

Colorado Healthy Rivers Fund

2011 - 2012 Report

July 26, 2012

The Colorado Healthy Rivers Fund (CHRF) received \$96,090 in donations for the 2010 tax year. January 2011 – June 2011 donations were \$88,650. This represented 92% of the 2010 donations, and it was over \$2,000 below the average annual donation. Six new grants were approved for funding in September of 2011. The total 2011 grant funding was \$90,090. The Colorado Water Conservation Board was able to fund over \$76,000 of the 2011 CHRF requests through other sources.

Nine projects and planning efforts were completed from April 2011 to July 2012. Project descriptions and links to the final reports are listed below. Currently, there are eight active grants funded through CHRF. Five of these grants were awarded in September 2011. The other three grants are near completion. A project description and brief progress report for each completed and active grant are included below.

COMPLETED COLORADO HEALTHY RIVERS FUND GRANTS – 4TH QUARTER FISCAL YEAR 2011 & FISCAL YEAR 2012

San Juan Resource Conservation & Development Council – Animas River Watershed Plan

The San Juan Resource Conservation & Development Council includes the Animas River Nutrient Work Group. The Work Group has identified nutrients enrichment in the Animas Basin by sampling low water from 2003 – 2005. The grant focus is to expand the base of stakeholders and develop a geographic database. Both of these objectives are complete. The grant was also awarded to develop a draft watershed plan under EPA guidelines. The final Animas River Watershed Based Plan was completed in August 2011 by BUGS Consulting. The Animas River Nutrient Work Group has now evolved into the Animas Watershed Partnership.

\$15,000 grant awarded September 2005. Project Completion August 2011.

Final report – Animas River Watershed Based Plan available at:

<http://cwcbweblink.state.co.us/WebLink/0/doc/158630/Electronic.aspx?searchid=7086d61a-72da-45fd-90eb-4a79ba6f423e>

Uncompahgre River Stewardship Alliance – Uncompahgre River Watershed Plan

The primary goal of this planning effort is to address the need for greater understanding of water-quality and riparian habitat issues within the Uncompahgre basin through continued community involvement and the development of a comprehensive watershed plan.

The watershed plan is designed to be a model planning process that will develop and strengthen collaborative ties between citizen groups and more traditional water user groups such as the water conservancy district, the water users association, the conservation districts, local governments and several

state and federal agencies. The plan will be used to identify new partnerships to improve water quality, conservation, and environmental health.

The Uncompahgre Watershed Plan was completed in the spring of 2012. A rapid river assessment was also performed to provide baseline data on aquatic/riparian habitat quality, water quality, channel physical conditions, riparian vegetation structure, and macroinvertebrates. This effort was completed in June 2012. The Uncompahgre River Stewardship Alliance is now known as the Uncompahgre Watershed Partnership. An executive director has been hired, and the Partnership is actively implementing projects.

\$10,000 grant awarded September 2007. Final Reports – Uncompahgre Watershed Plan and Rapid River Assessment of the Uncompahgre Watershed available at:

<http://cwcwweblink.state.co.us/WebLink/0/doc/163901/Electronic.aspx?searchid=54ad6e98-15f4-46f9-94e2-b5e9029651ef>

<http://cwcwweblink.state.co.us/WebLink/0/doc/163900/Electronic.aspx?searchid=54ad6e98-15f4-46f9-94e2-b5e9029651ef>

Friends of the River Uncompahgre – Uncompahgre River Watershed Plan

See Uncompahgre River Stewardship Alliance above.

\$15,000 grant awarded September 2009. Project complete June 2012

Town of Vail – Gore Creek River Restoration and Riparian Zone Re-vegetation

The Town of Vail, Gore Creek/Stephens Park stream bank restoration project was developed to re-grade the stream bank, re-vegetate the stream banks, improve stream access, and develop in-stream habitat. The project stabilized the creek bank and enhanced fish habitat. Native willows, alders, rose bushes and other vegetation was planted by 30+ volunteers during the 2010 Sustaining Colorado Watersheds Conference. The project includes stone seating areas and an ADA accessible path and ramp. An interpretive sign explaining the importance of the riparian area and the restoration project was installed in the spring of 2012.

