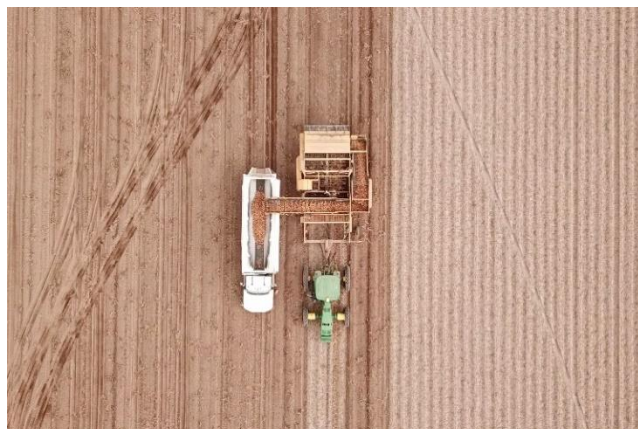


Rio Grande Basin Implementation Plan

VOLUME 2, APPENDIX A: Future Rio Grande Basin Projects

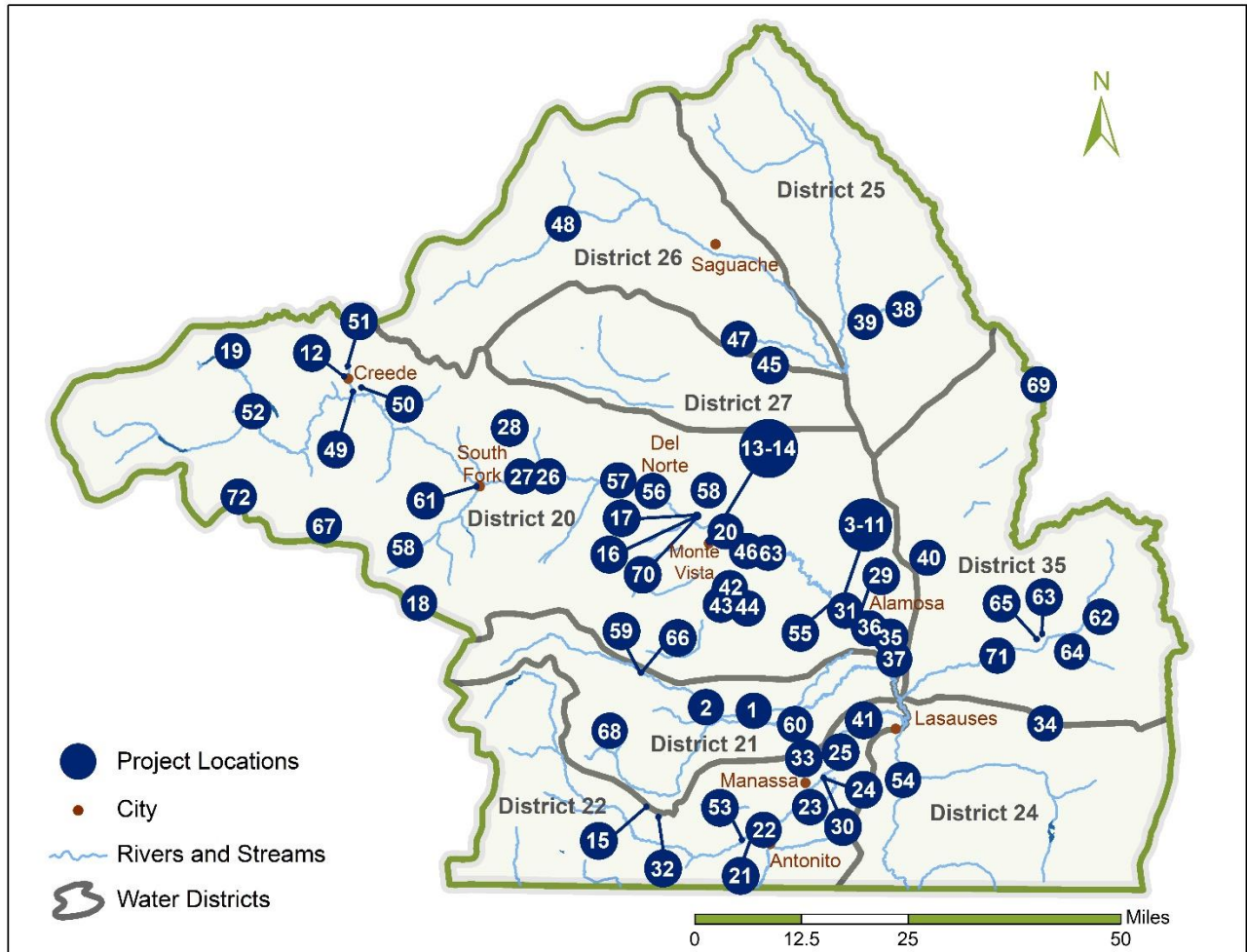
January 2022



Front Cover Photos (clockwise, from top to bottom): Black-necked stilts loafing (Cary Aloia), Potato harvest (Sinjin Eberle), Town of Del Norte (Heather Dutton), Boating the Rio Grande at Lobatos Bridge (Bethany Howell)

Projects List Summary and Map

As part of the Rio Grande Basin Implementation Plan (BIP) Update, BRT partners from across the Basin submitted projects. A total of 72 new projects were submitted, with this document providing summaries of each project. The map below shows the locations of future projects identified during the BIP. An interactive map showing future project locations, photos, and other details can be explored within the BIP Update StoryMap, available at the following link: <https://arcg.is/014DvX>. Additionally, overall project statistics, including total cost, are outlined in Volume 1 of the Rio Grande BIP.



Acronyms

AF	Acre-feet per year
CFS	Cubic feet per second
LF	Linear feet

**All project photos courtesy of Project Proponents.*

Project ID: RG-2020-0001

Project Name: Alamosa River Water Delivery Improvement Project – Phase II

Lead Proponent: Alamosa-La Jara Water Conservancy District

Project Description: Phase II of the Alamosa River Water Delivery Improvement Project will build on Phase I by improving the function of numerous Alamosa River irrigation structures. The project will address issues such as deteriorated head-gates, Parshall flumes, and diversion structures as well as provide radar telemetry and/or automated headgates to ditches on the Alamosa River. The project benefits will be provided to ditches in the Alamosa River Watershed and especially to those located in the Alamosa River Water Conservancy District. Key diversions with the most critical needs will be funded in order to make water delivery more accurate and efficient on the whole river system.



Needs Met:

Agriculture: 60%	M&I: 0%
Env't. & Recreation: 10%	Administration: 30%

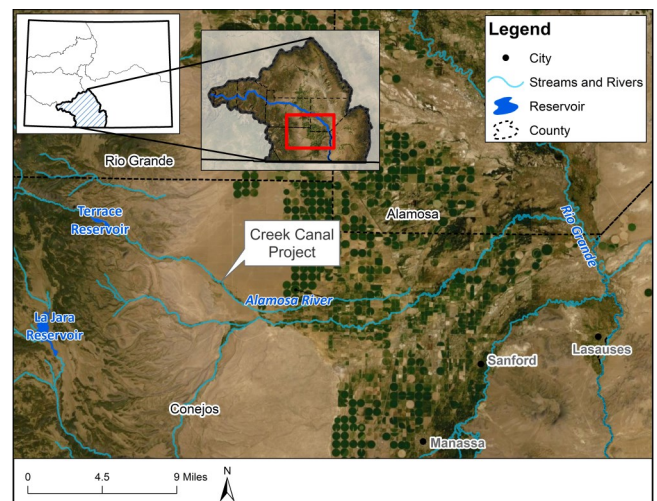
Estimated Cost: \$500,000	Estimated Yield: 0 AF
County: Conejos	Estimated Capacity:

Project Name: Creek Canal Pipeline Project

Lead Proponent: Alamosa-La Jara Water Conservancy District

Project Description: In order to improve efficiency, a pipeline will be installed in the Creek Canal. The ~4,500-foot pipeline will have a maximum flow rate of 50 cfs and will have one outlet with a 10 cfs capacity. The project will result in improved ditch efficiency resulting from reduced evaporative loss, the elimination of conveyance loss, and improved measurement capability. Increased efficiency and measurement capabilities will improve Alamosa River water administration and will allow water managers to meet multi-benefit flow needs more often.

Project ID: RG-2020-0002



Needs Met:

Agriculture: 90%	M&I: 0%
Env't. & Recreation: 0%	Administration: 10%

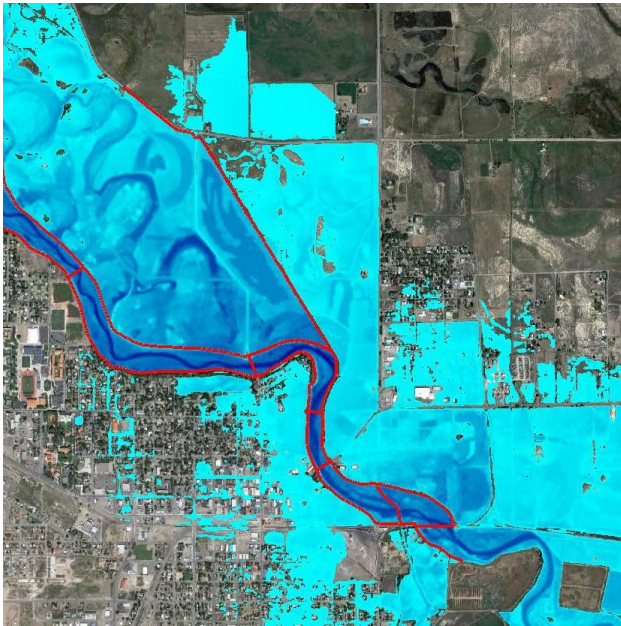
Estimated Cost: \$2,270,000	Estimated Yield: 0 AF
County: Conejos	Estimated Capacity: 50 CFS

Project ID: RG-2020-0003

Project Name: Alamosa Levee Recertification and Revitalization

Lead Proponent: City of Alamosa

Project Description: This is a multi-benefit project on the Rio Grande near Alamosa within the Rio Grande Levee System (RGLS). The project aims to mitigate flood risk, enhance recreational opportunities, improve river function and aquatic health, and improve the basin’s ability to administer water rights as well as Rio Grande Compact delivery obligations. While completing the required work for the levee recertification, the channel would be re-shaped and deepened, allowing for more water conveyance during high-flow events and also improving aquatic habitat. This project will meet multiple needs and provide benefits for City of Alamosa residents, recreationalists, and the Division of Water Resources.



