



— BUREAU OF —
RECLAMATION

Finding of No Significant Impact and Environmental Assessment for the Temporary Transfer of Operations and Maintenance for a Section of the Low Flow Conveyance Channel from June through October 2026 New Mexico

Upper Colorado Basin Region, Albuquerque Area Office



— BUREAU OF —
RECLAMATION



Mission Statements

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

Environmental Assessment for the Temporary Transfer of Operations and Maintenance of a Section of the Low Flow Conveyance Channel from June through October 2026

**Bureau of Reclamation
Upper Colorado Basin Region
Albuquerque Area Office**

Introduction

At the request of the Middle Rio Grande Conservancy District (MRGCD), the Bureau of Reclamation (Reclamation) proposes to temporarily transfer operations and maintenance (O&M) of the section of the Low Flow Conveyance Channel (LFCC) below the northern boundary of the Bosque del Apache National Wildlife Refuge (BDA) (Proposed Action). In compliance with the National Environmental Policy Act of 1969, 42 U.S.C. §§ 4321 et seq as amended (NEPA), Reclamation has completed an Environmental Assessment (EA) for the Proposed Action. MRGCD requests a temporary transfer of O&M to strategically divert water into this section of the LFCC during monsoonal events from June 2026 through October 2026. MRGCD believes that strategic diversions into the LFCC during monsoon events could be one solution to improving conveyance of water from Elephant Butte Reservoir (EBR). The New Mexico Interstate Stream Commission (NMISC) requested that MRGCD pursue this temporary transfer of O&M to analyze whether strategic diversions into the LFCC could improve conveyance to EBR and therefore reduce New Mexico's Rio Grande Compact debt. MRGCD and NMISC are applicants for the purpose of this NEPA compliance. The Proposed Action includes four alternate operational scenarios for the 2026 monsoon season, June through October. The Project is titled *Temporary Transfer of Operations and Maintenance of a Section of the Low Flow Conveyance Channel from June through October 2026, New Mexico*. This EA was prepared to consider the potential impacts on the natural and human environment due to implementation of the Proposed Action. The EA is attached to this Finding of No Significant Impact (FONSI) and is incorporated by reference.

Proposed Action

At the request of MRGCD, Reclamation proposes to enter into an O&M Agreement (Contract No. 26-WC-40-1050) that temporarily transfers O&M of a section of the LFCC to MRGCD (the Agreement). Through the Agreement, Reclamation would transfer O&M to the section of the LFCC below the northern boundary of the BDA. The Agreement would authorize MRGCD to strategically divert monsoonal flows defined as any additional flows available to be diverted at the San Acacia Diversion Dam (SADD) into the LFCC between June 15 through October 31 (Monsoon Operations). The Monsoon Operations could impact RM 116 to RM 60, including the river channel and associated riparian zones (Proposed Action Area). MRGCD will evaluate its Monsoon Operations throughout the irrigation season and include: (1) flow measurements from within the LFCC and in the adjacent river channel; (2) monthly Compact accounting that reports relative differences in deliveries due to use of the LFCC; (3) and hydrologic monitoring within the LFCC for infrastructure safety purposes. NMISC and MRGCD plan to develop a methodology for measuring the effectiveness of using the LFCC for the conveyance of water to EBR under the conditions proposed in the 2026 Monsoon Operations Plan. This includes monitoring that is designed to directly inform adaptive decision-making, documenting lessons learned and preparing a report that documents operations, monitoring results, evaluation findings, and recommendations for future implementation after the 2026 operations have been completed (The Plan - MRGCD and NMISC 2026a; Appendix A)

Reclamation, MRGCD, and the NMISC are parties to the 2016 U.S. Fish and Wildlife Service (Service) *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, Service 2016a). The Service concurred with MRGCD that the Monsoon Operations are adaptive management under the 2016 BiOp; therefore, Reclamation's temporary transfer of O&M authorizing MRGCD to conduct Monsoon Operations has Endangered Species Act coverage (ESA) under the 2016 BiOp.

The BiOp acknowledges that sediment and water conveyance issues in portions of the San Acacia Reach are due in large part to sediment aggradation within the river channel resulting from insufficient sediment transport by river flows. The channel in the San Acacia Reach requires sufficient base flows to remain connected in its current condition and the river frequently dries in summer months for 30 miles or more (between approximately RM 116 and RM 60).

The Agreement would authorize diversions into the LFCC from short-term, ephemeral monsoonal flows after the river has disconnected below SADD. These flows are unlikely to reach EBR if transported in the river during times of insufficient base flows.

This EA analyzes the No Action Alternative (Alternative A) in which Reclamation does not temporarily transfer O&M to the section of the LFCC below the northern boundary of the BDA and therefore maintains historical operations, and Alternative B in which Reclamation

temporarily transfers O&M and authorizes MRGCD to divert at SADD into the LFCC infrastructure. Alternative B, the Proposed Action, includes four alternate operational scenarios.

Summary of Reasonably Foreseeable Effects

The attached EA evaluates reasonably foreseeable effects of the Proposed Action using available information; where information was incomplete or unavailable as to effects of the LFCC monsoon operations, the EA makes clear where that information is lacking for the agency decision (as per DOI NEPA Handbook 516 DM 1, Section 3.7(a) and (b)). A total of four natural environmental resources (federally listed species, migratory birds, riparian habitat, and water resources) were identified for detailed analysis in the EA. The reasonably foreseeable effects the Proposed Action on these four natural environmental resources are summarized below.

Federally Listed Species (ESA): The Proposed Action will have no effect to the Mexican Wolf (*Canis lupus baileyi*), New Mexico Meadow Jumping Mouse (*Zapus hudsonius luteus*), Northern Aplomado Falcon (*Falco femoralis septentrionalis*), Piping plover (*Charadrius melodus*), Chupadera Springsnail (*Pyrgulopsis chupaderae*), Socorro Springsnail (*P. Neomexicana*), Suckley's cuckoo bumblebee (*Bombus suckleyi*), Socorro Isopod (*Thermosphaeroma thermophilus*), Monarch Butterfly (*Danaus plexippus*), or the Pecos Sunflower (*Helianthus paradoxus*). These species do not have critical habitat within the Proposed Action Area.

The Proposed Action may affect but is not likely to adversely affect the Southwestern Willow Flycatcher (*Empidonax traillii extimus*) and the Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*). Reclamation has conducted surveys for Southwestern Willow Flycatchers along the Middle Rio Grande (MRG) since 1995 (Reclamation 2013a; Reclamation 2024a). Reclamation has conducted surveys for the Western Yellow-billed Cuckoo along the MRG since 2006 (Reclamation 2013b; Reclamation 2024b). Both species have been documented in the Proposed Action Area.

The Proposed Action may affect and is likely to adversely affect the Rio Grande Silvery Minnow (*Hybognathus amarus*). However, the Proposed Action would only be initiated after the Service has attempted rescue and relocation of Rio Grande Silvery Minnows from the Proposed Action Area and the San Acacia Reach has become disconnected from the EBR. The Service determined in consultation with MRGCD that the Monsoon Operations may be considered Adaptive Management under the 2016 BiOp for any take of the Rio Grande Silvery Minnow caused by Monsoon Operations.

Migratory Birds (MBTA): The Proposed Action will occur during the migratory bird breeding season. There could potentially be incidental take of migratory birds during dredging operations. MRGCD and NMISC consulted with the Service regarding potential impacts to migratory birds. To reduce the potential to impact migratory birds, MRGCD will conduct migratory bird surveys prior to areas where dredging is required to maintain LFCC infrastructure and will prepare a report regarding incidental takes following the Proposed Action has been completed.

Riparian Habitat: Riparian vegetation can facilitate suitable habitat for several of the federally listed species and responds to altered flow patterns and floodplain connectivity (Reclamation 2022). Monitoring tools, such as gate records, photographic documentation, and telemetry will be used by MRGCD during the 2026 Monsoon Operations to assess activities under the Proposed Action that are associated with ecological responses (*Adaptive Management Plan LFCC Monsoon Operations 2026*; Appendix A). Monsoon Operations analyzed in the Proposed Action are not expected to have a measurable effect on riparian habitat.

Water Resources: If needed, dredging accumulated sediment within the LFCC to protect infrastructure would be conducted by MRGCD during the Monsoon Operations. This may adversely impact water quality temporarily and within a small area during dredging operations. However, impacts to the water in the LFCC are expected to be short term and will cease after dredging is completed.

Historic and/or Cultural Resources: No cultural sites are found in the Proposed Action Area and therefore, no effects to Cultural Resources are expected under the Proposed Action. The LFCC is a historic property under Criterion A and C per the National Historic Preservation Act, 54 U.S.C. §§ 300101 et seq. Any maintenance performed within the LFCC would restore the facility back to its original condition.

Indian Trust Assets: There are no Indian Trust Assets in the Proposed Action Area or the vicinity and no effects to Indian assets are expected under the Proposed Action.

Environmental Commitments

Environmental commitments would be implemented during the Monsoon Operations as described in this EA. Environmental commitments include minimizing potential impacts to federally listed species, migratory birds, riparian habitat, and water quality within the Proposed Action Area. Environmental commitments follow the 2016 BiOp (Service 2016a), requests from the Service after they reviewed the 2026 Adaptive Management Plan LFCC Monsoon Operations (The Plan - MRGCD and NMISC 2026a; Appendix A; and the *Reclamation and MRGCD O&M 2026* (Reclamation and MRGCD 2026; Contract No 26-WC-40-1050).

Environmental Commitments include utilizing the following Best Management Practices (BMPs):

- BMPs will be implemented to avoid erosion, detrimental sediment accumulation, or structural damage; and improve operational understanding of diversion thresholds and system response to diversions at SADD (2026 Adaptive Management Plan LFCC Monsoon Operations). Avian surveys for migratory nesting birds during the season will be conducted by a qualified biologist prior to dredging activities.
- Cleaning of equipment will be required in order to prevent inadvertent discharges of oil, gasoline, or other substances into the LFCC or surrounding area.

- Cleaning equipment will be used to prevent the introduction of noxious weeds if dredging is required to ensure that diversions from SADD into the LFCC do not cause flows in the LFCC to exceed safe hydraulic and structural limits.
- For this Proposed Action the Service requires the following (2026 Adaptive Management Plan LFCC Monsoon Operations Appendix A):
 - **Impacts to bird habitat and any associated level of take:**
Will be documented including how monsoon-driven diversions into the LFCC influenced riparian and avian habitat conditions, observed effects related to channel drying, rewetting frequency, or altered flow patterns. Given the ecological pathways described in the Plan—including riparian vegetation response and hydrologic variability—an assessment of any take resulting from these operations will be important.
 - **Coordination with Reclamation:**
MRGCD will continue coordinating with Reclamation to incorporate Reclamation’s habitat monitoring results for the San Acacia Reach, including nest success metrics and habitat-use observations that may inform effects analyses.
 - **Frequency and success of operational implementation:**
Please summarize how often monsoon diversion operations were initiated under each scenario (1–4), the hydrologic conditions leading to those decisions, and an evaluation of their success. This includes:
 - How frequently diversions occurred at SADD;
 - Whether diverted flows were successfully conveyed to RM 60;
 - Any infrastructure-related adjustments (e.g., reductions or cessation of diversions in response to thresholds, sediment accumulation, or structural concerns);
 - Ecological and water management outcomes relative to the Plan’s hypotheses and objectives.

Federal Agency Decision

Reclamation’s decision is to implement the Proposed Action and temporarily transfer O&M to the section of the LFCC below the northern boundary of the BDA to MRGCD from June through October 2026. Reclamation has considered the factors mandated by NEPA; the attached EA represents Reclamation’s good-faith effort to prioritize documentation of the most important considerations required by the statute within the congressionally mandated page limits; this prioritization reflects Reclamation’s expert judgment; and any considerations addressed briefly or left unaddressed in the attached EA are comparatively not of a substantive nature that meaningfully informed the consideration of environmental effects and the resulting decision on how to proceed (see DOI NEPA Handbook 516 DM 1, Section 1.5(e)(4)). Additionally, the resulting EA represents Reclamation’s good-faith effort to fulfill NEPA’s requirements within the congressional timeline; this NEPA effort is substantially complete; in Reclamation’s expert

opinion the attached EA considered the factors mandated by NEPA adequately informs and reasonably explains Reclamation's decision regarding the proposed Federal action (see DOI NEPA Handbook 516 DM 1, Section 1.5(f)(6)).

No public comment period or public meetings occurred for the development of the attached EA. Reclamation consulted with the applicant agencies (MRGCD and NMISC) throughout the preparation of this EA. Neither applicant requested a public comment period or public meetings.

Based on the analysis of reasonably foreseeable effects in the attached EA, Reclamation has determined that implementing the Proposed Action does not constitute a major federal action that will significantly affect the quality of the human or natural environment. Therefore, an environmental impact statement is not required for this Proposed Action. This finding is based on consideration of the degree of effects of the Proposed Action on the potentially affected environment, as analyzed in the EA.

Approved by:

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EA/FONSI Number AAO-EA-26-006

Environmental Assessment for the Temporary Transfer of Operations and Maintenance of a Section of the Low Flow Conveyance Channel from June through October 2026, New Mexico

Upper Colorado Basin Region, Albuquerque Area Office

Prepared for the Bureau of Reclamation by Tetra Tech



At the request of Applicants:

New Mexico Interstate Stream Commission



and Middle Rio Grande Conservancy District



June 2026

Cover Photo: Low Flow Conveyance Channel looking downstream from the bridge located to the south and west of Fort Craig, Socorro County, New Mexico (NMISC)

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Acronyms and Abbreviations

Acronym	Meaning
AM	Adaptive Management
APE	Area of potential effect
BDA	Bosque Del Apache National Wildlife Refuge
BiOp	Biological Opinion
BMP	Best Management Practices
Compact	Rio Grande Compact
CFR	Code of Federal Regulations
CWA	Clean Water Act
DOI	Department of the Interior
DM	Department Manual
EA	Environmental Assessment
EBR	Elephant Butte Reservoir
FONSI	Finding of No Significant Impact
FR	Federal Register
IPAC	Information for Planning and Consultation
ITA	Indian Trust Assets
LFCC	Low Flow Conveyance Channel
Monsoon Operations	Monsoon Operations - includes several operational scenarios for the 2026 monsoon season (June through October) that may improve annual conveyance of water to EBR for the purpose of reducing the Compact debt utilizing existing infrastructure.
MRGCD	Middle Rio Grande Conservancy District

Acronym	Meaning
NMDW	New Mexico Department of Wildlife
NMDGF	New Mexico Department of Game and Fish
NM	New Mexico
NMISC	New Mexico Interstate Stream Commission
NEPA	National Environmental Policy Act
O&M	Operations and Maintenance
PL	Public Law
Reclamation	U.S. Bureau of Reclamation
RIO	River Integrated Operations
RM	River Mile
SADD	San Acacia Diversion Dam
The Plan	Adaptive Management Plan LFCC Monsoon Operations
US	United States
USC	United States Code
Service	U.S. Fish and Wildlife Service
USGS	U.S. Geological Society

Chapter 1.0 Introduction

The U.S. Department of the Interior, Bureau of Reclamation (Reclamation), Albuquerque Area Office, prepared this Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA). At the request of the Middle Rio Grande Conservancy District (MRGCD), Reclamation proposes to temporarily transfer operations and maintenance (O&M) of the section of the Low Flow Conveyance Channel (LFCC) below the northern boundary of the Bosque del Apache National Wildlife Refuge (BDA) from June through October 2026 (Proposed Action). MRGCD requested a temporary transfer of O&M to conduct strategic diversions into the LFCC to understand the efficiency of using the LFCC for conveyance of water to Elephant Butte Reservoir (EBR). The New Mexico Interstate Stream Commission (NMISC) requested that MRGCD pursue this temporary transfer of O&M to analyze whether strategic diversions into the LFCC could improve conveyance to EBR and therefore reduce New Mexico's Rio Grande Compact debt. Reclamation proposes to temporarily transfer O&M through Contract No. 26-WC-40-1050 (the Agreement). The Agreement would authorize MRGCD to strategically divert monsoonal flows, defined as any additional flows available to be diverted at the LFCC between June 15 through October 31, at the San Acacia Diversion Dam (SADD) into the LFCC (Monsoon Operations). Both MRGCD and NMISC are considered applicants for this NEPA process.

