BUREAU OF RECLAMATION

Isleta Diversion Dam Sluiceway and East Bank Modifications Project Environmental Assessment Supplement to the Isleta Diversion Dam Modification Project EA and Finding of No Significant Impact

Middle Rio Grande Project
Upper Colorado Basin Region, Albuquerque Area Office

U.S. Department of the Interior

October 2025

Isleta Diversion Dam Sluiceway and East Bank Modifications Project Environmental Assessment Supplement to the Isleta Diversion Dam Modification Project EA and Finding of No Significant Impact

Middle Rio Grande Project, State (if needed)

Upper Colorado Basin Region, Albuquerque Area Office

prepared by

Anchor QEA
12596 West Bayaud Avenue, Suite 450
Lakewood, Colorado 80228

prepared for

U.S. Bureau of Reclamation
Albuquerque Area Office
555 Broadway Boulevard Northeast,
Suite 100
Albuquerque, New Mexico 87102

Cover Photo: Isleta Diversion Dam Anchor QEA.

U.S. Department of the Interior October 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; 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.

Finding of No Significant Impact

Isleta Diversion Dam Sluiceway and East Bank Modifications Project Environmental Assessment Supplement to the Isleta Diversion Dam Modification Project EA

Bureau of Reclamation
Upper Colorado Basin Region
Albuquerque Area Office
Albuquerque, New Mexico

Based on the analysis of potential environmental impacts contained in the attached environmental assessment supplement, the Proposed Action does not constitute a major federal action with significant effects on the Human Environment. I have determined that the Isleta Diversion Dam Sluiceway and East Bank Modifications Project will not have a significant effect, and an environmental impact statement is therefore not required, DOI NEPA Handbook Part 1.6; NEPA, § 106(2), 2025.

JENNIFER BACHUS Digitally signed by JENNIFER BACHUS
Date: 2025.10.31 15:12:39 -06'00'

Jennifer Bachus, Manager, Environment and Lands Division

Digitally signed by JENNIFER FALER
Date: 2025.11.13 12:27:24 -07'00'

Jennifer Faler, P.E., Area Manager, Albuquerque Area Office, New Mexico

EA/FONSI Number AAO-EA-25-07

Summary of the Analyzed Alternatives

The U.S. Department of the Interior, Bureau of Reclamation (Reclamation), Pueblo of Isleta (Pueblo), and Middle Rio Grande Conservancy District (MRGCD) are proposing to modify the Isleta Diversion Dam (IDD) in the Rio Grande on Pueblo trust lands to improve sediment management. The project area is located on the Pueblo approximately 15 miles south of downtown Albuquerque, New Mexico on the Rio Grande in Valencia County.

An Environmental Assessment (EA) was prepared in 2023 addressing both sediment management and construction of a fish passage facility and resulted in a Finding of No Significant Impact (FONSI). Since then, Reclamation decided to place efforts toward design and construction of a fish passage facility at IDD on pause since the likelihood of successful passage of the Rio Grande Silvery Minnow (RGSM) was relatively unknown, the level of effort and costs for operations and maintenance was potentially substantial and future commitments by Reclamation and other stakeholders may not be feasible, river degradation/aggradation would likely result in periods of inoperability without additional river structures, and uncertainty of the continually rising construction costs as the project progressed.

This Environmental Assessment (EA) Supplement refined analysis of the 2023 EA for the proposed improvements to the Peralta Sluiceway and the East Bank Realignment and automation of some dam gates and the headworks gates and disclosed that the previous plan to construct a fish passage facility has been paused and will not be implemented at this time. The Proposed Action would improve sediment management at the IDD through the following actions:

- East Bank Realignment
- Peralta Sluiceway Modification

This EA Supplement has been prepared in accordance with the National Environmental Policy Act (NEPA) and applicable regulations. The EA Supplement provides additional and updated analysis of the specific project design that was not available when the 2023 project EA was prepared.

There were five resources determined not to be impacted by the Proposed Action—air quality, migratory birds, water quantity, noxious weeds, and hazardous materials. It was determined the Proposed Action would not have the potential for significant impacts on the resources carried forward for detailed analysis in this EA Supplement—soils; hydrology, hydraulics, and geomorphology; water quality; riparian and wetland resources; vegetation; threatened and endangered species; cultural resources; Indian trust assets; and noise. The rationale for all determinations may be found in Chapter 3 of this EA Supplement.

With implementation of best management practices (BMPs), design features, and permit stipulations, effects to other resources were considered neutral and minor or temporary adverse impacts.

Environmental Impacts

The following resources were evaluated in this EA Supplement to determine impacts that would result from the Proposed Action—soils; hydrology, hydraulics, and geomorphology; water quality; riparian and wetland resources; vegetation; threatened and endangered species; cultural resources; Indian trust assets; and noise. Environmental impacts described in the 2023 EA have changed due to the decision not to pursue the fish passage portion of the project at this time and refined

information for the Peralta Sluiceway modification and the East Bank realignment. The evaluations have been updated from the 2023 EA.

Soil Resources

Soil will be removed to realign the east bank immediately upstream of the IDD All excavated soil will be transported along existing roads to an approved disposal area. The risk of increased wind or water erosion from excavated soil piles is expected to be low due to the generally flat terrain and the surrounding riparian vegetation will act as a windbreak. In addition, BMPs will be implemented to reduce the risk of erosion to soil resources as agreed upon between MRGCD and the Pueblo for sediment management.

Water Resources and Water Quality

There may be localized geomorphic changes from the realignment of the east bank, as the bank will be more concave, widening the channel upstream of the IDD. However, the IDD controls the vertical grades of the river and the channel bed below the IDD is sufficiently coarse such that the Proposed Action will not be expected to result in geomorphic changes downstream of the IDD.

Construction activities for the IDD modifications will temporarily alter water qualities by increasing turbidity, suspending sediment into the water column, and subsequent oxygen sags. Water quality within the project area will be impacted temporarily by increased sediment concentrations and turbidity until earth moving activities are completed and barriers are removed. Both installation and removal of the barriers are expected to have minor, temporary impacts to water quality that will be diluted by the Rio Grande flows. With the implementation of BMPs, potential impacts to water quality from accidental spills during construction are expected to be incidental. BMPs, design features, and adherence to the conditions of the U.S. Army Corps of Engineers (USACE) permits and Pueblo Water Quality Certifications will minimize the potential for adverse effects to water quality from accidental spills or construction activities.

Riparian and Wetland Resources

There are state and federally protected wetlands in the vicinity of the Proposed Action project area on the island north of the IDD. However, in contrast to the 2023 EA Section 3.4.3, there will be no impacts to wetland resources with the current Proposed Action.

The Proposed Action is expected to impact riparian areas. Construction of the Proposed Action will result in vegetated riparian impacts along the banks of the Rio Grande. The realignment of the east bank will permanently remove vegetation, including taller cottonwood trees within the east bank realignment area. Reclamation will mitigate the loss of large, mature cottonwood trees (trees with a diameter breast height greater than 6-inches) by a 10:1 replacement under the implementation of BMPs.

Vegetation

A description of the environmental consequences can be found in Section 3.5.3 of the 2023 EA. In contrast to Section 3.5.3 of the 2023 EA, the Proposed Action will not result in impacts to vegetation on the island north of IDD.

Threatened and Endangered Species

Consistent with the 2023 EA, there would be no adverse effects from the Proposed Action to the Mexican spotted owl, yellow-billed cuckoo, southwestern willow flycatcher, monarch butterfly, Suckley's cuckoo bumble bee, New Mexico meadow jumping mouse, or Pecos sunflower. Additionally, because vegetation clearing will not occur during the nesting season of the yellow-

billed cuckoo and southwestern willow flycatcher (April 15 to August 15), pre-construction bird surveys will not be conducted as there will be no impacts to these bird species. No yellow-billed cuckoo, southwestern willow flycatcher, or RGSM critical habitat will be impacted as there is no critical habitat designated for these species within Pueblo of Isleta lands. Impacts to the RGSM from the Proposed Action are discussed in the 2023 EA in Section 3.6.3; however, additional details on potential impacts to RGSM are discussed in further detail below. Activities with the potential to impact the RGSM include the following:

- Construction and removal of cofferdams
- Pouring of concrete
- Removal of the east bank in the wet
- Placement of riprap below the Ordinary High Water Mark (OHWM) of the east bank

RGSM exposed to construction activities in the Proposed Action project area may be adversely affected by noise; vibrations; reductions in habitat; altered water qualities due to an increase in turbidity; or other disturbances that harass, stress, injure, or reduce the fitness of RGSM in the Proposed Action project area. Fish salvage and rescue during dewatering activities could harass, stress, injure, or reduce the fitness of RGSM. Therefore, the Proposed Action may affect and is likely to adversely affect the RGSM. This determination is consistent with the 2016 Middle Rio Grande Biological Opinion (BO).

To reduce the potential for impacts on RGSM, mitigation measures will be implemented to minimize impacts to this species. The contractor will utilize construction techniques and implement the standard BMPs identified in the 2016 BO, the 2015 Joint Biological Assessment, and the 2023 EA and those described in Section 2.7 for the Proposed Action, which will minimize contact with fish and minimize potential for harm, harassment, or mortality. However, these potential impacts to RGSM are expected to be offset by creating new in-stream habitat and reducing erosion and turbidity within the project area.

Cultural Resources

Realignment of the east bank and construction of the Peralta Sluiceway modifications are not expected to result in impacts to cultural resources in the project area, except for the IDD, which is a historic cultural property. Impacts to the IDD were mitigated by conducting Historic American Engineering Record (HAER) documentation of the IDD prior to construction activities. In addition, if the contractor discovers any previously unidentified historic or prehistoric cultural resources, then work in the vicinity of the discovery will be suspended and the discovery will be promptly reported to the Pueblo Tribal Historic Preservation Officer (THPO).

Indian Trust Assets

Approximately 5 acres of Tribal trust lands will be disturbed from constructing the east bank realignment, and sluiceway modification. The Pueblo understands there will be impacts to Tribal trust lands and supports the IDD Modification Project (see 2023 EA Appendix C, letter of support).

Noise

Noise was not analyzed in the 2023 EA. During construction of the Proposed Action, there could be a slight and temporary increase in impacts to noise due to the operation of construction equipment, the operation of dewatering pumps, the transportation of excavated soils and sediments off-site, and an increase in truck traffic, which may increase noise above existing conditions. However, these impacts would be limited to the duration of construction.

The construction of the Peralta Sluiceway modifications would create a long-term improvement in noise from a reduction in excavator noise, repeated dump truck noise, and trips due to a reduction in sediment being entrained into the canal and subsequently necessitating removal.

Executive Summary

In compliance with the National Environmental Policy Act (NEPA) of 1969, as amended, the Bureau of Reclamation, Albuquerque Area Office (Reclamation) prepared an Environmental Assessment (EA) Supplement to analyze potential impacts associated with modifying the Isleta Diversion Dam (IDD) in the Rio Grande on Pueblo of Isleta (Pueblo) trust lands in Valencia County, New Mexico. The supplement provided additional detail for the Peralta Sluiceway modification and the East Bank realignment and also disclosed a change in the proposed action described in the 2023 EA stating that the fish passage portion of the project would be paused and not implemented at this time. This EA Supplement was prepared in accordance with the NEPA statute and applicable regulations and policies.

Modifications include realignment of the upstream east bank and Peralta Sluiceway modifications. The IDD and associated infrastructure are located on the Rio Grande and occupy about 15 acres of the Pueblo. The IDD diverts water into the Belen Highline Canal on the west side of the river and into the Peralta Main Canal on the east side. The Rio Grande bisects Pueblo lands, providing riparian habitat that is essential to the cultural and traditional needs of the people of the Pueblo. Under the 2016 Agreement of Settlement and Compromise Regarding the Isleta Diversion Dam (Settlement) the United States (Reclamation and the Bureau of Indian Affairs [BIA]) and the Middle Rio Grande Conservancy District (MRGCD) have right-of-way access to the IDD for operations and maintenance in cooperation with the Pueblo.

The purpose of the IDD modifications is to comply with the Settlement between Reclamation, BIA, the Pueblo, and MRGCD. As part of the Settlement, the Pueblo, MRGCD, and Reclamation have agreed to reduce sediment entrainment in the east IDD sluiceway and associated irrigation systems to the greatest extent possible.

The IDD was constructed in the 1930s by MRGCD and rehabilitated in the 1950s by Reclamation. Over decades of irrigation deliveries, large amounts of sediment have been diverted from the Rio Grande, which has resulted in extensive sedimentation of the irrigation canals, and subsequent dredging and disposal of dredged spoils, especially along irrigation canals and near the IDD. The accumulation of sediment and dredged materials (spoils) threaten the natural and cultural resources of the Pueblo.

Summary of Alternatives

Two alternatives are analyzed in the EA Supplement, No Action and Proposed Action. Under the No Action Alternative, the IDD would not be modified and there would be no changes to river, sluiceway, or opening and closing IDD radial gates and most gates would continue to be manually operated to maintain head pressure to meet irrigation demand; note that gate 16 is already mechanized.

The Proposed Action Alternative would improve sediment management at the IDD through the following actions:

- East Bank Realignment
- Peralta Sluiceway Modification

Summary of Impacts

There were five resources determined not to be impacted by the Proposed Action—air quality, migratory birds, water quantity, noxious weeds, and hazardous materials. Nine resources were carried forward for detailed analysis in this EA—soils; hydrology, hydraulics, and geomorphology; water quality; riparian and wetland resources; vegetation; threatened and endangered species; cultural resources; Indian trust assets; and noise. Noise was not analyzed in the 2023 EA. It was determined that the Proposed Action Alternative "may affect and is likely to adversely affect" the Rio Grande Silvery Minnow because of construction impacts within wetted habitats. Reclamation will utilize construction techniques and implement the standard BMPs for the IDD Modification Project, which will minimize impacts to silvery minnows. Impacts on resources are reduced by implementation of best management practices (BMPs), design features, and permit stipulations; and effects to other resources were considered neutral and minor or temporary adverse impacts.

