Study Proposal for Use of the Low Flow Conveyance Channel During the Monsoon Season for the Purpose of Increasing Seasonal Deliveries of Water to Elephant Butte Reservoir

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INTRODUCTION

The Middle Rio Grande Conservancy District (MRGCD) in collaboration with the New Mexico Interstate Stream Commission (NMISC) intends to conduct a study of the Low Flow Conveyance Channel (LFCC) beginning in 2024 for a period of up to 5 years to determine if limited and strategic diversions to the LFCC can improve water deliveries to Elephant Butte Reservoir (EBR), while maintaining habitat for listed species within the San Acacia Reach (Figure 1).

The MRGCD and NMISC seek sustainable solutions to improve deliveries for the Rio Grande Compact throughout the year and reduce New Mexico's current debit, which inhibits the ability to store water in post-Compact reservoirs for release in the summer months. Stored water greatly benefits both farmers and species and new and innovative ways to achieve this goal are needed as we anticipate extensive droughts and climate change.

The 2016 Biological Opinion acknowledges that the San Acacia Reach water conveyance and riparian habitat are both degrading due to sediment aggradation within the river channel. The channel in the San Acacia reach requires substantial flows to remain connected in its current condition and the river frequently dries in summer months for 30 miles or more. While planning is underway by the federal and nonfederal water management agencies to address these issues over the coming decades, clearly shorter-term solutions must also be implemented with the least impact to native species to improve Rio Grande Compact deliveries. MRGCD and NMISC believe that limited diversions to the LFCC could be one solution to improving deliveries to EBR.

Proposed LFCC Study

The LFCC Study is proposed to quantify changes in surface water deliveries to EBR and evaluate effects on the river ecosystem, specifically species and riparian vegetation, during five consecutive summers of experimental diversions of river flows and summer monsoon rain events into the LFCC. Flows would be diverted at the San Acacia Diversion Dam (SADD) and routed through the LFCC to the delta of Elephant Butte Reservoir (River Mile 60 outfall). The expected outcomes of capturing flow during monsoon events and routing this water through the LFCC are: 1) improvement in the efficiency of water conveyance for Compact delivery requirements, 2) reduction

of repeated river channel re-wetting and re-drying resulting in high water losses, and 3) reduction in the potential for stranding of the endangered Rio Grande Silvery Minnow (RGSM) due to repeated re-wetting and re-drying events.

During the study period, the MRGCD would divert water into the LFCC for deliveries to EBR after the river channel in the San Acacia Reach has become disconnected through a managed recession, which would allow the Service to conduct rescue operations. At this point, flows would no longer be reaching EBR via a connected river from San Acacia south. Diversions into the LFCC would be limited to 500 cubic feet per second (cfs). A diversion limit of 500 cfs was selected for this study to prevent the need for any major infrastructure or channel modifications. The MRGCD and NMISC will continue to work closely with the USFWS and Reclamation on the timing of river recession and species management activities in the San Acacia Reach.

The study period is planned for up to five (5) consecutive summer monsoon seasons so that the high variability in the summer monsoon season can be adequately captured, quantification of the water balance can occur, and the effects on species, vegetation, and groundwater can be adequately identified. MRGCD, NMISC, and other interested stakeholders will prepare a monitoring plan for this study prior to implementation in coordination with the Service and Reclamation. Monitoring will include measurement of LFCC flows at critical locations, continuous groundwater monitoring along existing well transects, analysis of vegetation using satellite imagery and other means, and support for additional data collection by existing fish and bird monitoring programs. Data will be used in hydrologic models being developed to assist in the LFCC diversion evaluation. An annual report will document the LFCC operations and summarize monitoring efforts. If at any time during the study the MRGCD and NMISC wish to modify the study (e.g., changing the diversion rate) then a modified scope of work will be provided to the Service and Reclamation for discussion.

History of the Low Flow Conveyance Channel

The LFCC is a large earthen channel constructed on the west side of the Rio Grande that originally acted as both a drain and conveyance channel. Currently, the LFCC runs from its headgates at SADD some 55 miles downstream to River Mile 60 (See Figure 1). The LFCC originally discharged back into the Rio Grande at River Mile 46 at a location known as the Narrows. Constructed by the USBR, 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[1]. Construction took place throughout the 1950s with initial diversions at SADD taking place in the 1960s and 70s. This work was part of the Middle Rio Grande Project, which also included massive reconfiguration of much of the river channel itself from Velarde to Elephant Butte. 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. The important backdrop to these river operations and historical use of the LFCC was the status of New Mexico's Rio Grande Compact debit to Texas, which had continued to balloon from approximately 60,000 acre-feet in 1943 to almost 550,000 acre-feet in 1956. The LFCC actively diverted from the river at SADD between 1959 and 1975, and again between 1983 and 1985.