Needs Met:

Agriculture: 5% **M&I:** 60%
Env’t. & Recreation: 30% **Administration:** 5%

Estimated Cost: \$5,000,000	Estimated Yield: 0 AF
County: Alamosa	Estimated Capacity: 21,200 LF

Project Name: Increasing Efficiencies in the Distribution and Collections Systems of Alamosa - Phase 1

Project ID: RG-2020-0004

Lead Proponent: City of Alamosa

Project Description: The City has multiple opportunities to improve efficiency and water quality with water in its collection and distribution systems. These opportunities are phased into three separate projects.

Phase 1: Asbestos Clay and Cast-Iron Water Line Replacement Program

Phase 2: Remote Water Metering Program

Phase 3: Sanitary Sewer Lift Stations



Needs Met:

Agriculture: 0% **M&I:** 95%
Env’t. & Recreation: 0% **Administration:** 5%

Estimated Cost: \$6,573,600	Estimated Yield:
County: Alamosa	Estimated Capacity: 16.6 miles

Project ID: RG-2020-0005

Project Name: Increasing Efficiencies in the Distribution and Collections Systems of Alamosa - Phase 2

Lead Proponent: City of Alamosa

Project Description: The City has multiple opportunities to improve efficiency and water quality with water in its collection and distribution systems. These opportunities are phased into three separate projects.
Phase 1: Asbestos Clay and Cast-Iron Water Line Replacement Program
Phase 2: Remote Water Metering Program
Phase 3: Sanitary Sewer Lift Stations



Estimated Cost: \$800,000	Estimated Yield: 134 AF
County: Alamosa	Estimated Capacity: 1.9 miles

Needs Met:

Agriculture: 0%	M&I: 95%
Env't. & Recreation: 0%	Administration: 5%

Project Name: Increasing Efficiencies in the Distribution and Collections Systems of Alamosa - Phase 3

Project ID: RG-2020-0006

Lead Proponent: City of Alamosa

Project Description: The City has multiple opportunities to improve efficiency and water quality with water in its collection and distribution systems. These opportunities are phased into three separate projects.
Phase 1: Asbestos Clay and Cast-Iron Water Line Replacement Program
Phase 2: Remote Water Metering Program
Phase 3: Sanitary Sewer Lift Stations



Estimated Cost: \$3,135,000	Estimated Yield: 0 AF
County: Alamosa	Estimated Capacity:

Needs Met:

Agriculture: 0%	M&I: 95%
Env't. & Recreation: 0%	Administration: 5%

Project ID: RG-2020-0007

Project Name: Producing a Master Infrastructure Plan for the City of Alamosa - Phase 1

Lead Proponent: City of Alamosa

Project Description: The City of Alamosa (City) has grown quite a lot over the past few years, and as growth occurs to the west, existing downstream infrastructure will be less able to accommodate new growth. The extent of this issue is unknown, and a system-wide study is needed for both the collection and distribution systems. Without a Master Infrastructure Plan, the City will face having to either slow or halt all development to the west or deal with potential consequences to existing services. This would have disastrous effects on the City and local economy. The first phase of this project has just been put out to bid, and will analyze the collection (sewer) system. The second phase will analyze the distribution system (water). The final phase will analyze the storm sewer needs.



Needs Met:

Agriculture: 0%	M&I: 95%
Env't. & Recreation: 0%	Administration: 5%

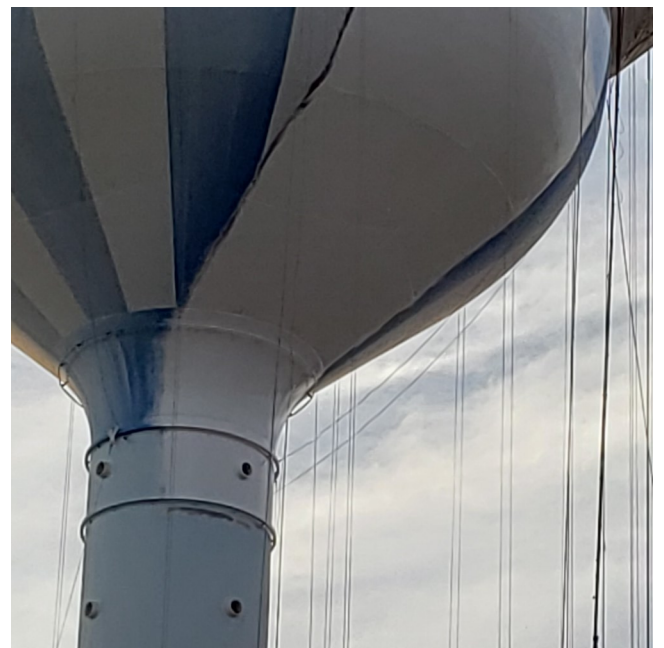
Estimated Cost: \$119,000	Estimated Yield: NA
County: Alamosa	Estimated Capacity: NA

Project Name: Producing a Master Infrastructure Plan for the City of Alamosa - Phase 2

Project ID: RG-2020-0008

Lead Proponent: City of Alamosa

Project Description: The City of Alamosa (City) has grown quite a lot over the past few years, and as growth occurs to the west, existing downstream infrastructure will be less able to accommodate new growth. The extent of this issue is unknown, and a system-wide study is needed for both the collection and distribution systems. Without a Master Infrastructure Plan, the City will face having to either slow or halt all development to the west or deal with potential consequences to existing services. This would have disastrous effects on the City and local economy. The first phase of this project has just been put out to bid, and will analyze the collection (sewer) system. The second phase will analyze the distribution system (water). The final phase will analyze the storm sewer needs.



Needs Met:

Agriculture: 0%	M&I: 95%
Env't. & Recreation: 0%	Administration: 5%

Estimated Cost: \$150,000	Estimated Yield: NA
County: Alamosa	Estimated Capacity: NA

Project ID: RG-2020-0009

Project Name: Producing a Master Infrastructure Plan for the City of Alamosa - Phase 3

Lead Proponent: City of Alamosa

Project Description: The City of Alamosa (City) has grown quite a lot over the past few years, and as growth occurs to the west, existing downstream infrastructure will be less able to accommodate new growth. The extent of this issue is unknown, and a system-wide study is needed for both the collection and distribution systems. Without a Master Infrastructure Plan, the City will face having to either slow or halt all development to the west or deal with potential consequences to existing services. This would have disastrous effects on the City and local economy. The first phase of this project has just been put out to bid, and will analyze the collection (sewer) system. The second phase will analyze the distribution system (water). The final phase will analyze the storm sewer needs.



Needs Met:

Agriculture: 0% **M&I:** 95%
Env't. & Recreation: 0% **Administration:** 5%

Estimated Cost: \$200,000	Estimated Yield: NA
County: Alamosa	Estimated Capacity: NA

Project Name: Studying Existing Turf Irrigation and Implementing Efficiencies in the City of Alamosa - Phase 1

Project ID: RG-2020-0010

Lead Proponent: City of Alamosa

Project Description: Approximately 50% of Alamosa's water usage goes towards outdoor irrigation. The recently completed Alamosa Water Efficiency Plan set two goals to make our outdoor water usage more efficient. Phase 1 will complete a feasibility study to look at the irrigation and water usage of city parks, the back 9 holes of Cattails golf course, and potentially Alamosa State University. This study would propose and design more efficient irrigation systems, reduced waste, etc. Based on the above study, Phase 2 would replace irrigation infrastructure and implement irrigation scheduling/timing/updates to Systems.



Needs Met:

Agriculture: 0% **M&I:** 75%
Env't. & Recreation: 20% **Administration:** 5%

Estimated Cost: \$50,000	Estimated Yield: NA
County: Alamosa	Estimated Capacity: NA

Project ID: RG-2020-0011

Project Name: Studying Existing Turf Irrigation and Implementing Efficiencies in the City of Alamosa - Phase 2

Lead Proponent: City of Alamosa

Project Description: Approximately 50% of Alamosa's water usage goes towards outdoor irrigation. The recently completed Alamosa Water Efficiency Plan set two goals to make our outdoor water usage more efficient. Phase 1 will complete a feasibility study to look at the irrigation and water usage of city parks, the back 9 holes of Cattails golf course, and potentially Alamosa State University. This study would propose and design more efficient irrigation systems, reduced waste, etc. Based on the above study, Phase 2 would replace irrigation infrastructure and implement irrigation scheduling/timing/updates to Systems.



Needs Met:

Agriculture: 0% **M&I:** 75%
Env't. & Recreation: 20% **Administration:** 5%

Estimated Cost: \$164,500	Estimated Yield: 20 AF
County: Alamosa	Estimated Capacity: 135 AF

Project Name: City of Creede Collection System I&I Improvement Project – Phase 1c

Project ID: RG-2020-0012

Lead Proponent: City of Creede

Project Description: Pursuant to the City of Creede's 2015 Discharge Permit, the city is required to address high inflow and infiltration (I&I (i.e., leaky pipes)) and elevated levels of cadmium and zinc. Evidence suggests that the city's wastewater collection system (sewer system) has been found to contain leaks throughout. The Collection System I&I Improvement Project Summary memorandums prepared by SGM, Inc. outline the process, recommendations and budgetary considerations to systematically replace Creede's sewer system using a 3-phased approach.



