WaterSMART

Cooperative Watershed Management Program Phase 1
Fiscal Year 2023 and 2024
Notice of Funding Opportunity No. R23AS00362

August 14, 2024

Lower Saguache Creek Flood Irrigation Infrastructure Restoration Planning and Design Project

Saguache, CO

Submitted By:
Ducks Unlimited, Inc

In Partnership With:
Rio Grande Headwaters Restoration Project

Project Manager:
John Denton
Manager of Conservation Programs
Ducks Unlimited, Inc
2114 Midpoint Dr., Unit 1
Fort Collins, CO 80525
Cell: 308-258-4682
Jdenton@ducks.org

Table of Contents

List of Tables

List of Figures

List of Attachments

TECHNICAL PROPOSAL AND EVALUATION CRITERIA

Executive Summary

Date: August 14, 2024

Applicant Name and Location: Ducks Unlimited, Inc. (DU) is acting as the sponsor (Fort Collins, Larimer County, Colorado) for the Existing Watershed Group, the Rio Grande Headwaters Restoration Project (Alamosa, Alamosa County, Colorado).

Project Summary

Ducks Unlimited, Inc. (DU), in partnership with the *existing watershed group* Rio Grande Headwaters Restoration Project (RGHRP), is working with private landowners and other partners to design agricultural infrastructure upgrades and associated river and wetland (flood irrigation) restoration projects identified in the Saguache Creek Stream Management Plan (SMP), a collaborative and stakeholder-driven planning effort. The *Lower Saguache Creek Flood Irrigation Infrastructure Restoration Planning and Design Project* (Project) represents a distinctly defined portion of lower Saguache Creek and its floodplain east of Highway 285 and south of the town of Saguache, in the San Luis Valley (SLV) of Colorado. This portion of the creek contains eight major diversions delivering water through ditch systems that irrigate approximately 5,000 wetland acres throughout the historic floodplain and six stream miles. This Project will result in designs for infrastructure improvements on at least eight headgate diversions; upgrades on at least eight ditch systems that function as flow-through systems to deliver water to subsequent water rights holders; streambank stabilization, aquatic and riparian habitat enhancement, and wetland restoration. Project designs will protect important riparian and wetland resources for federally endangered species and state species of concern while maintaining the agricultural landscape by more effectively delivering limited water resources that continue to decline due to climate change, drought conditions, and overuse of groundwater resources.

Project Duration: Estimated project duration is 3 years after award of the grant.

Project Start Date: 2025

Estimated Project Completion Date: The estimated completion date is December 2028.

Located on Federal Facility or Federal Land: No

Project Location

The Project is in Saguache Creek in Saguache County, immediately adjacent to the east and south of the town of Saguache, CO, and extending over 8 miles to the east (Figure 1). The middle of the Project area latitude is 38.0752742 ° N and longitude is -106.0796647° W.

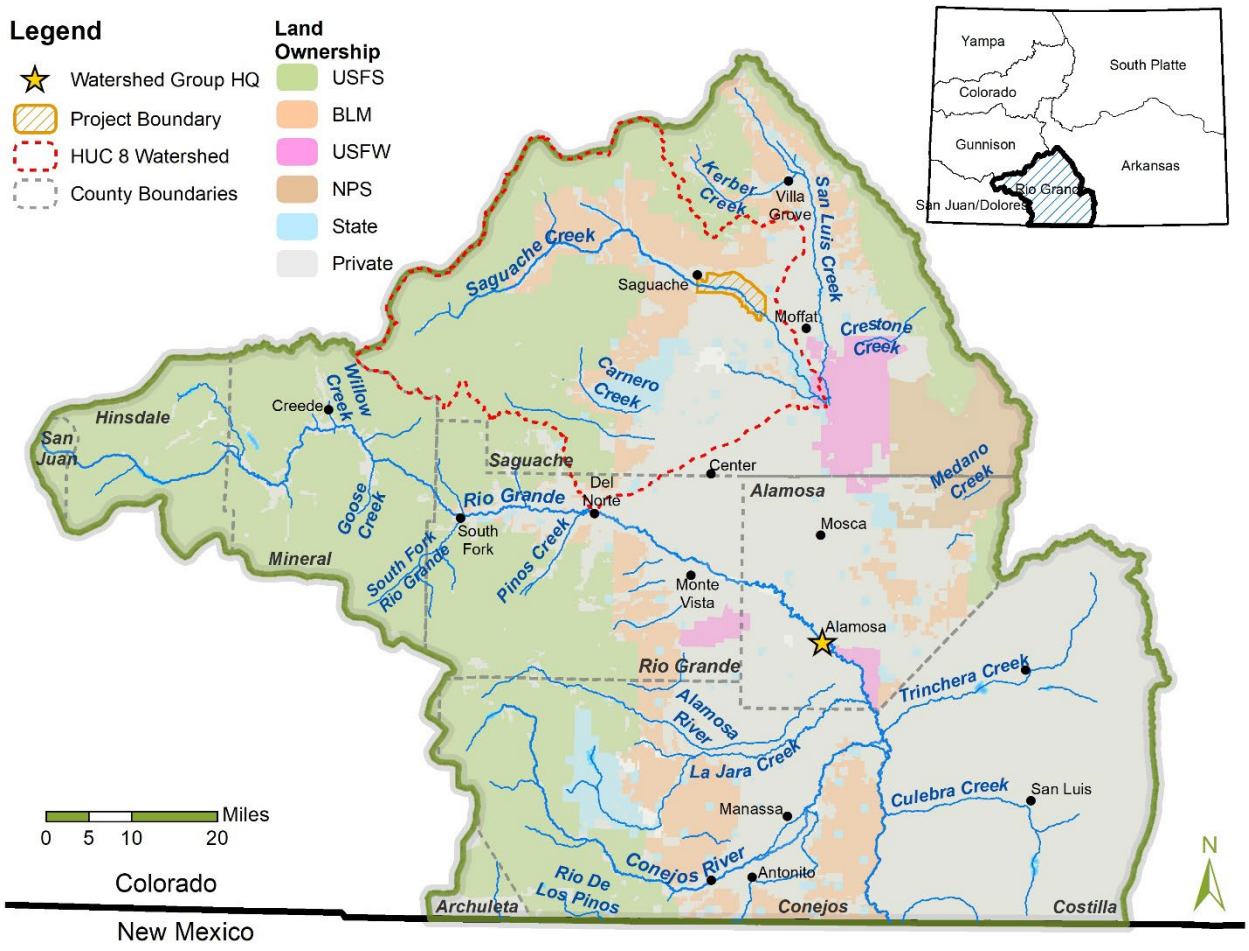


Figure 1. Overall map of the San Luis Valley, including the Watershed Group Headquarters location and the Project boundary.

Applicant Category

Ducks Unlimited, Inc. (DU) is acting as the sponsor (non-profit) for the Rio Grande Headwaters Restoration Project (RGHRP), an Existing Watershed Group, to apply for the BOR WaterSMART Cooperative Watershed Management Plan Phase I. DU can provide partners working in the San Luis Valley (SLV) with engineering expertise which is otherwise limited in the region. DU is working with RGHRP and other stakeholders in the region to incorporate their needs into plans for new structures and more efficient water use along the Saguache Creek corridor.

Eligibility of Applicant

Ducks Unlimited, Inc. (DU; Fort Collins, Larimer County, Colorado) is acting as the sponsor (non-profit) for the Rio Grande Headwaters Restoration Project (RGHRP), an Existing Watershed Group, to apply for the BOR WaterSMART Cooperative Watershed Management Plan Phase I. DU has a history of working on watershed-wide wetland restoration projects in the SLV, has recently worked in the Project area with the partners and landowners, and can provide the engineering assistance needed to complete Phase I of the Project. DU has previously worked

with RGHRP and other involved partners and will coordinate grant-related activities with partners throughout the completion of grant deliverables.

Project Description

This Project addresses Task C – Watershed Management Project Design, and will identify all specific project locations, complete site-specific project design and engineering plans up to 60%, develop project timelines, and determine environmental compliance requirements. Project deliverables include:

1. An inventory of infrastructure throughout at least 8 ditch service areas, and 60% designs for ditch system upgrades coupled with wetland restoration.
2. Survey and 60% designs for infrastructure improvements and aquatic and riparian habitat enhancements for at least 8 main ditch diversions on the mainstem of Saguache Creek.

The Saguache Creek SMP is a collaborative and stakeholder-driven plan developed and published by RGHRP in 2020, with funding from a 2018 WaterSMART Cooperative Watershed Management Phase I grant (R18AP00117). The SMP identified locations of ditch diversions/headgates, assessed stream health conditions, and provided restoration recommendations for a portion of the Project area. The SMP did not include all areas in the current Project area. A subsequent grant with DU and the Colorado Water Conservation Board (CWCB) identified further project locations in the Project area. This Project builds upon the watershed group's previous CWMP grant by developing engineering and design plans for ditch diversion infrastructure and aquatic and riparian habitat restoration opportunities identified in the SMP funded by the previous CWMP grant.

Surveying and Project Designs

Project designs will be completed by registered Professional Engineer(s) and will include geotechnical investigations and professional surveying. Designs will focus on improving the function and efficiency of headgate diversions on Saguache Creek while also enhancing aquatic, riparian, and wetland habitat. The Project will result in a 60% design package which we then hope to implement with a recently submitted NRCS Regional Conservation Partnership Program (RCPP) application, if funded, or will plan to incorporate into a WaterSMART Environmental Water Resources Project (EWRP). Additionally, project partners will initiate environmental and cultural compliance, including Clean Water Act (CWA) Section 404/401 permitting, and NEPA.

The Project includes eight ditch diversions and associated service areas which irrigate approximately 5,000 wetland acres (Figure 2). Many of these ditches utilize historic floodplain features (e.g. abandoned channels and backwater sloughs) to deliver water from one private land and/or one ditch service area to the next. Ditches act as a flow-through system: moving water to downstream landowners and ditches, returning water to Saguache Creek, maintaining water tables across the floodplain, and supporting wildlife habitat. Water delivered to an upstream floodplain location directly impacts downstream ditch users to more effectively get

their water. Design elements for each ditch are outlined in Table 1. This Project will build upon many years of stakeholder led plans and assessments for this reach of Saguache Creek.

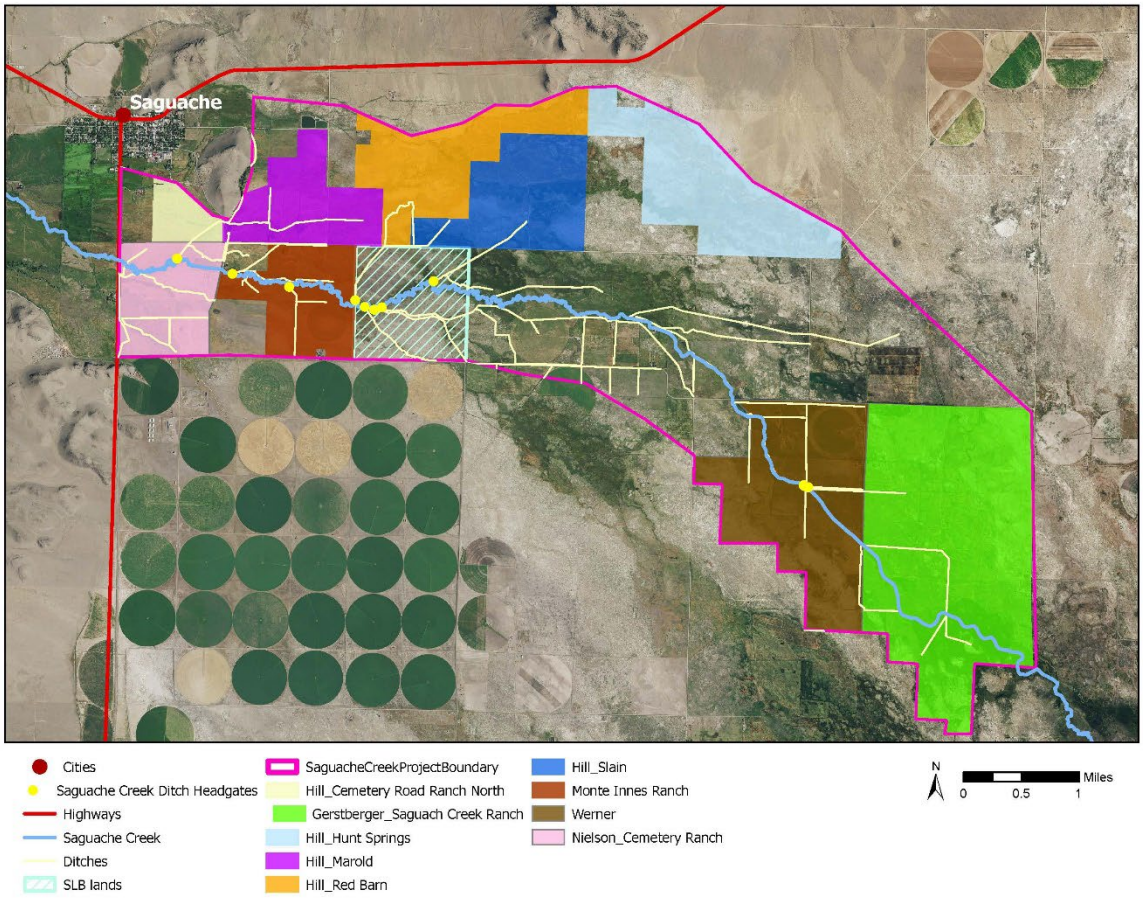


Figure 2. Overall map of the Project area, including incorporated land parcels and ditch headgates to be evaluated.

Table 1. Design elements for each Ditch on Saguache Creek.

Ditch Name	Acres Irrigated	Instream Infrastructure	Flood Irrigation Infrastructure
Ashley Proffit Ditch (SC05)	467	✓	✓
Proffit Company Ditch	202.17	✓	✓
Proffit McDonough Ditch	108.14	✓	✓
Quartet Ditch	1,100.21	✓	✓
George Ball - Turnbull Luengen Ditch	1,473.62	✓	✓
Wall Ditch	415.45	✓	
Hearn Ditch	381.45	✓	
Slane Scandrett Ditch	155.28	✓	✓
Roberts Company Ditch		✓	✓
Campbell Ditch			✓
South Ditch			✓

On-Creek Ditch Infrastructure

Information is provided by the Saguache Creek SMP (Reach SC05; Figure 2; Figure 1 in **Attachment B**) and recent site visits with ditch users. Ongoing maintenance at all the ditches listed below, including repairing diversion dams and removing accumulated sediment and debris, is a challenge for water users and adversely impacts riparian and aquatic habitat.

- The **Ashley Proffit Ditch** is located on the outside of a tight meander. Debris, sediment accumulation, and a poorly functioning diversion dam prevent the ditch from diverting its full decree at low flows. Designs will reduce maintenance needs and enable ditch owners to divert all adjudicated flows.
- The **Proffit Company Ditch** diversion has had some improvements but will require an upgraded design to replace the wood and rocks that currently comprise the dam that diverts water to the structure. Further survey is needed to determine if streambank stabilization will enable long-term use.
- Located in a low gradient, sinuous stream reach, the **Proffit McDonough Ditch** diversion is challenged by significant sedimentation and high risk of channel migration. The measurement flume for the ditch is also tilted and in need of replacement. Designs will consider gradient, sediment load, and bank stabilization, while a new flume will provide accurate measurement.
- The **Quartet Ditch** diversion currently creates challenges for both water users and stream health, including debris accumulation, altered sediment transport, bank erosion, and fish passage. Designs will include a new diversion structure and flume to allow for fish passage, restore sediment transport, and will be combined with riparian restoration and streambank stabilization.

- The **George Ball – Turnbull Luengen Ditch** is experiencing debris accumulation and erosion, threatening migration to a historic channel that would bypass the headgate, which itself is in poor condition. Riparian restoration and bank stabilization paired with infrastructure improvements would address challenges and improve functionality. Consolidation of this ditch's point of diversion with the Wall and Hearn Ditches downstream would prevent a potential bypass event and reduce maintenance needs and sediment transport impacts to the stream.
- The **Wall Ditch** diversion is installed and removed seasonally using t-posts, roofing metal, and other debris. Consolidation with the upstream diversion will be assessed. If not consolidated, a new permanent diversion and flume replacement will be needed to address high labor and maintenance costs, as well as measurement issues.
- The **Hearn Ditch** diversion is made of t-posts, rock, and concrete, and is typically removed seasonally, and the headgate and flume leak during high flows. Designs for a new diversion structure, headgate, and flume would allow for fish passage, restore sediment transport, and provide accurate measurement. The potential for consolidation with the two upstream diversions will be assessed and recommended if possible.
- The **Slane Scandrett Ditch** diversion structure will require an upgraded structure to reduce erosion on the opposite bank and will combine riparian restoration and streambank stabilization. This diversion may also benefit from being combined with a downstream diversion, the Jeep Scandrett Ditch. The diversions will be assessed to determine the best design for effective management of water resources in this area.
- The **Roberts Company Ditch** diversion will require an upgraded structure that will potentially need a unique design to allow water to be diverted throughout the year, including winter. This diversion is important as the landowner has a winter sheet ice water decree. Winter sheet ice is an ecologically and hydraulically important use of water during a time of extremely limited water resources on the landscape and outside of the normal irrigation season.

Figure 3. The Ashley Proffit diversion structure (right) and Proffit McDonaugh diversion structure (left) along Saguache Creek, in the Project area.