TABLE OF CONTENTS

TABLE

FIGURES

APPENDICES

ABBREVIATIONS

BiOp	*Final Biological and Conference Opinion for Bureau of Reclamation, Bureau of Indian Affairs, and Non-Federal Water Management and Maintenance Activities on the Middle Rio Grande, New Mexico*
BMP	best management practice
CFR	*Code of Federal Regulations*
CWA	Clean Water Act
cy	cubic yard
dB	decibel
EA	*Environmental Assessment for the Isleta Diversion Dam Modification Project*
EPA	U.S. Environmental Protection Agency
HAER	Historic American Engineering Record
HCPI	Cultural Properties Inventory
IDD	Isleta Diversion Dam
IPaC	Information for Planning and Consultation
lf	linear feet
LLPMC	Los Lunas Plant Materials Center
MBTA	Migratory Bird Treaty Act
MRGCD	Middle Rio Grande Conservancy District
NA	not applicable
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
NOI	Notice of Intent
OHWM	ordinary high water mark
PAE	Permission Agreement to Enter
POI	Pueblo of Isleta
Proposed Action	Isleta Diversion Dam Fish Passage Improvements
Pueblo	Pueblo of Isleta
Reclamation	U.S. Bureau of Reclamation
RGSM	Rio Grande silvery minnow
sf	square foot
SWPPP	Stormwater Pollution Prevention Plan
THPO	Tribal Historic Preservation Officer
USACE	U.S. Army Corps of Engineers
USC	United States Code
USFWS	U.S. Fish and Wildlife Service

1 Purpose and Need for Action

The U.S. Bureau of Reclamation (Reclamation) proposes to implement sediment management improvements consisting of realignment of the east bank and modification to the Peralta Sluiceway, and to mechanize and automate three river gates at the Isleta Diversion Dam (IDD) and three headwork gates and one sluiceway exit gate at the Peralta Main Canal as part of the East Bank Realignment and Sluiceway Modification project (Proposed Action). The Proposed Action is located in the Middle Rio Grande within Pueblo of Isleta (Pueblo) Trust Lands, approximately 15 miles south of downtown Albuquerque, in Valencia County, New Mexico (Figure 1). The purpose of the Proposed Action is to implement sediment management improvements and improve the functionality of the IDD and Peralta Sluiceway.

The information contained in this document supplements information presented in the *Environmental Assessment and Finding of No Significant Impact for the Isleta Diversion Dam Modification Project* (EA; BRIC 2023)[1] signed on June 7, 2023, *IDD Alternative Analysis Technical Memorandum* (BCC 2023 a), and *Fish Passage Design Criteria Technical Memorandum* (BCC 2023b). The 2023 EA includes the East Bank Realignment and Sluiceway Modifications as well as fish passage improvement activities at IDD. The previous plan to construct a fish passage facility has been paused since the likelihood of successful passage of the Rio Grande Silvery Minnow (RGSM) was relatively unknown, the level of effort and costs for operations and maintenance was potentially substantial and future commitments by Reclamation and other stakeholders may not be feasible, river degradation/aggradation would likely result in periods of inoperability without additional river structures, and uncertainty of the continually rising construction costs as the project progressed. This document is focused solely on the East Bank Realignment and Sluiceway Modifications. Other information related to the sluiceway and east bank in the 2023 EA that is not referenced in this document is incorporated by reference unless it is revised or omitted by this supplement.

1.1 Background

A description of the Proposed Action background can be found in Section 1.1 of the 2023 EA.

1.2 Purpose and Need for Action

A description of the Proposed Action purpose and need can be found in Section 1.2 of the 2023 EA.

[1] BRIC (BRIC, LLC), 2023. *Environmental Assessment and Finding of No Significant Impact for the Isleta Diversion Dam Modification Project*. Prepared for U.S. Bureau of Reclamation, Albuquerque Area Office. May 2023. Available at: https://www.usbr.gov/uc/DocLibrary/EnvironmentalAssessments/20230500-IsletaDiversionDamModificationProject-EA-FONSI.pdf

2 Alternatives

2.1 No Action

A description of the No Action Alternative can be found in Section 2.1 of the 2023 EA.

2.2 Proposed Action

A description of the Proposed Action can be found in Section 2.2 of the 2023 EA, which includes the East Bank Realignment and Sluiceway Modifications as well as fish passage activities at IDD. However, this document is focused solely on the East Bank Realignment and Sluiceway Modifications. The Proposed Action in the 2023 EA specific to the East Bank Realignment and Sluiceway Modifications is the same as the proposed project presented in this document with a few updates. The following sections provide a detailed description of the proposed project elements and construction methods. Although the East Bank Realignment and Peralta Sluiceway modifications construction access, temporary water operations, and long-term maintenance and operation are generally discussed in the 2023 EA, the following sections provide more details regarding the project elements and construction methods and construction timing. Project elements include construction staging and access, work area isolation, east bank realignment, Peralta Sluiceway modifications, mechanization and automation of IDD radial dam gates and Peralta Main Canal gates, and long-term operation and maintenance. Figure 2 provides an overview of the project elements proposed in the 2023 EA compared to the current design of the Proposed Action. Elements included in this document that are not discussed in the 2023 EA include the following:

- Specific location and footprint of the staging and laydown area
- Specific location and footprint of cofferdams and in-river dewatering areas
- Mechanization and automation of IDD radial dam gates and Peralta Main Canal gates
- Updated 90% engineering designs
- More details about the operation and maintenance of the Proposed Action

2.3 Project Location and Access

The Proposed Action is located on Pueblo Trust Lands in Valencia County, New Mexico, on the Rio Grande (Figure 1).

Access to the Proposed Action project area will be provided via State Highway 147 and Tribal Road 21. The laydown and stockpiling area will be located on the east bank on the upstream and downstream sides of the dam (Figure 3).

2.4 Project Elements and Construction Methods

The goal of the Proposed Action is to implement sediment management improvements to reduce sedimentation in the irrigation canals and to improve the functionality of the IDD and Peralta Sluiceway. The proposed sediment management improvements consisting of the east bank realignment, Peralta Sluiceway modifications, and IDD radial dam gate and Peralta Main Canal gate automation include the following activities as shown in Figure 3:

- Construction access and staging
  - Staging in a laydown area downstream and upstream of the IDD along the east bank
    - A total of 3.05 acres (132,779 square feet [sf]) is planned for a construction laydown area.
- Work area isolation from the river flow using a cofferdam to minimize impacts to aquatic species and habitat (Figure 4)
- Realignment of the east bank upstream of the IDD
  - Approximately 9,000 cubic yards (cy) of material covering an area of 0.89 acre (38,800 sf) will be excavated and permanently removed from the east bank to help manage sedimentation. Materials removed from the east bank will be placed in a laydown area for dewatering and then transported to the sediment disposal location at the Pueblo of Isleta (POI) abandoned lagoons (Figure 5) or to an alternative spoils disposal location currently used by Middle Rio Grande Conservancy District (MRGCD) or taken to an off-site commercial location that is able to accept the material.
  - A permanent riprap access ramp will be constructed upstream of the IDD within the east bank realignment work area to provide equipment access to the bank of the Rio Grande (Figure 3). The permanent riprap access ramp will require 100 cy of riprap and will cover approximately 0.04 acre (1,800 sf) of riverbank. The permanent riprap access ramp will be constructed above the ordinary high water mark (OHWM).
    - All construction associated with the east bank realignment will be conducted by equipment operating on the landward side of the east bank from the uplands. The east bank realignment will take place with equipment working on the landside and excavating material towards the east, away from the river to create the new bank alignment. This work will be completed without the use of a cofferdam or barrier in the river and equipment will not need to enter the river channel.
- East bank riprap stabilization
  - After the east bank has been realigned, approximately 125 cy of riprap will be placed within an area of 0.037 acre (1,600 sf) along approximately 60 linear feet of the southern toe of the east bank for stabilization (Figure 3). Of this 125 cy of riprap, only 25 cy will be discharged over an area of 0.028 acre (1,200 sf) below the OHWM.

        - As currently planned, this work will be completed within the upstream cofferdam limits (Figure 4). The installation of riprap along the east bank will occur within a dewatered work area.
- Modification of the Peralta Sluiceway
    - Material will be removed from the existing sluiceway structure before placement of concrete slopes.
        - All construction associated with the modification of the Peralta Sluiceway will be conducted within a dewatered work area.
- Mechanization and automation of radial dam gates 28, 29, and 30 of the IDD
    - Three radial dam gates will be mechanized and automated as part of operational improvements to the IDD to allow for remote operation of the radial dam gates, which are currently manually operated.
- Mechanization and automation of three headwork gates and one sluiceway exit gate of the Peralta Main Canal
    - The Peralta Main Canal currently has three headworks gates, and one sluiceway exit gate, which will also be automated. This work will mainly be conducted on the surface of the canal structure and from within the sluiceway or main canal. The upstream cofferdam will provide protection to the crews and keep the work area dry.
- Long-term operation and maintenance consisting of debris and sediment removal from the Peralta Sluiceway

A summary of construction areas of disturbance and estimated excavation and fill volumes is provided in Table 1, and specific project elements are described in the following sections.

Table 1
Construction Elements Areas/Volumes

Project Element	Estimated Area of Disturbance	Estimated Amount of Excavation (Permanent) Post-Construction	Estimated Amount of Fill (Permanent) Post-Construction	Estimated Amount of Fill (Temporary)
Construction staging	3.05 acres (132,779 sf)	NA	NA	NA
Work area isolation	0.22 acre (9,900 sf) above/below the OHWM	NA	NA	3,800 cy above/below the OHWM
East bank realignment	Pre-construction: 0.89 acre (38,800 sf) above the OHWM	9,000 cy below the OHWM	NA	NA

Project Element	Estimated Area of Disturbance	Estimated Amount of Excavation (Permanent) Post-Construction	Estimated Amount of Fill (Permanent) Post-Construction	Estimated Amount of Fill (Temporary)
	Post-construction: 0.89 acre (38,800 sf) below the OHWM			

Project Element	Estimated Area of Disturbance	Estimated Amount of Excavation (Permanent) Post-Construction	Estimated Amount of Fill (Permanent) Post-Construction	Estimated Amount of Fill (Temporary)
East bank riprap	Pre-construction: 0.037 acre (1,600 sf) above the OHWM	400 cy above/below the OHWM	125 cy above/below the OHWM	NA
	Post-construction: 0.009 acre (400 sf) above the OHWM	100 cy above the OHWM	100 cy above the OHWM	NA
	Post-construction: 0.028 acre (1,200 sf) below the OHWM	300 cy below the OHWM	25 cy below the OHWM	NA
East bank access ramp	Pre-construction: 0.04 acre (1,800 sf) above the OHWM	500 cy above/below the OHWM	100 cy above/below the OHWM	NA
	Post-construction: 0.018 acre (800 sf) above the OHWM	100 cy above the OHWM	100 cy above the OHWM	NA
	Post-construction: 0.022 acre (1,000 sf) below the OHWM	400 cy below the OHWM	NA	NA
Peralta Sluiceway modifications	NA	NA	NA	NA
Total	4.24 acre (184,700 sf)	9,900 cy	225 cy	3,800 cy

2.4.1 Construction Staging and Access

2.4.1.1 Overview

Access to the Proposed Action project area is from State Highway 147 through the Pueblo and Tribal Road 21. Hauling of construction equipment through Pueblo Trust Lands will proceed with care, as the reservation does not normally experience large volumes of traffic or heavy equipment. There will be a traffic control plan implemented during realignment of the east bank and construction of the Peralta Sluiceway modifications. Reclamation and the contractor will be in constant contact with the designated Pueblo staff to keep apprised of any Pueblo closures or other related activities.

Preparation of on-site activities will consist of the establishment of a temporary office and facilities, and delivery of equipment and materials. In preparation of on-site activities, installation of environmental controls per plans, specifications, and permitting agencies will occur. Equipment will be appropriately cleaned and inspected prior to arriving on site.

On-site construction activities will begin with the establishment of one staging area on the east side of the river (Figure 3). The laydown and stockpiling area will be located downstream and upstream of the IDD on the east bank. One laydown area totaling approximately 3.05 acres (132,779 sf) will be used for the duration of construction for storing construction materials and staging construction activities (Figure 3). Additionally, excavated soils are expected to be placed in the laydown area for dewatering prior to being transported to the existing sediment disposal location at POI abandoned lagoons (Figure 5) or taken to an off-site commercial location that is able to accept the material. Best management practices (BMPs) will be followed to minimize impacts and mitigate for loss of large mature cottonwoods as appropriate. The areas cleared of vegetation will be reseeded to stabilize the soil surface at the conclusion of construction.

The staging area is on lands under Pueblo jurisdiction, and legal access will be acquired for construction activities. Accordingly, the staging area proposed for use during the construction of the Proposed Action will receive approval prior to construction activities.

2.4.1.2 Construction Methods

There is an existing access road on the east side of the dam that will be used to establish temporary access to the river channel both upstream and downstream of the dam. Clearing of native and nonnative vegetation will occur during the construction of the Proposed Action as shown in Figure 3. Improvements to the staging area on east bank are expected to consist of removing vegetation, potentially laying down surface material for equipment maneuvering, and modifications to the existing bank slopes to facilitate access for vehicles and equipment. Vegetation clearing on the east bank will occur to construct the laydown area and to allow construction equipment to access the east bank of the Rio Grande. The site will be cleared and grubbed, as needed, using an excavator. Per the *Final Biological and Conference Opinion for Bureau of Reclamation, Bureau of Indian Affairs, and Non-Federal Water Management and Maintenance Activities on the Middle Rio Grande, New Mexico* (BiOp; USFWS 2016)[2], *Joint Biological Assessment* (Reclamation 2015), and the 2023 EA, upon conclusion of the Proposed Action, the areas cleared of native vegetation (i.e., mature cottonwoods) will be replanted at 10:1 ratio in areas not needed for long-term operations and maintenance, using one of the techniques referenced in Section 2.7. If necessary, this mitigation may occur in an off-site location. Per Section 1.6.4.5.1 of Part III of the *Joint Biological Assessment* (Reclamation 2015), these areas will be monitored by MRGCD for 3 years following construction to confirm the vegetation is growing as expected.

To access the east bank, vehicles and equipment will drive on Tribal Road 21 and cross a small bridge over the Peralta Main Canal to Tribal Road 23. Impacts to terrestrial habitats will be minimized by

[2] USFWS, 2016. *Final Biological and Conference Opinion for Bureau of Reclamation, Bureau of Indian Affairs, and Non-Federal Water Management and Maintenance Activities on the Middle Rio Grande, New Mexico*. December 2, 2016. Available at: https://www.fws.gov/sites/default/files/documents/20161202_MRG%20BiOp_Final%20%281%29.pdf

using existing roads whenever possible. In general, equipment operation will take place in the most open area available, and all efforts will be made to minimize damage to native vegetation. Refer to Section 2.7 for a complete list of BMPs proposed for the duration of the project.

2.4.2 Work Area Isolation

2.4.2.1 Overview

Following the realignment of the east bank, the instream Proposed Action work area will be dewatered for the remainder of construction to complete the Peralta Sluiceway modifications and the gate automation. Material that is removed from the east bank during realignment will be stockpiled and used to construct an earthen cofferdam upstream of the IDD to allow the area above radial dam gates 28, 29, and 30 to be dewatered. The cofferdam will extend from the east bank towards the river, terminating approximately at radial dam gate 27 (Figure 4). The cofferdam will be constructed by placing material into the river channel. The cofferdam will be installed with the use of an excavator, loader, and/or skid steer. As the material is placed and built up in lifts it will be used as a travel path for the equipment to avoid in-water work and disturbance. As such, no equipment will operate within the wet of the river. The cofferdam will be constructed to completely encompass the work area in the event high water is encountered during construction. A dewatering plan will be developed for the Proposed Action with contingencies in place to ensure that the cofferdams remain effective during periods of high flow. For example, a small section of secondary containment could be constructed to capture water (and fish) if the flows overtop the cofferdam. Following the completion of construction, the cofferdam will be removed in a reverse process of installation, starting at radial dam gate 27 and working back towards the east bank until material is removed in its entirety.

