

Dolores River Restoration Partnership

Disappointment Creek, and Big Gypsum Boat ramp, Colorado

Final Report 6/21/11



The SCC crew building massive tamarisk slash piles at the Big Gypsum Boat ramp.

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Executive Summary

The Southwest Conservation Corps (SCC) is a member of the Dolores River Restoration Partnership (DRRP) focused on a multi-year effort to complete watershed restoration work in the Dolores River Basin. The DRRP approach addresses widespread infestations and impacts of tamarisk trees along 184 miles of riparian corridor on the Dolores River and its tributaries with the ultimate goal being restoration of native plant species. The Southwest Conservation Corps' role in the partnership is to employ and train young adults to safely operate chainsaws, apply herbicide, cage cottonwoods and plant native vegetation such as willows. SCC engages young adults in conservation projects with the mission of "Empowering individuals to positively impact their lives, their communities and the environment". The Dolores River Restoration Crew is in its third year of existence and recently completed its 4th season of restoration project work.

This spring 14 weeks of conservation corps crew time (approximately 320 hours of labor/week) was spent working on dense infestations in Disappointment Creek and the Big Gypsum boat ramp. Six of those weeks were funded by the Colorado Healthy Rivers Fund matched by eight weeks of funding from a private funder. Disappointment Creek is the first major tributary in the Dolores River system that is seriously infested with tamarisk, and thus represents a heavy seed source for all areas downstream. SCC completed the project in tandem with Canyon Country Youth Corps (CCYC) crew. The SCC and CCYC crews removed 15.7 acres of tamarisk along one mile of Disappointment Creek where infestations average 75% canopy cover. The SCC crew also cleared 1.7 acres of mature tamarisk downstream of the Big Gypsum boat ramp, a heavily used put-in for boating enthusiasts. These activities were complimented by the caging of cottonwoods and the engagement of an environmental science class from the Gateway School which spent a half a day with the crew protecting these species from beaver predation.



The SCC crew.



Cutting and herbicide application.



Big Gypsum treatment.

In the upcoming winter months slash pile burning will be completed by the Dolores BLM Field Office. Both a watershed wide monitoring program and site specific monitoring will take place this summer to assess native vegetation response to tamarisk removal, as well as efficacy monitoring to determine success of herbicide treatment. Monitoring will determine if continued follow up treatment and re-vegetation is necessary under adaptive management protocols. These monitoring methods will continue for the next five years in Disappointment Creek and throughout the watershed.

Project/Partnership Background

DRRP Vision: A Dolores river watershed that is dominated by native vegetation - where the threats from tamarisk and other associated invasive species have been mitigated and the riparian areas of the watershed continue to become more naturally functioning, self-sustaining, diverse, and resilient over time.

The DRRP began to meet in 2008 as the Dolores Public Lands Office (DPLO), The Southwest Conservation Corps, the Canyon Country Youth Corps (CCYC), the Nature Conservancy (TNC), the Tamarisk Coalition (TC), and the Walton Family Foundation (WFF) advanced discussions surrounding restoration activities on the Dolores. A successful pilot project in 2009 engaged SCC and CCYC to treat the Dolores from Dove Creek Pump Station to Disappointment Creek, where infestations increased in size and cover. Initial tamarisk removal efforts began in Disappointment Creek began at this time, as did work on private lands in the Slickrock area.

During 2010, the DRRP worked tirelessly to engage many new partners and add organizational structure. The BLM offices of Grand Junction, Uncompahgre, and Moab were engaged, oriented and assisted with the formation of implementation plans for respective office management areas. Private landowner contacts continued to be made, and permissions gained. DRRP engaged the NRCS and began conversations surrounding collaboration with the DOW, USFS, USFWS, Counties, Conservation Districts and more.

In early 2010 a Corps River Restoration Director position was created through SCC and the partnership to help manage work on the ground, coordinate CCYC and SCC crews with project partners, develop training and restoration practices/resources and bring the Western Colorado Conservation Corps (WCCC) of Grand Junction into the partnership to add workforce capacity. This director is responsible for representing corps in the partnership, coordinating between the various entities, serving on the Core Team, the funding sub-committee, and chairing the outreach and education sub-committee. Western Colorado Conservation Corps was brought on board and a 3 corps, 50 person, joint training occurred to kick off the fall 2010 work season on the Dolores and Grand Junction BLM Districts. Crews work spring and fall seasons that begin with two weeks of training on chainsaw use, herbicide application, riparian ecology, invasive species identification, orientation to the DRRP, and project scope.

