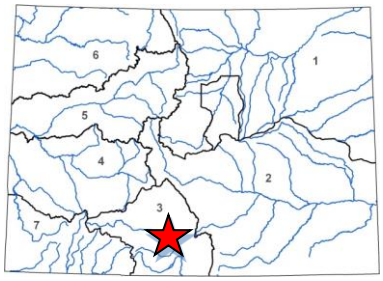
COLORADO
Colorado Water Conservation Board
Department of Natural Resources

Rio Grande Riparian Stabilization Project - Phase 5

Colorado Rio Grande Restoration Foundation

January 2020 Board Meeting

Colorado Watershed Restoration Program Application



LOCATION	
County/Counties:	Alamosa
Drainage Basin:	Rio Grande

DETAILS	
Total Project Cost:	$520,157
Colorado Watershed Restoration Program Request:	$200,000
Recommended amount:	$200,000
Other CWCB Funding:	$0
Other Funding Amount:	$315,157
Applicant Match:	$5,000
Project Type(s): Construction	
Project Category(Categories): Watershed and Stream Restoration	
Measurable Result: Stabilization of 6,400 linear feet of streambank. Restoration of 9 acres of riparian habitat. Community and youth volunteer engagement.	

The mission of the RGHRP is to restore and conserve the historical functions and vitality of the Rio Grande in Colorado for improved water quality, agricultural water use, riparian health, wildlife and aquatic species habitat, recreation, and community safety. Formed in 2001, the RGHRP has a history of completing projects on the Rio Grande through partnerships with local, state, and federal partners. Through 6 Projects in the Streambank Stabilization and Riparian Restoration Program, the RGHRP partnered with over 60 landowners to stabilize and rehabilitate over 11 river miles. Additionally, the RGHRP has worked with 6 ditch companies to replace aging and poorly functioning irrigation structures through the In-stream Infrastructure Improvement Program.

The Rio Grande in Alamosa County is experiencing a deterioration in river function due to unstable and eroding streambanks and degraded riparian areas. Loss of streambanks further reduces riparian habitat, negatively affecting wildlife. Unstable streambanks also increase sediment inputs into the river, decreasing water conveyance, reducing water quality, and harming fishery health.

The Project seeks to improve the health and resilience of the Rio Grande in Alamosa County by stabilizing streambanks and restoring riparian areas, thereby reducing sediment load to the river, improving riparian and aquatic habitat, reconnecting the river to its floodplain, and revitalizing riparian wetlands. These benefits will improve water quality and storage during drought years, restore riparian habitat, and reduce flood risk to the City of Alamosa.

Phase 5 will engage private landowners, the City of Alamosa, local stakeholders, and engineers in streambank stabilization and riparian restoration along the Rio Grande between the City of Alamosa and the Alamosa-Rio Grande County line, leveraging previously restored reaches to improve the regional health of the river. Among the identified project sites is a stretch within the Alamosa Riparian Park; riverfront property that was recently added to the City's public parks and trails system. Project activities on the Alamosa Riparian Park will protect trails and recreation opportunities on this new park property, while restoring riparian habitat.

COLORADO WATERSHED RESTORATION PROGRAM GRANT APPLICATION

PROJECT PROPOSAL SUMMARY SHEET

Project Title: Rio Grande Riparian Stabilization Project - Phase 5

Project Location: Portions of the Rio Grande in Alamosa County, CO. See project maps in Attachment D

Grant Type: Watershed/Stream Restoration

Grant Request/Amount: $200,000

Cash Match Funding: $311,000

In-kind Match Funding: $9,157

Project Sponsor: Colorado Rio Grande Restoration Foundation, fiscal agent for the Rio Grande Headwaters Restoration Project

Primary Contact: Emma Reesor, Executive Director, emma@riograndeheadwaters.org, (719) 589-2230

Project Description:
The Rio Grande in Alamosa County is experiencing a deterioration in river function due to unstable and eroding streambanks and degraded riparian areas. Loss of streambanks further reduces riparian habitat, negatively affecting wildlife. Unstable streambanks also increase sediment inputs into the river, decreasing water conveyance, reducing water quality, and harming fishery health.

The Rio Grande Riparian Stabilization Project – Phase 5 (Phase 5) seeks to improve the health and resilience of the Rio Grande in Alamosa County by stabilizing streambanks and restoring riparian areas, thereby reducing sediment load to the river, improving riparian and aquatic habitat, reconnecting the river to its floodplain, and revitalizing riparian wetlands. These benefits will improve water quality and storage during drought years, restore riparian habitat, and allow flexibility during floods, reducing risk to the downstream City of Alamosa.

Phase 5 will engage private landowners, the City of Alamosa, local stakeholders, and engineers in streambank stabilization and riparian restoration along the Rio Grande between the City of Alamosa and the Alamosa–Rio Grande County line, leveraging previously restored reaches to improve the regional health of the river. Among the identified project sites is a stretch within the Alamosa Riparian Park; riverfront property that was recently added to the City's public parks and trails system. Project activities on the Alamosa Riparian Park will protect trails and recreation opportunities on this new park property, while restoring riparian habitat.

When complete, Phase 5 will result in the following outcomes:

1. Stabilization of 6,400 linear feet of streambank at four sites along the Rio Grande;
2. Restoration of 9 acres of riparian habitat;
3. Engagement of community and youth in revegetation efforts and outreach and education activities.

COLORADO WATERSHED RESTORATION PROGRAM GRANT APPLICATION

Qualifications Evaluation (Maximum of 20 points)

• *Identify the lead project sponsor and describe the other stakeholders' level of participation and involvement. 10 points*

Phase 5 has brought together a diverse group of stakeholders to address community needs facing the Rio Grande in Alamosa County. Project partners involved in project planning and implementation include the Rio Grande Headwaters Restoration Project (RGHRP), Riverbend Engineering, the City of Alamosa, Colorado Open Lands (COL), private landowners, Rio Grande Headwaters Land Trust (RiGHT), and Rio Grande Conservation and Education Initiative (RGWCEI). Each partner represents different sectors of the community, ensuring project activities address multiple needs.

The lead sponsor for Phase 5 is the Rio Grande Headwaters Restoration Project (RGHRP). The RGHRP will coordinate contractors and partners, oversee and assist surveying and data collection, facilitate meetings between landowners and partners, secure project funding, and complete reporting. The RGHRP will contract with Riverbend Engineering, a local environmental engineering firm, to complete project designs and permits.

A portion of Phase 5 takes place on the Alamosa Riparian Park (Site 4), public open space owned by the City of Alamosa. The City has been developing improvements to this space, creating public recreation infrastructure that showcases the river as well as historical and cultural values. The City has partnered with COL to put a conservation easement on the Riparian Park, protecting the land from development in the future.

Upstream of the Alamosa Riparian Park, the land surrounding the Rio Grande is privately owned. As such, partnerships with private landowners are critical to the project outcomes. Phase 5 involves three individual landowners that have expressed enthusiasm for completing restoration work on their property. RiGHT has worked extensively with private landowners in the area to secure conservation easements on historic river ranches. In particular, the Hale Ranch (Site 1) is under conservation easement with RiGHT, ensuring that the restoration work done on these bends will remain valuable habitat for years to come.