The construction of the cofferdam would result in 3,800 cy of temporary fill within a 0.22 acre (9,900 sf) area below the OHWM of the Rio Grande. In total, 0.17 acre (7,243 sf) of river area will be temporarily dewatered for work area isolation.

2.4.2.2 Construction Methods

Construction of the IDD sluiceway and east bank modifications is expected to occur from November 2025 through February 2026. As such, construction is proposed to occur outside of the runoff and monsoon periods during the non-irrigation season (November 1 to February 28) when flows are lowest. As discussed previously, it will be necessary to install a cofferdam to dewater the in-water work area upstream of IDD radial dam gates 27 through 30 and within the Peralta Sluiceway to modify the existing Peralta Sluiceway and automate gates (Figure 4). This will allow for a reduced wet area in the construction zone, thus limiting the potential for sediment to mobilize downstream and keeping fish out of these areas away from potential harm. Working within a dewatered work area will minimize adverse effects of increased turbidity due to construction activities. Additionally, the majority of Peralta Sluiceway modification and gate automation will occur from within the

existing concrete structures of the Peralta Sluiceway further reducing the potential for increased turbidity and water quality impacts to the Rio Grande. Dewatering of the in-water work area will also serve to protect workers, construction equipment, and the channel work area. The dewatering barrier will be removed in its entirety after construction is completed.

After the east bank realignment is completed, work will begin on the installation of the temporary cofferdam. Additional details about the cofferdam are as follows:

- Materials that are excavated during the east bank realignment will be used to construct an earthen cofferdam. Machinery including excavators, loaders, and hand tools will place material in the river channel starting from the east bank and working towards radial dam gate 27. Machinery will travel along the earthen cofferdam as it is built outwards from the east bank. Once the cofferdams are in place, sump pits and submersible pumps will be placed inside of slotted casing pipes to begin dewatering the instream work areas. The number of pumps used will be dependent on the amount of dewatering required, but it is assumed that at least two pumps will be used. Typical decibel (dB) levels for the proposed pumps are around 80 dB. The casing pipes will be gravel packed on the exterior, and water will be pumped out of the dewatered work area back into the Rio Grande in compliance with project permits through a hose network. The hose networks will also be equipped with the appropriate screens at each end as required by BMPs to prevent entrainment of aquatic organisms. The discharge points will be equipped with appropriate measures such as a silt fabric bag to mitigate any sediment release during discharge.

The actual locations of the cofferdam will be determined based on upstream and downstream conditions during construction. The cofferdams will be removed in their entirety to the extent possible after construction is finished.

Although work will be conducted within a dewatered work area, BMPs (i.e., silt fences and/or appropriate erosional controls and initial steam cleaning of all equipment and checking the equipment several times per day) will be implemented to avoid the inadvertent risk of a discharge of pollutants into surface waters while the equipment is being used in the vicinity of the river. Additionally, as described in Section 2.7, during initial dewatering activities associated with the construction of the Proposed Action, qualified U.S. Fish and Wildlife Service (USFWS) staff or USFWS-trained staff will perform fish salvaging by netting fish entrained within the dewatered areas. Salvaged fish will be relocated from the dewatered areas back into the Rio Grande.

2.4.3 East Bank Realignment and Peralta Sluiceway Modification

2.4.3.1 Overview

The Proposed Action includes realigning the east bank upstream of the dam to reduce sediment entering the Peralta Sluiceway. The east bank is convex and will be realigned to be concave and reinforced to prevent erosion using riprap installed from the top of slope to new toe of slope.

A permanent riprap access ramp will be constructed upstream of the IDD within the east bank realignment work area to provide equipment access to the bank of the Rio Grande (Figure 3). The permanent riprap access ramp is described in more detail below:

- The permanent riprap access ramp is expected to cover a total area of 0.04 acre (1,800 sf). A total of 500 cy of material will be excavated prior to the installation of the permanent riprap access ramp, with 400 cy of this material being excavated from below the OHWM. Construction of the permanent riprap access ramp will entail the placement of 100 cy of riprap over an area of 0.04 acre (1,800 sf) above the OHWM of the Rio Grande.

Approximately 9,000 cy of material will be removed to realign the east bank. All material will be placed in a laydown area for dewatering and then used for the construction of the earthen cofferdam or hauled along an existing road to the existing sediment disposal location at POI abandoned lagoons (Figure 5) or taken to an off-site commercial location that is able to accept the material. Approximately 125 cy of riprap bank protection will be placed along approximately 60 linear feet (lf) of the new toe of the slope on the southern edge of the east bank, just upstream of the Peralta Sluiceway (Figure 3). Of this 125 cy of riprap, only 25 cy will be discharged over an area of 0.028 acre (1,200 sf) below the OHWM.

The Peralta Sluiceway along the east bank will also be modified to further reduce the sediment load diverted from the Peralta Sluiceway into the canal headworks. Sediment has been a pervasive issue in the diverted water from the Peralta Sluiceway at IDD, impacting the quality of diverted irrigation water and imposing undue canal maintenance requirements. Sediment deposition in the associated irrigation canals downstream of the sluiceway results in reduced irrigation deliveries and extensive maintenance operations to excavate and remove sediment deposits, particularly during high spring or summer monsoon flows. The amount of sediment being dredged is large. This condition results in extensive stockpiling on Pueblo lands and the ongoing need to find more locations to stockpile the diverted and dredged material. Sluiceway modifications include modification of the sluiceway floor shape to provide a sloped bed surface and automation of three sluiceway headworks gates and one sluiceway exit gate.

2.4.3.2 Construction

2.4.3.2.1 East Bank Realignment

The east bank realignment consists of removal of material along the east bank upstream of the sluiceway to mitigate sediment transport into the sluiceway and Peralta Main Canal. As part of the Proposed Action, up to 0.67 acre (9,000 cy) of soil will be removed to realign the east bank (Figure 3). During the preparation of the east bank realignment work area a permanent riprap access ramp will be constructed on the northern edge of the east bank to allow construction equipment to access to the east bank. The ramp area will be graded as needed and constructed and Class B riprap will be placed to stabilize the ramp. The permanent riprap access ramp will be installed using haul trucks; excavators; loaders; and, potentially, dozers. The riprap access ramp will cover an area of 0.04 acre (1,800 sf) of the east bank and will require 100 cy of fill material to construct. The construction of the riprap access ramp will result in the discharge of 0 cy of fill material below the OHWM. Additionally, the east bank realignment will result in a net reduction in fill as 400 cy of material will be excavated from below the OHWM prior to construction of the riprap access ramp.

Soils will be excavated from the landward side of the east bank, pulling the limits of the bank landward. This work will be completed without the use of a cofferdam or barrier in the river, and equipment will not need to enter the river channel. The majority of the excavated material will be stockpiled within a laydown area to be dewatered and used to construct an earthen cofferdam on the upstream side of the dam to facilitate the sluiceway modifications following the completion of the east bank realignment. Material will be removed with excavators and placed in a laydown area to allow for drying. Excavated materials not used for the construction of the cofferdam will be dewatered and then be loaded into haul trucks with an excavator or loader to be disposed of. Following the conclusion of construction, the earthen cofferdam will be removed from the river in its entirety, dewatered, and disposed using the same methods as described above. All excavated soils will be transported along existing roads to the existing sediment disposal location at POI abandoned lagoons (Figure 5) or taken to an off-site commercial location that is able to accept the material. After excavation and removal of material, the bank will be shaped to an appropriate slope, and approximately 125 cy of riprap will be installed along a length of 60 lf of the new southern bank slope upstream of the Peralta Sluiceway for shoreline protection. Approximately 100 cy of riprap will be placed above the OHWM of the Rio Grande and the remaining 25 cy of riprap will be placed below the OHWM of the Rio Grande. The placement of riprap will not result in an increase in net fill within jurisdictional waters as 300 cy of material will be excavated from below the OHWM prior to the placement of riprap.

The realignment of the east bank is expected to disturb up to 1 acre of vegetation along the east bank.

2.4.3.2.2 Peralta Sluiceway Modifications

The existing Peralta Sluiceway at the east end of the dam will be modified to facilitate sediment flushing by providing additional concrete slopes via concrete overlay within the sluiceway. The Peralta Sluiceway will be modified to enable more efficient sediment management for sluiceway operations and hence decrease sediment load into the irrigation canals. The existing Peralta Sluiceway will have a concrete wedge added to the floor to increase the slope to 3.5%, and the ramped floor will be reinforced concrete. The concrete floor of the Peralta Sluiceway will be cast-in-place. The increased slope will allow sluicing operations to more easily move sediment deposited in the sluiceway. Additionally, three sluiceway headworks gates and one sluiceway exit gate will be mechanized and automated to better control flow and reduce sedimentation into the irrigation canals.

Peralta Sluiceway modifications will involve dewatering of the sluiceway to expose the sluiceway floor. Once the upstream cofferdam is in place, the sluiceway will be cleaned and made free of standing water with the use of a vac truck, small equipment (skid steer), pressure washers, or hand tools. The materials will potentially be flushed out of the sluiceway or removed using a vacuum truck or excavator to collect the materials and sediment being removed from the sluiceway. Following the dewatering and cleaning of the Peralta Sluiceway, the existing sluiceway floor will be investigated with appropriate concrete testing measures to affirm that the existing concrete is suitable to accept new construction. A temporary earthen ramp will be constructed on the upstream side of the dam from the east bank to allow for equipment, crew, and material access to the Peralta Sluiceway. The sluiceway floor will be dried and then doweled to accept the new concrete topping slab. Installing a slope or wedge into the existing Peralta Sluiceway may require foundation modifications to support the concrete wedge. Concrete placement will be via a concrete pump truck staged on the landside near the Peralta Main Canal with reach to access the inside of the sluiceway.

The majority of Peralta Sluiceway modification will occur from within the existing concrete structures of the Peralta Sluiceway further reducing the potential for increased turbidity and water quality impacts to the Rio Grande. In-water work for the sluiceway modifications will be limited to the installation/removal of the cofferdam on the upstream side of the sluiceway. Although no equipment will need to operate within the wetted river channel as equipment will travel along the top of the cofferdam as it is built out from the east bank, the contractor will operate equipment in an area as small as possible to minimize disturbance of sediments.

2.4.4 Mechanization and Automation of IDD Radial Dam Gates 28, 29, and 30 and Peralta Main Canal Gates

2.4.4.1 Overview

Radial dam gates 28, 29, and 30 of the IDD will be mechanized and automated to reduce sedimentation in the Peralta Sluiceway. These three radial dam gates were chosen, as they were identified as being the most impactful to the performance of the Peralta Sluiceway modifications. The goal of the mechanization and automation of radial dam gates is to improve functionality of the IDD as part of operational improvements to the IDD to allow for remote operation of the radial dam gates, which are currently manually operated. Automation of the radial dam gates will allow for more precision and control of flow and sluicing conditions.

Mechanization and automation of the radial dam gates will include the installation of electrical conduits, cabling, controls, and hoist assemblies. The hoist assemblies will be mounted below the existing concrete deck of the IDD. Installation of hoist assemblies will require construction crews to access the section of the river channel above and below radial dam gates 28, 29, and 30. In-river work will be conducted within the dewatered work area behind the cofferdam. Access to the radial dam gates will also be accomplished by traversing the top of the existing IDD dam apron and existing structures including the east bank mule shed.

The Peralta Main Canal currently has three headworks gates, and one sluiceway exit gate which will also be automated. This work will mainly be conducted on the surface of the canal structure and from within the Peralta Sluiceway and/or Peralta Main Canal. The upstream cofferdam will provide protection to the crews and keep the work area dry. Additionally, working from within the existing concrete structures of the Peralta Sluiceway and Peralta Main Canal will further reduce the potential for increased turbidity and water quality impacts to the Rio Grande and Peralta Main Canal.

2.4.4.2 Construction

IDD radial dam gates 28, 29, and 30 will be modified with automated equipment that will allow for operation of the radial dam gates without the use of the current system. The equipment will be similar to equipment currently existing on radial dam gate 16, which was previously automated. The automation equipment will be installed beneath the dam floor to still allow passage of the "mule" cart used to lift and lower the radial dam gates that are not automated. Crews will access the work areas from both downstream and upstream areas. Work will be conducted between November 2025 and February 2026 when there are low-flow conditions. This timing is also outside the irrigation season (March 1 to October 31) when flows are highest to allow for installation of a cofferdam on the upstream side of the dam as described in Section 2.4.2. The cofferdam that will be installed for the Peralta Sluiceway modifications will also serve as a barrier to allow for radial dam gate modification work. The work will also be performed from the top side of the dam. The automated equipment will

have electrical systems either powered by hardwire to existing electrical systems or by solar equipment that is mounted to the dam.

The three headworks gates and one sluiceway exit gate on the Peralta Main Canal, will undergo modifications to enable gate automation. At present, the four gates are raised and lowered by motors and batteries, which must be connected to the gates each time they are raised or lowered. Gate automation will include the installation of electrical conduit, cabling, controls, and hoist assemblies on the existing structure. The hoist assemblies will be mounted on the surface above each gate and have cables attached to perform the necessary functions. The electrical cabling will be tied back to the existing East Bank Maintenance shed. This work will be conducted behind the upstream cofferdam which allow crews to safely access the necessary works areas.

2.5 Long-Term Operation and Maintenance (Post-Construction)

2.5.1 Overview

It is anticipated that the Peralta Sluiceway will operate during the irrigation season (March 1 to October 31), when the irrigation gates (radial dam gates) at the IDD are closed and water is being diverted into the Peralta Sluiceway for irrigation purposes. Maintenance activities will likely include routine sediment and debris removal to keep the Peralta Sluiceway clear. Routine sediment removal from the Peralta Sluiceway is expected to occur during maintenance operations at the IDD. Maintenance of the sluiceway gate will also be necessary for continued operation of the structure.