By 1972, New Mexico's Compact Debit had been cleared, in part by using the LFCC to efficiently move water from SADD to Elephant Butte. Varying estimates attribute the LFCC with saving as much as 60,000 acre-feet annually when it was utilized for conveyance through the San Acacia Reach.[2] By the late 1980s, however, high sediment concentrations and large flow events resulted in a highly mobile 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. The reservoir filled the outlet works of the LFCC resulting in upwards of 20 miles of the facility becoming inundated. Several miles of the LFCC above the Elephant Butte storage pool were also degraded

[1] Gorbach, Chris; 1999 WRRI Conference Proceedings *"History and Significance of the Low-Flow Conveyance Channel: What is its Future?"*
[2] *Id.*

such that USBR ceased LFCC operations. Since 1985 the LFCC has mainly functioned as a drain, capturing agricultural return flows and shallow groundwater from the valley. Endangered species in the area have created additional river management concerns in the reach and play a significant factor in why the LFCC is currently not operated for conveyance of water in the same historical context as mentioned above.

Currently, the State of New Mexico is struggling to meet annual Compact delivery requirements. New Mexico's Compact debit was officially calculated in early 2023 to be 93,000 acre-feet and is not expected to decrease significantly in 2023. With climate change forecasts clearly predicting a hotter and drier future, this trend must be reversed as soon as possible so that New Mexico can climb out of Compact debt, get out of Article VII restrictions, and can once again store native water in upstream reservoirs.[3]

Efficient Conveyance of Water

When considering how to move water efficiently in an open channel, water managers consider 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. The LFCC is a deep, narrow channel, which reduces open channel evaporation, whereas the Rio Grande channel, while variable in the San Acacia Reach, is considerably wider than the LFCC. The LFCC is also the lowest elevation in the valley in certain areas and therefore does not lose water to groundwater seepage. With the technical assistance from New Mexico Bureau of Geology and Mineral Resources (NMBGMR), the proposal partners intend to take advantage of existing ISC well transects throughout the valley to monitor changes in the groundwater and surface water interaction, and the localized response of the water table to manipulating the path of conveyance (via the LFCC or the Rio Grande). This study will also aim to understand how these operations impact seepage, bank storage, and groundwater capture.

Analysis by MRGCD of USGS hydrograph data from the main stem gage below San Acacia in 2022 highlights the potential opportunity missed by allowing monsoon rain events to pass SADD without being diverted in whole or in part into the LFCC. MRGCD staff estimate 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 the SADD into the LFCC. That is not to say that 52,000 more acre-feet would have been delivered to Elephant Butte and put towards the State's compact debit. However, the hypothesis that this exploratory action intends to investigate is whether more of that 52,000 acre-feet would have reached Elephant Butte had it been diverted, rather than left in the river (See Figure 2).

MRGCD also requested technical assistance from Reclamation to study water delivery in the reach and sediment transport in the LFCC. This research, which will be made available to the public, is intended to quantify the volume of surface water required to temporarily reconnect the river channel from SADD to San Marcial during summer monsoons. It is not unreasonable to assume that the annual volume of surface flow needed to wet the floodway during multiple monsoon flow events each season is substantial.

A more efficient method of conveyance in the San Acacia Reach would translate into opportunities to increase storage volumes in Elephant Butte over time. If we can regularly deliver enough water to Elephant Butte to increase combined storage in Elephant Butte and Caballo to over 400,000 acre-feet and reduce New Mexico's debit significantly, then Middle Rio Grande water managers will regain access to upstream storage of native water, which is the most important tool available for supporting agricultural, environmental, municipal, and interstate water needs.

[3] See Article VI & VII of the Rio Grande Compact

Success of this operation will require continued maintenance of the LFCC by MRGCD with support from NMISC, including mowing and dredging operations. These operations are a continuation of the maintenance operations that were performed by USBR prior to title transfer to MRGCD. MRGCD is currently trying to fill two (2) full time positions that would focus exclusively on the maintenance of the LFCC from SADD to the northern boundary of Bosque del Apache. This work will take place regardless of whether the LFCC is repurposed for conveyance in addition to drainage or operated strictly as a drain.

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. Depletions resulting from infiltration and evaporation are thought to be extreme within the riverbed and riverbanks and occurs repeatedly throughout the season. This study will help determine just how significant the conveyance losses are in this stretch of the river and will refine our knowledge of how bank storage contributes to downstream flow. The LFCC Study offers the opportunity to capture these monsoon events (either in full or in part depending on arriving flow) and to route that water to Elephant Butte Reservoir without having to re-saturate miles of sandy riverbed and explore conveyance efficiency. The same data analysis that determined the approximate volume of water that could have been diverted into the LFCC in the 2022 monsoon season also revealed that the number of temporary re-wetting events could have been reduced from 5 to 3 by diverting up to 500 cfs of monsoon flows as they arrived at SADD (See Figure 2). Reclamation has determined that upstream of river mile 64 the LFCC is the low point in the valley and thus, controls groundwater. This also means that upstream of river mile 64, the facility is functioning as a gaining reach drain. 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. This will be explored as part of this Study.