A Core Team retreat in early 2011 solidified the structure of the partnership by identifying and recording roles and responsibilities of partnership entities. A facilitator was hired, sub-committees were identified, chairs assigned, and structures for communication, fundraising, action plans and processes were agreed upon. The spring 2011 full partnership meeting took place in Montrose at the Uncompahgre BLM office and had 30+ attendees. A Memorandum of Understanding was finalized and signatures gathered. A website was planned, and is now in-process. A monthly newsletter reports to partners on progress, funding updates, outreach, and more.

All of this organization continues to pay off on the ground by working closer each year to the partnership's overall goals of treating approximately 1,900 acres in the Dolores River Basin, reducing tamarisk cover to 5%. At this point 647 acres of tamarisk have been treated by corps and mechanical contractors.



The Dolores River Restoration Partnership, April 2011, Montrose, CO

Corps Specific Accomplishments within the DRRP, 2009- present:

- Acres treated: 309
- Number of young adults engaged in service (and jobs created): 72
- Number of Native American young adults employed: 15 (one-third of each crew)
- Number of young adults hired from the Dolores Watershed: 25
- # AmeriCorps education awards: 20 awards, over \$25,000
- Average hours of official training per member: 99
- Average hours of additional education per member: 65
- Percentage of members interested in jobs with Land Management Agencies: 60%

Project Budget History and Outlook

In 2009 the WFF funded \$180,000 and in 2010, \$240,000 to SCC, CCYC, and WCCC to support implementation of the Corps' river restoration program. In addition to funding work on the ground the WFF provided a grant to fund the Corps River Restoration Director's focus of developing the Corps' capacity to complete river restoration work.

The CO BLM contributed \$72,000 in ARRA funds to the project for 2010–2011 and received a BLM Youth Initiative grant for \$10,000 for implementation in 2010. Funding from the Packard Foundation in the amount of \$250,000, the Colorado Water Conservation Board in the amount of

\$100,000 Grand Junction BLM in the amount of \$20,000 and Moab BLM in the amount of \$100,00 contributed to significant progress on project work throughout the watershed.

For the 2011 work season, in addition to the CHRF support, WFF funded \$229,800 for the three corps to implement projects on each of the BLM districts. The Dolores BLM was awarded an additional \$14,000 in Youth Initiative funds for fall 2011. This corps specific funding is complimented by other partnership funds of \$70,000 to support contractors and other needs. A \$20,000 grant from the El Pomar Foundation will also support work in fall of 2011.

Pending funds in 2012 for the DRRP include Colorado State Forest Service for work in the Gateway area, Colorado River District, Colorado Division of Wildlife, Colorado BLM, Utah BLM, USFS Partners for Fish and Wildlife, Walton Family Foundation. The funding sub-committee is constantly keeping on top of available funding sources and working to apply for these on an on-going basis.

Colorado Healthy Rivers Fund Budget

	CWCB 6 weeks	SCC 7 weeks	In-Kind Volunteer 14 weeks	Walton Family 8 weeks	CCYC 7 weeks	Total 14 weeks
Wages or volunteer time	28,338	3,328	42,420	39,384	3,328	116,798
Travel	2,826			3,768		6,594
Supplies	5,436	1,960		7,248	1,960	16,604
Vol. Project Materials	600	36				636
Total Direct	37,200	5,324	42,420	50,400	5,288	140,632
Indirect		3,605			3,605	7,210
Totals	37,200	8,929	42,420	50,400	8,893	147,842

Project Implementation

SCC crews are compiled of two leaders and six members. They are trained and provided transportation for personnel and equipment, supplied with personal protective equipment, chainsaws, camping equipment and food. A contract BLM seasonal (certified applicator) worked along the crews to apply herbicide, providing all equipment and supplies, as well as monitoring application rates and progress. The crew worked an eleven-day, 80 hour hitch schedule with four days off between hitches.



Justin Marler (Dolores BLM) explains the prescription to the SCC crew. The crew gets to work at the Big Gypsum Boat ramp.