2.5.2 Operation and Maintenance Activities

Although the purpose of the Proposed Action is to improve sediment management at the IDD and Peralta Sluiceway, it is still anticipated that some maintenance consisting of routine sediment and debris removal may still be needed as part of the operation of the Peralta Sluiceway. Sediment that accumulates within the Peralta Sluiceway will be sluiced as needed to the extent possible by managing the Peralta Sluiceway head gates to keep the sluiceway operational. Sediment sluiced from the Peralta Sluiceway would not impact the Rio Grande as this sediment would travel downstream within the Peralta Main Canal. If sluicing of sediments is not sufficient to remove accumulated sediments from the Peralta Sluiceway, then sediment removal from the Peralta Sluiceway using a backhoe or excavator may be required during maintenance operations at the IDD during the non-irrigation season (November 1 to February 28) when the sluiceway is not in use. Maintenance of the Peralta Sluiceway will not require the use of heavy machinery within the Rio Grande. Sediment removed from the Peralta Sluiceway will be loaded by an excavator onto haul trucks and transported to an existing MRGCD spoils location to be dewatered and used by MRGCD in its day-to-day maintenance operations (Figure 5). These activities are similar to the current Peralta Sluiceway maintenance activities.

Sluiceway gate maintenance and debris removal will be completed during the non-irrigation season (November 1 to February 28) when the Peralta Sluiceway and associated irrigation canals are not in use, as needed. However, during rain events and high-flow events during the irrigation season (March 1 to October 31) and during operation of the Peralta Sluiceway, it is expected that debris including trees could potentially accumulate around the sluiceway headworks gates and will require manual removal to keep the Peralta Sluiceway functional. Debris that is stuck on the Peralta Sluiceway will be removed by hand using hand tools (e.g., chainsaw). Debris removal will occur periodically as needed during the irrigation season. Access for debris removal will occur by foot by traversing the existing sluiceway and canal structures.

These proposed Peralta Sluiceway maintenance activities are similar to the current maintenance activities in that current IDD maintenance activities include the removal of sediment with machinery and the manual removal of debris that accumulates at the dam during high-flow and rain events during the irrigation season. During the operation of the Proposed Action, maintenance will still occur, but to a much lesser extent as a result of the Proposed Action. The frequency and need for removal of sediment from the Peralta Sluiceway should be reduced significantly relative to existing conditions. The operation of the Proposed Action will reduce the amount of sediment entrained in the Peralta Sluiceway, reducing the long-term maintenance needs.

2.6 Project Timing

The timing of construction in the 2023 EA is outside of the irrigation season, between November and February 28. Like the 2023 EA, the east bank realignment and construction of the Peralta Sluiceway modifications and IDD radial dam gate and Peralta Main Canal gate mechanization and automation are expected to occur during the non-irrigation season (November 1 to February 28) from November 2025 through February 2026.

2.7 BMPs and Impact-Minimization Measures

Section 2.2.1 of the 2023 EA details BMPs relevant to the project. Additionally, BMPs and impact-minimization measures from the 2016 BiOp (USFWS 2016) and Joint Biological Assessment (Reclamation 2015) that are applicable to the project will be implemented during construction of the Proposed Action and are presented below.

- Timing
  - The Project Proponent will seek to avoid impacts to birds protected by the Migratory Bird Treaty Act (MBTA; 16 *United States Code* 703), including the flycatcher and cuckoo, by conducting work activities outside the normal breeding and nesting season: April 15 to August 15 (or September 1 for work in suitable cuckoo habitat).
    - If work is necessary between April 15 and August 15 (or September 1 for work in suitable cuckoo habitat), suitable/occupied migratory bird habitat will be avoided

during the construction activities as much as possible, utilizing the most current annual survey results in conjunction with habitat suitability. The Action Agency will use current southwestern willow flycatcher and cuckoo monitoring data to avoid work within 0.25 mile of an active nest as much as possible. Coordination and consultation with USFWS will occur prior to such work activities.

- Reseeding or revegetation may be accomplished by hand or by mechanized means, such as using a Truax imprinter followed by hand or tractor broadcast seeding. (See "Vegetation Replanting and Control" below.) Planting via mechanized means includes using a handheld or tractor-mounted auger. If mechanized means are used for either reseeding or replanting in the April 15 to August 15 time frame (or September 1 for work in suitable cuckoo habitat), migratory bird surveys will be conducted immediately prior to the work to determine if any breeding birds are present. If birds are detected, Reclamation and/or the appropriate Project partner(s) will coordinate with USFWS to determine appropriate next steps.

- Water Quality
  - The Project Proponent will obtain all applicable permits prior to implementation of the Project, including Clean Water Act (CWA) permits. The Action Agency will comply with the requirements of the CWA and other permits associated with the Project, including required reporting to the appropriate authorities as needed, and will not begin work until all required permits are obtained.
  - Silt fences and/or appropriate erosional controls will be used around the Project site to manage site water runoff in accordance with CWA requirements.
  - The Project Proponent will visually monitor for water quality in the areas below areas of river work before and during the workday. Water quality will be monitored during construction and after equipment operates in the river channel. Monitoring will include visual observations and may include direct sampling, as appropriate.
    - If direct sampling is needed, water quality parameters to be tested include pH, temperature, dissolved oxygen, and turbidity. Parameters will be measured both upstream and downstream of the work area.
    - Responses to changes in water quality measures exceeding the Pueblo of Isleta Surface Water Quality Standards (Pueblo of Isleta 2002) will include reporting the measurements to the Pueblo of Isleta Water Quality Department and moving construction activities away from the shore.
- Equipment and Operations
  - Reclamation-led work activities that have the potential for adverse impacts will be monitored by properly trained Reclamation personnel to ensure compliance. Non-Reclamation partners will have an on-site environmental monitor during all work

activities that have the potential for adverse impacts to ensure compliance. Also, an environmental monitor will regularly assess other activities to ensure compliance.

- The Project Proponent will operate equipment in an area as little as possible to minimize disturbance of sediments. When operating equipment within the wetted channel, the following practices will be used to minimize disturbance of sediments:
    - Minimize movement of equipment.
    - Minimize contact with the riverbed when not operating equipment.
- Each individual operator will be briefed on local environmental considerations specific to the Project tasks.
- Minimize impact of hydrocarbons by minimizing the potential for spills into or contamination of aquatic habitat.
    - Hydraulic lines will be checked each morning for leaks and periodically throughout each workday. Any leaky or damaged hydraulic hoses will be replaced.
    - All fueling will take place outside the active floodplain with a spill-protection kit ready. Fuel, hydraulic fluids, and other hazardous materials may be stored on site overnight but outside the normal floodplain, not near the river or near any location where a spill could affect the river.
    - All equipment will undergo high-pressure spray cleaning and inspection prior to initial operation in the Project area.
    - Equipment will be parked on predetermined locations on high ground away from the river overnight and on weekends and holidays.
    - Spill-protection kits will be on site, and operators will be trained in the correct deployment of the kits.
    - External hydraulic lines are composed of braided steel covered with rubber. When there is increased risk of puncture such as during mastication while removing vegetation, external hydraulic lines will be covered with additional puncture-resistant material, such as steel-mesh guards, Kevlar, etc. to offer additional protection.
- Equipment will be removed from the channel in the event of high storm surges.
- To allow fish time to leave the area before in-water work begins, equipment will initially enter the water slowly. In-water work will be continuous during workdays so that fish are less likely to return to the area once work has begun.
- Riprap to be placed in the water will be reasonably clean to the extent possible. If there are large clumps of soil bigger than 1 foot within the riprap, those clumps will be set aside during the loading or placing operations.

- Access and Staging
  - Impacts to terrestrial habitats will be minimized by using existing roads whenever possible. In general, equipment operation will take place in the most open area available, and all efforts will be made to minimize damage to native vegetation and wetlands. (See "Vegetation Replanting and Control" below.)
  - All necessary permits for access points, staging areas, and study sites will be acquired prior to construction activity.
- Vegetation Replanting and Control
  - A variety of revegetation strategies may be used: stem and pole cuttings and long-stem transplants (LLPMC 2007), and upland planting with and without a polymer, zeolite, or similar compound to maximize soil water retention (Dreesen and Fenchel 2008). Planting techniques may vary from site to site and may consist of buckets, augers, stingers, and/or water jets mounted on construction equipment. In some areas, a trench may be constructed to facilitate the placement of a significant number of plants, specifically stem and pole cuttings. Seeding will be accomplished using a native seed drill, where feasible, and spread with a protective covering to provide moisture to the seeds.
  - Vegetation control may consist of mechanical removal, burning, mowing, and/or herbicide treatment. Herbicides will be used when nonchemical methods are unsuccessful or are not economically feasible.
    - Vegetation control will be completed between August 15 (or September 1 for work in suitable cuckoo habitat) and April 15. Any need for deviations from this work window would be considered on a project-specific basis and coordinated with USFWS. If work is planned within 2 weeks before April 15 or after August 15 (or September 1 for work in suitable cuckoo habitat), the Project Proponent will conduct additional surveys, if warranted, to determine the presence of breeding flycatchers, cuckoos, or other breeding birds. Reclamation and/or the appropriate Project partner will coordinate monitoring and work activities with USFWS, as appropriate, if bird nests are found.
  - Native vegetation at work sites will be avoided to the extent possible. If large, native woody vegetation (primarily cottonwood), needs to be trimmed or removed, it will be replaced at a ratio of 10:1. When and where possible, small, native woody vegetation will be removed or harvested at the appropriate season to use for revegetation work at another location in the Project area or at another Project site. Native vegetation that cannot be replanted may be mulched (mulch will be removed or spread on site at a depth of 3 inches or less) or temporarily stockpiled and used to create dead tree snags or brush piles in the Project area upon completion.

  - Nonnative vegetation removed at work sites will be mulched, burned, or removed off site to an approved location. Mulched vegetation may also be spread on site at a depth of 3 inches or less.
- Dust Abatement
  - If water is needed for dust abatement or to facilitate grading of roads, an MRGCD Special Use Permit will be obtained for construction water use. MRGCD will assign a facility to use for the pumping of water for construction purposes.
  - If water is needed for dust abatement or to facilitate grading of roads, water may be pumped from the Rio Grande, irrigation drains, sumps, or secondary channels adjacent to the river. During irrigation season (March 1 to October 31), water will not be pumped from the river, but will be pumped from the irrigation drains if possible. Pumping from the river is not expected to be needed between April 15 and August 15 (or September 1 in suitable cuckoo habitat); however, if pumping is needed between May 1 and July 1 (emergencies only), Reclamation and/or the appropriate Project partner(s) will coordinate with USFWS to avoid impacts to minnow eggs and larvae. Outside of the irrigation season, an amount not to exceed 5% of river flows at the time of pumping may be drawn from the Rio Grande. Pumping in short duration (minutes) for filling whatever water transport equipment is used. Sumps or secondary channels adjacent to the river will be used whenever feasible. Pump intake pipes will use a 0.25-inch (0.64-centimeter) mesh screen at the opening of the intake hose to minimize entrainment of aquatic organisms.
- Other Measures
  - All treatment and control areas will be monitored for 3 years following construction by Reclamation to determine the effectiveness of the methods implemented and identify Project-related hydrologic and geomorphic alterations. The monitoring will consist of biological, vegetation, geomorphic, and hydrologic monitoring as appropriate to the Project design and purpose.
  - All Project spoils and waste will be disposed of off site at approved locations or may be used on site as appropriate to the Project purpose, consistent with applicable environmental requirements.
  - All work projects will have a contract in place for the rental of portable restroom facilities during the duration of the Project.
- Additional BMPs
  - Contractors will be required to wash vehicles and equipment prior to entering the Project area to ensure no weeds, weed parts, or seeds are transported to the site.
  - If needed, permitted biologists will be used to conduct listed bird protocol and other migratory surveys, including weekly nesting surveys during the normal breeding and

nesting season (April 15 to August 15, or September 1 for work in suitable cuckoo habitat) contemporaneous with construction to protect nesting migratory birds.

2.7.1 Additional BMPs Not Included in the BiOp and Joint Biological Assessment

- During initial dewatering activities associated with the construction of the Proposed Action, qualified USFWS staff or USFWS-trained staff will perform fish salvaging by netting fish entrained within the dewatered areas. Salvaged fish will be relocated from the dewatered areas back into the Rio Grande.

2.7.2 Environmental Commitments

The following section provides details regarding environmental commitments required prior to, during, and after the conclusion of the Proposed Action.

The staging area proposed for use during the construction of the Proposed Action will receive Pueblo of Isleta approval prior to construction activities. Construction work hours will be approved by the Pueblo prior to the construction of the Proposed Action. A Permission Agreement to Enter (PAE) Pueblo of Isleta Reservation Lands will be obtained prior to and for the duration of the construction of the Proposed Action. Permission for disposal of spoils materials at existing MRGCD spoils locations will be obtained from the Pueblo of Isleta prior to the construction of the Proposed Action. As part of the Settlement, the Pueblo, the MRGCD, and Reclamation have agreed to reduce sediment entrainment in the east IDD sluiceway and associated irrigation systems to the greatest extent possible. As required by the Clean Water Act Section 401, a water quality certification will be obtained from the Pueblo of Isleta Water Quality Department prior to the construction of the Proposed Action.

Reclamation will continue to coordinate with the USFWS to complete the reasonable and prudent measures, along with implementing terms and conditions, as required by the 2016 BiOp.

Section 106 of the National Historic Preservation Act (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 National Register of Historic Places (NRHP). The Proposed Action will comply with the American Indian Religious Freedom Act, NRHP, and other legislation pertaining to cultural resources. The Pueblo THPO has been consulted, and a copy of this EA will be provided for review and comment.

Prior to construction of the Proposed Action, a Special Use Permit for construction and access will be acquired from MRGCD. A Special Use Permit will be obtained from MRGCD for dewatering into MRGCD infrastructure prior to the construction of the Proposed Action.

Prior to the construction of the Proposed Action, an Individual Permit or Letter of Permission will be obtained from the USACE Albuquerque District to permit the discharge of fill materials into waters of the United States in compliance with the Clean Water Act Section 404.

Reclamation will mitigate for the clearing of large cottonwoods by replanting cottonwoods either on site or off site after construction of the Proposed Action is completed. Reclamation will keep a record of the number of large, mature cottonwood trees that are removed during the construction of the Proposed Action. Reclamation will mitigate for the loss of large cottonwood trees after the construction of the Proposed Action in coordination with MRGCD and Pueblo of Isleta. Reclamation will coordinate replanting of cottonwoods with MRGCD and Pueblo of Isleta.

Reclamation will obtain a Construction Stormwater General Permit from the U.S. Environmental Protection Agency (EPA) prior to the construction of the Proposed Action. Accordingly, a Stormwater Pollution Prevention Plan (SWPPP) and Notice of Intent (NOI) will be prepared for the EPA prior to the construction of the Proposed Action. Areas disturbed by the Proposed Action will be reseeded by the contractor to stabilize soils in compliance with the SWPPP.

3 Affected Environment (Existing Conditions)

3.1 Soil Resources

A description of the affected environment can be found in Section 3.1.1 of the 2023 EA.

3.2 Hydrology, Hydraulics, and Geomorphology

A description of the affected environment can be found in Section 3.2.1 of the 2023 EA.

3.3 Water Quality

A description of the affected environment can be found in Section 3.3.1 of the 2023 EA.