RGWCEI works with K-12 teachers and students to raise awareness of natural resource stewardship and working landscapes. RGWCEI will help coordinate a youth volunteer event to assist with riparian revegetation efforts.

Finally, a Technical Advisory Team (TAT) has been formed to help oversee the planning process to ensure project methodologies and designs best address the ecological and hydrological needs for the project. The TAT includes representatives from the San Luis Valley Water Conservancy District (SLVWCD), Colorado Parks and Wildlife (CPW), RiGHT, COL, the Colorado Division of Water Resources (DWR), and the Natural Resources Conservation Service (NRCS).

• *Specify in-kind services and cash contributions (match) amount for the proposed activities. See section B.2 of the grant program guidance to determine match funding requirements. Discuss whether other funding sources are secured or pending. 10 points*

The total cost of Phase 5 is $520,157. Cash contributions for this project are as follows:

- $200,000 cash match from the National Fish and Wildlife Foundation, Resilient Communities Grant
- $45,000 cash match from project landowners

- $40,000 cash match from the San Luis Valley Conservation and Connection Initiative (SLVCCI)
- $15,000 cash match from the Colorado Health Rivers Fund
- $6,000 cash match from the San Luis Valley Water Conservancy District
- $5,000 cash match from the Colorado Rio Grande Restoration Foundation

In-kind support for this project is as follows:

- $2,034 of in-kind support from stakeholder that make up the project's TAT (80 hrs. @ $25.43/hr)
- $4,580 of in-kind support from the City of Alamosa. This includes the completion of a Southwestern willow flycatcher survey on the Alamosa Riparian Park and City Parks & Rec Director time (20 hrs @ $35 /hr) and City Outdoor Rec Specialist time (20 hrs. @ $19/hr) time spent on this project.
- $2,543 of in-kind support from community and youth volunteers for riparian revegetation efforts (100 hrs. @ $25.43/hr)

All matching funds have been secured.

Organizational Capability (Maximum of 30 points)

• *What is the applicant organization's history of accomplishments in the watershed? Provide several past project or planning examples. List partner organizations and agencies with whom applicant worked to implement past projects or planning efforts. 10 points*

The mission of the RGHRP is to restore and conserve the historical functions and vitality of the Rio Grande in Colorado for improved water quality, agricultural water use, riparian health, wildlife and aquatic species habitat, recreation, and community safety. Formed in 2001, the RGHRP has a history of completing projects on the Rio Grande through partnerships with local, state, and federal partners. Through 6 Projects in the Streambank Stabilization and Riparian Restoration Program, the RGHRP partnered with over 60 landowners to stabilize and rehabilitate over 11 river miles. Additionally, the RGHRP has worked with 6 ditch companies to replace aging and poorly functioning irrigation structures through the In-stream Infrastructure Improvement Program. Through the Watershed Stewardship Program, the RGHRP works with the US Forest Service and partners to complete forest health and wildlife hazard mitigation projects. Finally, through the Outreach and Education Program, the RGHRP completes valuable community information and engagement projects.

The RGHRP has completed past riparian stabilization projects adjacent to the proposed project area. These projects include the Rio Grande Riparian Stabilization Project – Phase 3 and Phase 4. Through these two projects, 10 sites underwent streambank stabilization and riparian restoration, resulting in improvements to over 3.5 miles of river channel. Phase 5 builds on these efforts, by implementing additional riparian stabilization adjacent to Phase 3 and 4 project locations.

All projects are completed through collaboration with partners; the NRCS, SLVWCD, Rio Grande Water Conservation District (RGWCD), and the private landowners involved with the RGHRP programs have been steadfast partners for over 16 years. More recently partners have expanded to include US Forest Service, the Bureau of Land Management, Colorado Parks and Wildlife, and local watershed groups and non-profits.

• *What level of staffing will be directed toward the implementation of the proposed project/planning effort? Discuss the number of staff and amount of time dedicated for the project. Will volunteers be utilized, and if so, how? Include brief resumes for each member of the active project team. 10 points*

The project will be implemented through a partnership between the RGHRP, Riverbend Engineering, the City of Alamosa, private landowners, RGWCEI and the TAT. The following passages detail information about the individuals that be involved and ensure the project is completed as proposed, within the stated timelines and expected costs.

- RGHRP: Emma Reesor is the Executive Director of the RGHRP and has held this position since 2016. With a background in biology and restoration ecology, Emma has experience in project development, administration, monitoring, and working with landowners, partners, agencies, and volunteers to complete project objectives. As the project lead, Emma will coordinate partners and contractors, facilitate meetings, raise funds for implementation, and complete project oversight, management and reporting. In addition, the RGHRP's full time volunteer Connor Born will assist in project implementation and monitoring.
- Riverbend Engineering, LLC: Riverbend Engineering is a water resources consulting engineering company with offices in Pagosa Springs, CO and Albuquerque, NM, specializing in geomorphically based river restoration, habitat enhancement, and bank stabilization projects. Chris Pitcher, PE will be the lead consulting engineer and will work with partners to complete surveys, develop project recommendation, complete designs, secure permits, and provide construction management and oversight. Chris has wide-ranging expertise in hydraulic and ecologically sustainable river restoration engineering.
- City of Alamosa: Andy Rice is the Director of Parks and Recreation at the City of Alamosa and currently oversees the City's diverse parks, recreational facilities, cemetery, and library and manages a total budget of around $3,000,000. He has been with the City of Alamosa since 2010 and has been in the field of parks and recreation for over 20 years. Andy will serve as the City of Alamosa's main point of contact and will facilitate all activities on City property.
- RGWCEI and youth volunteers: Bethany Howell is the executive director of the RGWCEI. She has been with the RGWCEI since 2016 and has an extensive background in communications at higher education institutions and non-profits. Bethany will help coordinate youth volunteer revegetation events and educational workshops as a part of this project.
- Technical Advisory Team: The TAT will provide guidance on project design and implementation. The TAT includes representatives from the SLVWCD, CWP, RiGHT, DWR, and NRCS.

• Demonstrate that the project budget and schedule are realistic. Please use the budget/timeline spreadsheet attached to the application. Please note that the start date will take place after funding awards are announced and grants are contracted. 10 points

The budget and timeline for Phase was developed by referencing previously completed RGHRP projects and through consultation with Riverbend Engineering. Stakeholder and landowner engagement are currently underway, with the completion of preliminary site surveys and designs planned for Spring 2020. Final designs and permitting will be completed during Summer 2020, preparing partners for construction as early as Fall 2020. The survey, design, and permitting completed by Riverbend Engineering will cost $14,000 per project site. Upon completion of the project designs, project partners will put the project out to bid. The most qualified contractor within the project budget will be selected to complete 6,400 feet of streambank stabilization and riparian restoration. The cost of earthwork, channel shaping, and construction of rock barbs and in-channel habitat improvements is estimated at $58 per linear foot of stream. The cost of riparian wetland restoration, including willow transplants and native seeding is estimated at $5 per linear foot. These estimates for the stream enhancement methods were calculated based on costs from similar adjacent stream enhancement projects. The project budget

also includes funding to support RGHRP staff time completing project management, partner coordination, grant administration, monitoring, and outreach and education.