In response to the heavy presence of tamarisk leaf beetles in Disappointment Creek, Mike Jensen of the Dolores BLM, using a cross-section study prepared by Chris Massingill of Mainstream Contracting along with information from the Dolores Hydrology and Ecology staff, designed a prescription for crews to work alongside the beetles. The prescription entails establishing bank height and distance from the creek where riparian vegetation such as willows and other riparian obligates are most likely to exist, and then clearing tamarisk which is encroaching on these areas. This leaves the majority of the upland tamarisk for the beetles- the other workforce in the mix on Disappointment Creek-while providing open habitat for the natural establishment and recruitment of priority vegetation. In addition to this approach, crews cleared tamarisk to create a wildfire buffer 50 feet from the drip line of any cottonwood, piling slash to be burned in the future, most likely in winter by BLM fire crews.



Cutting Prescription, Disappointment creek.

On May 11th, despite snow in the surrounding highlands, the SCC crew was joined by the AP environmental science class from the Gateway school (Gateway, CO). Mike Wight (SCC River Restoration Director) organized a volunteer project caging cottonwoods in Disappointment creek in order to protect these priority species from beaver predation. Many of the cottonwoods in the area have been

impacted by beaver activities. After introductions, a detailed discussion about the project, what it is like to be on a corps crew, the ecological priorities established by the DRRP, and a safety talk, the group donned their personal protective equipment and transported fencing and tools to the project area. The high school class worked in small groups with SCC crewmembers and leaders to secure four-foot caging around individual and groups of cottonwoods, being sure to leave a few of the previously impacted trees for beaver to chew on. The group was able to exhaust all of the fencing supplies through the day and caged 25 cottonwoods over a half-mile of Disappointment Creek.



SCC Crewmembers and Volunteers Cage Cottonwoods in Disappointment creek

One of the priorities of this class was to discuss the environmental issues, challenges and ecological results of the work along the Dolores River, which also runs through the town of Gateway. Students took video of speakers presenting throughout the day on various topics for their compilation, which will be displayed on YouTube upon editing and completion.

For the SCC crew, this was an opportunity to discuss their experiences working in the field on this ongoing project, display their newfound knowledge surrounding riparian restoration, to have exposure to other local youth, and to break up a bit of the monotony of day-to-day chainsaw work.

The DRRP may benefit in the future from this contact as work continues in the Gateway area this fall and in following years. The teacher was excited to make a connection with the corps and the partnership for hands-on, local restoration opportunities for the students in his classes.

SCC/ CHRF Project Accomplishments

- 8.23 Acres of tamarisk treated Average of 75% cover or greater
- 25 cottonwoods caged, using 1000 feet of 4' fencing
- 1,935 man hours of work
- 8 young adults employed
- 4 members earned AmeriCorps Education Awards totaling \$5660
- 5 volunteers engaged@ 4 hours each (25 hours valued at \$506.25)
- 80 hours of training per member (previous to the work season)
- 4 new sawyers trained, 4 re-certified, all members gained experience applying herbicide
- Crew attended AVUE Digital Training (how to apply for federal land management positions)
- 26 hours of additional education per member



Slash piles dwarf crew member at Big Gypsum boat ramp.

Follow Up Monitoring and Restoration

There are two types of monitoring protocols being used in the Dolores River Restoration Partnership's projects. The first is meant to gauge the vegetative habitat response of the entire watershed to combined efforts of individual restoration sites. This "watershed-wide monitoring" occurs at 40 representative sites throughout the basin, ten being located in each of four BLM Field Offices. These sites will be monitored between July and August each year for the next five years using line intercept and quadrant methods to determine vegetative response to treatments. Future monitoring frequency is yet to be determined.

The second type of monitoring is a "rapid project assessment" meant to establish whether or not individual project sites are responding to treatments as expected (i.e. whether or not they are on the way to success). This monitoring effort will occur every year and will rotate through project sites so that each site is visited every few years (the specifics of this rotation are still being discussed). This protocol will be very user friendly and is intended to be carried out by interns, volunteers, etc. with the purpose of evaluating the native vegetation response to treatments at all sites over time. This will be coupled with the watershed wide protocol in order to get a better picture in different stretches of the Dolores (including Disappointment) and to inform adaptive management needs.

Adaptive management applies information learned from monitoring to benefit future restoration efforts. This is an on-going process where implementation and monitoring inform maintenance of a restoration site and improved implementation methods at new sites.