Needs Met:

Agriculture: 0% **M&I:** 85%
Env't. & Recreation: 10% **Administration:** 5%

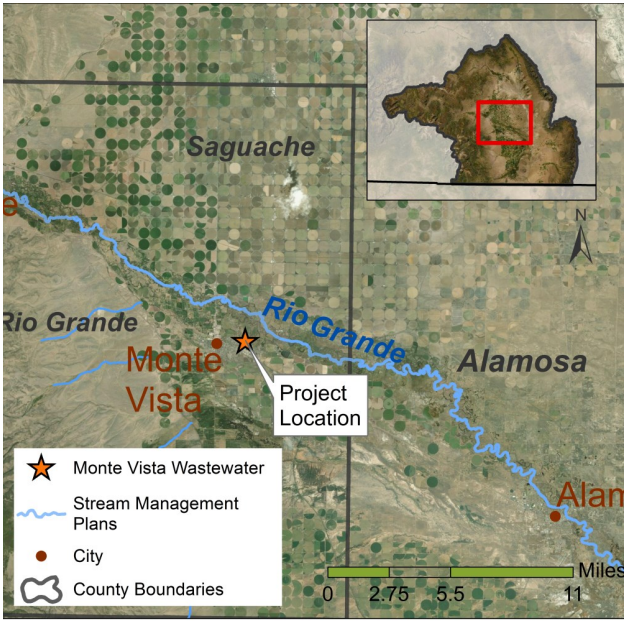
Estimated Cost: \$685,768	Estimated Yield: 0 AF
County: Mineral	Estimated Capacity: 2,500 LF

Project ID: RG-2020-0013

Project Name: Monte Vista Municipal Wastewater Treatment Plant Improvement Project

Lead Proponent: City of Monte Vista

Project Description: The City of Monte Vista’s recently completed Master Plan (MP) identified municipal water infrastructure repair and improvement needs. The MP identified the need to rehabilitate the City’s existing wastewater treatment system and lagoons. The City of Monte Vista’s WWTP Improvement Project will implement the recommended improvements to the City’s municipal water treatment system. The project will involve construction of a new treatment plant with a mechanical treatment system and the decommission of the existing lagoons, thereby bring all flows to the single new plant.



Needs Met:	
Agriculture: 0%	M&I: 80%
Env't. & Recreation: 10%	Administration: 10%

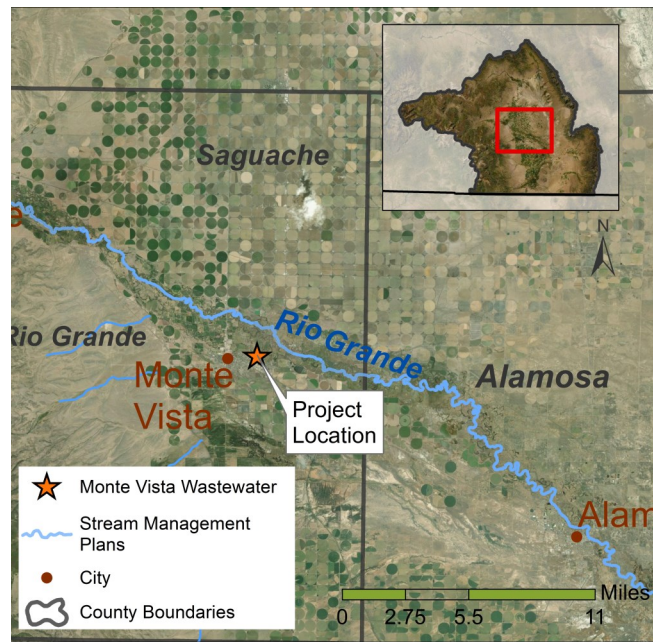
Estimated Cost: \$27,000,000	Estimated Yield: 0 AF
County: Rio Grande	Estimated Capacity:

Project Name: Monte Vista Water Distribution Improvement Project - Phase 1

Project ID: RG-2020-0014

Lead Proponent: City of Monte Vista

Project Description: The City of Monte Vista’s recently completed Master Plan (MP) identified municipal water infrastructure repair and improvement needs. Multiple repair and improvement needs were identified related to the City’s existing water supply distribution network. Phase 1 of the Monte Vista Water Distribution Improvement Project will implement the identified projects to improve the City’s municipal water distribution system. Existing asbestos and cast iron water distribution lines need to be replaced because of their age and lack of durability. The project will result in the replacement of approximately 1.5 miles of existing water lines with new lines. The project will increase water use efficiency by reducing leakage and water system loss.



Needs Met:	
Agriculture: 0%	M&I: 90%
Env't. & Recreation: 0%	Administration: 10%

Estimated Cost: \$5,000,000	Estimated Yield: 1 AF
County: Rio Grande	Estimated Capacity: 1.5 miles

Project ID: RG-2020-0015



Project Name: Conejos Ranchland Initiative

Lead Proponent: Colorado Open Lands

Project Description: Conejos Ranchland Initiative properties are some of the oldest ranches and permanent settlements in all of Colorado, encompassing approximately 6 miles of active channels on the Alamosa River, Conejos River and Rio San Antonio along with many oxbows and associated wetland areas. This project will establish conservation easements on these historic ranches, protecting historically significant agricultural landscapes and ecosystems while furthering numerous federal and state policies. Additionally, these easements will have a degree of flexibility that allows landowners and water management districts to work together to ensure the long-term viability of the area’s water resources.

Needs Met:

Agriculture: 50% **M&I:** 0%
Env’t. & Recreation: 10% **Administration:** 40%

Estimated Cost: \$3,000,000	Estimated Yield: 9,000 AF
County: Conejos	Estimated Capacity: 9,000 AF

Project Name: Helping Communities Understand the Values of Private Land Conservation Using Environmental Social Goals

Lead Proponent: Colorado Open Lands

Project Description: The need to increase public participation in environmental decision-making is receiving renewed attention at all levels of government. However, there are few approaches to evaluating these processes that address the question: What are we getting from public participation? To answer this question, the project will use a framework that evaluates the outcomes of participatory processes based on a set of “social” goals including: 1) educating the public; 2) incorporating public values, assumptions, and preferences into decision making; 3) increasing the substantive quality of decisions; 4) fostering trust in institutions; 5) reducing conflict; and 6) making decisions cost-effectively.

Project ID: RG-2020-0016



Needs Met:

Agriculture: 40% **M&I:** 15%
Env’t. & Recreation: 15% **Administration:** 30%

Estimated Cost: \$10,000,000	Estimated Yield: NA
County: NA	Estimated Capacity: 2,500 people

Project ID: RG-2020-0017

Project Name: San Luis Valley River & Aquifer Recovery & Enhancement (RARE) Partnership Implementation

Lead Proponent: Colorado Open Lands

Project Description: This project works to address the decline in both the confined and unconfined aquifers by collaborating with private landowners and partners to reduce groundwater consumptive use through flexible and multi-benefit solutions. Colorado Open Lands will engage with the Rio Grande Headwaters Land Trust (RiGHT) and other major water entities in the San Luis Valley to first identify interested landowners whose wells have a substantial impact on aquifer levels, then work towards mitigation using approaches such as conservation easements, water covenants, or leases.



Needs Met:	
Agriculture: 50%	M&I: 0%
Env't. & Recreation: 10%	Administration: 40%

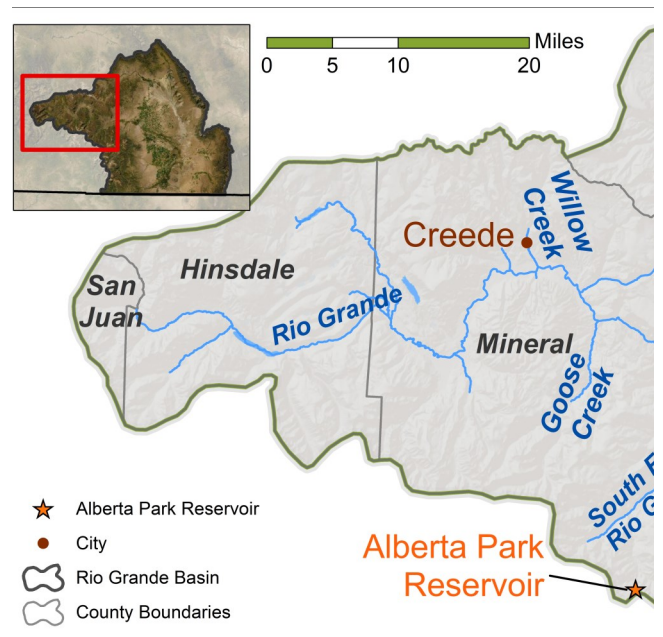
Estimated Cost: \$10,000,000	Estimated Yield: 9,000 AF
County: NA	Estimated Capacity: 9,000 AF

Project Name: Alberta Park Reservoir Dam Improvement Project

Project ID: RG-2020-0018

Lead Proponent: Colorado Parks and Wildlife

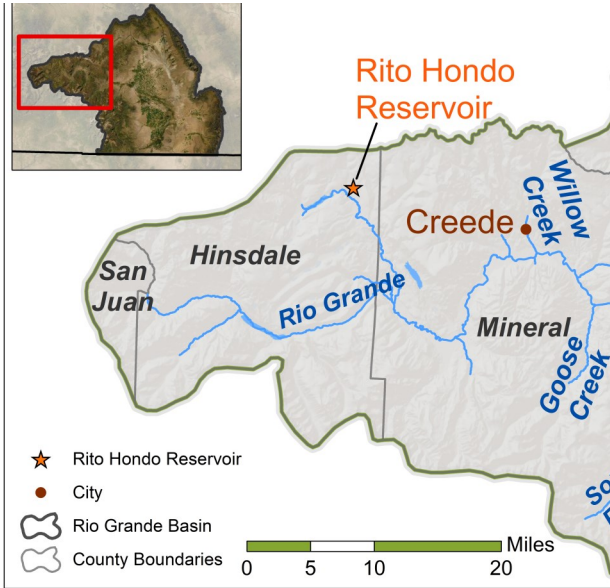
Project Description: Alberta Park Reservoir is a pre-compact reservoir located in Mineral County south of Highway 160 near the top of the watershed on an unnamed tributary of Pass Creek. The reservoir's decreed uses include storage and irrigation. The Alberta Reservoir dam is currently classified as conditionally satisfactory, but future improvements are needed. The extent of the problem is not known but Colorado Parks and Wildlife (CPW) suspects that a full replacement of the dam may be necessary. CPW continues to monitor the dam and will conduct geotechnical studies in summer 2021 to evaluate options.



Needs Met:	
Agriculture: 0%	M&I: 0%
Env't. & Recreation: 60%	Administration: 40%

Estimated Cost: \$7,500,000	Estimated Yield: 0 AF
County: Mineral	Estimated Capacity: 597.5 AF

Project ID: RG-2020-0019



Project Name: Rito Hondo Reservoir Dam Improvement Project

Lead Proponent: Colorado Parks and Wildlife

Project Description: Rito Hondo Reservoir is an on-channel reservoir in Hinsdale County. The reservoir’s decreed uses include recreation (angling) and storage/release of water for fisheries and habitat both in the reservoir and downstream. When Colorado Parks and Wildlife (CPW) last refilled the reservoir, the dam experienced widespread saturation and seepage which resulted in CPW drawing it down to prevent the possibility of failure. The reservoir has now been empty since July, 2000. The State Engineer’s Office reclassified the dam as a high hazard with a zero storage restriction. The new classification changed the design criteria to be more protective of life and property below the dam. The dam safety team is currently assessing the issues and developing a potential path forward which will likely involve the construction of a new dam and spillway.