3.4 Riparian and Wetland Resources

A description of the affected environment can be found in Section 3.4.1 of the 2023 EA.

3.5 Vegetation

A description of the affected environment can be found in Section 3.5.1 of the 2023 EA.

3.6 Threatened and Endangered Species

A description of the affected environment can be found in Section 3.6.1 of the 2023 EA.

3.7 Cultural Resources

A description of the affected environment can be found in Section 3.7.1 of the 2023 EA.

3.8 Indian Trust Assets

A description of the affected environment can be found in Section 3.8.1 of the 2023 EA.

3.9 Noise

Noise was not evaluated as a part of the 2023 EA. Sound levels in the project area are low, except during irrigation season, which is typical in rural, agrarian areas. During irrigation season operation of IDD, major sources of intermittent noise in the area are attributed to water flow through the dam, automobile traffic, farm operations, and Reclamation's and MRGCD's maintenance operations.

4 Environmental Consequences

The impact analysis presented in this section is based on information provided in Section 3 of the 2023 EA. The impacts of the No Action Alternative are the same as those discussed in Section 3 of the 2023 EA.

However, noise impacts were not analyzed in the 2023 EA. As such, Section 4.9 includes an analysis of noise for the No Action Alternative, Alternative 1, Alternative 2, and Proposed Action.

4.1 Soil Resources

A description of the environmental consequences can be found in Section 3.1.3 of the 2023 EA.

4.2 Hydrology, Hydraulics, and Geomorphology

A description of the environmental consequences can be found in Section 3.2.3 of the 2023 EA.

4.3 Water Quality

Impacts from the Proposed Action to water quality are described in the 2023 EA in Section 3.3.3. However, water quality impacts from the clearing of vegetation, ground disturbance, and the use of cofferdams to reduce turbidity from construction are not analyzed in the 2023 EA, and are described below. The EA considered the timing of construction and analyzed impacts to water quality occurring during the non-irrigation season (November 1 to February 28), which overlaps with the Proposed Action construction time frame.

4.3.1 Potential Turbidity Increases

The Proposed Action is expected to result in temporary impacts to the Rio Grande. The Proposed Action is expected to temporarily suspend sediments and increase turbidity levels in the immediate construction area during construction for activities completed outside of the isolated/dewatered construction areas. The construction of the cofferdam, ground disturbance, and exposure of soils could cause short-term increases in turbidity levels within the water column.

Impacts to water quality due to turbidity are possible during the construction of the cofferdam as the earthen cofferdam will be placed directly into the Rio Grande. Vegetation clearing will be necessary to access the east bank realignment construction area, and vegetation will be removed from the east bank during grading and realignment of the east bank. Exposure of soils from vegetation clearing and soil disturbance during the realignment of the east bank could result in an increase in erosion and runoff and could increase turbidity within the Rio Grande. These increases in turbidity are expected to be minor and localized and to rapidly dissipate with horizontal and vertical distance from the construction activities. Additionally, to reduce the potential for future erosion, riprap will be placed at the southernmost toe of the slope of the east bank after the east bank realignment occurs

to stabilize the slope and reduce the potential for erosion. Riprap will be sourced from a commercial operation and will be relatively clean to prevent an increase in turbidity. If there are large clumps of soil bigger than 1 foot within the riprap, those clumps will be set aside during the loading or placing operations to minimize adding excess soil material to surface waters.

Clearing of vegetation will also be needed for construction access and the creation of the laydown area and will expose soils, which could contribute to increased erosion, into the water column. These increases in turbidity are expected to be minor and localized and to rapidly dissipate with horizontal and vertical distance from the construction activities. The Proposed Action is not expected to have appreciable impacts on dissolved oxygen within the water column. Although turbidity within the Rio Grande is correlated to seasonal flows, with an increase in turbidity relative to baseline conditions occurring during elevated flows resulting from spring snow melt runoff and summer storm runoff during the North American monsoon season, the Rio Grande still has a relatively high baseline level of turbidity during the fall and winter months when river flow is lower (Brown 2014). As such, although the baseline turbidity will be lower in the Rio Grande during the non-irrigation season (November 1 to February 28) when construction is proposed, the increase in turbidity from the Proposed Action's activities would still be a small contribution relative to the sediment load the river already carries. The effects of the Proposed Action on erosion and water quality are expected to be minor and temporary in nature. Areas within the area of ground disturbance will be evaluated for erosion control and other stormwater and water quality management needs in conjunction with the National Pollutant Discharge Elimination System Stormwater Construction General Permit and the Pueblo of Isleta Water Quality Department water quality certification prior to the construction of the Proposed Action. During construction, all appropriate permits, certifications, and approvals will be obtained and complied with and turbidity generating activities will be minimized through working in dry dewatered areas. The only turbidity causing activities will be from installation/removal of the cofferdam and potential indirect impacts from erosion of soils in disturbed areas/areas where vegetation is cleared. Additionally, all required BMPs will be implemented as needed to minimize impacts to water quality. With implementation of the BMPs described in Section 2.7 (e.g., use of silt fences, fabric bags, or appropriate erosional controls to manage site water runoff), turbidity levels are not expected to notably increase throughout the water column relative to existing baseline conditions.

The east bank realignment and construction of the cofferdam will not require machinery to operate in the wet of the Rio Grande. The east bank realignment will be accomplished from the bank of the river and the construction of the cofferdam will be constructed moving from the east bank out towards the IDD with machinery travelling along the top of the cofferdam as it is constructed. Additionally, the Peralta Sluiceway modifications and gate mechanization and automation will occur within a dewatered work area to minimize adverse effects of increased turbidity during construction activities and to protect river water quality. Radial dam gates will be closed to dewater the area

below the IDD radial dam gates, with only seepage flow present. Additionally, the use of the cofferdam would divert water around the construction area and dewater the area of construction in the immediate vicinity of the proposed Peralta Sluiceway modifications and gate mechanization and automation to help reduce impacts to water quality due to increased turbidity. The use of a cofferdam and strategic dewatering above and below the radial dam gates will help reduce the wet area in the construction zone, thus limiting the energy that would mobilize sediment downstream. BMPs (i.e., initial steam cleaning of all equipment and checking the equipment several times per day) would be followed to avoid inadvertent risk of a discharge of pollutants into surface waters while the equipment is being used in the vicinity of or within the river channel.

During maintenance activities, there may be a temporary, localized increase in turbidity during the sluicing of the Peralta Sluiceway to eliminate sediment buildup. However, the sediments flushed from the Peralta Sluiceway will not be released into the Rio Grande as they will be constrained to the Peralta Main Canal. This increase in turbidity is expected to be short-term and dissipate quickly. If the operations and maintenance of the Peralta Sluiceway related to the flushing of sediments causes an excess amount of turbidity, maintenance operations will be evaluated and adjusted as needed. Additionally, if heavy equipment is needed to remove sediment from the Peralta Sluiceway, equipment would not need to operate within the Rio Grande or within the wet of the Peralta Sluiceway as maintenance can be accomplished from existing roads and structures. The increase in turbidity from maintenance activities associated with the operation of the Proposed Action would be a small contribution relative to the sediment loan the Peralta Sluiceway already carries, especially if maintenance activities occur during the irrigation season. Additionally, these proposed Peralta Sluiceway maintenance activities are similar to the current maintenance activities in that current Peralta Sluiceway maintenance activities include the sluicing of accumulated sediment and removal of sediment with machinery.

Operation of the Proposed Action will have long-term benefits to water quality. The realignment of the east bank will reduce local erosion that has historically contributed to sedimentation and increased turbidity at the project site. As such, it is anticipated that the long-term benefits to water quality will outweigh the temporary impacts to water quality from increased turbidity during construction.

4.3.2 Potential for Elevated pH from Pouring of Uncured Concrete

During the construction of the Peralta Sluiceway modifications, the pouring of uncured concrete to construct the modified Peralta Sluiceway floor has the potential to increase pH in water at the sediment surface if the concrete material is exposed to the surrounding water column. Water pH would also increase if any of the uncured concrete material were to leak or spill into the water column. This is because commonly used ingredients in the concrete have inherently high alkalinity.

Therefore, the highest potential for elevated pH in the water column is during construction of the Peralta Sluiceway modifications while the concrete is being poured.

Fish species tend to have very narrow ranges of pH tolerance, and levels outside this range will impact its health. The optimal range for most freshwater aquatic organisms, including fish, is between 6.5 and 8 (EPA 2017). Temporary or long-term pH outside this range can result in decreased reproduction, decreased growth, disease, or death for aquatic species (EPA 2017). Spilled concrete can cause very alkaline water that can result in the direct killing of fish that often have a narrow range of pH tolerance. Even for fish species that are less sensitive, prolonged exposure to pH between 9.5 and 10 can damage outer surfaces such as gills, eyes, and skin (EPA 2017). Over the long term, high pH can damage the olfactory system, making it difficult for fish to find food or mates, avoid toxic chemicals, or detect alarm signals from other fish (EPA 2017).

Although uncured concrete could spill into the aquatic environment and cause elevated pH levels that could impact the Rio Grande silvery minnow (RGSM) and other aquatic organisms, the BMPs and impact-minimization measures described in Section 2.7 will be implemented. Specifically, pouring of concrete within a dewatered area within the Peralta Sluiceway will make it unlikely for uncured concrete to come into contact with the Rio Grande. As such, the likelihood of this impact occurring is expected to be low.

4.4 Riparian and Wetland Resources

There are state and federally protected wetlands in the vicinity of the Proposed Action project area on the island north of the IDD as shown in Figure 3. Contrary to the 2023 EA Section 3.4.3, there will be no impacts to wetland resources.

However, the Proposed Action is expected to impact riparian areas. Construction of the Proposed Action will result in vegetated riparian impacts along the banks of the Rio Grande. The realignment of the east bank will permanently remove vegetation, including taller cottonwood trees within the east bank realignment area. Reclamation will mitigate the loss of large, mature cottonwood trees (trees with a diameter breast height greater than 6-inches) by a 10:1 replacement under the implementation of BMPs (Section 2.7; Reclamation 2015). Although the number of large, mature cottonwood trees to be cleared is unknown, the contractor will maintain an inventory of the number of these trees that are cleared during construction to be used for mitigation calculations. BMPs, such as cleaning equipment before entering the Proposed Action project area to ensure that all equipment, machinery, rocks, gravel, and other materials are cleaned and weed-free, will be implemented to prevent establishment of noxious weeds in the construction work area. Riparian saplings, shrubs, and herbaceous vegetation will be removed to access the construction site. During construction, vegetation clearing including the removal of riparian saplings, shrubs, and herbaceous vegetation will occur for construction access and for creation of the staging area upstream and

downstream of the IDD. These vegetation impacts within the laydown area will be temporary and occur in previously disturbed areas.

Although impacts to riparian habitat will occur during construction activities, in accordance with BMPs and impact-minimization measures referenced in Section 2.7, mitigation measures will be implemented to restore riparian habitats where feasible and to reduce impacts to riparian habitats resulting from construction activities.

4.5 Vegetation

A description of the environmental consequences can be found in Section 3.5.3 of the 2023 EA. Contrary to Section 3.5.3 of the 2023 EA, the Proposed Action will not result in impacts to vegetation on the island north of IDD.

4.6 Threatened and Endangered Species

Consistent with the 2023 EA, there would be no adverse effects from the Proposed Action to the Mexican spotted owl, yellow-billed cuckoo, southwestern willow flycatcher, monarch butterfly, Suckley's cuckoo bumble bee, New Mexico meadow jumping mouse, or Pecos sunflower. Additionally, because vegetation clearing will not occur during the nesting season of the yellow-billed cuckoo and southwestern willow flycatcher (April 15 to August 15), pre-construction bird surveys will not be conducted as there will be no impacts to these bird species. No yellow-billed cuckoo, southwestern willow flycatcher, or RGSM critical habitat will be impacted as there is no critical habitat designated for these species within Pueblo of Isleta lands.

Impacts to the RGSM from the Proposed Action are discussed in the 2023 EA in Section 3.6.3; however, additional details on potential impacts to RGSM are discussed in further detail below. Activities with the potential to impact the RGSM include the following:

- Construction and removal of cofferdams
- Pouring of concrete
- Removal of the east bank in the wet
- Placement of riprap below the OHWM of the east bank

4.6.1 Life History Considerations

RGSM are most abundant in areas of low to moderate water velocity and are rare in habitats with high water velocity. Additionally, RGSM prefer to use habitats not commonly found in the Rio Grande, including eddies formed by debris piles, pools, and backwaters (Dudley and Platania 2003). Habitat also includes stream margins, side channels, benthic areas, and off-channel pools where water velocities are low or reduced from the main channel velocities. Different life stages of the RGSM utilize different habitats with larval RGSM occurring almost exclusively within shallow areas

with low or no water velocity and fine silt or sand substrate. As RGSM grow larger they shift from habitats with low to moderate flow velocity areas. However, despite shifts in habitat use, the majority of size-classes of RGSM primarily occupy low-velocity habitats (Dudley and Platania 2003). Habitat use also differs between summer and winter seasons. In winter, RGSM move from summer habitats such as pools and backwaters to habitats with instream debris piles with low-flow velocities. RGSM also tend to occupy deeper water in the winter, but these areas are still characterized by low velocities (Dudley and Platania 2003). Seasonality also affects the density of the RGSM population. In 2021, silvery minnows had greater abundance during the summer monitoring events and relatively low abundance during the spring and fall in the Isleta Reach (Dudley et al. 2022).

The RGSM is a pelagic spawner, on average producing over 3,000 eggs that are semibuoyant and nonadhesive and are carried downstream by river flow. Spawning of the RGSM is associated with high-flow events such as spring snowmelt runoff or early-summer rainstorms. RGSM spawn over a relatively brief period of about 1 month in the late spring/early summer (May and June), coinciding generally with spring runoff (Dudley and Platania 2003). Eggs remain suspended in the water column during development and grow quickly, generally hatching within 24 to 48 hours (Platania 2000). Recently hatched larval fish swim vertically in the water column to remain in the drift portion of the water column and begin feeding after about 3 days. After about 3 days, the gas bladder of larval fish develops, and swimming behavior shifts from vertical to horizontal movement with fish actively seeking low-velocity habitats (Dudley and Platania 2003). Low-velocity habitats, sometimes created by overbank flooding, are used by silvery minnows as suitable habitat for developing larval stages (Mortensen et al. 2020). Spawning results in high mortality rates of the RGSM. For example, in December of any given year, the surviving RGSM population is dominated by age zero fish born in the most recent spawning event, with over 98% of fish sampled in December consisting of age zero fish (Dudley and Platania 2003). Generally, RGSM populations in the wild consist of ages between 0 and 2 years of age (Dudley and Platania 2003). River fragmentation is one of the most immediate threats to RGSM populations, as diversion dams such as IDD prevent the movement of fish to upstream reaches. RGSM eggs are frequently displaced downstream through diversion dams and RGSM may become isolated from the upstream habitats they were spawned in. Additionally, the presence of diversion dams prevents upstream movement of RGSM to escape periods of river drying.