Flood Irrigation Infrastructure

An inventory of the existing flood irrigation infrastructure will be completed to assess location, condition, effectiveness, and future design ideas. Based on the design needs mentioned above, we expect to incorporate the following components into designs whenever possible:

- **Instream Ditch Diversion Infrastructure Improvements**: Existing instream diversions and headgate infrastructure on the mainstem of Saguache Creek for at least 8 diversion ditch headgates will be surveyed to determine the optimal design for ditch function and efficiency while also incorporating environmental needs and improvements. Hydraulic analyses will be completed, and at a minimum, ditch diversion structures will be designed to 60% and will be capable of diverting their decreed water rights at all streamflow levels.
- **Saguache Creek Aquatic and Riparian Habitat Restoration**: Within the Project area, the Saguache Creek channel will be surveyed upstream and downstream of the ditch diversion sites (described under "On-Creek Ditch Infrastructure") to determine needs and recommendations to protect and restore aquatic and riparian habitat surrounding each ditch diversion. Improved diversion structures will be designed to include fish passage, create new aquatic habitat, including scour pools, and reduce water temperature.
- **Flood Irrigation Upgrades and Wetland Restoration**: Flood irrigation infrastructure for at least 8 ditches will be surveyed and inventoried, and designs will be developed for new and upgraded infrastructure (diversions, t-boxes, measuring devices, etc.) to at a minimum 60%. A topographic survey will be conducted to identify the effectiveness of the ditch system infrastructure, specific infrastructure upgrade needs, and potential wetland restoration and floodplain reconnection opportunities. The survey will assess how water moves from one parcel/ditch to another and identify opportunities to restore flows through floodplain features including sloughs and wet meadows.

Figure 4. Dilapidated flood irrigation infrastructure on the Proffit McDonaugh and Saguache Creek Ranch, located within the Project area.

DU will utilize RCPP funding, if awarded, to implement these project plans. If not, an application for WaterSMART EWRP funding, along with CWCB funding, will be submitted for implementation funding.

Planning and Stakeholder Engagement

The Saguache Creek SMP was completed in 2020 and was funded in part by a CWMP Phase I grant (R18AP00117). The SMP assessed stream conditions on upper Saguache Creek and extended to the State Land Board parcel (Figure 2; Figure 1 and 2 in **Attachment B**) within the proposed Project area. The SLV Aquatic Habitat Assessment (SLVAHA), funded by a CWCB Colorado Water Plan grant, was completed in 2022 and incorporated the downstream portion of this project area not included in the SMP. These two documents identified and prioritized important water delivery infrastructure needs with significant community and stakeholder input. This funding request maintains momentum and builds upon these efforts and provides the next step towards implementation of identified project needs.

Stakeholder engagement has continued since the development of these plans/assessments and will continue as project plans are developed. Future stakeholder participation will involve meetings/site visits with project partners, landowners, and water users to discuss ditch diversion, flood irrigation infrastructure, and habitat restoration needs and designs within the Project area. After the planning and design phase is finished, stakeholders will finalize all design elements at each site prior to implementation and construction of structures to ensure all needs are met.

Evaluation Criteria

E.1.1. Evaluation Criterion A—Watershed Group Diversity and Geographic Scope (30 points)

Sub-Criterion No. A1. – Watershed Group Diversity

The RGHRP, an Existing Watershed Group, has spent over two decades building a robust and diverse watershed group and bringing together 'affected stakeholders' along the Saguache Creek corridor, including water users and associations, private and public landowners, ranchers, water conservancy and conservation districts, conservation and environmental groups, and state and federal agencies. The RGHRP has a proven track record of working with these diverse stakeholders throughout the SLV to develop well-supported, community-driven projects. These stakeholders have been working together to administer water resources, address resource concerns, and plan for future needs to maintain the economic viability of agriculture while sustaining important environmental conditions.

Existing Watershed Group Structure:

The Colorado Rio Grande Restoration Foundation (CRGRF) is a 501(c)(3) non-profit organization located in Alamosa, Colorado and serves as the fiscal agent and governing body for the RGHRP, an ***Existing Watershed Group***. Formed in 2001, the RGHRP is a local watershed group whose mission is "*to restore and conserve the historical functions and vitality of the Rio Grande Basin in Colorado for improved water quality, agricultural water use, riparian health, wildlife and*

aquatic species habitat, recreation and community safety while meeting the Rio Grande Compact."

The RGHRP watershed group does not have a formal membership process; involvement is more informal. The CRGRF/RGHRP has a Board of Directors made up of ten members representing distinct regions of, and water uses within, the watershed. Board members are chosen by the current Directors. The CRGRF/RGHRP's bylaws state that the Board of Directors must include three Directors from local water conservancy and conservation districts, "at least one Director that holds water rights on the Rio Grande," [and that] "the remaining directors shall be elected from individuals holding an interest in the restoration and related activities in the Rio Grande Basin in Colorado." The bylaws further state "efforts shall be made by the Directors to represent diversity of backgrounds, expertise, and geography." Watershed Group staff make day-to-day decisions using input from local partners and community stakeholders; the Board of Directors is responsible for making long-term and financial decisions for the watershed group based on input from staff.

The RGHRP was formed to implement the recommendations of a river conditions study of the Rio Grande completed in 2001. The study, titled *2001 Rio Grande Headwaters Restoration Project,* was prompted by local stakeholders due to a realized deterioration of the historic functions of the Rio Grande, which include providing high quality water, healthy riparian areas, fish and wildlife habitat, and a functioning floodplain. Since 2001, the RGHRP has been working with local communities and partners to protect and restore the health and function of the Rio Grande and its tributaries.

The Rio Grande, Conejos River, and Saguache Creek SMPs are community and stakeholder-driven plans which illustrate the diversity and engagement of our watershed group. To support the SMPs, RGHRP formed a Technical Advisory Team (TAT) composed of state and federal agency officials, local water managers, nonprofit organizations, private landowners, and other interested stakeholders. The TAT was instrumental in guiding data collection and the overall direction of the SMP. During development of the SMP, outreach included regular email updates to a broad stakeholder list, a Story Map outlining the SMP, distribution of a stakeholder survey, regular TAT and public community meetings, regular updates to the RGBRT, RGWCD, Saguache Creek Water Users Association (SCWUA), and countless meetings with state and federal agencies, individual landowners, and water commissioners. The SMPs assessed stream conditions and identified priority restoration projects on each river, with the goal of preserving and enhancing water uses and community values. It is now being used by the community as a guide for data-driven management actions and multi-benefit restoration projects.

Project Area Stakeholders:

The RGHRP has partnered with more than 75 landowners (public and private) and 17 irrigation ditches to complete multi-benefit restoration projects. RGHRP has also supported countless

projects led by partner organizations of the watershed group. The success of projects implemented by the watershed group would not be possible without diverse partners. This is evidenced by the longevity of the watershed group, and by the letters of support for this Project in **Attachment A**. The proposed Project builds on decades-long partnerships within the watershed group and, like past projects, will include diverse partners. While this Project does not cover the entire watershed, all stakeholders within the Project area have been invited to participate through a variety of meetings, site visits, and through the development of the Saguache Creek SMP (2020).

Water Community:

- RGHRP is the existing watershed group sponsored by DU (applicant) and has worked for over two decades in the watershed. In 2020, the RGHRP completed the SMP, which identified and prioritized restoration projects included in this grant request. The SMP was community-driven and a diverse group of local stakeholders was engaged throughout the development of the SMP.
- Rio Grande Water Conservation District (RGWCD) represents all six counties of the SLV and includes the Saguache Creek watershed. RGWCD employes a Sub-District #5 (Saguache Creek) administrator, supports programs for water users, and advocates for the sustainability of water resources in the Rio Grande Basin locally, regionally, and nationally. All water users may participate in public meetings.
- The Saguache Creek Water User's Association (SCWUA) is composed of landowners within the Saguache Creek corridor that have surface water rights diverted off the creek. This group works together to coordinate projects, advocate for resource needs to other groups/stakeholders, and provides a forum for water users to develop strong community relationships, etc.
- Groundwater Sub-district #5 encompasses the Saguache Creek watershed and is composed of water users in the watershed with groundwater well rights that must augment depletions to the creek and meet long-term sustainability requirements for the aquifer. Many of these water users have both surface and groundwater rights and have voluntarily formed a sub-district and curtailed pumping to make sure that surface water rights and Saguache Creek are sustained despite groundwater withdrawals.
- Rio Grande Basin Roundtable (RGBRT) is made up of representatives of various and diverse sectors of the community including agriculture, water districts, environmental, recreation, conservation, education, municipalities/industrial, counties, reservoirs, and at-large members who meet monthly to discuss issues related to water across the SLV which includes the Saguache Creek watershed. The public and stakeholders are invited to participate in monthly meetings which routinely have active and full discussions about the various water issues and projects in the basin. The RGBRT votes to fund projects via the Water Supply Reserve Fund (WSRF), administered by CWCB. The RGBRT also advocates within the basin and statewide for the sustainability of water resources that meet multiple stakeholder objectives.

Conservation/Environmental Groups:

- Colorado Cattleman's Agricultural Land Trust (CCALT) holds conservation easements throughout the watershed and has helped agricultural landowners protect and conserve large ranches that make up an almost contiguous corridor that will prevent development and keep water rights tied to the land on Saguache Creek. All landowners included in this Project have a CCALT conservation easement. CCALT advocates for sustainable agriculture, maintaining water resources, and helps landowners target resources when needed to enhance or promote the health of their lands through partnerships and project applications like this funding request.
- Wetland Dynamics, LLC (WD) staff have worked in the SLV for over 25 years and recently completed a DU CWCB water plan grant that identified projects in the eastern half of the Project area that had not been assessed in the SMP. WD provides wetland restoration expertise and coordinates and implements projects and monitoring within the watershed with partners and agricultural landowners.
- Habitat Conservation Program (HCP) for the endangered southwestern willow flycatcher (SWFL) is a USFWS agreement that provides regulatory assurances to agricultural producers in SWFL habitat in the SLV and is administered by the RGWCD. The HCP allows for SWFL habitat impacts associated with normal agricultural activities, such as ditch diversion and ditch cleaning, to occur without ESA Section 7 permits.
- Intermountain West Joint Venture (IWJV) has provided support, funding, and research that has aided in project development throughout the SLV and specifically in the watershed and Project area. GIS hydrologic modeling was field-truthed in the SLVAHA completed by WD and proved to be an accurate tool for identifying areas that remain wet or resilient to climate changes and drought conditions.
- Ducks Unlimited (DU) is the sponsor and applicant of this grant and has a long history of wetland restoration work in the SLV. DU also holds conservation easements on agricultural lands downstream of the Project area that provide wetland resources for waterfowl and waterbirds. DU provides design, engineering, and construction oversight for projects like those proposed in this application.

State and Federal Agencies:

- Colorado State Land Board (SLB) owns parcels of land throughout Colorado and leases out the parcels for specific uses to stakeholders. The SLB parcel in the Project area is leased for grazing and has 5 diversion headgates on Saguache Creek within its boundary (Figure 2; Figure 2 in **Attachment B**). DU, WD, and RGHRP have been working with SLB staff across the SLV to coordinate projects that promote effective water delivery, improve wetland health, and improve productivity of forage for agricultural landowners with leases on parcels.
- Division 3 of the Colorado Division of Water Resources administers water rights through water commissioners in the Rio Grande Basin. Tom Torrez is the Water Commissioner for Saguache Creek and works daily with landowners, water users, and others to effectively manage adjudicated water rights on the creek.

- CWCB supports the RGBRT with WSRF and Water Plan grants, advocates for water resource concerns for specific watersheds like Saguache Creek or the entire basin at state levels, and provides programs and staff to help meet resource needs. The CWCB has funded planning efforts in the Project area.
- The Bureau of Land Management (BLM) owns large tracts of land immediately adjacent to the Project area and in the upper Saguache Creek watershed. The BLM works with water users, landowners, and partners listed to promote healthy watersheds through cross boundary projects, providing leases for ranchers to graze their cattle, and meet multi-use objectives for the greater community.

Agriculture:

- Private landowners who are part of the water community groups are active participants in stakeholder meetings to develop plans like the SMP. These landowners work with all other stakeholder groups to promote sustainable agriculture through projects that help ensure the longevity of water resources to meet their needs.

RGHRP represents the entirety of affected stakeholders. Outreach and engagement will continue as the project progresses with the aforementioned groups to ensure Project designs fully meet the needs of the water users. The proposed Project was identified in the Saguache creek SMP and has received a high level of support from the local, state, and federal stakeholders described above. Letters of support are attached in **Attachment A** and include the Saguache Creek Water Users' Assocation, RGWCD, Colorado State Land Board, Colorado Division of Water Resources, individual landowners/water users, CCALT, congressional members, non-governmental organizations, and others.

Sub-Criterion No. A2. – Geographic Scope

Figure 1 provides the boundary of the Project area within the HUC 8 Saguache Creek watershed. There are no other watershed group boundaries within the Project area to describe as the stakeholder group areas are larger than and extend beyond the geographic area of the Project. All private properties included in the project area have an existing CCALT conservation easement. There are some landowners who are in the process of completing a CCALT conservation easement within the Project boundary. DU and partners will work with CCALT to provide information to these landowners and outreach will continue to occur throughout the Project timeline to identify other projects that could be involved in the future.

The RGHRP covers the extent of the Project area, as it encompasses the Rio Grande Basin in Colorado (all six counties) in its entirety (Figure 1), of which Saguache Creek is one watershed. Other stakeholder groups outlined above, including state and federal agencies, DU, IWJV, and WD work throughout the basin and within the Project boundary. Working in coordination with DU and the SCWUA, the partners fully cover the scope of the area from a basin-wide and watershed-wide perspective.

DU, RGHRP, and partners will work together to ensure all stakeholder groups are kept informed of Project progress through attendance at SCWUA, RGBRT, RGWCD, Sub-district #5, and other

meetings as they arise. A majority of the area contained in the Project boundary is made up of landowners who have actively participated in the SMP by identifying and prioritizing the specific needs being addressed by this Project. New stakeholders (landowners) will be welcomed through various partners such as CCALT to initiate conversations about the Project.

Conservation work in this area has been ongoing for decades. CCALT has worked with landowners on conserving ranches throughout the entire Saguache Creek watershed, creating an almost contiguous corridor of protected lands and water. The 2020 Saguache Creek SMP provided an assessment of the river and instream diversions for a majority of the creek. RGHRP has initiated work on some upstream instream diversions since that time. In 2022, WD and DU completed the SLVAHA, which identified and prioritized water delivery infrastructure needs, riparian and wetland restoration opportunities, and new partners in the downstream section of the creek not included in the SMP. These two efforts highlighted the need and provided momentum for developing a large-scale project to addresses multiple objectives, brought in multiple stakeholders and partners, crossed land ownership boundaries, and was of importance to the SCWUA and DWR to improve administration of water resources. This Project encompasses not only instream diversions and accurate water right accounting but also aquatic riverine, riparian habitat, and flood irrigation delivery infrastructure that supports agriculture, wildlife habitat, and promotes sustainable aquifers.

The proposed Project is for site-specific planning within a subsection of the Saguache Creek Watershed (HUC8; Figure 1) encompassing a lower reach of the creek that is separated from the upper portion by a Highway 285 on the west boundary and extends to the east through the area. The area includes instream creek diversions that annually divert surface water rights to County Road 55. The creek now rarely flows downstream of the Project boundary due to the cumulative effects of climate change, drought, and groundwater pumping that have reduced flows and lowered water tables. The geographic scope of the Project area represents a logical section of the watershed given the highway on the west end, entirety of the historic floodplain through to the downstream perennial creek extent, and the eastern boundary of County Road 55.

E.1.2. Evaluation Criterion B—Developing Strategies to Address Critical Watershed Needs (35 points)

Sub-Criterion No. B1. – Critical Watershed Needs or Issues

The Saguache Creek watershed is vulnerable to a number of critical threats and issues including declining ecological resiliency, water supply shortages, endangered species concerns, drought impacts, aquatic and riparian ecosystem degradation, and conflicts over water supply. These issues are exacerbated by degraded infrastructure that prevents water users from effectively administering water rights to agricultural landowners. Impacts from drought and declining water tables have resulted in Saguache Creek, a historically perennial creek that flowed into San Luis Creek downstream of the Project area, no longer flowing past the Project boundary. The watershed is dependent on highly variable streamflow driven by snowpack. Season and

year-to-year variation, along with no reservoir storage, creates challenges as water users and managers plan for drought and uncertainty from climate change projections.

The SLV and Rio Grande Basin have endured consistent drought conditions since 2002, the driest year on record for the SLV, and part of a 25-year decline in the running average to present (BIP, 2022). The latest Colorado Climate Assessment (CCA; 2024) found that the Rio Grande Basin is one of two Colorado basins with the largest decreases in snowpack. Projections for 2050 show a decline in median snow water equivalent of more than 10%. Future stream flows are projected to decline by about 15% (CCA, 2024). This shows impacts of warming temperature trends on river flows and snowpack that are expected to result in a shift in mean monthly peak flows, including earlier spring runoff and lower mid- to late-summer flows.