\$6,000 grant awarded September 2009. Draft Final Report available at:

<http://cwcwweblink.state.co.us/WebLink/0/doc/163893/Electronic.aspx?searchid=47fc87fe-070a-4fe1-bd6c-3987002cf71b>

Wildlands Restoration Volunteers – Riparian Zone Re-vegetation on Tarryall, Rock, and Boulder Creeks

Grant funding was used to design and implement three riparian restoration projects and 15 leadership and skills trainings in 2010. The three tributaries to the South Platte River that received restoration work were Tarryall Creek, St. Vrain Creek, and Rock Creek. The work was planned and implemented by Wildlands Restoration Volunteers using a collaborative approach to watershed conservation by involving numerous regionally based

diverse interests within watersheds located in Northern Colorado. The riparian areas were restored through effective practices devised by WRV staff and relevant agency partners, aimed at improving water quality and wildlife habitat. Volunteers contributed 1,100 hours of planning time and labor. Over 400 willow cuttings (stakes) and 1,100 container plants were planted. Container plants included native narrowleaf cottonwood, wood's rose, golden currant, and Baltic rush. Seed was applied to 700 feet of riparian area. 56,000 square feet of riparian area received treatments. Boulder County will lead the monitoring effort.

\$19,220 grant awarded September 2009. Final report available at:

<http://cwcbweblink.state.co.us/WebLink/0/doc/152737/Electronic.aspx?searchid=b6b7ae82-a358-43e4-979f-8c1e0dc74c10>

Tamarisk Coalition (TC) – Ecotype Specific Riparian Plant Propagation

There were three goals defined for this project. The first goal was to provide seed collection and riparian restoration training for land managers, landowners and others. The Tamarisk Coalition (TC) hosted seed collection training near Grand Junction on August 5, 2010. TC held riparian restoration training on November 30th and December 1, 2011 in Grand Junction.

The second goal was to work with partners to define restoration needs and goals. TC engaged with the Dolores River Watershed Partnership, Escalante River Watershed Partnership, Northwest Colorado Watershed Partnership, and the Southeast Utah Tamarisk Partnership to identify restoration needs within the representative watersheds. TC was integral in the development of restoration prioritization documents. CRRF money was not used outside of the State of Colorado in these efforts.

The third goal was to facilitate the development of appropriate replacement plant species. This included the development of ecotype specific long stem plants for restoration and the maintenance of cottonwood nurseries in western Colorado. Many collected seeds were propagated to support the development of long stem plants. TC continues to work with three west slope nurseries to develop cottonwood seedlings from cuttings and collected seeds. Approximately 4,000 – 5,000 cottonwoods were propagated on donated land, using donated irrigation water and labor. The donor will sell the mature cottonwood poles to land managers. Proceeds will continue to support the nursery operation.

\$10,000 grant awarded September 2009. Final report available at:

<http://cwcbweblink.state.co.us/WebLink/0/doc/152741/Electronic.aspx?searchid=c2b11717-0831-4503-9cba-7cf607ef410e>

Eagle River Watershed Council – Edwards Eagle River Restoration, Riparian Zone Re-vegetation

The goals of this Eagle River restoration, Phase II, project were to stabilize the banks in the Edwards, Co reach eroded by decades of cattle grazing, to restore native plants eradicated by cattle and bank erosion, and to reduce sediment from urbanization and poor land management practices. Structural treatments were implemented for grade control, point bar enhancement, bank stabilization, and backwater habitat

enhancement. Vegetation was planted in the riparian zone and consisted primarily of willow wattles, willow stakes, and cottonwood poles. There was some damage to approximately 500 linear feet of the project after high flows in the spring of 2011. These areas were repaired in the fall of 2011. Survival rates for vegetation ranged from 85% to 95% by project section. This project is enrolled in the joint CWCB/WQCD Measureable Results Program. Continued monitoring will occur.

