

Colorado Water Conservation Board (CWCB) Healthy Rivers Fund Grant to the Colorado Rio Grande Restoration Foundation

Rio Grande Riparian Revegetation Improvement Project

Final Report

Amount: \$5,000.00

Background

In September 2010 the Colorado Rio Grande Restoration Foundation (Foundation), the fiscal agent for the Rio Grande Headwaters Restoration Project (RGHRP), was awarded \$5,000 from the Colorado Healthy Rivers Fund. The award was used to improve the quality of revegetation on riparian sites within the RGHRP's riparian stabilization and restoration projects. Funded activities included attending one riparian restoration and revegetation training, organization of revegetation projects with volunteers and the Southwest Conservation Corps, and tools and plant materials needed for the revegetation efforts. The total value of the project was \$21,095 with \$5,000 from the Colorado Healthy Rivers Fund and \$16,095 in cash and in-kind contributions from the Foundation and project partners. This final report complements the Foundation's Reimbursement Request #1 for the Rio Grande Riparian Revegetation Improvement Project.

Training: Coal Creek Watershed Coalition's Bioengineering Day

The RGHRP Coordinator traveled to Crested Butte to participate in a bioengineering field day hosted by the Coal Creek Watershed Coalition. Coal Creek Watershed Coalition staff and local Natural Resources Conservation Service (NRCS) personnel instructed participants on riparian shrub plantings, dormant willow bundle planting, and tree revetment installation. While RGHRP has used some of these methods previously, the workshop provided some important tips for success. The tree revetment installation information was especially helpful. All techniques were utilized in later revegetation projects. The total cost of attending this event was \$443.75.

Revegetation Event 1: Spring Tree and Shrub Planting

The RGHRP held a spring tree and shrub planting event on two of the Rio Grande Riparian Stabilization Project – Phase 4 (Phase 4) sites where riparian stabilization was completed in 2010. RGHRP purchased 6 lots of bareroot shrubs (50 per lot) and 2 lots of tree plugs (30 per lot) from the Colorado State Forest Service (CSFS). Eight volunteers worked for 4 hours to plant a total of 360 shrubs and trees. Each plant was soaked in root polymer, planted to CSFS recommendations, and circled by wire to protect the small plants from beavers and deer until they become established. RGHRP spent 21 hours organizing and coordinating this event. The total event value was \$2315.83.

Revegetation Event 2: Spring Willow Bundle Planting

The RGHRP held a spring willow planting event on one of the RGHRP's 2009 Cooperative Conservation Partnership Initiative (CCPI) Project sites where riparian stabilization was completed in 2009. In spite of significant revegetation efforts completed during project construction, vegetative cover at the project site was not satisfactory to the RGHRP and NRCS. As such, a volunteer willow planting event was organized. Nine volunteers worked for 4 hours

to plant 41 willow bundles on 500 feet of poorly vegetated streambank. RGHRP spent 8 hours organizing and overseeing the event. The total value of the event was \$1,010.60.

Revegetation Event 3: Fall Streambank Stabilization and Willow Planting Event

In 2011, the RGHRP and the Rio Grande Headwaters Land Trust (RiGHT), with assistance from the Southwest Conservation Corps (SCC), received a grant from the Colorado Youth Corps Association (CYCA) for a crew of 8 to work on riparian areas of two sites protected under conservation easements with RiGHT for two weeks in 2011. The RGHRP organized and oversaw the work on two sites. Both sites treated were riparian areas adjacent to sites treated through the RGHRP's 2010 Colorado Partnership Program (CPP) Project and the 2011 Plaza Project. Through the project, 8 SCC crew members worked for 80 hours to slope 1,400 feet of 3-6 foot vertical streambanks, plant 517 willow bundles, and install 51 tree revetments. Volunteers from the NRCS, USFS, and SCC staff contributed 12 hours. RGHRP spent 65 hours organizing and overseeing the event. The total value of the event was \$16,796.26.

Supplies for Riparian Revegetation and Monitoring

The RGHRP purchased a pump, sprinklers, and hoses to water vegetation on some of the most xeric restoration sites. Because water is most commonly the factor that limits revegetation success in the San Luis Valley, these efforts should improve vegetation establishment and vigor. Additionally, the RGHRP and CWCB installed two piezometers to monitor the groundwater levels at restoration sites. The cost of supplies to improve riparian revegetation success and groundwater monitoring was \$528.79.

Summary of Activities Completed and Total Project Value

The following tables summarize the activities completed and the detailed values of the project components. Table 2 includes the purchases requested for reimbursement, totaling \$5,000.00, and the sources of match.

Table 1. 2010 Colorado Healthy Rivers Fund Rio Grande Riparian Revegetation Improvement Project Stats	
Volunteer Hours	80
SCC Crew Hours	640
Bareroot Shrubs Planted	300
Tree Plugs Planted	60
Willow Bundles Planted	558
Tree Revetments Installed	51
Feet of Streambank Stabilized and Revegetated	1900

Table 2. Expenses Incurred and In-Kind Contributions for the 2010 Colorado Healthy Rivers Fund Rio Grande Riparian Revegetation Improvement Project

		Source	
Item	Total Cost	CHRF	In-Kind
Training: Crested Butte Bioengineering Field Day			
Coordinator's Hours: <i>9.5 hours at \$32.50/hr</i>	308.75	308.75	-
Travel Expenses: Mileage	135.00	135.00	-
Total Training	443.75	443.75	-
Riparian Revegetation Events (3)			
Event 1: Spring Tree and Shrub Planting			
Volunteer Contribution <i>8 Volunteers*4Hrs*\$20.85/Hr</i>	667.20	-	667.20
Event Coordination and Oversight <i>21 hours at \$32.50/hr</i>	682.50	682.50	-
Food and Water	89.88	89.88	-
Shrubs: 6 bareroot lots, 2 plug lots, polymer, and fertilizer	548.25	548.25	-
Tree trimmers (for old willows) and wire (to deter beavers/deer)	328.00	328.00	-
Total Event 1	2,315.83	1,648.63	667.20
Event 2: Spring Willow Bundle Planting			
Volunteer Contribution <i>9 Volunteers*4Hrs*\$20.85/Hr</i>	750.60	-	750.60
Event Coordination and Oversight: <i>8 hours at \$32.50/hr</i>	260.00	260.00	-
Total Event 2	1,010.60	260.00	750.60
Event 3: Fall Tree Revetment and Willow Bundle Planting			
Southwest Conservation Corps Contribution <i>Crew of 8 people*80Hrs*\$20.85/Hr</i>	13,344.00	-	13,344.00
Forest Service, USWFS, and SCC Staff Assistance <i>12 hours at \$20.85/hr</i>	250.20	-	250.20
Event Coordination and Oversight <i>65 hours @ \$32.50/hr and 610 Miles at \$0.55/Mile</i>	2,448.00	1,364.77	1,083.23
Cable for Tree Revetments	151.15	151.15	-
Duckbills for Tree Revetments	316.47	316.47	-
Stakes for Willow Bundles	256.79	256.79	-
Twine and Stakes for Willow Bundles	29.65	29.65	-
Total Event 3	16,796.26	2,118.83	14,677.43
Supplies for Riparian Revegetation and Monitoring			
Pump - Murdoch's	431.59	431.59	-
Hoses, Sprinklers, and Nozzles	56.03	56.03	-
PVC Pipe and Glue	41.17	41.17	-
Total Supplies	528.79	528.79	-
TOTAL	\$ 21,095	\$ 5,000	\$ 16,095