4.6.2 Construction Timing

Construction of the Proposed Action will occur during the non-irrigation season (November 1 to February 28) from November 2025 through February 2026. Should this period be extended, Reclamation, with assistance from the contractor, will determine if further consultation is needed with the USFWS. RGSM spawn during the spring high flows; therefore, impacts to spawning fishes or nursery areas will not occur, as construction of the Proposed Action will take place outside of the breeding season of the RGSM. Additionally, a cofferdam will be used to minimize the potential for

direct impacts to all RGSM life stages from construction activities within the Rio Grande. Fish entrained in the dewatering areas will be rescued as discussed in the referenced BMPs in Section 2.7.

4.6.3 Potential Impacts from the Pouring of Concrete

During the construction of the Peralta Sluiceway modifications, the pouring of uncured concrete to construct the modified Peralta Sluiceway floor has the potential to increase pH in water at the sediment surface where the concrete material is exposed to the surrounding water column. Water pH would also increase if any of the uncured concrete material were to leak or spill into the water column. Spilled concrete can cause very alkaline water that can result in decreased reproduction, decreased growth, disease, and the direct killing of fish that often have a narrow range of pH tolerance (EPA 2017). Even for fish species that are less sensitive, prolonged exposure to pH between 9.5 and 10 can damage outer surfaces such as gills, eyes, and skin (EPA 2017). Over the long term, high pH can damage the olfactory system, making it difficult for fish to find food or mates, avoid toxic chemicals, or detect alarm signals from other fish (EPA 2017). As such, if uncured concrete were to spill into the water column of the Rio Grande, it would cause an increase in pH, which could negatively impact the RGSM and cause mortality in severe instances. Exposure to water that has been in contact with uncured concrete would constitute a disturbance that potentially harasses, stresses, injures, or reduces the fitness of RGSM in the Proposed Action project area.

Although uncured concrete could spill into the river and cause elevated pH levels that could impact the RGSM and other aquatic organisms, the pouring of concrete will be constrained to the Peralta Sluiceway. If concrete were to spill into the wet of the Peralta Sluiceway it would likely be contained within the sluiceway and would not come into contact with the Rio Grande. Furthermore, the Peralta Sluiceway does not provide potential habitat for the RGSM and therefore it is highly unlikely that RGSM would be present within the sluiceway in the event that concrete spills into the sluiceway water. Although impacts to RGSM from the pouring of concrete are unlikely to occur, BMPs and impact-minimization measures described in Section 2.7 will be implemented to further reduce the likelihood of impacts to RGSM from the pouring of concrete. Specifically, pouring of concrete within a dewatered area within the Peralta Sluiceway will make it unlikely for uncured concrete to come into contact with the Rio Grande. As such, the likelihood of contact of uncured concrete with the water column is unlikely, and the impact to RGSM is expected to be low.

4.6.4 Potential Impacts from Disturbance to Wetted Instream Habitats

The Proposed Action will temporarily impact RGSM, should individuals be present during construction of the cofferdam and placement of riprap along the southern portion of the east bank. During construction of the temporary cofferdam, permanent riprap access road, east bank removal in the wet, and placement of riprap along the east bank, construction equipment would place fill material within the Rio Grande, which would constitute a disturbance to wetted instream habitats. Impacts to instream

habitat from the construction of the cofferdam would be temporary as the cofferdam would be removed following the conclusion of construction. As such, short-term adverse effects on silvery minnows may occur due to instream disturbance during the construction and removal of the cofferdam. The placement of riprap during the construction of the permanent riprap access ramp and placement of riprap along the southern portion of the east bank, however, would result in a permanent impact to instream habitat as open water habitat would be permanently filled. However permanent impacts to instream habitat would be very minor as only 0.028 acre (1,200 sf) of instream habitat would be permanently lost due to the placement of riprap below the OHWM. In total, the placement of riprap along the southern portion of the east bank would result in a permanent loss of 0.028 acre (1,200 sf) of instream habitat below the OHWM. Furthermore, this loss of instream habitat would be offset by the realignment of the east bank, which will result in the creation of 0.89 acre (38,800 sf) of new instream habitat for silvery minnows. In total, the Proposed Action will result in a net increase of 0.86 acre (37,500 sf) of in-stream habitat.

It is anticipated that silvery minnows that may be present in the in-stream project area may be harassed temporarily as a direct effect of the proposed activities (e.g., installation of the cofferdam and riprap and east bank removal in the wet). Silvery minnows are expected to exhibit an avoidance response to these activities given the operating speed, noise intensity, and location of equipment, as well as the areas exposed. It is not anticipated that many fish will be directly injured; however, avoidance behavior, or fleeing from the disturbance, represents a disruption in normal behaviors and an expenditure of energy that an individual silvery minnow would not have experienced in the absence of the Proposed Action. The placement of the cofferdam and riprap in in-stream habitat would cause a temporary increase in noise and vibrations. While the impacts of noise and vibrations to RGSM are still relatively unknown, preliminary studies indicate that RGSM are sensitive to noise and vibrations, displaying a behavioral response of freezing in place. RGSM present in the in-stream construction area while machinery is operating should leave the immediate area of construction, but if noise and vibrations are great enough that RGSM freeze in place, RGSM could be directly impacted by construction equipment noise and vibration. BMPs such as a slow entry of machinery into in-stream habitat will minimize potential impacts of noise and vibration to RGSM by allowing fish ample time to leave the construction area. Additionally, once work has started in any given day, construction will be relatively continuous to prevent RGSM from entering back into the construction area.

The sequencing of construction activities will aim to minimize the amount of contact with the river habitat of the RGSM by working within a dewatered work area. Construction of the cofferdam and the diversion of flows away from a portion of the wetted habitat within the river channel may result in disturbance and potential stranding of RGSM, including possible mortality. To minimize the impacts to RGSM, to the extent possible, the areas that are isolated from flow for construction will be immediately netted by USFWS biologists or USFWS-trained staff to collect and relocate RGSM from isolated pools in the dewatered work area to wetted, connected stream habitats. Any excavation or placement of

materials in the wetted channel will be conducted from upstream to downstream or in a way that avoids creating isolated pools of water which would have the capacity to isolate and strand fish. Construction of the cofferdam and placement of riprap could expose RGSM to noise and vibrations that would constitute disturbances that potentially harass, stress, injure, or reduce the fitness of RGSM in the Proposed Action project area. Although in-stream project-related activities have the potential to cause direct or indirect injury, harm, or harassment to silvery minnows, the effects from construction will be limited to the duration of construction (~4 months) and will be minimized by project design and implementing BMPs.

4.6.5 Potential Impacts from Increases in Turbidity

Construction of the cofferdam, ground disturbance during the realignment of the east bank, and exposure of soils from vegetation clearing during the realignment of the east bank and the preparation of the staging and laydown area could cause short-term increases in turbidity in the water column, which could impact water quality.

Changes in water quality or flows associated with the Proposed Action may also occur during construction activities or during dewatering. There may be localized increases in turbidity and suspended sediments, as well as increases in suspended solids, reduced oxygen, other pollutants that may affect the qualities of the water inhabited by silvery minnows. As an area is dewatered or as sediment is disturbed, various pollutants (e.g., ammonia, sedimentation, oxygen demanding substances, residual pesticides) may become mobilized into the water column to elevated concentrations or reach levels that may adversely affect those silvery minnows that are exposed.

Direct effects from excess suspended sediments on a variety of fish species have included alarm reactions, abandonment of cover, avoidance responses, injury, or potentially, death. Although construction will occur during the non-irrigation season (November 1 to February 28) when river flows and turbidity are at their lowest, the increase in turbidity resulting from construction would still be a small contribution relative to the sediment load that the river already carries, as baseline turbidity within the Rio Grande is still relatively high even during periods of low flow (Brown 2014). Additionally, the use of the cofferdam and strategic dewatering to reduce the wet area in the construction zone would reduce the potential of an increase in turbidity within the water column.

With the implementation of BMPs, turbidity is not expected to notably increase throughout the water column relative to baseline conditions. Additionally, impacts to water quality are expected to be localized to the immediate vicinity of construction and would be temporary and transient in nature as turbidity will be dissipated by river flow. Due to the implementation of BMPs and due to the fact that turbidity is not expected to cause a significant impact on water quality relative to existing baseline conditions in the river, turbidity from construction activities will have a minimal impact on RGSM. The Proposed Action would result in a net benefit to water quality as the realignment of the

east bank will reduce erosion, which contributes to localized turbidity due to the chronic erosion of the east bank.

4.6.6 Potential Impacts to RGSM During Fish Salvage and Relocation

Construction of the cofferdam and dewatering of the in-water work area has the potential to entrain RGSM should they be present within the construction area. Although RGSM are likely to avoid areas of construction, BMPs would be implemented to prevent the take of RGSM. Specifically, USFWS staff or USFWS-trained staff would perform fish salvage and netting to rescue RGSM that are trapped in the dewatered in-water work area. Fish rescue from isolated pockets of water that may remain within the dewatered work area will be coordinated with the New Mexico Fish and Wildlife Conservation Office of the USFWS ahead of the construction of the cofferdam. Fish rescue might happen after the cofferdam is installed and occur concurrently with the initiation of or after a few days of pumping but will occur prior to the construction of the sluiceway modifications. During the salvage of entrained RGSM, RGSM could likely experience entrapment, some harassment, and possibly injuries during fish rescue. As such, construction of the cofferdam and dewatering of the in-water work area may adversely impact RGSM. However, impacts to RGSM would be periodic and short-term and should be primarily constrained to harassment and behavioral response. Additionally, BMPs requiring the rescue and salvage of entrained RGSM be conducted by qualified or trained individuals should minimize the impacts to RGSM.

4.6.7 Potential Impacts During Maintenance of the Peralta Sluiceway

During the maintenance of the Peralta Sluiceway, there could be a localized increase in turbidity during the sluicing of the Peralta Sluiceway to eliminate sediment buildup. The increase in turbidity during flushing activities would be a small contribution relative to the sediment load that the sluiceway already carries, and any increase in turbidity would be constrained to the Peralta Sluiceway and Peralta Main Canal where there is no RGSM habitat present. Therefore, the increase in turbidity resulting from the maintenance of the Proposed Action is anticipated to have negligible impacts to RGSM.

4.6.8 Summary of Potential Impacts to RGSM

RGSM exposed to construction activities in the Proposed Action project area may be adversely affected by noise; vibrations; reductions in habitat; altered water qualities due to an increase in turbidity; or other disturbances that harass, stress, injure, or reduce the fitness of RGSM in the Proposed Action project area. Fish salvage and rescue during dewatering activities could harass, stress, injure, or reduce the fitness of RGSM. Therefore, the Proposed Action **may affect and is likely to adversely affect** the RGSM. This determination is consistent with the 2016 BiOp (USFWS 2016).

4.6.9 Mitigation Measures

To reduce the potential for impacts on RGSM, mitigation measures will be implemented to minimize impacts to this species. The contractor will utilize construction techniques and implement the standard BMPs identified in the 2016 BiOp, the 2015 Joint Biological Assessment, and the 2023 EA and those described in Section 2.7 for the Proposed Action, which will minimize contact with fish and minimize potential for harm, harassment, or mortality (USFWS 2016). However, these potential impacts to RGSM are expected to be offset by creating new in-stream habitat and reducing erosion and turbidity within the project area.

4.7 Cultural Resources

A description of the environmental consequences can be found in Section 3.7.3 of the 2023 EA. The IDD is identified as a Historic Cultural Property (Historic Cultural Properties Inventory [HCPI; HCPI 53622]). As discussed in Section 3.7.3 of the 2023 EA, mechanization and automation of gates 28, 29, and 30 would modify HCPI 53622 and could adversely affect cultural resource HCPI 53622. Adverse effects to the IDD were mitigated through conducting a modified version of a Historic American Engineering Record (HAER) of the dam, as agreed upon with the Tribal Historic Preservation Officer (THPO).

Under the Proposed Action, spoils will be placed in a laydown area for dewatering and then transported to the existing sediment disposal location at POI abandoned lagoons (Figure 5) or taken to an off-site commercial location that is able to accept the material. These locations are actively used by MRGCD and are highly disturbed and have been used routinely for years, and therefore it is unlikely that any cultural or archaeological resources will be impacted.

An Agreement between the Bureau of Reclamation, MRGCD, and the THPO regarding the Proposed Action is included as Appendix A. Under the Agreement, Reclamation committed to providing THPO with a HAER documentation package to demonstrate mitigation of adverse effects to HCPI 53622 (IDD), a National Register-eligible historic structure. Under the Agreement, it was agreed upon that the HAER analysis could occur concurrently with construction activities. The HAER document was submitted to Pueblo of Isleta THPO on April 10, 2025, concluding Section 106 consultation.

4.8 Indian Trust Assets

A description of the environmental consequences can be found in Section 3.8.3 of the 2023 EA.

4.9 Noise

Noise was not analyzed in the 2023 EA. Under the No Action Alternative, there would be no changes to existing noise. Under the No Action Alternative, noise resulting from the current ongoing maintenance activities at IDD and the Peralta Sluiceway would continue.

The impacts of noise will be similar for Alternative 1, Alternative 2, and the Proposed Action. During the construction of Alternatives 1 and 2, there could be a slight and temporary increase in impacts to noise, but these impacts would be limited to the duration of construction. Similar to Alternatives 1 and 2, the construction of the Proposed Action will cause a slight and temporary impact to noise in the Proposed Action project area. During the transportation of excavated soils and sediments off-site, there will be an increase in truck traffic and an associated increase in noise above existing conditions. During construction of the Proposed Action, the operation of construction equipment and the operation of dewatering pumps could cause a temporary increase in noise levels relative to existing conditions; however, these impacts will be temporary and limited to the duration of construction. The construction of the Peralta Sluiceway modifications would create a long-term improvement in noise from a reduction in excavator noise, repeated dump truck noise, and trips due to a reduction in sediment being entrained into the canal and subsequently necessitating removal.

During the maintenance activities associated with the operation of the Proposed Action, the operation of heavy machinery and haul trucks during the removal of sediment from the Peralta Sluiceway will cause a temporary increase in noise. However, the operation of machinery for maintenance activities associated with the operation of the Peralta Sluiceway will be similar to the operation of equipment currently occurring for maintenance activities and therefore is expected to cause a minimal impact to noise relative to the impacts resulting from current maintenance activities.