Needs Met:

Agriculture: 0%	M&I: 0%
Env’t. & Recreation: 60%	Administration: 40%

Estimated Cost: \$8,500,000	Estimated Yield: 561 AF
County: Hinsdale	Estimated Capacity: 561 AF

Project Name: Billings Ditch Rehabilitation Project

Project ID: RG-2020-0020

Lead Proponent: Colorado Rio Grande Restoration Foundation

Project Description: The Billings Ditch irrigates 3,403 acres of agricultural land. Its headgate and diversion dam are in poor condition, facing issues including sediment and debris accumulation, high maintenance needs, difficulty diverting full decree at low flows, and channel and bank instability. This project will address these issues through the replacement of the structure’s headgate and diversion dam as well as bank stabilization and riparian vegetation restoration. The diversion dam will be a grouted rock structure with a low flow channel for improved sediment transport. A sluice gate adjacent to the new headgate and trash rack will also be installed to mitigate debris issues. The measurement flume will also be realigned to improve measurement accuracy.



Needs Met:

Agriculture: 60%	M&I: 0%
Env’t. & Recreation: 30%	Administration: 10%

Estimated Cost: \$500,000	Estimated Yield: 238 AF
County: Rio Grande	Estimated Capacity: 2,600 LF

Project ID: RG-2020-0021

Project Name: Chacon Ditch No. 1 Improvement Project

Lead Proponent: Colorado Rio Grande Restoration Foundation

Project Description: The Chacon Ditch No. 1 is located on the Conejos River upstream of Guadalupe and supplies water to 286 acres of agricultural land. The structure functions poorly. Includes streambank stabilization, riparian revegetation, and headgate replacement at the Chacon Ditch No. 1. Project benefits include bank stabilization and improved natural channel processes, riparian vegetation condition, and water quality.



Needs Met:

Agriculture: 60% **M&I:** 0%
Env't. & Recreation: 30% **Administration:** 10%

Estimated Cost: \$75,000	Estimated Yield: 20 AF
County: Conejos	Estimated Capacity: 150 LF

Project Name: Conejos River at Guadalupe - Stream and Riparian Restoration

Project ID: RG-2020-0022

Lead Proponent: Colorado Rio Grande Restoration Foundation

Project Description: During a high flow event in spring 2019, the Conejos River near the town of Guadalupe experienced significant erosion and lateral migration. Erosion and migration are now threatening the integrity of County Road H as well as the County Road 13 bridge, which is just downstream. If additional erosion and/or migration occurs, the road and bridge may be damaged and, during a high flow event, the river will flood Guadalupe. This project will improve floodplain connection, natural channel processes, riparian vegetation condition, and water quality through streambank stabilization and riparian revegetation. Project benefits include improved floodplain connectivity, natural channel processes, riparian vegetation condition, and water quality.



Needs Met:

Agriculture: 10% **M&I:** 25%
Env't. & Recreation: 55% **Administration:** 10%

Estimated Cost: \$100,000	Estimated Yield: 0 AF
County: Conejos	Estimated Capacity: 825 LF

Project ID: RG-2020-0023

Project Name: Conejos River Partnership
Project – Phase II

Lead Proponent: Colorado Rio Grande Restoration Foundation

Project Description: Phase II of the Conejos River Partnership Project (CRPP) will build on Phase I by improving the function of two Conejos River irrigation diversion structures while simultaneously providing aquatic habitat and riparian benefits. The project will address issues at the Mecitos Ditch and William Stewart Co Irrigation Ditch, which irrigate 1,459 and 981 acres of agricultural land, respectively. To address these issues, this project will improve the diversions and headgates for both ditches and restore an estimated 313 linear feet of stream adjacent to the Mecitos Ditch and 622 linear feet adjacent to the William Stewart Ditch, for a total of 935 linear feet.



Needs Met:

Agriculture: 40% **M&I:** 0%
Env't. & Recreation: 40% **Administration:** 20%

Estimated Cost: \$588,500	Estimated Yield: 218 AF
County: Conejos	Estimated Capacity: 935 LF

Project Name: Cottonwood Ditch Improvement Project

Project ID: RG-2020-0024

Lead Proponent: Colorado Rio Grande Restoration Foundation

Project Description: The Cottonwood Ditch is located on the Conejos River just downstream of the Rio San Antonio confluence and supplies water to 543 acres of agricultural land. This project will include headgate replacement and diversion improvements, including bank stabilization and riparian revegetation. Project benefits include bank stabilization, enhanced aquatic habitat, and improved natural channel processes, riparian vegetation condition, and water quality.



Needs Met:

Agriculture: 60% **M&I:** 0%
Env't. & Recreation: 30% **Administration:** 10%

Estimated Cost: \$175,000	Estimated Yield: 0 CFS
County: Conejos	Estimated Capacity: 200 LF

Project ID: RG-2020-0025

Project Name: East Bend Ditch Improvement Project

Lead Proponent: Colorado Rio Grande Restoration Foundation

Project Description: The East Bend Ditch is located on the lower Conejos River and supplies water to 265 acres of agricultural land. This project involves bank stabilization and riparian revegetation surrounding the diversion dam. It will also include installation of a trash rack and adjustments to the headgate and adjacent sluice gate. Project benefits include bank stabilization, enhanced aquatic habitat, and improved natural channel processes, riparian vegetation condition, and water quality.



Needs Met:

Agriculture: 60% **M&I:** 0%
Env't. & Recreation: 30% **Administration:** 10%

Estimated Cost: \$85,000	Estimated Yield: 0 CFS
County: Conejos	Estimated Capacity: 430 LF

Project Name: Ehrowitz Ditch Improvement Project

Project ID: RG-2020-0026

Lead Proponent: Colorado Rio Grande Restoration Foundation

Project Description: The Ehrowitz Ditch diverts water off of the Rio Grande to supply water to 287 acres of agricultural land. The Ehrowitz Ditch diversion is in poor condition and the streambanks surrounding the structure are unstable. The project will result in an improved diversion dam capable of delivering water at all flows while maintaining fish and boat passage. The project will also include stream restoration surrounding the structure. This project is a partnership between the Colorado Rio Grande Restoration Foundation and Ehrowitz Ditch shareholders.



Needs Met:

Agriculture: 50% **M&I:** 0%
Env't. & Recreation: 40% **Administration:** 10%

Estimated Cost: \$100,000	Estimated Yield: 59 AF
County: Rio Grande	Estimated Capacity: 450 LF

Project ID: RG-2020-0027

Project Name: Minor Ditch Improvement Project

Lead Proponent: Colorado Rio Grande Restoration Foundation

Project Description: The Minor Ditch diverts water off of the Rio Grande to supply water to 1,006 acres of agricultural land. The Minor Ditch headgate is in poor condition and the streambanks surrounding the structure are unstable. This project will address channel migration through streambank stabilization and improve the Minor Ditch headgate while maintaining fish and boat passage. This project is a partnership between the Colorado Rio Grande Restoration Foundation and the Minor Ditch shareholders.



Needs Met:

Agriculture: 50%	M&I: 0%
Env't. & Recreation: 40%	Administration: 10%

Estimated Cost: \$150,000	Estimated Yield: 99 AF
County: Rio Grande	Estimated Capacity: 400 LF

Project Name: Rio Grande National Forest Wet Meadow Restoration Project - Phase 2

Project ID: RG-2020-0028

Lead Proponent: Colorado Rio Grande Restoration Foundation

Project Description: This project is a partnership between the US Forest Service and the Colorado Rio Grande Restoration Foundation to improve the ecological health and function of high elevation wet meadow habitat across the Rio Grande National Forest. The project will result in the restoration of 10 stream miles and 400 acres of riparian and wetland habitat through low-tech stream restoration methods and riparian revegetation. Restoration efforts will benefit watershed health, riparian corridors, and native aquatic species such as the Rio Grande Cutthroat Trout. The project will engage volunteers and community members throughout project monitoring and implementation.



Needs Met:

Agriculture: 0%	M&I: 0%
Env't. & Recreation: 100%	Administration: 0%

Estimated Cost: \$60,000	Estimated Yield: 0 AF
County: NA	Estimated Capacity: 400 acres

Project ID: RG-2020-0029

Project Name: Rio Grande Riparian Stabilization Project - Phase 6

Lead Proponent: Colorado Rio Grande Restoration Foundation

Project Description: The Colorado Rio Grande Restoration Foundation will partner with private landowners along the Rio Grande to complete targeted restoration including channel shaping and the installation of rock barbs and woody root wads to improve aquatic habitat, stabilize streambanks, and reconnect the river to the floodplain and riparian areas. This work will build upon previous phases with the overall goal of improving the health and resilience of the Rio Grande in Alamosa and Rio Grande Counties.



Needs Met:

Agriculture: 0% **M&I:** 0%
Env't. & Recreation: 100% **Administration:** 0%

Estimated Cost: \$600,000	Estimated Yield: 0 AF
County: NA	Estimated Capacity: 10,560 LF

Project Name: Trogillio Ditch Improvement Project

Project ID: RG-2020-0030

Lead Proponent: Colorado Rio Grande Restoration Foundation

Project Description: The Trogillio Ditch is located on the Conejos River near the Rio San Antonio confluence and supplies water to 254 acres of agricultural land. The structure functions poorly. This project includes Trogillio Ditch diversion and headgate replacement, streambank stabilization, and riparian revegetation both upstream and downstream of the diversion. Project benefits include bank stabilization, enhanced aquatic habitat, and improved natural channel processes, riparian vegetation condition, and water quality.



Needs Met:

Agriculture: 60% **M&I:** 0%
Env't. & Recreation: 30% **Administration:** 10%

Estimated Cost: \$250,000	Estimated Yield: 30 AF
County: Conejos	Estimated Capacity: 350 LF

Project ID: RG-2020-0031

Project Name: Westside Ditch Improvement Project

Lead Proponent: Colorado Rio Grande Restoration Foundation

Project Description: The Westside Ditch diverts water off of the Rio Grande to supply water to 1,898 acres of agricultural land. The ditch's diversion dam functions poorly and creates a barrier to boat passage as well as fish passage at low flows. Additionally, limited flow capacity at the diversion disrupts natural sediment transport regimes and contributes to water conveyance challenges for Colorado's water administrators during high water periods. To address these issues, this project will replace the existing diversion dam and incorporate fish and boat passage. Having adequate flow capacity at this structure would improve sediment transport processes and help Colorado meet its Rio Grande Compact water delivery obligations. The project would enhance recreational boating opportunities and improve overall river health.