Some of the monsoon flows that can be captured at SADD are generated in the larger upland watersheds in the Middle Rio Grande. This includes the Rio Puerco and Rio Salado, both of which contribute significant monsoon flows to the Rio Grande every year. A network of gages and cameras near the confluence of these drainages and the Rio Grande provide MRGCD and other water managers with information about inflows from these tributaries. Gate positions on SADD would be set to divert for a range of scenarios as explained further down in this document.

Questions related to the efficiency of routing water through both the river channel and the LFCC remain and will be investigated through this exploratory operation. This will be tested by diverting different rates of flow from various monsoon driven events and comparing those deliveries to RM 60 via the LFCC versus the river channel. One goal of the study is to understand what magnitude of monsoon event 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 study to establish baseline rates of river channel conveyance. The Reclamation water and sediment delivery study mentioned previously will also help quantify the efficiency of conveyance.

Reduce Stranding of RGSM

The San Acacia Reach of the Rio Grande 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 and intentional bypasses of water. This would continue to be the case during this experimental operation. This area becomes the summer refuge for 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 re-wet sub-reaches of the river, moving fish downstream from the relative safety of the area

just below SADD (See Figure 2). 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 that can reach well above 30°C and offer easy opportunities for predation.[4][5]

[4] Archdeacon, P. Thomas – *Reduction in Spring Flow Threatens Rio Grande Silvery Minnow: Trends in Abundance during River Intermittency,* American Fisheries Society 2016

