

**Dolores River Restoration Partnership (DRRP) – Riparian Restoration Projects
along the Dolores River & Disappointment Creek in Southwestern Colorado**

Final Report



Prepared for:

Colorado Water Conservation Board Invasive Phreatophyte Control Program

Attn: Chris Strum

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Conservation Legacy

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Introduction

On behalf of the Dolores River Restoration Partnership, Conservation Legacy's Southwest Conservation Corps was awarded a grant totaling \$185,000 from Colorado Water Conservation Board's Invasive Phreatophyte Control Program in 2016. The Grant period ran for two years. This is the final report for project work, primarily implemented in the fall of 2016 and 2017, which was accomplished with awarded funds.

Funds were used for restoration activities along the Dolores River in southwest Colorado as part of a larger effort to ensure riparian restoration success across 145 miles of the Dolores River and its tributaries in southwest Colorado. Since 2009, the DRRP has worked to remove invasive plants, whose extensive growth has displaced native plant communities, impaired wildlife habitat and forage, hindered access to campsites and other recreational opportunities, and increased risks associated with wildfire in the riparian corridor.

Conservation Legacy's Southwest Conservation Corps (SCC) is a 501(c)(3) non-profit based in Durango, CO. SCC operates conservation service programs across Southern Colorado and Northern New Mexico that "empower individuals to positively impact their lives, their communities and the environment". Since 2010, SCC has provided project coordination for DRRP efforts with two other regional conservation corps programs and partners, fundraising capacity for DRRP efforts, and planning for volunteer projects/education with partners.

Background

For 8 years, the DRRP has been working collaboratively to restore riparian habitat across two states, four BLM field offices, five counties, and more than 26 engaged private lands. Through the collaborative work of the SCC program and multiple partners, the DRRP has garnered over \$6 million from both private and public sources, implemented restoration activities along 1,800 acres of the riparian corridor, and created more than 350 job opportunities for local contractors and young adults. These ecological and social successes, in addition to success of the partnership itself, earned the DRRP the 2014 Colorado Collaboration Award for its work as a model collaborative, and our work continues to this day.

Partners include the more than 30 signatories to the renewed 2015 five-year DRRP Memorandum of Understanding as well as 80 individuals, funders, private landowners and community members who provide important in-kind services.

The Dolores River-Riparian Action Plan (DR-RAP) was developed in 2010 to articulate the science-driven, tamarisk related vision, goals, and site selection criteria common to Dolores River stakeholders in both Colorado and Utah to facilitate a consistent approach throughout the watershed.

The Transition Plan for Monitoring and Maintenance (M&M) was developed in 2014 and outlines the DRRP's strategies for transitioning from intensive tamarisk removal to monitoring and maintenance of sites treated for tamarisk to ensure that the watershed as a whole is trending towards native species dominance. The activities conducted under the DR-RAP and the M&M are identified as priorities in the BLM's National Healthy Lands, Resilient Landscapes,; BLM Field Offices' Resource Management Plans; Utah and Colorado State Wildlife Action Plans; Counties' Noxious Weed Management Plans; Unaweep-Tabeguache Scenic and Historic Byway Corridor Management Plan; Middle Colorado River Watershed CWMA Cooperative Agreement; and Intermountain West Joint Venture Implementation Plan.

Additionally, data and reports generated from restoration site monitoring conducted in 2015 and 2016 were used help inform restoration success in terms invasive vs. native cover and evidence of natural recruitment of native species on treated sites. Restoration best practices are determined from site monitoring and are continually incorporated into activities as part of an adaptive management approach.

Objectives and Long-Term Goals

Project Specific Goals

Overall project goals for the 2 year grant period were as follows:

- Initial Tamarisk Treatments: 36 acres
- Long Term Maintenance (secondary weed and tamarisk resprouts treatments): 238 acres
- Monitoring: 75 acres
- Active Revegetation: 28 acres
- Education and Outreach: 40 students engaged in educational field trips, printing and materials

DRRP Multi-Objective Approach

The DRRP is completing intensive restoration of riparian areas that will achieve the following objectives: improved habitat for aquatic and terrestrial species, enhanced recreational access, improved water quality, and reduced groundwater consumption by invasive phreatophytes.