Drought impacts have also been exacerbated by overuse of groundwater. Groundwater Rules and Regulations (Rules) established in 2015 for Division of Water Resources (Division #3) came into effect in 2021 to prevent injury to surface water users, Rio Grande Compact obligations, and to maintain sustainable groundwater supplies (BIP, 2022). To date, aquifer levels continue to decline despite well reductions, fallow programs, changes in crops, and other initiatives. Conflicts with water supply (surface water and groundwater) continue to be a prominent challenge in the Saguache Creek watershed.

Climate change impacts coupled with groundwater overuse have adversely affected all water users and the environment. Wildlife and aquatic life cycle events are timed to coincide with ecosystem processes such as high flow events. Warmer stream temperatures may result in shorter spawning windows and summer low-flow conditions that adversely affect various aquatic species (Llewellyn and Vaddey, 2013; BIP, 2022). Additionally, changes in water availability and mean monthly peak flows can negatively impact agriculture if peak runoff occurs before water users can divert their water during irrigation season beginning in April.

The San Luis Valley Wetland Wildlife Conservation Assessment (SLVWWCA; 2019) documented a loss of over 60% of historical wetlands in the SLV, and identified wetland areas with high drought resilience to be targeted for restoration efforts so that resiliency is maintained as challenging climatic conditions continue. The Lower Saguache Creek area, despite drought conditions, has remained somewhat resilient and still maintains some wetland and riparian habitat through the corridor. However, in a warmer, drier future, with continued groundwater withdrawals and limited ability to effectively deliver water with the existing degraded water delivery infrastructure, wetland and riparian health of this corridor will continue to decline.

Numerous private land conservation easements in the area help protect conservation values that sustain habitat for the federally endangered southwestern willow flycatcher (SWFL). The Lower Saguache Creek Corridor supports riparian and wetland habitat incorporated into the HCP as mapped potential habitat for SWFL. The HCP is a SWFL species protection agreement

with the USFWS that allows for normal agricultural activities to continue while protecting habitat for the SWFL. Habitat loss for this species along Saguache Creek due to limited water resources has been exacerbated by erosion and degradation of streambanks at headgate locations that diminishes aquatic and riparian habitat along the creek.

The status of Saguache Creek headgates and diversion structures identified for replacement in this project are in poor to failed condition, consisting of a range of materials and configurations that trap sediment and debris making them a challenge to manage. Furthermore, the associated measuring devices required for each diversion to accurately divert water are often missing, inoperable or inaccurate. Diversions require daily to annual repair and maintenance to deliver water, sometimes requiring heavy equipment that disturbs the creek bed, riparian vegetation, and aquatic life. These maintenance activities provide a short-term solution but do not address the long-term viability of the infrastructure nor the disturbance to the environment and wildlife. Degraded streambanks adjacent to these structures are at risk and increase sediment loads within the river, impacting the functionality of downstream diversions and negatively impacting stream resources and conditions. Existing ditch infrastructure for flood irrigation throughout the 8 ditch service areas are also in poor to failed condition, requiring seasonal and annual maintenance. These degraded structures not only impact the economic viability of the landowners to adequately maintain forage and hay resources for their cattle operations, but adversely impact local water tables. Additionally, there are several opportunities to combine two or more ditch diversions into a single structure which would increase efficiency of water delivery and reduce the habitat impacts of diversions on sensitive riparian systems that are home to imperiled species like the federally endangered SWFL.

Sub-Criterion No. B2. – Project Benefits

The partners and stakeholders working on this Project have identified opportunities for key ditch diversion infrastructure improvements to alleviate water conflicts, drought impacts, continued degradation of aquatic and wildlife riparian and wetland resources, and which will help to buffer current and future climate changes. The next steps in this process include 1) a survey and inventory of all the infrastructure, and 2) preparation of specific plans and designs for water control infrastructure that includes not only instream diversions but the entirety of the ditch service area throughout the floodplain. Planning and engineered designs are a critical component to meet multiple objectives of stakeholders, including agriculture, water users and administrators, environmental and conservation concerns, and the continued sustainability of surface and groundwater resources. The *Lower Saguache Creek Flood Irrigation Restoration Planning and Design Project* will take a comprehensive approach to address challenges throughout the Project area and work to reconnect floodplain features to restore wetland functionality through irrigated wet meadows to improve and protect water resources for a resilient future. Plans and designs will consider specific issues such as sediment load, high variability in streamflow, changes in water right adjudications throughout the season, and stream bed and bank conditions, in addition to aquatic and wildlife habitat including impacts to

the SWFL. This comprehensive approach will improve senior water users' ability to maintain their agricultural livelihoods, improve administration of water rights and reduce water conflicts, improve aquatic and riparian health to better buffer extreme climate conditions, and improve the resiliency of habitats for threatened and endangered species as well as all others that utilize this important conserved corridor. This planning effort will continue to seek and incorporate stakeholder input and will require consistent outreach and discussion throughout the process.

Climate trends toward higher temperatures and less precipitation are well established predictions for the southwest United States including the SLV of Colorado (CCA 2024). Maintaining agricultural activities is crucial for the economy of the SLV and these agricultural practices, especially flood irrigation, are critical to maintaining wildlife habitat throughout creek corridors. Flood irrigation mimics natural processes such as high flow events and overbanking onto the floodplain where pastures and hay meadows exist, which helps to maintain historic functions within the landscape, maintain the water table, and promote resiliency over time. Planning and design to meet these needs will require improved water delivery infrastructure that will not only allow producers to do more with less water but will also withstand extreme weather events that are predicted with climate change including drought, flood, and winter sheet ice events. Improved water delivery will also help to buffer extreme events through improved habitat conditions for aquatic and wildlife species. A recent paper published by Donnelly et al. (2024) describes the benefit of flood irrigation for maintaining and sustaining riparian ecosystems in the Intermountain West, and notes that conversion of grass hay pastures to center pivot sprinklers or other crops may significantly impact the resiliency of riparian systems if flood irrigation continues to decline. Improving efficiencies and administration of this infrastructure, specifically for flood irrigation, will help ensure the continued use of this method of irrigation and thus the resiliency of the riparian ecosystem.

Planning and design for all upgraded infrastructure on this reach (SC05; Figure 1 and Figure 2 in **Attachment B**) will reduce water users time and labor, improve agricultural productivity and sustainability to multi-generational farmers, reduce water conflicts in the watershed, improved water administration, and improve safety for ditch managers. Careful design of diversion infrastructure coupled with determining the best methods for revegetation to promote healthy riparian habitat and reduce sediment loads will reduce potential annual disturbance to the stream bed/banks and improve macroinvertebrate and other aquatic habitat while improving effective water rights administration. When implemented, this Project will protect and improve river, riparian, and wetland health for aquatic species and threatened and endangered species and provide sustainability and resiliency of flows through this area. Finally, several of the identified ditch diversions could be combined into a single diversion structure that would then be diverted into their respective ditches, further improving efficiencies, and reducing labor and costs. If warranted, this will reduce instream channel infrastructure, reduce ecological disturbance in sensitive riparian areas, and increase efficiency and accuracy of water delivery.

Stakeholder Benefits:

All affected stakeholders that live and work within the project boundary will benefit from this Project, as will downstream stakeholders. Specifically, agricultural producers and water users will experience improved water delivery efficiency that will reduce time and labor costs associated with maintaining infrastructure, and that will likely increase productivity of hay meadows while promoting resiliency to drought conditions and other climate related changes forecasted for the future. Landowners and water users may also benefit from the collaborative process of working together with other stakeholders to develop infrastructure solutions that meet multiple objectives and help address and ameliorate existing conflicts with water supplies. These kinds of collaborative projects often galvanize relationships and partnerships which will be a key component to managing declining water resources in the future throughout this watershed. Further, improvements to infrastructure will help water commissioners to more accurately and easily administer water rights which will also help reduce water conflicts.

Environmental and conservation organizations and partners such as CCALT will be a primary beneficiary of this Project through resources provided to their landowners that help them sustain their ranch's conservation values throughout this conserved corridor. Resources will focus on improved water delivery infrastructure that supports the resiliency of the watershed, agricultural economy, and aquatic and wildlife habitat resources. Investment in these ranches' infrastructure will also help maintain important habitat for the SWFL and thus support HCP requirements and goals for this species.

The SLB parcel included in the Project area will directly benefit from this project, as their one parcel of land (640 acres) contains 5 headgate diversions on Saguache Creek that will be replaced and/or improved, resulting in less seasonal and annual disturbance to the parcel and creek (Figure 2, **Attachment B**). This will result in improved aquatic and riparian habitat across the entire parcel.

Task C: Watershed Management Project Design, Known Extent:

Figure 2 shows the extent of the Project area with identified locations for instream headgate diversion upgrades or replacements along with individual landowner parcels that will be inventoried for flood irrigation infrastructure upgrades. Specifically, this Project will encompass survey and design for at least 8 headgate diversions and associated ditch service areas on Lower Saguache Creek, which includes multiple private parcels owned by at least six different landowners, and a Colorado SLB parcel. Table 1 and the Project Description describe each headgate structure that will be addressed.

Project designs will be completed by registered Professional Engineer(s) and will include geotechnical investigations and professional surveying. Designs will improve the function and efficiency of headgate diversions off Saguache Creek while enhancing aquatic, riparian, and

wetland habitat. The Project will result in a design package and survey and inventory of the ditch service areas.

- **Instream Ditch Diversion Infrastructure Improvements**: Existing instream diversion and headgate infrastructure on the mainstem of Saguache Creek for at least 8 diversion ditch headgates will be surveyed to determine the optimal design for ditch function and efficiency while also incorporating environmental needs and improvements. Hydraulic analyses will be completed, and at a minimum, ditch diversion structures will be capable of diverting their decreed water rights at all streamflow levels and designed to 60% completion. Diversion structure improvements reduce maintenance needs, increase efficiency, and allow water managers and landowners to more consistently and effectively administer water rights from Saguache Creek to and through the ditch systems. Headgate structures will be improved for ease of use, reduced maintenance, and increased efficiency. Improvements may include woody debris deflectors and headgate automation capabilities.
- **Saguache Creek Aquatic and Riparian Habitat Restoration**: The Saguache Creek channel will be surveyed upstream and downstream of the ditch diversion sites to determine needs and recommendations to protect and restore aquatic and riparian habitat surrounding each ditch diversion. Streambank stabilization and revegetation designs upstream and downstream of each ditch diversion are expected to further enhance aquatic and riparian habitat and improve water quality by reducing erosion. Restoration design features are expected to benefit a variety of aquatic species as well as the federally endangered southwestern willow flycatcher (SWFL).
- **Flood Irrigation Upgrades and Wetland Restoration**: Flood irrigation infrastructure for at least 8 ditches will be surveyed and inventoried, and designs will be developed for new and upgraded infrastructure (diversions, t-boxes, measuring devices, etc.) to a minimum 60% completion. A topographic survey will be collected to identify the effectiveness of the ditch system infrastructure, specific infrastructure upgrade needs, and potential wetland restoration and floodplain reconnection opportunities. Restoration of these floodplain features will improve wetland conditions and conveyance/utilization of water rights, greatly improving the operation of these lands for agriculture, wildlife, and healthy wetland systems. When coupled with the instream infrastructure upgrades and creek restoration, each ditch will be able to more effectively manage water resources to utilize flood irrigation for agricultural purposes while improving creek health and maintaining habitat for federally endangered species and state species of concern.

Benefits to all stakeholders will occur because of this planning and design phase of the Project that carefully considers each stakeholder's needs and develops the best structures. These benefits are also further described earlier in Evaluation B.

E.1.3. Evaluation Criterion C – Readiness to Proceed (20 points)

Preliminary Project Schedule:

Table 2. Summary of Expected Project Timelines.

Project Task or Milestone	Completion Date
1. Topographic surveys	Late Summer 2025
2. Engineering plan drafting	December 2026
3. Completion of 60% engineering design plans	June 2027
4. Initiation of project permitting	December 2027
5. Administration, stakeholder meetings, and fundraising for Phase II: Implementation	December 2027

Topographic Surveys:
During the summer of 2025, DU's engineering team will conduct a topographic survey of the Project area to identify and inventory structures along the ditch service areas, collect elevation data, and specify restoration activities to be implemented in future phases of the Project. Survey data produced by DU and obtained from other sources (i.e., existing LIDAR data sets) will be validated and analyzed to produce a high-resolution surface model of the project area, typically with the capacity to produce 6-inch topographic contour maps across the Project area and higher resolutions in specific areas where priority water-control structures or other facilities will be installed. An adequate surface model of the natural landforms, aquatic features, and artificial structures will be produced such that conceptual design and, ultimately, construction plan-sets may be developed with a high degree of fidelity to the site's existing condition and to the desired final landform.

Engineering Plan Drafting and Completion of 60% Engineering Designs:
DU engineers will utilize Auto CAD 3D to draft construction plan-sets that provide the location, position, size, specification, and detail of the construction activities within the Project area. Plans will be developed to 60% completion, with the remaining 30% to be finalized during the implementation phase. These plan-sets will provide complete information required for project permitting and will serve as the basis for construction sub-contractor bidding and procurement. Stakeholders will be involved throughout the drafting and design process and will be encouraged to provide input on needs and desires for implementation.

Initiation of Project Permitting:
Actions necessary to achieve the desired project outcome entail activities that must comply with a complex of federal, state, and local permitting regimes. DU staff will coordinate with other partners to obtain the necessary compliance for Project implementation. At a minimum, compliance will be obtained under the National Environmental Policy Act, the Endangered Species Act, and the National Historic Preservation Act. Certain activities may also be governed

by the Clean Water Act and require a permit under that federal rule. Finally, state and local rules may apply to certain restoration activities.

Administration, stakeholder meetings, and fundraising for Phase II: Implementation:
DU will manage project workplans and financial plans, track project expenditures, and coordinate with partners to achieve project objectives for the Saguache Creek Project. Local partners in the SLV will coordinate stakeholder meetings and assist with on-the-ground project management when necessary. The partners on this Project have applied for additional funding through an NRCS Regional Conservation Partnership Program (RCPP) application. If received, RCPP funding will be used for the completion of engineering design plans, and implementation of restoration activities. If the RCPP is not awarded, partners will apply to a WaterSMART EWRP for implementation.

E.1.4. Evaluation Criterion D – Presidential and Department of the Interior Priorities (15 points)

Climate Change

Once the Saguache Creek watershed projects are implemented, they will build drought resilience by supporting groundwater recharge and natural water storage through reconnection of the floodplain. Riparian revegetation and improved floodplain habitat will enhance natural water storage within the river channel hyporheic zone. During dry periods in late summer and fall, groundwater is released slowly, resulting in augmented baseflow and increased drought resiliency. Aquatic ecosystems will experience benefits during drier years, as water will return to the river slowly through the connected floodplain, supporting late-season flows. By improving riparian vegetation and enhancing aquatic habitat, more suitable habitat will be available for aquatic and wildlife species to take refuge from hotter and drier conditions. This Project seeks to maintain water temperature and dissolved oxygen levels that are healthy for aquatic species through increased and improved instream habitat.

Restoring riparian habitat and improving bank stabilization will increase safety and resilience for local private property and ecosystems impacted by high and low streamflow extremes brought about by climate change. During high flows, enhanced floodplain connectivity will give the river room to spread out and dissipate energy, reducing flooding risks.

Flood irrigation is an important and historic practice throughout the SLV that mimics natural processes in river systems to grow native hay and pasture (see Donnelly et al 2024). This practice helps maintain wildlife habitat, the water table, and adds to the system resilience. By upgrading infrastructure that promotes more efficient use of ditch water and reduces time and labor costs, maintaining the practice of flood irrigation will continue to be a viable option for Project area landowners that promotes resiliency, and buffers impacts from climate change into the future.

Upgraded infrastructure and restored floodplain wetland features will aid ditch managers in delivering water to individual users, helping to maintain water tables and reduce water

temperatures throughout the irrigated floodplain, increasing the overall sustainability of the water supply. Additionally, Project designs, when implemented, will increase biodiversity, improve aquatic and riparian habitat, reconnect the floodplain, and improve irrigation efficiency, promoting healthy lands and soils and aiding in protecting water supplies. It does not contribute to climate resilience in other ways not described.

Benefits to Disadvantaged, Underserved, and Tribal Communities

Disadvantaged and Underserved Community Benefits:

The Project is near Saguache in Saguache County, Colorado (Tract #08109977600) and is identified as a disadvantaged community by the Climate and Economic Justice Screening Tool. The County has an income level that is less than or equal to twice the federal poverty level, not including students enrolled in higher education. Saguache County is a rural community as defined by the US Census Bureau, with a population of 6,454, and 36% of its population identifies as Hispanic. The median household income is $51,946.

Agriculture is the dominant industry in the Project area and across the SLV. Upgrading and improving water diversions, headgates and ditch systems will benefit the agricultural economy by increasing water efficiencies and reliability of water supplies for water rights holders. The private lands within the project corridor are enrolled in conservation easements with CCALT and will not be developed over time. The viewshed of the area is protected with these conservation easements and with the water infrastructure improvements in this Project the health and ecological integrity of this conservation corridor will be projected.

Tribal Benefits:

Given the location of the Project, there are no direct benefits to any Tribes.

PROJECT BUDGET

DU, as the sponsor for the RGHRP, is requesting $300,000.00 from the Bureau of Reclamation, WaterSMART Cooperative Watershed Management Program. As there is no match requirement for this application, no non-federal funding for the Project has been secured.