[5] *id*

Figure 1

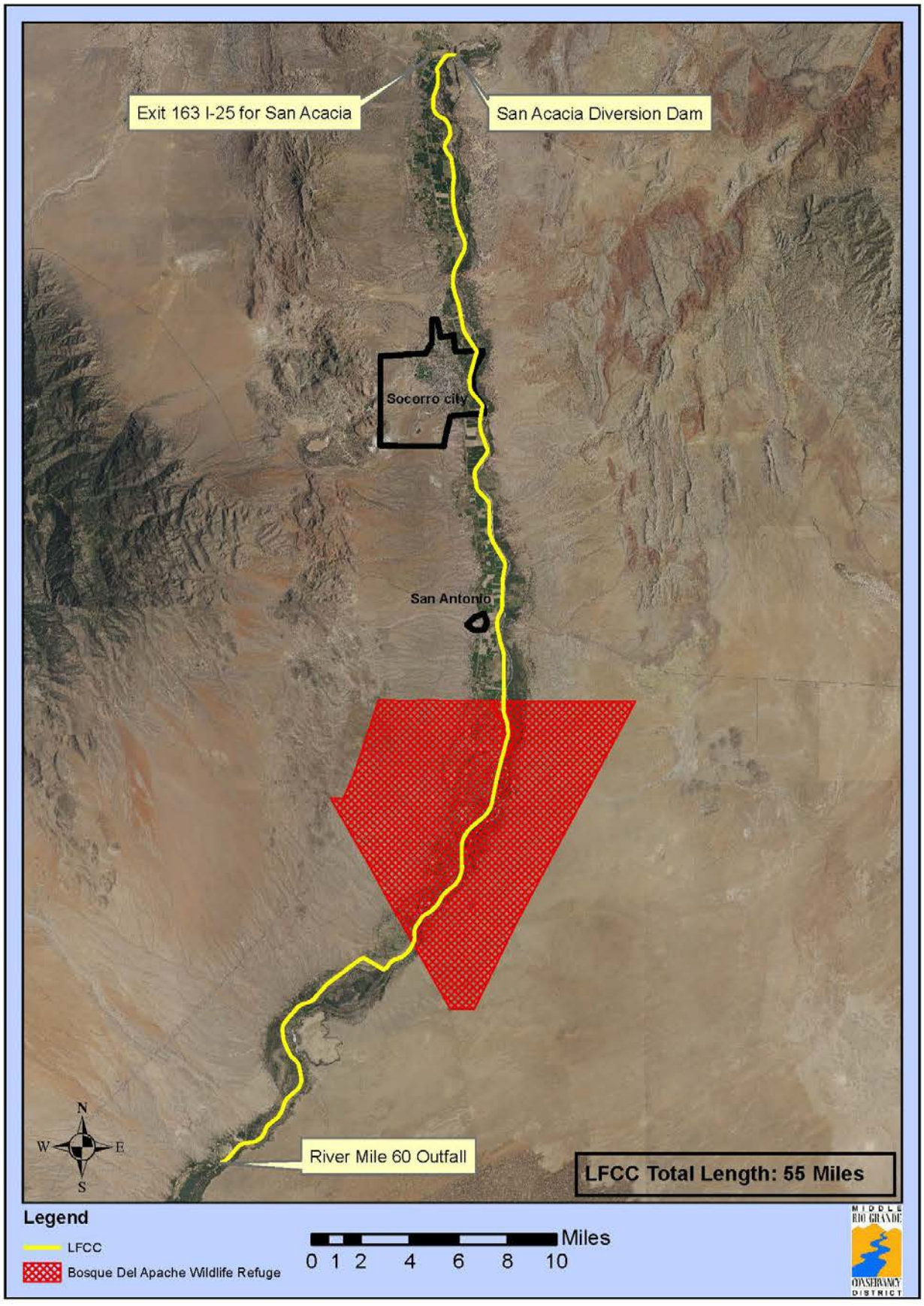
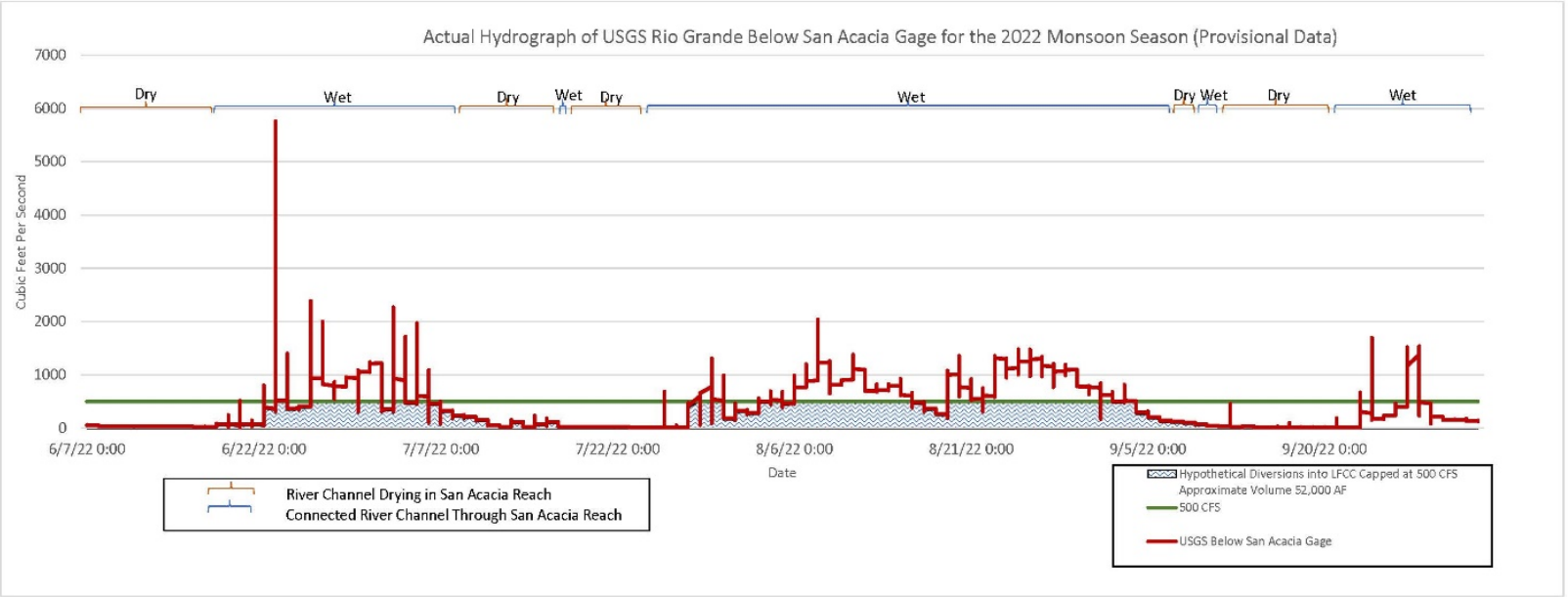

Exit 163 I-25 for San Acacia
San Acacia Diversion Dam
Socorro city
San Antonio
River Mile 60 Outfall
LFCC Total Length: 55 Miles
N
W
E
S
Legend
LFCC
Bosque Del Apache Wildlife Refuge
Miles
0 1 2 4 6 8 10
MIDDLE RIO GRANDE CONSERVANCY DISTRICT

Figure 2


Actual Hydrograph of USGS Rio Grande Below San Acacia Gage for the 2022 Monsoon Season (Provisional Data)
Cubic Feet Per Second
7000
6000
5000
4000
3000
2000
1000
0
Dry
Wet
Dry
Wet
Dry
Wet
Dry
Wet
Dry
Wet
Dry
Wet
6/7/22 0:00
6/22/22 0:00
7/7/22 0:00
7/22/22 0:00
8/6/22 0:00
8/21/22 0:00
9/5/22 0:00
9/20/22 0:00
Date
River Channel Drying in San Acacia Reach
Connected River Channel Through San Acacia Reach
Hypothetical Diversions into LFCC Capped at 500 CFS
Approximate Volume 52,000 AF
500 CFS
USGS Below San Acacia Gage