The Environmental Assessment for the Temporary Transfer of Operations and Maintenance of a Section of the Low Flow Conveyance Channel from June through October 2026, New Mexico analyzes the potential environmental impacts that could result from the Proposed Action. The Proposed Action will consist of the diversion of water into the LFCC during short-term, monsoonal storm flows at SADD. The Service in consultation with MRGCD has determined that the Proposed Action of temporarily transferring O&M to MRGCD and authorizing MRGCD to address Monsoonal Operations from June to October 2026 are covered through Adaptive Management (AM) under the 2016 Biological Opinion (BiOp) (U.S. Fish and Wildlife Service (Service) 2016a).

1.1 Background, Location, and Action Area

1.1.1 Background

Data utilized for Chapter 1 was taken from the 2026 Adaptive Management Plan LFCC Monsoon Operations (The Plan - MRGCD and NMISC 2026a; Appendix A) and the AM actions associated with the 2016 BiOp (Service 2016a). The following information describes the background and goals of the Proposed Action.

1.1.1.1 History of the Low Flow Conveyance Channel

The LFCC is a large earthen channel constructed by Reclamation on the west side of the Rio Grande in the 1950s as part of the Middle Rio Grande Project's river channelization program to

reduce evaporation and the seepage of water, provide more effective sediment transport, and improve valley drainage (Reclamation 2025). In the Flood Control Acts of 1948 and 1950 “the Middle Rio Grande Project was authorized by Congress to improve and stabilize the economy of the MRG Valley by rehabilitating the MRG Conservancy District facilities and by controlling sedimentation and flooding in the Rio Grande.” Originally the LFCC functioned as both a drain and conveyance channel (MRGCD and NMISC 2026b) and conveyed water from SADD (RM 116) to the outfall at the Rio Grande at RM 54.5 (Reclamation 2012). The LFCC runs from seepage downstream of the headgates at SADD for approximately 55 miles downstream to RM 60 (Figure 1). Initial diversions at SADD took place in the 1960s and 1970s (MRGCD and NMISC 2026b). These construction efforts were part of the Middle Rio Grande Project, which also included massive reconfiguration of much of the river channel itself from Velarde to Elephant Butte (MRGCD and NMISC 2026b).

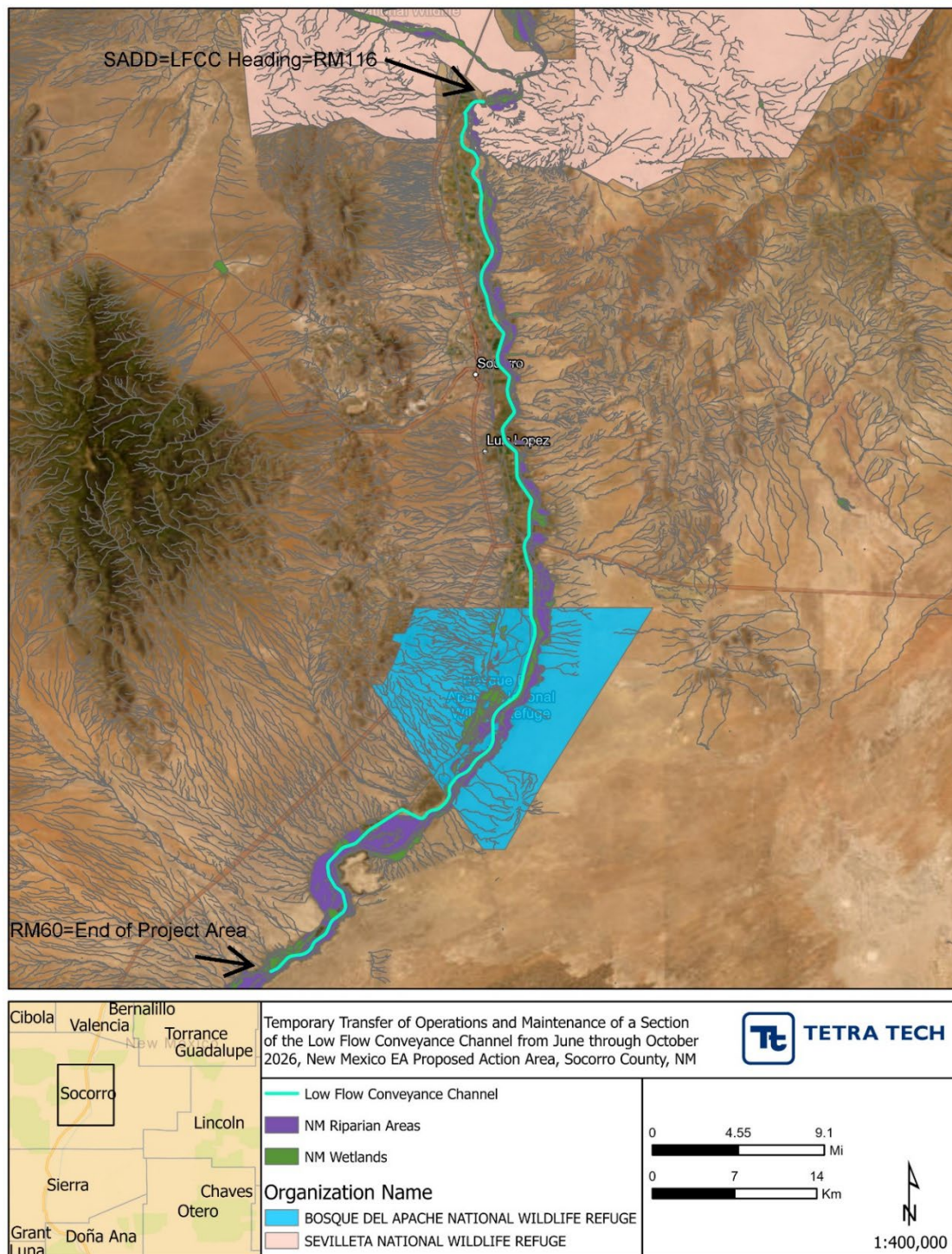


Figure 1. The Proposed Action Area begins near RM 116 at the San Acacia Diversion Dam and extends 61.5 miles south to where the LFCC merges with the main stem of the Rio Grande near RM 54.5.

The historical operation of the LFCC generally consisted of diverting the entire river at SADD and only allowing large spring runoff flows and some monsoonal flows to remain instream (MRGCD and NMISC 2026b). The important backdrop to these river operations and historical use of the LFCC was the status of New Mexico's Rio Grande Compact debt, which had continued to balloon from approximately 60,000 acre-feet in 1943 to almost 550,000 acre-feet in 1956 (MRGCD and NMISC 2026b). MRGCD actively diverted water into the LFCC from the river at SADD between 1959 and 1975, and again between 1983 and 1985 (MRGCD and NMISC 2026b).

By the late 1980s, high sediment concentrations and large flow events resulted in a highly mobile river channel that migrated dramatically across the valley. This channel migration, along with heavy sedimentation at the upper end of the reservoir pool, resulted in significant management challenges (MRGCD and NMISC 2026b).

The rising elevations at EBR filled the outlet works of the LFCC, resulting in approximately 20 miles of the facility becoming inundated. Several miles of the LFCC above EBR's full storage pool were also degraded such that Reclamation ceased LFCC operations (MRGCD and NMISC 2026b). Since 1985, the LFCC has mainly functioned as a drain, capturing agricultural return flows and shallow groundwater from the valley, particularly where the river channel has had significant aggradation (MRGCD and NMISC 2026b).

Endangered species within the San Acacia Reach have created additional river management concerns and play a significant factor in why the LFCC is currently not operated for conveyance of water in the same historical context as referenced above (MRGCD and NMISC 2026b).

In 2021, Reclamation transferred to MRGCD, the title to all lands and facilities that were assigned to Reclamation by MRGCD under the terms of the 1951 Repayment Contract Between United States and the MRGCD for Rehabilitation and Construction of Project Works, and Repayment of Reimbursable Construction Costs Thereof (Contract No 178r-423), as amended, except the LFCC and Drain Unit 7, in the southern end of MRGCD from the southern boundary of the Pueblo of Isleta to the northern boundary of the BDA. Reclamation also transferred O&M and all associated costs, but not title, to the part of the LFCC north of the BDA boundary to MRGCD.

1.1.1.2 Conveyance of Water

When considering how to move water efficiently in an open channel, water managers consider the two major forms of water loss to be evaporation and seepage to groundwater. Evaporation largely depends on the surface area of the water body, while seepage depends on the hydraulic gradient between surface water and the local groundwater (MRGCD and NMISC 2026b).

A more efficient method of conveyance in the San Acacia Reach would translate into opportunities to increase deliveries to EBR over time. MRGCD and NMISC's goal is to deliver enough water to EBR to increase combined storage in Elephant Butte and Caballo to over 400,000 acre-feet of water, while reducing New Mexico's Compact debt in order for the MRG

water managers to regain access to upstream storage of native water, which is the most important tool available for supporting agricultural, environmental, municipal, and interstate water needs (MRGCD and NMISC 2026b).

The LFCC is a deep, narrow channel, which reduces open channel evaporation as compared to a wide river channel. The Rio Grande channel, while variable in the San Acacia Reach, is considerably wider than the LFCC (MRGCD and NMISC 2026b). The LFCC is also the lowest point in the valley in certain areas and in these areas, the LFCC does not lose water to groundwater seepage. The Proposed Action includes four alternate operational scenarios. The MRGCD and NMISC will use five existing gages and five well transects throughout the valley to monitor changes in the surface water flows, changes in the groundwater and surface water interaction, and the localized response of the water table to the 2026 Monsoon Operations (Figure 2). During Monsoon Operations, MRGCD and NMISC will study how these operations impact seepage, bank storage, and groundwater capture. MRGCD staff has estimated that if a modest diversion cap of 500 cubic feet per second (cfs) had been set for the 2022 monsoon season (June through September for this analysis) that approximately 52,000 acre-feet of water could have been diverted at SADD into the LFCC (MRGCD and NMISC 2026b).

1.1.1.3 Reduce Temporary Re-Wetting of the San Acacia Reach

In 2022, the San Acacia Reach experienced five separate drying and re-wetting episodes during the monsoon season. Partial rewetting frequently occurs as well (MRGCD and NMISC 2026b). Depletions resulting from seepage and evaporation are thought to be extreme within the riverbed and riverbanks and repeatedly occur throughout the season (MRGCD and NMISC 2026b; Reclamation 2025).

The monitoring proposed for 2026 has been designed to help determine the extent of conveyance gains from use of the LFCC and help refine Reclamation's knowledge of losses in this stretch of the river and how bank storage contributes to downstream flows in the river channel. The 2026 Monsoon Operations offers the opportunity to capture monsoon events (either in full or in part, depending on arriving flows and other conditions such as the length of time between monsoon events and extent of drying in the reach below SADD), to route water to EBR without having to re-saturate miles of sandy riverbed, and to explore the relative conveyance efficiency of the river and the LFCC (MRGCD and NMISC 2026b). The same data analysis that determined the approximate volume of water that could have been diverted into the LFCC in the 2022 monsoon season, revealed that the number of temporary re-wetting events could have been reduced from 5 to 3, by diverting up to 500 cfs of the monsoon flows as they arrived at SADD (MRGCD and NMISC 2026b).

Reclamation has determined that the LFCC is the low point in the valley upstream of RM 64 that controls groundwater (MRGCD and NMISC 2026b; Reclamation 2025). This means that upstream of RM 64, the facility is functioning as a gaining reach drain (MRGCD and NMISC 2026b). The drain flow of the LFCC may create additional conveyance benefit by allowing the

monsoon water to “ride” drain water downstream, potentially minimizing additional losses due to re-saturation of dry riverbed (MRGCD and NMISC 2026b).

1.1.1.4 Reduce Stranding of Rio Grande Silvery Minnow

The San Acacia Reach historically dries intermittently during the summer months as the spring pulse subsides and upstream irrigation diversions open for the season. Once drying has occurred, there is typically a section of river directly below SADD that continues to flow year-round due to gate leakage or intentional bypass of water provided by Reclamation or other parties. The area directly below SADD becomes a summer refuge for Rio Grande Silvery Minnow (RGSM) and other fish species until the end of irrigation season when river conditions improve and the San Acacia Reach reconnects for the remainder of the fall and winter months. Monsoon events that arrive at SADD will occasionally rewet sub-reaches of the river, moving fish downstream and out of the perennial flows that are often found downstream of SADD or at other outfall locations. (The Plan - MRGCD and NMISC 2026a; Appendix A). This temporary re-wetting is usually short lived, and without sustained rain, the San Acacia Reach quickly disconnects, leaving fish, including the RGSM, stranded in pools where predation increases and the pools eventually dry resulting in increased mortality. (MRGCD and NMISC 2026b).

1.1.2 Monitoring Locations

Monitoring by MRGCD during the Monsoon Operations will include measurement of LFCC flows at five locations including the heading of the LFCC, Neil Cupp Check Structure, San Marcial Conveyance Channel Gage (08358300), and RM 60 Outfall (The Plan - MRGCD and NMISC 2026a; Appendix A (Figure 2)). MRGCD will conduct sediment monitoring at two locations upstream of 9-Mile Outfall, including upstream of the Neil Cupp Check structure, and adjacent to the San Marcial Railroad Bridge (The Plan - MRGCD and NMISC 2026a; Appendix A (Figure 2)). When flows are diverted, they will enter the LFCC where hydraulic characteristics determine transport efficiency, including conveyance losses or gains along the route. Gaged monitoring points will allow managers to quantify these hydrologic responses, compare actual volumes conveyed to expected volumes conveyed, and assess success relative to AM hypotheses. These data will form a central feedback mechanism for MRGCD and NMISC to evaluate Monsoon Operations performance (The Plan - MRGCD and NMISC 2026a; Appendix A).