Table 3. Summary of Non-Federal Funding Sources

FUNDING SOURCES	AMOUNT
Non-Federal Entities	
Non-Federal Subtotal	$0.00
REQUESTED RECLAMATION FUNDING	**$300,000.00**

Budget Narrative

A detailed budget narrative is included in the Application Submission in **Attachment C**.

ENVIRONMENTAL AND CULTURAL RESOURCES COMPLIANCE

Environmental Impacts:
As this is a planning and design project, no impacts are expected to occur in this phase of the Project, and work will not have any adverse impact on the environment. In a future phase (implementation), some disturbance may occur, and could include disturbances to soil and ground, water quality and dust, but will be mitigated appropriately. Overall, the impacts of this project once implemented will have many positive environmental benefits.

Threatened or Endangered Species Impacts:
According to the USFWS IPAC analysis, and there are potentially six federally threatened or endangered species within the project area and there is no designated critical habitat. Ground truthing and local wildlife surveys suggest that the only endangered species is the southwestern willow flycatcher (SWFL); the threatened silver-spot butterfly and candidate species Monarch Butterfly (MOBU) are also likely in the project area. This planning and design grant will not impact the listed species, and future project implementation will improve species habitat.

Waters of the United States:
The Saguache Creek watershed lies completely within the Closed Basin of the SLV which has no direct surface water link to the Rio Grande or its tributaries. This grant will not have any impact on wetlands or Waters of the United States.

Delivery System History:
Water delivery infrastructure is of varying ages. Many of the diversion structures are pieced together annually and then removed at the end of the irrigation season. All structures have been maintained, changed, and/or added to as conditions have changed or impacts have occurred. Many structures on private lands diverting surface water for flood irrigation are tarps or other annually constructed devices.

Infrastructure Impact:
This Project will not impact any infrastructure until the implementation phase, which will be funded through a separate request.

National Register of Historic Places:
There are no structures within the Project area eligible for listing on the National Register of Historic Places. There are currently no known cultural resources in the Project area; NEPA and other permitting needs will be determined over the course of the planning and design process.

Low Income and Minority Populations:
The Project will support local agricultural economies. As described above, the Project will benefit the disadvantaged and underserved community in the project area which relies heavily on agriculture as the dominant industry.

Tribal Lands Impacts:
There will be no effect on Tribal lands during this Project.

Noxious Weeds:
There will be no introduction or spreading of noxious and non-native plant species in the area during this Project.

REQUIRED PERMITS OR APPROVALS
No federal or state permits are required for this phase of the Project.

OVERLAP OR DUPLICATION OF EFFORT STATEMENT
This Project builds upon RGHRP's previous work developing the SMP discussed above, funded by a 2018 WaterSMART Cooperative Watershed Management Phase I grant (R18AP00117). A subsequent grant with DU and the Colorado Water Conservation Board (CWCB) identified further project locations in the Project area, which will be investigated further during this phase of the Project.

CONFLICT OF INTEREST DISCLOSURE STATEMENT
A Conflict-of-Interest statement is included in the Application Submission.

UNIFORM AUDIT REPORTING STATEMENT
A Uniform Audit Reporting statement is included in the Application Submission.

SF-LLL: Disclosure of Lobbying Activities (if Applicable)
A Disclosure of Lobbying Activities statement is included in the Application Submission.

LETTERS OF SUPPORT
Letters of support from the following entities are included in **Attachment A**:

1) Rio Grande Headwaters Restoration Project
2) Rio Grande Water Conservation District
3) Saguache Creek Water User's Association
4) Colorado State Land Board
5) The office of United States Senate, Michael F. Bennet
6) American Rivers
7) Flying X Cattle Co., Inc.
8) Kristi Hill (Saguache Creek Landowner)
9) Dale and Andrea Gerstberger (Saguache Creek Landowners)
10) Colorado Cattlemen's Agricultural Land Trust

OFFICIAL RESOLUTION
An Official Resolution will be provided if this application is selected for funding.

UNIQUE ENTITY IDENTIFIER
PFJPWQMCLSC3

DUCKS UNLIMITED

Great Plains Regional Office
2525 River Road
Bismarck, ND 58503-9011
(701) 355-3500 • Fax (701) 355-3575
www.ducks.org

September 3, 2024

FUNDING OPPORTUNITY R23AS00362
WaterSMART Cooperative Watershed Management Program
Phase I for Fiscal Year 2023

OVERLAP/DUPLICATION STATEMENT

There are no overlaps or duplication between this application and any of our other Federal applications or funded projects, including in regard to activities, costs, or time commitment of key personnel.

CONFLICT OF INTEREST DISCLOSURE STATEMENT

The undersigned certifies, that to the best of his or her knowledge and belief, that Ducks Unlimited, Inc:

1. Maintains a written standard of conduct covering conflicts of interest and governing the actions of its employees engaged in the selection, award and administration of contracts. No employee, officer, or agent may participate in the selection, award, or administration of a contract supported by a Federal award if he or she has a real or apparent conflict of interest. Such a conflict of interest may arise when the employee, officer, or agent, any member of his or her immediate family, his or her partner, or an organization which employs or is about to employ any of the parties indicated herein, has a financial or other interest in or a tangible personal benefit from a firm considered for a contract. The officers, employees, and agents may neither solicit nor accept gratuities, favors, or anything of monetary value from contractors or parties to subcontracts. However, there are set standards for such situations in which the financial interest is not substantial or the gift is an unsolicited item of nominal value. The standard of conduct also provides for disciplinary actions to be applied for violations of such standards by officers, employees, or agents.

2. In the event that it procures any item from its affiliate or subsidiary organization, its written standard of conduct will also cover organizational conflicts of interest with its affiliate or subsidiary organizations, because a prior relationship with an affiliate or subsidiary organization, Ducks Unlimited, Inc. may be unable or appears to be unable to be impartial in conducting a procurement action involving a related organization.

This disclosure is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this disclosure is a prerequisite for making or entering into this transaction imposed by the conflict-of-interest provisions in 2 CFR §200.318 to ensure that non-Federal entities and their employees take the appropriate steps to avoid conflicts of interest in their responsibilities under or with respect to Federal financial assistance agreements.

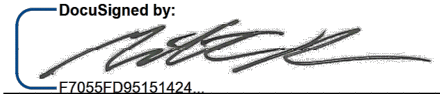
SINGLE AUDIT REPORTING STATEMENT

Ducks Unlimited, Inc. was required to submit a Single Audit report from the most recently closed fiscal year (2023). The report can be found on the Federal Audit Clearinghouse Single Audit Database website (https://facdissem.census.gov) under Employee Identification Number 13-5643799.

INDIRECT COST STATEMENT

Ducks Unlimited, Inc. annually negotiates a NICRA for periods that coincide with our fiscal year (July 1 to June 30). DU's rate for FY24 was 14.39%. Our rate for FY25 is currently being reviewed and has not yet been issued. We anticipate it will be 12.59% and will not invoice for indirect costs until we submit the official NICRA letter.

DocuSigned by:



F7055FD95151424...

9/3/2024

Milt Rue
Director of Conservation Services
Great Plains Regional Office

Date

Colorado Rio Grande Restoration Foundation
Rio Grande Headwaters Restoration Project
623 Fourth Street
Alamosa, CO 81101

August 21, 2024

Bureau of Reclamation
WaterSMART Program – CWMP
Funding Opportunity No. R23AS00362
Robin Graber, Program Coordinator
rgraber@usbr.gov

RE: Lower Saguache Creek Flood Irrigation Infrastructure Restoration Planning and Design Project

Dear Bureau of Reclamation WaterSMART CWMP Review Committee,

Please accept this letter of support on behalf of the Colorado Rio Grande Restoration Foundation, fiscal agent and governing body for the Rio Grande Headwaters Restoration Project (RGHRP), an Existing Watershed Group, located in Alamosa, Colorado. We are in full support of the *Lower Saguache Creek Flood Irrigation Infrastructure Restoration Planning and Design Project* (Project) proposal being developed by Ducks Unlimited, Inc. (DU).

The RGHRP's mission is, "to restore and conserve the historical functions and vitality of the Rio Grande Basin in Colorado for improved water quality, agricultural water use, riparian health, wildlife and aquatic species habitat, recreation and community safety while meeting the Rio Grande Compact." The RGHRP facilitated completion of the Saguache Creek Stream Management Plan (SMP, 2020), a community-driven plan which assessed stream health conditions and diversion infrastructure along Saguache Creek. The Saguache Creek SMP assessed a portion of the ditch diversions and stream channel located within the proposed Project area and provided recommendations for infrastructure improvements and restoration opportunities. The proposed Project was directly informed by and born out of the SMP. Projects like this one further the stream restoration goals of the SMP and will help address our communities' current water security challenges.

Specifically, this project will help address agricultural, environmental, and water administration needs on lower Saguache Creek in the northern end of Colorado's San Luis Valley. It will result in planning and 60% designs to replace at least eight aging surface water diversion headgates, along with additional diversion structures to individual landowners and upgrade ditch and conveyance infrastructure for the ditch service areas. Improving diversions, headgates, and ditch infrastructure will benefit water rights associated with these ditches by improving diversion efficiency and ensuring delivery of water across agricultural lands. Increased

efficiencies within Saguache Creek will allow water managers to better plan and administer water rights and add flexibility to manage water to support ecological benefits. This project will also restore aquatic and riparian habitat and stabilize streambanks, which will improve river health, floodplain wetlands, water quality, and wildlife habitat. To bring this Project to fruition, the partners, including landowners and water users, have worked with DU to develop a meaningful and community-driven scope that will have important and long-lasting positive impacts to sustain water resources into the future.

We hope you will support this request for funding through the Cooperative Watershed Management Program, Phase I. These funds are imperative to the completion of the project, which will not only benefit water users within the Project area, the health of the Saguache Creek corridor and all downstream water users, but also administration of water rights for all users.

Sincerely,

Daniel Boyes
Executive Director, RGHRP

Rio Grande Water Conservation District
8805 Independence Way • Alamosa, Colorado 81101
Phone: (719) 589-6301 • Fax: (719) 992-2026
Protecting & Conserving San Luis Valley Water

August 21, 2024

Bureau of Reclamation
WaterSMART Program – CWMP
Funding Opportunity No. R23AS00362
Robin Graber, Program Coordinator
rgraber@usbr.gov

SUBJECT: **Lower Saguache Creek Flood Irrigation Infrastructure Restoration Planning and Design Project**

Dear WaterSMART - CWMP Program Selection Committee,

I am writing to express my support for the *Lower Saguache Creek Flood Irrigation Infrastructure Restoration Planning and Design Project* proposal being developed by Ducks Unlimited, Inc. (DU) as the applicant and the Rio Grande Headwaters Restoration Project (RGHRP) serving as the watershed group. The RGHRP completed the Saguache Creek Stream Management Plan (2020) that assessed stream condition and water control infrastructure condition through this section of Saguache Creek containing the 8 headgate diversions included in this project for upgrades. Over the past two years, a cooperative project funded by a Colorado Water Conservation Board water plan grant identified and prioritized additional infrastructure needs in lower Saguache Creek. Projects like this one play a critical role in addressing our communities' current water security challenges.

Specifically, this project will help address agricultural, environmental, and water administration needs on lower Saguache Creek. It will result in planning and 60% designs to replace at least eight aging surface water diversion headgates, along with additional diversion structures to individual landowners and upgrade ditch and conveyance infrastructure for the ditch service areas. Improving diversions, headgates, and ditch infrastructure will benefit water rights associated with these ditches by improving diversion efficiency and ensuring delivery of water across agricultural lands. Increased efficiencies within Saguache Creek will allow water managers to better plan and administer water rights and add flexibility to manage water to support ecological benefits. This project will also restore aquatic and riparian habitat and stabilize streambanks, which will improve river health, floodplain wetlands, water quality, and

wildlife habitat. To complete this project, the water users have worked with DU and partners to develop a meaningful and community driven project scope that will have important and long-lasting positive impacts to sustain water resources into the future.

We hope you will support this request for funding through the Cooperative Watershed Management Program. These funds are imperative to the completion of the project, which will not only benefit water users within the project area, the health of the Saguache Creek corridor, and administration of water for all users.

Sincerely,

Amber Pacheco
Deputy General Manager, Rio Grande Water Conservation District

Saguache Creek Water User's Association

Saguache, CO 81149

719-655-2255

August 19, 2024

Bureau of Reclamation
WaterSMART Program – CWMP
Funding Opportunity No. R23AS00362
Robin Graber, Program Coordinator
rgraber@usbr.gov

RE: Ducks Unlimited CWMP Lower Saguache Creek Flood Irrigation Infrastructure Restoration Planning and design Project

Dear WaterSMART - CWMP Program Selection Committee,

The Saguache Creek Water User's Association supports the *Lower Saguache Creek Flood Irrigation Infrastructure Restoration Planning and Design Project* proposal being developed by Ducks Unlimited, Inc. (DU) and has been an active participant in the development and prioritization of projects along this corridor. The Rio Grande Headwaters Restoration Project completed the Saguache Creek Stream Management Plan (2020) that assessed stream condition and water control infrastructure condition throughout the entire length of Saguache Creek. Over the past two years, a cooperative project funded by a Colorado Water Conservation Board water plan grant identified and prioritized 8 diversion structures that are outdated and non-functional on lower Saguache Creek. Projects like this one play a critical role in dealing with our communities' current water security challenges.

Specifically, this project will help address agricultural, environmental,

and water administration needs on lower Saguache Creek. It will result in planning and 60% designs to replace eight aging surface water diversion headgates, along with additional diversion structures to individual landowners and upgrade ditch and conveyance infrastructure for the eight ditch service areas. Improving diversions, headgates, and ditch infrastructure will benefit water rights associated with these ditches by improving diversion efficiency and ensuring delivery of water across agricultural lands. Increased efficiencies within Saguache Creek will allow water managers to better plan and administer water rights and add flexibility to manage water to support ecological benefits. This project will also restore aquatic and riparian habitat and stabilize streambanks, which will improve river health, floodplain wetlands, water quality, and wildlife habitat. To complete this project, the water users have worked with DU and partners to develop a meaningful and community driven project scope that will have important and long-lasting positive impacts to sustain water resources into the future.

We hope you will support this request for funding through the Cooperative Watershed Management Program. These funds are imperative to the completion of the project, which will not only benefit water users within the project area, but also the health of the Saguache Creek corridor and all water users on Saguache Creek.

Sincerely,

Edwin C. Nielsen, President

Saguache Creek Water User's Association

COLORADO
State Land Board

Southwest District
918 4th Street, Suite B
Alamosa, CO 81101
P 719.589.2360 | F 719.589.2967

8.22.2024

Bureau of Reclamation
WaterSMART Program – CWMP
Funding Opportunity No. R23AS00362

RE: Lower Saguache Creek Flood Irrigation Infrastructure Restoration Planning and Design Project

Dear WaterSMART - CWMP Program Selection Committee,

I would like to express my support for the ***Lower Saguache Creek Flood Irrigation Infrastructure Restoration Planning and Design Project*** ("Project") proposal being developed by Ducks Unlimited, Inc. (DU). Over the past two years, a cooperative project funded by a Colorado Water Conservation Board water plan grant identified and prioritized infrastructure needs in lower Saguache Creek.

Specifically, the Project will help address agricultural, environmental, and water administration needs on lower Saguache Creek. It will result in planning and 60% designs to replace at least eight aging water diversion headgates, along with additional diversion structures serving individual landowners, and upgrade water conveyance infrastructure for multiple ditch service areas.

Improving ditch infrastructure will benefit water rights associated with these ditches by improving diversion efficiency and ensuring delivery of water across agricultural lands. Increased efficiencies within Saguache Creek will allow water managers to better administer water rights and add flexibility to manage water to support ecological benefits. The Project will also restore aquatic and riparian habitat and stabilize stream banks, improving river health, floodplain wetlands, water quality, and wildlife habitat.

1127 Sherman Street, Suite 300, Denver, CO 80203-2206
P 303.866.3454 | F 303.866.3152 | www.colorado.gov/statelandboard

COLORADO
State Land Board

To complete this project, the water users have worked with DU and partners to develop a meaningful and community driven project scope that will have important and long-lasting positive impacts to sustain water resources into the future.

I hope you will support this request for funding through the Cooperative Watershed Management Program. These funds are imperative to the completion of the project, which benefits water administration, water users within the project area, the health of the Saguache Creek corridor, and all downstream water users.

Sincerely,

Courtney Hurst
Southwest District Manager, State Land Board

1127 Sherman Street, Suite 300, Denver, CO 80203-2206 P 303.866.3454 F 303.866.3152
www.colorado.gov/trustlands

MICHAEL F. BENNET
COLORADO

COMMITTEES:
AGRICULTURE, NUTRITION, AND FORESTRY
FINANCE
INTELLIGENCE
RULES AND ADMINISTRATION

United States Senate
WASHINGTON, DC 20510-0609

WASHINGTON, DC:
261 RUSSELL SENATE OFFICE BUILDING
WASHINGTON, DC 20510
(202) 224-5852

COLORADO:
CESAR E. CHAVEZ BUILDING
1244 SPEER BOULEVARD
DENVER, CO 80204
(303) 455-7600

http://www.bennet.senate.gov

August 14, 2024

The Honorable Robin Graber
Program Coordinator
Bureau of Reclamation
1849 C Street NW #7654
Washington, DC 20240

Dear Coordinator Graber:

I write in support of Ducks Unlimited's application to the Bureau of Reclamation for funding from the WaterSMART Cooperative Watershed Management Program Phase I grant program. If awarded, Ducks Unlimited, in partnership with Rio Grande Water Conservation District and Wetland Dynamics, will design stream infrastructure upgrades and restoration projects in the San Luis Valley (SLV) with their Lower Saguache Creek Flood Irrigation Infrastructure Restoration Planning and Design Project (the Project).