Improved habitat: This restoration work is replacing invasive phreatophytes with riparian plant communities that are more structurally diverse (i.e. multiple layers) and have greater temporal variety in food sources for wildlife. A variety of migratory species (e.g. Western Yellow Billed Cuckoo, Southwest Willow Flycatcher) and non-migratory terrestrial species (mule deer, wild turkey) are expected to benefit from this work. Bird Conservancy of the Rockies is continuing to monitor avian populations at multiple sites in the watershed to compile a complete multi-year picture of population response at treated and untreated sites. Additionally, this work will improve in-stream habitat complexity (e.g. islands, secondary channels, backwaters) with reduced channelization imposed by tamarisk and improved natural meandering.

Enhanced recreation: Sites with heavy recreation use are a key consideration for prioritizing restoration work along the Dolores River. Boat-ramps in Bedrock and Big Gypsum Valley, the confluence of the Dolores and San Miguel Rivers, and the Gateway interpretative trail will be improved by continued control of noxious weeds through this grant proposal. The partnership has improved over 25 riverside campsites since inception and will continue this important work.

Water quality: Large-scale removal of tamarisk is expected to reduce soil-surface salinity.

Groundwater consumption: It is expected that groundwater consumption will also be reduced through removal of dense tamarisk monocultures in the upper terraces of the historic floodplain. In these dryer areas, planting focuses on mesic and xeric species of native grasses and shrubs.

Project Site Summary

Funding was used for three specific activities along the Dolores River: (1) initial riparian tamarisk treatments on public and private lands within the greater boundaries of the Tres Rios and Grand Junction BLM Field Offices that was completed by local contractors, conservation corps crews and volunteers; (2) maintenance and monitoring; follow-up riparian weed treatments (e.g. Russian knapweed, tamarisk resprouts) and monitoring within Tres Rios, Grand Junction, and Uncompahgre BLM field offices by conservation corps strike teams; and (3) active revegetation and public education with volunteers and school groups within the three BLM field offices.

Methods

Initial Tamarisk Treatments

After the spring bird migration, local contractors with mechanical equipment knocked down and mulched highly dense tamarisk in December 2016. This work was achieved through a sub-contract with local contractors Ival and Ed Young and the Grand Junction BLM Field office. The following prescription was newly developed and designed by Sparky Taber with the Grand Junction BLM Field Office. Stan Young mulched tamarisk, left the stumps, returned to the site with an excavator with a thumb, extracted the root ball of tamarisk, and then used a third piece of equipment to mix the soil with the chips. The method was designed to reduce the much load, support future revegetation, and reduce surface soil salinity. Root balls were burned by the BLM WCCC strike team and seeding took place during the following winter (more on this in the active revegetation section).

Initial tamarisk treatments were also conducted by hand crews from three different local conservation corps (Western Colorado Conservation Corps, Canyon Country Youth Corps, and Southwest Conservation Corps). Crews underwent extensive training on chainsaw use, herbicide application, and plant ID before implementing project work. Eight-person hand crews cut tamarisk with chainsaws, low-stumped down to ground level, and applied herbicide to the cambium layer of stumps in order to maximize movement of active ingredient to the roots of the tamarisk. Crews utilized Element 4 or Garlon 4 herbicide mixed with a crop oil concentrate in hand sprayers for cut stump application. Tamarisk slash was piled for burning by BLM Fire crews in winter.

In early October 2016, Wildlands Restoration Volunteers (WRV) recruited 36 volunteers from across Colorado to spend three days removing tamarisk and planting hundreds of native grasses, shrubs, and trees across a 17-acre site located just south of the town of Bedrock, CO. Because of the Wilderness status of this area, volunteers were equipped with loppers, hand saws, and hand sprayers with an appropriate herbicide mix for cut-stump application to remove tamarisk.

CWCB funding used for Initial Tamarisk Removal: \$104,200

- \$35,000 for mechanical treatment with heavy machinery
- \$60,000 for Conservation Corps hand crews
- \$9200 for hand cutting of tamarisk and revegetation by the Wildlands Restoration Volunteers

Long-Term Maintenance and Monitoring

Strike teams (specialized 2 and 3 person crews) were trained to perform several critical functions, including rapid monitoring of vegetation and wildlife response to tamarisk removal, secondary weed and resprout treatments, and active revegetation. Once certified for pesticide application in Colorado and with continued mentorship from BLM and SCC, they conducted prioritized long-term maintenance and monitoring activities throughout the watershed.