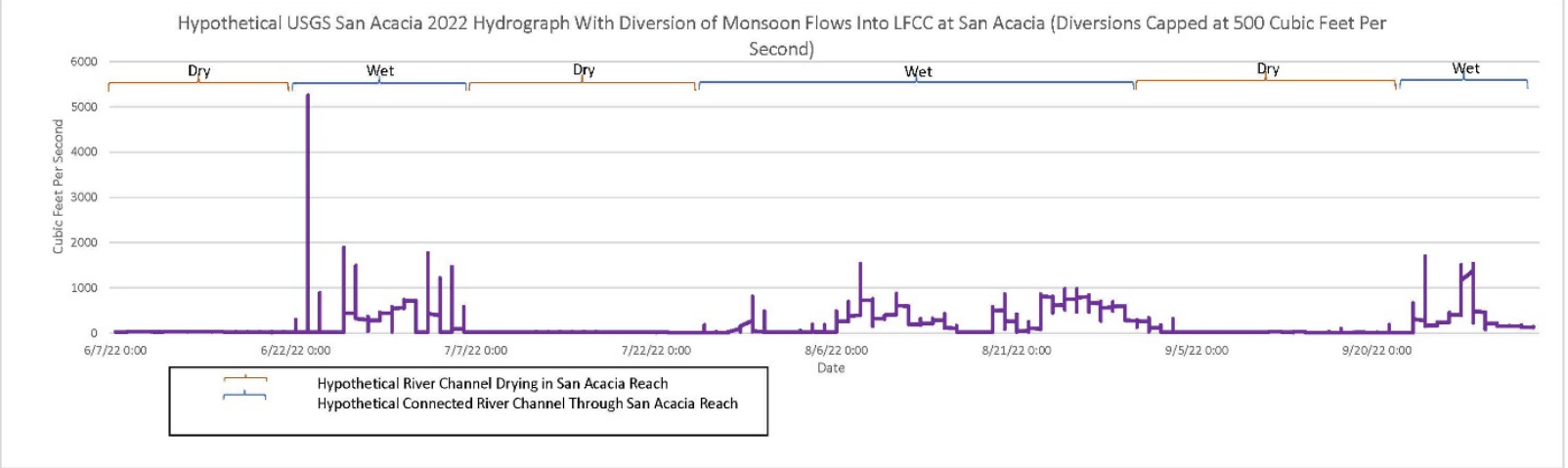
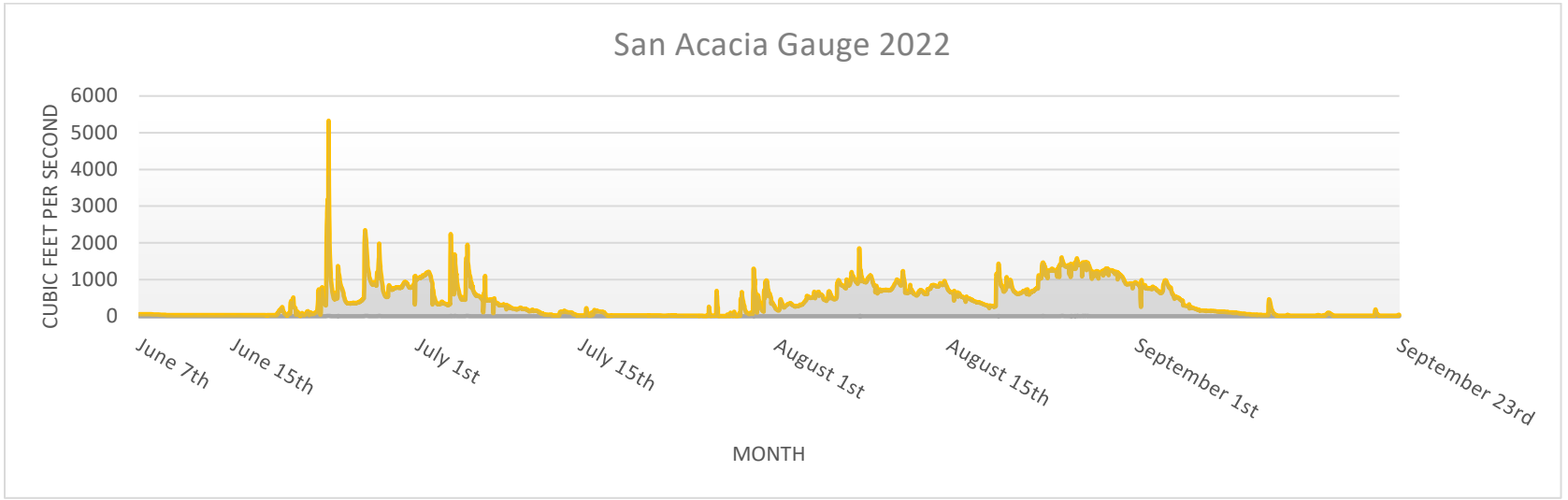
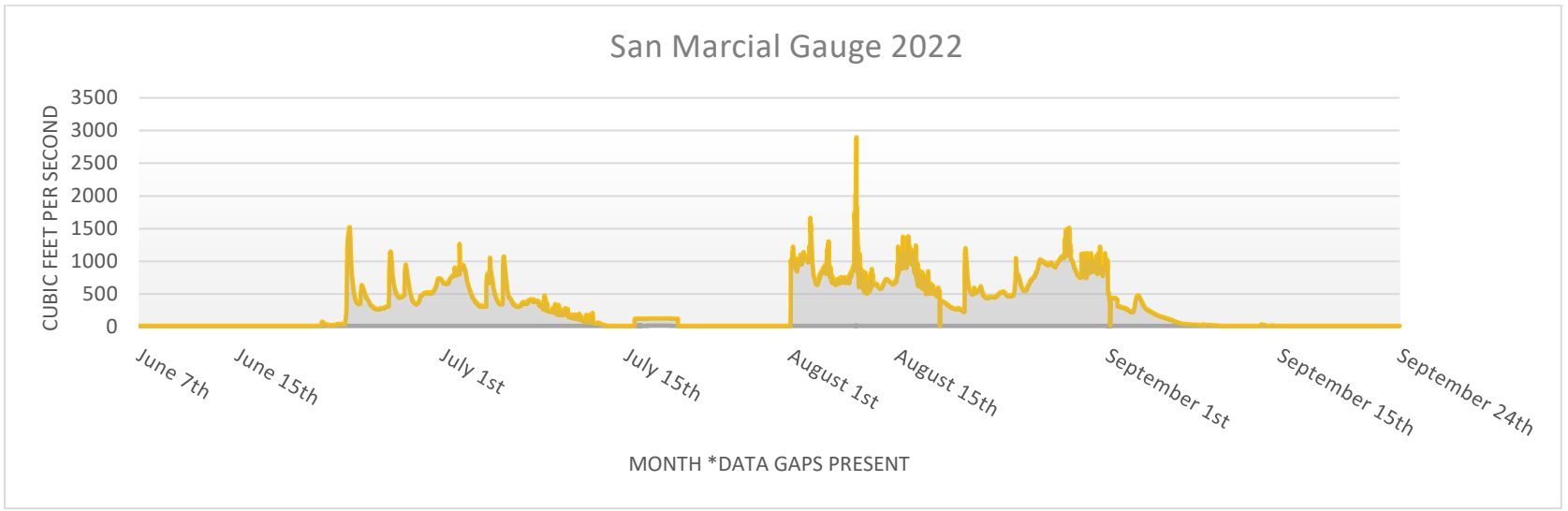

