No Action Alternative, no direct impacts to riparian and wetland resources are expected as no ground disturbance or construction activities would occur. There are reasonably foreseeable impacts to riparian and wetland resources from uncontrolled flood events due to the continued deterioration of the radial gates. The safe channel capacity downstream of Sumner Dam is approximately 8,500 cfs. A single radial gate failure (considered the most likely failure mode) would increase flows in the channel downstream of Sumner Dam by an estimated 3,500 cfs. Simultaneous failure of all three radial gates would increase flows downstream by an estimated 10,500 cfs, however this failure scenario is unlikely, and the actual flows would be expected to be less since portions of the radial gate(s) remaining in place would restrict flows (Reclamation 2018).

The higher risk does not come directly from failure of the radial gate(s), but from subsequent uncontrolled flood events. The flow rates estimated above assumed a "sunny day" failure with the lake's water surface elevation at the winter storage level. During flood control situations, water surface elevations in the lake could be much higher, and the Pecos River could see large inflows downstream of the Dam. Inoperable radial gates would eliminate any ability to control floods, thus elevating the risk of exceeding safe channel capacity (Reclamation 2023). An uncontrolled release overtopping the banks of the Pecos Reiver would likely impact riparian and wetland areas along the riverbanks downstream of Sumner Dam.

3.3.3 Impacts from the Proposed Action

Under the Proposed Action Alternative, in the project area all construction activities would occur outside the Pecos River and fill material would not be placed within the river or in any wetland areas. USACE stated that a CWA 404 permit would not be required if dredge or fill material are not placed into the Pecos River. (Appendix B). A SWPPP would be prepared and implemented during construction to reduce potential impacts to water quality and disturbance to surrounding riparian area.

Riparian and wetland vegetation would not be removed along the riverbanks for installation of the proposed bypass portable bridge and support abutments because this would occur outside the river and not immediately adjacent to the riverbanks. Furthermore, BMPs would be implemented to prevent establishment of noxious weeds adjacent to the riverbank where construction would be conducted, such as cleaning equipment before entering the project area to ensure that all equipment, machinery, rocks, gravel, and other materials are cleaned and weed free. Adherence to design features, stipulations, and BMPs would minimize potential for indirect adverse effects, such as increased sedimentation into the Pecos River, to riparian resources.

In the water area reasonably foreseeable impacts from bypassing water during construction activities to Brantley Reservoir include lower water levels at Lake Sumner, more frequent but stable low flows along the Pecos River from Lake Sumner to Brantley Reservoir, and higher water levels at Brantley Reservoir. Water level changes at both Lake Sumner and Brantley Reservoir would be within historically encountered levels but could increase water and wind erosion from exposed shorelines and increased wave action from winds, respectively, that may increase sediment loads in the reservoirs. The higher water levels in Brantley Reservoir could benefit emergent and submersed aquatic vegetation in Brantley Reservoir. The rate of bypass flows into the Pecos River would depend on inflow conditions but would be expected to be a maximum of 80 cfs, which is within routinely encountered channel flow rates and would not scour the channel downstream and would continue to be relatively sediment-free from Lake Sumner. The bypass flows into the Pecos River would be expected to maintain a continuous flow reducing the likelihood of river drying, benefitting wetland and riparian areas along the Pecos River below Sumner Dam to Brantley Reservoir. Additionally, if the bypass flows move the water needed by CID for irrigation during the summer, the block releases may not be needed, or at least be reduced, which overall reduces the erosion of the banklines along the river channel.

3.3.4 Impacts from the No NMOSE Permit Action Alternative

Impacts from No NMOSE Permit Action Alternative would be same as described for the Proposed Action Alternative. Without the NMSOE permit, the disturbed areas, onsite construction activities, and other aspects of the work that could impact riparian and wetland resources would not be

different than if the NMSOE permit was obtained. All construction activities would occur outside the Pecos River and no fill material would be placed in the Pecos River or wetland areas.

3.4 VEGETATION

3.4.1 Affected Environment

Vegetation includes native and invasive species observed in the Sumner Dam Radial Gates project area where vegetation could be affected from ground disturbance by the proposed alternatives. The project area has a history of long-term public use and land management, with man-made hills and depressions from agriculture and stock management areas being common in the existing material borrow sites. The vegetation community in the proposed project area was mapped as the Plains and Great Basin Grassland Vegetation Community (Brown 1994). Dominant vegetation consists primarily of one-seed juniper (*Juniperus monosperma*), honey mesquite (*Prosopis glandulosa*), salt cedar, cottonwood, alkali sacaton (*Sporobolus airoides)*, Russian olive, Christmas tree cholla (*Cylindropuntia leptocaulis*), sideoats grama (*Bouteloua curtipendula*), black grama (*Bouteloua eriopoda*), feather fingergrass (*Chloris virgata),* soaptree yucca *(Yucca elata)*, six-weeks three-awn (*Aristida adscensionis*), indigobush (*Amorpha fruticose*), bermuda grass (*Cynodon dactylon)*, and narrowleaf willow. New Mexico listed noxious weed species in the project area include Russian olive and salt cedar (NMSU 2020a).

3.4.2 Impacts from the No Action

Under the No Action Alternative, no impacts to vegetation would be expected as no ground disturbance or construction activities would occur. There are reasonably foreseeable impacts to vegetation from the subsequent risk of uncontrolled flood events from failure of one or more radial gates due to the continued deterioration of the radial gates. The safe channel capacity downstream of Sumner Dam is approximately 8,500 cfs. A single radial gate failure (considered the most likely failure mode) would increase flows in the channel downstream of Sumner Dam by an estimated 3,500 cfs. Simultaneous failure of all three radial gates would increase flows downstream by an estimated 10,500 cfs, however this failure scenario is unlikely, and the actual flows would be expected to be less since portions of the radial gate(s) remaining in place would restrict flows (Reclamation 2018).

The higher risk does not come directly from failure of the radial gate(s), but from subsequent uncontrolled flood events. The flow rates estimated above assumed a "sunny day" failure with the lake's water surface elevation at the winter storage level. During flood control situations, water surface elevations in Lake Sumner could be much higher, and the Pecos River could see large inflows downstream of the Dam. Inoperable radial gates would eliminate any ability to control floods, thus elevating the risk of exceeding safe channel capacity (Reclamation 2023). The potential flows from uncontrolled events could exceed the safe channel capacity impacting vegetation along the riverbanks downstream of Sumner Dam.

3.4.3 Impacts from the Proposed Action

The proposed radial gates replacement and installation of the bypass bridge and associated support abutments would disturb vegetation. The abutment structure on the east side of the river would occur in a previously disturbed designated picnic area with sparse vegetation. The removal of upland

vegetation would remove 74 acres of the Plains and Great Basin Grassland Vegetation Community identified within the project area (Figure 2). Therefore, no substantial populations or communities of native plants would be affected by the Proposed Action. BMPs would be implemented to prevent establishment of noxious weeds in the construction work area, such as cleaning equipment before entering the project area to ensure that all equipment, machinery, rocks, gravel, and other materials are cleaned and weed free (see section 2.2.3 for additional design features).

In the water area reasonably foreseeable impacts from bypassing water during construction activities to Brantley Reservoir include lower water levels at Lake Sumner, more frequent low flows along the Pecos River from Lake Sumner to Brantley Reservoir, and higher water levels at Brantley Reservoir. Lower or higher water levels at the reservoirs would be within the historic yearly and seasonal fluctuation levels and would not be expected to impact the upland vegetation surrounding Lake Sumner or Brantley Reservoir. The bypass flows into the Pecos River would not be expected to impact upland vegetation along the Pecos River from below Sumner Dam to Brantley Reservoir because the maximum flows would be up to 80 cfs (within routinely encountered channel flow rates and lower than the block release volumes) and would not be expected to cause additional channel or soil erosion from what occurs normally. The more frequent low bypass flows during construction activities along the Pecos River from Lake Sumner to Brantley Reservoir would make river drying less likely, benefiting riparian vegetation along this river segment.

3.4.4 Impacts from the No NMOSE Permit Action Alternative

Impacts from No NMOSE Permit Action Alternative would be same as described for the Proposed Action Alternative. Without the NMSOE permit, the disturbed areas, onsite construction activities, and other aspects of the work that could impact vegetation resources would not be different than if the NMSOE permit was obtained. Approximately 74 acres of upland vegetation would still be removed for bridge abutment installation and road improvements, including obtaining additional fill material for fill soil for road construction from the borrow pits.

3.5 THREATENED AND ENDANGERED SPECIES AND CANDIDATE SPECIES

3.5.1 Affected Environment

The impact analysis area includes the Sumner Dam Radial Gates construction project area (Figure 2) for direct impacts, and Lake Sumner, Brantley Reservoir, and the Pecos River between Lake Sumner and Brantley Reservoir for reasonably foreseeable impacts for the water area (Figure 4). The affected environment for threatened and endangered species within the areas evaluated varies by species.

For birds and insects, the affected environment includes the Sumner Dam Radial Gates construction project area because this captures areas that could be physically affected by both proposed action alternatives. Suitable habitat for the Southwestern Willow Flycatcher (SWFL) has not been identified at Lake Sumner or Brantley Reservoir. One SWFL nest was observed along the Pecos River in 2017 (Durst 2012). However, due to the restriction during construction at Lake Sumner there will be lower high flows along the Pecos River since flows will be spread throughout the season and the construction period. Flows in the Pecos River will likely be a continuous lower flow, but within historic seasonal and yearly levels and lower than the block releases, and it is expected there will be no impacts to riparian habitats.

For fish, the affected environment includes the water area along the Pecos River between Lake Sumner and Brantley Reservoir because aquatic habitats downstream of Lake Sumner could be impacted by both proposed action alternatives.

Under the Endangered Species Act of 1973 (ESA), all federal departments and agencies have the responsibility to avoid jeopardizing federally listed species that are endangered or threatened, to address impacts to candidate species actively proposed for listing, and to avoid adversely modifying designated critical habitat. The USFWS evaluated Reclamation's proposal to conserve the Pecos bluntnose shiner, a federally threatened fish species, and to conserve the Carlsbad Project water supply (USFWS 2016). Carlsbad Project operations include diverting water to storage and releasing water for authorized uses. Lake Sumner is the storage reservoir located immediately upstream of the reach of the river where the shiner is still present. In 2016, the USFWS issued a Final Biological and Conference Opinion for the Bureau of Reclamation Carlsbad Project Water Operations and Water Supply Conservation on the Pecos River, New Mexico (USFWS 2016) to address the effects of a wide variety of proposed actions on the endangered Pecos Bluntnose Shiner, other listed species, and their critical habitats.

A list of threatened and endangered species for the Proposed Action was acquired from the USFWS Information for Planning and Consultation tool for the project area (IpaC 2025; Appendix C). The USFWS identified four species that could occur within the project area and are discussed below (Table 5). The Pecos bluntnose shiner was considered for the 2016 Biological Opinion for the Carlsbad Project (USFWS 2016). Although Sumner Dam and Reservoir are upstream of the reach of the river where the shiner is still present, the water flows for the shiner would not be impacted by the proposed Radial Gates Project action alternatives. However, the frequent bypass flows released during construction activities could impact aquatic habitat downstream to Brantley Reservoir and will be discussed below.

There were no designated or proposed critical habitats within the project area (USFWS 2025; see Appendix C). The nearest final designated critical habitat for the Pecos Bluntnose Shiner is approximately 30 miles downstream of the project area below Fort Sumner, New Mexico (USFWS 2025). In the water area, the frequent bypass flows released during construction activities could impact aquatic habitat downstream, including Pecos Bluntnose Shiner designated critical habitat, to Brantley Reservoir and will be discussed below.

Table 5. Federally Listed Threatened, Endangered, and Candidate Species and Their Likelihood of Occurring in the Project Area

Common/Scientific Name	*Status	Potential to Occur
Bird		
Southwestern Willow Flycatcher (*Coccyzus americanus*)	ESA T MBTA	Nests in dense riparian habitats near or adjacent to perennial rivers or underlain by wet soil (USFWS 2002). One Southwestern Willow Flycatcher nest was observed along the Pecos River in 2017 (Durst 2012). The proposed project area, existing Sumner Dam and associated infrastructure footprint, and the proposed crossing area downstream do not have dense riparian habitat suitable for nesting. Suitable habitat is **not present** in the project area. Regarding impacts to habitat along the Pecos River the changes to the flow regime will be an overall decrease in high flows and a lower but constant flow regime temporarily during the construction period. There will be minimal to no impacts to the banklines from the overall lower flow regime and all within historic levels. The block releases may not be needed if the flow regime has moved all the water CID needs for irrigation. It is expected there will be no impacts to riparian habitats, and maybe even positive from a more constant, with less drying, water flow along the river.
Lesser Prairie Chicken (*Tympanuchus pallidicinctus*)	ESA E	Habitat in New Mexico is shinnery oak/grasslands dominated by shin oak and multiple tallgrass species that include bluestem, grama, and dropseed grasses (New Mexico Avian Conservation Partners 2017). The primary populations occur in north Lea, south Roosevelt, and northeast Chaves counties. Sparse and scattered populations occur in portions of north Roosevelt and Curry counties, and small portions of east De Baca and south Quay counties (New Mexico Avian Conservation Partners 2017). The proposed project area does not include tallgrass prairie or shinnery oak/grasslands suitable for lesser prairie chicken habitat. Suitable habitat is **not present** in the project area.