The SLV is the headwaters of the Rio Grande River and faces significant water management challenges due to continued drought conditions, limited water resources, groundwater pumping, and changing climatic conditions. The Rio Grande Headwaters Restoration Project completed a Stream Management Plan that identified key issues affecting the watershed; this Project will address the issues previously identified and expand the plan area to the lower reaches of Saguache Creek. With WaterSMART funds, Ducks Unlimited will administer water rights, deliver water resources to various ditches along the stream corridor, and incorporate riparian and wet meadow restoration where appropriate. This Project will result in designs for infrastructure improvements on eight head-gate diversions, upgrades on the eight associated ditch systems to better deliver water to subsequent users, streambank stabilization, aquatic and riparian habitat enhancement, and wetland restoration. This will advance community-led efforts to collaboratively develop projects that will contribute to the long-term viability of the SLV's water resources.

I respectfully encourage you to give Ducks Unlimited's application your full and fair consideration consistent with all applicable laws and regulations. Thank you for your review, and please notify my office of any funds awarded.

Sincerely,

Michael F. Bennet
United States Senator

August 20, 2024

US Department of the Interior - Bureau of Reclamation
WaterSMART Cooperative Watershed Management Program Phase 1
Fiscal Year 2023 and 2024
Funding Opportunity No. R23AS00362
Robin Graber, Program Coordinator
rgraber@usbr.gov

Re: BOR WaterSMART Cooperative Watershed Management Program Grants - Lower Saguache Creek Flood Irrigation Infrastructure Restoration Planning and Design Project

Dear Bureau of Reclamation WaterSMART Review Committee,

I am writing to express my support for the *Lower Saguache Creek Flood Irrigation Infrastructure Restoration Planning and Design Project*, in development by Ducks Unlimited, Inc. (DU) as the applicant and the Rio Grande Headwaters Restoration Project (RGHRP) serving as the watershed group. American Rivers is a national river conservation organization focused on protecting and restoring rivers for people and nature. We support this project because it aligns with our organization's mission and goals, including achieving goals laid out in the Saguache Creek Stream Management Plan (SMP). American Rivers has worked with these partners to identify federal funding and has applied for funding through the Natural Resource Conservation Service Rangewide Conservation Partnership Program which identified this project area as a priority. If approved, this funding would provide support for implementation of the planning and design resulting from this grant request.

Funding from this grant would support the planning and design of multi-benefit projects that will improve access to and management of water through headgate and ditch improvements, while also restoring in-stream and riparian habitat through river channel improvements and better connectivity with the floodplain. The RGHRP completed the SMP (2020), funded in part by a previous CWMP that assessed stream conditions and water control infrastructure conditions through this section of Saguache Creek containing the 8 headgate diversions included in this project for upgrades. Over the past two years, a cooperative project funded by a Colorado Water Conservation Board water plan grant identified and prioritized additional infrastructure needs in lower Saguache Creek. Projects like this play a critical role in addressing the area's current water security challenges.

Specifically, this project will help address agricultural, environmental, and water administration needs on lower Saguache Creek. It will result in planning and 60% designs to replace at least eight aging surface water diversion headgates, along with additional diversion structures to individual landowners and upgrade ditch and conveyance infrastructure for the ditch service areas. Improving diversions, headgates, and ditch infrastructure will benefit water rights associated with these ditches by improving diversion efficiency and ensuring delivery of water across agricultural lands. Increased efficiencies within Saguache Creek will allow water managers to better plan and administer water rights and add flexibility to manage water to support ecological benefits. This project will also restore aquatic and riparian habitat and

stabilize streambanks, which will improve river health, floodplain wetlands, water quality, and wildlife habitat. To complete this project, the water users have worked with DU and partners to develop a meaningful and community driven project scope that will have important and long-lasting positive impacts to sustain water resources into the future.

We hope you will support this request for funding through the Cooperative Watershed Management Program. These funds are imperative to the completion of the project, which will not only benefit water users within the project area, but improve the health of the Saguache Creek corridor, and administration of water for all users.

Sincerely,

Emily Wolf

Emily Wolf
Rio Grande Coordinator
American Rivers

Flying X Cattle Co., Inc.
30755 Hwy 114
Saguache, CO 81149

August 19, 2024

Bureau of Reclamation
WaterSMART Program – CWMP
Robin Graber, Program Coordinator
rgraber@usbr.gov

RE: Ducks Unlimited CWMP Lower Saguache Creek Flood Irrigation Infrastructure Restoration Planning and Design Project

Dear WaterSMART - CWMP Program Selection Committee

I am a landowner on Saguache Creek near Saguache, CO. I administer the first ten diversions and headgates on the upper reaches of Saguache Creek as well as several more on Luders Creek and Sheep Creek. I also own 3 more diversions and headgates 20 miles east of these near the town of Saguache. In 2021, we began working on a project to incorporate lands in the lower portion of the creek in partnership with the Colorado State Land Board (SLB) Colorado Cattleman's Agricultural Land Trust (CCALT), Rio Grande Headwaters Restoration Project (RGHRP), Wetland Dynamics, LLC, and Ducks Unlimited (DU). Using the RGHRP's Saguache Creek Stream Management Plan and subsequent efforts we identified extensive infrastructure upgrades needed to more effectively and efficiently flood irrigate our ranches and restore and enhance the habitat and wildlife values this type of irrigations provides.

CCALT has worked to conserve the large ranches in this area as part of the "Saguache Creek Conservation Project." The group was highly successful in this effort, conserving the majority of the ranchlands in the Saguache Creek drainage. This focused conservation effort has preserved the ranching culture, tied water rights to the land, and protected important wildlife habitat along Saguache Creek. Upgrading infrastructure along this corridor is critical to sustaining our family ranches and the functionality of the creek, wetlands and wildlife values in the area. Restoration projects along this corridor sustain limited water resources, recharge the

local water table and aquifers, and serve as an important buffer to the impacts of climate change and threats to dry up areas or export water.

Some of the irrigation infrastructure throughout the Saguache Creek corridor is near the end of or past its useful lifespan. Replacing this infrastructure is cost-prohibitive for individual landowners and ditch organizations. Over the past 2 years and with the assistance of funding from a Colorado Water Conservation Board water plan grant, we have worked closely with Wetland Dynamics and DU engineers to identify restoration areas and prioritize infrastructure replacement projects. We are now ready to pursue the funding necessary to restore this corridor.

We have a strong water community represented by the Saguache Creek Water User's Association, the Rio Grande Water Conservation District, and the RGHRP which serves as a watershed group for this application along with other cooperative efforts that have targeted and prioritized projects in this corridor and we are eager to maintain this energy and move forward without delay. This CWMP grant request is an important first step in planning and designing infrastructure and riparian restoration that will ensure the future viability of flood irrigated wet meadows for agriculture and wildlife throughout the Saguache Creek Corridor.

We appreciate the opportunity to work with the Rio Grande Headwaters Restoration Project, DU and other partners to meet our long-term goals toward a sustainable water future through the **Lower Saguache Creek Flood Irrigation Infrastructure Restoration Planning and Design Project** and hope that the committee fully funds this important community led project.

Sincerely,

Edwin C. Nielsen, President
Flying X Cattle Co., Inc.

DATE 08/26/24

Bureau of Reclamation
WaterSMART Program – CWMP
Robin Graber, Program Coordinator
rgraber@usbr.gov

RE: Ducks Unlimited CWMP Lower Saguache Creek Flood Irrigation Infrastructure Restoration Planning and Design Project

Dear WaterSMART - CWMP Program Selection Committee

I am a landowner on Saguache Creek corridor near Saguache, CO. Beginning in 2021, we began working on a project to incorporate lands in the lower portion of the creek in partnership with the Colorado State Land Board (SLB) Colorado Cattleman's Agricultural Land Trust (CCALT), Rio Grande Headwaters Restoration Project (RGHRP), Wetland Dynamics, LLC, and Ducks Unlimited (DU). Using the RGHRP's Saguache Creek Stream Management Plan and subsequent efforts we identified extensive infrastructure upgrades needed to more effectively and efficiently flood irrigate our ranches and restore and enhance the habitat and wildlife values this type of irrigations provides.

CCALT has worked to conserve the large ranches in this area as part of the "Saguache Creek Conservation Project." The group was highly successful in this effort, conserving the majority of the ranchlands in the Saguache Creek drainage. This focused conservation effort has preserved the ranching culture, tied water rights to the land, and protected important wildlife habitat along Saguache Creek. Upgrading infrastructure along this corridor is critical to sustaining our family ranches but also the creek, wetlands and wildlife values in the area. Restoration projects along this corridor sustain limited water resources, recharge the local water table and aquifer, and serve as an important buffer to the impacts of climate change and threats to dry up areas or export water.

Today much of the flood irrigation infrastructure throughout the Saguache Creek corridor is near the end of or past its useful lifespan. Replacing this infrastructure is cost-prohibitive for individual landowners and ditch organizations. Over the past 2 years and with the assistance of funding from a Colorado Water Conservation Board water plan grant, we have worked closely with Wetland Dynamics, and DU engineers to identify restoration areas, and prioritize infrastructure replacement projects. We are now ready to pursue the funding necessary to restore this corridor.

We have a strong water community represented by the Saguache Water Users Association, the Rio Grande Water Conservation District, and the RGHRP which serves as a watershed group for this application along with other cooperative efforts that have targeted and prioritized projects in this corridor and we are eager to maintain this energy and move forward without delay. This CWMP grant request is an important first step in planning and designing infrastructure and riparian restoration that will ensure the future viability of flood irrigated wet meadows for agriculture and wildlife throughout the Saguache Creek Corridor.

We appreciate the opportunity to work with the Rio Grande Headwaters Restoration Project, DU and other partners to meet our long-term goals toward a sustainable water future through the **Lower Saguache Creek Flood Irrigation Infrastructure Restoration Planning and Design Project** and hope that the committee fully funds this important community led project.

Sincerely,
Kristi Kehl-Staudt
Saguache Creek Landowner

DATE

Bureau of Reclamation
WaterSMART Program – CWMP
Robin Graber, Program Coordinator
rgraber@usbr.gov

RE: Ducks Unlimited CWMP Lower Saguache Creek Flood Irrigation Infrastructure Restoration Planning and Design Project

Dear WaterSMART - CWMP Program Selection Committee

I am a landowner on Saguache Creek corridor near Saguache, CO. Beginning in 2021, we began working on a project to incorporate lands in the lower portion of the creek in partnership with the Colorado State Land Board (SLB) Colorado Cattleman's Agricultural Land Trust (CCALT), Rio Grande Headwaters Restoration Project (RGHRP), Wetland Dynamics, LLC, and Ducks Unlimited (DU). Using the RGHRP's Saguache Creek Stream Management Plan and subsequent efforts we identified extensive infrastructure upgrades needed to more effectively and efficiently flood irrigate our ranches and restore and enhance the habitat and wildlife values this type of irrigations provides.

CCALT has worked to conserve the large ranches in this area as part of the "Saguache Creek Conservation Project." The group was highly successful in this effort, conserving the majority of the ranchlands in the Saguache Creek drainage. This focused conservation effort has preserved the ranching culture, tied water rights to the land, and protected important wildlife habitat along Saguache Creek. Upgrading infrastructure along this corridor is critical to sustaining our family ranches but also the creek, wetlands and wildlife values in the area. Restoration projects along this corridor sustain limited water resources, recharge the local water table and aquifer, and serve as an important buffer to the impacts of climate change and threats to dry up areas or export water.

Today much of the flood irrigation infrastructure throughout the

Saguache Creek corridor is near the end of or past its useful lifespan. Replacing this infrastructure is cost-prohibitive for individual landowners and ditch organizations. Over the past 2 years and with the assistance of funding from a Colorado Water Conservation Board water plan grant, we have worked closely with Wetland Dynamics, and DU engineers to identify restoration areas, and prioritize infrastructure replacement projects. We are now ready to pursue the funding necessary to restore this corridor.

We have a strong water community represented by the Saguache Water Users Association, the Rio Grande Water Conservation District, and the RGHRP which serves as a watershed group for this application along with other cooperative efforts that have targeted and prioritized projects in this corridor and we are eager to maintain this energy and move forward without delay. This CWMP grant request is an important first step in planning and designing infrastructure and riparian restoration that will ensure the future viability of flood irrigated wet meadows for agriculture and wildlife throughout the Saguache Creek Corridor.

We appreciate the opportunity to work with the Rio Grande Headwaters Restoration Project, DU and other partners to meet our long-term goals toward a sustainable water future through the **Lower Saguache Creek Flood Irrigation Infrastructure Restoration Planning and Design Project** and hope that the committee fully funds this important community led project.

Sincerely, Dee & Andrea Leidlmeyer 8/24/202

Saguache Creek Landowner

COLORADO CATTLEMEN'S AGRICULTURAL LAND TRUST

August 28th, 2024

Bureau of Reclamation
WaterSMART Program – CWMP
Funding Opportunity No. R23AS00362
Robin Graber, Program Coordinator
rgraber@usbr.gov

SUBJECT: Lower Saguache Creek Flood Irrigation Infrastructure Restoration Planning and Design Project

Dear WaterSMART - CWMP Program Selection Committee,

The Colorado Cattlemen's Agricultural Land Trust (CCALT) was founded in 1995 by the membership of the Colorado Cattlemen's Association (CCA), to help Colorado's farming and ranching families conserve agricultural lands and associated natural resources. The organization's mission is "to conserve Colorado's western heritage and working landscapes for the benefit of future generations." CCALT works diligently to deliver conservation solutions for Colorado's working lands, to increase awareness among farmers and ranchers about the benefits of conservation easements and other conservation opportunities, and to increase awareness of the importance of land conservation, production agriculture, and intact working landscapes. CCALT has conserved close to 36,000 acres in Saguache County, mostly along the Saguache Creek corridor, and is interested in investing in restoration projects that bolster the long-term sustainability of Saguache's agricultural economy.

I am writing to express my support for the Lower Saguache Creek Flood Irrigation Infrastructure Restoration Planning and Design Project proposal being developed by Ducks Unlimited, Inc. (DU) as the applicant and the Rio Grande Headwaters Restoration Project (RGHRP) serving as the watershed group. The RGHRP completed the Saguache Creek Stream Management Plan (2020) that assessed stream condition and water control infrastructure condition through this section of Saguache Creek containing the 8 headgate diversions included in this project for upgrades. Over the past two years, a cooperative project funded by a Colorado Water Conservation Board water plan grant identified and prioritized additional infrastructure needs in lower Saguache Creek. Projects like this one play a critical role in addressing our communities' current water security challenges.

Specifically, this project will help address agricultural, environmental, and water administration needs on lower Saguache Creek. It will result in planning and 60% designs to replace at least eight aging surface water diversion headgates, along with additional diversion structures to individual landowners and upgrade ditch and conveyance

infrastructure for the ditch service areas. Improving diversions, headgates, and ditch infrastructure will benefit water rights associated with these ditches by improving diversion efficiency and ensuring delivery of water across agricultural lands. Increased efficiencies within Saguache Creek will allow water managers to better plan and administer water rights and add flexibility to manage water to support ecological benefits. This project will also restore aquatic and riparian habitat and stabilize streambanks, which will improve river health, floodplain wetlands, water quality, and wildlife habitat. To complete this project, the water users have worked with DU and partners to develop a meaningful and community driven project scope that will have important and long-lasting positive impacts to sustain water resources into the future.

We hope you will support this request for funding through the Cooperative Watershed Management Program. These funds are imperative to the completion of the project, which will benefit agricultural producers operating on properties with CCALT-held conservation easements, the health of the Saguache Creek corridor, and administration of water for all users.

Sincerely,

Brendan Boepple
Director of Conservation

ATTACHMENT A
BUDGET DETAIL AND NARRATIVE TEMPLATE

Summary			
6. Budget Object Category	Total Cost	Federal Estimated Amount	Non-Federal Estimated Amount
a. Personnel	$158,892		
b. Fringe Benefits	$51,333		
c. Travel	$4,788		
d. Equipment	$0		
e. Supplies	$0		
f. Contractual	$51,441		
g. Construction	$0		
h. Other Direct Costs	$0		
i. Total Direct Costs	$266,454		
i. Indirect Charges	$33,546		
Total Costs	$300,000	$300,000	$0
	Cost Share Percentage	100%	0%

ATTACHMENT A
BUDGET DETAIL AND NARRATIVE TEMPLATE

6a. Personnel

This category includes salaries and wages of employees of the applicant organization that will be working directly on the project. Generally, salaries of administrative and/or clerical personnel are classified as indirect or overhead costs in your organization's accounting system included as a portion of the stated indirect costs. If these salaries can be adequately documented as direct costs, they can be included in this section; however, a justification must be included in the narrative. Recommend reviewing **§ 200.430 *Compensation - personal services*** for more information on the specific requirements regarding compensation costs, including the ***Standards for Documentation of Personnel Expenses*** **at §200.430(i).**

Narrative: For key personnel such as the project manager or principal investigator, identify the name individual and position/title. Other personnel should be identified by position only. For all positions, identify the project tasks that will be performed. Compensation rates can be expressed as hourly rates and number of hours or annual salary and percentage effort that will be contributed to each task, but must be consistent with your organization's accounting and timekeeping policies. Include estimated hours for compliance with reporting requirements, including the final project report and evaluation. For multi-year projects, identify the level of effort anticipated for each budget year and any estimates increases in compensation rates. Within the budget narrative, provide a certification that the labor rates included in the budget proposal represent the actual labor rates of the identified personnel/positions and are consistently applied to Federal and non-Federal activities. *Note: The annual/hourly labor rate must not include fringe benefits.*

Links: § 200.430 Compensation - personal services.