Following initial removal of tamarisk, Conservation Corps strike teams treated tamarisk resprouts and other Colorado list-B species, including Russian knapweed, Hoary Cress, lambsquarter, musk thistle, and perennial pepper weed. Strike teams used backpack sprayers, hand sprayers, and UTV mounted sprayers to apply herbicide as spot sprays, basal bark treatments, and foliar treatments. Herbicides used for this work include Element 3, Garlon 3, Pathfinder II and Transline mixed with water and appropriate adjuvants (including a surfactant and blue Hi-Light dye) to maximize herbicide effectiveness. Strike teams were comprised of several interns hired through local conservation corps programs to follow the annual DRRP Project Implementation Plan, which is developed every year and vetted by an Implementation Subcommittee made up of private landowners, agency personnel, and non-profit organization staff. While

beyond the scope of this proposal, it is worth noting that contractors and county weed programs also conducted these treatments elsewhere in the watershed. CWCB funds were used for personal protective equipment for herbicide application (e.g. nitrile gloves, rubber boots, coveralls, etc.), herbicide and adjuvants, a weather meter for documentation of weather during herbicide application, and costs associated with testing and licensure for strike team members and leaders for pesticide application.

A volunteer event with the Wildlands Restoration Volunteers (WRV) was also held in October, 2017 to remove tamarisk resprouts on land managed by the Grand Junction BLM Field Office. Volunteers were equipped with loppers and hand saws to remove small tamarisk resprouts at their base. Members of the WCCC and SCC strike teams wore backpack sprayers filled with Garlon 4 and crop oil mixture and sprayed the cut stumps. Volunteers were shuttled across the river to an island on a raft supplied by the Tamarisk Coalition (now Rivers Edge West), where the majority of the work took place.

In addition to maintenance and revegetation activities, strike teams were trained to conduct annual rapid monitoring to gather site-based information (e.g. cover classes of native and non-native plants, signs of wildlife, documentation of passive recruitment, photo-points, mapping of secondary weed infestations) to track restoration success and inform future management activities on a site-by-site basis. Protocols for rapid monitoring were developed by the DRRP Science & Monitoring subcommittee in 2014 and improved in 2016 and 2017 to further meet DRRP needs. Monitoring data was gathered using the Collector app for ArcGIS loaded onto tablets enabled with GPS. ArcGIS Online in conjunction with ArcGIS Desktop were used to share and analyze data. Rapid monitoring and photo-point reports were generated for BLM land managers.

CWCB Funding used for Long-Term Monitoring and Maintenance: \$71,806

- \$55,420 for secondary weed and tamarisk resprout treatments by conservation corps strike teams
- \$3,260 for rapid monitoring
- \$3,926 for herbicide, training, personal protective equipment (PPE), and herbicide application equipment
- \$9,200 for lopping and hand cutting of tamarisk resprouts by the Wildlands Restoration Volunteers

Active Revegetation

In sites where there was low potential for passive recruitment of native species and/or where there was concern about re-encroachment of secondary weeds, the DRRP conducted active revegetation with strike teams from WCCC and SCC and local school volunteer groups. In sites where mechanical removal of tamarisk occurred, WCCC strike teams broadcasted native grass seed that was then physically mixed with the tamarisk slash to ensure good seed-soil contact. During the winter, the WCCC Strike Team burned tamarisk slash piles and broadcast seeded burned areas with native grasses throughout the Grand Junction Field Office. In 2017, SCC Strike Teams broadcast seeded an area along Disappointment Creek, a major tributary of the Dolores, which had been treated the previous year for Russian knapweed.

School volunteer groups planted containerized plant materials that were locally sourced from the Dolores River and consistent with native shrubs, grass, and trees species recommended in Bay & Sher 2008. Students from the Dove Creek elementary school planted 6 cottonwood and box elder trees along a 3 acre site on Disappointment Creek. Students from the Paradox valley charter school planted native grasses and shrubs north of the Bedrock boat-ramp in 2016 and planted 10 cottonwood trees at the Bedrock boatramp in 2017. Planting methodology consisted of digging a hole large enough so that the root ball of the plant was around 4-6 inches below the ground surface, filling the hole to leave a depression around the plant to collect water, and initially watering the plant with at least two 5 gal buckets full of water. Caging at least 3 ft. in height was installed around cottonwood plantings and secured with rebar posts.

CWCB Funding used for Active Revegetation: \$3,998

- \$130 for container cottonwoods
- \$3,868 for native grass seed mix and storage containers

Education and Outreach

The DRRP makes it a priority to complete outreach and enhance education to local school groups and volunteers through restoration service projects that enhance plant communities along the river corridor. Projects with school groups were service learning days that included talks about ecology, geology, and the importance of restoration from BLM land managers and DRRP personnel.