\$10,000 grant awarded September 2009. U.S. Army Corps of Engineer Monitoring Report available at:

<http://cwcwweblink.state.co.us/WebLink/0/doc/158634/Electronic.aspx?searchid=7d85af74-a3af-4b70-9acf-728297473ffe>

Colorado Rio Grande Restoration Foundation – Riparian Zone Re-vegetation

The award was used to improve the quality of re-vegetation efforts on riparian sites within the Rio Grande Headwaters Restoration Project's riparian stabilization and restoration projects. The grant funding was specifically used to improve the Foundation Director's knowledge in riparian restoration and to support three volunteer riparian re-vegetation events. Eight volunteers at the first event installed 360 shrubs and trees. Nine volunteers at the second event planted 41 willow bundles on 500 feet of poorly vegetated stream bank. Eight Southwest Conservation Youth Corps members worked 80 hours at the third event. They re-graded 1,400 feet of vertical stream banks, planted 517 willow bundles, and installed 51 tree revetments. All three re-vegetation sites are part of the bigger Rio Grande Headwaters Restoration Project (RGHRP), which includes channel rehabilitation and re-vegetation efforts to reduce sediment loading in the Rio Grande. RGHRP Phase 3 and Phase 4 projects are funded through the Water Supply Reserve Account in the amounts of \$285,000 and \$148,000, respectively.

\$5,000 grant awarded September 2010. Final Report available at:

<http://cwcwweblink.state.co.us/WebLink/0/doc/158632/Electronic.aspx?searchid=8ca55945-36a8-46dc-8489-75df92365272>

Wildlands Restoration Volunteers – Chico Basin Riparian Restoration

The primary goals of this project were to control tamarisk and Russian olive, reduce cattle grazing pressure in riparian areas, and restore a diverse native riparian tree/shrub community. The Chico Creek watershed is located in the Arkansas Basin, one watershed east of Fountain Creek. This phase of the project was completed in the spring of 2012. Five grazing exclosures were erected. All exclosures were designed to keep cattle out of restoration areas, and two of the exclosures were designed to keep deer out. Invasive phreatophytes were removed using a cut stump removal, hydro-axing, and subsequent herbicide application integrated pest management approach. 1,273 trees and shrubs were planted using volunteer labor. Species included choke cherry, plains cottonwood, golden currant, peachleaf willow, and coyote willow. Monitoring transects and photo points were established, and continued monitoring will be performed by the Chico Basin Ranch and Wildlands Restoration Volunteers.

\$10,590 grant awarded September 2011. Final Report available at:

ACTIVE COLORADO HEALTHY RIVERS FUND GRANTS

Colorado River Water Conservation District – Lower Gunnison Basin Salinity and Se Water Quality Montioring

This project expands upon and optimizes the existing water-quality monitoring network in the Lower Gunnison River Basin by adding an additional real-time specific conductance monitor in one of five strategic locations at U.S. Geological Survey (USGS) real-time stream flow stations. The station conducts selenium and salinity sample collection and analyses. The goal of the project is to gather selenium and salinity water-quality data so that remediation can be better targeted for the purposes of meeting State of Colorado water-quality standards and Endangered Species Act requirements for the protection of endangered river fishes. A real-time specific conductance monitor has been installed at the USGS gaging station at Colona, Colorado. It is gathering salinity and selenium data for water quality analyses. The final report will include discussion of data. Final report is pending.

\$16,000 grant awarded September 2009. \$13,536 invoiced.

Arkansas Headwaters Recreation Area (AHRA), Colorado State Parks – Hecla Wash Restoration and Sediment Reduction

The Hecla Wash project aims to work with a partnership to implement ecologically sustainable watershed restoration measures to reduce sediment loading and achieve improved water quality and habitat in an impaired reach of the upper Arkansas River. Sediment sources include a county road, extremely high recreational use, irrigation structures and spills, and some amount of ranching and grazing. Project success will be measured through robust monitoring and evaluation, and should set the stage for additional watershed planning in the future. BMPs, vegetative plantings, stabilization techniques and other engineered and soft features will be incorporated into the overall project to achieve desired goals.

The Project began March 2011 and was scheduled for completion in summer 2011. Pre and Post project monitoring is coordinated with CWCB, Water Quality Control Division (WQCD), and Colorado Watershed Assembly as part of the Measurable Results Program (MRP). Sediment loading reductions to the Arkansas River will be measured by calculating volume of sediment removed from constructed sediment traps in Hecla Wash.