Proposal Effectiveness (50 points)

• What information is the project sponsor using to develop the proposed plan or project? Include any relevant information regarding existing watershed plans, stream management plans, geomorphic assessments, flood studies, fire protection plans, riparian conditions assessments, aquatic/terrestrial habitat conditions, wildlife studies, and/or river restoration reports. 10 points

Phase 5 has been developed with the support of the following planning documents and efforts:

1. **The Rio Grande Headwaters Restoration Project 2001 Study** – The 2001 Study surveyed 91 miles of the Rio Grande through the Valley floor, summarized the condition of the river and riparian area, analyzing the causes of declining river health, and provided recommendations for restoration. The Study found a primary cause of degradation in the project reach to be sedimentation, and highlighted the overall poor condition of the riparian area within the project reach as well as a low Stability Index, an indication that streambanks were experiencing heightened instability.
2. **City of Alamosa Comprehensive Plan (2017)** – A result of mass community input and surveying, the Alamosa Comprehensive Plan identified goals and priorities for the City and laid out strategies to accomplish them. Among these was a strong emphasis on increasing access to the river and improving trails, vegetation, and sustainability in public access areas.
3. **Rio Grande Stream Management Plan (Jan 2020, anticipated completion)** – Assessment results from the Rio Grande SMP identified the need for river and riparian restoration within the Phase 5 project area. Preliminary recommendations for Reach 13 of the Rio Grande SMP (Alamosa County Line to the City of Alamosa) include projects focused on floodplain reconnection, reduction of sediment sources through bank stabilization, and aquatic habitat enhancement. The SMP also emphasized the need for riparian restoration through native species plantings and nonnative species removal.

In addition to these planning efforts, the methods for Phase 5 have been guided by lessons learned by the RGHRP and project partners during past streambank stabilization and riparian restoration work completed in the area.

• Discuss the multiple objective aspects of the project and how they relate to each other. Describe similar activities in the watershed and how this project or plan complements but does not duplicate those activities. Multiple objectives may include (but are not limited to) channel stabilization, riparian re-vegetation, habitat improvement, recreation opportunity enhancement, natural hazard reduction, flood mitigation, water supply delivery improvement, fish migration improvement, ephemeral/intermittent channel stabilization, and upland erosion mitigation. 30 points

Phase 5 will result in streambank stabilization and riparian restoration at four sites along the Rio Grande in Alamosa County. Sites were chosen strategically both for the critical and urgent nature of their instability and their location relative to previously restored sites. Combined with previous restoration work, this will create a contiguous four mile stretch of restored stream as the river enters the City of Alamosa. Additionally, infrastructure, including an access road and recreational trails, is threatened by erosion at several sites. Stabilizing the banks at these sites will reduce risk of harm to this infrastructure.

These efforts have a variety of benefits for the environment, as well as local water users and the downstream City of Alamosa. The stabilization of 6400 linear feet of stream will address the heightened erosion in this reach. Reshaping banks will reconnect the river to its historic floodplain, increasing

capacity during floods and improving riparian habitat condition. This is beneficial to the endangered Southwestern willow flycatcher and threatened yellow-billed cuckoo, who rely on riparian habitat within the project area.

Reshaping the channel will create a low-flow subchannel, decreasing water temperatures during low flow conditions to improve aquatic habitat. The new channel shape will also increase capacity, allowing the river to hold more water during flood years and protecting downstream Alamosa from flooding. Bank stabilization will address sedimentation and erosion issues, as well as protect existing habitat and infrastructure. Decreasing sediment input to the river will improve water quality and decrease temperature, improving aquatic habitat. The rock barb and root wad structures used will also create habitat features for fish.

Restoring 9 acres of riparian wetlands will directly improve resilience during drought and create improved riparian habitat. The wetlands act as a sponge year-round, holding water and releasing it slowly when the surrounding area is dry. This creates stable flows during drought years, maintaining and improving aquatic and riparian habitats that would otherwise dry up. The wetlands also provide a critical habitat for birds and fish, and are an important source of biodiversity.

Finally, project activities will improve the quality of river access on City open space, protecting trails and enhancing habitat. Engaging youth and community members in restoration activities results in will connect the public to the project and increase awareness of the benefits of river restoration

Phase 5 is complemented by the work of state and federal agencies such as CPW, US Fish and Wildlife Service, Bureau of Land Management, and the USFS. These agencies work to manage public lands in a way that protects our local rivers, wetlands, and watersheds. Phase 5 furthers their work by improving river condition on private lands and by providing a precedent for future projects of a similar nature. Additionally, these efforts are complemented by non-profit organizations working across the SLV including RiGHT, COL, RGWCEI, Trout Unlimited, and the Headwaters Alliance. Each organization fills an important role in the basin-wide effort to protect our natural resources. Collaboration between these organizations is critical to the resiliency of the Rio Grande and the communities that depend on it.

• *Describe the proposed monitoring or implementation plan. How will the project or plan measure success of its objectives? 10 points*

The RGHRP will oversee project implementation and monitoring. Progress towards project objectives will be measured by the completion of discrete steps. First, identified project locations will be surveyed and assessed by the project engineer. The engineer will then create site-specific designs, which will be reviewed by the project's TAT. The engineer will work with the RGHRP and landowners to acquire all required permits for the proposed restoration. Once permits and designs are in place, construction of the stabilizing structures, channel and bank reshaping, and revegetation will occur with the help of a local contractor and volunteers.

After the restoration is complete, the RGHRP will monitor the project sites annually for five years, with the use of photo points, cross sections, and riparian habitat assessments, ensuring the successful establishment of riparian vegetation and continued stability of streambanks. Throughout construction metrics will be tracked and quantified. These metrics include linear feet of stream restored, acres of riparian habitat restored, number of willows and cottonwoods planted, and number of volunteers engaged.

COLORADO WATERSHED RESTORATION PROGRAM GRANT APPLICATION

SCOPE OF WORK

GRANTEE: Rio Grande Headwaters Restoration Project

FISCAL AGENT: Colorado Rio Grande Restoration Foundation

PRIMARY CONTACT: Emma Reesor; emma@riograndeheadwaters.org

ADDRESS: 603 Forth Street, Alamosa, CO 81101

PHONE: (719) 589-2230

PROJECT NAME: Rio Grande Riparian Stabilization Project – Phase 5

GRANT AMOUNT: $200,000

INTRODUCTION AND BACKGROUND Provide a brief description of the project.
The Rio Grande in Alamosa County is experiencing a deterioration in river function due to unstable and eroding streambanks and degraded riparian areas. Loss of streambanks further reduces riparian habitat, negatively affecting birds and wildlife. Unstable streambanks also increase sediment inputs into the river, decreasing water conveyance, reducing water quality, and harming fishery health.