- Dove Creek Elementary School: Building on a previous field trip hosted by Tamarisk Coalition (TC) and SCC, the third-grade class from the Dove Creek School, joined TC and SCC staff in Slickrock in 2016. Just above the confluence the Dolores River and Disappointment Creek, the class monitored a site where they had seeded native grasses in fall 2015; evaluated protective caging that they had previously installed around cottonwood trees; and planted six native cottonwood and box elder trees along Disappointment Creek.
- Paradox Valley Charter School: In 2016, seven middle and high school students from the Paradox Valley Charter School monitored the plantings described above and then planted native grasses and shrubs on a 0.25 acre site just north of the Bedrock Boat Ramp in Bedrock, CO. At the same site in 2017, seven students returned and planted 10 cottonwoods along 0.5 acres of bank-side habitat to help improve aesthetics of this popular recreation site. The group also helped replace the plexiglass and install a DRRP poster at the boatramp kiosk to help inform future visitors about DRRP work.
- Wildlands Restoration Volunteers (WRV): In early October 2016, WRV recruited 36 volunteers from across Colorado to spend three days removing tamarisk and planting hundreds of native grasses, shrubs, and trees across a 17-acre site located just south of the town of Bedrock, CO. In the fall of 2017, WRV recruited 23 volunteers to remove tamarisk resprouts and cage naturally recruited cottonwoods on a private ranch south of Gateway, CO.

The DRRP printed and distributed new communications materials to build community awareness and bolster stewardship efforts, based off of the DRRP's newly developed communications plan, brand promise and collateral built off of a contract with Third Principle, a Marketing and Communications Firm hired in late 2015. Materials included annual reports, brochures, rack cards, stickers, banners, and posters. These materials were distributed during volunteer projects, at local events such as the Dolores River Festival, and to visitor centers at BLM field offices across the watershed. Annual reports were distributed to DRRP partners.

The DRRP is also updating its website to create a more modern and user friendly platform for partners and the general public. A contract has been established through WebCreate.com, LLC and CWCB funding has been used to partially fund the website development, which should be online by the fall of 2018.

A long-time partner of the DRRP, the Dolores River Boating Advocates (DRBA), is putting together an updated river guide and map for the Dolores River, which is expected to come out late 2018 or early 2019. The DRRP contributed funds to this effort, which will feature a summary of the DRRP work at the beginning of the guide, pictures and success stories of DRRP restoration accomplishments in the mile-by-mile river map, and the DRRP logo.

CWCB funding used for Education and Outreach: \$4,994

- \$1,494 for printing of banners, posters, rack cards, annual reports, brochures, and stickers
- \$2,000 for website development

- \$1,500 for the new Dolores River Guide being developed by Dolores River Boating Advocates to add DRRP Logo and mile by mile photos/language

Results

Initial Tamarisk Treatments – 54 acres treated

Objective: 36 acres

- Mechanical Treatment by local contractors
 - 14 acres along Hwy 141 south of Gateway, CO
- Conservation Corps hand crews: 22 acres total
 - 2016
 - 3.3 acres of tamarisk were treated over 2 weeks by Western Colorado Conservation Corps 8 person crew at Serengeti ranch- private lands near Slickrock, CO.
 - 1 acre was treated over 2 weeks by a Southwest Conservation Corps 8 person crew on private lands within the Uncompahgre BLM Field Office.
 - 1.8 acres were treated over 2 weeks by a Canyon Country Youth Corps 8 person crew at Roc Creek within Uncompahgre BLM Field Office.
 - 2017
 - 10 acres of tamarisk were treated over 3 weeks by a Southwest Conservation Corps 8 person crew off Hwy 141 near River Mile 116 in the Uncompahgre Field Office
 - 2-person WCCC Strike Team: 12 acres within the Grand Junction BLM Field Office in January and February 2017
 - Wildlands Restoration Volunteers: 12 acres upstream of Bedrock, CO in the Dolores River Canyon Wilderness Study Area



Figure 1: Initial tamarisk mulching near the Mesa County line



Figure 2: Stan Young, his wife and Sparky Taber of GJ BLM pose near equipment during innovative treatments along Highway 141 South of Gateway, CO