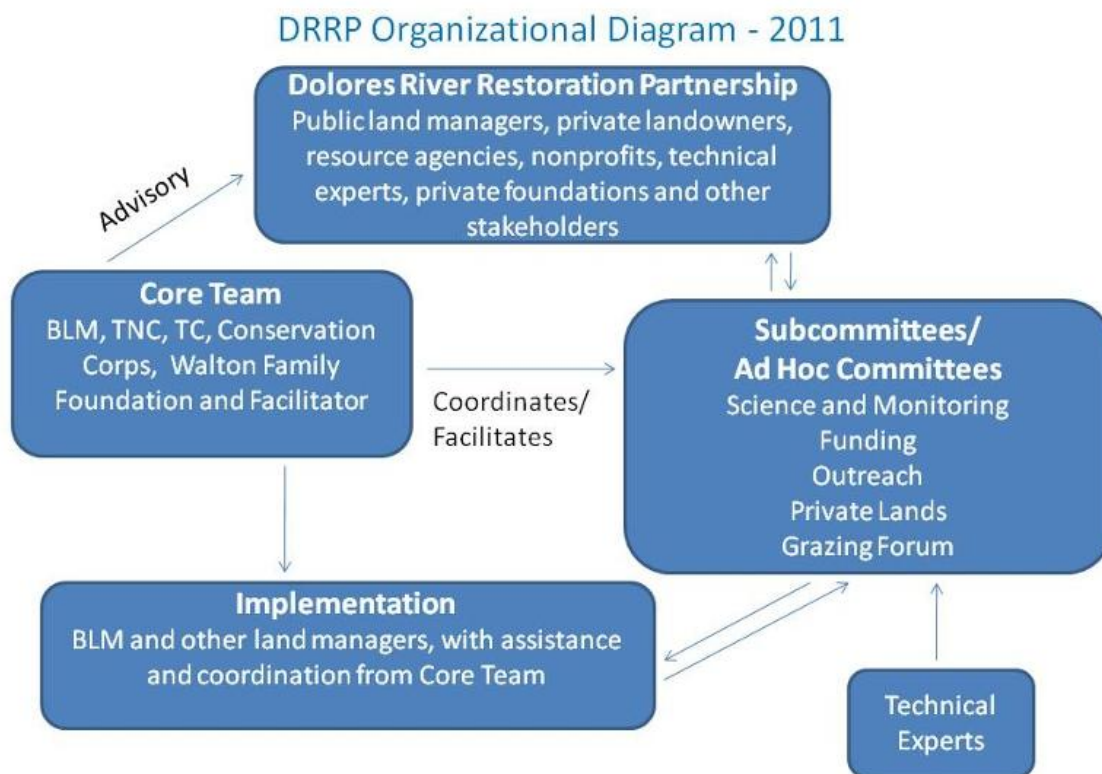
In Disappointment Creek there is a healthy suite of native vegetation which is likely to naturally re-vegetate with natives (known as passive re-vegetation). Last winter, slash piles built in 2009 and 2010 were burned by the forest service fire crew. The piles created this year will be burned in winter to remove the biomass. Follow-up visits, combined with the monitoring discussed above will determine seeding needs for burn areas, and if tamarisk re-sprout treatment will be necessary.

At the Big Gypsum boat ramp area, the amount and diversity of native vegetation is less than in Disappointment Creek. This area has already begun to receive knapweed spraying by the BLM following the tamarisk treatment. Seeding will be necessary in this area and a low bench by the river is an ideal place to plant willows and cottonwoods without the need for supplemental irrigation.

Attachments:

DRRP Organizational Diagram

Additional Project Photos





Dolores River Restoration Crew.



SCC and CCYC crew leaders confer amidst a hard, hot day.



The SCC crew finishes daily saw maintenance in Disappointment creek.



The crew and volunteers have lunch and interviews.



SCC above the worksite in Disappointment Creek.



SCC leader Steve Lynch.



The Big Gypsum Valley and La Sal Mountains.



Before (left)...and after (right), in the meanders of Disappointment, see Corps members in lower right for size perspective.



Big Gypsum Boat Ramp



Herbicide application

Following Page Top: Big Gypsum Panorama.

Middle: Another Before and After in Disappointment Creek

Bottom: Working hard!