Needs Met:

Agriculture: 40%	M&I: 20%
Env't. & Recreation: 40%	Administration: 0%

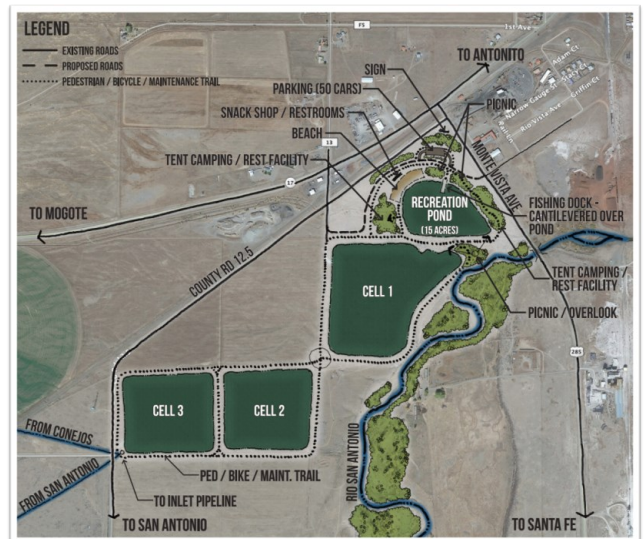
Estimated Cost: \$250,000	Estimated Yield: 149 AF
County: Alamosa	Estimated Capacity: 350 LF

Project Name: Conejos Cooperative Storage Project

Lead Proponent: Conejos Water Conservancy District

Project Description: The Conejos Water Conservancy District is seeking to study and ultimately build a new water storage facility within the Conejos River System, specifically to benefit the water users on the Rio San Antonio.

Project ID: RG-2020-0032



Needs Met:

Agriculture: 50%	M&I: 10%
Env't. & Recreation: 15%	Administration: 25%

Estimated Cost: \$6,000,000	Estimated Yield: 1,900 AF
County: Conejos	Estimated Capacity: 1,900 AF

Project ID: RG-2020-0033

Project Name: Manassa Land and Irrigation Conveyance Project

Lead Proponent: Conejos Water Conservancy District

Project Description: Manassa Land and Irrigation Company is seeking to make improvements to its conveyance and delivery system to increase efficiency. Improvements will include an analysis of existing conveyance ditches, recommended structural improvements, and implementation of identified improvements. Improvements are expected to include pipelines and other efficiency improvements.



Needs Met:

Agriculture: 75% **M&I:** 10%
Env't. & Recreation: 5% **Administration:** 10%

Estimated Cost: \$8,000,000	Estimated Yield: 1,400 AF
County: Conejos	Estimated Capacity: 22,000 AF

Project Name: Upper Culebra Watershed Assessment – Project Implementation

Project ID: RG-2020-0034

Lead Proponent: Costilla County Conservancy District

Project Description: This stakeholder driven watershed assessment encompasses the Upper Culebra Basin, from the headwaters on Culebra Peak to the valley at San Acacio. Environmental challenges facing the watershed include extended drought, forest fire potential, extensive beetle kill, water quality impairments, endangered species, degraded habitat, and other anthropogenic impacts. The UCWA will assess the ecological condition of the Upper Culebra watershed by collecting, compiling, and analyzing a wide variety of data. This data will provide partners with a resource to prioritize, secure funding for, and implement projects to improve the health and resiliency of the watershed.



Needs Met:

Agriculture: 25% **M&I:** 25%
Env't. & Recreation: 25% **Administration:** 25%

Estimated Cost: \$10,000,000	Estimated Yield: 1,000 AF
County: Costilla	Estimated Capacity: 1,000 AF

Project ID: RG-2020-0035

Project Name: Alamosa NWR – Mumm Well Restorations

Lead Proponent: Ducks Unlimited, Inc.

Project Description: This Project involves restoring natural water movement and hydrologic conditions on the Alamosa NWR by modifying and removing water infrastructure around Mumm Well. Previously installed infrastructure, including a ditch and levee, restricts natural sheetflow and impounds water, causing habitat that was historically seasonal wetlands and uplands to be replaced with undesired perennial wetland species. Removal of these structures, as well as increasing the capacity of a culvert under a necessary service road, will restore natural sheetflow and allow natural vegetation to reestablish without compromising accessibility.



Needs Met:

Agriculture: 0% **M&I:** 0%
Env't. & Recreation: 100% **Administration:** 0%

Estimated Cost: \$325,000	Estimated Yield: 0 AF
County: Rio Grande	Estimated Capacity: 1,070 acres

Project Name: Alamosa NWR – Rio Grande Riparian Restorations

Project ID: RG-2020-0036

Lead Proponent: Ducks Unlimited, Inc.

Project Description: Riparian habitat on Alamosa National Wildlife Refuge is in a degraded condition due to hydrologic alterations, past livestock grazing, and current browsing by native ungulates such as elk. It is also suspected that due to changes in average annual snowpack, groundwater levels adjacent to the Rio Grande are often insufficient to maintain adequate hydrological conditions within the root zones of willows and cottonwoods. This Project involves installing water diversion structures out of the Chicago Ditch to maintain adequate hydrologic conditions within the root zone of willow and cottonwood, thus promoting their growth, spread, and persistence. Elk exclosures will also be installed to reduce browsing pressure.



Needs Met:

Agriculture: 0% **M&I:** 0%
Env't. & Recreation: 100% **Administration:** 0%

Estimated Cost: \$150,000	Estimated Yield: 0 AF
County: Rio Grande	Estimated Capacity: 100 acres

Project ID: RG-2020-0037

Project Name: Alamosa NWR – Units C1, T, O and Restorations

Lead Proponent: Ducks Unlimited, Inc.

Project Description: The hydrology in the Alamosa National Wildlife Refuge has been highly altered both prior to and after refuge establishment. This project will install new water control/diversion structures within Units C1, T, O, and P, substantially improving their ability to provide water to natural wetland areas. These changes will also improve the quantity and quality of wetland vegetative conditions within these areas. Along with these additions, the elimination of irrigation on natural upland habitats will result in the reestablishment of upland vegetation communities and a long-term decrease in invasive plants, reducing the amount of labor and financial resources currently devoted to invasive plant control.



Needs Met:

Agriculture: 0% **M&I:** 0%
Env't. & Recreation: 100% **Administration:** 0%

Estimated Cost: \$175,000	Estimated Yield: 0 AF
County: Rio Grande	Estimated Capacity: 1,700 acres

Project Name: Baca NWR – Crestone Creek Riparian Restorations

Project ID: RG-2020-0038

Lead Proponent: Ducks Unlimited, Inc.

Project Description: This Project will construct additional elk exclosures along Crestone Creek to reduce browsing pressure from the large populations of elk present within the Baca National Wildlife Refuge. These exclosures will help protect and restore riparian habitat by allowing species such as willow and cottonwood to better establish while also reducing the need for other more intensive elk management techniques.



Needs Met:

Agriculture: 0% **M&I:** 0%
Env't. & Recreation: 100% **Administration:** 0%

Estimated Cost: \$60,000	Estimated Yield: 0 AF
County: Rio Grande	Estimated Capacity: 1 stream mile

Project ID: RG-2020-0039

Project Name: Baca NWR – Wet Meadow Restorations

Lead Proponent: Ducks Unlimited, Inc.

Project Description: Installation of new water control/diversion structures in appropriate locations will facilitate the delivery of water directly into the upper areas of natural wetland flowpaths, resulting in greater efficiency of water use (more water being delivered to natural wetland areas) and improved habitat conditions, including vegetation quality and decreased invasive species presence. This, along with the removal of water control/diversion structures and ditches located on higher ground (natural upland habitat), will allow areas to revert to a vegetation community typified by upland habitat, benefitting upland wildlife species.



Needs Met:

Agriculture: 0% **M&I:** 0%
Env't. & Recreation: 100% **Administration:** 0%

Estimated Cost: \$450,000	Estimated Yield: 0 AF
County: Rio Grande	Estimated Capacity: 8,000 acres

Project Name: McIntire Springs – Riparian Restorations

Project ID: RG-2020-0040

Lead Proponent: Ducks Unlimited, Inc.

Project Description: This project proposes the rehabilitation of all priority wells on the Blanca Wildlife Habitat Area and the re-construction of critical water delivery infrastructure. Ducks Unlimited will work with BLM, CPW and local constituents to develop a plan of restoration, perform the requisite engineering and permitting activities, and, within three years, perform construction to rehabilitate the infrastructure. Project activities include re-drilling and re-casing wells such that they meet permitted production limits; installation of appropriate measurement devices; re-construction and armoring of well outlets, emplacement of anti-erosion measures, recontouring of ditch runs and banks, and installation of modern water management infrastructure.



Needs Met:

Agriculture: 0% **M&I:** 0%
Env't. & Recreation: 100% **Administration:** 0%

Estimated Cost: \$400,000	Estimated Yield: 0 AF
County: Rio Grande	Estimated Capacity: 500 acres

Project ID: RG-2020-0041

Project Name: McIntire-Simpson – Riparian Wetland Restorations

Lead Proponent: Ducks Unlimited, Inc.

Project Description: Water control and management is required to ensure the continued health and sustainability of wetland and riparian habitats found on the McIntire-Simpson property. Degraded infrastructure is threatening the ability to support both species sought by federal wildlife managers and recreational waterfowling. DU, in collaboration with BLM and local stakeholders, will review, design, permit and construct water infrastructure rehabilitations such that decreed water rights are put to the most efficient use in creating riparian and wetland habitat. Project activities will include re-construction of water diversion and conveyance infrastructure, installation of required measurement structures, fencing, and earth-moving deemed necessary to increase habitat functionality on the site.



Needs Met:

Agriculture: 0% **M&I:** 0%
Env't. & Recreation: 100% **Administration:** 0%

Estimated Cost: \$250,000	Estimated Yield: 0 AF
County: Conejos	Estimated Capacity: 250 acres

Project Name: Monte Vista NWR – Spring Creek Restoration

Project ID: RG-2020-0042

Lead Proponent: Ducks Unlimited, Inc.