Common/Scientific Name	*Status	Potential to Occur
Insect		
Monarch Butterfly (*Danaus plexippus*)	ESA C	Monarch butterfly is a candidate for listing under the ESA as of December 17, 2020 (USFWS 2020a). Migratory species that summers in the State of New Mexico. Adults feed on flower nectar and larvae feed exclusively on milkweed leaves. Monarchs require abundant source of flowering plants; breeding only where milkweeds are found. The project area lacks abundant sources of milkweed to support their breeding preferences, as well as flowers that could supply nectar to adult monarchs. Suitable habitat is **not present** in the project area. Additionally, their fall and spring migration routes occur outside of the project area (USFWS 2022).
Fish		
Pecos Pupfish (*Cyprinodon pecosensis*)	ESA Proposed T	Pecos pupfish occur in a variety of aquatic habitats including the main stem of the Pecos River, wetlands, springs, and streams (USFWS 2024b). This pupfish prefers aquatic habitat with little to no water flow and in areas with flows prefer pools and shallow runs and riffles (USFWS 2024b). The current Pecos pupfish populations in the Pecos River occur between Bitter Lake National Wildlife Refuge and north of Brantley Reservoir (USFWS 2024b); 100 miles and 200 miles downstream from the project area, respectively. The current distribution occurs south of Lake Sumner. Flows released at Sumner Dam to help ensure the Pecos River does not dry up will not be impacted by the radial gates project because the water is released via the primary outlet directly into the Pecos River. Suitable habitat is **not present** in the project area, but downstream aquatic habitats along the Pecos River could be impacted to the benefit of the fish due to less drying and more constant flows from changes in water management.

Common/Scientific Name	*Status	Potential to Occur
Pecos Bluntnose Shiner (*Notropis simus pecosensis*)	ESA T	Historically inhabited a 329-mile reach of the Pecos River from the confluence with Gallinas River to north of Carlsbad, New Mexico (USFWS 2020b). Currently, the bluntnose shiner is restricted to a 192-mile reach of the Pecos River from Taiban Creek confluence (south of Lake Sumner) to Brantley Reservoir delta (USFWS 2020b). Prefers aquatic habitat with little to no water flow and in areas with flows prefer pools and shallow runs and rifles. Suitable habitat is **not present** in the project area, but downstream aquatic habitats along the Pecos River could be impacted to the benefit of the fish due to less drying and more constant flows from changes in water management.

* ESA C, E and T = Endangered Species Act candidate, endangered and threatened. MBTA = Migratory Bird Treaty Act.

3.5.2 Impacts from the No Action

Under the No Action Alternative, no direct impacts to federally listed or proposed threatened and endangered species would occur as no ground disturbance would occur. Indirect impacts to federally listed or proposed threatened and endangered species would not be expected to occur from the continued deterioration of the radial gates, the risk of failure remaining, or subsequent uncontrolled flood events. The safe channel capacity downstream of Sumner Dam is approximately 8,500 cfs. A single radial gate failure (considered the most likely failure mode) would increase flows in the channel downstream of Sumner Dam by an estimated 3,500 cfs. Simultaneous failure of all three radial gates would increase flows downstream by an estimated 10,500 cfs, however this failure scenario is unlikely, and the actual flows would be expected to be less since portions of the radial gate(s) remaining in place would restrict flows (Reclamation 2018).

The higher risk does not come directly from failure of the radial gate(s), but from subsequent uncontrolled flood events. The flow rates estimated above assumed a "sunny day" failure with the lake's water surface elevation at the winter storage level. During flood control situations, water surface elevations in the lake could be much higher, and the Pecos River could see large inflows downstream of the Dam. Inoperable radial gates would eliminate any ability to control floods, thus elevating the risk of exceeding safe channel capacity (Reclamation 2023). There would be no effects to the following species under the No Action Alternative due to lack of habitat or because the project area is outside the current principal range of the species, both of which make occurrence in the project area unlikely and discountable: Southwestern Willow Flycatcher, Lesser Prairie Chicken, and Monarch Butterfly.

3.5.3 Impacts from the Proposed Action

There would be no effects to the SWFL, Lesser Prairie Chicken, Pecos Pupfish, Pecos Bluntnose Shiner, and Monarch Butterfly in the proposed project area under the Proposed Action Alternative due to lack of habitat or because the project area is outside the current principal range of the species, both of which make occurrence in the project area unlikely and discountable. The flows managed for the Pecos Bluntnose shiner's designated critical habitat downstream from Sumner Dam are not anticipated to be affected by the Radial Gates Project, since water is released via the primary outlet directly into the Pecos River. Therefore, there would be no effect to Pecos Bluntnose Shiner nor would its designated critical habitat be modified.

In the water area, the reasonably foreseeable impacts from bypassing water during construction activities from Lake Sumner to Brantley Reservoir would have no adverse effects on SWFL, Lesser Prairie Chicken, Pecos Pupfish, Pecos Bluntnose Shiner, and Monarch Butterfly or their habitats. Lake Sumner and Brantley Reservoir lack suitable habitat for the five federally listed or proposed threatened species, thus lower water levels at Lake Sumner and higher water levels at Brantley Reservoir during construction activities would have no effect. However, the more frequent low bypass flows released during construction activities along the Pecos River from Lake Sumner to Brantley Reservoir in combination with the supplemental releases for the Pecos Bluntnose Shiner would make river drying less likely, benefiting Pecos Pupfish and their habitat from Bitter Lake National Wildlife Refuge to north of Brantley Reservoir, Pecos Bluntnose Shiner designated critical habitat, and other Pecos River fishes and their habitat. The low bypass flows would be expected to reach a maximum flow rate of 80 cfs and would not be expected to cause channel or soil erosion and would continue to be relatively sediment-free from Lake Sumner. Therefore, there would be beneficial impacts to the Pecos Pupfish and Pecos Bluntnose Shiner and their habitats downstream of Lake Sumner as well as beneficial impacts to aquatic habitat downstream of Lake Sumner for other Pecos River fishes.

The lower water levels at Lake Sumner and higher water levels at Brantley Reservoir during construction activities could impact general wildlife species present at Lake Sumner and Brantley Reservoir. In general, higher water levels at Brantley Reservoir could be beneficial to wildlife due to a temporary increase in water elevation, could result in an increase in food availability from more aquatic vegetation and invertebrates, and an increase to aquatic habitat from more plant material in a larger reservoir. While overall lower water levels during construction but have already been occurring due to the restrictions at Lake Sumner could adversely impact wildlife from a decrease in water available for terrestrial wildlife, an increase in water temperature and reduce dissolved oxygen from lower water levels that could impact aquatic species at Lake Sumner, a decrease in aquatic plant composition and abundance from lower water levels reducing areas where aquatic plants grow, or a decrease in food sources from less aquatic invertebrates and vegetation from a smaller reservoir. The degree of impacts would depend on the water levels and duration of these water level changes, but only temporary during construction.

3.5.4 Impacts from the No NMOSE Permit Action Alternative

Impacts from No NMOSE Permit Action Alternative would be same as described for the Proposed Action Alternative. Without the NMSOE permit, the disturbed areas, onsite construction activities, and other aspects of the work that could impact threatened and endangered species or their habitats would not be different than if the NMSOE permit was obtained. Approximately 74 acres of upland vegetation would still be removed for bridge abutment installation and road improvements,

including obtaining additional fill material for fill soil for road construction from the borrow pits. The water storage would increase at Santa Rosa Dam until the current conservation storage limit of 40,000 ac-ft at Brantley Reservoir is reached. Once the storage limit is reached, water would be sent downstream that could temporarily increase water flow, benefiting aquatic habitat for Pecos River fishes, including Pecos Pupfish and Pecos Bluntnose Shiner.

3.6 CULTURAL RESOURCES

3.6.1 Affected Environment

The affected environment for cultural resources is identified as the area of potential effects (APE) in compliance with Section 106 of the NHPA (36 CFR 800.16). The APE is defined as the geographic area within which federal actions may directly or indirectly cause alterations in the character or use of historic properties. The APE for the proposed action alternatives includes the area that could be physically affected by both proposed alternatives (the maximum limit of disturbance; Figure 2). The proposed project area is located within the southeast subregion of New Mexico (Figure 1). The southeast subregion is bounded on the west by the Sacramento and Guadalupe Mountains; the Texas border on the east and south; and a line drawn from the juncture of Torrance, Guadalupe, and Lincoln counties northeastward to the Texas border in Quay County. In general, the history of the southeastern subregion can be divided into four major periods: Paleo-Indian (ca. 9500 B.C. to 6000 B.C.), Archaic (ca. 6000 B.C. to A.D. 400), Formative Period (A.D. 400 to 1450), and the Historic Occupation (A.D. 1539 to present), which includes Native American as well as later Hispanic and Euro-American settlers. Detailed descriptions of these various periods and additional information can be found in the Cultural Resource Inventory Report, Cultural Resource Survey for Proposed Sumner Dam Radial Gates Project, New Mexico Cultural Resource Information System (NMCRIS) # 154085 (BRIC 2024b).

The term "cultural resources" refers to any historic or prehistoric resource. This encompasses a wide range of material remains that have the potential to provide information about the human use and occupation of the project area. These cultural resources generally consist of archaeological sites and Traditional Cultural Properties (TCPs). Cultural sites vary considerably and can include, but are not limited to, simple artifact scatters, structures, or structural remains of various types with a myriad of associated features, rock art and inscriptions, ceremonial/religious features, and roads and trails.

The NHPA and the NRHP (36 CFR Part 800) are the benchmarks by which the significance of cultural resources is evaluated by a federal agency when considering what effects its actions may have on cultural resources. To summarize, Section 106 of the NHPA requires Federal agencies to take into account the effects of their undertakings on historic properties and afford the Advisory Council a reasonable opportunity to comment on such undertakings. This process includes consultation, involvement of the public, identification of historic properties by contractors, assessment, and possible resolutions of adverse effects by the action. The NHPA contains criteria the agency uses to evaluate whether a particular site/resource is eligible for listing on the NRHP. The NRHP states that for a historic property to be considered eligible, a cultural resource must have integrity of location, design, setting, materials, workmanship, feeling, and association, *and* meet one or more of the following criteria: a) are associated with events that have made a significant contribution to the broad patterns of our history; b) are associated with the lives of significant persons in or past; does it c) embody the distinctive characteristics of a type, period, or method of

construction; represent the work of a master; possess high artistic values; represent a significant and distinguishable entity whose components may lack individual distinction; or d) have yielded or may be likely to yield information important in history or prehistory. If a site, regardless of age, meets these standards it is referred to as a "historic property."

A records search of the NMCRIS database and the National and State Registers of Historic Places was conducted. The search radius included a buffer area of 500 meters (0.3 km) from the project area boundaries (Figure 1). The search revealed four (4) previously conducted investigations and nine (9) previously recorded sites within 500 meters (0.3 km) of the project area.

A Class III cultural resource pedestrian survey of the proposed project area was conducted on September 5–6, 2023 and January 3 and February 6, 2024 (BRIC 2024b). A total of eight cultural sites were encountered within the project area, three (3) previously recorded sites and five (5) new archeological sites. Of these sites, five are historic, two are multi-component, and one is prehistoric. Reclamation has determined one site (LA 105556/Sumner Dam) is eligible under criteria A and C for listing in the NRHP, one is determined ineligible for listing on the NRHP, and the remaining are undetermined and need more data. Sixteen (16) isolated occurrences were also recorded. An isolated occurrence is a manifestation of human activity that represents a single occurrence and/or are unable to meet site definition requirements. Typically, these include 1–10 artifacts. Isolated occurrences are not eligible for listing on the NRHP.

LA 105556 is Sumner Dam and qualifies as historic resource under New Mexico Historic Preservation Division guidelines. An initial Historic Property Inventory (HCPI) form was completed, and Sumner Dam was recorded as HCPI 54428. Sumner Dam is found eligible under Criteria A and C by Reclamation and is recommended potentially eligible to the NRHP. Sumner Dam is found eligible under Criterion A because it is recognized as contributing to the period in which water control in the American West became paramount to the greater expansion of the United States and agriculture, the Great Depression and the New Deal. Reclamation finds Sumner Dam eligible under Criterion C because it embodies and retains distinctive elements of Civilian Conservation Corps (CCC) stone masonry workmanship and water-control engineering technology of the 1930s; and the associated CID water storage and transmission system also embody significant new adaptations to private- and public- water control structures significant to dry land farming and permanent settlement in the arid West. Additionally, Reclamation finds Sumner Dam eligible under Criterion A for the period of water infrastructure reconstruction in the 1950s at the height of the Reclamation Dam Building Period (1945–1970), the beginning of emphasis on recreation at Reclamation facilities, and importance of National Infrastructure in association with the Cold War. A Level 2 Historic American Engineering Record (HAER) documentation was recommended to be completed for Sumner Dam before the undertaking is completed to mitigate adverse impacts (BRIC 2024b) and is currently underway. The undetermined sites that need more data would be treated as eligible and flagged for avoidance if disturbance would occur within 50 feet of the site boundary.

Traditional Cultural Properties (TCPs)

TCPs are a separate class of cultural resources and are places that have cultural values that transcend the values of scientific importance that are normally ascribed to cultural resources such as archaeological sites and may or may not coincide with archaeological sites (Parker and King 1998).

A TCP is defined as a property that is listed on or is eligible for inclusion on the NRHP because of its association with cultural practices or beliefs of a living community that are: (1) rooted in that community's history; and (2) important in maintaining the continuing cultural identity of the community (National Register Bulletin #38). Native American communities are most likely to

identify TCPs, although TCPs are not restricted to those associations. Some TCPs are well known, while others may only be known to a small group of traditional practitioners, or otherwise only vaguely known. Native American tribal perspectives on what is considered a TCP are not limited by a places age or its National Register eligibility or lack thereof.