The Rio Grande Riparian Stabilization Project – Phase 5 (Phase 5) seeks to improve the health and resilience of the Rio Grande in Alamosa County by stabilizing streambanks and restoring riparian areas, thereby reducing sediment load to the river, improving riparian and aquatic habitat, reconnecting the river to its floodplain, and revitalizing riparian wetlands. These benefits will improve water quality and storage during drought years, restore riparian habitat, and allow flexibility during floods, reducing risk to the downstream City of Alamosa.

Phase 5 will engage private landowners, the City of Alamosa, local stakeholders, and engineers in streambank stabilization and riparian restoration along the Rio Grande between the City of Alamosa and the Alamosa–Rio Grande County line, leveraging previously restored reaches to improve the regional health of the river. Among the identified project sites is a stretch within the Alamosa Riparian Park; riverfront property that was recently added to Alamosa's public parks and trails system. Project activities on the Alamosa Riparian Park will protect trails and recreation opportunities on this new park property, while restoring riparian habitat.

OBJECTIVES:

1. Improve water quality, reduce sediment loading, enhance sediment transport by stabilizing the stream channel on the Rio Grande;
2. Improve floodplain connectivity through channel shaping;
3. Restore riparian habitat by revegetating reshaped streambanks with native grasses, sedges and forbs, willow transplants, and cottonwood saplings;
4. Promote community participation and increase understanding of local watershed and stream health issues by reaching out to the community with presentations, tours, volunteer events;
5. Enhance public open spaces by stabilizing streambanks and restoring riparian habitat on the newly established Alamosa Riparian Park.

COLORADO WATERSHED RESTORATION PROGRAM GRANT APPLICATION

TASKS

TASK 1: Project Design and Engineering
Description of Task: Complete designs and permitting for the project elements

Method/Procedure: Riverbend Engineering, LLC will be hired to complete survey, site assessments, and designs. This will include meetings with landowners and project partners to review preliminary designs and ensure the goals of the project are addressed in the final design. The final design drawings will include accurate material quantities required for the channel shaping and construction of the new bank stabilization structures, and riparian revegetation as well as profile view, typical sections, structure details, and an updated estimate of construction quantities and costs. Riverbend Engineering will work with RGHRP to prepare and submit documents needed to obtain a Section 404 Permit for the work in the river from the USACE.

Deliverable: Final designs and required permits for streambank stabilization and riparian restoration work at 4 sites on the Rio Grande.

TASK 2: Streambank Stabilization and Riparian Restoration
Description of Task: Implement channel shaping streambank stabilization and riparian revegetation on 6,400 linear feet of stream. Protect riparian areas by completing fencing and grazing best management practices at sites where owners are currently grazing livestock. Coordinate community and youth volunteer revegetation events to improve riparian habitat in project area.

Method/Procedure: The CRGRF will hire contractors to reshape streambanks, install rock barbs and root wads, and transplant willow clumps and other riparian vegetation. Fencing will be installed and grazing best management practices will be implemented where applicable to protect riparian areas from overgrazing while vegetation becomes established. Riverbend Engineering will provide construction oversight, ensuring that all elements are constructed as designed and in accordance with permit requirements. The RGHRP, City of Alamosa, and RGWCEI will coordinate a series of community and youth events to engage volunteers in the riparian revegetation efforts. Volunteers will plant cottonwood saplings and willow transplants on the Alamosa Riparian Park. In addition, they will fence off cottonwood saplings to further protect the trees from grazing wildlife.

Deliverable: 6,400 linear feet of reshaped and stabilized streambanks, which will result in reconnected floodplains and reduced sediment loading of up to 11,000 cubic feet annually. Nine acres of restored riparian vegetation through reseeding of native riparian grasses and forbs and planting willows and cottonwood transplants.

TASK 3: Outreach and Education
Description of Task: Conduct public outreach and education to raise awareness of project activities and RGHRP efforts, and encourage other landowners to participate in future projects.

Method/Procedure: Develop visual aids and written materials showing the specific sites and proposed work. Make presentations at the SLV Wetlands Area Focus Committee; Rio Grande Inter-basin Roundtable; quarterly Board Meetings of the Rio Grande Water Conservancy District; Board Meetings of the San Luis Valley Water Conservancy District, and to specific public meetings. RGHRP staff and

volunteers will complete this task. Partner with the Rio Grande Watershed Conservation and Education Initiative to organize youth education and revegetation events at the project.

Deliverable: A public that is better informed and more aware of river related issues, especially regarding the work of the RGHRP, the role of the Foundation, and the restoration program in general, including site-specific methodologies used to achieve Project objectives. Outreach and education efforts will impress upon private landowners, local youth, and the general public the importance of improving the condition of the Rio Grande and will raise awareness, gain support and increase participation in future projects.

TASK 4: Project Monitoring

Description of Task: Monitor each project site for five years using the RGHRP Sampling and Analysis Plan (SAP)

Method/Procedure: Monitoring will consist of several assessments that include documenting streambank locations with cross sections, photographic documentation, and visual stream assessments. Pre-construction, post-construction, and long-term surveys will map locations of the streambanks over time. Photographic documentation will be used to track conditions of the riparian plant communities, bank stabilization, and overall visual condition of the project area. The United States Department of Agriculture's Stream Visual Assessment Protocol II (SVAP II) will be used to assess the sites. This monitoring strategy is used in other RGHRP projects. The RGHRP will be responsible for monitoring.

Deliverable: Annual Reports which summarize monitoring date, condition of the sites, and long term trends comparing current data to prior data in order to demonstrate the relative stability of the streambanks and to evaluate the degree of improvement in the riparian condition.

TASK 5: Project Management and Administration

Description of Task: Complete project oversight, management, and partner coordination. Complete all necessary contracts, status reports, and internal and external documents. Ensure tasks are completed within approved costs and timelines.

Method/Procedure: The RGHRP will manage and administer Phase 5. This includes completing contracts with CWCB, NFWF, project partners, landowners, and contractors; obtaining the necessary environmental permits; managing budgets and reimbursement requests, and completing progress and final reports. Additionally, the RGHRP will perform project oversight, making certain project design and implementation are timely and accurate. The RGHRP will organize outreach and education efforts and complete site monitoring in accordance with the RGHRP monitoring protocol.

Deliverable: All appropriate contracts, external and internal reports, and on-site project activities completed within planned period and anticipated costs.