Project Description: The historic channel of Spring Creek has experienced significant incision, in some places to a depth of over 2 meters. Ditches in the area (Sanderson Ditch, Spring Creek Ditch) also contribute similar challenges to hydrology. Restoration of a meandering, shallow creek and removal of the ditches (i.e., filling them in) will greatly reduce the drainage of surface and sub-surface water in the entire area, improving vegetative conditions. Reduced drainage and improved water holding capability within the floodplain and adjacent wetland areas will improve water efficiency and vegetation quality for nesting waterfowl. Finally, the installation of a new water diversion structure and measurement flume will give refuge staff the flexibility to direct water into Unit 9 or maintain water flows into Spring Creek and its associated floodplain.



Needs Met:

Agriculture: 0% **M&I:** 0%
Env't. & Recreation: 100% **Administration:** 0%

Estimated Cost: \$500,000	Estimated Yield: 0 AF
County: Rio Grande	Estimated Capacity: 2.5 stream miles

Project ID: RG-2020-0043

Project Name: Monte Vista NWR – Units 14, 15 and 16 Restoration

Lead Proponent: Ducks Unlimited, Inc.

Project Description: Control structures for units 14, 15 and 16, which facilitate water delivery into the natural wetland flowpath, are old, dilapidated, and under-sized, resulting in inadequate flows of water. Consequently, much of the water backs-up, flows into a ditch, and by-passes the flowpath completely. Replacing the existing water control structure with one that allows all the water to flow into the natural wetland flowpath will result in greater efficiency of water use. In addition to this replacement, removal of the system of levees within the area will eliminate the flooding of former upland habitats and restore sheetflow and hydrological connectivity. As a result, the quality and extent of desirable short-emergent vegetation for nesting waterfowl and other waterbirds within the natural wetland flowpath will improve.



Needs Met:

Agriculture: 0% **M&I:** 0%
Env't. & Recreation: 100% **Administration:** 0%

Estimated Cost: \$500,000	Estimated Yield: 0 AF
County: Rio Grande	Estimated Capacity: 3,860 acres

Project Name: Monte Vista NWR – Units 18 and 24 Restoration

Project ID: RG-2020-0044

Lead Proponent: Ducks Unlimited, Inc.

Project Description: Natural wetland flowpaths are compromised by dilapidated levees and numerous small drains. These drains now severely impact groundwater levels and cause the drainage of surface water flows in adjacent natural wetland areas. Consequently, it has become extremely difficult to maintain adequate surface and sub-surface hydrologic conditions. Removal of the surrounding drains will eliminate the continued drainage of surface water flows in desired locations. Additionally, removal of sections of small water delivery ditches will eliminate the flooding of natural upland habitats, allowing these areas to revert to historic vegetative communities (upland shrub). Bowen drain will be maintained and improved, allowing what is known as Bowen Pond (an important white-faced ibis breeding location) to remain.



Needs Met:

Agriculture: 0% **M&I:** 0%
Env't. & Recreation: 100% **Administration:** 0%

Estimated Cost: \$250,000	Estimated Yield: 0 AF
County: Rio Grande	Estimated Capacity: 700 acres

Project ID: RG-2020-0045

Project Name: Northern SLV Water Table Study on Conserved Lands

Lead Proponent: Ducks Unlimited, Inc.

Project Description: Utilizing existing piezometers, an aquatic study will be initiated in the Closed Basin area on public and conserved lands along current and historic drainages between RLSWA and the Baca NWR in 2020 and 2021. Locations for future piezometers will be determined during the 2020-21 field effort to help understand annual water table fluctuations, the connectivity of the system, and the impact of different water uses. This understanding will help guide how agencies and landowners can work together to help maintain a higher and more stable water table. This study would also help to show how different management strategies in Sub-district #1 are affecting water tables across land ownership.



Needs Met:

Agriculture: 40% **M&I:** 0%
Env't. & Recreation: 40% **Administration:** 20%

Estimated Cost: \$50,000	Estimated Yield: NA
County: Saguache	Estimated Capacity: NA

Project Name: Rio Grande State Wildlife Area – Wetlands and Water Restoration

Project ID: RG-2020-0046

Lead Proponent: Ducks Unlimited, Inc.

Project Description: This Project will improve water control infrastructure efficiency and effectiveness, enhancing and restoring 80 acres of wetland habitats across the Rio Grande State Wildlife Area. Current infrastructure is difficult to maintain, in poor condition, and is poorly designed. Primary objectives include increasing the amount of shallowly flooded habitat for migrating waterbirds and wildlife, improving waterfowl hunting opportunities, and increasing the health of wetlands for a variety of wildlife including species of concern and threatened and endangered species.



Needs Met:

Agriculture: 0% **M&I:** 0%
Env't. & Recreation: 100% **Administration:** 0%

Estimated Cost: \$325,000	Estimated Yield: 0 AF
County: Rio Grande	Estimated Capacity: 80 acres

Project ID: RG-2020-0047

Project Name: Russell Lakes State Wildlife Area
– Wetlands and Water Restoration

Lead Proponent: Ducks Unlimited, Inc.

Project Description: This project is the second and final phase of a project located on the RLSWA, which is a mitigation site for the Closed Basin Project and managed by CPW. The first phase was completed in 2016 and created shallowly flooded wetlands that have been utilized by a wide variety of birds. A total of 650 acres are included within this project’s scope, which incorporates the confluence of the 3 branches of the historic Russell Creek drainages, wetlands, and associated upland habitat. The primary objective is to increase available resources for a majority of priority waterfowl species through a more efficient use of water resources in the late winter, spring, and early summer.



Needs Met:

Agriculture: 0% **M&I:** 0%
Env’t. & Recreation: 100% **Administration:** 0%

Estimated Cost: \$325,000	Estimated Yield: 0 AF
County: Saguache	Estimated Capacity: 80 acres

Project Name: Upper Saguache Creek Bank Stabilization and Restoration

Project ID: RG-2020-0048

Lead Proponent: Ed Nielsen

Project Description: The landowner aims to complete targeted restoration including channel shaping and the installation of rock barbs and woody root wads to improve aquatic habitat, stabilize streambanks, and reconnect the river to the floodplain and riparian areas. The work will reduce erosion and increase alluvial water storage, resulting in improved water quality and sustained base flows in the Creek. This work will build upon previous restoration work on the Creek with the goal of improving the health and resilience of Saguache Creek while reducing landowner maintenance.



Needs Met:

Agriculture: 50% **M&I:** 0%
Env’t. & Recreation: 50% **Administration:** 0%

Estimated Cost: \$350,000	Estimated Yield: 0 AF
County: Saguache	Estimated Capacity: 800 LF

Project ID: RG-2020-0049



Project Name: Lower Willow Creek Floodplain Stream Restoration, Habitat Enhancement and Recreational Development Project

Lead Proponent: Headwaters Alliance

Project Description: HWA has selected a Design Firm to create a 60% design for restoration and reclamation work on the full reach of the lower Willow Creek floodplain. This design will attend to regulatory requirements related to legacy mining impacts, stabilize stream banks to ensure floodplain connectivity, revegetate the riparian corridor, and improve water quality to support Brown trout in lowest stretch of reach, resulting in an ecologically functioning floodplain. Recreational use will also be a key aspect to create a non-motorized use only trail from town to the Rio Grande. This project will also maintain existing water rights and seek to protect and integrate key City municipal water system infrastructure where possible.

Needs Met:

Agriculture: 0% **M&I:** 20%
Env't. & Recreation: 75% **Administration:** 5%

Estimated Cost: \$1,200,000	Estimated Yield: 0 AF
County: Mineral	Estimated Capacity: 1.7 miles

Project Name: Mineral County Water Use Project

Project ID: RG-2020-0050

Lead Proponent: Headwaters Alliance

Project Description: There is an absence of land and water use planning in Mineral County and an associated lack of data. This project seeks to better inform water use and water contribution to the Rio Grande across Mineral County (both main stem and South Fork of the Rio Grande) by pulling together existing documentation and modeling data. Additional needs will be identified upon evaluation of the above. Strategies for obtaining further data will likely include the Rio Grande Tributary Stream Flow Project.



Needs Met:

Agriculture: 10% **M&I:** 40%
Env't. & Recreation: 40% **Administration:** 10%

Estimated Cost: \$65,000	Estimated Yield: NA
County: Mineral	Estimated Capacity: 561,920 acres

Project ID: RG-2020-0051



Project Name: North Creede Stream Stability and Flood Mitigation

Lead Proponent: Headwaters Alliance

Project Description: Headwaters Alliance will be releasing an RFP requesting designs for improvements along the North Creede reach of the main stem of Willow Creek from just above the flume at the north end of Creede to above the confluence of East and West Willow Creek. This will be part of the Comprehensive Willow Creek Watershed Planning Project, a multi-partner project funded largely by CWCB and administered by Headwaters Alliance.

Needs Met:

Agriculture: 0% **M&I:** 40%
Env't. & Recreation: 50% **Administration:** 10%

Estimated Cost: \$475,000	Estimated Yield: 0 AF
County: Mineral	Estimated Capacity: 0.5 miles

Project Name: Upper Rio Grande Tributary Flow Volume Project

Project ID: RG-2020-0052

Lead Proponent: Headwaters Alliance

Project Description: This Project will install an updated and operational stream gage on Willow Creek to collect stream flow data. Future project scoping includes planning and implementation of stream gages on other key tributaries in the Upper Rio Grande Watershed, providing valuable data to inform water management and education.