Figure 3: (Left) Western Colorado Conservation Corps Crew at Serengeti Ranch



Figure 4: (Right) Southwest Conservation Corps crew members show off their chainsaws along the Dolores River



Figure 5: WCCC hitting an impressive stand of tamarisk along highway 141 South of Gateway, CO



Figure 6: (Right) Close-up of a tamarisk stump after herbicide application. The crew only applied herbicide to the cambium layer of the stump so that the chemical could be transported to the roots of the plant

Figure 7 : (Left) SCC conservation crew member sawing down tamarisk

Long-Term Maintenance and Monitoring – 265 acres treated, 128 acres monitored

Objective: 238 acres of secondary weeds and tamarisk resprouts treated, 75 acres monitored

- WCCC 8-person crew
 - 2 acres of tamarisk resprouts treated on Serengeti Ranch along Disappointment Creek
- 2-person WCCC Strike Team
 - 78 acres within the Grand Junction BLM Field Office in the spring of 2017 treating tamarisk resprouts, Hoary cress, lambsquarters, and Russian knapweed
- 3-person SCC Strike Team
 - 171 acres between 2016 and 2017 in the Tres Rios BLM Field Office between Slick Rock and Gypsum Creek and in Little Glen Canyon, Department of Energy leased land near Slick Rock, and in the Dolores River Canyon Wilderness Study Area south of Bedrock, CO. Species treated include Russian knapweed, musk thistle, Canada thistle, and tamarisk resprouts
- Wildlands Restoration Volunteers
 - 14 acres of tamarisk resprouts treated on private land south of Gateway, CO
- SCC 2-person monitoring team
 - 128 acres monitored within the Grand Junction Field Office in 2017



Figure 8: SCC Strike Team sprays weeds along the Disappointment Creek, a major tributary of the Dolores River, in the Tres Rios BLM Field Office near Slickrock, CO



Figure 9: The SCC Strike Team worked with many partners during the 2017 spraying season, including county weed managers and partners at Navarro and Research and Engineering Inc.



Figure 10: Sparky Taber of Grand Junction BLM explaining the history of the DRRP and project logistics to WRV volunteers



Figure 11: SCC monitoring coordinator Emily Kasyon getting a good view of the site on top of a mound to record monitoring data

Active Revegetation – 45 acres seeded/planted

Objective: 28 acres

- 2-person WCCC Strike Team: 34 acres total
 - 14 acres seeded after mechanical mulching of tamarisk
 - 20 acres seeded and irrigated within the Grand Junction BLM Field Office
- 3-person SCC Strike Team
 - 7 acres seeded on a site previously treated for Russian knapweed along Disappointment Creek
- Paradox Valley School Volunteers
 - 1 acre of planting native grasses, shrubs, and cottonwoods at the Bedrock Boat Ramp
- Dove Creek Elementary School
 - 3 acres planted with cottonwoods and box elder trees along a site in Disappointment Creek



Figure 12: Grand Junction BLM and Western Colorado Conservation Corps Strike Team Seeding the Mechanical Site



Figure 13: The mechanical site months after seeding showing native grass establishment

Education and Outreach – 84 volunteers engaged

Objective: 40 volunteers engaged

- Dove Creek Elementary School
 - 11 students engaged
- Paradox Valley Charter School
 - 7 students participated in 2016
 - 7 students participated in 2017
- Wildlands Restoration Volunteers
 - 36 volunteers in 2016
 - 23 volunteers in 2017
- Printed 100 annual reports, 300 rack cards, 30 posters, 2 banners, 300 stickers, 200 brochures
- Inclusion in the Dolores River Guide being developed by Dolores River Boating Advocates: DRRP Logo and mile by mile photos/language
- New and Improved DRRP website



Figure 14: Dove Creek students pose next to newly planted box elder and cottonwood trees after monitoring their native seeding project near Slickrock, CO



Figure 15: Paradox Valley Charter school students listening to a talk from BLM partners about geology of the Paradox Valley area and how it relates to the Dolores River ecosystem



Figure 16: Dolores River Restoration Coordinator David Varner (front crouched) with excited WRV volunteers ready to lop some tamarisk resprouts near Gateway, CO



Figure 17: A Western Colorado Conservation Corps poses proudly by a newly developed banner to highlight restoration activities at project sites

Conclusions and Discussion

Objectives and Accomplishments

All objectives for this proposal were met and exceeded. Table 1 highlights objectives and associated accomplishments, showing that the DRRP succeeded in treating, in total, 115 more acres and engaged 44 more volunteers than originally planned.