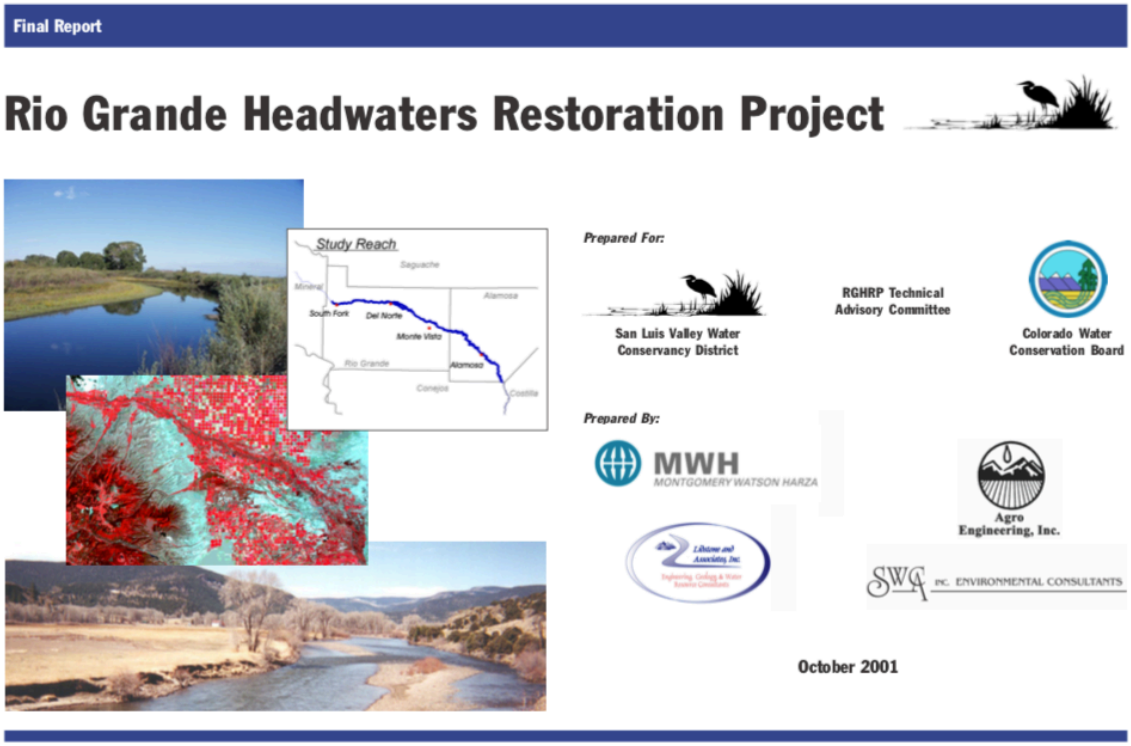
BUDGET & TIMELINE

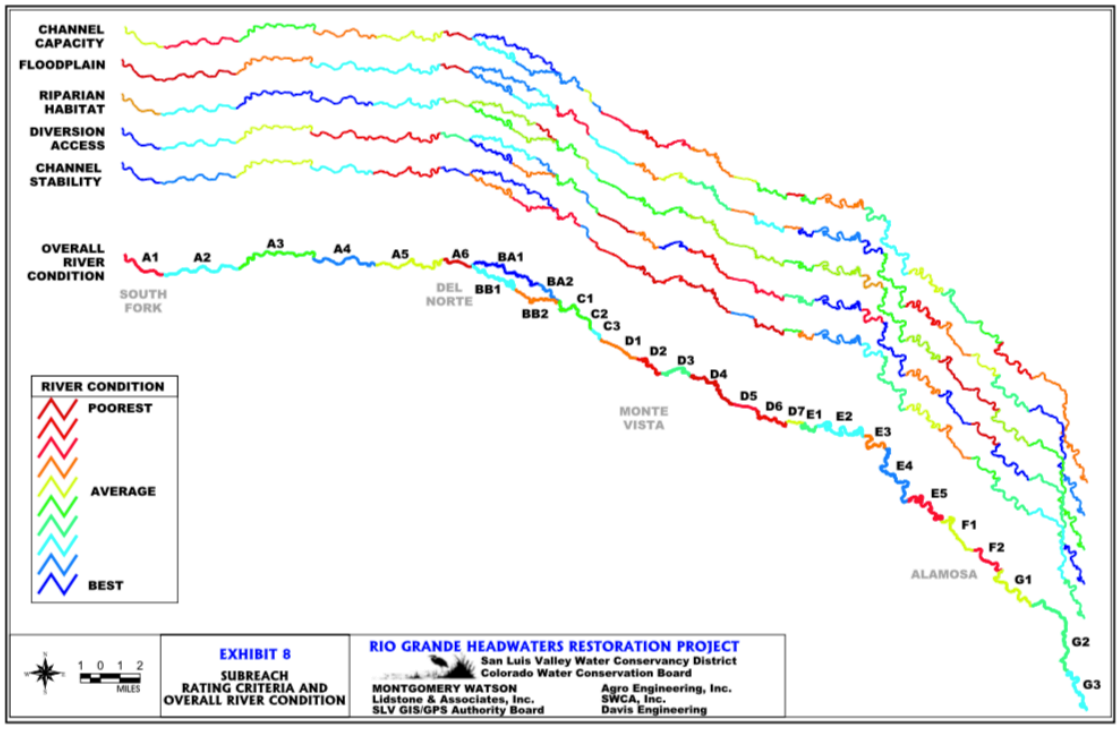
Rio Grande Riparian Stabilization Project - Phase 5: Timeline and Budget by Task and Funding Source

Task	Description	Target Start Date	Target Completion Date	Cash Contributions							In-kind Contributions			TOTAL
				CWCB Funds	NFWF	SLVCCI	CHRF	SLVWCD	Landowners	CRGRF	TAT	City of Alamosa	Community Volunteers	
1	Project Design and Engineering	9/1/2019	6/1/2020	$ -	$ -	$ 36,500.00	$ 15,000.00	$ 5,000.00	$ -	$ -	$ 2,034.00	$ 3,500.00	$ -	$ 62,034.00
2	Streambank Stabilization and Riparian Restoration	9/1/2020	5/1/2022	$ 188,000.00	$ 200,000.00	$ -	$ -	$ -	$ 45,000.00	$ -	$ -	$ -	$ 2,543.00	$ 435,543.00
3	Outreach and Education	4/1/2020	5/1/2022	$ 1,000.00	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,000.00
4	Monitoring	8/1/2020	9/1/2025	$ 1,000.00	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,000.00
5	Project Management and Administration	4/1/2020	12/1/2022	$ 10,000.00	$ -	$ 3,500.00	$ -	$ 1,000.00	$ -	$ 5,000.00	$ -	$ 1,080.00	$ -	$ 20,580.00
TOTAL				**$ 200,000.00**	**$ 200,000.00**	**$ 40,000.00**	**$ 15,000.00**	**$ 6,000.00**	**$ 45,000.00**	**$ 5,000.00**	**$ 2,034.00**	**$ 4,580.00**	**$ 2,543.00**	**$ 520,157.00**
% of Project Budget				*38.4%*	*38.4%*	*7.7%*	*2.9%*	*1.2%*	*8.7%*	*1.0%*	*0.4%*	*0.9%*	*0.5%*	

ATTACHMENT A – Supporting Watershed Plan

Phase 5 was developed with the support of the RGHRP 2001 Study, which can be accessed through the following link:
https://www.dropbox.com/s/l2e6zo0udnptqpg/2001%20Study%20Final%20Report.pdf?dl=0