1.1.3 Action Area

The Proposed Action Area includes all areas to be affected directly or indirectly by the Proposed Action (see 50 C.F.R. § 402.02) and includes the LFCC from RM 116 to RM 60, the river channel and associated riparian zones. The Proposed Action Area is shown in Figure 1.

1.2 Purpose and Need for the Proposed Action

The primary need for the Proposed Action is to enable MRGCD and NMISC to continue to develop tools for flexible water management, to evaluate and measure how diversions at SADD

into the LFCC might improve New Mexico's Compact debt by increasing deliveries to EBR relative to the river channel, and to reduce the duration that New Mexico is unable to store in upstream reservoirs (The Plan - MRGCD and NMISC 2026a; Appendix A).

Without upstream storage, water managers in the basin are limited in their ability to manage the river in a way that supports multiple, and often competing water uses, including for native wildlife. Upstream storage allows water managers to adjust operations, fine-tune releases during low water conditions and capitalize on programs intended to create system conservation and demand management (MRGCD and NMISC 2026b).

The primary goal for the 2026 Monsoon Operations is to explore how best to convey monsoon flows to EBR after the river has disconnected in the San Acacia Reach (MRGCD and NMISC 2026b). MRGCD's goal is to determine if limited use of the LFCC to capture and route portions of monsoon events can assist with improving water conveyance to EBR for Compact deliveries (MRGCD and NMISC 2026b).

1.2.1 Conceptual Model

The 2026 Monsoon Operations are designed to understand how monsoon-driven hydrology, operational decisions, ecological resources, and infrastructure thresholds interact within the LFCC system (Adaptive Management Plan LFCC Monsoon Operations 2026; Appendix A). Monsoonal storm events can generate rapid runoff and create short-duration, highly variable flow pulses in the Rio Grande (Adaptive Management Plan LFCC Monsoon Operations 2026; Appendix A). These pulses travel downstream to the SADD, where stormwater can be diverted into the LFCC (Adaptive Management Plan LFCC Monsoon Operations 2026; Appendix A). Decisions to divert will depend on several considerations:

- Expected conveyance or delivery efficiency below SADD (e.g., whether the channel has already disconnected or whether the river is continuous/connected);
- Ecological conditions below SADD (e.g., length and duration of river drying);
- Infrastructure safety thresholds (e.g., management of diversions to mitigate potential risk to the LFCC or other critical infrastructure that could be impacted by flows above 500 cfs in the LFCC); and
- Operational constraints – specific operational decisions and adjustments to the operations, including diversion rates and timing throughout the monsoon season will be conducted in coordination with Service.

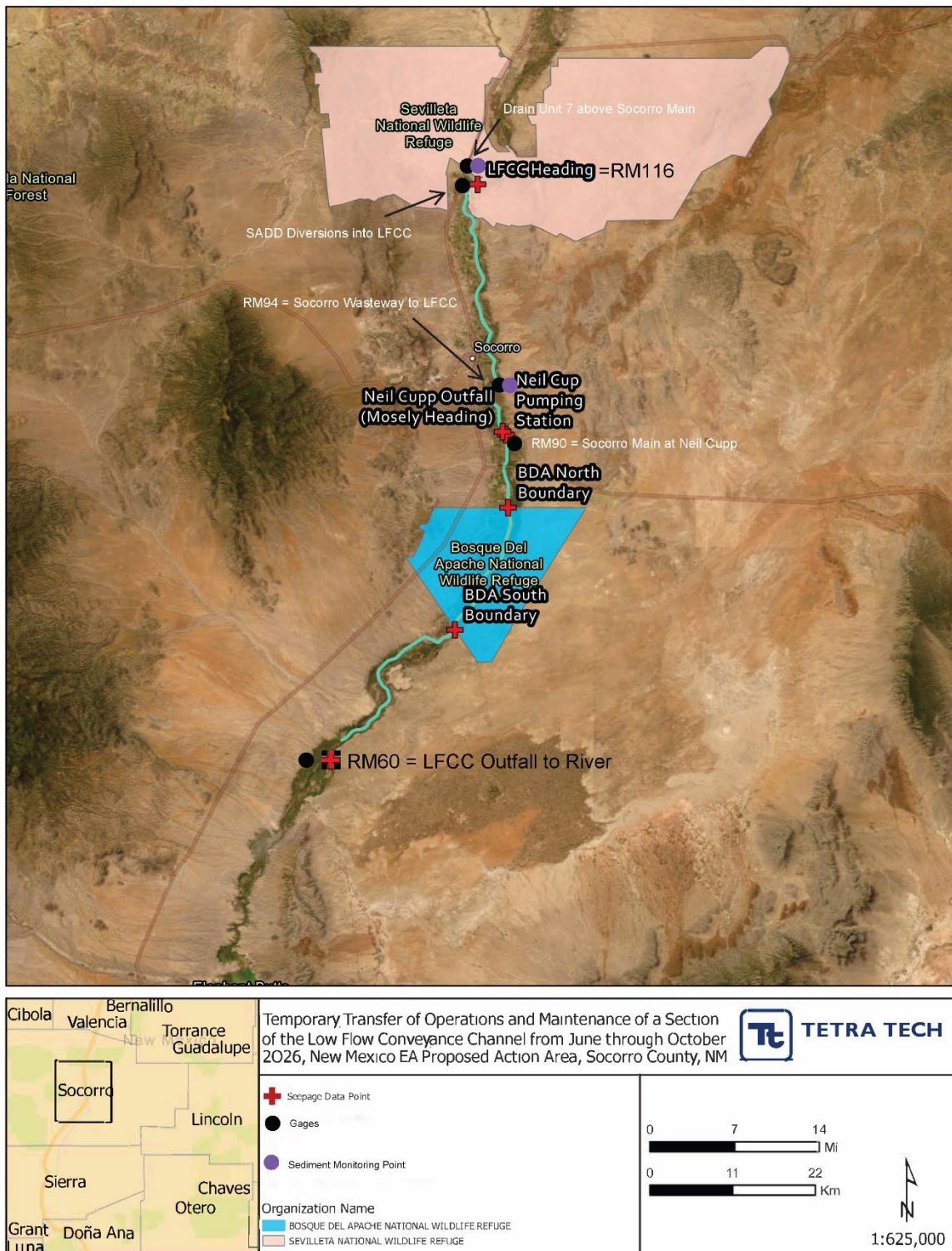


Figure 2. Existing gages along the LFCC in the Proposed Action Area that will be Measurement/Monitoring Locations to collect data for the 2026 Monsoon Operations.

1.3 Decision to Be Made

Reclamation will determine whether to implement the Proposed Action to temporarily transfer O&M authority for the LFCC to MRGCD and thereby enable MRGCD and NMISC to conduct monitoring, analysis, and Adaptive Management of LFCC Monsoon Operations during 2026. Reclamation will decide whether to enter into an O&M Agreement with MRGCD, will review and approve the applicant-driven NEPA document, and the MRGCD will coordinate with the Service and implement the Monsoon Operations under Adaptive Management. Reclamation is the lead federal agency for NEPA compliance; MRGCD and NMISC are applicants for NEPA compliance.

Should a determination be made that the Monsoon Operations would not result in significant environmental impacts, a FONSI would be prepared to document that determination and provide a rationale for approving testing scenarios described in the Proposed Action-Alternative B.

If significant effects are identified, Reclamation would decide whether to approve the Proposed Action with additional mitigation measures (mitigated FONSI) or further evaluate the project through an Environmental Impact Statement.

1.4 Authorities

Reclamation, NMISC, and MRGCD in coordination with Service are seeking creative solutions to water management challenges, and are following the Service's 2016 BiOp (Service 2016a) for this project, which states the following under Conservation Measures:

“As part of their Proposed Action, Reclamation is implementing River Integrated Operations (RIO), which is an approach for river operations using adaptive management principles that address species and water management needs. Adaptive management is supported by Department of Interior Policy (Williams et al. 2009). Development of a defined adaptive management process for the MRG Project, integrated with ongoing decision-making efforts, will help to improve our collective understanding of how to achieve sustainable management of the MRG. The RIO is an overarching adaptive management process that would take into account the four focus areas for the RGSM: 1) strategies for stabilizing and eventually recovering the RGSM (The Plan - MRGCD and NMISC 2026a; Appendix A); 2) river connectivity; 3) habitat restoration; and 4) conservation storage” (Service 2016a).

1.5 Relationship to Statutes and Regulations

The following major laws, Executive Orders, and Secretarial Orders apply to the proposed action and compliance with their requirements is documented in this EA:

- Antiquities Act of 1906, as amended (PL 52-209; 16 U.S.C. 431-433)

- American Indian Religious Freedom Act of 1978 (PL 95-431; 92 Stat. 469; 42 U.S.C. 1996)
- Archaeological Resources Protection Act of 1979 (PL 96-95; 93 Stat. 721; 16 U.S.C. §§ 470aa et seq.), as amended (PL 100-555; PL 100-588)
- Clean Air Act, as amended (42 U.S.C. §§ 7401 et seq. Section 112),
- Clean Water Act, as amended (PL 107-303; 33 U.S.C. §§ 1251 et seq.)
- Endangered Species Act of 1973, as amended (PL 93-205; 16 U.S.C. §§ 1531 et seq.)
- Migratory Bird Treaty Act of 1918, as amended (16 U.S.C. §§ 703-712; 50 C.F.R. § 21)
- Native American Graves Protection and Repatriation Act of 1990 (PL 101-601; 104 Stat. 3048; 25 U.S.C. § 3001; 43 C.F.R. § 10)
- Section 106 of the National Historic Preservation Act of 1966 (PL 89-665; 80 Stat. 915; 16 U.S.C. §§ 470 et seq.), as amended (implemented under regulations of the Advisory Council on Historic Preservation, 36 C.F.R. §§ 800)

1.6 Scoping and Issues

No formal public scoping was conducted and is not required. The development of alternatives was conducted with the action agency (Reclamation) and the applicants (NMISC and MRGCD) in coordination with the Service. Within-season data and hydrologic conditions will drive specific operational decisions, adjustments to operations, including diversion rates and timing of diversions, and will be repeated throughout the monsoon season in coordination with the Service.

The Service has determined that the action of direct diversion of monsoon events into the LFCC at SADD is covered through AM actions under the 2016 BiOp (Service 2016a, D. Hill pers. comm. 2026). The key concerns/issues identified during the internal agency scoping process are listed in Table 1. Resources analyzed in this EA are discussed in detail in Chapter 3.0. The specific AM components proposed to be implemented are described in Table 3.

Table 1. Issues Identified for Detailed Analysis

Issue Number	Issue Description	Impact Indicator
Issue 1 Federally listed species and critical habitat	Potential impacts to federally listed species: • Southwestern Willow Flycatcher (<i>Empidonax traillii extimus</i>) and Yellow-billed Cuckoo (<i>Coccyzus americanus occidentalis</i>) critical habitat is present in the Proposed Action Area. • Rio Grande Silvery Minnow critical habitat is present in the Proposed Action Area.	• Assess how the related channel drying, rewetting frequency and altered flow patterns affect these species under Alternative B; described in Table 3), as compared to the average 10-year maximum duration of channel drying of 91 days. • Document how monsoon-driven diversions into the LFCC influences riparian and avian habitat conditions.
Issue 2 Riparian Habitat	Potential impacts to riparian habitat within the Proposed Action Area	• Assess how the related channel drying, rewetting frequency and altered flow patterns affect these species under Alternative B; described in Table 3), as compared to the average 10-year average maximum duration of channel drying of 91 days.
Issue 3 Water Resources	Potential impacts to water resources within the Proposed Action Area during diversions of water from SADD into the LFCC	• Assess impacts related to channel drying, rewetting frequency, or altered flow patterns per each scenario tested under Alternative B. • Document whether diverted flows were successfully conveyed to RM 60. • Document frequency of diversions that occurred at SADD. • Assess impacts to water quality.

Issue Number	Issue Description	Impact Indicator
Issue 4 Cultural/Historic Resources	Potential impacts to integrity of cultural sites, or sacred places within the Proposed Action Area	Determine whether there are cultural sites or sacred places in the general area.
Issue 5 Indian Trusts	Potential impacts on Indian Trust Assets.	Determine whether there are Indian Trust Assets and consider how to address potential impacts.

Resource issues listed in Table 2 were identified as not applicable to the project and are not analyzed any further in this EA.

Table 2. Resources Considered But Eliminated from Further Review

Resource	Rationale for Elimination from Further Analysis
Air Quality and Noise	No reasonably foreseeable effects to air quality are expected to occur under Alternative B. The Proposed Action Area is in a remote area and no impacts due to noise are anticipated.
Bald and Golden Eagles	Monsoon Season activities will occur in the summer of 2026. Bald eagles inhabit areas along the Rio Grande from October 15 through July 31 and golden eagles have been documented in the surrounding area. However, the eagles are known to utilize large trees for nesting, perching, and nesting sites. The LFCC is a maintained, dredged channel and does not contain these features. The Rio Grande is east of this Proposed Action Area and eagles are expected to continue to use these areas along the river where suitable habitat for these species is present. No impacts to eagles are expected to occur due to the Proposed Action.
Land Use	There would be no changes to the land use due to the Proposed Action.
Transportation	There would be no changes to transportation. The Proposed Project Area is remote, and there will be no impacts to transportation due to the Proposed Action.

Chapter 2.0 Background and Descriptions of the Proposed Actions

The alternatives presented in this chapter were developed to the extent required by NEPA §102(C)(iii), 42 U.S.C §4332(C)(iii) based on the purpose and need for the Proposed Action and the issues raised during internal agency scoping, as described in Chapter 1. The alternatives analyzed in this document include: the No Action (Alternative A) and the Proposed Action (Alternative B) under which Reclamation would temporarily transfer O&M of a section of the LFCC and authorize Monsoon Operations. These operations will be monitored to determine surface water flows, seepage impacts, bank storage, and risks to infrastructure. The No Action Alternative is evaluated because it provides an appropriate basis by which the Proposed Action impacts are compared.

The objectives and key management questions for this Proposed Action are described in The Plan (MRGCD and NMISC 2026a; Appendix A) and include information compiled in Section 2.1 through Section 2.5:

2.1 The Proposed Action Objectives

2.1.1 The Water Measurement Objective

The Water Measurement Objective is included to improve the accuracy, consistency, and defensibility of flow measurement, tracking, and accounting for water diverted into and conveyed through the LFCC. This includes evaluating and refining methods for measuring diversion rates, in-channel flows, return flows, and conveyance to RM 60 and EBR. The objective further includes developing a clearer understanding of system mass balance relationships, including distinguishing between diverted monsoon flows, existing LFCC drain flows, and return flows to the river system. This objective supports the development of best practices for gaging, telemetry, and data integration and is essential for the other Plan objectives, as related to evaluating conveyance efficiency and potential ecological impacts, supporting Compact management and deliveries, monitoring for infrastructure risks, and ensuring transparency and interagency confidence in the operation. These efforts are consistent with the 2016 BiOp's emphasis on improving the understanding of system operations through monitoring and AM (Reclamation 2016a).