Table 1: Objectives and associated accomplishments

	Objective	Accomplishments
Initial tamarisk removal	36 acres	54 acres
Secondary weeds and tamarisk resprouts	238 acres	265 acres
Rapid Monitoring	75 acres	128 acres
Active Revegetation	28 acres	45 acres
Volunteers Engaged	40 people	84 people

On behalf of the DRRP, we sincerely appreciate the significant contributions from CWCB over the years. CWCB accomplishments highlighted in this report contributed to even more restoration success. The DRRP as a private-public collaboration, matches agency, state and foundation sources annually to meet restoration goals. Overall accomplishments of the partnership for 2016 and 2017 were as follows:

Overall 2016 Accomplishments:

- 179 acres of initial tamarisk treatments
- 52 acres of actively planted/seeded lands
- 183 acres of tamarisk resprouts treated
- 516 acres of secondary weeds treated
- 30 jobs created
- 18,720 hours of restoration service work
- 2,059 hours of volunteer service

Overall 2017 accomplishments:

- 175 acres of initial tamarisk treatments
- 30 acres of actively planted/seeded lands
- 480 acres of tamarisk resprouts treated
- 252 acres of secondary weeds treated
- 32 jobs created
- 10,520 hours of restoration service work
- 1,155 hours of volunteer service

Monitoring

Rapid monitoring continues to be an integral part of DRRP work and is planned to take place over approximately 1/3 of the river corridor every year (50 miles each year). Rapid monitoring occurs on all treated sites, including the sites treated for initial tamarisk, secondary weeds, tamarisk resprouts, and active revegetation in this report. The Transition Plan for Monitoring and Maintenance (M&M) was developed and approved in 2014 in order to strategize the transition from intensive restoration efforts to follow-up monitoring and maintenance at a site-by-site level in order to assure ecological restoration success

throughout the watershed. The partnership has predicted through long-term project planning that by 2019, more than 75 percent of restoration sites are anticipated to have transitioned from active, high-intensity implementation to less intensive M&M. Restoration activities, monitoring, and maintenance are planned into the foreseeable future in order to protect the large investment made by all DRRP partners and local communities since 2009 to restore this beautiful river.

Lessons Learned

Active revegetation success, specifically planting of containerized plants, has always been a challenge for the DRRP given the remote and dry nature of the watershed. Many of the plants put in the ground by volunteers in 2016 did not survive and establish into the next year, primarily due to dry conditions and lack of water. The DRRP has now realized that initial watering is not enough and is working to implement watering plans following planting projects. Since most members of the DRRP live in communities that are far away from many of the restoration sites, these watering plans revolve around help from local community members who are willing to water plantings throughout the fall and into the spring after planting events occur. In 2016, the DRRP compiled an in-depth report discussing active revegetation lessons learned (Dolores River Restoration – Active Revegetation: Moving Forward, 2016).

Staff turnover at Canyon Country Youth Corps (CCYC) in 2017 left a gap in DRRP stewardship capacity, making it difficult to get as many volunteer efforts off the ground that year. New staff has since been hired at CCYC and the DRRP is now working on reestablishing old relationships and fostering new ones with local schools and volunteer groups. This turnover process highlighted the importance of keeping relationships with volunteers sustained throughout the staff transition process so that volunteer projects can continue to be implemented each year.

Future Work

The DRRP restoration work is far from over and this contribution from CWCB helped the DRRP achieve many of its restoration goals for the past two years. The 2015 five-year DRRP Memorandum of Understanding includes partners, individuals, funders, private landowners, and community members who are committed to DRRP restoration work until at least 2020.

The DRRP 2018 implementation plans include more initial tamarisk removal, secondary weeds and tamarisk resprouts treatments, seeding and planting of native plants with volunteers and school groups, rapid monitoring, and educational events for the public. Although the partnership is slowly transitioning to monitoring and maintenance, there are still many acres of tamarisk providing a seed source for future infestations that need to be treated. More of this type of work is planned for 2020 as well. Not only does this work benefit the river and riparian ecosystems of the Dolores River, it continually has a positive impact on communities of Southwestern Colorado by providing jobs and training for local young adults, enhanced recreational opportunities, cleaner water sources, decreased fire hazard, and educational opportunities that increase public understanding and engagement in conservation.

Actual Expense Budget

See Attached

References

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