TCPs cover a wide range of locales and use areas. Properties may include sacred landforms (e.g., mountains, rivers, lakes, outcrops, or naturally discolored rocks), places associated with deities, plant gathering areas, places mentioned in traditional histories, habitation sites, and ceremonial or offering places.

3.6.2 Impacts from the No Action

Under the No Action Alternative, no impacts to cultural resources are expected as no ground disturbance or replacement of existing infrastructure at Sumner Dam would occur. The replacement of the radial gates and hoist deck and overlay of the spillway would not occur, resulting in the overall risk of failure of the gates remaining. The possible concurrent failure of all three gates is unlikely, but failure of any of the gates could impact the integrity of Sumner Dam, HCPI 54428. The damage or removal of the radial gate(s) would impact the 1956 construction, not the CCC/WPA-era construction components, CCC stone masonry workmanship and water-control engineering technology of the 1930s, and as a HAER has not been completed, the historical engineering information for the period of water infrastructure reconstruction in the 1950s at the height of the Reclamation Dam Building Period for the associated radial gates could be lost or degraded.

3.6.3 Impacts from the Proposed Action

Under the Proposed Action Alternative, the three radial gates would be replaced causing the need to replace the hoist deck and raising the elevation of the spillway. Construction of this alternative would result in removal of the three existing radial gates and hoist deck of Sumner Dam (HCPI 54428), and raising the elevation of the spillway, therefore adversely affecting the cultural resource. However, adverse impacts to Sumner Dam would be mitigated through conducting a Level 2 HAER of the Dam before construction activities were started. Additionally, the six sites recommended as undetermined and need more data to make a determination would be flagged and disturbance would not occur within 50 feet of the site boundary. Based on outreach to tribes associated with the Sumner Dam area (see Chapter 4), the Proposed Action is not known to physically threaten any TCPs, prevent access to sacred sites, prevent the possession of sacred objects, or interfere with or hinder the performance of traditional ceremonies or rituals.

It has been determined there will be a direct adverse effect to the dam with the proposed Sumner Dam Radial Gates Project. Conducting Level 2 HAER documentation of the Dam to mitigate impacts to HCPI 54428 is recommended and is currently underway, as well as no disturbance within 50 feet of undetermined site boundaries. In addition, if the contractor discovers any previously unidentified historic or prehistoric cultural resources, then work in the vicinity of the discovery would be suspended and the discovery would be promptly reported to the Reclamation archeologist and New Mexico SHPO. The New Mexico SHPO would specify what action would be taken.

Reclamation recommends the project go forward, with the mitigative strategy of a Level 2 HAER to mitigate adverse effects to historic properties and a 50-foot avoidance buffer for undetermined sites; thus, satisfying the Section 106 process of the NHPA (as amended). The New Mexico SHPO concurred with the cultural resource inventory report (BRIC 2024b) that the proposed Sumner Dam

Radial Gates Project would have adverse impacts to the Dam (Appendix D). The New Mexico SHPO recommends that a project-specific programmatic agreement be developed that provides phased consultation as new elements of the project are identified, per 36 CFR §800.4.b.2 and executed per 36 CFR §800.14(b) on April 26, 2024 (Appendix D). Furthermore, the New Mexico SHPO recommended a memorandum of agreement (MOA) be developed to resolve the known adverse effects to the Dam, with provisions for phased consultation, per 36 CFR §800.4.b.2. The MOA between Reclamation and the New Mexico SHPO was executed on March 26, 2025.

Bypassing water during construction to increase water storage at Brantley Reservoir could result in impacts to cultural resources at both Brantley Reservoir and Lake Sumner and along the Pecos River between the two. Lower water levels at Lake Sumner could cause exposure and erosion of some approximately 16 sites that are situated along the lake edge. Increased water levels at Brantley Reservoir could result in the inundation of approximately 18 sites that lie along the edge of the reservoir. The bypass water flows are not expected to increase scour or downstream soil erosion on the Pecos River, with the average annual maximum stream flow below Sumner Dam being 1,499 cfs and the annual maximum stream flow ranging from 1,300 cfs (2000) to 1,700 cfs (2021). However, some 21 sites are located directly adjacent to the Pecos River channel and could be subject to minor erosion that could carry away artifacts or weaken structures.

3.6.4 Impacts from the No NMOSE Permit Action Alternative

Impacts from No NMOSE Permit Action Alternative would be same as described for the Proposed Action Alternative. Without the NMSOE permit, the disturbed areas, onsite construction activities, and other aspects of the work that could impact cultural resources would not be different than if the NMSOE permit was obtained. Direct adverse impacts to Sumner Dam and the six undetermined sites would still occur without a NMSOE permit. Conducting a Level 2 HAER documentation of the Dam to mitigate impacts to HCPI 54428 and no disturbance within 50 feet of undetermined site boundaries would still be required mitigation measures that occur prior to construction activities.

3.7 INDIAN TRUST ASSETS

3.7.1 Affected Environment

The DOI Manual Release 512 Department Manual 2 (1995) requires each bureau and office to identify potential effects of Departmental activities upon Indian Trust Assets (ITAs). The ITAs are legal interests in property held in trust by the federal government for federally recognized Indian tribes or individual Indians. Secretarial Order 3175 and Reclamation ITA policy require that Reclamation assess the impacts of its projects on ITA. An inventory of all ITA within the proposed project area is required. If any ITAs are impacted, mitigation or compensation for adverse impacts to these assets is required. The current American Indian/Alaskan Native/Native Hawaiian areas shapefile was overlayed with the Sumner Dam project area (Figure 1), which indicated no ITAs present. In addition, Native American tribes associated with the Sumner Dam area were contacted by Reclamation via letter (see Chapter 4). No ITAs were identified for this project because there are no Tribal trust lands within the project area and no Tribal mineral, hunting or fishing rights, or water rights in the project area (Figure 2).

3.7.2 Impacts from the No Action

Under the No Action Alternative, the radial gates and hoist deck and overlay of the spillway would not occur, resulting in safety issues and overall risk of failure of the radial gates remaining. However, no impacts to ITAs would be expected because no ITAs were identified for this project.

3.7.3 Impacts from the Proposed Action

The Proposed Action would have no effects to ITAs because the proposed actions are not on and would not affect Tribal trust lands.

3.7.4 Impacts from the No NMOSE Permit Action Alternative

The No NMOSE Permit Action Alternative would have no effects to ITAs because the proposed actions are not on and would not affect Tribal trust lands.

3.8 SOCIOECONOMICS

3.8.1 Affected Environment

The region of influence includes De Baca and Eddy counties, New Mexico and the Lake Sumner and Fort Sumner communities. This region of influence was chosen because the potential socioeconomic consequences from the radial gates' replacement activities would be concentrated within the county and more specifically the community of Lake Sumner.

Demographics and Population Trends

The nearest Census Designated Places to the project area are Lake Sumner and Fort Sumner with a combined city region (CCR) population of 1,285 as of 2022 (U.S. Census Bureau 2025). The population in De Baca County has decreased approximately 16 percent in the last 10 years (Table 6). The population of Lake Sumner and Fort Sumner (town approximately 16 miles southeast of Sumner Dam) have decreased 50 and 14 percent, respectively, from 2010 to 2020. The population of Eddy County, where CID users are located, has increased about 16 percent from 2010 to 2020 (Table 6).

Table 6. Populations and Population Trends from 2010 to 2020.

	2010	2020	Annual Rate of Change 2010–2020
De Baca County	2,022	1,698	-16.02%
Lake Sumner	143	72	-49.65%
Fort Sumner	1,031	889	-13.77%
Eddy County	53,829	62,314	15.76%
New Mexico	2,059,179	2,117,522	2.83%

The demographic data of the CCR shows the majority of the population as Hispanic ethnicity for both populations of Lake Sumner and Fort Sumner (72.2 percent and 74.3 percent; U.S. Census Bureau 2025). In De Baca County, a total of 63.5 percent of the population are Hispanic and 35 percent are Caucasian (U.S. Census Bureau 2025). The Carlsbad Irrigation District users are located

in the southeastern portion of Eddy County that has Hispanic ethnicity as the majority population (51.5%) followed by Caucasian (43.5%), African American at 1.1% and Native American at 1.1% (U.S. Census Bureau 2025).

Employment and Income

In De Baca County, about 54 percent of all workers were employed in the private sector, with nearly 19 percent employed in government and government enterprises, and 27 percent were in the farm sector (NMSU 2020b). Within the public sector, local and state governments were the greatest sources of employment in the county. In the private sector, farm, retail trade, and mining, were the primary employers in the county (NMSU 2020b). A total of 56 percent of this population was in the labor force and 5 percent were considered to be unemployed (U.S. Census Bureau 2025). The median household income in De Baca County was $34,702. A total of 16 percent of individuals have income below the poverty level (U.S. Census Bureau 2025).

Eddy County had about 88 percent of all workers employed in the private sector, 10 percent in government and government enterprises, and 2 percent in Farm employment (NMSU 2020c). Within the private sector, mining, retail, construction services, and health care and social assistance were the primary employers in the county (NMSU 2020c). In the public sector, local and state governments were the greatest sources of employment in the county. A total of 58 percent of this population was in the labor force and 3 percent were considered to be unemployed (U.S. Census Bureau 2025). The median household income in Eddy County was $77,458 (U.S. Census Bureau 2025). A total of 12 percent of individuals have income below the poverty level (U.S. Census Bureau 2025).

The most common industries in Lake Sumner, NM are Agriculture, forestry, fishing and hunting, and mining, manufacturing, and retail (U.S. Census Bureau 2025). The primary employers in Fort Sumner, NM are construction, transportation and warehousing, utilities, educational services, and health care and social assistance, finance and insurance, real estate and rental and leasing (U.S. Census Bureau 2025). The economy of Lake Sumner and Fort Sumner have about 16 and 58 percent in the work force and about 18 and 6 percent considered unemployed, respectively (U.S. Census Bureau 2025). A total of 54 and 15 percent of individuals have income below the poverty level in Lake Sumner and Fort Sumner, respectively (U.S. Census Bureau 2025).

3.8.2 Impacts from the No Action

The No Action Alternative could impact CID water users from further decreased storage capacity at Lake Sumner. Winter storage for CID irrigation delivery at Lake Sumner has been reduced by the WCM deviation (Reclamation 2021) and is allowed under the premise that the radial gates would be replaced. If the radial gates are not replaced, USACE is likely to require additional risk reductions which could include further reducing CID storage capability at Lake Sumner and requiring CID storage in other reservoirs. The degree of impact to CID conservation storage and CID water users is dependent on the timing, size, and location of precipitation events that occur annually.

Reasonably foreseeable impacts would not be expected to occur from radial gate(s) failure alone, however, failure of one or more radial gates would result in an inability to control flood flows downstream of Sumner Dam (Reclamation 2023). The inability to control flood events at Sumner Dam could necessitate renegotiation of existing agreements, allocations, and compacts regarding irrigation storage and flood control space that could alter the way the Pecos River is managed. The comprehensive review conducted by Reclamation showed a zero-life loss as the likely outcome for a

failure of a single radial gate during normal operations (Reclamation 2018). However, impacts to campers and fisherman immediately downstream of the Dam are discussed under the Public Health and Safety Section.

The risk from failure of one or more radial gates would be uncontrolled flood events flowing through Sumner Dam, which could exceed the safe channel capacity, increasing the risk to life and properties downstream. Additionally, the radial gates provide flood flow attenuation, which provides additional time for emergency response and notifications. Failure of one or more radial gates could reduce the amount of time public safety teams have to respond to emergencies downstream of Sumner Dam prior to flood flows reaching these areas, further increasing the risk to life and property. Uncontrolled flood events could directly damage properties and infrastructure downstream, resulting in financial losses to the local economy. Damage to infrastructure and businesses downstream could disrupt local commerce, leading to reduced local revenue for businesses.

In addition, further reduction of water storage capacity at Lake Sumner could impact visitation at Sumner Lake State Park, impacting revenue rates. In the past, lake level fluctuations have impacted visitation, with a decrease of 100,000 visitors in 2000 and only 22,000 visitors in 2004 due to drought and irrigation (NM EMNRD 2004).

3.8.3 Impacts from the Proposed Action

The proposed replacement of the radial gates and hoist deck and overlay of the concrete spillway would not change the existing community structure or lands for other uses. Indirect impacts could include a temporary increase in noise, dust, traffic, and activity disturbance to residents adjacent and near the Sumner Dam construction activities. These impacts would apply to all residents in the proposed project area equally.

The completion of the Radial Gates Project could require CID to pay a portion of the construction costs, which could result in increased costs for CID water users. CID would need to generate additional revenue to pay for its responsibility for the construction costs. The current water user fee is $96 per acre-feet per water right and would be expected to increase. Based on preliminary financial analysis, the annual water use fees could increase by additional $10 to $43 per acre-foot, depending on the funding secured by CID to cover their portion of the construction costs. A study in California showed that short increases for water usage changed how farmers irrigated their crops, while long-term cost increases changed the amount and type of crops planted (Berlig et al. 2024). Based on these studies, the increased water use fees could result in farmers in CID considering changing how they irrigate their crops in the short-term or what crops they plant and how much they plant in the long-term to mitigate for increased costs. Some users could also use their supplemental irrigation wells that are used when surface water supplies fall short of their crop irrigation demands; however, not all users have irrigation wells and would have to find other mitigation measures as described above.