Key Management Question #1: What measurements should be made, including where and how often, in order to understand flows in the LFCC due to diversions relative to flows in the river channel?

Hypothesis #1: Monitoring of gages during the 2026 Monsoon Operations is adequate for measuring flows in the LFCC between SADD and RM 60, and for determining gains and losses relative to the river.

Evaluation using LFCC Gages: The following existing gages will be used to collect data continuously and available via telemetry (Figure 2):

- **SADD diversions into LFCC** – to confirm volume of direct diversions made at SADD
- **Drain Unit 7 above Socorro Main** – to measure water volume arriving into the San Acacia reach via irrigation return flows from the Isleta Reach
- **Socorro Wasteway to LFCC (RM 94)** – to measure tail water that is being routed through MRGCD’s irrigation facilities for farmers or for sustained Compact deliveries. Return flows at Socorro Wasteway may contribute to total volume being delivered to RM 60 as part of the monsoon operation
- **Socorro Main at Neil Cupp (RM 90)** – to measure water that has been directly diverted into the LFCC plus any irrigation return flows that have been discharged into the LFCC in the Socorro Division. The Neil Cupp gage will provide the combined flow from the direct diversion and the Socorro Wasteway into the LFCC
- **LFCC Outfall to River (RM 60)** – to measure water volume delivered to the river at RM 60 from the LFCC. Pumping data from the Neil Cupp can be pulled as needed to supplement data at this location

Additionally, two staff gages have been installed in the LFCC at the north and south boundaries of BDA, to assist in better understanding gains and losses in this stretch of the LFCC. Data collection will occur in response to active diversions into the LFCC by MRGCD staff and will be hand recorded.

Evaluation using River Gages:

Several gages are available to evaluate flows in the river throughout the season, with data being collected continuously and available via telemetry. The following gages are of particular importance to the 2026 Operations (Figure 2):

- **San Acacia Spillway** – this gage measures flow over SADD and provides managers with an “inflow” into the San Acacia Reach of the river.
- **HWY 380** – This gage is located near San Antonio, NM and is a good indicator of channel conditions in the middle of the San Acacia Reach.
- **San Marcial** – This gage provides water managers with a good measurement of flow near the bottom of the San Marcial Reach and will provide critical data to support channel drying or reconnection as a result of monsoon flows that are not diverted in the LFCC.

Evaluation using Seepage Data:

Seepage data were collected in February 2026 by USGS at five locations along the LFCC and the river. Seepage data collection at these same locations will be repeated by the USGS at one time during 2026 operations (Figure 2). The five locations include:

- Below SADD
- At or near Neil Cupp Pump Station

- At the northern boundary of BDA
- At the southern end of BDA
- Near the RM 60 gate

Seepage data collection has occurred for several years along the LFCC between SADD and RM 60. In 2018, a seepage run and report of ten locations were completed by NMISC and WEST Inc. In February, July, and September of 2025, seepage runs in the LFCC were collected by New Mexico Tech under Dr. Cadol's supervision at up to 23 nested piezometer locations along the LFCC (The Plan - MRGCD and NMISC 2026a; Figure 3; Appendix A). Preliminary data are available for the 2025 seepage runs and additional data can be collected in 2026, if needed.

2.1.2 The Water Management for Compact Deliveries Objective

The Water Management for Compact Deliveries Objective is included to evaluate how diversions of monsoon events into the LFCC can be monitored between SADD and the outfall at RM 60 and whether those diversions increase net deliveries to EBR, improve conveyance efficiency relative to river routing, and inform strategies to manage or reduce Rio Grande Compact debt. This objective is consistent with the 2016 BiOp emphasis on conservation storage and system operations that support both water management and species requirements (Service 2016a).

Key Management Question #2: Does diverting monsoon flows into the LFCC improve delivery efficiency relative to flows left in the river?

Hypothesis #2: Diverting 200 cfs at SADD into the LFCC during monsoon events and after the river has disconnected increases conveyance efficiency relative to leaving flows in the river.

Evaluation: Using the monitoring data described in this report, the LFCC and river channel gains/losses can be identified throughout the season, including after monsoon events, and can be used to evaluate how much of the diversions at SADD are conveyed to RM 60.

The monitoring described in this section will be used to measure deliveries at RM 60 from water diverted at SADD for comparison to estimates of flows expected in the river channel at RM 60 after the river has disconnected had that amount remained in the channel and not been diverted.

2.1.3 The Ecological Objectives

The Ecological Objectives are included to address reducing the frequency and extent of episodic river re-wetting and drying cycles, minimize stranding risk for RGSM, and to avoid adverse impacts to riparian and avian habitat, particularly during extended drying conditions. These actions support the 2016 BiOp priorities related to river connectivity, habitat conditions, and species protection (Service 2016a).

Key Management Question #3.1: What are the effects of monsoonal diversion operations on RGSM relative to the 10-year average maximum duration of channel drying below SADD?

Hypothesis #3.1: Diverting up to 200 cfs of monsoonal flows when the river below SADD has already disconnected and river drying duration has not exceeded the average annual maximum duration of 91 days will have no measurable effect on RGSM population because the operations do not increase duration of drying below SADD relative to the average annual maximum duration.

Evaluation 3.1: Using 2026 diversion data and river drying data, a desktop review will be conducted to identify drying/rewetting cycles, as compared to river channel drying in prior 10 years. This will help determine if the 2026 operations created durations of drying that exceed the average annual maximum duration of drying in the previous 10 years.

Key Management Question 3.2: What are the impacts of monsoonal diversion operations on riparian vegetation relative to the 10-year average maximum duration of channel drying below SADD?

Hypothesis #3.2: Diverting up to 200 cfs of monsoonal flows when the river below SADD has already disconnected and river drying duration has not exceeded the average annual maximum duration of 91 days will have no measurable effect on vegetation because the operations do not increase duration of drying below SADD relative to the average annual maximum duration.

Evaluation 3.2: Using 2026 diversion data and river channel drying data, perform a desktop review of drying/rewetting cycles as compared to river channel drying in prior 10 years to determine if the 2026 operations created durations of drying that exceed the average annual maximum duration of drying in the previous 10 years.

2.1.4 Infrastructure and Operational Objectives

Infrastructure and Operational Objectives are included to ensure that diversions from SADD into the LFCC do not cause flows in the LFCC to exceed safe hydraulic and structural limits (primarily 500 cfs at the Fort Craig bridge near San Marcial, NM) (Figure 2), to avoid erosion, detrimental sediment accumulation, or structural damage; and to improve operational understanding of diversion thresholds and system responses to diversions at SADD.

Key Management Question #4: What are the effects of monsoonal diversion operations on LFCC and related infrastructure?

Hypothesis #4: Diverting up to 200 cfs of monsoonal flows at SADD into the LFCC will not exceed safe operation limits at the Fort Craig bridge, there will be no erosion, detrimental accumulation of sediment, or other structural damage due to the operations.

Evaluation: The evaluation of infrastructure impacts will be detailed in the Agreement between Reclamation and MRGCD (Reclamation and MRGCD 2026), a necessary requirement of receiving approval from Reclamation for conducting Monsoon Operations. A fully signed O&M agreement will be provided to the Service, upon request.

2.1.4.1 Modifications to LFCC Structures

The maximum diversion of 200 cfs proposed monsoonal flows in the Monsoon Operations is within the original engineered capacity of the LFCC as well as the five gates at SADD, which would be used to divert water into the LFCC. MRGCD will ensure that these gates are functional as part of the basic O&M of the facility (Reclamation and MRGCD 2026) and will explore options to automate and add telemetry to the heading. MRGCD will perform routine inspections of bridges and other infrastructure to ensure that the LFCC can still safely pass the diverted flows, especially during localized rain events. Therefore, no modifications to the LFCC are contemplated as part of this operation.

2.2 Adaptive Management Process and Decision-Making

The AM for the Proposed Action will follow a structured cycle consistent with DOI guidance and the 2016 BiOp, which identifies AM as a key component of River Integrated Operations (Service 2016a). MRGCD and partner agencies will first assess hydrologic conditions, forecasted monsoon activity, and river connectivity, while confirming completion of RGSM rescue activities in coordination with the Service (MRGCD and NMISC 2026b).

2.3 Alternatives

A summary of SADD Operations, proposed during the LFCC Monsoon Operation is provided in Table 3. The Proposed Action Alternative is described in The Plan (MRGCD and NMISC 2026a) and is included in Appendix A. This EA analyzes the No Action Alternative (Alternative A) in which Reclamation does not temporarily transfer O&M to the section of the LFCC below the northern boundary of the BDA and therefore maintains historical operations, and Alternative B in which Reclamation temporarily transfers O&M and authorizes MRGCD to divert at SADD into the LFCC infrastructure. Alternative B is the Proposed Action and includes four alternate operational scenarios described in Table 3.

2.3.1 Alternative A – No Action Alternative – Reclamation does not temporarily transfer O&M to the section of the LFCC below the northern boundary of the BDA and therefore maintains historical operations. The No Action Alternative sets a useful baseline against which the effects of the Proposed Action may be measured and consists of a continuation of the reasonably foreseeable environmental trends and planned actions as they would occur should Reclamation not implement the Proposed Action (The Plan - MRGCD and NMISC 2026a; Appendix A).

2.3.2 Alternative B – Proposed Action

Under the Proposed Action, Reclamation temporarily transfers O&M and authorizes MRGCD to divert at SADD into the LFCC. Monsoon Operations will start in the summer of 2026, pending review and approval by Reclamation of this EA, concurrence by Service that the Monsoon

Operations are covered by the 2016 BiOp for any adverse effects on ESA listed species (Service 2016a), and execution of the Agreement (Reclamation and MRGCD 2026, Contract No. 26-WC-40-1050). MRGCD proposes this effort as supporting the 2016 BiOp River Integrated Operations (RIO) and applies AM principles to balance water management objectives with Endangered Species Act compliance (Service 2016a).

The AM Plan is implemented as a deliberate, science-based process that integrates monitoring, evaluation, and adjustment of operations to reduce uncertainty and improve outcomes over time and is supported by Department of the Interior (DOI) policy (Williams et al. 2009, as cited in Service 2016a) and aligns with DOI's AM Implementation Policy (522 DM 1) and DOI's AM Technical Guide (Williams et al. 2009). The need for flexible operations that are adaptive to the new hydrologic reality that addresses the looming Compact crisis are urgent and necessary. The following includes additional context that frames the need for the Monsoon Operations:

- MRGCD and NMISC have invested over \$10 million in the past several years on improvements to existing water management infrastructure, including completion of deferred maintenance of the LFCC, which will allow for more efficient and responsible use of the LFCC.
- Compact debt, hydrologic conditions, and river channel and infrastructure capacity combine to increase the challenge of delivering water to EBR. New Mexico's Compact debt continues to increase each year.
- Two of the warmest and driest years on record occurred in 2024 and 2025. This severely limited water availability of the Rio Grande. River drying occurred as far north as Albuquerque in the last two years.

The projections for 2026 include a continued poor hydrologic outlook, with record low snowpack and record high temperatures.

MRGCD will prepare an infrastructure monitoring plan for the Monsoon Operation in coordination with Reclamation to ensure sediment is not accumulated unnecessarily within the LFCC, that crossings are sound and stable, and that flows in the LFCC remain within the operational limits of the LFCC. Success of this operation will require continued monitoring of the LFCC by the MRGCD with support from NMISC (The Plan - MRGCD and NMISC 2026a; Appendix A). MRGCD may have to conduct emergency dredging of accumulated sediment within the LFCC in small areas to protect infrastructure, if needed during the Monsoon Operations. These actions are described under Reclamations' annual monitoring (as described in the 2016 BiOp (Service2016a), as well as the Agreement (Reclamation and MRGCD 2026).

Data collection in 2026 is designed to help evaluate how diversions of monsoon events into the LFCC can be monitored between SADD and the outfall at RM 60 and whether those diversions increase net deliveries to EBR, improve conveyance efficiency relative to river routing, and inform strategies to manage or reduce Rio Grande Compact debt (The Plan - MRGCD and NMISC 2026a; Appendix A).

Table 3. Summary of Alternative A and The Proposed Action, Alternative B, for the 2026 LFCC Monsoon Operations

Upstream Condition	Downstream Condition	Diversion Decision	Bypass Decision
ALTERNATIVE A: No Action Alternative = Reclamation does not temporarily transfer O&M to the section of the LFCC below the northern boundary of the BDA and therefore maintains historical operations			
Monsoon Flows arriving at SADD	River channel is dry and disconnected below SADD except for the channel that is supported by supplemental water. Fish rescue operations completed.	Divert flows to meet irrigation demand via Socorro Main Canal at SADD	Bypass over SADD supplemental water, and any other monsoon flow not diverted for irrigation.
ALTERNATIVE B: Proposed Action = Reclamation temporarily transfers O&M and authorizes MRGCD to divert at SADD into the LFCC infrastructure. Under Alternative B The Proposed Action includes four alternate operational scenarios: 1). Flashy, localized, short duration rain event, not expected to reconnect the river; 2). Widespread, sustained northern storms expected to reconnect the river; 3). Localized monsoon, limited river connectivity; and 4). Localized monsoon and river is reconnected. These scenarios are described below.			
Scenario 1). Flashy, localized, short duration rain event, not expected to reconnect the river			
Flows arriving at SADD are more than 50 cfs and less than 600 cfs. This type of event is unlikely to reconnect the riverbed from SADD all the way to Elephant Butte.	River channel is dry and disconnected below SADD except for the channel that is supported by supplemental water. Fish rescue operations completed.	Begin and maintain LFCC diversions up to 200 cfs.	Bypass over SADD supplemental water, and any other monsoon flow not diverted for irrigation.
Scenario 2). Widespread, sustained northern storms expected to reconnect the river			
Flows arriving at SADD are expected to be greater than 600 cfs and less than 2,200 cfs and are expected to be sustained for more than 72 hours based on	River channel will be reconnected to EBR and is expected to remain connected based on upstream	LFCC diversions would stop if diversions occur under 2 or 3 below and would not resume until the river becomes disconnected and operations will return to	Bypass all arriving flows over SADD, except for irrigation supply to the Socorro main.