Hypothetical USGS San Acacia 2022 Hydrograph With Diversion of Monsoon Flows Into LFCC at San Acacia (Diversions Capped at 500 Cubic Feet Per Second)
Cubic Feet Per Second
6000
5000
4000
3000
2000
1000
0
Dry
Wet
Dry
Wet
Dry
Wet
6/7/22 0:00
6/22/22 0:00
7/7/22 0:00
7/22/22 0:00
8/6/22 0:00
8/21/22 0:00
9/5/22 0:00
9/20/22 0:00
Date
Hypothetical River Channel Drying in San Acacia Reach
Hypothetical Connected River Channel Through San Acacia Reach

Figure 3


San Acacia Gauge 2022
CUBIC FEET PER SECOND
6000
5000
4000
3000
2000
1000
0
June 7th
June 15th
July 1st
July 15th
August 1st
August 15th
September 1st
September 23rd
MONTH


San Marcial Gauge 2022
CUBIC FEET PER SECOND
3500
3000
2500
2000
1500
1000
500
0
June 7th
June 15th
July 1st
July 15th
August 1st
August 15th
September 1st
September 15th
September 24th
MONTH *DATA GAPS PRESENT

STUDY DESIGN AND METHODS

This study is expected to begin in the spring of 2024 and continue through 2028. A draft monitoring plan(s) will be completed once environmental compliance is provided by the appropriate regulatory agencies. This study design and method section provides the principal elements of the study.