Bypassing water during construction to increase water storage at Brantley Reservoir could result in impacts to revenue at both Lake Sumner and Brantley Reservoir state parks. Lower water levels at Lake Sumner would be expected to decrease revenue because lake levels impact visitation for water associated recreation activities. In the past, lake level fluctuations have impacted visitation rates, with a decrease of 100,000 visitors in 2000 and only 22,000 visitors in 2004 when lake levels were low (NM EMNRD 2004). Visitation at Brantley Reservoir is also affected by the water level of the reservoir and fluctuates annually depending on winter runoff, irrigation, and water release

agreements with Texas (NM EMNRD 1996). Brantley Reservoir State Park revenue fluctuates with water levels and would be expected to maintain or increase revenue with increased water levels resulting in increased visitation rates.

3.8.4 Impacts from the No NMOSE Permit Action Alternative

Impacts for construction activities would be the same as described for the Proposed Action Alternative. However, there could be a reduction in irrigation water delivered to CID for irrigation deliveries during the proposed construction activities. Water storage could increase at Santa Rosa Dam up until Brantley Reservoir reaches the 40,000 ac-ft conservation limit and then water would be passed downstream at which point it would no longer be available for use by CID. The CID conservation storage could be reduced up to 40,000 ac-ft out of the 176,500 ac-ft allocation for Carlsbad Project. This would mean a reduction in the water allotments for each user acre and could impact the crop growth for harvest. For example, an alfalfa farmer could only be able to harvest 2–3 times in a growing season compared to 3–5 times in a growing season with reduced water allotments. The quantity of water delivered to each user acre is determined annually based on available stored water and annual precipitation in the basin for the year. The quantity of water delivered to each user acre between 2020 to 2024 ranged from 3.3 to 1.71 ac-ft (CID 2025). The degree of impact to CID conservation storage is dependent on the timing, size, and location of precipitation events that occur during construction activities.

3.9 ACCESS/TRANSPORTATION

3.9.1 Affected Environment

The affected environment encompasses the roads surrounding Sumner Dam and Reservoir (Figure 2 and Figure 3) that could be reasonably expected to be affected by the proposed alternatives. The project area will be accessed using the existing road network. The existing road network includes U.S. Highway 84, NM203, and paved and unpaved local roads (Figure 2 and Figure 3). NM203 currently crosses Sumner Dam on a one-lane bridge above the Dam's radial gates and adjacent to the existing hoist deck.

3.9.2 Impacts from the No Action

Under the No Action Alternative, no impacts to access and transportation are expected as no ground disturbance or replacement of existing infrastructure at Sumner Dam would occur. Reasonably foreseeable impacts to transportation network would not be expected to occur from the continued deterioration of the radial gates and the risk of their failure remaining. The increased flow rate of up to 3,500 cfs for failure of a single radial gate during normal operations (considered the most likely gate failure mode) is below the safe channel capacity of approximately 8,500 cfs (Reclamation 2018), and the spillway would be expected to carry the increased flow to the river. Simultaneous failure of all three radial gates would increase flows downstream by an estimated 10,500 cfs, however this failure scenario is unlikely, and the actual flows would be expected to be less since portions of the radial gate(s) remaining in place would restrict flows (Reclamation 2018). Failure of one or more radial gates would result in subsequent uncontrolled flood events that could exceed safe channel capacity downstream of Sumner Dam (Reclamation 2023), potentially impacting

the access and transportation network downstream. The increased flow from uncontrolled flood events could impact the existing transportation infrastructure.

The radial gates provide flood flow attenuation, which provides additional time for emergency response and notifications. Failure of one or more radial gates could reduce the amount of time public safety teams have to respond to emergencies downstream of Sumner Dam prior to flood flows reaching these areas, increasing the potential risk to transportation infrastructure (Reclamation 2023).

3.9.3 Impacts from the Proposed Action

Increased traffic during construction of the proposed Radial Gates Project would occur on NM203 and local paved roads, which would be used to access the proposed project area under the Proposed Action Alternative. Construction activities would not be expected to interfere with local traffic patterns as the bypass bridge would be constructed prior to construction begins for the replacement of the radial gates before the closure of the existing bridge over the Dam. All residents would be notified of the construction start via an electronic message board placed at the lake residential area and announcements via the local newspapers. Approximately 6,100 linear feet of existing road would be demolished and reconstructed to bypass Sumner Dam during construction. However, most of the proposed road alignment would follow the existing road corridor in the state park to reduce impacts to undisturbed areas. Approximately 2.7 acres of asphalt would be demolished and replaced, and 5.3 acres of new ground would be disturbed to widen the road t and construct the bypass bridge abutments to meet NMDOT design standards for low-volume roads. Reconstructing the existing road would not increase the existing road network miles.

The contractor would provide a traffic control plan prior to commencing work. Traffic control would likely include traffic signs that inform the public of construction activities. The contractor would be required to submit a traffic control layout/implementation plan provided by a licensed traffic control contractor. Overall, impacts from construction activities would be expected to be minimal to the existing transportation network. The Proposed Action will provide access using a portable bypass bridge constructed prior to construction activities to provide a safe and continuous access route for both construction and public use, including emergency vehicles and commercial vehicles, during construction activities.

3.9.4 Impacts from the No NMOSE Permit Action Alternative

Impacts from No NMOSE Permit Action Alternative would be same as described for the Proposed Action Alternative. Without the NMSOE permit, onsite construction activities for the bypass bridge and bypass access road improvements and other aspects of the work that could impact access, and transportation would not be different than if the NMSOE permit was obtained. A temporary increase in traffic would occur until construction is completed and local traffic patterns would not be impacted with installation of the bypass bridge and associated access road improvements.

3.10 PUBLIC HEALTH AND SAFETY

3.10.1 Affected Environment

Reclamation has identified dam safety issues at the existing Sumner Dam structure, specifically the potential failure of the radial gates. The existing radial gates have extensive corrosion with areas rusted entirely through and wall plates are loose from the concrete wall in some areas. In 2018, Reclamation performed a risk analysis and found the Dam to be above Reclamation's guidelines for risk due to the current condition of the radial gates (Reclamation 2018). Based on Reclamation's findings, the Safety of Dams recommended rehabilitation or replacement of the radial gates (SOD-2018-A). The affected environment for public health and safety is the Sumner Dam project area (Figure 2) and residents immediately downstream that could be reasonably expected to be impacted by the proposed alternatives.

3.10.2 Impacts from the No Action

Under the No Action Alternative, no direct impacts to public health and safety are expected as no ground disturbance from radial gate replacement and bypass access route construction would occur. Indirect impacts to public health and safety could occur from the risk of failure of the radial gates remaining as the probability of failure would remain moderately high, exceeding the threshold of Reclamation's public protection guidelines. Additionally, inoperable radial gates could result in subsequent uncontrolled flood events flowing through Sumner Dam. The comprehensive review conducted by Reclamation showed a zero-life loss as the likely outcome for a failure of the radial gates during normal operations (Reclamation 2018). However, fishermen and campers immediately downstream of the Dam, if present, could be subjected to life threatening flows and may have to climb to safety quickly. The minimum wintertime flows are less than 35 ft^3/s, (Reclamation 2021) and a sudden increase of flows up to 3,500 ft^3/s would result in a rapid rate of rise along the river immediately downstream of the Dam.

The safe channel capacity downstream of Sumner Dam is approximately 8,500 cfs. A single radial gate failure (considered the most likely failure mode) would increase flows in the channel downstream of Sumner Dam by an estimated 3,500 cfs, if the gates fail while the lake elevation is at the top of the winter storage pool. Simultaneous failure of all three radial gates would increase flows downstream by an estimated 10,500 cfs, however this failure scenario is unlikely, and the actual flows would be expected to be less since portions of the radial gate(s) remaining in place would restrict flows (Reclamation 2018).

The higher risk does not come directly from failure of the radial gate(s), but from subsequent uncontrolled flood events. During flood control situations, water surface elevations in Lake Sumner could be much higher, and the Pecos River could see large inflows downstream of the Dam. Inoperable radial gates would eliminate any ability to control floods, thus elevating the risk of exceeding safe channel capacity (Reclamation 2023). Failure of one or more radial gates resulting in an inability to control flood flows through Sumner Dam would increase the risk to life and property downstream, particularly downstream road bridges and irrigation diversion structures in the river.

Additionally, the radial gates provide flood flow attenuation, providing additional time for emergency notifications and response. Failure of one or more radial gates could potentially reduce the amount of time for emergency response prior to a flood event, further increasing risks to life and property downstream of Sumner Dam (Reclamation 2023).

In addition, the deterioration of the radial gates has reduced their structural capacity resulting in an interim reservoir elevation restriction to 4,259 feet (top of joint use and initiation of winter flood control; Reclamation 2021). During high flood flow events, USACE would have to release flood flows for longer durations because the reservoir would not be able to hold its full flood allocation, and the overall flood waters could not exceed the 12 feet of static water held against the gates. This could result in longer impacts to downstream users, including the state park facilities immediately below Sumner Dam.

3.10.3 Impacts from the Proposed Action

The replacement of the radial gates would alleviate the identified dam safety issues and reduce overall risk of failure of the radial gates. New radial gates would also allow for emergency drawdown releases during heavy precipitation events as well as additional winter storage for irrigation. With the replacement of the radial gates, the Sumner Dam Reservoir would be able to control flood water up to 4,275 feet (normal operation storage conditions) and release it more slowly during flood flow events with the reservoir being able to hold its full flood allocation. During construction activities a bulkhead would be installed in front of the existing radial gates to protect the construction site and to protect residents downstream during a storm event should it occur.

In addition, a bypass bridge spanning the Pecos River would be constructed prior to construction activities at Sumner Dam to allow for the replacement of the radial gates. The bypass bridge would also allow continued access for the public, including emergency response vehicles, during replacement of the radial gates and hoist deck and spillway overlay activities.

During construction activities, heavy equipment would be used for removal of the existing radial gates and hoist deck and installation of the new gates, hoist equipment and improvements of the existing access roads. The Occupational Safety and Health Administration laws regulate worker safety and would be followed to prevent work site accidents. Potential safety hazards to the general public include accidents associated with vehicle traffic.

3.10.4 Impacts from the No NMOSE Permit Action Alternative

Impacts from No NMOSE Permit Action Alternative would be same as described for the Proposed Action Alternative. Without the NMOSE permit, the disturbed areas, onsite construction activities, and other aspects of the work would not be appreciably different if the permit is obtained prior to construction and would still alleviate the identified dam safety issues and reduce overall risk of failure of the radial gates.

3.11 REASONABLY FORESEEABLE EFFECTS

Applying CEQ's rescinded regulations previously found at 40 C.F.R. Parts 1500–1508 as guidance, Reclamation has considered impacts that are reasonably foreseeable and have a reasonably close causal relationship to the action alternatives.

Past human caused and natural events have had varying levels of impacts on the resources and values affected by the proposed Radial Gates Project construction activities. Past and present actions include agricultural developments, livestock grazing, and infrastructural development such as roads and residential homes. There are no other reasonably foreseeable actions within or near the project

area besides continued maintenance and operation of flood control and irrigation releases at Sumner Dam and the other three dams along the Pecos River.

Proposed Action

Other ongoing activities along the Pecos River may negatively impact water quality, erosion, channel maintenance, sediment levels and riverine habitats. These include stormwater runoff, agricultural runoff, municipal wastewater discharges, riparian clearing, and chemical use for vegetation control and cultivated crops. Recreation in the river, urban and industrial growth, and riparian vegetation clearing without replanting could also impact water quality, erosion, sediment levels, and riverine habitat.

In 2021, Reclamation implemented a modified flood operations plan due to the deterioration and risk of failure of the radial gates. The Proposed Action would contribute to beneficial impacts by resolving safety issues at Sumner Dam and reducing the overall risk of failure of the radial gates. Replacing the radial gates and hoist deck and overlaying the existing spillway would allow for storage of flood water and winter storage of irrigation water and would provide a means for emergency drawdown releases during flood events. Mitigation measures and BMPs would be implemented under the Proposed Action to minimize adverse impacts from construction activities for the Sumner Dam Radial Gates Project. The proposed radial gates and hoist deck replacement and spillway overlay would contribute negligibly to reasonably foreseeable adverse effects because they are temporary and transient in nature and localized with implementation of mitigation measures and BMPs. Overall, the Proposed Action would meet the purpose of the Reclamation Safety of Dams Act ensuring that Reclamation preserves the structural safety of dams and related facilities.

4. Consultation and Coordination

A public scoping meeting was held by Reclamation on December 12, 2023 to present the preliminary proposed actions, potential resources that could be impacted, and receive public concerns and feedback. A primary concern from the public was access during construction activities for residents and emergency situations with the bridge over NM203 being closed. A second public scoping meeting was held on January 30, 2024 to further discuss providing continued access for residents during construction activities. The Reclamation Team presented the preliminary proposed actions which included installing a bypass bridge downstream of Sumner Dam before the bridge over the radial gates is closed and construction activities begin. The preliminary proposed bypass bridge was necessary for construction but would also be open the public as appropriate. Means to notify residents of the construction activities were also discussed, with an electronic message board placed at the lake residential area and announcements via the local newspapers provided as possibilities.

Agencies and Tribes consulted during this EA are discussed below.