Upstream Condition	Downstream Condition	Diversion Decision	Bypass Decision
upstream gages and operational knowledge (i.e., sustained, widespread northern storms).	conditions for over 24 hours.	Alternative A conditions.	Supplemental water will be suspended until flows Alternative A conditions.
Scenario 3). Localized monsoon, limited river connectivity			
Flows arriving at SADD are expected to be greater than 600 cfs and less than 2,200 cfs and are expected to last for less than 24 hours (i.e., flashy, localized monsoon event)	The river channel might be fully reconnected to EBR but is not expected to remain connected for over 24 hours based on upstream conditions.	LFCC diversions would begin or continue up to 200 cfs, minus MRGCD irrigation demand at SADD.	Bypass arriving flows in excess of any LFCC diversions and irrigation diversions. Supplemental flows would be suspended until operations return to Alternative A conditions.
Scenario 4). Localized monsoon and river is reconnected			
Flows arriving at SADD are expected to be greater than 2,200 cfs and are expected to be sustained for more than 24 hours.	The river is expected to be fully reconnected to EBR.	Flows above 2,200 could result in considerable overbanking and high depletions. Diverting to LFCC may result in more water being delivered to EBR.	All flows in excess of MRGCD irrigation and LFCC diversions to bypass SADD. Supplemental water will be suspended until operations return to Alternative A conditions.

Any increase in the direct diversions into the LFCC above 200 cfs will require discussion and approval from Reclamation (The Plan - MRGCD and NMISC 2026a; Appendix A).

Questions related to the efficiency of routing water through both the river channel and the LFCC remain and will be investigated through the Monsoon Operations (The Plan - MRGCD and NMISC 2026a; Appendix A). This will be tested by diverting different rates of flow from monsoon events and comparing those deliveries to RM 60 via the LFCC versus the river channel. One goal of the Monsoon Operations is to understand the ideal magnitude and duration of monsoon events that should be considered for diversion, and what rate of diversion should be used to optimize conveyance of that event downstream. This will require leaving some monsoon events un-diverted throughout the course of the operation, to establish baseline rates of river channel conveyance (The Plan - MRGCD and NMISC 2026a, MRCGD and NMISC 2026b).

2.4 Proposed Monitoring

MRGCD and NMISC will monitor the following throughout the Monsoon Operations: hydrologic, groundwater, and infrastructure observations, as described in this section. Diversions will not begin until the Service confirms that fish rescue activities are complete below SADD.

Data will be evaluated against the Management Objectives and Hypotheses driving the 2026 operations (The Plan - MRGCD and NMISC 2026a; Appendix A). Within-season data and hydrology will drive specific operational decisions and adjustments to operations, including diversion rates and timing and will be repeated throughout the monsoon season in coordination with Service. AM decisions will be guided by defined thresholds, summarized in Table 3.

AM will be implemented through coordination among MRGCD, NMISC, Reclamation, the Service, and associated monitoring of the LFCC, the river channel, and groundwater, will be used to evaluate the hydrologic changes from the diversion operations. The timing and frequency of monitoring is described in more detail below and a monitoring plan will be developed in coordination with Reclamation and the Service prior to beginning the Monsoon Operation. Project related monitoring is designed to directly inform adaptive decision-making and reduce uncertainty, consistent with the 2016 BiOp's emphasis on integrating monitoring with operational decision making under RIO (Service 2016a). The monitoring summarized below will support the adaptive decision-making and hypothesis testing and include ground water monitoring, surface water monitoring, and infrastructure monitoring.

Groundwater Monitoring – The LFCC and the river will be monitored to evaluate seepage losses, bank storage and groundwater responses to the Monsoon Operations (The Plan - MRGCD and NMISC 2026a; Appendix A).

Surface water Monitoring – Diversion rates at SADD, flows within the LFCC at key locations including the Neil Cupp Check Structure and RM 60 outfall, and flows in the river channel below SADD (Figure 2) will be monitored.

Infrastructure Monitoring – Following the diversion and delivery of a monsoon event, MRGCD will inspect the LFCC for any signs of bank erosion, sediment deposition, and structural instability. Sediment accumulation exceeding operational thresholds will be addressed through maintenance actions in accordance with the Agreement between MRGCD and Reclamation (Reclamation and MRCGD 2026).

Hydrologic and Ecological Indicators Monitoring – This will include tracking channel drying duration, frequency of rewetting events, and coordination with River Eyes and agency observations.

Water Measurement and Accounting – This will be a central component of all monitoring. MRGCD will conduct mass balance evaluations using measurements at SADD, intermediate LFCC locations as described in The Plan (MRGCD and NMISC 2026a; Appendix A), and at RM 60, to approximate flow losses, gains, and delivery efficiency. Data will be used to distinguish

between diverted flows, existing drain contributions, and return flows, and to improve accounting methodologies.

The AM activities for Monsoon Operations will be used to evaluate the ultimate goals of operating the LFCC and diversions into the LFCC from SADD in such a way that flows to RM 60 and to EBR increase without (a) negatively impacting infrastructure (including the LFCC and bridges crossing the LFCC); (b) negatively impacting habitat for birds; and (c) without negatively impact RGSM habitat below SADD.

Infrastructure conditions will help guide decisions (The Plan - MRGCD and NMISC 2026a; Appendix A). If monitoring identifies bank instability, structural risk, or significant sediment accumulation, diversions will be reduced or ceased until conditions are stabilized. If infrastructure risk is identified, MRGCD will immediately reduce or cease diversions into the LFCC (The Plan - MRGCD and NMISC 2026a; Appendix A). Flow may be redirected using the 9-Mile Outfall, the Neil Cupp Pump Station, or diversions to BDA as appropriate (The Plan - MRGCD and NMISC 2026a; Appendix A). Operations will not resume until inspections are completed and any necessary repairs or operational adjustments are implemented (The Plan - MRGCD and NMISC 2026a; Appendix A). Infrastructure monitoring will conform to an O&M agreement between MRGCD and Reclamation (The Plan - MRGCD and NMISC 2026a; Appendix A).

2.5 Coordination and Reporting

As described in The Plan (MRGCD and NMISC 2026; Appendix A), the Monsoon Operations will be implemented through coordination among MRGCD, NMISC, Reclamation, and the Service. Coordination will occur through regular operations meetings and real-time communication during monsoon events.

- After each monsoon event, agencies (MRGCD, NMISC, Reclamation, and the Service) will conduct an after-action review.
- Lessons learned will inform subsequent operations and be included in the post-season report.
- If monsoon events are rapid or frequent, meetings will occur at least every two weeks.

A report will document operations, monitoring results, evaluation findings, and recommendations for future implementation after completion of the Monsoon Operations. The report will include assessment of water measurement methodologies and accounting improvements achieved during the pilot year.

Chapter 3.0 Affected Environment and Environmental Consequences

3.1 Introduction

This section describes the relevant issues (i.e., existing biological, cultural, physical, and social resources that could be affected by the action) and identifies potential environmental consequences, beneficial or adverse, that could result from implementing each of the proposed actions. The Affected Environment Section describes the existing environment that could be affected by the Proposed Action and the Environmental Consequences Section describes the reasonably foreseeable effects the Proposed Action would have, if implemented. Alternative A - No Action, describes the conditions of a specific resource if Reclamation takes no action and provides the basis to compare the proposed action.

Resources evaluated in Chapter 3 were selected based on compliance with laws, statutes, executive orders; and Reclamation requirements. Resources that were determined to be unaffected by the proposed actions are listed in Section 1.6, Table 2. This EA evaluates reasonably foreseeable effects of the Monsoon Operations using available information; information may be incomplete or unavailable as to effects of the Monsoon Operations for some of the resources listed in this section, given the Adaptive Management aspect of the proposed operations; therefore, Reclamation discloses that such information is not available for the agency decision (as per DOI NEPA Handbook 516 DM 1, Section 3.7(a) and (b)).

3.2 Federally Listed Species and Critical Habitat

In accordance with Section 7(a)(2) of the Endangered Species Act of 1973, as amended, federally funded, constructed, permitted, or licensed projects must take into consideration the impacts to federally threatened, endangered, and proposed species. Federal or state listed species identified for potential to occur within this Proposed Action Area were reviewed to determine if there could be potential adverse impacts on them from proposed project activities.

3.2.1 Affected Environment

A Service Information for Planning and Consultation (IPaC) system species list was compiled for the Proposed Action (Service 2026). Table 4 identifies federally listed species that were eliminated from further consideration due to the lack of species occurrence and/or habitat in the Proposed Action Area.

Table 4. Federally Listed Species Eliminated from Further Consideration

Common Name (Genus and Species)	Federal Status	Rationale for Elimination from Further Consideration
Birds		
Northern Aplomado Falcon (<i>Falco femoralis septentrionalis</i>)	Endangered and Experimental Bird Population, Non-essential	Northern Aplomado Falcons primarily inhabit and nest in mesquite or yucca shrubs areas where yucca grasslands and open pine woodlands are present (NMDOW 2024). The falcon relies upon foraging areas that consist of open terrain and scattered trees with low ground cover (NMDOW 2024). Yucca grasslands are not present within the Proposed Action Area. In 2006, Northern Aplomado Falcons were released on the Armendaris Ranch near Elephant Butte Lake, during the first reintroduction project for this species (Peregrine Fund 2009). Between 2009 and 2012 this species was documented on the BDA (eBird 2026). However, after 2012, no Northern Aplomado Falcons have been documented on the BDA (eBird 2026). This species will not be impacted due to the proposed actions. There is no designated critical habitat for this species.
Piping Plover (<i>Charadrius melodus circumcinctus</i>)	Threatened	Piping plovers occur on sandflats or bare, sandy shorelines of rivers, lakes, or coasts (NMDOW 2022). They inhabit areas along wetland edges, boardwalks, and marsh overlooks (eBird 2026). Piping Plovers have been documented within the BDA south of where the 2026 monitoring sites will be located. This species is not expected to be present along the LFCC or be impacted by the scenarios that will be tested under Alternative B during the monsoon season of 2026. The Proposed Action Area is outside of the Piping plover designated critical habitat.
Crustaceans		
Socorro Isopod (<i>Thermosphaeroma thermophilus</i>)	Endangered	The Socorro Isopod is native to a single, thermal native spring, known as Sedillo Spring in Socorro, New Mexico (Service 2022). The Proposed Action Area does not overlap with Sedillo Spring and therefore, it is unlikely this species is present within the Proposed Action Area.

Common Name (Genus and Species)	Federal Status	Rationale for Elimination from Further Consideration
Invertebrates		
Suckley's Cuckoo Bumble Bee (<i>Bombus suckleyi</i>)	Proposed Endangered	Suckley's Cuckoo Bumble Bees are an obligate social parasite depending primarily on usurping the nests of western bumble bees (<i>Bombus occidentalis</i>) and Nevada bumble bees (<i>Bombus nevadensis</i>) (Service 2024). This species prefers high elevation mountainous areas in New Mexico and are therefore unlikely to occur within the Proposed Action Area. There is no designated critical habitat for this species. The Proposed Action Area is not located in high elevation mountainous areas. It is unlikely this species is present within the Proposed Action Area.
Mammals		
Mexican Wolf (<i>Canis lupus baileyi</i>)	Endangered Mammal and EXPN – Experimental Mammal Population, Non-essential	The Mexican wolf is associated with grasslands, montane forests and woodlands, and is very rarely observed in arid habitats (Service 2025a). According to 2025 data collected by the Mexican Wolf Interagency Field Team, the 2023 occupied range for Mexican wolves is north of the Proposed Action Area. Due to the lack of montane woodland habitat within the Proposed Action Area, it is unlikely a Mexican wolf would inhabit areas within the Proposed Action Area. There is no designated critical habitat for this species.
New Mexico Meadow Jumping Mouse (<i>Zapus hudsonius luteus</i>)	Endangered	New Mexico Meadow Jumping Mice inhabit areas with sedges, forbs, alders, willow species along permanent water sources, and within large, wet meadows (Service 2016b). Although the Proposed Action Area overlaps with Final Critical Habitat for this species (Service 2025b), there is no suitable habitat within the Proposed Action Area. It is unlikely for this species to be present in the Proposed Action Area. This species has not been documented within the Proposed Action Area.

Common Name (<i>Genus and Species</i>)	Federal Status	Rationale for Elimination from Further Consideration
Snails		
Chupadera Springsnail (<i>Pyrgulopsis chupaderae</i>)	Endangered	The Chupadera Springsnail has been documented at Willow Spring and an unnamed spring at the southern end of the Chupadera Mountains in Socorro County, NM (Service 2025c). The Proposed Action Area is located within and along the LFCC, which is outside of the known range for this species.
Socorro Springsnail (<i>P. neomexicana</i>)	Endangered	The Socorro Springsnail is endemic to one spring on privately owned land and is not found in the Proposed Action Area (Service 2020).
Plants (Flowering)		
Pecos Sunflower or Paradox Sunflower (<i>Helianthus paradoxus</i>)	Threatened	Pecos Sunflowers inhabit desert wetlands with ciénegas that contain saturated soil in the root zone (NM Rare Plant Technical Council 1999, last updated 2021). They are found in fine sandy soils with high organic matter (NM Rare Plant Technical Council 1999, last updated 2021). Pecos Sunflowers have not been found in the Action Area.

Table 5 identifies federally listed species with potential to occur in the Proposed Action Area. Federally listed species with the potential to be affected by the Proposed Action include the RGSM; Southwestern Willow Flycatcher (SWFL) (*Empidonax traillii extimus*); and Western Yellow-billed Cuckoo (YBCU) (*Coccyzus americanus occidentalis*). The IPaC list (Service 2026) is included in Appendix B.

After reviewing The Plan (MRGCD and NMISC 2026a; Appendix A), the Service recommended additional reports be prepared upon completion of the Proposed Action. The reports will address impacts to bird habitat and incidental take, results of the scenario diversions, and infrastructure related adjustment (MRCGD and NMISC 2026a; Appendix A). BMPs used will follow the 2016 BiOp (Service2016a), and the Reclamation and MRGCD O&M (Reclamation and MRCGD 2026).

Table 5. Federally Listed Species with Potential to Occur in the Proposed Action Area

Species Common Name	Listing Status	Potential To Occur in the Proposed Action Area
Birds		
SWFL	Endangered	There is potential for this species to occur in riparian habitat surrounding the LFCC. Since 1995 Reclamation has been conducting surveys along the SADD and this species has been documented in the Proposed Action Area (Reclamation 2103a; Reclamation 2024a;).
YBCU	Threatened	There is potential for this species to occur in riparian habitat surrounding the LFCC. Since 2006 Reclamation has been conducting surveys along the SADD and this species has been documented in the Proposed Action Area (Reclamation 2013b; Reclamation 2024b).
Fish		
Rio Grande Silvery Minnow	Endangered	There is potential for this species to occur in the Rio Grande below SADD. Impacts to this species in the Proposed Action Area will primarily be realized prior to project implementation due to river drying that occurs annually in the reach. There is potential for Monsoon Operations to reduce water available for river flows which may result in some adverse effects to RGSM.