The majority of the project is complete; however, the CHRF grant is being reserved for the final re-vegetation effort to take place in the fall of 2012. All of the engineered components of the project are complete, including a new cement pad on the old alluvial fan, sediment detention basins, texas road crossings, and channel reconfigurations. Hecla Wash experienced a > 100 year flood event in July 2012. Preliminary reports indicate that the project performed well, however there was some channel erosion

below the Texas road crossings. WQCD staff report that these areas need attention so that no additional sediment is contributed to the Arkansas River. Boater access was not compromised as a result of this flood event.

\$25,000 grant awarded September 2009. \$830 invoiced.

Groundwork Denver – River Restoration, Riparian Zone Re-vegetation, Education and Outreach

The urbanized section of Bear Creek has been identified in the State's list of impaired water bodies with high priority for E. coli contamination. This eight-mile stretch of the river runs through the cities of Lakewood, Denver, and Sheridan and is not included in the purview of the existing Bear Creek Watershed Association. As such, there is no coordinated education or action to address the water pollution, invasive species, stream bank erosion, or general watershed and river stewardship. This project will focus on developing stewardship through restoration projects, and building stakeholder collaboration for the implementation of a watershed planning effort.

Groundwork Denver and its partners will implement a project as a first step towards Bear Creek restoration. Activities will include: 1. 720 hours of youth work teams conducting watershed improvements, conducting community outreach, and conducting water quality testing projects; 2. One community-wide volunteer restoration day for both youth and adults; 3. Stakeholder outreach for collaborative watershed planning effort.

As of spring 2012 the project is complete pending submittal of the final report. Groundwork Denver partnered with Urban Drainage and Flood Control District, ERO Consultants, the City of Sheridan, Americorps, and Wildlands Restoration Volunteers to conduct riparian re-vegetation efforts. The group planted 3,000 coyote willows and installed beaver cages to protect 26 cottonwood trees. They also conducted outreach to 1,000 homes in the watershed, handing out educational materials.

\$15,000 grant awarded September 2010. \$12,750 invoiced.

Coalition for the Upper South Platte – Sediment Mitigation on Sugar Creek

The Sugar Creek Restoration Project is a 3-year effort to substantially reduce the amount of sediment entering Sugar Creek and restore the ecological function of this small stream. Sugar Creek is a tributary to the South Platte River and, in the past, this creek has provided refuge for young-of-the-year trout spawned in the river. Five miles of gravel road are immediately adjacent to Sugar Creek and the road contributes chronic levels of sediment into the stream and ultimately into the South Platte River. The Sugar Creek Restoration Pilot Project (SCRPP), is part of the larger Sugar Creek Restoration Project (SCRPP) funded by Non-point Source (NPS) 319, Chatfield Water Providers, South Platte Enhancement Board and others, with a significant in-kind match coming from Douglas County, USFS, CUSP and Trout Unlimited. The five specific sites have been selected to represent the diverse difficulty scale of the larger SCRPP. Work will include the installation of stilling basins, culverts, sustainable drainage outflows, and riparian re-

vegetation. The project includes a significant monitoring program aimed at ascertaining the quantity of sediment entering the road corridor and culvert boxes to best design and install future sediment control devices within SCRP and other Upper South Platte road corridors.

\$25,000 grant awarded September 2011. \$0 invoiced. Contract pending WQCD NPS contract approval.

Colorado Watershed Assembly – River Watch Macro-invertebrate Sampling

River Watch has incorporated benthic macroinvertebrate sample analysis as another indicator of watershed health. Monitoring macroinvertebrates is particularly beneficial to a comprehensive watershed monitoring program because it can help characterize ecosystems and identify actual aquatic life impairments. This is especially the case with the use of specific multi metric indices created by the WQCD for Colorado's xeric, mountain, and plains ecoregions.

River Watch has equipped 10 volunteer water quality monitoring groups with macroinvertebrate sampling kits. Fourteen samples have been submitted to an outside lab for analysis. Results are uploaded to the River Watch Database and the Colorado Data Sharing Network. Fifty-six samples remain to be analyzed. Data can be viewed at:

<http://wildlife.state.co.us/LandWater/Riverwatch/Data/Pages/DataSummaryStations.aspx>

<http://www.coloradowaterdata.org/>

\$20,000 grant awarded September 2011. \$5,150 invoiced.