The ESA requires the consideration of impacts on federally listed species for all federally funded, permitted, or authorized projects. Reclamation requested a species list from the USFWS IPaC that identified threatened, endangered, proposed, and candidate species that may occur within the project area or may be affected by the proposed action alternatives. The Proposed Action and No NMOSE

Permit Action alternatives will have no effect on federally listed species, thus, do not require further Section 7 consultation or coordination with the USFWS.

Section 106 of the NHPA as amended in 1992 (16 USC 470 *et seq.*) requires the consideration of impacts on historic properties that are listed, or eligible to be listed, in the NRHP. The Sumner Dam Radial Gates Project will comply with the American Indian Religious Freedom Act, NRHP, and other legislation pertaining to cultural resources. The cultural resource inventory report was sent to the New Mexico SHPO for review and concurrence of the recommended determinations. The New Mexico SHPO concurred with the cultural resource inventory report (BRIC 2024b) that the proposed Sumner Dam Radial Gates Project would have adverse impacts to the Dam and the mitigative strategies. The New Mexico SHPO recommends that a project-specific programmatic agreement be developed that provides phased consultation as new elements of the project are identified, per 36 CFR §800.4.b.2 and executed per 36 CFR §800.14(b) on April 26, 2024 (Appendix D). Furthermore, the New Mexico SHPO recommended a memorandum of agreement (MOA) be developed to resolve the known adverse effects to the Dam, with provisions for phased consultation, per 36 CFR §800.4.b.2. The MOA between Reclamation and the New Mexico SHPO was executed on March 26, 2025.

The following Tribal entities were consulted during the development of this EA.

- Comanche Nation of Oklahoma
- Pueblo of Isleta
- Kiowa Indian Tribe of Oklahoma
- Mescalero Apache
- Navajo Nation

5. List of Preparers

A list of who participated in the development of this EA is provided below.

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6. References

Berlig, F., L. Preonas, and M. Woerman

2024 Groundwater and Crop Choice in the Short and Long Run. Energy Institute WP 349. Available online from https://haas.berkeley.edu/wp-content/uploads/WP349.pdf.

Brown, D. E., (Ed.)

1994 Biotic communities: southwestern United States and northwestern Mexico. University of Utah Press, Salt Lake City, UT.

BRIC, LLC (BRIC)

2024a Aquatic Resource Report for Sumner Dam Radial Gates Environmental Compliance Project. Unpublished report prepared for Reclamation Albuquerque Area Office, Albuquerque, NM.

2024b Cultural Resource Survey for the Proposed Sumner Dam Radial Gates Project. Unpublished report prepared for Reclamation Albuquerque Area Office, Albuquerque, NM.

Bureau of Reclamation (Reclamation)

2018 Sumner Dam Comprehensive Review. Report prepared by Bureau of Reclamation Technical Service Center, Denver, CO.

2020 Value Planning Report: Sumner Dam Spillway Radial Gates Modification. Report prepared by Bureau of Reclamation Value Planning Team, Denver, CO.

2021 Sumner Dam Modified Flood Operations Plan Environmental Assessment. Available online from https://www.usbr.gov/uc/DocLibrary/EnvironmentalAssessments/20210500-SumnerDamModifiedFloodOperationsPlan-DraftEA-508-AAO.pdf.

2022 Value Engineering Report: Sumner Dam Spillway Radial Gates Modification. Report prepared by Bureau of Reclamation Value Planning Team, Denver, CO.

2023 Routing Study: Sumner Dam Spillway. Report prepared by Bureau of Reclamation Technical Service Center, Denver, CO.

Bureau of Reclamation and New Mexico Office of State Engineer (NMOSE)

2006 Final Environmental Impact Statement: Carlsbad Project Water Operations and Water Supply Conservation. Bureau of Reclamation Albuquerque Area Office, Albuquerque, NM.

Carlsbad Irrigation District (CID)

2025 CID Allotment History. Available online from http://cidistrict.com/.

Durst, S. L.

2012 Southwestern Willow Flycatcher Breeding Site and Territory Summary – 2012. Unpublished report prepared for the U.S. Fish and Wildlife Service, San Juan River Basin Recovery Implementation Program, New Mexico Ecological Services Field Office, Albuquerque, NM.

Hoagstrom, C.

2009 Causes and Impacts of Salinization in the Lower Pecos River. Great Plains Research 19:27–44.

Natural Resources Conservation Service (NRCS)

2024 Web Soil Survey: Soil Data Explorer. Available online from https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx.

New Mexico Avian Conservation Partners

2017 Bird Conservation Plans: Species Assessments: Lesser Prairie Chicken. Available online from https://avianconservationpartners-nm.org/wp-content/uploads/2017/01/Lesser-Prairie-Chicken.pdf.

New Mexico Energy, Minerals, and Natural Resources Department (EMNRD)

1996 Brantley Lake State Park Management and Development Plan. Available online from https://www.emnrd.nm.gov/spd/park-plans/.

2004 New Mexico State Parks: Sumner Lake State Park Management Plan 2004–2009. Available online from https://www.emnrd.nm.gov/spd/park-plans/.

New Mexico Environment Department (NMED)

2024 2024–2026 State of NM CWA 303(d)/305(b) Integrated Report: Appendix A, Integrated List. Available online from https://www.env.nm.gov/surface-water-quality/303d-305b/.

New Mexico State University (NMSU)

2020a Noxious and Troublesome Weeds of New Mexico. Available online from https://pubs.nmsu.edu/_circulars/CR698/.

2020b The Economic Base of De Baca County, NM. Prepared by the Office of Policy Analysis at Arrowhead Center, New Mexico State University. Available online from https://arrowheadcenter.org/wp-content/uploads/2021/01/De-Baca-County-2020.pdf.

2020c The Economic Base of Eddy County, NM. Prepared by the Office of Policy Analysis at Arrowhead Center, New Mexico State University. Available online from https://arrowheadcenter.org/wp-content/uploads/2021/01/Eddy-County-2020.pdf.

Parker, P. L., and T. F. King

1998 Guidelines for Evaluating and Documenting Traditional Cultural Properties. National Park Service, National Register Bulletin 38. Washington. Available online from https://www.nps.gov/subjects/nationalregister/upload/NRB38-Completeweb.pdf.

Robertson, L

1997 Water operations on the Pecos River, New Mexico, and the Pecos bluntnose shiner, a Federally-listed minnow, *in* Greydanus, H.W., and Anderson, S.S., eds., Competing interests in water resources—Searching for consensus: U.S. Committee on Irrigation and Drainage, p. 407–422.

U.S. Census Bureau

2025 American Community Survey. Available online from https://www.census.gov/acs/www/data/data-tables-and-tools/data-profiles/.

United States Fish and Wildlife Service (USFWS)

2002 Final Recovery Plan Southwestern Willow Flycatcher (*Empidonax traillii extimus*). Prepared by Southwestern Willow Flycatcher Recovery Team Technical Subgroup for U.S. Fish and Wildlife Service Southwest Region. U.S. Fish and Wildlife Service Southwest Region, Albuquerque, NM.

2017 Final Biological Opinion for the Carlsbad Water Operation and Water Supply Conservation 2016–2026. Field Supervisor, New Mexico Ecological Services Field Office, Albuquerque, New Mexico.

2020a Endangered Species Act Listing for Monarch Butterfly Warranted but Precluded. Available online from https://www.fws.gov/press-release/2020-12/endangered-species-act-listing-monarch-butterfly-warranted-precludedhttps://www.fws.gov/press-release/2020-12/endangered-species-act-listing-monarch-butterfly-warranted-precluded.

2020b Pecos Bluntnose Shiner (*Notropis simus pecosensis*) 5-Year Review: Summary and Evaluation. New Mexico Ecological Services Field Office, Albuquerque, New Mexico.

2022 Monarch Butterfly: Fall and Spring Migration Map. Available online from https://www.flickr.com/photos/usfwsmidwest/36238499890.

2024a National Wetlands Inventory Web Map Services. Available online from https://www.fws.gov/wetlands/data/mapper.html.

2024b Species Status Assessment Report for the Pecos Pupfish (*Cyprinodon pecosensis*). U.S. Fish and Wildlife Service Southwest Region, Albuquerque, NM.

2025 Critical Habitat Portal. Available online from http://criticalhabitat.fws.gov/crithab/

United States Geologic Survey (USGS)

2019 Pecos River Basin Salinity Assessment, Santa Rosa Lake, New Mexico, to the Confluence of the Pecos River and the Rio Grande, Texas. Available online from https://pubs.usgs.gov/publication/sir20195071.

APPENDIX A. PUBLIC SCOPING AND EA REVIEW PERIOD COMMENTS SUMMARY AND RESPONSES

Commentor	Format	Comment	Reclamation Response
Multiple Commentors	Email	Will the intermediate bridge be installed prior to radial gates replacement activities to allow access for public to cross the river?	Yes. The bypass bridge will be installed and be in service before the bridge over the radial gates is closed to the public and construction on the Sumner Gates Radial Gates Project begins.
Multiple Commentors	Email	Will Highway 203 be closed during or after project construction?	Closures are not expected. Residents will likely maintain access to Highway 203 during construction via a bypass access route. Future permanent bypass bridge and road installations are out of the scope of the current Radial Gates project. Reclamation may need to close the bypass route to the public at times to facilitate construction activities.
Jim Lyssy	Email	What is the maximum load capacity for the temporary bypass bridge?	A permanent bypass bridge is outside of scope of Sumner Dam Radial Gates Project.
N/A	Teams Meeting Participant	Is this project eligible for Water Resources Development Act funding?	The Water Resources Development Act (WRDA) is strictly authorizing legislation and does not appropriate funding. The Sumner Dam Radial Gates project is not authorized under the WRDA.
Leroy and Sandy Sandoval	Letter	Will Statewide Transportation Improvement Program (STIP) funding be used for the permanent bypass bridge?	A permanent bypass bridge is outside of scope of Sumner Dam Radial Gates Project
Jim Lyssy	Email	Who owns the (current) bridge and who owns the road (State Road 203)?	Reclamation owns the bridge and land underneath the bridge, NMDOT owns the road alignment.

Commentor	Format	Comment	Reclamation Response
Jim Lyssy	Email	What is the Maximum Load Capacity for the intermediate Mabey Bridge and bridge over the radial gates?	The maximum load capacity for the current bridge over the Dam is 15 tons. The 15-ton capacity is based on the Federal Highway requirements for the existing bridge over the Dam and not the road. The Mabey bridge will be designed for an HS-20 load and is not expected have a load restriction for standard size loads.
Alan Manning	Email	Do archeological and environmental studies need to be completed before activities are started?	No. Archeological and environmental studies have already been completed in compliance with the National Historic Preservation Act (NHPA) and the National Environmental Policy Act (NEPA) process for the Sumner Dam Radial Gates Project. All findings and collected data will be included in the project's Environmental Assessment
N/A	Email	Will the public be able to still participate in recreation activities during construction of the radial gates and intermediate bridge?	Yes, the public will still have recreational access to Lake Sumner during project construction activities. There may be limited access to areas of the lake being used for construction activities while construction efforts are underway.
Jim Lyssy	Email	What are the weight limitations of the temporary bridge and how long can it be utilized by the community?	The Mabey bridge will be designed for an HS-20 load and is not expected to have a load restriction for standard size loads. Upon completion, NMDOT will determine the final load rating (and height restriction) of the bypass bridge once it is placed. The bypass bridge will be inspected by a team of engineers on a yearly basis while in use. The Mabey bridge will remain in place at least through construction and may remain in place past construction, but this is not certain.
Mike Craft	Email	I propose Alternative D— Branch off from Tamarack Dr. on the west side of the fire dept. (heading N-N/W), with a road, somewhat parallelling the west side of the lake. At a point of feasibility then erect a MaBey modular bridge, crossing the Pecos to the north of the lake and connecting with U.S. Highway 84. This action may potentially open up more lake access with development for homes in that area, thus increasing revenue for the county.	The proposed route for an alternative access around the north side of Lake Sumner would be both cost and time prohibitive when compared to the current proposed route.
Comments Addressed During 2nd Public Scoping Meeting- January 30th, 2024			
Jim Lyssy	Public Meeting Comment	Where is the radial gate funding coming from for the following: Sumner Dam Radial Gates, the Intermediate Bridge, and the Permanent Bypass Bridge?	A permanent bypass bridge is out of scope of the Sumner Dam Radial Gates Project. The radial gates and associated construction bypass bridge will initially be funded through Reclamation's Aging Infrastructure Account. Upon completion, CID will be responsible for their portion of the cost-share of the Project.
Public Scoping Meeting Attendee	Public Meeting Comment	Is the project eligible for funding from the president's budget FY 2025?	Out of the scope of current project. Reclamation response during meeting stated funding applications is usually started 3 years previous to start of project.
Public Scoping Meeting Attendee	Public Meeting Comment	When does Reclamation find out if they have received the grant funding applied for a given project?	Out of scope of current project. Reclamation is unable to determine the timelines in which grant money for a given project application will be awarded.