Needs Met:

Agriculture: 0% **M&I:** 0%
Env't. & Recreation: 75% **Administration:** 25%

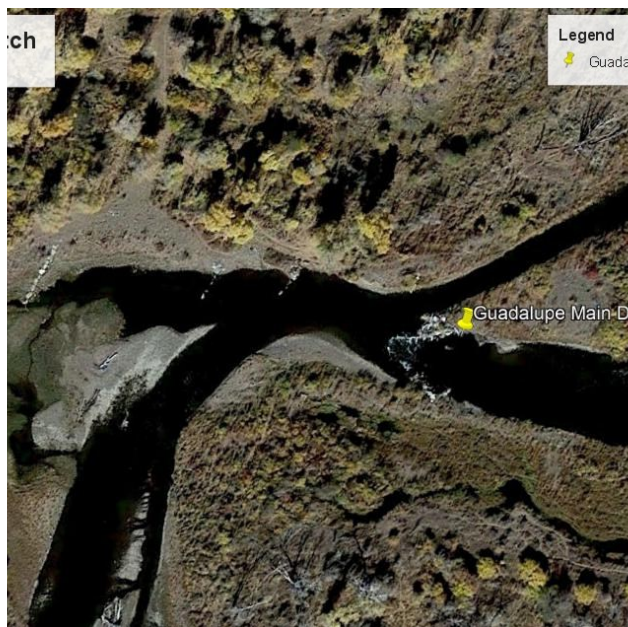
Estimated Cost: \$96,000	Estimated Yield: NA
County: Mineral	Estimated Capacity: NA

Project ID: RG-2020-0053

Project Name: Mefford Ranch Bank Stabilization/Stream Restoration

Lead Proponent: Mefford Ranch

Project Description: Stabilize outer bank on a 90 degree bend on the Conejos River approximately 200 yds upstream of the Guadalupe Ditch feeder channel by constructing 4 barbs along the outer bank of the sharp bend. As noted in the Conejos Stream Management Plan, the Guadalupe Ditch feeder channel (Priority No. 1) will be bypassed by the river if bank erosion continues. Stream restoration upstream and downstream of the bend will also be undertaken to improve reach stability and fish habitat. The river had been historically dredged leaving high berms (now failing) that prevent the river from accessing the rivers natural flood plain. Reconnecting the river to its floodplain will help to reduce future bank erosion on the bend and create low flow fish habitat. Low flow fish habitat will help mitigate future effects of climate change as the Basin continues to see below-average precipitation.



Needs Met:

Agriculture: 60%	M&I: 0%
Env't. & Recreation: 40%	Administration: 0%

Estimated Cost: \$75,000	Estimated Yield: 0 AF
County: Conejos	Estimated Capacity: 2,640 LF

Project Name: Rio Grande Natural Area – Rangeland Analysis Platform (RAP) Assessment

Lead Proponent: Salazar Rio Grande del Norte Center at Adams State University

Project Description: Utilize a peer reviewed method to assess riparian and upland riparian habitat within the Rio Grande Natural Area.

Project ID: RG-2020-0054



Needs Met:

Agriculture: 20%	M&I: 0%
Env't. & Recreation: 80%	Administration: 0%

Estimated Cost: \$25,000	Estimated Yield: NA
County: NA	Estimated Capacity: NA

Project ID: RG-2020-0055

Project Name: Water Education Initiative:
Phase II

Lead Proponent: Salazar Rio Grande del Norte
Center at Adams State University

Project Description: Water Education at Adams State University has a vital role to play for both students and the community by offering for-credit water courses and developing new ways of reaching learners of all ages to enhance community water knowledge. As Phase I moves forward, project proponents will seek to build upon successes and explore new ways of educating about the many dimensions and challenges of water, including how to optimize virtual learning.



Needs Met:

Agriculture: 25% **M&I:** 25%
Env't. & Recreation: 25% **Administration:** 25%

Estimated Cost: \$100,000	Estimated Yield: NA
County: NA	Estimated Capacity: NA

Project Name: Farmers Union Canal Headgate
Automation Project

Project ID: RG-2020-0056

Lead Proponent: San Luis Valley Irrigation District

Project Description: The San Luis Valley Irrigation District owns the water rights associated with the Farmers Union Canal which services 62,000 acres within the closed basin area of the San Luis Valley near Center, Colorado. The headgate of the canal is located on the North Branch of the Rio Grande approximately 6 miles east of Del Norte, Colorado. The District has planned on automating the headgates of the canal as similar large canals within the area on the Rio Grande have done to increase headgate diversion efficiency and help meet agricultural, environmental, recreational and supply/demand goals in this area.



Needs Met:

Agriculture: 55% **M&I:** 5%
Env't. & Recreation: 20% **Administration:** 20%

Estimated Cost: \$39,000	Estimated Yield: 595 AF
County: Rio Grande	Estimated Capacity: 800 CFS

Project ID: RG-2020-0057

Project Name: North Branch Splitter Rehabilitation Project

Lead Proponent: San Luis Valley Irrigation District

Project Description: The San Luis Valley Irrigation District owns the diversion dam and headgate structure that splits the North Branch of the Rio Grande from the main channel of the Rio Grande located near Del Norte, Colorado. The North Branch Splitter structure services the surface water rights owned by the Farmers Union Canal and some smaller ditches that are located downstream of this structure. The District would like to replace the diversion dam and headgate structure to help meet agricultural, environmental, recreational and supply/demand goals on the North Branch of the Rio Grande.



Needs Met:

Agriculture: 55% **M&I:** 5%
Env't. & Recreation: 20% **Administration:** 20%

Estimated Cost: \$1,200,000	Estimated Yield: 892 AF
County: Rio Grande	Estimated Capacity: 1,200 CFS

Project Name: Shaw Reservoir Rehabilitation

Lead Proponent: San Luis Valley Water Conservancy District

Project ID: RG-2020-0058

Project Description: The project includes rehabilitation of the Shaw Reservoir Feeder Ditch and headgate, which were damaged in the West Fork Complex Fire, upgrading the reservoir outlet works, lining the outlet pipe, and adding automated measurement and controls. This will protect the ability for this pre-compact reservoir and extremely popular recreation asset to fill and operate safely, with greater flexibility. The project is a partnership with SLVWCD, BLM, and Trout Unlimited.



Needs Met:

Agriculture: 5% **M&I:** 25%
Env't. & Recreation: 60% **Administration:** 10%

Estimated Cost: \$370,000	Estimated Yield: 400 CFS
County: Mineral	Estimated Capacity: 680 AF

Project ID: RG-2020-0059

Project Name: Terrace Reservoir Outlet Works
Analysis and Repair- Phase II

Lead Proponent: Terrace Irrigation Company

Project Description: This project involves lining, repairing or the possible replacement of the Terrace Reservoir outlet pipeline.

Testing and Analysis done in Phase I identified three scenarios—cost estimates will depend on the results of ongoing monitoring and analysis done by engineers. The State Dam Safety Inspector is requiring The Terrace Irrigation Company to retain an Engineering firm that specializes in reservoir tunnel pipelines to perform an inspection of the existing outlet works pipe in the dam at the Terrace Reservoir and prepare an analysis describing alternatives to mitigate the corrosion.



Needs Met:

Agriculture: 70%	M&I: 10%
Env't. & Recreation: 0%	Administration: 20%

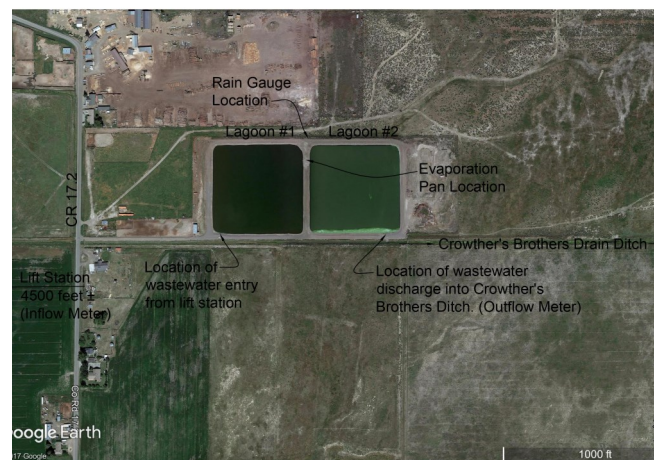
Estimated Cost: \$4,500,000	Estimated Yield: 0 AF
County: Conejos	Estimated Capacity: 15,182 AF

Project Name: Town of La Jara Wastewater Treatment Facility Project

Lead Proponent: Town of La Jara

Project Description: The existing wastewater treatment facilities for the Town of La Jara include two facultative lagoons with no mechanical aeration equipment. The ponds were designed in 1970 to have a water depth of 5 feet and a detention time of 50 days for each pond. The discharge permit authorizes La Jara to discharge treated wastewater from the facility through Outfall 001A into the Crowthers Brother's Ditch. The Town received a Notice of Violation/Cease and Desist Order – DO190826-1, for exceeding allowable limits for BOD, TSS, Flow Rate and E. coli. This project would consist of dredging the lagoons and installing a mechanical aeration system and disinfection equipment.

Project ID: RG-2020-0060



Needs Met:

Agriculture: 0%	M&I: 90%
Env't. & Recreation: 0%	Administration: 10%

Estimated Cost: \$1,541,250	Estimated Yield: 0 AF
County: Conejos	Estimated Capacity: 0 AF

Project ID: RG-2020-0061



Project Name: Town of South Fork Municipal Water Infrastructure Improvements – Phase 2

Lead Proponent: Town of South Fork

Project Description: This project will result in the development of an updated Master Plan (MP) for the Town of South Fork municipal water system. An updated MP is needed to reflect recently completed projects, including private well and water system acquisitions, as well as future infrastructure improvement and water acquisition needs. The Town recently acquired private water providers and incorporated some of those providers into the Town’s central municipal water system. However, the need for additional water supplies was identified and quantified. The updated MP will describe the additional water rights acquisitions needed to satisfy current and future municipal demands as well as physical infrastructure improvements required to develop a robust and sustainable water system for the Town of South Fork.

Needs Met:

Agriculture: 0%	M&I: 95%
Env’t. & Recreation: 0%	Administration: 5%

Estimated Cost: \$680,000	Estimated Yield: 0 AF
County: Rio Grande	Estimated Capacity: 354 AF

Project Name: Indian Creek Ditch Project

Lead Proponent: Trinchera Irrigation Company

Project Description: This Project will Install a 48” PVC pipe in the existing Indian Creek Ditch, which runs from West Indian Creek to Mountain Home Reservoir. The pipeline would be approximately 3,285 feet long and help prevent and mitigate the impact of possible flooding.

Project ID: RG-2020-0062



Needs Met:

Agriculture: 70%	M&I: 0%
Env’t. & Recreation: 20%	Administration: 10%

Estimated Cost: \$435,000	Estimated Yield: 317 AF
County: Costilla	Estimated Capacity: 900 AF

Project ID: RG-2020-0063

Project Name: Levy Diversion and Headgate Rehabilitation Project

Lead Proponent: Trinchera Irrigation Company

Project Description: This project would consist of the repair or replacement of a 50' x 2' concrete diversion structure and replacement of two 36" manual headgates and two 48" manual headgates with mechanical automated headgates. These existing diversion and headgates service the Levy Diversion. The improved diversion would increase overall function and reduce maintenance needs. Automated headgates would increase diversion efficiency and reduce maintenance by automatically adjusting for diurnal and other flow fluctuations.