3.2.1.1 Southwestern Willow Flycatcher

The SWFL typically arrives on breeding grounds between early May and early June and establishes breeding territories that range in size from approximately 0.5 to 1.5 acres (Service 2002). SWFL spend three to four months on their breeding grounds. The remainder of the year is spent on migration and in wintering areas south of the United States. They are riparian obligate species, usually breeding in patchy to dense riparian habitats along streams or other wetlands, near or adjacent to surface water, or in areas underlain by saturated soil (Reclamation 2022; Sogge et al. 2010; Service 2002). In almost all cases, slow moving or still surface water and/or saturated soil are present at or near breeding sites during wet or non-drought years. Nest sites

typically have dense foliage from the ground level up to approximately 13 feet above ground and have dense canopies. The flycatcher nests in native vegetation such as coyote willow (*Salix exigua*), but also occasionally nests in non-native species including Russian Olive (*Elaeagnus angustifolia*) and salt cedar (*Tamarix chinensis*) (Sogge et al. 2010; Service 2002). This species is an insectivore and forage on bees and wasps (Hymenoptera Families), various beetles (Coleoptera Families), and butterflies, caterpillars, and moths (Lepidoptera Families) (Service 2002).

The riparian areas adjacent to the Proposed Action Area have been known historically to provide suitable breeding, foraging, and nesting habitat for this species. SWFL have been documented in dense, shrubby, moist riparian areas along the river channel (Reclamation 2024b), to the east of the LFCC and in the Delta Channel to the west of the LFCC within the Proposed Action Area (Reclamation 2024a; Reclamation 2022). In recent years drought and fire, along with age and senescence of the existing habitat has impacted the riparian habitat this species utilizes during the breeding season (Reclamation 2018).

3.2.1.1.1 Critical Habitat for the SWFL

Designated critical habitat for the SWFL was established in 1997 (and revised in 2013) and is present for this species within the Proposed Action Area (Service 2026).

3.2.1.2 Yellow-billed Cuckoo

In Arizona and California, a few individual YBCU arrives in the western United States in mid- to late May (Parametrix and SSRS 2015). The majority of cuckoos, however, do not arrive until mid-June and some late migrants have been documented to arrive early in July (Corman 2005; Laymon 1998). The YBCU leave for their winter range towards the end of August, but in some areas within California cuckoos were documented leaving as late as mid-September (Parametrix and SSRS 2015; McNeil et al. 2013; Sechrist, et al. 2009).

During the winter, translocation data has documented this species in Gran Chaco in Mexico and Paraguay (Stanley 2024; Western Yellow-billed Cuckoo Working Group 2022; Sechrist et al. 2009). In the Southwestern United States, YBCU nest in large, dense patches of riparian vegetation, particularly with Rio Grande cottonwood (*Populus deltoides wislizenii*) and/or Goodding's willow (*Salix goodingii*) overstory that can cover 50 acres or more within arid to semiarid landscapes (Halterman et al. 2015; Hughes 1999). They forage on caterpillars, cicadas, katydids and other large insects, such as grasshoppers (Parametrix and SSRS 2015; McNeil et al. 2013).

The most current data on dense understory, comprised of exotic Russian olive, salt cedar, native species, and willow species, also appear to be important components for YBCU territory establishment (Stanley 2024; Parametrix, Inc. and Southern Sierra Research Station 2015. In New Mexico, home range estimates for YBCU within portions of the Rio Grande vary from

approximately 12 to 700 acres and average 200 acres (Stanley 2024; Western Yellow-billed Cuckoo Working Group 2022).

The riparian areas adjacent to the Proposed Action Area have been known historically to provide suitable breeding, foraging, and nesting habitat for this species. Between RM 116 and RM 60 YBCU have been documented in riparian woodlands along the river, east of the LFCC and in the Delta Channel to the west of the LFCC within the Proposed Action Area (Reclamation 2013b); Reclamation 2022; Reclamation 2024b). In recent years drought and fire, along with age and senescence of the existing habitat has impacted the riparian habitat this species utilizes during the breeding season (Reclamation 2020). Data compiled by Reclamation from 2006 through 2024 document YBCU within the Proposed Action Area (Reclamation 2013b; Reclamation 2024b).

3.2.1.2.1 Critical Habitat for the Yellow-billed Cuckoo

The YBCU designated critical habitat Final Rule was established in 2021 (Service 2021). Critical habitat for this species is present within the Proposed Action Area (Service 2026).

3.2.1.3 Rio Grande Silvery Minnow

The RGSM spawns in the late spring and early summer, coinciding with high spring snowmelt flows (Dudley et al. 2023; Mortensen et al. 2019) and is only found in the Rio Grande (Dudley and Platania 2002; Bestgen and Platania 1991). The RGSM tolerates a wide range of habitats but generally prefer low-velocity areas (<0.33 feet per second) over silt or sand substrate that are associated with shallow (<15.8 inches) braided runs, backwaters, or pools (Dudley et al. 2023; Mortensen et al. 2019). Habitat and spawning grounds include stream margins, side channels, and off-channel pools where water velocities are low or reduced from main-channel velocities. Stream reaches dominated by straight, narrow, incised channels with rapid flows are not typically occupied by RGSM (Bestgen and Platania 1991). RGSM generally synchronize their reproductive efforts with elevated and extended flow periods in the spring and can use both slow-flowing floodplain and main channel habitats (Mortensen et al. 2019). Water seeping from the LFCC has created ponded areas that could be used by RGSM if the river were not disconnected (Reclamation 2022). Due to the fragmentation of this species habitat upstream movements in the Rio Grande are restricted (Reclamation 2025). RGSM respond to hydrologic conditions, including the magnitude, timing, and duration of spring runoff (Reclamation 2025; Dudley and Platania 2009; Dudley et al. 2016).

The intermittent drying of the Rio Grande creates potential for mortality and impacts genetic diversity of this species (Reclamation 2025). This species is known to occur within the Proposed Action Area.

3.2.1.3.1 Critical Habitat for the Rio Grande Silvery Minnow

The Proposed Action Area contains federally designated critical habitat for the RGSM (designated as critical habitat in 2003) (Service 2003).

Table 6. Effects Determinations for Federally Listed Species Analyzed for the 2026 Proposed Action Area

Common Name of Species	Effects Determination
Rio Grande Silvery Minnow	May affect, likely to adversely affect
SWFL	May affect, not likely to adversely affect
YBCU	May affect, not likely to adversely affect

3.2.2 Environmental Consequences

Reclamation has surveyed SWFL and YBCU from RM 116 to the head of RM 37.5 at the northwest end of EBR since 1995 (SWFL) and 2006 (YBCU) (Reclamation 2024a; Reclamation 2024b). These species have consistently been detected within the Proposed Action Area since Reclamation started surveying (Reclamation 2024a; Reclamation 2024b) and may be in areas where the Proposed Action Scenarios are being tested. However, the vegetation along the LFCC does not provide the habitat and habitat along the riparian corridor is not expected to be affected by these temporary operations. Therefore, the Proposed Action ‘may affect but is not likely to adversely affect the SWFL or YBCU.’

The 2026 Monsoon Operations aims to convey water deliveries to EBR once the river in the San Acacia Reach has disconnected, which MRGCD and NMISC propose through Adaptive Management to evaluate for increased delivery efficiency. Flows would be diverted at SADD and routed through the LFCC to the delta of EBR at RM 60 outfall (MRGCD and NMISC 2026; Reclamation 2022). No diversions would be initiated until the Service has completed RGSM rescue operations in the river channel that occur annually during the irrigation season. Once the river through the San Acacia Reach has dried flowing water captured during 2026 Monsoon Operations and routed to the LFCC would reduce mortality for RGSM resulting from displacement and additional stranding during repeated drying events (MRGCD and NMISC 2026; Reclamation 2022). The reduction in flows through increased diversions into the LFCC may also reduce available habitat for RGSM in the river channel and recharge of existing habitat areas, resulting in potential for adverse effects covered through the 2016 BiOp and Adaptive Management (Reclamation 2016). The Proposed Action would not be initiated until all attempts to remove the RGSM from the Proposed Action Area have been completed.

There is potential for one or more RGSM to not be removed during the salvage attempts. In addition, when flood pulses pass the diversion there is potential for RGSM to be diverted downstream beyond the division area. Therefore, the Proposed Action is ‘may affect and is likely to adversely affect RGSM. The Service determined, in consultation with the MRGCD, that the Monsoon Operations are covered through Adaptive Management under the 2016 BiOp for any take of the RGSM caused by Monsoon Operations.

3.3 No Action and Alternative Actions on Federally Listed Species

3.3.1.1 Alternative A – No Action Alternative Impacts on Rio Grande Silvery Minnow

Under the No Action Alternative there would be no Monsoon Operations, as described under Alternative B – Proposed Action. Maintenance needs would be expected to increase over time as the LFCC is an aging structure, and aging infrastructure requires increased maintenance, resulting in human presence, equipment use, and disturbance to vegetation within the Proposed Action Area (MRGCD and NMISC 2026; Reclamation 2022). Although increased human presence, equipment use and vegetation disturbance could impact conditions for threatened and endangered species, those impacts are expected to be minimal.

3.3.1.2 Alternative B – Proposed Action Alternative Impacts on Rio Grande Silvery Minnow

Changes in flow timing, magnitude, and duration affect conditions relevant to the RGSM, particularly the frequency and duration of drying and rewetting periods (MRGCD and NMISC 2026). Similarly, riparian vegetation responds to altered flow patterns and floodplain connectivity. Monitoring tools—such as telemetry, gate records, and photo documentation—support assessment of these ecological responses (The Plan - MRGCD and NMISC 2026a; Appendix A). Diversions into the LFCC to evaluate Alternative B, Scenarios 1 through 4, will only begin after the Service is satisfied that fish rescue activities are complete below SADD (The Plan - MRGCD and NMISC 2026a; Appendix A). However, there is still the possibility that fish may be missed during salvage efforts or fish may flow past the diversion sites when a flood occurs.

3.2.1.3 Alternative A – No Action Alternative Impacts on Southwestern Willow Flycatchers

Under the No Action Alternative there would be no trials as described under Alternative B – Proposed Action. Maintenance needs would be expected to increase over time as the LFCC is an aging infrastructure, and this would result in human presence, equipment use, and disturbance to vegetation within the Proposed Action Area (MRGCD and NMISC 2026; Reclamation 2022). Although increased human presence, equipment use and vegetation disturbance could impact conditions for threatened and endangered species, those impacts are expected to be minimal.

3.2.1.4 Alternative B – Proposed Action Alternative Impacts on Southwestern Willow Flycatchers

Riparian areas surrounding the LFCC can provide suitable breeding, foraging, and nesting habitat for SWFL (Reclamation 2025, Reclamation 2024a, and Reclamation 2022). SWFL have been documented in dense, shrubby, moist riparian areas along the river channel within the Proposed Action Area (Reclamation 2025), and to the east of the LFCC, and in the Delta Channel to the west of the LFCC at the south end of the Proposed Action Area (Reclamation 2024a, Reclamation 2022).

Dredging accumulated sediment within the LFCC would only occur to protect infrastructure and prevent water loss if needed during the 2026 Monsoon Operations. Coordination between Reclamation, MRCGD, and the Service, will be initiated prior to dredging in areas in proximity to areas where SWFL and/or YBCU have been documented historically within the Proposed Action Area. The 2016 BiOp (Service 2016a), and the Reclamation and MRGCD O&M (Reclamation and MRCGD 2026) will be followed to address ESA related tasks in the Proposed Action Area.

Monitoring tools—such as telemetry, gate records, and photo documentation—support assessment of ecological responses (MRGCD and NMISC 2026) and they will be used during the 2026 Monsoon Operations trials to assess Scenario 1 through 4 and potential impacts to this species (The Plan - MRGCD and NMISC 2026a; Appendix A). These monitoring tools will also be used to assess impacts to riparian vegetation utilized by this species, since riparian areas respond to altered flow patterns and floodplain connectivity and provide important habitat requirements for this species (Reclamation 2022).

3.2.1.5 Alternative A – No Action Alternative Impacts on Western Yellow-billed Cuckoo

Under the No Action Alternative there would be no Monsoon Operations as described under Alternative B – Proposed Action. Maintenance needs would be expected to increase over time as the LFCC is an aging infrastructure, and this would result in human presence, equipment use, and disturbance to vegetation within the Proposed Action Area (MRGCD and NMISC 2026; Reclamation 2022). Although increased human presence, equipment use and vegetation disturbance could impact conditions for threatened and endangered species, those impacts are expected to be minimal.

3.2.1.6 Alternative B – Proposed Action Alternative Impacts on Western Yellow-billed Cuckoo

The LFCC can provide suitable breeding, foraging, and nesting habitat for this species (Reclamation 2025; Reclamation 2024b; Reclamation 2022). Monitoring tools—such as telemetry, gate records, and photo documentation—support assessment of these ecological responses (MRGCD and NMISC 2026) and they will be used during the 2026 Monsoon Operations to assess Scenario 1 through 4 and potential impacts to this species (The Plan - MRGCD and NMISC 2026a; Appendix A). These monitoring tools will also be used to assess impacts to riparian vegetation utilized by this species, since riparian areas respond to altered flow patterns and floodplain connectivity (Reclamation 2022).

Dredging accumulated sediment within the LFCC to protect infrastructure may occur if needed during the 2026 Monsoon Operations. Coordination between Reclamation, MRCGD, and the Service will be initiated prior to dredging in areas in proximity to areas where SWFL and/or YBCU have been documented within the Proposed Action Area. The 2016 BiOp (Service

2016a), and the Reclamation and MRGCD O&M (Reclamation and MRCGD 2026) will be followed to address ESA in these areas.

3.3 Riparian Habitat

3.3.1 Affected Environment

Riparian habitat present within the Proposed Action Area includes the LFCC from RM 116 to RM 62, the river channel, and associated riparian zones (The Plan - MRGCD and NMISC 2026a; Appendix A; Reclamation 2022). Constructed by Reclamation, the LFCC was built for the purpose of reducing consumption of water by riparian vegetation and open channel evaporation, providing more effective sediment transport through the lower reach of the middle valley, and improving valley drainage (Gorbach 1999). MRGCD will monitor impacts to the Proposed Action Area during the implementation of the four scenarios, per the Service responses after reviewing the proposed actions (NMGCD and NMISC 2026). Riparian habitats provide cooler, humid environments for many species, including breeding and foraging SWFL and western YBCU (Reclamation 2022). Cooler, more humid areas produce more insects, an important part of the SWFL and YBCU diet.

3.3.2 Environmental Consequences

3.3.2.1 Alternative A – No Action Impacts on Riparian Vegetation

Under the No Action Alternative there would be no trials as described under Alternative B – Proposed Action. Maintenance needs would be expected to increase over time as the LFCC is an aging infrastructure, and this would result in human presence, equipment use, and disturbance to vegetation within the Proposed Action Area (MRGCD and NMISC 2026; Reclamation 2022). Although increased human presence, equipment use and vegetation disturbance could impact riparian vegetation the impacts are expected to be minimal.