Chatfield Watershed Assembly – Water Quality Monitoring on Plum Creek

Nearly thirty years of inflow data indicate approximately 70% or more of the inflow to Chatfield Reservoir is from the South Platte River with the remaining inflow from Plum Creek. However, while only 30% of the flow comes from Plum Creek, approximately 80% of the phosphorus load to the reservoir is from the Plum Creek watershed nonpoint sources. Water Quality Control Commission (WQCC) Control Regulation #73 for Chatfield Reservoir limits the pounds of phosphorus allowable to the reservoir, as well as concentrations of total phosphorus (TP) and chlorophyll-a (chl_a). NPS pollutant sources are not well understood in the Plum Creek basin.

The implementation of water quality monitoring along the Plum Creek corridor will provide scientific support of water quality issues in the basin coupled with control strategies to reduce pollutant loading to Plum Creek and Chatfield Reservoir. The monitoring network will also provide the foundation for a stakeholder process that allows for public outreach on water quality, meeting water quality goals, and identification of project priorities. The project will provide water quality data for nutrients, sediment and bacteria (e. coli). The data will inform a plan to reduce pollutant loads in the Plum Creek Watershed.

The Plum Creek Sampling and Analysis Plan (SAP) was refined in March 2012 and sampling in the Plum Creek watershed commenced in April 2012. Monthly flow and water quality measurements and water samples are being collected in the watershed at nine sites in accordance with the SAP. As monthly

laboratory results are provided by the lab, the data is compiled, analyzed, and evaluated. Seasonal changes in quality and flow are evaluated, as well as water quality trends within the watershed, and potential pollutant sources. Data is presented at monthly Chatfield watershed meetings and also posted at www.chatfieldwatershedauthority.org.

\$20,000 grant awarded September 2011. \$0 invoiced.

Tomichi Creek Stakeholders Group – Riparian Conditions Assessment

Tomichi Creek drains the eastern portion of Gunnison County along Highway 50 and is tributary to the Gunnison River with headwaters near Monarch Pass and a terminus west and south of the City of Gunnison. In 2009 and 2010 water quality assessments using the new multi-metric index for aquatic life were completed through a cooperative agreement between the WQCD and the Upper Gunnison River Water Conservancy District (UGRWCD). Tomichi Creek barely attained aquatic life standards in 2009 and 2010 with the cause of the impairments poorly understood. The riparian assessment is only one component of a proposed study that includes surface water quality, quantity and physical characteristics and macroinvertebrate collection. The project will investigate the roles that return flows, warm springs, riparian habitat, and irrigation diversions have on water quality. Riparian and stream habitat analyses will be performed on a 5.2 mile reach of the creek.

The project is moving by convening all stakeholders, hiring consultants, and discussing existing data and analyses. Colorado Parks & Wildlife, the Colorado Water Trust, and Colorado Trout Unlimited are involved in the project as stakeholders, and they are committed to improving the fishery on the creek. Gunnison County owns and leases nearly all of the study reach. The land adjacent to the study reach is operated as a grazing operation. The county is reluctant to make changes to the management of the property. The stakeholders are working with the county to discuss conceptual best practices to protect the riparian and instream habitat. The riparian assessment was presented and discussed in June 2012.

\$6,000 grant awarded September 2011. \$0 invoiced.

Coal Creek Watershed Coalition – Slate River Sediment Analysis

The funding requested for the Slate River Watershed includes funding for a geomorphic assessment of the Slate River to be included in a Nonpoint Source watershed plan. The grant also covers the cost of two Office of Surface Mining/Americorps Volunteers in Service to America (OSM/VISTA). The VISTAs will assist the Coal Creek Watershed Coalition (CCWC) in capacity building, watershed research, water quality monitoring, public outreach and education, and community revitalization.

CCWC released an RFP for the geomorphic assessment and hired a consultant team in March 2012. The team is currently performing the assessment. The final report should be available by December 2012. CCWC successfully hired the VISTAs in November 2011 and April 2012. The VISTAs work for a one

year term. They will be actively engaged in the organization of community water quality monitoring events and riparian floodplain protection workshops. Total cost for two VISTAs for one year is \$17,800.

\$13,500 grant awarded September 2011. \$5,000 invoiced.



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