Commentor	Format	Comment	Reclamation Response
Public Scoping Meeting Attendee	Public Meeting Comment	Why can't the bridge location be moved downstream to a different crossing area within the park area?	Multiple preliminary studies of the dam area have been conducted. The current Radial Gates project is a result of combining the safest design plan for the dam area with the most cost-effective budget.
Public Scoping Meeting Attendee	Public Meeting Comment	What about the fiber optic cable/ cables that are run through the dam?	Reclamation is currently working with the county to determine what easements and right of ways are present.
Public Scoping Meeting Attendee	Public Meeting Comment	Will the current bridge remain where it is?	Yes. Reclamation confirmed the current bridge will remain where it is.
Jim Lyssy	Public Meeting Comment	What if you keep the bridge where it is, and you adjust it to a weight limit of so much?	Out of scope of Sumner Dam Radial Gates Project. The weight limit for the bridge is 15,000 tons. A separate bypass bridge away from the spillway is required to safely replace the radial gates.
Public Scoping Meeting Attendee	Public Meeting Comment	Will the counterbalances be replaced as well?	The counterbalances will no longer be necessary with the new radial gate design for this project. Reclamation is moving away from the practice of using counterbalances and toward a more modern design for radial gates.
Public Scoping Meeting Attendee	Public Meeting Comment	How Many Radial Gates are being replaced?	There are three radial gates located on Sumner Dam and all three will be replaced.
Public Scoping Meeting Attendee	Public Meeting Comment	Will the hoist bridge be replaced as well?	Yes. The current hoist bridge will be replaced with a hoist bridge that is designed for the new radial gates design.
Public Scoping Meeting Attendee	Public Meeting Comment	Who was responsible for the repairs on the bridge (filling holes, pebble sealant)?	NMDOT is responsible for the driving surface of the road, including on the bridge.
Public Scoping Meeting Attendee	Public Meeting Comment	Out of the dams in the 500-mile radius of Fort Sumner, how many facilities are close that are high risk?	Out of scope of current Sumner Dam Radial Gates Project.
Public Scoping Meeting Attendee	Public Meeting Comment	How old is the temporary bridge?	The Mabey bridge NMDOT plans to utilize is approximately 60 years old.
Public Scoping Meeting Attendee	Public Meeting Comment	When this project is completed, will Carlsbad Irrigation district allow us to maintain the same water capacity?	Out of project scope. Lake elevations at Sumner are determined by the U.S. Army Corps of Engineer's Water Control Manual, approved deviations to the Water Control Manual, the Pecos River Commission, the Office of the State Engineer, and hydrologic conditions.

Commentor	Format	Comment	Reclamation Response
Public Scoping Meeting Attendee	Public Meeting Comment	When Fort Sumner irrigation needs water, if we start to run dry, how will we get water? Is there anything in agreement that insures the irrigations district will have water during their watering times from March to October?	Out of scope of Sumner Dam Radial Gates project. Fort Sumner Irrigation District (FSID) deliveries will not be impacted by construction because FSID's water is not technically stored in Lake Sumner, but bypasses through the lake in a quantity/rate determined by the inflows into Lake Sumner.
Public Scoping Meeting Attendee	Public Meeting Comment	What is going to prevent rust from affecting the radial gates again?	Reclamation will put a plan in place in which radial gates maintenance is overseen by a team of engineers who will determine the best action to maintain the radial gates.
Public Scoping Meeting Attendee	Public Meeting Comment	Did you know that where they are going to put in the road on the west side, that there used to be a dump down there?	Out of scope of project. However, archeological surveys and evaluation are required before any project construction can begin.
Public Scoping Meeting Attendee	Public Meeting Comment	Who will own the new permanent bypass bridge and the road (State Road 203)?	A permanent bypass road is not part of this project.
Public Scoping Meeting Attendee	Public Meeting Comment	Will Socioeconomics analysis to residents be included in this EA?	Yes, socioeconomic analyses are included in section 3.8 of the EA.
Public Scoping Meeting Attendee	Public Meeting Comment	Did Reclamation Consider funding all 3 phases (temporary bridge, radial gates replacement, and permanent bridge) at once?	Reclamation and CID are responsible for the operation and maintenance of Sumner Dam. Reclamation is not responsible for providing a permanent bridge for NM 203. Reclamation and CID are working to fund this operation and maintenance project, and a permanent bridge project is outside the scope of this work.
Public Scoping Meeting Attendee	Public Meeting Comment	How will the community be notified of possible temporary bridge closure? The Lake Community does not have access to local newspaper or radio stations.	Reclamation will notify public prior to temporary closures by means that reach the Lake Community residents too, such as a portable message board and working with community to post on their Facebook page and other social media platforms

Commentor	Format	Comment Number/Section	Comment	Reclamation Response
			Comments Addressed During EA Review Period -September 18, 2024	
CID	Email	General	CID provided written comments to an advanced review of the draft EA on 6/14/2024 prior to public review, and Reclamation provided comment responses on 8/30/2024. Of the 21 comments received, Reclamation applied or addressed all but 3 comments. Of those 3, the reasons for not changing the EA document were explained in the response to comments.	CID provided written comments to an advanced review of the draft EA on 6/14/2024 prior to public review, and Reclamation provided comment responses on 8/30/2024. Of the 21 comments received, Reclamation applied or addressed all but 3 comments. Of those 3, the reasons for not changing the EA document were explained in the response to comments.
CID	Email	General	To CID's knowledge, these gates have not been needed or utilized for flood control purpose since the early 1950s, when Sumner Dam was raised (in 1956). In 1977, Santa Rosa Dam was constructed 30 miles upstream from Sumner, greatly reducing the risk that Sumner Dam would have to be used for a flood event.	Multiple Flood Hazard Analyses and subsequent routing studies have been developed for Sumner Dam since Santa Rosa Dam was constructed. All such studies have indicated that even with Santa Rosa regulating flows upstream, intervening flows still require the radial gates to safely pass most design floods. The 2023 Flood Hazard Analysis document was included and referenced in the EA revisions.
CID	Email	General	The burden of flood control for many tens of thousands of residents from Sumner Dam to Brantley Dam, which includes Fort Sumner, Roswell, Dexter, Hagerman, Lake Arthur, and Artesia, should not fall on the shoulders of CID's farmers to whom there is no benefit of this flood control.	As described in the MOU dated 1/19/2023, CID's portion of the cost share of the Sumner Dam Radial Gates project was established under previous legislation. Changing the cost share is not in the scope of this EA and is beyond Reclamation's authority.
CID	Email	A	The Draft EA does not support Reclamation's adoption of the "Proposed Action Alternative," replacement of the Sumner Dam radial gates. The Draft EA does not establish that the radial gates are needed to keep flood waters within safe stream limits downstream of Sumner Dam, or to prevent the loss of life in the communities of Roswell, Artesia, and others between Sumner and Brantley. The Draft EA states failure of the radial gates will not cause flow to exceed the safe channel capacity of the Pecos River downstream from Sumner. E.g., Section 3.2.2. The Draft EA states there is no risk of loss of life if the radial gates fail. E.g., Section 3.7.2. Both of these statements support the No Action Alternative, and not the Proposed Action Alternative.	The EA has been revised to more accurately and fully explain the risks as identified in the Flood Hazard Analysis and Routing Study. The EA as revised fully supports the Action Alternative. See edits to the "Impacts from the No Action" subsections in each the resources listed in Section 3.
CID	Email	B1	Sumner is authorized to store water in the total reservoir capacity in af available at elevation 4,261, with an additional 20,000 af available in "winter storage" (Sumner storage is not calculated in af by the Partial Final Decree. The Draft EA does not accurately state CID's and Reclamation's storage rights at Sumner, in Sections 1.1, 2.2.1 (p.10), 3.2.1, 3.2.3.	See revised language in Section 2.2.1 (CID Water Storage subsection), Section 3.2.1 (Water Storage subsection), and Section 3.2.3.
CID	Email	B1	Section 3.2.3 states additional water, including winter water, can be stored at Brantley during construction, and "water quantity would not be impacted by the proposed radial gates project." This is true only if the OSE grants a permit allowing CID and Reclamation to store additional water in Brantley.	EA was revised to include alternatives reflecting the possibility that the application to temporarily store additional water in Brantley is not approved. Also see revised language in Section 3.2.3.
CID	Email	B2	In Section 3.9.3, the Draft EA states "New radial gates would also allow for operational releases, as well as emergency drawdown releases during heavy precipitation events." Section 3.10 contains similar language. This is incorrect. The radial gates do not release irrigation water, and do not have a role in "operational releases." The radial gates provide flood control protection only, and the Draft EA should not imply that the radial gates are needed for irrigation operations.	This language has been clarified in the EA and Sections 3.10.3 and 3.11.

Commentor	Format	Comment Number/Section	Comment	Reclamation Response
CID	Email	B3	At numerous points, including Sections 2.2.1, 3.2.3, the Draft EA states CID and Reclamation intend to seek a permit from the New Mexico Office of the State Engineer ("OSE") to temporarily increase storage at Brantley by 80,000 af. This is incorrect. CID's Brantley storage allocation will increase from 40,000 to 80,000 af during the construction period. The Draft EA is incorrect when it states "an additional 80,000 acre-feet" of storage is being sought at Brantley.	This has been corrected in the EA to explain that an additional 40,000 ac-ft of storage is being sought, which will bring the total to 80,000 ac-ft.
CID	Email	B3	The application to store an additional 40,000 af at Brantley will be submitted to the OSE upon approval by CID's Board of Directors and the appropriate authority within Reclamation. After submission, the OSE will issue public notice, and members of the public will have the opportunity to protest the application. The timeline to receive the permit may be anywhere from 3-24 months. CID cannot increase storage at Brantley until the permit allowing it to do so is issued by the OSE.	The EA has been revised throughout to include a second action alternative in the event that the NMOSE permit is not obtained prior to construction.
CID	Email	B3	CID may increase some of its storage at Santa Rosa without an OSE permit. However, this is not sufficient to protect CID's water supply during the radial gates construction project because a significant amount of water may flow into the Pecos stream system downstream of Santa Rosa. If CID is not allowed to store additional water in Brantley, any water that exceeds current storage limitations will be sent downstream to Texas and will not be available for use by CID's members.	The EA has been revised throughout to include a second action alternative in the event that the NMOSE permit is not obtained prior to construction.
CID	Email	C	The Draft EA does not accurately address the environmental justice and economic impacts on CID's farmers.	Per Executive Order 14173, the Environmental Justice section of the EA was removed. The financial analysis information has been updated in the EA and additional discussion regarding socioeconomic impacts have been added to Section 3.8.
CID	Email	C	It is CID's understanding that this analysis, however, did not include the approximately $10,000,000 for the temporary road, and was based on the 60% design of the radial gates, not the final design of either the radial gates or the temporary road.	The financial analysis information has been updated in Section 3.8 of the EA.
CID	Email	C	For a CID member with a 30-acre farm, the annual assessment to account for the loan at 4.375% would increase from $2,880 to $4,169.10 per year, and cost (without any other increases to the assessment or accounting for inflation or the time value of money) that CID member almost $40,000 over the 30-year loan term. That is a significant expense for a farmer who will receive zero flood control protection from the radial gates.	The financial analysis information has been updated in Section 3.8 of the EA.
CID	Email	C	Section 3.7.3 of the Draft EA proposes that CID's farmers can simply irrigate less to save money. But CID charges its assessments per acre, not based on the amount of water delivered. Thus, a farmer who chooses not to irrigate in a given year and a farmer who irrigates with the full allotment will pay the same assessment per acre.	See revisions in Section 3.8 of the EA.

Commentor	Format	Comment Number/Section	Comment	Reclamation Response
CID	Email	C	Section 3.7.3 of the Draft EA also proposes that farmers change what they plant to "reduce their water use and costs." As noted, reducing their water use does not reduce their assessment. And changing what a farmer plants to make more money is not as quick a process as Reclamation appears to believe. Converting an alfalfa field to a pecan orchard will take many years before the farmer may see increased income.	See revisions in Section 3.8 of the EA.
CID	Email	C	Section 3.7.3 of the Draft EA also proposes farmers simply use supplemental irrigation wells when surface water supplies fall short. Again, this misunderstands CID and its members' water rights. Only a small portion of CID members have supplemental irrigation wells, as the OSE stopped permitting wells to supplement CID rights in 1968. For those that do, OSE permit limitations mean the farms cannot simply use more groundwater to pay for the assessments.	See revisions in Section 3.8 of the EA.
CID	Email	D	The Draft EA only considers two alternatives: No Action, and the Proposed Action. The EA does not consider any other alternative action, including leaving the gates in place and raising the weir to provide additional flood control; removing the gates and raising the weir to provide additional flood control; removing the gates with no further action.	The EA has been revised throughout to include a second action alternative in the event that the NMOSE permit is not obtained prior to construction. Other alternatives (including removal of the radial gates) were considered but dismissed. Discussion of those considered alternatives are included in Section 2.3 of the EA.
CID	Email	D	The Draft EA did not consider the viability of commencing the radial gates project after State and/or Federal construction of a permanent road and bridge downstream of Sumner Dam. This would ensure the public continued to have road access on NM State Road 203 and would not require temporary road construction as part of the radial gates replacement project.	The project cannot be delayed. Based on the 2018 risk analysis of Sumner Dam, Reclamation's Safety of Dams (SOD) Program issued a Category 1 O&M recommendation for rehabilitation of the radial gates (SOD-2018-A)––the highest potential risk and O&M priority. Per Reclamation Directives and Standards FAC 01-07, "Category 1 O&M Recommendations will be made for the correction of severe deficiencies where immediate responsive action is required to ensure structural safety and operational integrity of a facility."
CID	Email	E	In Section 2.2.1, pg. 10, Intermediate Access Route, the Draft EA states, "An intermediate bridge for the public and local residents . . . ." The Draft EA's description of the need for the intermediate bridge demonstrates that it should be considered a non-reimbursable cost unrelated to the radial gates construction project.	A bypass road during construction is required for both construction and emergency access and is an inseparable part of the construction project. Section 2.2.1 has been revised. Reclamation is coordinating with NMDOT on the bypass road to reduce costs.
CID	Email	E	In Section 3.2.3, the Draft EA addresses the impact to water quality from radial gates construction and road construction. The Draft EA does not address impacts to water quality that may be caused by storage of more irrigation water in Brantley than in Sumner.	Additional discussion regarding water quality, including storage or more water at Brantley Reservoir, has been added to Section 3.2 of the EA.
CID	Email	E	In Section 3.5.2, the Draft EA states that the "damage or removal of the radial gate(s) would impact the 1956 construction, not the CCC/WPA-era construction components . . . ." This is incorrect. As Reclamation has acknowledged, the radial gates are part of the original construction of Sumner Dam in 1936-1937. Thus the removal or damage of the radial gates will impact the original construction (and may impact the 1956 construction as well).	Further clarification was added to Section 3.6.2 of the EA.