ATTACHMENT B – Letters of Support and Funding Commitment

NFWF	**NATIONAL FISH AND WILDLIFE FOUNDATION GRANT AGREEMENT**	**1. NFWF PROPOSAL ID:** 64738	**2. NFWF GRANT ID:** 1302.19.064738
		3. UNIQUE ENTITY IDENTIFIER (DUNS #) 029650383	**4. INDIRECT COST RATE (REFERENCE LINE 17 for RATE TERMS)** N/A

5. SUBRECIPIENT TYPE	**6. NFWF SUBRECIPIENT**
Non-profit	Colorado Rio Grande Restoration Foundation
7. NFWF SUBRECIPIENT CONTACT	**8. NFWF GRANTS ADMINISTRATOR/NFWF CONTACT INFORMATION**
Emma Reesor Colorado Rio Grande Restoration Foundation 623 Fourth Street Alamosa, CO 81101 Tel: 719-589-2230 emma@riograndeheadwaters.org	Erin Lewis National Fish and Wildlife Foundation 1133 15th Street, N.W. Suite 1000 Washington, D.C. 20005 Tel:202-857-0166 Fax: 202-857-0162 Erin.Lewis@nfwf.org

9. PROJECT TITLE

Rio Grande Riparian Restoration Project (CO)

10. PROJECT DESCRIPTION

Improve the health and resilience of the Rio Grande in Alamosa County, CO by restoring streambanks and riparian areas and removing noxious weeds, thereby reducing sediment load to the river, improving riparian and aquatic habitat, reconnecting the river to its floodplain and revitalizing riparian wetlands. Project will restore 25 acres through noxious weed removal, restore 1.2 miles of instream habitat and plant 1380 willows and cottonwood trees.

11. PERIOD OF PERFORMANCE	**12. TOTAL AWARD TO SUBRECIPIENT**	**13. TOTAL FED. FUNDS**	**14. TOTAL NON-FED. FUNDS**
May 1, 2019 to May 1, 2021	$200,000	N/A	$200,000

15. FEDERAL MATCH REQUIREMENT	**16. NON-FEDERAL MATCH REQUIREMENT**
N/A	$275,373

17. SUBRECIPIENT INDIRECT COST RATE TERMS

The rate specified in Line 4 reflects that the Subrecipient has elected not to claim an indirect cost rate and that this election shall apply throughout the project's period of performance.

18. TABLE OF CONTENTS

SEC.	DESCRIPTION
1	NFWF Agreement Administration
2	NFWF Agreement Clauses
3	Representations, Certifications, and Other Statements – General
4	Representations, Certifications, and Other Statements Relating to Federal Funds- General
5	Representations, Certifications, and Other Statements Relating to Federal Funds – Funding Source Specific
6	Other Representations, Certifications, Statements and Clauses

COLORADO WATERSHED RESTORATION PROGRAM GRANT APPLICATION

RIO GRANDE BASIN ROUNDTABLE

November 12, 2019

Chris Sturm, Stream Restoration Coordinator
Colorado Water Conservation Board
1313 Sherman St., Rm. 721
Denver, CO 80203

Re: Rio Grande Riparian Stabilization Project – Phase 5 Grant Application

Dear Mr. Sturm,

On behalf of the Rio Grande Basin Roundtable (Roundtable), please accept this letter of support for the Rio Grande Riparian Stabilization Project – Phase 5 (Phase 5) sponsored by the Colorado Rio Grande Restoration Foundation (CRGRF). Roundtable voted unanimously to support the CRGRF's Colorado Watershed Restoration Grant Application for Phase 5 at the November 12, 2019 Roundtable meeting.

The Roundtable recognizes that the Phase 5 project addresses environmental, recreational, and community needs facing the Rio Grande Basin. The project will result in the stabilization of up to 6,400 feet of streambank and the restoration of 9 acres of riparian habitat. Additionally, this project will engage community and youth in revegetation efforts and education activities. These project methods and activities meet the following Rio Grande Basin Implementation Plan Goals:

1. Protect, preserve, and/or restore the sustainability of the Rio Grande Basin watersheds by focusing on watershed health and ecosystem function.
2. Protect and preserve the doctrine of prior appropriation and vested water rights, and fully utilize Colorado's compact entitlements as specified under the Rio Grande and Costilla Creek Compacts.
6. Support the development of projects and methods that have multiple benefits for agricultural, municipal and industrial, and environmental and recreational water needs.
9. Make progress towards meeting applicable water quality standards throughout the Basin.
11. Protect, preserve, and enhance terrestrial and aquatic wildlife habitats throughout the basin.
12. Conserve, restore, and maintain wetlands and riparian areas for the benefit of a healthy watershed.
13. Maintain and enhance water dependent recreational activities.

In addition to meeting many of the BIP goals, Phase 5 aligns with the Colorado Water Plan's Critical Goal F, which seeks to enhance environmental and recreational economic values, protect healthy environments, promote protection and restoration of water quality, and protect and restore critical watersheds of to identify and implement projects to meet community and agricultural water needs, while balance the needs of the environment, and recreation.

Thank you for your consideration of this application.

Sincerely,

Nathan Coombs
Chair, Rio Grande Basin Roundtable

COLORADO WATERSHED RESTORATION PROGRAM GRANT APPLICATION

623 Fourth Street
Alamosa, CO 81101
(719) 589-2230
Heather@slvwcd.org

October 31, 2019

Chris Sturm, Stream Restoration Coordinator
Colorado Water Conservation Board
1313 Sherman St., Rm. 721
Denver, CO 80203

Re: CWCB Colorado Watershed Restoration Program Grant
Rio Grande Riparian Stabilization Project – Phase 5

Dear Mr. Sturm,

I am writing to express the San Luis Valley Water Conservancy District (SLVWCD) support for Rio Grande Headwaters Restoration Project's (RGHRP) grant application for the Rio Grande Riparian Stabilization Project – Phase 5. The SLVWCD operates an augmentation program within five counties in the San Luis Valley. Through our operations, we replace injurious depletions to the Rio Grande caused by pumping of domestic, commercial, and municipal wells. Additionally, the SLVWCD works with partners to address timely issues such as groundwater sustainability, compliance with the Rio Grande Compact, and water supply protection. The SLVWCD partnered with the CWCB almost 20 years ago to complete the 2001 Study, a restoration master plan for 91 miles of the Rio Grande. Since that time, the District has remained committed to implementation of the 2001 Study and supported efforts by the RGHRP to improve river health in the Rio Grande Basin.

The RGHRP's proposed project builds on past restoration successes to develop riparian stabilization projects that will improve the function of the Rio Grande, furthering the recommendations of the 2001 Study. The SLVWCD will support the proposed project by serving on the project's Technical Advisory Team. In addition, the SLVWCD will contribute $6,000 to the project and will continue to partner on implementation of the priorities recognized through the project.

I appreciate the opportunity to comment on the Foundation's application for this project, which will have a meaningful positive impact on the Rio Grande.