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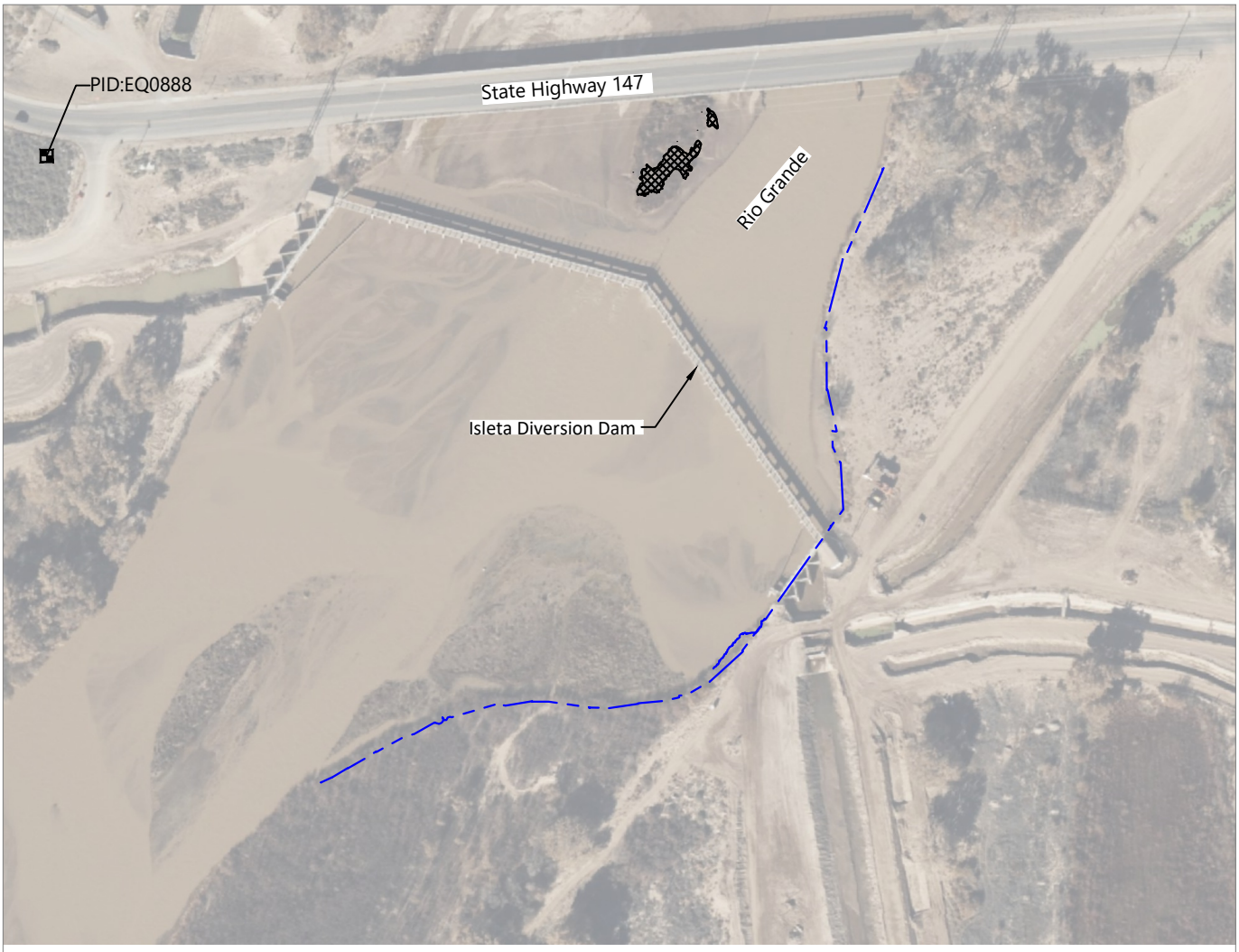
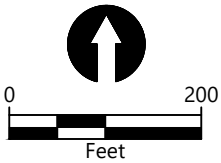
Figures





SOURCE: Aerial ©2023 Microsoft Corporation ©2023 Maxar ©CNES (2023) Distribution Airbus DS
HORIZONTAL DATUM: New Mexico State Plane Central Zone, NAD83, U.S. Survey Feet

NOTE: Coordinates for Control Point PID:EQ0888. Northing; 1421392.43 Easting; 1509236.40 Latitude; N34°54'22" Longitude; W106°41'15"

LEGEND:

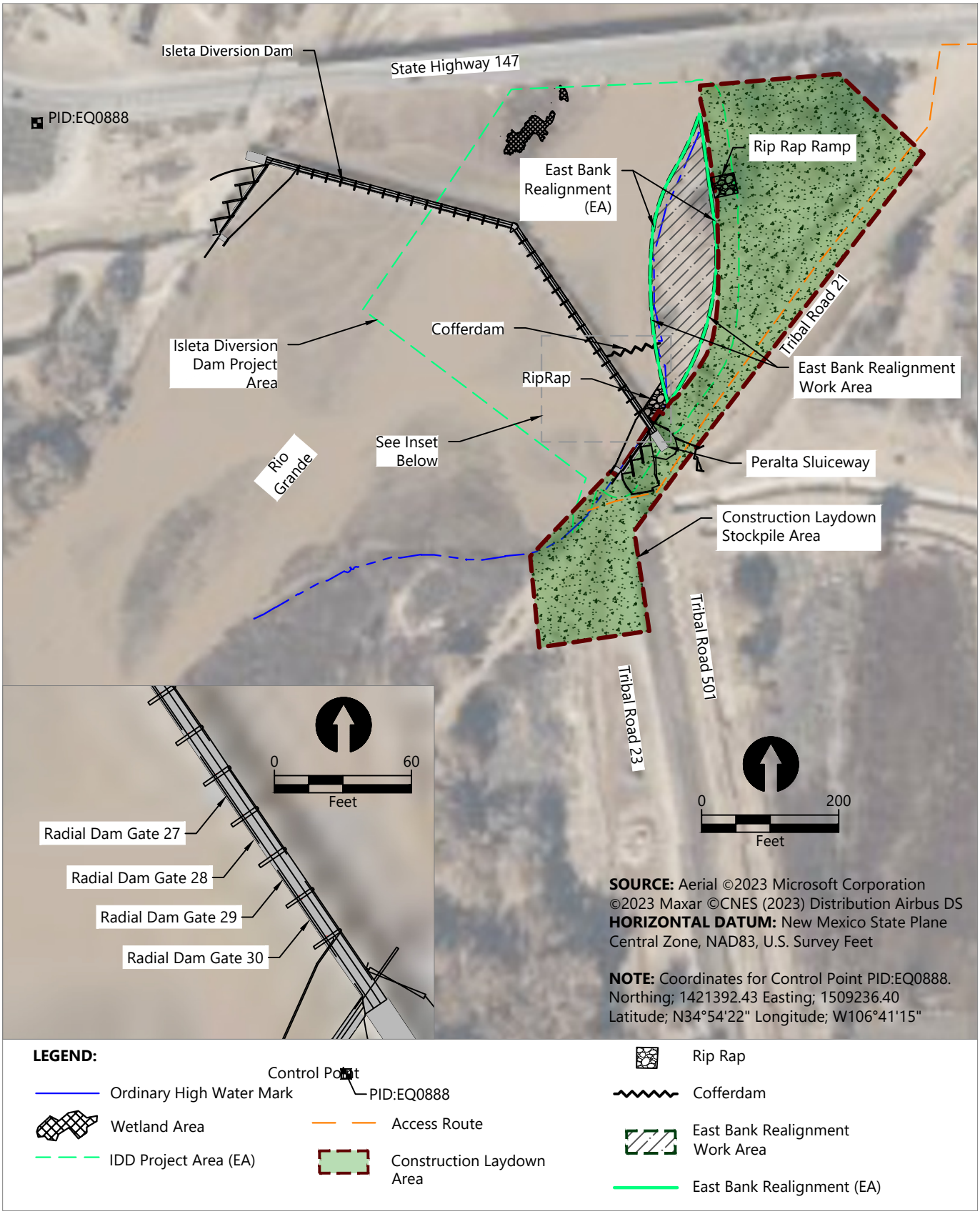
- Ordinary High Water Mark
- Wetland Area
- Control Point PID:EQ0888

Publish Date: 2025/07/18 12:29 PM | User: mpratschner
Filepath: K:\Projects\2764-Lloyd Engineering Inc\USBR SADD IDD\2764-RP-006 IDD (Existing).dwg Figure 1

ANCHOR QEA

Figure 1
Vicinity Map and Existing Conditions

East Bank Realignment and Sluiceway Modifications Project
U.S. Bureau of Reclamation



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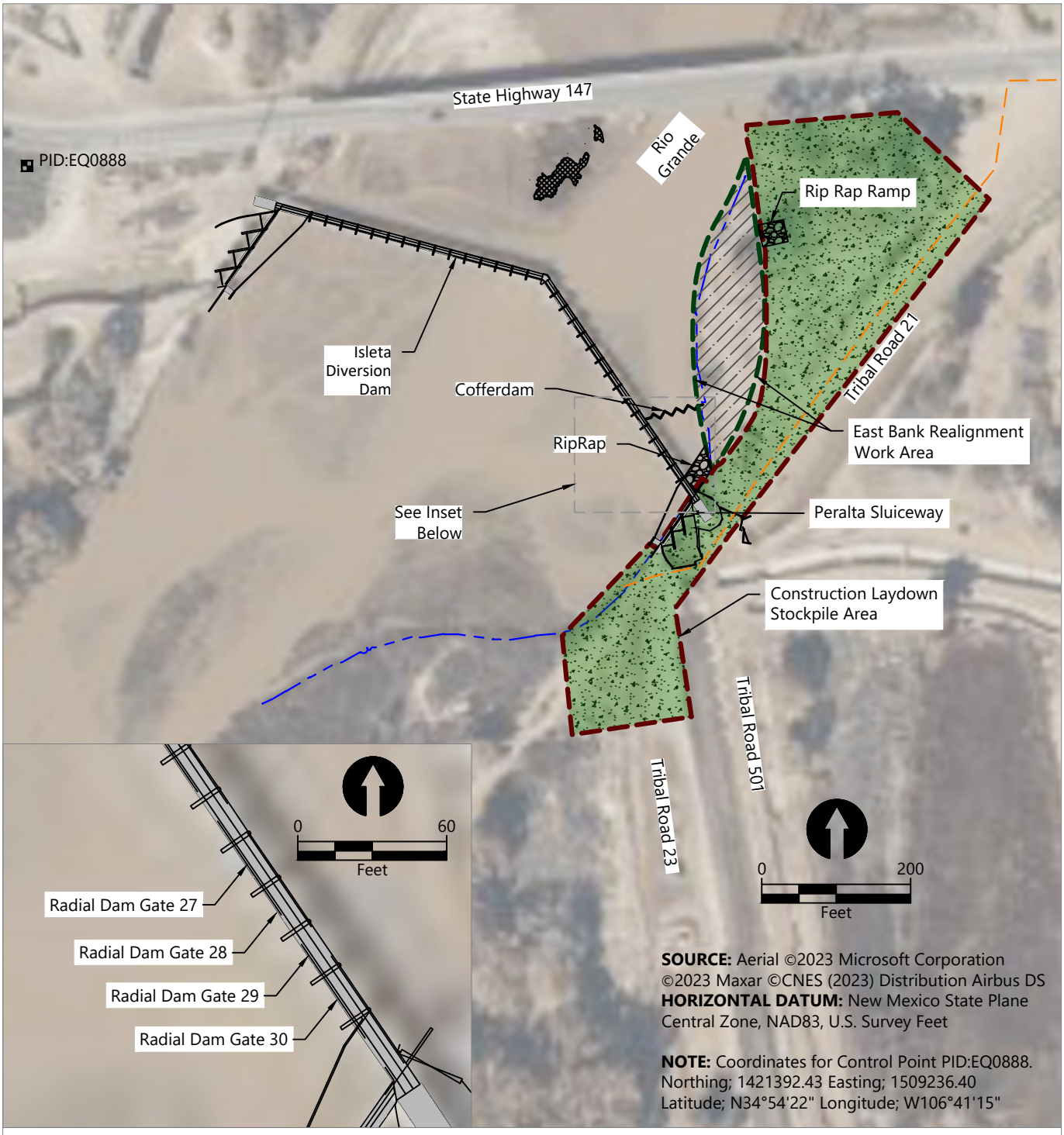
Filepath: K:\Projects\2764-Lloyd Engineering Inc\USBR SADD IDD\2764-RP-011 IDD (Expanded Site).dwg Figure 2

ANCHOR QEA

Figure 2
Proposed Conditions Compared to Proposed Conditions in the Environmental Assessment (EA)

East Bank Realignment and Sluiceway Modifications Project
U.S. Bureau of Reclamation



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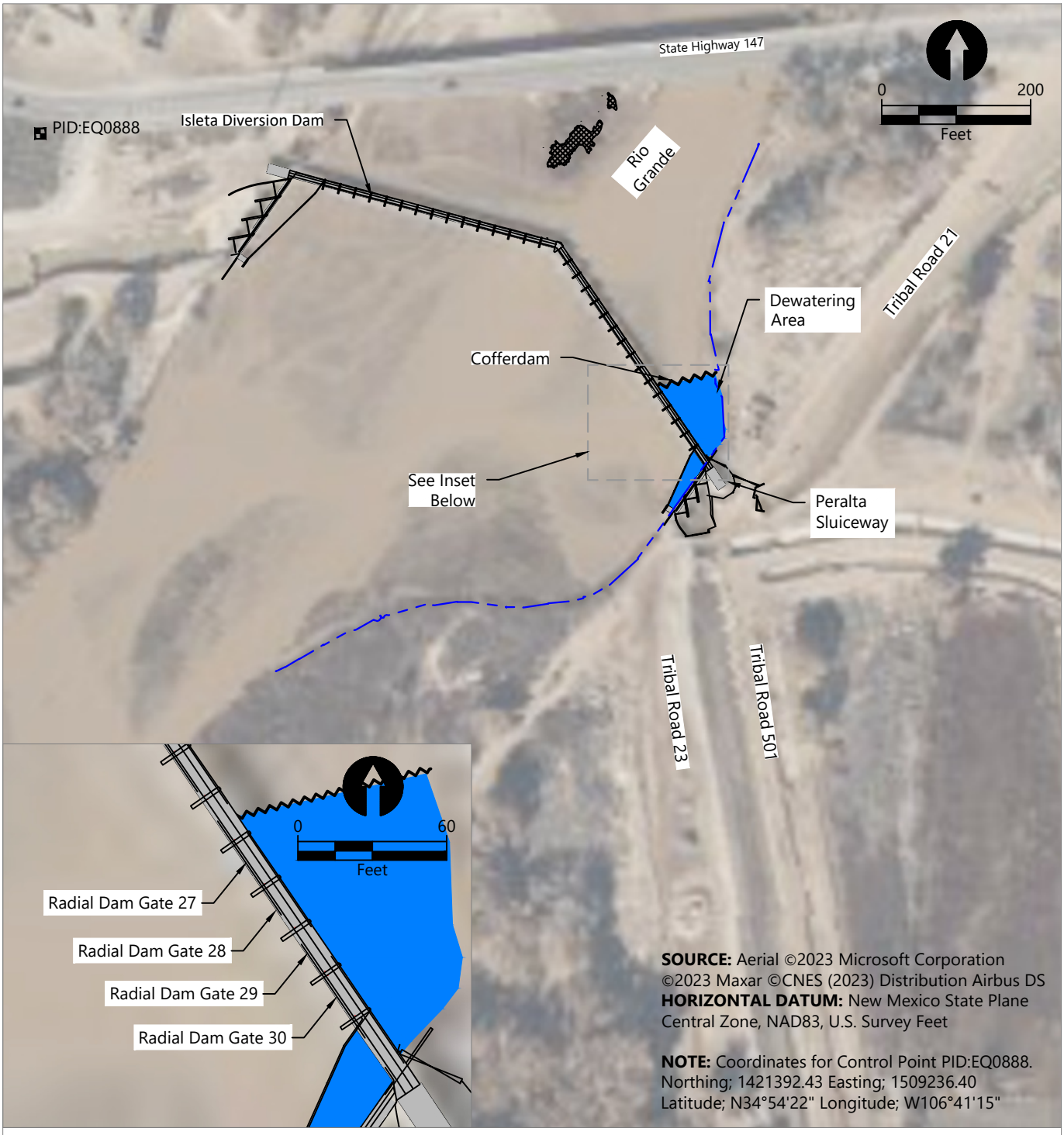
ANCHOR QEA