Needs Met:

Agriculture: 75%	M&I: 0%
Env't. & Recreation: 0%	Administration: 25%

Estimated Cost: \$127,812	Estimated Yield: 208 AF
County: Costilla	Estimated Capacity:

Project Name: Mountain Home Reservoir Spillway Project

Project ID: RG-2020-0064

Lead Proponent: Trinchera Irrigation Company

Project Description: This project involves filling the washed out area below the Mountain Home Reservoir Spillway with riprap. The area to be filled is approximately by feet, or ~ acres. The washout area is eroding, creating a possible dam safety concern. This project will prevent erosion and mitigate risks associated with the dam.



Needs Met:

Agriculture: 80%	M&I: 0%
Env't. & Recreation: 0%	Administration: 20%

Estimated Cost: \$10,500	Estimated Yield: 0 AF
County: Costilla	Estimated Capacity: 2 acres

Project ID: RG-2020-0065

Project Name: Ute Creek Parshall Flume Project



Lead Proponent: Trinchera Irrigation Company
Project Description: This project involves the fabrication of an 8 foot Parshall Flume or similar structure along with all associated hardware to measure flows in Ute Creek. This stream gage will improve water administration in Ute Creek and will help water users plan irrigation water usage more efficiently.

Needs Met:

Agriculture: 80% **M&I:** 0%
Env't. & Recreation: 0% **Administration:** 20%

Estimated Cost: \$17,500	Estimated Yield: 0 AF
County: Costilla	Estimated Capacity: 0 AF

Project Name: Alamosa River Instream Flow Restoration

Project ID: RG-2020-0066

Lead Proponent: Trout Unlimited

Project Description: The Alamosa River Watershed is a critical tributary in the Rio Grande Basin, providing water for people and farms and ranches. In the upper watershed a mining disaster has led to toxic runoff that severely impacted the watershed. In response there has been an enormous effort to restore the watershed and a master plan was developed. In the master plan, in-stream flow restoration was identified as a top priority. This project will seek water rights acquisitions and leases to fill a permanently dedicated 2,000 acre-feet of storage space in Terrace Reservoir, to be used for non-irrigation season flow restoration. Releasing water at this time will benefit the environment and recreational fisheries, but also recharge groundwater into the aquifer.



Needs Met:

Agriculture: 0% **M&I:** 0%
Env't. & Recreation: 100% **Administration:** 0%

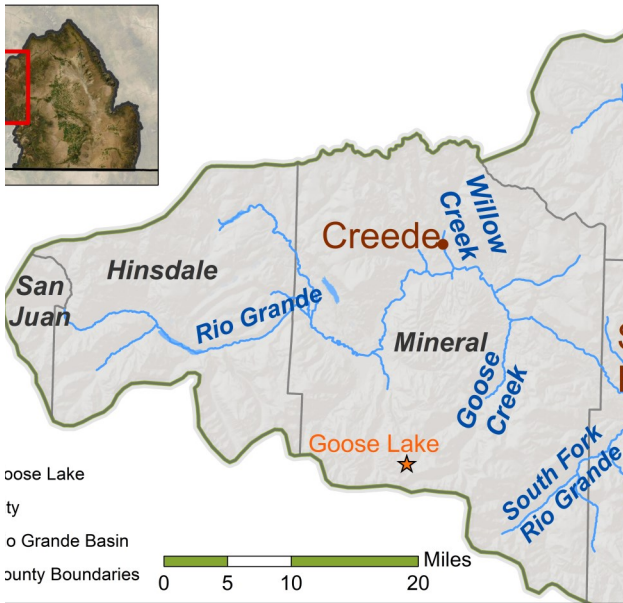
Estimated Cost: \$180,000	Estimated Yield: 1,200 AF
County: Conejos	Estimated Capacity: 1,200 AF

Project ID: RG-2020-0067

Project Name: Goose Lake Reservoir Management Plan and Repair

Lead Proponent: Trout Unlimited

Project Description: Goose Lake is a high elevation reservoir located within the Weminuche Wilderness of Rio Grande National Forest near Creede, Colorado. The reservoir is part of the conservation pool program with Colorado Parks and Wildlife, whereby Trout Lake is kept full and maintained as a recreational fishery for the public, and in exchange, the water rights owners receive a like amount of water for irrigation, providing multiple benefits to the resource and public. The dam needs repair work, however, there is a sensitive population of Boreal Toads persisting in the pool habitat associated with the dam outlet, and the pool is causing damage to the pipe. This project will develop a management plan that includes protecting the toads, the water right, and the infrastructure.



Needs Met:	
Agriculture: 50%	M&I: 0%
Env't. & Recreation: 50%	Administration: 0%

Estimated Cost: \$15,400	Estimated Yield: 0 AF
County: Mineral	Estimated Capacity: 223 AF

Project Name: Jim Creek Electric Fish Barrier

Lead Proponent: Trout Unlimited

Project Description: Jim Creek is a tributary to La Jara Reservoir in Conejos County, Colorado. Jim Creek is home to a core conservation population of the native Rio Grande cutthroat trout. However, this population is compromised by the invasive Brook Trout. Trout Unlimited and partners have been working since 2014 to protect and restore stream and riparian habitat on Jim Creek. This work has led to substantial recovery in the cutthroat population. This project would install a solar powered electric fish barrier that would prevent fish from the reservoir from entering the creek. With the barrier in place, removal efforts on brook trout will further secure this important fish population.

Project ID: RG-2020-0068



Needs Met:	
Agriculture: 0%	M&I: 0%
Env't. & Recreation: 100%	Administration: 0%

Estimated Cost: \$180,000	Estimated Yield: 0 AF
County: Conejos	Estimated Capacity: 0 AF

Project ID: RG-2020-0069

Project Name: Medano Ditch Fish Screen

Lead Proponent: Trout Unlimited

Project Description: Medano ditch is a trans-mountain irrigation diversion that diverts water from Medano Creek. The ditch often sweeps the entire flow of the creek and is entraining all life stages of native Rio Grande cutthroat trout, impacting a core conservation population. The project will replace the current head-gate with new infrastructure that prevents fish from entering the ditch without interrupting water diversions to the ditch.



Needs Met:

Agriculture: 25%	M&I: 0%
Env't. & Recreation: 75%	Administration: 0%

Estimated Cost: \$225,000	Estimated Yield: 0 AF
County: Saguache	Estimated Capacity: NA

Project Name: Rio Grande Cutthroat Reintroduction Studies

Project ID: RG-2020-0070

Lead Proponent: Trout Unlimited

Project Description: The Rio Grande cutthroat trout is native to the Rio Grande and its tributaries in Colorado and New Mexico. This native sportfish only occupies 12 % of its historic range. It is imperative that new populations are reintroduced to the historic range of the species to reverse trends and keep the fish from being listed on the federal endangered species list. A decision matrix was developed in the Upper Rio Grande Watershed Assessment, which guides managers on which streams are most suitable for reintroduction. After selecting good candidates, the next step is a watershed characterization study that drills into the details of project feasibility. This project will result in characterization studies for potential cutthroat reintroduction sites.



Needs Met:

Agriculture: 0%	M&I: 0%
Env't. & Recreation: 100%	Administration: 0%

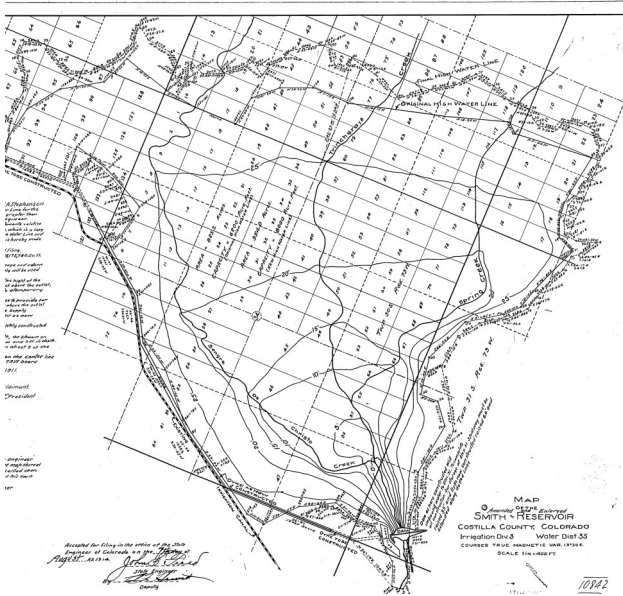
Estimated Cost: \$45,000	Estimated Yield: NA
County: NA	Estimated Capacity: NA

Project ID: RG-2020-0071

Project Name: Smith Reservoir Storage Recovery Feasibility Study

Lead Proponent: Trout Unlimited

Project Description: Smith Reservoir is an irrigation reservoir near Blanca, Colorado in Costilla County. The reservoir also serves the public as a recreational fishery. Colorado Parks and Wildlife maintains a conservation pool of water in Smith Reservoir to sustain the fishery. Over time, the 800 acre-foot conservation pool has silted in from sediment inputs in the upper watershed. This project will investigate options to recover the storage capacity in Smith and assess and mitigate future siltation.



Needs Met:	
Agriculture: 30%	M&I: 0%
Env't. & Recreation: 70%	Administration: 0%

Estimated Cost: \$45,000	Estimated Yield: 810 AF
County: Costilla	Estimated Capacity: 810 AF

Project Name: Trout Lake Reservoir - Wilderness Infrastructure Repair

Lead Proponent: Trout Unlimited

Project Description: Trout Lake is a high elevation reservoir located within the Weminuche Wilderness of Rio Grande National Forest near Creede, Colorado. The reservoir is part of the conservation pool program with Colorado Parks and Wildlife, whereby Trout Lake is kept full and maintained as a recreational fishery for the public. In exchange, the water rights owners receive a like amount of water for irrigation, providing multiple benefits to the resource and public. The dam needs repair work, the cost of which is being assessed in the fall of 2020.

Project ID: RG-2020-0072



Needs Met:	
Agriculture: 50%	M&I: 0%
Env't. & Recreation: 50%	Administration: 0%

Estimated Cost: \$250,000	Estimated Yield: 122 AF
County: Hinsdale	Estimated Capacity: 122 AF