Sincerely,

Heather R. Dutton

Heather Dutton
Manager, San Luis Valley Water Conservancy District

THE CITY OF ALAMOSA

October 24th, 2019

Chris Sturm, Stream Restoration Coordinator
Colorado Water Conservation Board
1313 Sherman St., Rm. 721
Denver, CO 80203

Dear Mr. Sturm,

The City of Alamosa is pleased to support the Rio Grande Headwaters Restoration Project's (RGHRP) Colorado Watershed Restoration Program grant application and the Rio Grande Riparian Stabilization Project.

The City of Alamosa has been working alongside partner organizations in recent years to improve recreational access to the Rio Grande and the surrounding open spaces through the city limits. We have also taken significant steps to protect sensitive habitat along our river corridor. This recreation and conservation momentum in Alamosa is evidenced by our recent partnership with Western Rivers Conservancy and Great Outdoors Colorado; whereby the City of Alamosa is acquiring a 203-acre plot of land in the summer of 2019, that contains cottonwood gallery forest and riparian habitat. This ecological treasure, which will be named the "Alamosa Riparian Park", will be conserved by Colorado Open Lands so that wildlife can continue to thrive and future generations of Alamosans can use trials on the property for low impact recreation. This property, has benefited from the efforts of RGHRP in past years through streambank stabilization and habitat restoration projects. Furthermore, the City of Alamosa recently completed a master plan for our adjacent 1,300+ acre City Ranch open space, which includes several miles of river frontage on the Rio Grande. This master plan calls for conservation easement along the river corridor in Alamosa.

The Rio Grande Riparian Restoration Project builds on this momentum to improve the health of the river system for the benefit of all. By restoring the streambanks on the public, City owned lands, this project will improve habitat and recreation opportunities for the Alamosa community and increase public awareness of the benefits of restoration. Additionally, the project's focus on noxious weed treatment will augment the City's efforts to revitalize our natural ecosystems.

The City of Alamosa is excited to partner with the RGHRP on this project. In addition, the City of Alamosa is committed to contributing $4,580 in in-kind support. We hope this contribution speaks to our investment in the project.

I hope that you look favorably upon this request and consider the benefit it will have to the Rio Grande and the community of Alamosa.

Sincerely,

Andrew Rice
Director of Parks, Recreation and Library
719-587-2529

COLORADO
OPEN LANDS

October 25, 2019

Chris Sturm, Stream Restoration Coordinator
Colorado Water Conservation Board
1313 Sherman St., Rm. 721
Denver, CO 80203

Re: Rio Grande Riparian Stabilization Project – Phase 5 Grant Application

Dear Mr. Sturm,

On behalf of Colorado Open Lands (COL), I am writing to express our strong support for the Rio Grande Headwaters Restoration Project's (RGHRP) Rio Grande Riparian Stabilization Project – Phase 5. Colorado Open lands is a private, nonprofit, 50l(c)3 organization based in Lakewood, Colorado. In 2008, Colorado Open Lands became one of the first land trusts in the nation to receive accreditation by the Land Trust Accreditation Commission, an independent program of the Land Trust Alliance. Accreditation provides public recognition of standards for organization and operations that typify best practices. We are also certified by the State of Colorado to hold conservation easements and therefore must show adherence to certain operational and procedural standards of operational governance, as well as acquisition, monitoring, and enforcement of conservation easements. Our staff has a wide range of expertise that spans rangeland ecology, conservation easement negotiations and stewardship, ecosystem science and water rights law. This expertise ensures that the land and habit that we conserve also remains protected.

COL has partnered with the City of Alamosa to conserve the Alamosa Riparian Park. In doing so, we are creating a significant public space that gives users numerous recreational options. All of this is due to the significant conservation values that the property possesses. The river access and significant riparian area make up a wildlife corridor that is unprecedented. When you add the scenic views, you can see why this is a special place and why the need for river restoration on the project site would benefit the conservation values and the usability of the property.

The Streambank stabilization and riparian habitat restoration at the Alamosa Riparian Park will connect this stretch of the river to those previously restored by RGHRP. The restoration would protect existing trails and ensure that when future trails are developed, they remain useable. The riparian habitat restoration will improve and protecs wildlife habitat, while ensuring water quality and river function remain, creating a great nexus for people, wildlife and place. This grant will add to the significant investment that has already been made to ensure that this community project becomes a reality. It is because of the Rio Grande Headwaters Restoration Projects ongoing commitment to protecting the Rio Grande that we support this request for funding.

Sincerely,

Judy Lopez

Judy Lopez
San Luis Valley Conservation Project Manager
Colorado Open Lands

COLORADO WATERSHED RESTORATION PROGRAM GRANT APPLICATION

RIO GRANDE
HEADWATERS LAND TRUST

October 24, 2019

Chris Sturm
Stream Restoration Coordinator
Colorado Water Conservation Board
1313 Sherman St., Rm. 721
Denver, CO 80203

Re: CWCB Colorado Watershed Restoration Program Grant / Rio Grande Riparian Stabilization Project - Phase 5

Dear Mr. Sturm,

Please accept this letter of support for the behalf for the Rio Grande Headwaters Restoration Project's (RGHRP) Rio Grande Riparian Stabilization Project. Over the past 10 years, the Rio Grande Headwaters Land Trust (RiGHT) has led an effort protect 25,000 acres of private land along the upper Rio Grande with our *Rio Grande Initiative*. Throughout that effort RiGHT has been lucky to have a strong partner in the Rio Grande Headwaters Restoration Project. By collaborating we amplify the impact of our work while sticking to our organizational strengths.

The San Luis Valley is one of the last primarily agricultural valleys in the state of Colorado. With rising development values and costs, the farmers and ranchers who have cared for this land for generations need help. RiGHT and RGHRP work with landowners to support the San Luis Valley way of life. In turn we all benefit; wildlife thrives on intact riparian habitats, clean water comes from a high-functioning river system, and agriculture is the bedrock for our economy.

Hale Ranch is an important piece of this puzzle. It is next to a State Wildlife Area and numerous other conserved ranches, building a corridor for both wildlife and agriculture to thrive. The property has 1.3 miles of Rio Grande river channel, which, along with senior water rights, supports 175 acres of wetlands. It has suitable habitat for federally endangered Southwestern Willow Flycatcher and threatened Yellow Billed Cuckoo. Because of these values, RiGHT has fundraised $1.35 million to conserve the property.

Based on our shared success and values, RiGHT and RGHRP have begun to take our partnership to the next level. We recently collaboratively applied to the Gates Family Foundation for over $2.2 million to fund both conservation and restoration projects that benefit conserved lands, and we continue to collaborate on expanding our work to other important San Luis Valley streams.

Restoration of degraded streambanks will not only protect infrastructure and investment in the Hale Ranch but will improve important habitat and increase the river's resiliency. I hope that you look favorably upon this request and consider the benefit it will have to the Rio Grande and the community of Alamosa.