Figure 3
Proposed Conditions

East Bank Realignment and Sluiceway Modifications Project
U.S. Bureau of Reclamation

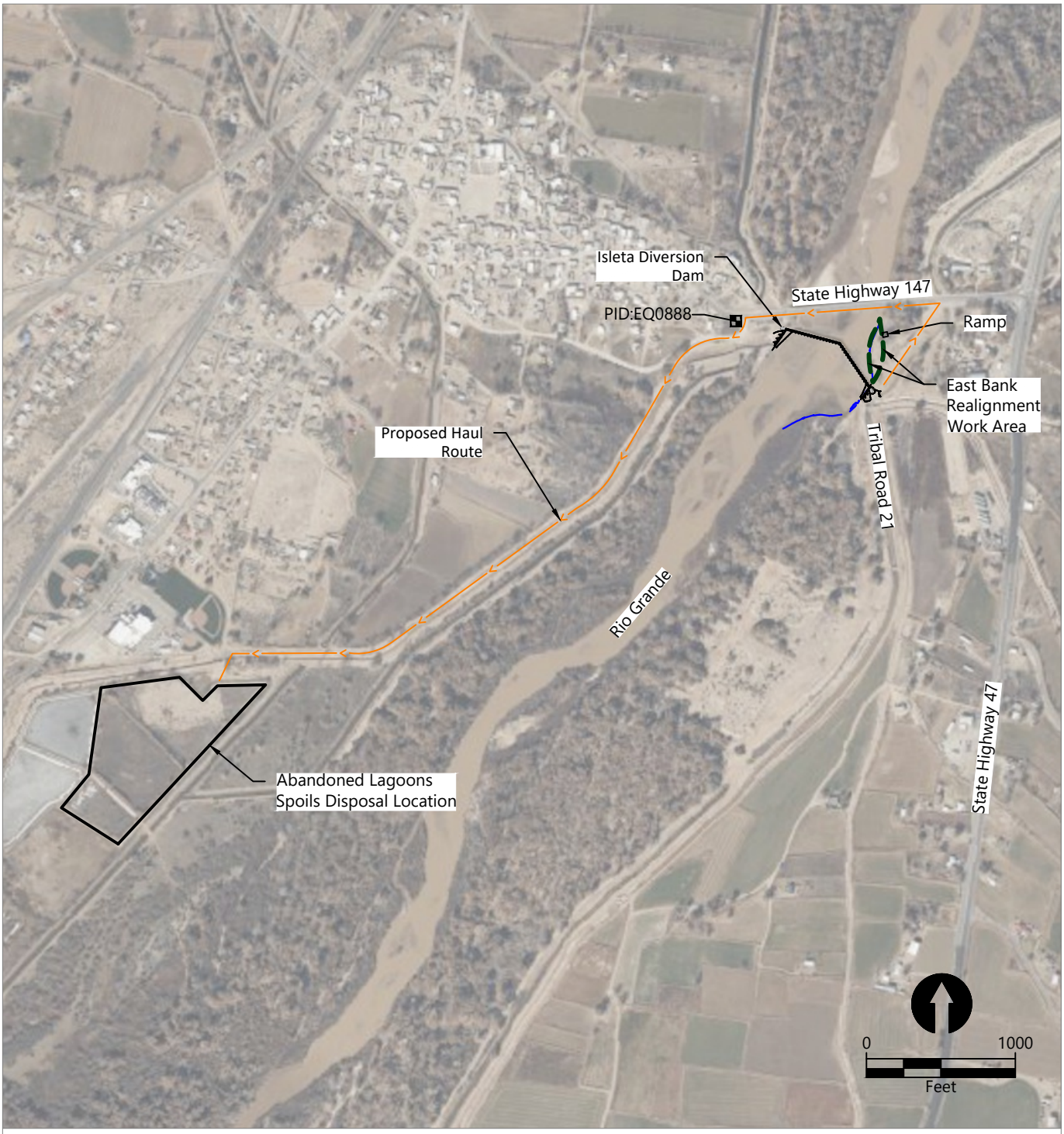


Publish Date: 2025/07/18 12:30 PM | User: mpratschner
Filepath: K:\Projects\2764-Lloyd Engineering Inc\USBR SADD IDD\2764-RP-012 IDD (Dewatering).dwg Figure 4

ANCHOR QEA

Figure 4
Dewatering Areas

East Bank Realignment and Sluiceway Modifications Project
U.S. Bureau of Reclamation



SOURCE: Aerial ©2023 Microsoft Corporation ©2023 Maxar ©CNES (2023) Distribution Airbus DS
HORIZONTAL DATUM: New Mexico State Plane Central Zone, NAD83, U.S. Survey Feet

NOTE: Coordinates for Control Point PID:EQ0888. Northing; 1421392.43 Easting; 1509236.40 Latitude; N34°54'22" Longitude; W106°41'15"

LEGEND:

- Ordinary High Water Mark
- Work Area
- Proposed Haul Route
- Control Point PID:EQ0888
- Abandoned Lagoons Spoils

Publish Date: 2025/07/18 12:30 PM | User: mpratschner
Filepath: K:\Projects\2764-Lloyd Engineering Inc\USBR SADD IDD\2764-RP-021 IDD (Spoils).dwg Figure 5

ANCHOR QEA

Figure 5
MRGCD Spoils Disposal Location

East Bank Realignment and Sluiceway Modifications Project
U.S. Bureau of Reclamation

Appendix A
Tribal Historic Preservation Officer 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

May 30, 2024

VIA ELECTRONIC MAIL

Dr. Henry Walt
Isleta Pueblo Tribal Historic Preservation Officer
PO Box 1270
Isleta, New Mexico 87022

Subject: Continued Section 106 Consultation between Bureau of Reclamation and the Pueblo of Isleta Regarding Mitigation Efforts Associated with the Isleta Diversion Dam (IDD) Fish Passage and Peralta Canal Headworks Modification Project, Letter of Agreement

Dear Dr. Walt:

In 2016, Reclamation reached a settlement agreement that required implementation of future dam modifications at the IDD, located on the Rio Grande approximately four miles south of Albuquerque, New Mexico, on Pueblo of Isleta lands in Bernalillo County. The Agreement of Settlement and Compromise Regarding the IDD (Settlement), dated 21 October 2016, committed the Settlement parties (Pueblo of Isleta, Middle Rio Grande Conservancy District (MRGCD), Reclamation and Bureau of Indian Affairs) to undertake projects to meet specific sediment management and fish passage goals for the IDD. Reclamation has a parallel commitment with the U.S. Fish & Wildlife Service to provide fish passage at the IDD in accordance with the 2016 Middle Rio Grande Biological Opinion, with specific attention to the Rio Grande Silvery Minnow (RGSM), a federally listed endangered species.

As requested in the telephone conversation on May 7, 2024 between you and Albuquerque Area Office archaeologist Dr. John Cater, this letter provides information to the Pueblo of Isleta for review and consideration of the Reclamation's proposed mitigation measures associated with the IDD fish passage and Peralta Canal headworks modification project. Additionally, as per the discussion on the date referenced above, no Memorandum of Agreement is required for the proposed mitigation effort and this letter will serve as the agreement should you and/or the Pueblo choose to sign. On January 3, 2024 the Advisory Council on Historic Preservation declined to take part in consultation. On January 29, 2024, the New Mexico State Historic Preservation Office (SHPO) chose not to consult further on the project.

The IDD was built by the MRGCD in 1934 and rehabilitated by Reclamation in 1955. It has been altered numerous times over the years as time wears out components or as technology changes allowing for more efficient operations. The dam provides head for diversion of river water to irrigation systems on both sides of the river.

Modifications to the IDD Peralta Canal headworks, located on the east side of the river, will allow reduction of sediment diversion into the downstream irrigation system, thus increasing reliability of water delivery and reducing MRGCD's cost for sediment removal and dredging activities. The sediment bank above the dam on the east side of the river will be modified to aid in the flow of water to the Peralta Canal headworks.

As a federally funded project, compliance is required under Section 106 of the National Historic Preservation Act of 1966, as amended (36 CFR Part 800) (NHPA).

Project Need and Purpose

The need for fish passage at IDD has been discussed for many years and culminated in the 2016 Settlement. River connectivity is crucial for the RGSM and passage is not possible during irrigation season when the dam gates are closed, and difficult when river flows are low. Fish passage at IDD will allow the RGSM to travel upstream and downstream of the dam.

Over many decades the IDD has diverted large amounts of sediment through the Peralta Canal headworks which in turn required dredging and dredge material removal on a daily basis at certain river flows, a labor intensive and expensive activity. By slight modification of the headworks, it is anticipated that sediment deposition will decrease significantly.

NHPA Compliance

Reclamation determined that the proposed undertaking has potential to affect the historic IDD and Peralta Canal headworks. An archaeological contractor was engaged by Reclamation to complete a Class III inventory of the proposed project area and make recommendations for mitigation of effects. The resulting report was reviewed and accepted by Pueblo of Isleta on or after May 11, 2023.

Impact and Effect

Impact at IDD

The proposed fish passage will include the removal of one radial gate near the apex of the dam and the fishway built downstream of the dam. The fishway will be constructed in a reinforced concrete flume with a gravel bottom. The downstream construction option creates the smallest possible footprint with a 0.1-foot drop in water surface at each of 60 rows of baffles. Modifications to the dam will include: removal of a non-historic gate (all gates on the dam were replaced in the 1980s according to MRGCD records); filling the unused portion of the gate with a reinforced concrete bulkhead; and construction atop the 1950s downstream apron involving doweling and grouting the fishway in place with a tunnel or culvert beneath the fishway and over the apron to allow fish movement from one side of the passage to the other.

There will be a grating walkway and security fencing on the top of the fishway for operations and management access and security. It is possible that a trash rack will be installed at the fishway entrance.

Effect at IDD

Reclamation finds that the proposed fishway will have adverse effect on the historic IDD. Effects include removal of one gate, adding new concrete to the historic concrete on either side of the fish passage, construction on the 1950s-era downstream apron, and effects to the viewshed of the dam.

Impact at Peralta Main Canal headworks

Effects associated with the Peralta Spillway include the removal of modern bank deposits above the dam. This area was surveyed as part of the project and no significant cultural materials were encountered, not surprising in that the bank formed within the last 20 years. As such, removal of this bank will have no effect on cultural resources. It is currently not known how much of the Peralta Canal headworks is from the 1950s restoration efforts, but the gates were replaced in the 1980s. The proposed modifications will include construction of a concrete “step” at the front of the sluiceway and changing the sluiceway floor angle.

Effect at Peralta Main Canal headworks

Although the proposed modifications will have an adverse effect on the historic sluiceway, these effects will not be visible because they will be underwater. In essence, the alterations are minor.

Proposed Mitigation

Reclamation has determined that the proposed undertaking has the potential to affect historic properties and, as such, Reclamation is seeking Tribal Historic Preservation Officer (THPO)/Pueblo of Isleta concurrence on mitigation recommendations to satisfy the Section 106 Process of NHPA and resolve any adverse effects to Historic Properties. Reclamation has determined that the completion of a Historic American Engineering Record (HAER) analysis of the dam, associated Peralta Canal sluiceway and other appurtenances associated with the dam is sufficient to resolve adverse effects by the proposed action.

HAER is a subcategory of the National Park Service's (NPS) Heritage Documentation Program. According to the NPS website, the program can be described as follows:

> The Heritage Documentation Programs (HDP) consist of the Historic American Buildings Survey (HABS), Historic American Engineering Record (HAER), and Historic American Landscapes Survey (HALS). The programs document historic sites and structures across the United States through the creation of measured drawings, large-format photographs, and historical reports. Documentation is archived in the HABS/HAER/HALS Collection at the Library of Congress and is available to the public without restriction. HDP is part of the National Park Service's Cultural Resources, Partnerships, and Science Directorate.

Importantly, Pueblo of Isleta has direct authority over who the HAER report is provided to. Unless Pueblo of Isleta objects, NPS will keep a copy, one copy will be presented to Pueblo of Isleta, and one copy must be sent to the Library of Congress as presented in the quotation above. Typically, copies are also sent to SHPO, University of New Mexico, and Reclamation retains a copy. If the Pueblo of Isleta objects to any of these entities receiving a copy, please inform us.

Reclamation is requesting THPO/Pueblo of Isleta signature on the designated page below reflecting agreement with the mitigation proposal. Please return a signed copy to our office. Once signed, the proposed mitigation measure will be implemented. 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: 2024.05.30 13:55:35 -06'00'

Jennifer Faler, P.E.
Area Manager

Signatory:

Letter of Agreement Between the Bureau of Reclamation and the Pueblo of Isleta regarding Mitigation Measures Associated with the Isleta Diversion Dam Fish Passage and Peralta Canal Headworks Modification Project

Pueblo of Isleta

	8/14/2024
Pueblo of Isleta and/or Tribal Historic Preservation Officer	**Date**

Signatory:

Letter of Agreement Between the Bureau of Reclamation and the Pueblo of Isleta regarding Mitigation Measures Associated with the Isleta Diversion Dam Fish Passage and Peralta Canal Headworks Modification Project

Bureau of Reclamation

Digitally signed by JENNIFER FALER Date: 2024.08.19 10:50:35 -06'00'	August 19, 2024
Jennifer Faler, P.E. Area Manager	**Date**