Personnel

Position Title	Time (Hrs or %)	Rate (Hr or Salary)	Total Cost	Rate Basis	**Comments** (as needed)
Supervisory Biologist/Manager - John Denton	40	$94	**$3,750**	Current salary	
Project Biologist	600	$75	**$44,760**	Current salary	
Senior Engineer	80	$94	**$7,499**	Current salary	
Project Engineer 1	1000	$75	**$74,600**	Current salary	
Temporary Engineering Technician	40	$45	**$1,800**	Current salary	
Compliance Specialist	355	$75	**$26,483**	Current salary	
		Total	**$158,892**		

Additional Narrative/Comments:

6b. Fringe Benefits

Fringe benefits are allowances and services provided by employers to their employees as compensation in addition to regular salaries and wages. Fringe benefits include, but are not limited to, the costs of leave (vacation, family-related, sick or military), employee insurance, pensions, and unemployment benefit plans. Fringe costs should also include employer contributions required by law such as payroll taxes such as FICA, unemployment, and workers compensation. Fringe does not include federal income taxes, employee portion FICA, or other such costs. Recommend reviewing ***§ 200.431 Compensation - fringe benefits*** for more information on the allowability and allocability of fringe benefits. *Note: Car allowances and cars furnished to employees for personal and work use are unallowable as a fringe benefit, regardless of whether the costs is reported as taxable income, and must be excluded from fringe benefit rates.*

Narrative: Fringe benefits can be expressed as an hourly rate or percentage of personnel costs, but must correspond to how the costs are documented in your organization's accounting system. In the narrative, identify the fringe benefit rates/amounts for each position. If the fringe benefit rate is less than 35% of the estimated employee compensation, no additional information is necessary. If the fringe benefit rate is more than 35%, provide a description and breakdown of the benefits. If the rate is established within a negotiated indirect cost rate agreement (NICRA), provide a copy of the agreement with the application. Do not combine the fringe benefit costs with direct salaries and wages in the personnel category.

Links: § 200.431 Compensation - fringe benefits

Fringe Benefits

Position Title	Compensation	Quantity	Total Cost	**Comments** (as needed)
Senior Biologist/Manager	$30	40	**$1,210**	**Less than 35% of compensation rate**
Project Biologist	$24	600	**$14,640**	**Less than 35% of compensation rate**
Senior Engineer	$30	80	**$2,421**	**Less than 35% of compensation rate**
Project Engineer 1	$24	1000	**$24,400**	**Less than 35% of compensation rate**
Compliance Specialist	$24	355	**$8,662**	**Less than 35% of compensation rate**
		Total	**$51,333**	

Additional Narrative/Comments:

6c. Travel

Travel costs are expenses incurred by personnel in the performance of project activities. Costs can be charged on an actual cost basis, on a per diem or mileage basis in lieu of actual costs incurred, or on a combination of the two, provided that the method used is applied to the entire trip and not to selected days of the trip. All charges must be consistent with those normally allowed under similar circumstances for non-Federally funded activities and any established travel policies. Recommend reviewing ***§ 200.475 Travel costs***

Narrative: Provide a narrative describing any travel employees are anticipated to perform. Include the purpose of the travel and how it relates to project tasks, the origin and destination of the trip, number of personnel traveling, length of stay and all travel costs including airfare, per diem, lodging, transportation, and miscellaneous travel expenses. Identify the basis for rates used, (e.g. GSA Per Diem Rates, published prices) and the total of each planned trip.

Links: § 200.475 Travel costs

Travel

Purpose	From/To	# of Days	# of Travelers	Lodging per Traveler	Flight per Traveler	Vehicle per Traveler	Per Diem per Traveler	Cost per Trip	Basis for Estimate
Site visits/Stakeholder meetings	Fort Collins to Monte Vista, CO	3	6	$160		$410	$114	**$4,104**	**3 days X 2 travelers/trip. Average**
Topographical Surveys	Fort Collins to Monte Vista, CO	5	1	$160		$410	$114	**$684**	**5 days X 1 travelers/trip needed to**
								$0	
								$0	
								$0	
							Total	**$4,788**	

Additional Narrative/Comments:

6f. Contractual

Include all contracts and subawards, (other than those for construction activities) under this Budget Object Class Category. Per § 200.1, a*contract* means, for the purpose of Federal financial assistance, a legal instrument by which a recipient or subrecipient purchases property or services needed to carry out the project or program under a Federal award. The term as used in this part does not include a legal instrument, even if the non-Federal entity considers it a contract, when the substance of the transaction meets the definition of a subaward.

For additional information on subrecipient and contractor determinations, see § 200.331 Subrecipient and contractor determinations. Do not include construction contract costs in this subsection. Construction costs should be included in Budget Object Class Category 6g, Construction.

Links: § 200.1 Definitions
§ 200.331 Subrecipient and contractor determinations.

Contracts

For each contract, regardless of dollar value, describe the services to be obtained and the applicability or necessity of each to the project. Identify the total estimated cost and the basis(es) used to develop the estimate. For each contract with an estimated amount meeting or exceeding $250,000 or represents 35% or more of the total project cost, provide a separate detailed description of the estimated costs. A detailed estimate can be included with the application in lieu of a description. For contracts with an estimated cost equal to or greater than the micro-purchase threshold (currently $10,000) identify the anticipated procurement method to be used and the basis of selection.

NOTE: Only contracts for architectural/engineering services can be awarded using a qualifications-based procurement method. If a qualifications-based procurement method is used, profit must be negotiated as a separate element of the contract price. See **§200.318** ***General Procurement Standards*** for additional information regarding procurements, including required contract content. The procurement method used must be compliant with**§ 200.319** ***Competition*** , and **§ 200.320** ***Methods of procurement to be followed*** . Recommend reviewing **§200.459** ***Professional service costs*** .

Links: § 200.318 General procurement standards
§ 200.319 Competition
§ 200.320 Methods of procurement to be followed.
§ 200.459 Professional service costs

Contractor Name	Purpose and Contracting Method	Total Cost	Description of costs	Basis of cost
Wetland Dynamics, LLC.	Facilitate local stakeholder meetings, technical	$30,441	Personnel costs and other direct costs	Recent project cost for same activity on a different project(s).
		$0		
		$0		
		$0		
		$0		
	Subtotal	$30,441		

Additional Narrative/Comments:

Subawards

If known, identify the recipient of each subaward. Describe the activities to be performed under each subaward and indicate the applicability or necessity of each to the project. Provide a separate detailed budget for each subaward regardless of dollar value. A detailed estimate may be included with the application in lieu of a description of budgeted costs. Identify who prepared the estimate (subrecipient, applicant personnel, etc.) and indicate the basis used to estimate each cost. Include any indirect/overhead costs anticipated to be paid and the rate used. If the subrecipient has a Federal negotiated indirect cost rate agreement (NICRA), include a copy of the NICRA with the application.

Subrecipient Name	Description of Activites	Total Cost	Description of budgeted costs	Basis of Cost
Rio Grande Headwaters Restoration Project	Facilitate local stakeholder meetings, technical	$21,000	Personnel costs and other direct costs	Recent project cost for same activity on a different project(s).
		$0		
		$0		
		$0		
	Subtotal	$21,000		

Additional Narrative/Comments:

TOTAL CONTRACTUAL	$51,441

6 j. Indirect Costs

Option 1: Show the rate reflected in the most recent Federal indirect cost rate agreement, cost base, and proposed amount for allowable indirect costs. If your organization has a current Federal negotiated indirect cost rate agreement, it must be included with your application.

Option 2: If your organization has never received a Federal negotiated indirect cost rate, the budget may include a 10 % de minimis rate of modified total direct costs. Per ***§ 200.1 Definitions,*** Modified Total Direct Cost (MTDC) *means all direct salaries and wages, applicable fringe benefits, materials and supplies, services, travel, and up to the first $25,000 of each subaward (regardless of the period of performance of the subawards under the award). MTDC excludes equipment, capital expenditures, charges for patient care, rental costs, tuition remission, scholarships and fellowships, participant support costs and the portion of each subaward in excess of $25,000.* For further information on modified total direct costs, refer to ***§ 200.414 Indirect (F&A) costs*** .

Option 3: If your organization does not have a federally approved indirect cost rate agreement and is proposing a rate greater than the 10 % de minimis rate, include the computational basis for the indirect expense pool and corresponding allocation base for each rate. *Note: If this option is selected, you will be required to submit an indirect cost rate proposal to your cognizant Federal agency within 3 months after the date the award is issued.* Information on "Preparing and Submitting Indirect Cost Proposals" is available from Interior, the National Business Center, and Indirect Costs and Acquisition Audit Services at https://ibc.doi.gov/ICS/icrna.

Note: Construction costs are capital expenditures and must be excluded from the indirect cost base.

Links: § 200.1 Definitions
§ 200.414 Indirect (F&A) costs.
https://ibc.doi.gov/ICS/icrna

j. Indirect Costs

Rate Type	Current Federal NICRA	Base Description	Base Total	Rate	Total Cost
Indirect Rate	Yes	See indirect cost rate agreement	$266,454	12.59%	**$33,546**
					$0
					$0
					$0
				Total	**$33,546**
				Estimated amount of indirect costs to be paid with Federal funds	
				Estimated amount of indirect costs to be paid with non-Federal funds	

288113

Attachment – Supporting Watershed Plan

The Lower Saguache Creek Flood Irrigation Infrastructure Restoration Planning and Design Project (Project) was developed by a diverse group of partners after the project being identified and prioritized in the 2020 Saguache Creek Stream Management Plan (SMP). The SMP is available for download at the following link: https://riograndeheadwaters.org/stream-management-plans.

This multi-benefit Project will help meet the following SMP goals:

- Goal A. Improve function and reduce maintenance of irrigation infrastructure, both for water users and river health.
- Goal B. Maintain or improve bank and channel stability, especially near important wildlife habitat and critical infrastructure such as homes, diversion structures, roads, and bridges.
- Goal C. Maintain and improve the function of floodplains, associated alluvial aquifers, and natural channel processes.
- Goal D. Maintain and improve the extent and condition of riparian areas.
- Goal F. Maintain or improve water quality, with a focus on compliance with State water quality standards.

The Saguache Creek SMP excerpts below include the following: river conditions by reach, a table of SMP Reach SC05 conditions, Reach SC05 hydrographs (depicting dry, average, and wet year types) with winter/summer aquatic habitat target flows overlaid, diversion infrastructure statistics and ratings, and an excerpt from **Goals and Priority Action Items** listing the Project as a priority. *Note: the Project elements are identified within multiple projects, including the Proffit "McDonough Ditch Improvement Project," "Quartet Ditch Improvement Project," "George Ball Ditch Improvement Project," "Wall Ditch Improvement Project," and the "Saguache Creek Riparian Revegetation Project" in the SMP.*

Saguache Creek SMP Title Page

Saguache Creek Stream Management Plan

Prepared for:
Rio Grande Basin Roundtable and the
Stream Management Plan Technical Advisory Team

With support from:
Colorado Water Conservation Board
San Luis Valley Conservation and Connection Initiative
Bureau of Reclamation WaterSMART Program
American Whitewater
Sangre de Cristo National Heritage Area
San Luis Valley Water Conservancy District
Conejos Water Conservancy District

Prepared by:
Rio Grande Headwaters Restoration Project
623 E Fourth St
Alamosa, CO 81101

2020

Figure 3.2: River conditions by reach, by assessment variable and overall condition.

Figure 3.2 shows reach condition by assessment as well as the overall reach condition. Overall reach condition was calculated as the mean assessment rating for each reach.

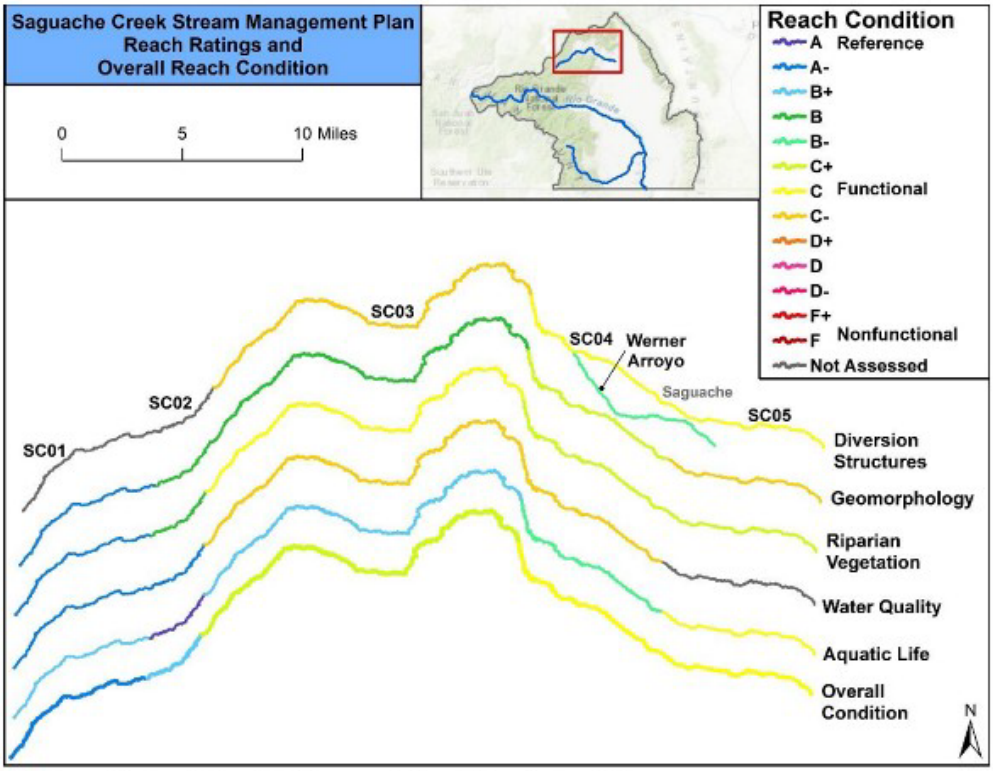


Figure 3.2: Saguache Creek Reach Ratings and Overall Reach Condition

66

SAGUACHE CREEK STREAM MANAGEMENT PLAN
2020

Reach-scale conditions assessment results – Reach SC05

SC05 Conditions Assessment Overview

Reach: SC05		Major Stream Condition Stressors												
Parameter	Condition Rating	Crossings and diversions	Roads and railways	Floodplain disconnection	Channelization and armoring	Fill and floodplain conversion	Flow alteration: impoundments	Flow alteration: diversions	Abandoned mine lands	Exotic/naturalized plant species	Exotic aquatic species	Lack of woody material	Hillslope/channel erosion	Unknown source
Geomorphology	C-	X		X	X	X		X				X	X	
Riparian Vegetation	C+			X	X	X				X				
Water Quality	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Aquatic Life	C	X						X				X	X	
Diversion Structures	C													

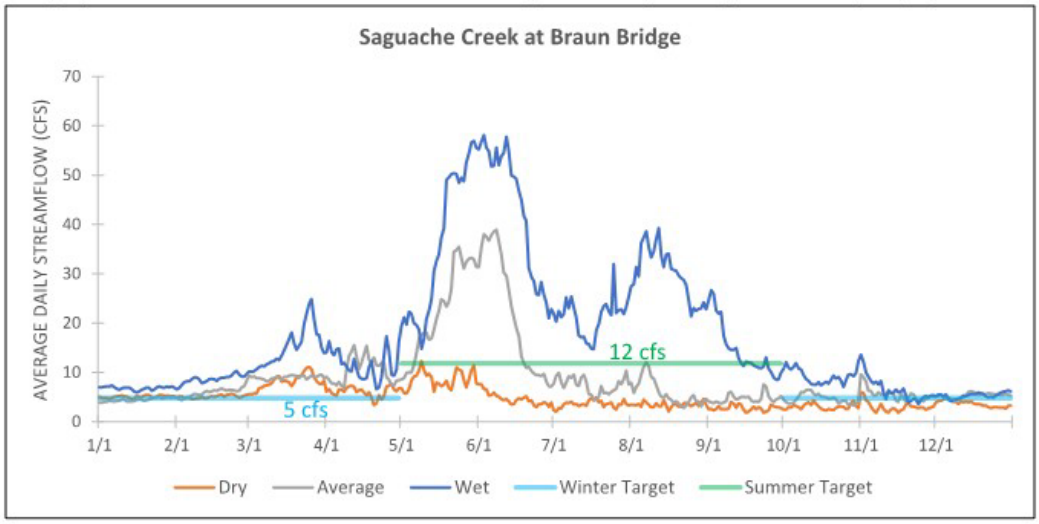
A	B	C	D	F	Not Assessed

*For an explanation of methodology used to determine reach ratings, see section 2.