3.3.2.2 Alternative B – Proposed Action Alternative Impacts on Riparian Vegetation

Riparian habitat responds to altered flow patterns and floodplain connectivity (Reclamation 2022). During the scenario trials MRGCD will monitor riparian vegetation as the water passes through during monsoon pulses. To monitor these pulses and impacts gate records, photographic documentation, and telemetry will be used for Alternative B that will document the ecological responses associated to each scenario proposed under this Alternative (The Plan - MRGCD and NMISC 2026a; Appendix A). Although specific amounts of water are unknown, only a maximum of 200 cfs of these flows would be diverted into the LFCC during these temporary Monsoon Operations. The remainder of flows will remain in the river and it is anticipated that this amount will maintain riparian vegetation.

3.4 Migratory Birds

3.4.1 Affected Environment

Habitat exists in the Proposed Action Area for SWFL, YBCU, and many other migratory species that utilize areas along the LFCC and the riparian areas along the river for breeding, foraging, and stopover sites.

3.4.1.1 Alternative A – No Action Impacts on Migratory Birds

Under the No Action Alternative, there would be no trials, as described under Alternative B – Proposed Action. Maintenance needs would be expected to increase over time as the LFCC is an aging infrastructure, and this would result in human presence, equipment use, and disturbance to vegetation within the Proposed Action Area (MRGCD and NMISC 2026; Reclamation 2022). Although increased human presence, equipment use and vegetation disturbance could impact migratory birds the impacts are expected to be minimal.

3.4.1.2 Alternative B – Proposed Action Alternative Impacts on Migratory Birds

The Proposed Action is scheduled to occur during the 2026 monsoon season when migratory birds are breeding.

3.4.2 Environmental Consequences

3.4.2.1 Alternative A – No Action Impacts on Migratory Birds

Dredging occurs when infrastructure could be negatively impacted. Although there would be no trials under the No Action Alternative maintenance needs are expected to increase over time as the LFCC is an aging infrastructure. This could potentially result in human presence; equipment use and potential disturbance to vegetation where migratory birds may be foraging or nesting during the breeding season in the future.

3.4.2.2 Alternative B – Proposed Action Impacts on Migratory Birds

The Proposed Action could cause an incidental take of migratory birds. MRGCD and NMISC consulted with the Service regarding potential impacts to migratory birds. To reduce the potential to impact migratory birds, MRGCD will conduct migratory bird surveys in areas where maintenance is required consistent with the terms of the Agreement.

3.5 Water Resources

3.5.1 Affected Environment

Reclamation reviewed the definition of irrigation exemption in CWA regulations for the RM 60 Controlled Outfall Urgent Implementation EA and FONSI (Reclamation 2022) and determined the LFCC meets the definition of an irrigation ditch as it both delivers irrigation water and

captures irrigation return flows from agricultural fields (Reclamation 2022). In a November 3, 2022 letter the Corps did not make a jurisdictional determination regarding the LFCC, however, the Corps did affirm that a CWA permit is not required for the LFCC because maintenance or construction of the LFCC as an irrigation or drainage ditch is exempt in accordance with 33 CFR 323.4(a)(3) (USACE 2022).

3.5.1.1 Alternative A – No Action Impacts on Water Resources

Under the No Action Alternative, there would be no Monsoon Operations , as described under Alternative B – Proposed Action. Maintenance needs would be expected to increase over time as the LFCC is an aging infrastructure, and this would result in human presence, equipment use, and disturbance to vegetation within the Proposed Action Area (MRGCD and NMISC 2026; Reclamation 2022). Although increased human presence, equipment use, and vegetation disturbance could impact water resources the impacts are expected to be minimal.

3.5.1.2 Alternative B – Proposed Action Alternative Impacts on Water Resources

Monitoring tools—such as telemetry, gate records, and photo documentation—support assessment of these ecological responses and they will be used during the 2026 Monsoon Operations trials to assess Scenarios 1 through 4 and potential impacts to riparian habitat and species (The Plan - MRGCD and NMISC 2026a; Appendix A). As previously described, groundwater monitoring in the LFCC and the river will be used to evaluate seepage losses, bank storage, and groundwater response to the 2026 Monsoon Operations. Surface water monitoring of diversion rates will be conducted at SADD, flows within the LFCC at key locations including the Neil Cupp Check Structure and RM 60 outfall, and flows in the river channel below SADD. Hydrologic and ecological indicators will include tracking channel drying duration, frequency of rewetting events, and coordination with River Eyes and agency observations. Water measurement and accounting will be a central component of all monitoring. MRGCD will conduct mass balance evaluations using measurements at SADD, intermediate LFCC locations, and RM 60 (Figure 2) to approximate flow losses, gains, and delivery efficiency. Data will be used to distinguish between diverted flows, existing drain contributions, and return flows, and to improve accounting methodologies.

3.5.2 Environmental Consequences

3.5.2.1 Alternative A – No Action Impacts on Water Resources

Under the No Action Alternative, there would be no Monsoon Operations , as described under Alternative B – Proposed Action. Maintenance needs would be expected to increase over time as the LFCC is an aging infrastructure, and this would result in human presence, equipment use, and disturbance to vegetation within the Proposed Action Area (MRGCD and NMISC 2026; Reclamation 2022).

Currently, the State of New Mexico is struggling to meet annual Compact delivery obligations. New Mexico's cumulative Compact debt is expected to worsen in 2026 to more than 132,000 acre-feet (The Plan - MRGCD and NMISC 2026a; Appendix A). With climate forecasts predicting a hotter and drier future, and New Mexico planning for at least 25% less water availability, reversing this trend in Compact debt is of paramount concern. Not only is New Mexico nearing a Compact violation of 200,000 acre-feet cumulative debt, but low reservoir levels at EBR and Caballo, are impeding the ability to store native water in upstream reservoirs (The Plan - MRGCD and NMISC 2026a; Appendix A).

The potential for violation of the Compact increases each year and the gap between the current debt level and 200,000 acre-feet narrows. Importantly, the need to be able to store native Rio Grande water for various uses within the MRG has never been more critical. As a result of the aridification and Compact restrictions in upstream storage, all MRG water use sectors have seen significant stress, including municipal, agricultural, and environmental sectors. When MRGCD can store and release native water to supplement irrigation and river flows, all sectors benefit. The stress placed on farmers and the environment when there is little-to-no upstream storage of native Rio Grande water was evident throughout the 2025 irrigation season, a year when there were significant disruptions to irrigation and the Rio Grande dried for some period of time in all three of the reaches below Cochiti (MRGCD and NMISC 2026b).

3.5.2.2 Alternative B - Proposed Action Alternative Impacts on Water Resources

Analysis by MRGCD of USGS hydrograph data from the main stem gage below SADD in 2022 highlights the potential opportunity to make Compact deliveries through the LFCC that are missed by allowing monsoon rain events to pass SADD without being diverted in whole or in part into the LFCC (The Plan - MRGCD and NMISC 2026a; Appendix A). MRGCD estimated that if a modest diversion cap of 500 cfs had been set for the 2022 monsoon season (June through September for this analysis) that approximately 52,000 acre-feet of water could have been diverted at SADD into the LFCC (MRGCD and NMISC 2026b). That is not to say that 52,000 more acre-feet would have been delivered to EBR for Compact deliveries, but more of the 52,000 acre-feet would have reached EBR, had it been diverted at SADD and conveyed using the LFCC, rather than left in the river (MRGCD and NMISC 2026b).

Current maintenance includes dredging accumulated sediment within the LFCC to protect infrastructure, is not expected to deviate from current maintenance practices. Maintenance actions may adversely impact water quality temporarily, but within a small area. It is recommended that BMPs be utilized and include cleaning of dredging equipment for inadvertent discharges of oil, gasoline, or other substances into the LFCC or surrounding area. The Service has requested that MRGCD submit a report following Monsoon Ops trials that will summarize the diversion operations and ecological outcomes (Appendix A). Water resources requirements will follow the 2016 BiOp (Service2016a), and the Reclamation and MRGCD O&M (Reclamation and MRCGD 2026; Appendix A).

3.6 Historic and Cultural Resources

“The LFCC was constructed by Reclamation in the 1950s to aid the State of New Mexico in delivering waters obligated to Texas under the Compact. Construction of the channel also served to improve agricultural drainage and to supplement irrigation water supplies to both the BDA as well as irrigators of the MRGCD. The riprap-lined channel currently parallels about 56 miles of the Rio Grande from San Acacia to River Mile 60. Historically, the LFCC conveyed up to 2,000 cfs to the Reservoir and has been credited with assisting New Mexico to significantly decrease its Compact compliance deficit. The LFCC use-life was limited due to increased storage in the Reservoir in the early to mid-1980s that buried the last 15 miles of the channel and the outfall (where the LFCC drains into the Rio Grande). The LFCC currently functions only as a passive drain for seepage and irrigation return flows” (Reclamation 2022). To date, this channel has not been listed as a historic or cultural resource but has been found eligible for inclusion in the National Register of Historic Places (NRHP) under Criterion A and C.

3.6.1.1 Alternative A – No Action Impacts on Historic and Cultural Resources

Under the No Action Alternative, there would be no trials, as described under Alternative B – Proposed Action. Maintenance needs would be expected to increase over time as the LFCC is an aging infrastructure, and this would result in human presence, equipment use, and disturbance to vegetation within the Proposed Action Area (MRGCD and NMISC 2026; Reclamation 2022). No effects to historic and cultural resources are expected under the No Action Alternative.

3.6.1.2 Alternative B –Proposed Action Alternative Impacts on Historic and Cultural Resources

No effects to historic and cultural resources are expected under the Proposed Action. Should impacts to portions of the LFCC occur, MRGCD will restore those portions to their former condition in consultation with SHPO. MRGCD has a staff of 22 at the Socorro Division and equipment (2 Long Reach Excavators, 2 Short Boom Excavators, a 750 Dozer, a 550 Dozer, and a Remote Controlled Sheep’s Foot Compactor) located within our Socorro Division. In situations that require maintenance based on the Monsoon Operations, the field crew will deploy and utilize fill material located at the Fort Craig Pit, made available by Reclamation, when necessary. Should maintenance be required based on the Monsoon Operations, MRGCD equipment and staff will be staged to avoid habitat of listed species and to avoid additional damage to the LFCC.

3.7. Indian Trust Assets

Indian Trust Assets (ITA) are legal interests in assets held in trust by the United States Government for Native American tribes or individuals. Some examples of ITA are lands, minerals, water rights, hunting and fishing rights, titles, and money. ITAs cannot be sold, leased, or alienated without the express approval of the U.S. Government. Secretarial Order 3175 and

Reclamation ITA policy require that Reclamation assess the impacts of its projects on ITA. An inventory of all ITA within the Proposed Action Area is required. If any ITAs are impacted, mitigation or compensation for adverse impacts to these assets is required. ITAs were not identified in the Proposed Action Area.

3.7.1 Affected Environment

There are no Affected Environmental issues related to Indian Trust Assets, since none occur in the Proposed Action Area.

3.7.2 Environmental Consequences

There are no Environmental Consequences related to Indian Trust Assets, since none occur in the Proposed Action Area.

3.8 Reasonably Foreseeable Effects of the Proposed Actions

Table 7 summarizes the environmental consequences for the resources evaluated in Chapter 3.0. Resource effects include Alternative A –No Action and the Proposed Action Alternative.

Table 7. Summary of Impacts of Alternative A – No Action and Alternative B – Proposed Action

Resource	Alternative A No Action	Alternative B Proposed Action
Federally listed species	Long-term: Habitat degradation would continue. May affect, not likely to adversely affect.	Short-term: unknown how much water will be available for the scenarios proposed during the monsoon season. May affect, not likely to adversely affect SWFL and YBCU. Likely to adversely affect RGSM. Long-term: No impacts beyond the 2026 Monsoon Operations.

Resource	Alternative A No Action	Alternative B Proposed Action
Riparian Habitat	Long-term: Habitat conditions will continue according to current dynamics.	Short-term: Although specific amounts of water are unknown, only a maximum of 200 cfs of these flows would be diverted into the LFCC during these temporary Monsoon Operations. The remainder of flows will remain in the river and its anticipated that this amount will maintain riparian vegetation. Long-term: No impacts beyond the 2026 Monsoon Operations.
Water Resources – including water quality	Long-term: Efficiency of water conveyance will remain the same and any impacts to water quality are expected to be minimal.	Short-term: monitoring will evaluate any conveyance efficiency improvements and any impacts to water quality are expected to be minimal. Long-term: No impacts beyond the 2026 Monsoon Operations.
Historic or Cultural Resources	The LFCC was constructed in the 1950's. The LFCC is a historic property under Criterion A and C per the National Historic Preservation Act, 54 U.S.C. §§ 300101 et seq. No impacts to historic or cultural resources would occur due to Alternative A.	The LFCC was constructed in the 1950's. The LFCC is a historic property under Criterion A and C per the National Historic Preservation Act, 54 U.S.C. §§ 300101 et seq. No effects to historic and cultural resources are expected under the Proposed Action. Any impacts to portions of the LFCC will be fixed or maintained back to its former condition in consultation with SHPO.

Resource	Alternative A No Action	Alternative B Proposed Action
Indian Trust Assets	No Indian Trust Assets are present, therefore there will be no impacts to Indian Trust Assets under Scenario A.	No Indian Trust Assets are present. No reasonably foreseeable effects to Indian Trust Assets would occur under Scenario 1 through Scenario 4.

Chapter 4.0 Summary

This EA reviewed potential impacts to federally listed species and critical habitat, riparian habitat, and water resources. No other resources are expected to be affected. Alternative A – No Action would result in continued degradation of riparian habitat, which would in turn affect federally listed species and potentially their critical habitat over time.

In accordance with the NEPA of 1969, as amended, based on the analysis in this EA, Reclamation has determined that implementing the Proposed Action - Scenarios 1 through 4 would not have a reasonably foreseeable significant effect on the quality of the human environment.

Chapter 5.0 Consultation and Coordination

The MRGCD and NMISC submitted The Plan (MRGCD and NMISC 2026a; Appendix A) to the Service on May 4, 2026, for review. The Service responded on May 11th that they did not have any edits to the Plan at this time. The Service provided several reporting requests including:

- Document how monsoon-driven diversions into the LFCC influences riparian and avian habitat conditions including any observed effects related to channel drying, rewetting frequency, or altered flow patterns. Given the ecological pathways described in The Plan (MRGCD and NMISC 2026a; Appendix A) including riparian vegetation response and hydrologic variability—an assessment of any take resulting from these operations will be important.
- Continue to coordinate with Reclamation to incorporate their habitat monitoring results for the San Acacia Reach, including nest success metrics and habitat-use observations that may inform effects analyses.
- Document the frequency and results of operational implementation.
- Summarize how often monsoon diversion operations were initiated under each scenario (Alternative A through Alternative D), the hydrologic conditions leading to those decisions, and an evaluation of their success. This includes:
 - How frequently diversions occurred at SADD;

- Whether diverted flows were successfully conveyed to RM 60;
- Any infrastructure-related adjustments (e.g., reductions or cessation of diversions in response to thresholds, sediment accumulation, or structural concerns);
- Ecological and water management outcomes relative to The Plan’s hypotheses and objectives (MRGCD and NMISC 2026a; Appendix A).