Environmental Compliance

There is no existing environmental compliance in place for use of the LFCC for diversions/conveyance purposes. While the infrastructure itself does not need compliance, the proposed operations will require environmental compliance coverage, including permits required by the National Environmental Policy Act (NEPA), Clean Water Act (CWA), National Historic Preservation Act (NHPA) and Endangered Species Act (ESA). The MRGCD and NMISC will work with the appropriate federal and state regulatory entities to obtain any permits needed. We will also ensure that the Office of the State Engineer is notified and will address their requirements.

LFCC Study - Initial Diversion Scenarios

Diversions into the LFCC for this study will only begin once channel drying in the San Acacia Reach has occurred and the USFWS is satisfied that fish rescue activities are complete. MRGCD will coordinate with USFWS and Reclamation to manage drying of the San Acacia Reach once the spring pulse has subsided and river flows no longer exceed irrigation demand. As in previous years, flows below the SADD will eventually be reduced to the amount of supplemental water provided for ESA purposes as described in the 2016 Biological Opinion. This study will not impact scheduled deliveries of supplemental water. Activities under this study will also have no effect on spring runoff in the San Acacia Reach because diversions will occur after drying below San Acacia. MRGCD will operate the LFCC diversions to study specific scenarios following cessation of RGSM fish rescue activities. A summary of the initial Diversion Scenarios is provided below.

Table 1. Summary of Proposed SADD Operations during the LFCC Study

Scenario	Upstream Condition	Downstream Condition	Diversion Rule	Bypass Rule	Study Purpose
A – default action	Flows arriving at SADD are more than 50 cfs and less than 600 cfs	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 diversion and, as needed, divert for irrigation supply to Socorro main.	Bypass over SADD supplemental water only.	To assess if water conveyance efficiency to EBR is improved by diverting available flows into the LFCC once drying below SADD has occurred. Assess environmental effects in San Acacia reach .
B	Flows arriving at SADD are expected to be greater than 600 cfs and less than 2,200 cfs and is expected to be sustained for more than 24 hours (i.e., Sustained, widespread storms)	River channel will be reconnected to EBR and is expected to remain connected based on upstream conditions for over 24 hours	LFCC diversions stop, if diversions are occurring, and would not resume until river becomes disconnected (operations will return to scenario A)	Bypass all arriving flows over SADD except for irrigation supply to Socorro main. Supplemental water will be suspended until flows return to scenario A.	To assess if this action reduces the expected additional depletions resulting from splitting flows between river channel and LFCC. Assess hydrologic and environmental effects including during the rewetting and redrying period.

Scenario	Upstream Condition	Downstream Condition	Diversion Rule	Bypass Rule	Study Purpose
C	Flows arriving at SADD are expected to be greater than 600 cfs and less than 2,200 cfs and is expected to last for less than 24 hours (i.e., Flashy, localized monsoon event)	River will be fully reconnected to EBR but is not expected to remain connected for over 24 hours based on upstream conditions	LFCC diversions begin or continue up to 500 cfs, less MRGCD irrigation demand at SADD	Bypass arriving flows in excess of any LFCC diversions and irrigation diversions. Supplemental flows suspended until operations return to scenario A.	To maintain LFCC diversions during flashy, short term flow events and to avoid extreme yo-yo effect that may reduce effective water transport. Study the effects of short term splitting of flows and effects on river ecosystem of short term rewetting.
D	Flows arriving at SADD is expected to be greater than 2,200 cfs	River is expected to be fully reconnected to EBR	Flexible operations are being considered in this scenario. Because flows above 2,200 could result in considerable overbanking (and high depletions) diverting to LFCC may result in more water being delivered to EBR. A Diversion and a No Diversion operation will be tested.	All flows in excess of MRGCD irrigation and LFCC diversions, if testing this action, will bypass SADD. Supplemental water will be suspended until operations return to scenario A.	Evaluate if reducing overbanking during high flows, to extent possible, through LFCC diversions results in more effective water deliveries to EBR. Study the effects to river ecosystem when rewetting flows in river are reduced by approximately 500 cfs for longer time period.

Initially, the MRGCD dam tender will operate the LFCC gates to allow up to 200 cfs into the LFCC. MRGCD would initially limit diversion to 200 cfs to ensure that the LFCC is able to safely pass that flow rate. If no problems are identified at 200 cfs, the MRGCD would increase the diversion limit to 300 cfs, then 400 cfs, and then up to 500 cfs as described in the Diversion Rules. A diversion of 500 cfs would be the maximum diversion rate for this study.

Depending on upstream supply arriving from the Belen Division, MRGCD may also divert water into the Socorro Main Canal during monsoon periods to supplement irrigation supply. Diverting monsoon flows for irrigation purposes is a well-established practice throughout the MRGCD. This study proposal does not contemplate modifications to the MRGCD's diversion of monsoon driven flows for the purpose of irrigation.