Commentor	Format	Comment Number/Section	Comment	Reclamation Response
CID	Email	E	In Section 3.8.3, the Draft EA states the current road over Sumner Dam will experience a "temporary closure" if the Proposed Action is implemented. This is incorrect. Once closed, the road over Sumner Dam will not reopen and will be used only by CID for dam maintenance and operations.	Future permanent closure of the existing spillway bridge would be for overloading, safety, and security reasons, and is unrelated to the radial gates project. Spillway bridge closure and construction of a bypass route during construction on the radial gates is necessary due to extremely close proximity of the spillway bridge to the construction area. Section 3.8.3 has been revised to clarify language.
CID	Email	F	A1, N/A Comment: The Reclamation Response states this project is ineligible for Water Resources Development Act funding "due to it being an Army Corps of Engineering funded project." CID's understanding is that the Corps is not providing funding for the radial gates replacement project.	Comment response has been revised to clarify.
CID	Email	F	A2, Jim Lyssy Comment: Reclamation's response states "the intermediate bridge and the radial gates project funding will likely come from the bipartisan infrastructure backlog." While CID agrees the funding should come from federal sources only, Reclamation's position, including that stated at public meetings, is that CID will be responsible for approximately 68% of the costs of the intermediate bridge and the radial gates project.	Comment response has been revised to clarify.
CID	Email	F	A3, final comment on page: Reclamation states, "Future decisions regarding water capacity will be the decision of the CID board." This is incorrect. CID's ability to store water is limited by the PFD, which contains the rights adjudicated to CID and Reclamation for the Carlsbad Project. CID and Reclamation intend to apply for a temporary permit from the OSE to increase storage at Brantley during the radial gates project. If that temporary permit is not converted into a permanent permit allowing for flexible storage, storage rights will revert to those contained in the PFD. CID cannot unilaterally change the limitations on its storage rights.	Comment response has been revised to clarify.
CID	Email	F	A4, comment re socioeconomics: Reclamation responds to the question only with reference to the bridge ("Q: Will Socioeconomics analysis to residents be included in the EA? A: No, because the socioeconomic impacts occurred when the existing bridge load capacity was reduced to 15 tons."). The socioeconomic impact regarding the radial gates replacement, including the temporary bridge, will not be felt by residents of or visitors to Sumner. The impacts will solely be felt by CID members facing significantly increased assessments to cover construction costs, even over a 50-year period, unless Congress acts, Reclamation agrees to negotiate a new agreement with CID, or different funding sources are identified.	Comment response has been revised to clarify. Socioeconomic discussion is included in Section 3.8 of the EA.

APPENDIX B. USACE CORRESPONDENCE

From: Randell Seeley
To: Stephanie Lee
Subject: Fwd: Ft. Sumner Lake CWA Question
Date: Tuesday, February 13, 2024 10:12:34 AM
Attachments: image003.png
image001.png

Hi Steph,

Please see below the response from the Corps regarding Fort Sumner.

Get Outlook for Android

From: Schroeder, Christina L CIV USARMY CESPA (USA) <Christina.L.Schroeder@usace.army.mil>
Sent: Tuesday, February 13, 2024 10:05:31 AM
To: Randell Seeley <Randell.Seeley@ddc4c.com>; SPA-RD-NM <SPA-RD-NM@usace.army.mil>
Subject: Ft. Sumner Lake CWA Question

CAUTION: This email originated from outside your organization. Exercise caution when opening attachments or clicking links, especially from unknown senders.

Hello,
An irrigation exemption is not applicable to this situation. However, if your activity does not involve the discharge of dredge or fill material into waters of the U.S., authorization from the Corps under Section 404 of the Clean Water Act is not required.

Sincerely,

Christina Schroeder
New Mexico/Texas Branch Chief
Albuquerque District

Office: 505-342-3374
Mobile: 505-377-8799

APPENDIX C. USFWS IPAC T&E SPECIES LIST

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New Mexico Ecological Services Field Office
2105 Osuna Road Ne
Albuquerque, NM 87113-1001
Phone: (505) 346-2525 Fax: (505) 346-2542

In Reply Refer To: 06/13/2025 16:44:48 UTC
Project Code: 2024-0006490
Project Name: Sumner Dam Radial Gates

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:

Thank you for your recent request for information on federally listed species and important wildlife habitats that may occur in your project area. The U.S. Fish and Wildlife Service (Service) has responsibility for certain species of New Mexico wildlife under the Endangered Species Act (ESA) of 1973 as amended (16 USC 1531 et seq.), the Migratory Bird Treaty Act as amended (16 USC 701-715), and the Bald and Golden Eagle Protection Act as amended (16 USC 668-668(c)). We are providing the following guidance to assist you in determining which federally imperiled species may or may not occur within your project area, and to recommend some conservation measures that can be included in your project design.

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 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 feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the

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 (NEPA; 42 USC 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

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

Candidate Species and Other Sensitive Species

A list of candidate and other sensitive species in your area is also attached. Candidate species and other sensitive species are species that have no legal protection under the ESA, although we recommend that candidate and other sensitive species be included in your surveys and considered for planning purposes. The Service monitors the status of these species. If significant declines occur, these species could potentially be listed. Therefore, actions that may contribute to their decline should be avoided.

Lists of sensitive species including State-listed endangered and threatened species are compiled by New Mexico State agencies. These lists, along with species information, can be found at the following websites.

Biota Information System of New Mexico (BISON-M): www.bison-m.org

New Mexico State Forestry. The New Mexico Endangered Plant Program: https://www.emnrd.nm.gov/sfd/rare-plants/

New Mexico Rare Plant Technical Council, New Mexico Rare Plants: nmrareplants.unm.edu

Natural Heritage New Mexico, online species database: nhnm.unm.edu

WETLANDS AND FLOODPLAINS

Under Executive Orders 11988 and 11990, Federal agencies are required to minimize the destruction, loss, or degradation of wetlands and floodplains, and preserve and enhance their natural and beneficial values. These habitats should be conserved through avoidance, or mitigated to ensure that there would be no net loss of wetlands function and value.

We encourage you to use the National Wetland Inventory (NWI) maps in conjunction with ground-truthing to identify wetlands occurring in your project area. The Service's NWI program website, www.fws.gov/wetlands/Data/Mapper.html, integrates digital map data with other resource information. We also recommend you contact the U.S. Army Corps of Engineers for permitting requirements under section 404 of the Clean Water Act if your proposed action could impact floodplains or wetlands.

MIGRATORY BIRDS

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

It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a Federal nexus) or a Bird/Eagle Conservation Plan (when there is no Federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds. We also recommend review of the Birds of Conservation Concern list (https://www.fws.gov/media/birds-conservation-concern-2021) to fully evaluate the effects to the birds at your site. This list identifies migratory and non-migratory bird species (beyond those already designated as federally threatened or endangered) that represent top conservation priorities for the Service, and are potentially threatened by disturbance, habitat impacts, or other project development activities.

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

We suggest you contact the New Mexico Department of Game and Fish, and the New Mexico

Energy, Minerals, and Natural Resources Department, Forestry Division for information regarding State protected and at-risk species fish, wildlife, and plants.

For further consultation with the Service we recommend submitting inquiries or assessments electronically to our incoming email box at nmesfo@fws.gov, where it will be more promptly routed to the appropriate biologist for review.

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

Attachment(s):

- Official Species List
- Bald & Golden Eagles
- Migratory Birds

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:

New Mexico Ecological Services Field Office
2105 Osuna Road Ne
Albuquerque, NM 87113-1001
(505) 346-2525

PROJECT SUMMARY

Project Code: 2024-0006490
Project Name: Sumner Dam Radial Gates
Project Type: Dam - Maintenance/Modification
Project Description: Radial gates at the dam site will be replaced due to deterioration. There are three 45' wide by 21' tall radial gates that will each be replaced by 45' wide by 16' tall radial gates. The 5' difference will be made up by raising the spillway invert elevation to the upstream weir elevation. During construction, bulkheads will be installed in front of two of the radial gates with one remaining open for flood control. NM State Hwy 203, which crosses the dam, may be taken out of service and an alternate one-lane bypass route may be constructed just downstream of the dam. This crossing would follow the existing roads on both eastern and western sides of the Pecos River just downstream of the stilling basin. It may be a portable bridge with abutments outside the riverbed or a dirt road on top of new concrete culverts and compacted backfill in the same location. It would be approximately 18' wide and 84' long. Improvements on the east side of the dam may include developing radii at the sharper turns and reducing grading. If material is needed to install the new road, it is assumed it can be borrowed from a nearby borrow source located southwest of the spillway. The project perimeter provided includes area with proposed staging area and borrow source locations. Some vegetation removal may be required. Some road development may be necessary to conform to NMDOT regulations. The construction period is approximately 3 years.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@34.601530350000004,-104.39329107551725,14z

Counties: De Baca County, New Mexico

ENDANGERED SPECIES ACT SPECIES

There is a total of 4 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.

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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.

BIRDS

NAME	STATUS
Lesser Prairie-chicken *Tympanuchus pallidicinctus* Population: Southern DPS No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1924	Endangered
Southwestern Willow Flycatcher *Empidonax traillii extimus* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6749	Endangered

FISHES

NAME	STATUS
Pecos Pupfish *Cyprinodon pecosensis* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5162	Proposed Threatened

INSECTS

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

CRITICAL HABITATS

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

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

BALD & GOLDEN EAGLES

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act [2] and the Migratory Bird Treaty Act (MBTA) [1]. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

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

There are Bald Eagles and/or Golden Eagles in your project area.

Measures for Proactively Minimizing Eagle Impacts
For information on how to best avoid and minimize disturbance to nesting bald eagles, please review the National Bald Eagle Management Guidelines. You may employ the timing and activity-specific distance recommendations in this document when designing your project/ activity to avoid and minimize eagle impacts. For bald eagle information specific to Alaska, please refer to Bald Eagle Nesting and Sensitivity to Human Activity.

The FWS does not currently have guidelines for avoiding and minimizing disturbance to nesting Golden Eagles. For site-specific recommendations regarding nesting Golden Eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

If disturbance or take of eagles cannot be avoided, an incidental take permit may be available to authorize any take that results from, but is not the purpose of, an otherwise lawful activity. For assistance making this determination for Bald Eagles, visit the Do I Need A Permit Tool. For assistance making this determination for golden eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

Ensure Your Eagle List is Accurate and Complete
If your project area is in a poorly surveyed area in IPaC, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the Supplemental Information on Migratory Birds and Eagles, to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to bald or golden eagles on your list, see the "Probability of Presence Summary" below to see when these bald or golden eagles 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. https://ecos.fws.gov/ecp/species/1626	Breeds Oct 15 to Jul 31
Golden Eagle *Aquila chrysaetos* 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. https://ecos.fws.gov/ecp/species/1680	Breeds Dec 1 to Aug 31

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 "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

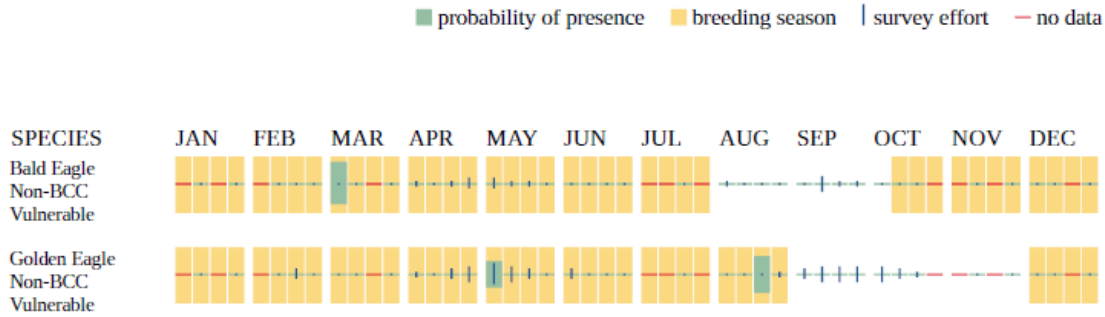
Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

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



Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

MIGRATORY BIRDS

The Migratory Bird Treaty Act (MBTA) [1] prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service).