Aquatic habitat (i.e., environmental) flow targets for Reach SC05

SC05 Aquatic Habitat Flow Targets

The graph below shows summer and winter flow targets with dry, average, and wet hydrographs.



The table below shows percent of days the reach's summer and winter flow targets are met in each year type:

Reach SC05	DRY	AVERAGE	WET
Winter	51%	72%	94%
Summer	1%	29%	92%

*See section 2.6 for detailed explanation of aquatic habitat methodology and caveats.

114

SAGUACHE CREEK STREAM MANAGEMENT PLAN
2020

Table 3.2: Diversion infrastructure statistics and condition listed by structure.

SMP Assessment Reach	Structure Name	Priority	Total Decreed Rate (cfs)	Water District ID (WDID)	Current Structure Rating	River Miles From Saguache Creek Terminus	Acres Irrigated (acres)	Amount Diverted (acre-feet)	Flood, Sprinkler, Both	% Flood/ % Sprinkler	Notes
SC05	Malone Sullivan Community Ditch	1	9.86	2600592	C	30.6	394.43	2343.91	Flood	100/0	This ditch services the Malone Sullivan Ditch 1 (ID 592, priority 1), Heimberger Ditch (ID 560, priority 2), Cato Ditch (ID 516, priority 2), Malone Sullivan Ditch 2 (ID 593, priority 6), and Luengen Sullivan Ditch (ID 589, priority 7).
SC05	Jaques Ditch	43	1.8	2600571	A-	N/A	80.24	500.75	Flood	100/0	
SC05	Van Allen Ditch & Downer Ditch 1	27	1.2	2600690	D	N/A	19.52	243.87	Flood	100/0	When in priority, the 2.8 cfs decreed to Downer Ditch 1 (priority 53) is diverted via Van Allen Ditch. Acreage and amt diverted include both structures.
SC05	Malone Ditch	4	2.15	2600591	B-	30.1	179.40	438.83	Flood	100/0	
SC05	Woodard Bros Ditch	13	7.1	2600697	D	29.9	367.35	946.13	Flood	100/0	
SC05	Mears Ditch 3	76	1	2600600	C+	29.1	N/A	172.56	Flood	100/0	
SC05	Ashley Proffit Ditch	9	9	2600501	B-	28.4	467.37	3067.64	Flood	100/0	
SC05	Proffit Company Ditch	10	3.6	2600648	B	27.8	202.17	978.96	Flood	100/0	
SC05	Proffit McDonough Ditch	24	2.2	2600649	B-	27.2	108.14	978.88	Flood & Sprinkler	45/55	
SC05	Quartet Ditch	17A	8.28	2600650	B-	26.2	1100.21	5344.60	Flood	100/0	
SC05	George Ball Ditch	36	18	2600545	D	26.1	1473.62	1233.48	Flood	100/0	
SC05	Wall Ditch	23	6.9	2600691	C-	26.0	415.45	1644.38	Flood & Sprinkler	70/30	

Table 3.2: Diversion infrastructure statistics and condition listed by structure.

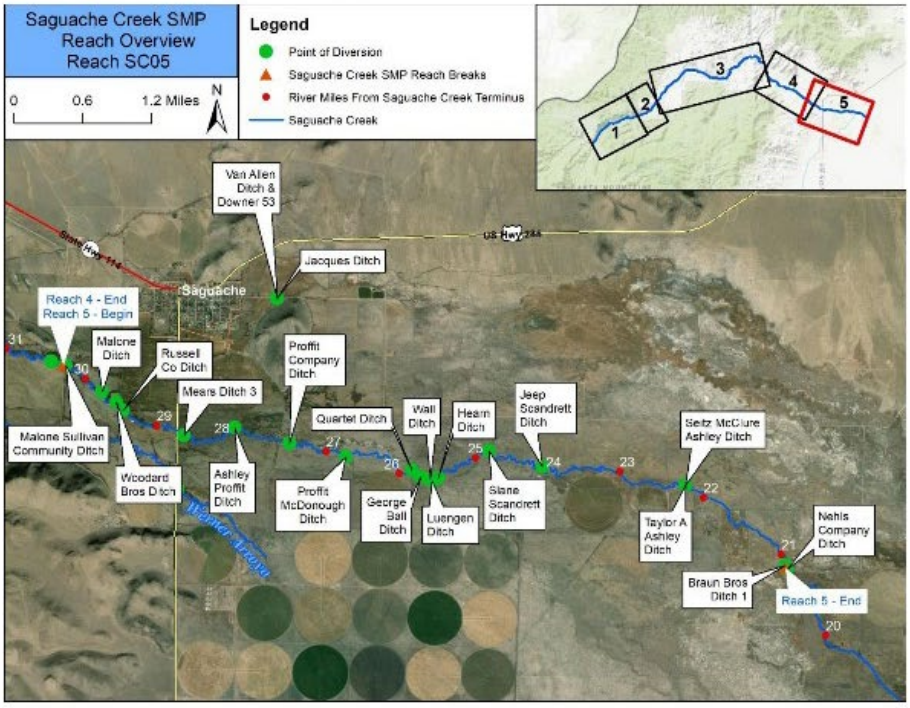
SMP Assessment Reach	Structure Name	Priority	Total Decreed Rate (cfs)	Water District ID (WDID)	Current Structure Rating	River Miles From Saguache Creek Terminus	Acres Irrigated (acres)	Amount Diverted (acre-feet)	Flood, Sprinkler, Both	% Flood/ % Sprinkler	Notes
SC05	Luengen Ditch	91	9.6	2600588	N/A	26.0	Included in WDID 691	Included in WDID 691	Flood	100/0	Acreage and amt diverted included in George Ball Ditch, the structure diverting this water when in priority.
SC05	Hearn Ditch	14	5.2	2600559	B	25.9	381.45	2036.24	Flood & Sprinkler	66/34	
SC05	Slane Scandrett Ditch	25	4.4	2600675	B-	25.2	155.28	2200.10	Flood	100/0	
SC05	Jeep Scandrett Ditch	25	3.6	2600574	B-	24.4	309.73	808.73	Flood	100/0	
SC05	Seitz McClure Ashley Ditch	35	5	2600667	B-	22.6	63.42	285.62	Flood	100/0	
SC05	Taylor A Ashley Ditch	25	2	2600682	B-	22.6	159.40	83.31	Flood	100/0	
SC05	Braun Bros Ditch 1	19	3	2600506	C	21.3	344.94	1736.65	Flood	100/0	
SC05	Nehls Company Ditch	32	9.12	2600616	C	21.2	205.79	147.18	Flood & Sprinkler	48/52	When in priority, the 1.8 cfs decreed to the Dick Gow Ditch (priority 55) is diverted via Nehls Co Ditch.

*Note: River miles for structures located on Werner Arroyo are from the terminus of Werner Arroyo. Acres irrigated, amount diverted, and percent flood/sprinkler are based on 2017 records. Amounts are rounded to the nearest tenth.

Diversion Infrastructure Descriptions and Recommendations

3.2.5 SC05 – County Road 46 to Braun Bridge

From where County Road 46 crosses the Creek, southwest of the Town of Saguache, downstream to the County Road X crossing (Braun Bridge).



Representative Reach Photo

Diversion Infrastructure Descriptions and Recommendations

SC05 Diversion Infrastructure

***Refer to reach overview map above for diversion structure locations.**

Malone Sullivan Community Ditch: This diversion is located just downstream of County Rd 46. A stacked rock diversion dam directs water to an approximately 450 ft feeder channel that delivers water to a second diversion dam and to the headgate. The headgate currently functions but is at risk of washing out at high flows. The diversion dam on the feeder channel is a check board structure with steel wing walls that directs water to the headgate on the north bank of the stream. Any unused water returns to the stream just downstream of the diversion dam. The diversion's wing walls are bulging and it is difficult to adjust for low flow conditions. The ditch between the headgate and flume was recently cleared and improved. Given the issues identified, the TAT recommends repairing or replacing the diversion and improving the headgate. Diversion improvement would reduce maintenance and improve the ditch's ability access to its full decree at all flows. Headgate reinforcement would prevent it from being washed out.

Jaques Ditch: This diversion is located just upstream of County Rd Z. The headgate is located just downstream of the Van Allen Ditch headgate, which can serve as the diversion dam/control structure for this ditch. Approximately 430 ft downstream of the headgate, this ditch travels under County Rd Z via a culvert. The headgate was recently replaced and functions well. Flow is measured using a staff on the headgate. No immediate repair needs were identified.

Van Allen Ditch & Downer 53 Ditch: This diversion is located just upstream of County Rd Z. The Jaques Ditch headgate serves as the diversion dam, directing water to the headgate, which travels north under County Rd Z via a culvert. The headgate leaks and functions poorly. Downstream of Rd Z where the flume is located, the ditch is very wide. Both Van Allen Ditch & Downer 53 and Jaques Ditch pick up return flows from the Saguache Town drain and the wastewater treatment facility. The TAT recommends repairing the headgate leak to reduce maintenance and improve efficiency.

Malone Ditch: This structure is located on the outside of a short meander. A stacked rock diversion dam directs water to the headgate, located on the north bank of the stream. During 2019 spring runoff, the diversion dam partially washed out. The landowner was able to temporarily repair the diversion dam, but is likely to fail again in the future. The headgate functions moderately well but leaks. The TAT recommends replacing the diversion dam and repairing the headgate leak. A new diversion and headgate would reduce maintenance and increase efficiency.

Woodard Bros Ditch: The diversion dam is a stacked rock structure with a utility pole that directs water to the headgate, located on the south bank. The diversion functions but requires regular maintenance. The headgate leaks and sediment accumulation is an issue at this structure. The TAT recommends repairing the headgate leak, installing a sluice gate, and improving the diversion dam. A new headgate and adjacent sluice gate would increase efficiency and sediment transport capacity. An improved diversion would reduce maintenance needs and help ensure long-term function.

Ashley Proffit Ditch: This structure is located on the outside of a tight meander. A stacked rock diversion dam directs water to the headgate, located on the north bank of the stream. The headgate functions effectively, however it cannot access its full decree at low flows due to leaks in the dam. The

meander upstream of this structure could be cut off during a high flow event, which would cause the structure to be bypassed. Given these current issues, the TAT recommends improving the diversion dam with a structure designed to reduce maintenance and enable the ditch to divert at all flows. If the upstream meander is cut off, the TAT recommends relocating the point of diversion accordingly.

Proffit Company Ditch: This diversion is located just downstream of County Rd 48X. A boulder diversion dam directs flow to the headgate on the north bank of the stream. The diversion dam, headgate, and flume were recently improved and are functioning well. However, the channel is unstable in this location and could experience avulsion or migration in the near future. An overflow channel was installed south of the diversion dam to prevent high flows from washing out the bank. Bank stabilization was also installed upstream of diversion dam to keep water from flooding south of the channel. The TAT recommends implementing bank stabilization and riparian revegetation on the south bank upstream and downstream of the diversion. Stabilization and revegetation would mitigate erosion and help prevent future channel avulsion.

Proffit McDonough Ditch: The stream's gradient in this reach is very low and the stream is sinuous, with the potential for meanders to be cut off during high flow events. This structure's headgate is located on the south bank of the stream on the downstream end of a meander. The stream bank around the headgate was recently stabilized to prevent flows from bypassing it. The diversion dam is a stacked rock structure and functions moderately well. Occasionally, sand prevents the headgate from closing completely. The flume is tilted. The TAT recommends bank stabilization and riparian revegetation near this structure and resetting the flume. Stabilization and revegetation upstream of the diversion would help prevent the meander from being cut off and would mitigate erosion. Resetting the flume would improve long-term measurement accuracy.

Quartet Ditch: This structure is located at the apex of a meander. A boulder diversion dam directs water to the headgate, located on the north bank of the stream. The diversion dam effectively diverts the ditch's water users, but debris accumulates on the dam and the structure has led to altered sediment transport, bank erosion, and channel widening downstream of the dam. The dam creates a significant drop in the stream's elevation, forming a fish barrier and leading to a scour pool downstream of the dam. During high flows, it is possible that the stream could intercept a historic channel, causing the stream to bypass the George Ball Ditch headgate. The flume functions but is aging and may fail in the near future. Given these issues, the TAT recommends installing a new diversion, implementing bank stabilization and riparian revegetation, and replacing the flume. A new diversion would reduce maintenance needs, create fish passage, and restore the sediment transport regime. Stabilization and revegetation would help prevent the meander from being cut off and would mitigate erosion. Replacing the flume would improve long-term functionality.

George Ball Ditch: A diversion dam composed of t-posts, a utility pole, and rocks diverts water to the headgate, which is located on the south bank. The headgate leaks and is in poor condition. Woody debris accumulates on the dam, making it difficult to adjust head pressure. The streambank downstream of the diversion is eroding and may cause the entire headgate to wash out at high flows. Additionally, during a high flow event, it is possible that the stream could intercept a historic channel beginning just downstream of Quartet Ditch. If this occurs, it would cause the stream to bypass the

Diversion Infrastructure Descriptions and Recommendations

George Ball headgate. The flume measures accurately but is tilted and severely eroded on its downstream side. Given the issues identified at this structure, the TAT recommends implementing bank stabilization and riparian revegetation, repairing the headgate and flume, and installing a new diversion. Stabilization and revegetation upstream would help prevent the meander from being cut off and downstream stabilization would help prevent channel widening and potential dam and headgate failure. Flume repairs would improve long-term functionality. A new diversion would reduce maintenance and allow sediment and debris to pass through the system. Alternatively, the point of diversion could be combined with the diversions belonging to the Wall and Hearn ditches. The three diversions are located within 900 ft of one another. Consolidation of these diversions would reduce both maintenance and sediment transport impacts.

Wall Ditch: This diversion is located on the downstream end of a meander in the stream. The diversion dam is made up of t-posts, roofing metal, and other debris. It is typically removed during the winter. The headgate is located on the south bank and suffers from erosion, with the only remaining wing wall collapsing. The exposed headgate culvert has holes which leak at high flows. The flume measure accurately when a shift is applied, however it is eroding. Given these issues, the TAT recommends replacing the diversion and headgate and repairing or replacing the flume. A new and integrated diversion and headworks would reduce maintenance and improve ditch function. Reinforcing the flume to prevent erosion would improve long-term functionality. Alternatively, this structure could be combined with the George Ball and/or Hearn diversions. Consolidation would reduce maintenance and substantially reduce sediment transport impacts.

Hearn Ditch: This diversion is located at the apex of a meander in the stream. A diversion dam made of t-posts, boulders, and concrete directs flow to a 30 ft feeder channel on the south bank of the stream and to the headgate, which functions well. The diversion appears to limit sediment transport capacity at this location and forms a barrier to fish passage during low flows. The TAT recommends replacing the diversion with an improved structure. A new diversion would improve fish passage and sediment transport capacity. As noted above, this structure could be combined with the Wall and/or George Ball diversions. Consolidation would reduce maintenance and reduce sediment transport impacts.

Slane Scandrett Ditch: This diversion is located on the outside of a meander. The stream is unstable in this location and a historic channel approximately 0.3 miles upstream could be captured during a high flow event. To mitigate this risk, an adjustment gate approximately 480 ft down the ditch allows water to bypass the main headgate and return to the stream. Despite recently installed concrete road barriers, significant erosion was occurring downstream of the diversion dam at the time of inspection. The TAT recommends improving the diversion dam and implementing bank stabilization and riparian revegetation. A new diversion could be designed to direct flow away from the bank and reduce erosion and maintenance needs. Alternatively, combining the diversion dam with that of the Jeep Scandrett may improve this ditch's function and reduce maintenance. Stabilization and revegetation would also reduce erosion.

Jeep Scandrett Ditch: A diversion dam of boulders and woody debris directs water to the headgate, located on the north bank of the stream. The diversion is located on the outside of a tight meander. The diversion dam functions poorly during low flow, collects debris, and does not have adequate

4. Saguache Creek SMP Implementation Strategy

4.1 Saguache Creek SMP Goals and Priority Action Items

The vision for implementation of the Saguache Creek Stream Management Plan is *to balance diverse ecological, agricultural, cultural, and recreational needs to support a healthy watershed and its sustainable use*. The goals and associated action items and projects listed below are based on community values identified during stakeholder engagement activities and stream condition assessment results. Action items and projects are organized under the primary goal which they will help meet. This implementation strategy was developed with input and support from the Technical Advisory Team (TAT). The TAT recognizes that the projects list below is dynamic. As conditions change, project details may also change and new projects will be identified in the future.

*Note: Refer to Table 4.1 for relative costs of priority projects. For action items that may include multiple projects, cost estimates are per site.

Table 4.1: Range of project costs.

Relative Cost	Range
Low	<$10,000
Medium	$10,000 – $100,000
Medium-High	$100,000 – $250,000
High	$250,000 – $1,000,000
Very High	>$1,000,000

Saguache Creek SMP Goals and Priority Action Items

Goal A. Improve function and reduce maintenance of irrigation infrastructure, both for water users and river health.	
Target – Fully functioning, low maintenance diversion structures with little or no impairment to river function. Riparian restoration and fish habitat improvements should be considered as part of any improvements.	**Performance Indicators** – Continued monitoring and documentation of infrastructure function.
Justification – The diversion infrastructure assessment identified significant need for infrastructure improvements. Some structures do not function well for water users, and, in some cases, negatively affect stream health and function.	