Modifications to LFCC Structures

The maximum diversion of 500 cfs proposed in this study is well within the original engineered capacity of the LFCC as well as the five (5) gates at the SADD which would be used to divert water into the LFCC. MRGCD will ensure that these gates are functional as part of basic operations and maintenance (O&M) of the facility and will explore options to automate and add telemetry to the heading. MRGCD will do routine inspections of bridges and other infrastructure to ensure that the LFCC can still safely pass the diverted flows, especially during localized rain events. The outfall towards the southern extent of the LFCC at RM 60 is being modified by Reclamation and it is engineered to pass over 700 cfs. The gates at the RM 60 Outfall and the connection to LFCC West will be automated. Through a mass balance evaluation, MRGCD will work with NMISC and USBR to ensure appropriate "drain" flows are delivered to the LFCC West habitat, while allowing the diversion flows in the LFCC to return to the river through the RM 60 Outfall.

Modifications to the LFCC may be required to conduct the study. Vegetation removal is anticipated in some areas. Additionally, updated cross sections of the LFCC may be needed and surveying will be conducted as required.

Monitoring Activities

MRGCD and NMISC will monitor the LFCC, river channel, and groundwater to evaluate the hydrologic changes during the experimental diversion operations. Additionally, remote sensing and other methods will be used to evaluate changes in vegetation along the river channel. Surface/groundwater modeling will be conducted using acquired data to calibrate the water balance and predict hydrologic conditions. The timing and frequency of monitoring is described in more detail below and a monitoring plan will be developed prior to beginning the study.

Hydrologic monitoring

- Hydrologic monitoring downstream of SADD – Flows in the river channel will be monitored using existing USGS gages and supplemented with measurements as needed. Currently, once drying has occurred, the River Eyes hydrologic monitoring program conducts observations only when requested by Reclamation and USFWS. MRGCD and NMISC will obtain monitoring datasets from River Eyes to assist in evaluation of this study.

- Surface water monitoring of LFCC – MRGCD plans to establish and install telemetry on at least 2 new gages in the LFCC. MRGCD will measure the diversion rate into the LFCC at the SADD, the flow within the LFCC at the northern boundary of Bosque del Apache National Wildlife Refuge, and flow in the LFCC as it is returned to the river channel at the River Mile 60 outfall.

- Groundwater monitoring – NMISC, NMBGMR and NM Tech students will conduct a monitoring study of existing NMISC groundwater piezometers at multiple transects throughout the San Acacia reach to determine any changes to groundwater that result from the LFCC diversions.

- Monitoring of diversions along the LFCC will be included in the study. MRGCD and NMISC will perform a mass balance evaluation at these various locations to determine the volume of water that should be returned to the river ("new source"), while accounting for any existing flows present in the LFCC that need to be diverted to the LFCC West habitat or to Bosque del Apache Wildlife Refuge. The study will adhere to any flow requirements for the LFCC West and adjacent wetlands as advised by the ongoing analysis by Reclamation and USFWS. MRGCD will work with the refuge manager to ensure no "new source diversions" are being diverted out of the LFCC for non-Compact delivery purposes. MRGCD will also ensure that no "new source" water is diverted at the Neil Cupp pump station for irrigation purposes.

Species monitoring

- RGSM Monitoring Within the LFCC During Diversions - MRGCD and other partners will monitor for RGSM entrainment within the LFCC following the diversion of flows at SADD. Results from the monitoring will be made available through a final report at the end of the calendar year, documenting the presence of RGSM in the facility and their approximate location at the time of sampling. MRGCD and ISC will work with the appropriate federal agencies to determine the appropriate spatial extent of this monitoring effort within the facility, and potential mitigation efforts needed, should RGSM be found within the LFCC.

Vegetation monitoring

- Monitoring of the riparian vegetation will be accomplished using remote sensing analysis and other methods to evaluate the response of the riparian vegetation to a reduction in the frequency of rewetting events.

Summary

The MRGCD and NMISC intend to conduct a study beginning in 2024 for a period of up to 5 years to evaluate whether limited diversions to the LFCC during the monsoon season can assist with improving water conveyance for Compact deliveries, reduce extensive depletions due to rewetting and drying of the channel in this San Acacia Reach and reduce fish mortalities due to RGSM stranding during repeated drying events in the summer months.

The primary need for this study is to explore how best to reduce the time that New Mexico is in debit under the Rio Grande Compact and/or also under Article VII restrictions. Articles VI and VII of the Rio Grande Compact control New Mexico's ability to store native water in post-1929 dams. Without storage, water managers up and down the river 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, time releases during low water conditions and capitalize on programs intended to create system conservation and demand management.

The MRGCD and NMISC will work in cooperation with the USFWS, Reclamation, and the Middle Rio Grande Endangered Species Collaborative Program as well as nongovernmental organizations and local communities on this study and hope to address any questions from the MRG's many stakeholders. We hope to engage New Mexico Tech and the Bureau of Geology to assist in data collection and analyses and to provide scientific integrity and robustness for this study.