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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)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the "Probability of Presence Summary" below 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. https://ecos.fws.gov/ecp/species/1626	Breeds Oct 15 to Jul 31
Broad-tailed Hummingbird *Selasphorus platycercus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/11935	Breeds May 25 to Aug 21
Clark's Grebe *Aechmophorus clarkii* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10575	Breeds Jun 1 to Aug 31
Ferruginous Hawk *Buteo regalis* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/6038	Breeds Mar 15 to Aug 15
Golden Eagle *Aquila chrysaetos* 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. https://ecos.fws.gov/ecp/species/1680	Breeds Dec 1 to Aug 31
Long-billed Curlew *Numenius americanus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/5511	Breeds Apr 1 to Jul 31

NAME	BREEDING SEASON
Red-headed Woodpecker *Melanerpes erythrocephalus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9398	Breeds May 10 to Sep 10

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 "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (▪)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (▪)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

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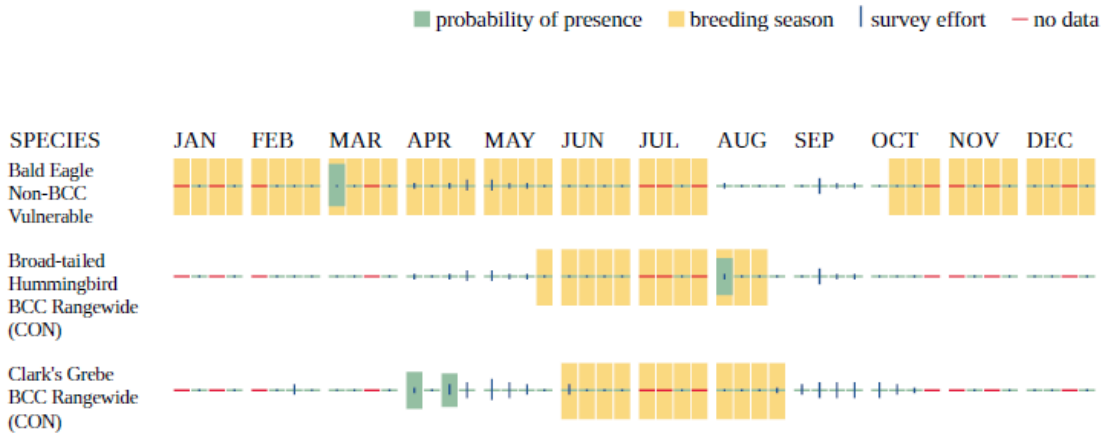

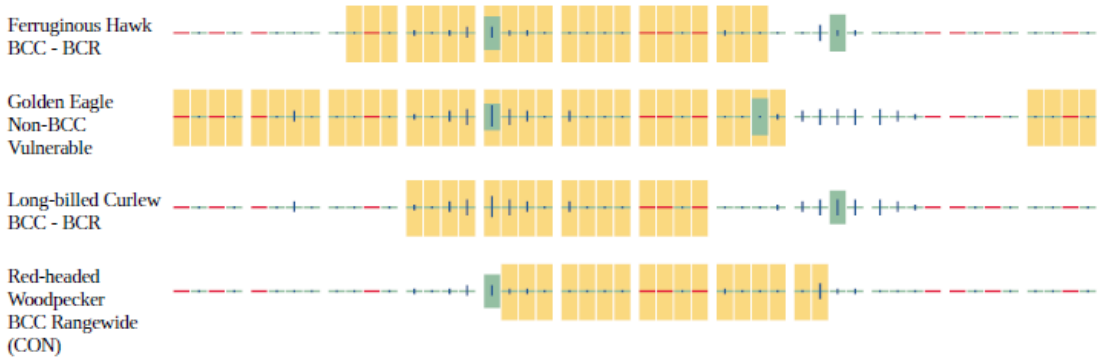

Additional information can be found using the following links:

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- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

APPENDIX D. SHPO CONSULTATION

United States Department of the Interior

BUREAU OF RECLAMATION
Albuquerque Area Office
555 Broadway NE, Suite 100
Albuquerque, NM 87102-2352

IN REPLY REFER TO:
ALB-702
2.1.1.04

March 15, 2024

VIA U.S. AND ELECTRONIC MAIL

Jeff Pappas, PhD.
State Historic Preservation Officer and Director
New Mexico Historic Preservation Division
Bataan Memorial Building,
407 Galisteo Street, Suite 236
Santa Fe, NM 87501

Subject: Section 106 Consultation, Sumner Dam Spillway Radial Gates Replacement Project, De Baca County, New Mexico.

Dear Dr. Pappas:

The Bureau of Reclamation working with the Carlsbad Irrigation District (CID) and the United States Army Corps of Engineers plans to replace three radial gates at Sumner Dam (LA 105556/HCPI54428) in De Baca County, New Mexico. The spillway gates have not functioned properly since 2004, creating a severe risk to life and property downstream of the dam. The new gates will not have counterweights, like the current gates do, and there will be extensive modification needed to the hoist deck and hoists, along with modernized electrical supply and controls. Some concrete demolition will also be required. Additionally, all handrails must be replaced in order to meet current safety regulations.

The project Area of Potential Effect (APE) is approximately 57.20 acres including two staging areas. Sumner Dam is owned by Reclamation but is operated and maintained by CID. The proposed project will be funded by Reclamation and, therefore, requires compliance with Section 106 of the National Historic Preservation Act of 1966 (NHPA, as amended). As such a Class III Cultural Resources Inventory was performed under New Mexico Cultural Resources Information System (NMCRIS) #154085, Sumner Radial Gates Replacement Project by BRIC LLC to identify historic properties with potential to be impacted by the undertaking. All reporting documentation has been uploaded to the Archaeological Records Management Section (ARMS) for review.

Sumner Dam

Sumner Dam and Lake Sumner are on the Pecos River about 250 river miles north of Carlsbad and about 16 miles northwest of Fort Sumner, New Mexico. The dam was originally called Alamogordo Dam but renamed to avoid confusion with the town of the same name. It was constructed between 1936 and 1937 by Reclamation with Works Progress Administration (WPA) and Civilian Conservation Corps (CCC) labor. It underwent major modification in 1956 when the height of the dam was raised, and an improved spillway was installed. Previous recordings of the dam found it to be eligible for inclusion in the National Register of Historic Places (NRHP) under Criteria A and D in 1997 (Historic Preservation Division [HPD] Log 52596) and again in 2002 (HPD Log 64889). Reclamation concurs with the previous determinations of eligibility in the current analysis and documentation.

Proposed Project Components

The proposed undertaking will be comprised of two main components: demolition and installation. The demolition component consists of the removal of the three 45 by 21-foot non-functioning radial gates, removal of the existing hoist deck, and removal of the three-chain hoists and automatic gate operating equipment. Installation will include three new 45 by 16-foot radial gates, raising the existing spillway invert 5 feet, new concrete corbels, cathodic protection, a new hoist deck with wire rope hoists, increased power supply, modern automated control for the gates, and new railings and fencing that meet modern safety standards. Additionally, concrete will be placed in the float wells.

Secondary Components

Borrow Pits

As originally conceived, the project would require a coffer dam upstream of the construction area to protect against storms and/or rising lake levels due to flood-water runoff. The earth for the coffer dam would have been taken from the areas used to remove soil for the initial 1930s dam construction and the 1950s dam modification. The cultural resources survey for this is reflected in the Class III report (which will be sent simultaneously with this letter but under separate cover). Since the time of the Class III survey (5 and 6 September 2023), the project scope has changed, the coffer dam no longer is planned, and the Borrow Pits are not needed for the completion of the proposed undertaking.

Temporary Bridge

State Highway 203 crosses the spillway and is supported by the spillway walls and piers. The road must be closed to traffic during construction. In initial planning a temporary route for the road across the planned coffer dam was an alternative. After elimination of the coffer dam from design, plans to install a temporary bridge downstream of the dam that will connect with existing roads was chosen as the preferred alternative. The downstream bridge was also part of initial planning and was included in the Class III survey area. Reclamation is working with New Mexico Department of Transportation on initial designs for a permanent downstream bridge and reroute of State Highway 203. This will be a separate undertaking at a future date and is not part of the current radial gates project.

Cultural Resources Within the APE

A total of eight cultural resource sites was encountered during the Class III inventory. Of these, five are historic, two are multi-component, and one is prehistoric. Reclamation has determined one of these to be eligible for inclusion in the NRHP, one is determined not eligible to the NRHP and the remainder are undetermined and need more data (see attached determinations of eligibility).

LA 105556/HCPI 54428, Sumner Dam, is determined by Reclamation to be eligible to the NRHP under Criteria A and C. The dam is found to be eligible under Criterion A by Reclamation because it is recognized as contributing to the period of time in which water control in the American West became paramount to the greater expansion of the United States and agriculture, the Great Depression and the New Deal. Reclamation also finds Sumner Dam eligible under Criterion C primarily in the period of initial construction in the 1930s for its association with an architectural style that is distinctly tied to the works of the CCC supported by WPA. Reclamation further finds that Sumner Dam is eligible for inclusion in the NRHP under Criteria A for the period of water infrastructure reconstruction in the 1950s at the height of the Reclamation Dam Building Period
(1945 – 1970), the beginning of emphasis on recreation at Reclamation facilities, and importance of National Infrastructure in association with the Cold War.

With regard to the remainder of the sites, please refer to the eligibility determinations attached and the Class III cultural resources report for justification of findings.

Impact and Effect

LA 105556/HCPI 54428

The proposed project will restore Sumner Dam to its original functionality by replacing the existing radial gates, however, the undertaking will have direct impact to the dam and Reclamation finds that there will be *adverse affect* to the historic cultural property. It is important to note that the expected impact will be on the 1956 construction, not the CCC/WPA-era construction components.

With regard to the remaining seven cultural resource sites, see attached treatment findings. It is important to note that sites LA 204070 – 204220 are no longer within the planned APE (borrow pit area, see above); however, should the area be needed for other construction purposes then the treatment findings will apply.

Proposed Mitigation

Sumner Dam meets the 50-year guideline and has been identified as a historic property that is eligible to the NRHP, the dam was never formally documented on Historic Property Inventory (HCPI) forms until the current project. Based on current documentation, the undertaking will have an adverse effect to the historic property and Reclamation finds that the appropriate mitigation strategy is a Level 2 Historic American Engineering Record (HAER) analysis. Reclamation recommends the project go forward as planned, with the mitigative strategy of a Level 2 HAER to mitigate adverse effects to historic properties and thus satisfy the Section 106 process of the NHPA (as amended). At this time, we are requesting concurrence from your office in support of this project, determinations of eligibility, and the recommended mitigation strategy. As always, we look forward to working with you on this important project.

Please direct your questions and comments to Dr. John Cater of my office at (505) 418-6377 or jcater@usbr.gov. As always, we look forward to working with you. Individuals who are deaf, deafblind, hard of hearing, or have a speech disability may dial 711 (TTY, TDD, or TeleBraille) to access telecommunications relay services.

Sincerely,

Digitally signed by JENNIFER FALER
Date: 2024.03.15 16:19:57 -06'00'

Jennifer Faler, P.E.
Area Manager

Enclosure

Determinations of Eligibility

Site Number	Site Type	BRIC	BOR
LA 105556/HCPI 54428	Historic/Structural	Eligible, A, C	Eligible, A, C
LA 105557	Historic/Structural	Undetermined	Undetermined
LA 105558	Historic/Structural	Not Eligible	Not Eligible
LA 204070	Historic/Non-structural	Undetermined	Undetermined
LA 204071	Historic/Non-structural	Undetermined	Undetermined
LA 204072	Prehistoric/Non-structural	Undetermined	Undetermined
LA 204073	Multicomponent/Non-structural	Not Eligible	Undetermined
LA 204220	Historic/Structural	Not Eligible	Undetermined

Treatment Findings

Site Number	BOR Determinations
LA 105556/HCPI 54428	Level 2 HAER Analysis
LA 105557	Flag for Avoidance if disturbance is within 50'
LA 105558	No treatment required
LA 204070	Flag for Avoidance if disturbance is within 50'
LA 204071	Flag for Avoidance if disturbance is within 50'
LA 204072	Flag for Avoidance if disturbance is within 50'
LA 204073	Flag for Avoidance if disturbance is within 50'
LA 204220	Flag for Avoidance if disturbance is within 50'

Michelle Lujan-Grisham
Governor

STATE OF NEW MEXICO
DEPARTMENT OF CULTURAL AFFAIRS
HISTORIC PRESERVATION DIVISION

BATAAN MEMORIAL BUILDING
407 GALISTEO STREET, SUITE 236
SANTA FE, NEW MEXICO 87501
PHONE (505) 827-6320 FAX (505) 827-6338

April 26, 2024

Dr. John Cater
Bureau of Reclamation
Albuquerque Area Office
555 Broadway NE, Suite 100
Albuquerque, NM 87102-2352

Re: Sumner Dam Radial Gate Replacement adverse effect (NMCRIS 154085; HPD log 122116, 122117)

Dear Dr. Cater:

I am following up on our call of earlier today concerning the Bureau of Reclamations' (BOR) undertaking to replace the gates at Sumner Dam in De Baca County, New Mexico. based on our conversation, it is the SHPOs' opinion that it is too early to develop an agreement to resolve adverse effects because the project activities, such as plans to reroute NM 203, are still being developed.

We recommend one of two courses of action. The first is to develop a project specific programmatic agreement that provides phased consultation as new elements of the project are identified, per 36 CFR 800.4.b.2 and executed per 36 CFR 800.(14)b.

The second course is to develop a memorandum of agreement to resolve the known adverse effects, with provisions for phased consultation, per 36 CFR 800.4.b.2.

We also recommend that BOR consult with the Advisory Council on Historic Preservation (ACHP) for the most appropriate course of action.

We are looking forward to working with you on this important project. If you have any questions or comments, please feel free to call me directly at 505-827-4225 or email me at bob.estes @dca.nm.gov.

Best regards,

John R Estes

John R. (Bob) Estes Ph.D.
HPD Staff Historic Preservation Specialist