Action Item/Project	Description	Applicable Reach(es)	Additional Goals Met	Associated Benefits	Approximate Cost
Hawkins Ditch Improvement Project	This project includes improvements to the diversion dam, including fish passage, bank stabilization to protect headgate and increase channel stability, and riparian revegetation.	Reach 3	B, C, D, F, and G	Improved riparian vegetation condition and water quality; bank stabilization; enhanced aquatic habitat; increased sediment transport capacity.	Medium
Elwes Ditch 1 Improvement Project	This project includes improvements to the diversion dam, including fish passage, bank stabilization to prevent meander cutoff and improve channel stability, improvements to wing walls on headgate, and riparian revegetation.	Reach 3	B, C, D, F, and G	Improved riparian vegetation condition and water quality; bank stabilization; enhanced aquatic habitat; increased sediment transport capacity.	Medium
Monk Ditch 1 Improvement Project	Bank stabilization is recommended to protect this ditch's headgate and prevent the structure from being cut off. This project will implement bank stabilization and improve the diversion dam to create fish passage.	Reach 3	B, C, D, F, and G	Improved riparian vegetation condition and water quality; bank stabilization; enhanced aquatic habitat; increased sediment transport capacity.	Medium
North Meadows No 779 Ditch Improvement Project	This project will involve resetting the headgate and flume as well as bank stabilization and riparian revegetation to protect the headgate and minimize channel/structure maintenance.	Reach 3	B, C, D, F, and G	Improved riparian vegetation condition and water quality; bank stabilization; enhanced aquatic habitat.	Medium
Hodding Ditch 5 Improvement Project	This project will result in diversion dam improvements to divert water more effectively at low flows, improve sediment transport, provide fish passage, bank stabilization, replacement of flume.	Reach 3	B, C, D, F, and G	Improved riparian vegetation condition and water quality; bank stabilization; enhanced aquatic habitat.	Medium

Action Item/Project	Description	Applicable Reach(es)	Additional Goals Met	Associated Benefits	Approximate Cost
Werner Arroya Ditch Improvement Project	This project will result in diversion dam improvements to improve sediment transport. One potential solution is to move the diversion dam downstream to address the sedimentation issue.	Werner Arroyo	B, C, D, F, and G	Improved riparian vegetation condition and water quality; bank stabilization; enhanced aquatic habitat.	Medium
Fullerton Ditch 2 Improvement Project	This project will result in diversion dam replacement to create less hydraulic jump and create fish passage. Additionally, the flume will be leveled	Werner Arroyo	B, C, D, F, and G	Improved riparian vegetation condition and water quality; bank stabilization; enhanced aquatic habitat.	Medium-High
Fullerton Ditch 3 Improvement Project	This project will result in diversion dam improvements to divert water more effectively and improve sediment transport. The headgate and flume will also be repaired and reset.	Werner Arroyo	B, C, D, F, and G	Improved riparian vegetation condition and water quality; bank stabilization; enhanced aquatic habitat.	Medium
Moses Goff Ditch 2 Improvement Project	This project will reorient or relocate the diversion dam to improve efficiency and sediment transport. The flume will be stabilized or filled to prevent further erosion.	Werner Arroyo	B, C, D, F, and G	Improved riparian vegetation condition and water quality; bank stabilization; enhanced aquatic habitat.	Medium
Malone Sullivan Community Ditch Improvement Project	This project will repair or replace the diversion dam to allow the ditch to access to its full decree at low flows.	Reach 5	B, C, D, F, and G	Improved riparian vegetation condition and water quality; bank stabilization; enhanced aquatic habitat.	Medium-High
Woodard Bros Ditch Improvement Project	This project will address the leaky headgate and result in the installation of a sluice gate to address sediment accumulation.	Reach 5	B, C, D, F, and G	Improved riparian vegetation condition and water quality; bank stabilization; enhanced aquatic habitat.	Medium
Proffit McDonough Ditch Improvement Project	This project will result in the installation of bank stabilization structures upstream of the diversion to prevent the meander from being cut off.	Reach 5	B, C, D, F, and G	Improved riparian vegetation condition and water quality; bank stabilization; enhanced aquatic habitat.	Medium
Quartet Ditch Improvement Project	This project will result in diversion dam improvements for sediment transport and to mitigate debris accumulation. The flume will also be reset or replaced.	Reach 5	B, C, D, F, and G	Improved riparian vegetation condition and water quality; bank stabilization; enhanced aquatic habitat.	Medium
George Ball Ditch Improvement Project	This project will address a headgate leak through repair or replacement. A new diversion dam will be installed that requires less maintenance and allows sediment and debris to pass through the system. Bank stabilization and riparian revegetation will be implemented downstream of the diversion dam to prevent channel widening and potential dam and headgate failure.	Reach 5	B, C, D, F, and G	Improved riparian vegetation condition and water quality; bank stabilization; enhanced aquatic habitat.	Medium-High

Action Item/Project	Description	Applicable Reach(es)	Additional Goals Met	Associated Benefits	Approximate Cost
Wall Ditch Improvement Project	This project will result in diversion dam replacement with a low maintenance structure that is integrated with the headgate. The headgate and flume will also be repaired or replaced.	Reach 5	B, C, D, F, and G	Improved riparian vegetation condition and water quality; bank stabilization; enhanced aquatic habitat.	Medium
Braun Bros and Nehls Company Ditch Improvement Project	This project will result in bank stabilization paired with riparian revegetation to mitigate upstream erosion and reduce sedimentation. A sluice gate will be installed on the diversion dam to improve sediment transport and reduce ditch maintenance. The project applies to both the Braun Bros and Nehls Company ditches as they share the same point of diversion.	Reach 5	B, C, D, F, and G	Improved riparian vegetation condition and water quality; bank stabilization; enhanced aquatic habitat; increased sediment transport capacity.	Medium

Figure 4.1: Middle D-Curtis Ditch diversion and headgate on Saguache Creek.

*Although diversion structures are listed individually, infrastructure improvement projects may be grouped and completed in phases. Irrigation infrastructure projects listed here are top priorities, however improvement needs exist on other structures as well. For a detailed assessment of each diversion structure and its condition, visit this webpage: https://riograndeheadwaters.org/stream-management-plans.

Goal D. Maintain and improve the extent and condition of riparian areas.	
Target – Riparian areas with diverse species and age classes that contribute to overall stream health and wildlife habitat, including imperiled species.	**Performance Indicators** – Colorado Natural Heritage Program Ecological Integrity Assessment (EIA) score; SLV HCP, riparian area function, in conjunction with floodplain and river channel function.
Justification – Healthy and highly functioning riparian areas are critical to overall stream health. Importantly, intact riparian vegetation provides stream shading and provides a buffer against changes in water temperature. Maintaining and improving riparian vegetation will support overall stream health and complements other objectives.	

Action Item/Project	Description	Applicable Reach(es)	Additional Goals Met	Associated Benefits	Approximate Cost
Saguache Creek Riparian Revegetation	Targeted riparian revegetation, focusing on Reach SC03 through SC05.	Reaches 3 through 5	B, C, F, and G	Improved riparian vegetation condition and water quality; bank stabilization; enhanced aquatic habitat.	Medium
Saguache Creek Riparian Fencing	Installation of fencing to protect riparian vegetation, where possible.	All	B, C, F, and G	Improved riparian vegetation condition and water quality; bank stabilization; enhanced aquatic habitat.	Medium

Figure 4.3: Riparian vegetation near the Fourmile Creek confluence.

Attachment B – Supporting Figures

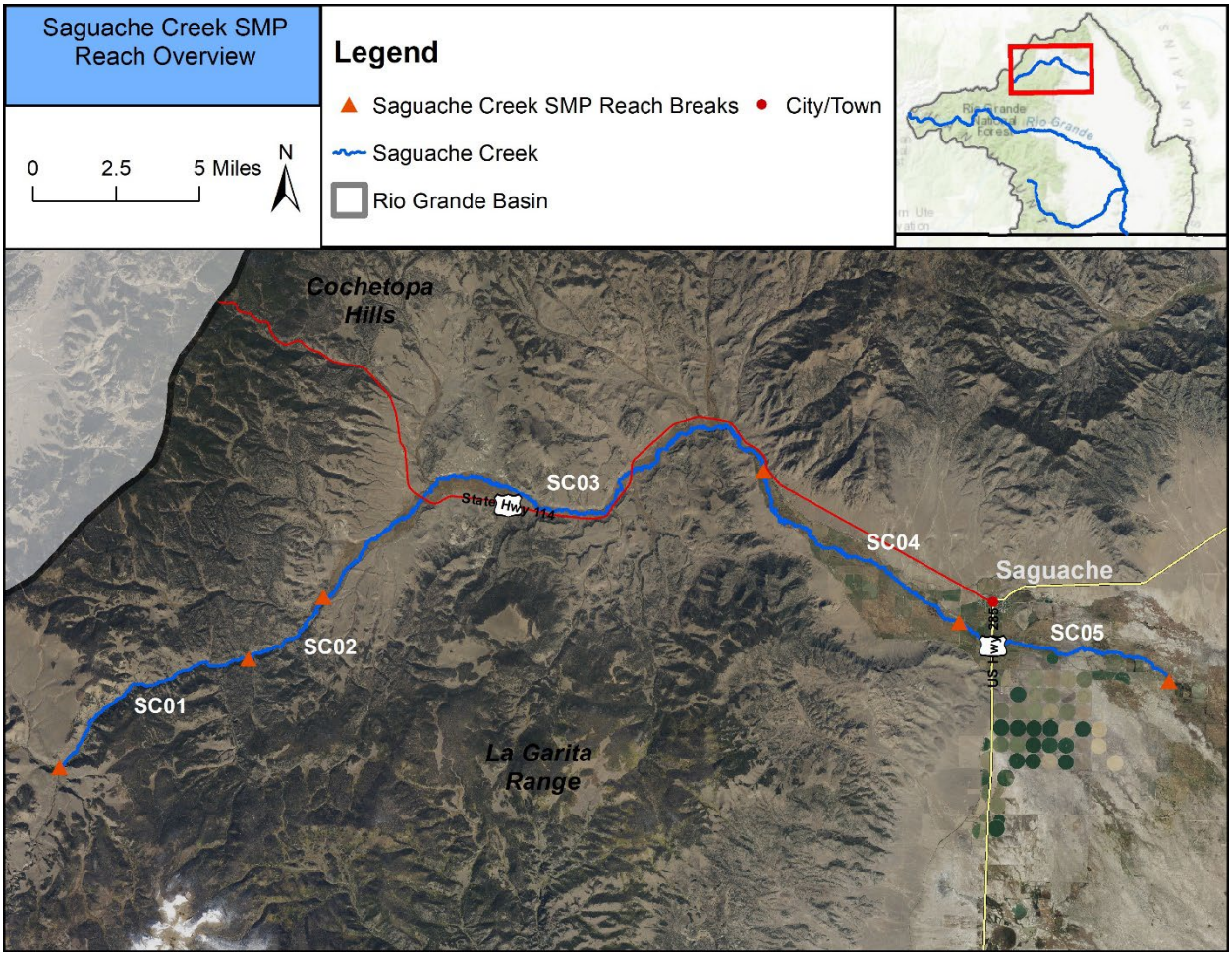


Figure 1. Overview map of the Saguache Creek SMP Reach, including SC05.

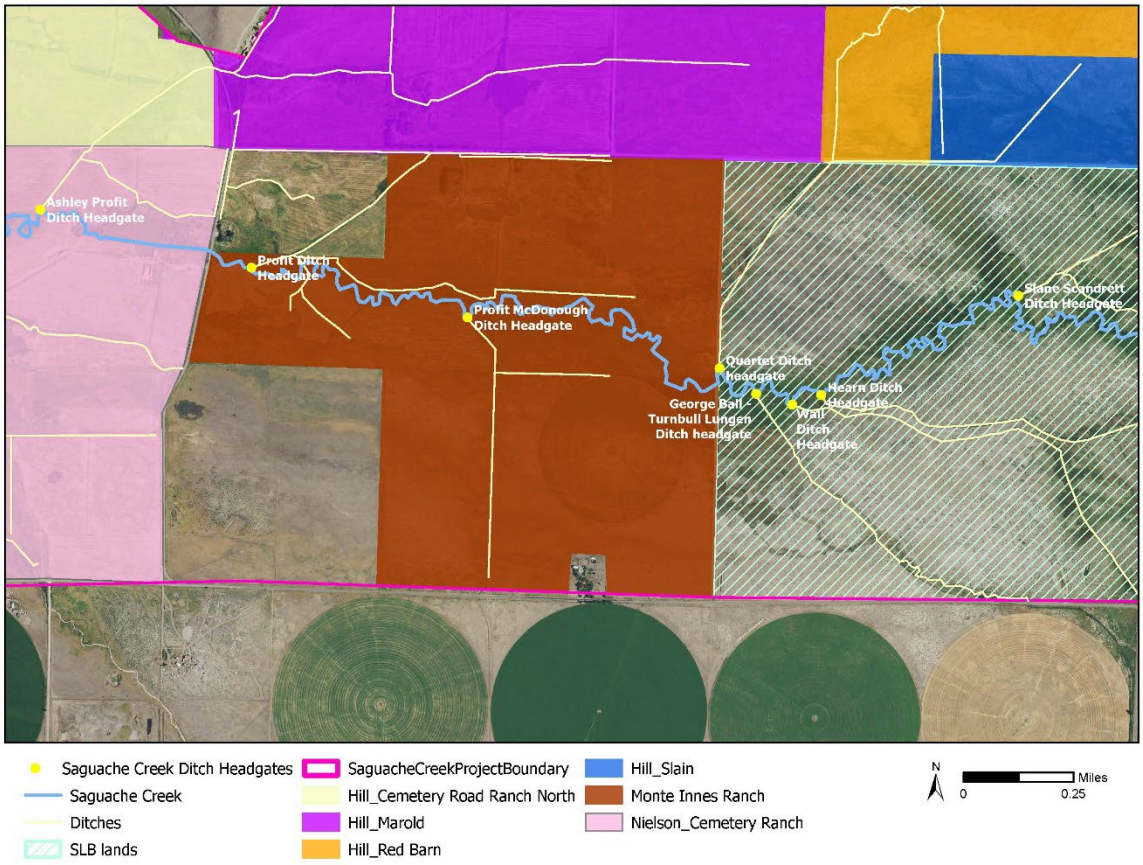


Figure 2. Location of the eight ditch headgates along the Saguache Creek within the Project area.

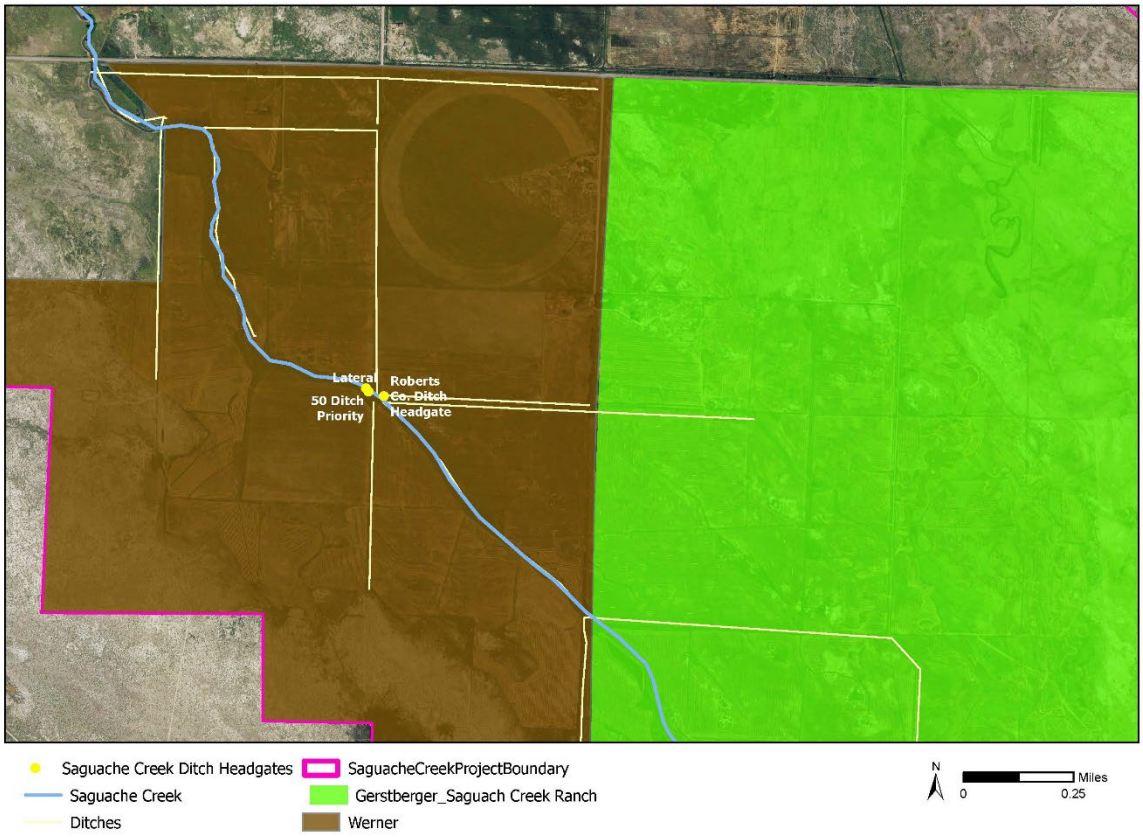


Figure 3. Location of Saguache Creek headgates within the Project that hold a sheet ice decree.