Sincerely,

Allen Law

PO Box 444 Del Norte, CO 81132
(719) 657.0800
info@riograndelandtrust.org

riograndelandtrust.org

CONSERVING OUR LAND, WATER AND WAY OF LIFE IN COLORADO'S SAN LUIS VALLEY

COLORADO WATERSHED RESTORATION PROGRAM GRANT APPLICATION

Rio Grande Watershed CONSERVATION & EDUCATION

125 Adams Street P.O. Box 142 Monte Vista, CO 81144
www.rgwcei.org 719.480.4864

Chris Sturm
Stream Restoration Coordinator
Colorado Water Conservation Board
1313 Sherman St., Rm. 721
Denver, CO 80203

Re: CWCB Colorado Watershed Restoration Program Grant
Rio Grande Riparian Stabilization Project – Phase 5

October 29, 2019

Dear Mr. Sturm,

On behalf of the Rio Grande Watershed Conservation & Education Initiative, I am happy to provide a letter of support for the Rio Grande Headwaters Restoration Project's Riparian Stabilization Project – Phase 5.

We are proud to have partners across the San Luis Valley such as the RGHRP to connect K-12 students with environmental education in their own community. Our mission to provide dynamic, effective conservation education for the San Luis Valley community to enhance understanding of natural resources stewardship and our working landscapes goes hand in hand with the mission of the RGHRP in providing open spaces for our community to enjoy. Open riparian areas and community access are imperative in engaging our younger community members with the outdoors and encouraging children and their families to become passionate about and involved in safeguarding those spaces in the future.

In particular, the Alamosa Riparian Park will allow all community members to interact with an important riparian corridor, gaining greater understanding and connection with habitat, wildlife, and the necessity of restoration and conservation practices.

RGWCEI is honored to have partnered with the RGHRP in the past to provide quality water education and stewardship opportunities for youth, and to continue to partner with them in providing environmental educational experiences for our area children and recognizes that community open spaces are integral to Alamosa's (and Colorado's) future sustainability. We are excited to continue this partnership through youth volunteer events that will be a part of the Phase 5 project.

Sincerely,

Bethany Howell

Bethany Howell
Executive Director, Rio Grande Watershed Conservation & Education Initiative

COLORADO WATERSHED RESTORATION PROGRAM GRANT APPLICATION

ATTACHMENT C – Project Photos

Photos 1a and 1b. Erosion and riparian degradation at the upstream bend of Site 1, Hale Ranch, looking upstream (a) and downstream (b). An access road lies just thirty feet from the eroding bank.

Photos 2a and 2b. Erosion and riparian degradation at Site 2, McCarty property, looking upstream (a) and downstream (b). The Independent Ditch diversion can be seen in Photo 2b.

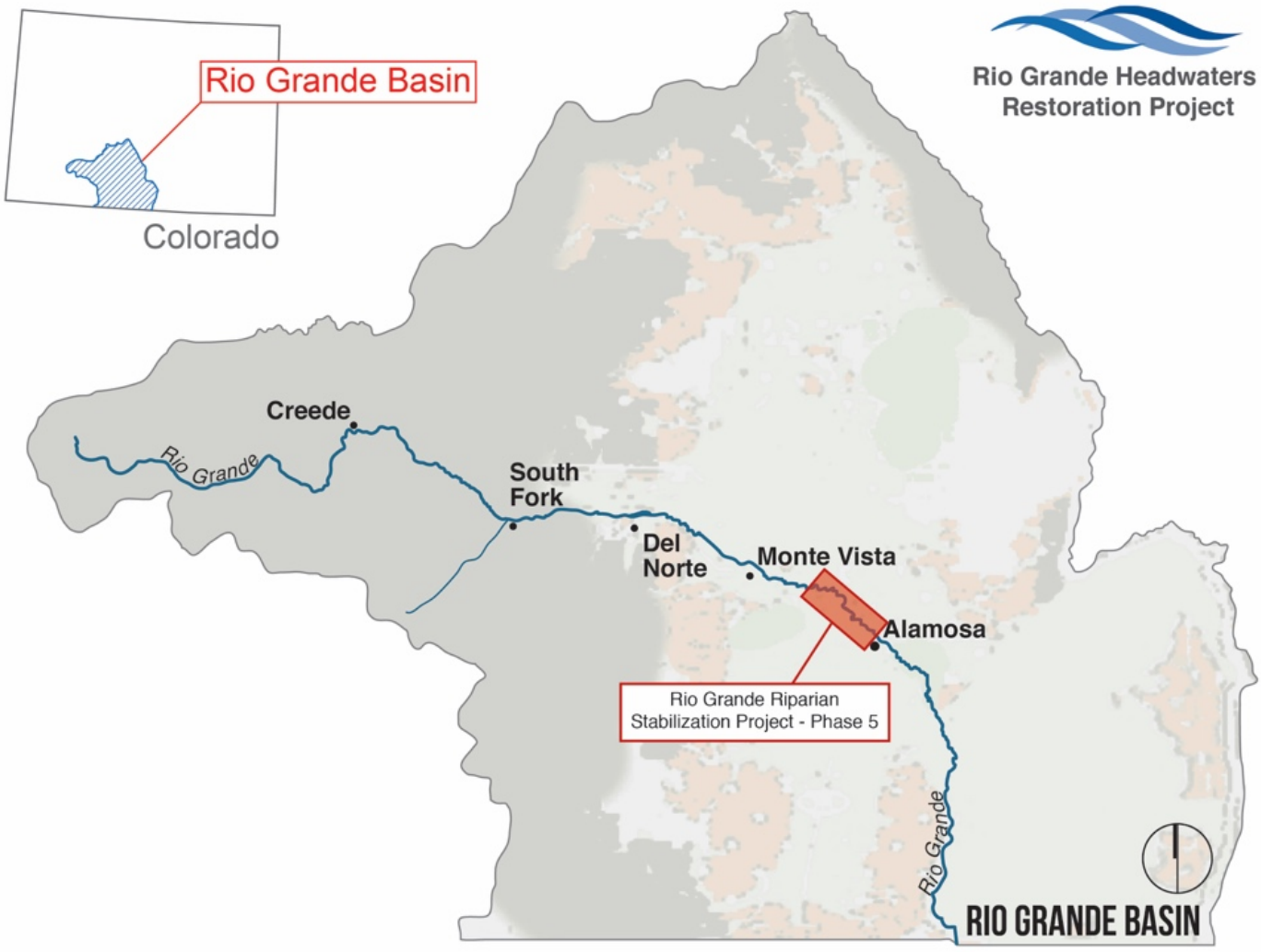
Photo 3. Downstream bend of Site 3, Chefas Ranch, looking upstream, with pasture fencing falling into the river.

Photos 4a and 4b. Erosion at Site 4, the Alamosa Riparian Park, near a recreational trail, facing upstream (a) and downstream (b).

Photo 6. Site visit to the Alamosa Riparian Park with project partners.

COLORADO WATERSHED RESTORATION PROGRAM GRANT APPLICATION

ATTACHMENT D – Project Maps and Coordinates



COLORADO WATERSHED RESTORATION PROGRAM GRANT APPLICATION

Phase 5 Site Number	**Coordinates**
Site 1: South Hale Ranch	37.545886, -105.949965
Site 2: McCarty Property	37.506974, -105.908485
Site 3: Chefas Ranch	37.502871, -105.905487
Site 4: Alamosa Riparian Park	37.498564, -105.891132