No public comment period or public meetings occurred for the development of this EA. Reclamation consulted with the applicant agencies throughout the preparation of this EA (MRGCD, NMISC) (per 516 DM 1 Implementing Procedures). Neither applicant requested public comment or public meetings.

Chapter 6.0 Preparers

Reclamation established an ID team made up of staff specialists who worked with the applicant agencies and a third-party contractor to develop the content and analysis in this EA. A list of preparers who participated in the development of this EA is provided in Table 8.

Table 8. List of Preparers

Name	Title	Resource Related Sections	Agency or Organization
RECLAMATION			
Jennifer Bachus	Biologist, Environment & Lands Division Manager	Reviewer	Bureau of Reclamation
John D. Cater	Archeologist	Reviewer	Bureau of Reclamation
Scott Hebner	Environmental Protection Specialist	Reviewer	Bureau of Reclamation
Larry Moore	Environmental Protection Specialist	Reviewer	Bureau of Reclamation
Eric Gonzales	Biologist Environment and Lands Division Applied Sciences Group Supervisor	Reviewer	Bureau of Reclamation
Logan Gonzales	Biologist	Reviewer	Bureau of Reclamation
Shamarie Nez	Biologist	Reviewer	Bureau of Reclamation
Chris Grosso	Biologist	Reviewer	Bureau of Reclamation

Name	Title	Resource Related Sections	Agency or Organization
Kenneth Richard	Acting Deputy Area Manager	Reviewer	Bureau of Reclamation
NMISC			
Lynette Giesen	Project Manager	Reviewer	NMISC
Sharon Wirth	Middle Rio Grande Bureau Chief	Reviewer	NMISC
MRGCD			
Casey Ish	Director of Lands & Conservation	Reviewer	MRGCD
Tetra Tech			
Ondrea Hummel	Senior Ecologist/Office Manager	Internal Quality Control	Tetra Tech
Jenny Lisignoli	Senior Environmental Scientist and NEPA Specialist	EA and Internal Quality Control	Tetra Tech
Edmund Vandever	Environmental Scientist	EA Preparation	Tetra Tech

Chapter 7.0 References

Bestgen, K. G., and S. P. Platania. 1991. *Status and Conservation of the Rio Grande Silvery Minnow, *Hybognathus amarus**. Southwestern Naturalist 36(2):225-232.

Biota Information System of New Mexico [BISON-M]. 2022. *Piping Plover Species Booklet # 041505*. Available at: <https://www.bison-m.org/SpeciesBooklet.aspx?SpeciesID=041505>. Accessed 19 May 2026.

_____. 2024. BISON-M: *Apomado Falcon Species Booklet #040380*. Available at: <https://bison-m.org/SpeciesBooklet.aspx?SpeciesID=040380>. Accessed 19 May 2026.

_____. 2025. BISON-M: *Monarch Butterfly Species Booklet #216670*. Available at: <https://www.bison-m.org/SpeciesBooklet.aspx?SpeciesID=216670>. Accessed 19 May 2026.

Clean Water Act, Pub. L. No. PL 92-500 (original act), 33 CFR § 328.3(c)(1) (1972). Available at: <https://www.ecfr.gov/current/title-33>.

Corman, T.E. 2005. *Yellow-billed Cuckoo (Coccyzus americanus) “in” Arizona Breeding Bird Atlas*. T.E. Corman and C. Wise-Gervais (editors). Univ. of New Mexico Press, Albuquerque, NM, pp. 202-203.

Dudley, R.K., and S.P. Platania. 2022. *Rio Grande Silvery Minnow Population Monitoring Program Results from 2021*. Report to the U.S. Bureau of Reclamation, Albuquerque Area Office.

Dudley, R. K., S. P. Platania, and G. C. White. 2023. *Rio Grande Silvery Minnow Population Monitoring during 2022*. U.S. Bureau of Reclamation.

eBird. 2026. *An Online Database of Bird Distribution and Abundance*. eBird, Cornell Lab of Ornithology. Available at: <http://www.ebird.org>.

Gaines, D., and S. A. Laymon. 1984. *Decline, Status and Preservation of the Yellow-Billed Cuckoo in California*. In *Western Birds* 15(2).

Gorbach. 1999. *History and Significance of the Low-Flow Conveyance Channel: What is its Future?* Presented at the WRRRI Conference Proceedings.

Halterman, M. D., M. J. Johnson, J. A. Holmes, and S. A. Laymon. 2015. *A Natural History Summary and Survey Protocol for the Western Distinct Population Segment of the Yellow-Billed Cuckoo*. Available at: https://www.fws.gov/sites/default/files/documents/YBCU%20Survey%20Protocol_%20DRAFT_2016_0.pdf.

Hill, D. 2026. Personal Communication. Email dated July 6, 2026. US Fish and Wildlife Service, Albuquerque NM.

McNeil, S. D. Tracy, J. R. Stanek, and J. E. Stanek. 2013. *Yellow-billed cuckoo distribution, abundance, and habitat use on the lower Colorado River and tributaries: 2008–2012 summary report*. Available at: http://www.lcrmscp.gov/reports/2012/d7_sumrep_08-12.pdf.

Mortensen, J. G., S. P. Platania, and T. F. Turner. 2019. *Rio Grande Silvery Minnow Habitat Synthesis*. U.S. Bureau of Reclamation Contract G-01802-01. U.S. Bureau of Reclamation Technical Service Center.

McKenna 2025. *Annual and Monthly Drying Statistics*. River Eyes Middle Rio Grande Monitoring Program. Data Compiled from River Eyes Observations from 2016–2025 of the San Acacia Reach. Available at: <https://reyes.gsanalysis.com/dry/days?page=5>.

_____. 2026b. *Proposal for Use of the Low Flow Conveyance Channel During the 2026 Monsoon Season for the Purpose of Increasing Seasonal Deliveries of Water to Elephant Butte Reservoir*.

New Mexico Rare Plant Technical Council. 1999. *Helianthus paradoxus (Puzzle Flower or Pecos Sunflower Species Information)*. Available at: <https://nmrareplants.unm.edu/node/95>. Last Information compiled by Charlie McDonald 1999; last updated 2021.

Parametrix, Inc., and Southern Sierra Research Station. 2019. *Yellow-billed Cuckoo Surveys on the Lower Colorado River and Tributaries, 2014 to 2018 Summary Report*. Submitted to the U.S. Department of the Interior

Lower Colorado River Multi-Species Conservation Program, Bureau of Reclamation, Boulder City, Nevada, by S.E. McNeil, D. Tracy, J. Lisignoli, and J.R. Stanek under Reclamation contract No. R14PD0004. Available at: https://southernsierraresearch.org/wp-content/uploads/2023/10/d07_sumrep_2014-2018.pdf.

Reclamation. 2012. *Middle Rio Grande River Maintenance Program Comprehensive Plan and Guide*. Upper Colorado Region, Albuquerque Area Office, Albuquerque, New Mexico. 215 pp.

Reclamation. 2013a. *2013 Southwestern Willow Flycatcher Study Results Selected Sites along the Rio Grande from Bandelier National Monument to Elephant Butte Reservoir, New Mexico*.
_____. 2013b. *Yellow-billed Cuckoo Study Results – 2013 Survey Results from New Mexico State Highway 60 to Elephant Butte Reservoir: Middle Rio Grande, NM*.

_____. 2018. *River Mile 82 to 79 Pilot River Realignment Project at Bosque Del Apache National Wildlife Refuge, Environmental Assessment*. Available at: <https://www.usbr.gov/uc/envdocs/ea/RiverMile82to79PilotRiverRealignmentProjectatBosqueDelApacheNationalWildlifeRefuge-DraftEA.pdf>. Prepared by Scott Hebner, Bureau of Reclamation, Albuquerque Area Office, Albuquerque, New Mexico.

_____. 2022. *Draft River Mile 60 Controlled Outfall Urgent Implementation Environmental Assessment and Finding of No Significant Impact*. Available at: <https://www.usbr.gov/uc/envdocs/ea/RiverMile82to79PilotRiverRealignmentProjectatBosqueDelApacheNationalWildlifeRefuge-DraftEA.pdf>.

_____. 2024a. *Middle Rio Grande Southwestern Willow Flycatcher Study Results. Results - 2024*. Technical Service Center, Bureau of Reclamation.

_____. 2024b. *Middle Rio Grande Yellow-Billed Cuckoo Study Results - 2024*. Technical Service Center, Bureau of Reclamation.

_____. 2025. *Lower San Acacia Reach Improvements Project Draft Environmental Impact Statement*. November 2025. Available at: https://rgimsprod0196a3.blob.core.windows.net/eisdocs/LSARI_DEISfor508_20251126_508.pdf?sv=2025-07-05&spr=https&st=2025-11-26T22%3A47%3A34Z&se=2035-12-31T22%3A47%3A00Z&sr=b&sp=r&sig=WTRNjDBRjSRFRHaz0sH55XMZGchv2VEC%2FHxMd373LOQ%3D.

Reclamation and MRGCD. 2026. *Contract between the United States and the Middle Rio Grande Conservancy District for Operation and Maintenance at the Low Flow Conveyance Channel*. Contract No. 26-WC-40-1050.

Sechrist, J., V. Johanson, and D. D. Ahlers. 2009. *Western Yellow-Billed Cuckoo Radio Telemetry Study Results – Middle Rio Grande New Mexico – 2007-2008*. Bureau of Reclamation Technical Service Center.

Siegle, R., and D. Moore. 2022. *Southwestern Willow Flycatcher Habitat Suitability 2021; Middle Rio Grande, New Mexico*. Bureau of Reclamation Technical Service Center. Technical Report No. ENV-2022-050. Available at: https://webapps.usgs.gov/mrgescp/documents/Siegle-and-Moore_2022_SWFL-Breeding-Habitat-Suitability-2021.pdf.

Sogge, M. K., Darrell Ahlers, and S. J. Sferra. 2010. *A Natural History Summary and Survey Protocol for the Southwestern Willow Flycatcher*. U.S. Geological Techniques and Methods 2A-10. Available at: <https://pubs.usgs.gov/tm/tm2a10/pdf/tm2a10.pdf>.

The Peregrine Fund. 2006. *First Aplomado Falcon Reintroduction Slated for Early August in New Mexico*. July 27, 2006. Available at: <https://peregrinefund.org/news-release/first-aplomado-falcon-reintroduction-slated-early-august-new-mexico>.

Stanley, Q.S. 2024. *Tracking Yellow-billed Cuckoo (Coccyzus americanus) Progress Along the Road to Recovery*. Post-Doctoral Fellow, Georgetown University Presentation available at: <https://www.bing.com/videos/riverview/relatedvideo?q=Review+MC+data+for+western+yellow+billed+cuckoo&mid=90B27BF17AA349CC09C090B27BF17AA349CC09C0&churl=https%3a%2f%2fwww.youtube.com%2fchannel%2fUC9>.

Service. 2005. *Endangered and Threatened Wildlife and Plants; Proposed Designation of Critical Habitat for the Southwestern Willow Flycatcher*. DOI Service 50 CFR Part 17. RN 1018-AT88. Available at: <https://docs.regulations.justia.com/entries/2005-04-28/05-8488.pdf>.

_____. 2013. *Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Southwestern Willow Flycatcher: Final Rule*. Federal Register Volume 78, No. 2/343-534. Available at: https://www.fws.gov/sites/default/files/federal_register_document/2012-30634.pdf.

_____. 2016a. *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*. Available at: https://www.fws.gov/sites/default/files/documents/20161202_MRG%20BiOp_Final%20%281%29.pdf.

_____. 2016b. *Endangered and Threatened Wildlife and Plants: Designation of Critical Habitat for the New Mexico Meadow Jumping Mouse; Final Rule*. Federal Register 81(51):14264-14325.

_____. 2020. *5-Year Review Socorro Springsnail (Pyrgulopsis neomexicana)*. Available at: <https://www.fws.gov/node/65815>.

_____. 2021. *Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Western Distinct Population Segment of the Yellow-Billed Cuckoo*. Federal Register 86 (75): 20798-21005.

_____. 2022. *5-Year Review Socorro Isopod (Thermosphaeroma thermophilum)*. Available at: https://ecos.fws.gov/docs/tess/species_nonpublish/3649.pdf

_____. 2024a. *Conserving the Mexican Wolf*. Available at:
<https://www.fws.gov/program/conserving-mexican-wolf>.

_____. 2024b. *Endangered and Threatened Wildlife and Plants; Endangered Species Status for Suckley's Cuckoo Bumble Bee*. *Federal Register* (89 FR 102074). Available at:
<https://www.federalregister.gov/d/2024-28729>.

_____. 2025a. *Recovery Plan for the Chupadera Springsnail (Pyrgulopsis chupaderae)*. U.S. Fish and Wildlife Service, Albuquerque, NM USA. 13pp. Available at:
https://ecos.fws.gov/docs/recovery_plan/FINAL%20Chupadera%20Recovery%20Plan%20v1_Signed.pdf.

_____. 2025b. *Environmental Conservation Online System: Threatened & Endangered Species Active Critical Habitat*. Service.

_____. 2026. *Information for Planning and Consultation (IPaC) Species List*. Compiled from the associated website. Available at: <https://ipac.ecosphere.fws.gov/>.

USACE. 2022. SUBJECT: No Permit Required – Action No. SPA-2022-00399, Maintenance Exemption for the Low Flow Conveyance Channel at Rio Grande River Mile 60. Letter from the U.S. Army Corps of Engineers, Albuquerque District. November 3, 2022. 2p.

Western Yellow-billed Cuckoo Working Group. 2022. *Working Action Plan Table*. Recovery and Planning Subcommittee. Available at:
https://static1.squarespace.com/static/61e8a2e602e66d00596c640b/t/6366e92be1b65f028facfe0/1667688747719/2022-11-05_Action+Plan+Table-Recovery+%26+Planning.pdf

Williams, B. K; R.C. Szaro, and C. D. Shapiro. 2009. *Adaptive Management: The U.S. Department of the Interior Technical Guide*. Adaptive Management Working Group, U.S. Department of the Interior, Washington, DC. International Standard Book Number: 978-1-4133-2478-7. Available at: <https://www.doi.gov/sites/doi.gov/files/uploads/TechGuide-WebOptimized-2.pdf>.

16 U.S.C. Sec. 668(a). 1940. *Bald and Golden Eagle Protection Act*. US Federal Code of Regulations.

50 C.F.R. Sec. 10.12. 1918. *Migratory Bird Treaty Act*. US Federal Code of Regulations.