

Planning and Development to Further the Dolores Watershed and Resilient Forest Collaborative



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Executive Summary

On behalf of the Dolores Watershed and Resilient Forest Collaborative, the Dolores Water Conservancy District requests that the Bureau of Reclamation invest \$99,530 over two years. This investment will build the structural foundation to enable an existing watershed protection collaborative group to successfully enhance opportunities for cross-boundary management across local, state, and federal public lands and private lands in the Upper Dolores River Watershed to:

- Protect McPhee Reservoir, the second largest reservoir in Colorado, built and owned by the Bureau of Reclamation, from the risks and impacts of high intensity, unmanaged wildfire.
- Reduce risk from wildfires and post-fire flooding to people, property, water, and other public resources.
- Increase implementation of wildfire risk reduction and flood management projects in order to support long-term ecologic and economic resilience.
- Move toward self-sustaining, cost-effective forest restoration projects through support of forest restoration and wood products industries.
- Connect community stakeholders to better prepare for, respond to, and recover from a severe wildfire and resulting post-fire effects.

Support will include organizational development through strategic planning, organizational planning, and capacity building. This includes contracting for a part-time assistant coordinator and note-taker and for the development of an outreach plan that will help the community at large to engage in a more resilient Dolores River Basin. Watershed restoration planning would be further supported through facilitation and GIS support for a watershed wildfire protection plan which will feed into the development of source water protection plans for upper Dolores River water users. Investments to design monitoring protocols for water quality, flow, and forest hydrology will provide baselines to inform adaptive management for forest restoration projects that support watershed resilience into the future.

Background Data

The Dolores Watershed

The watershed starts above 14,000 feet in the alpine area surrounding Lizard Head Pass in the western San Juan National Forest and drops down into spruce-fir dominated forests. The watershed continues lower into mixed conifer and aspen before reaching the ponderosa pine dominated forests just above McPhee Reservoir, the prime storage feature of the Reclamation Dolores Project (DP). McPhee drains 800 square miles (34,800 acres) of the upper Dolores watershed and is full at elevation 6,924, just below the Town of Dolores.

The forested watershed continues below McPhee Dam to the Dove Creek pump station on the lower Dolores that provides winter municipal supplies to the Town of Dove Creek, a Dolores Project municipal customer. This is the lower extent to which the Dolores Watershed and Resilient Forest Collaborative focuses. Ponderosa pine dominates this additional 480 square miles (20,900 acres) of lower Dolores drainage with interspaced grass meadows and piñon-juniper shrublands. Elevations in this lower reach range from above 9,000 feet down to 6,000 near the Dove Creek pumps. Beyond the Dove Creek pumps, the Dolores River continues its 230 mile journey to join the Colorado River in southeast Utah.

Average precipitation varies from 40 inches at the mountain peaks down to 16 inches at the lower reaches. Winter snowpack historically accounts for 80% of the watershed moisture that runs off from April to July each year. The Dolores River delivers an average of 300,000 acre feet (AF) annually, 240,000 AF during the April to July runoff per the Project Definite Plan Report. More recent periods have seen these averages drop down to 270,000 AF & 217,000 AF respectively due to a continued exceptionally dry period. Additionally, the northern edge creeks, House Creek, Beaver Creek & Plateau Creek all drain directly to McPhee and provide an additional 51,000 AF annually, most of it during the spring runoff. Like the rest of the watershed, recent years are drier than the long-term average with total McPhee annual inflows down to 323,000 AF average since McPhee started storing water in 1986. McPhee Reservoir (McPhee) sits at the southern edge of the western San Juan Mountains with a surface area of 4,470 acres when full at 6924. McPhee, at over 200 feet deep at the downstream outlet, has a total storage capacity of 381,000 AF and active capacity of 229,000 AF.

The 1,284 square mile watershed holds significant local infrastructure and important links to the western power grid. These pieces include 768 miles of roads, 1,600 private parcels with 3,800 structures, 40 miles of high voltage power transmission lines and 20 miles of gas transmission. These items are important to our local economy and the larger southwest across four states.

The watershed is also important to the local communities for livestock grazing, wood products production, fish and wildlife habitat, and outdoor recreation. It is used by both locals and

visitors for hunting, fishing, boating, motor sports, hiking, horseback riding, mountain biking, fire wood gathering, and other pursuits.

Water Rights & Early Settlers

Early European pioneers arrived by 1880 and quickly diverted water from the narrow Dolores Valley with limited arable land across a small divide into the fertile open sage plains of the Montezuma Valley by 1890. The Montezuma Valley Irrigation Company (MVIC) inherited this early water development and irrigates 37,500 acres today with these senior 1890's water rights. Although successful for many years, the water supply consistently ran short in July when the snowmelt runoff tapered off. The complete Dolores River was diverted into the Montezuma Valley yet, without adequate storage, it was insufficient for all needs. In addition to irrigation, early settlers established municipal & domestic uses for the Towns of Rico, Dolores, Cortez, & Dove Creek. Rico and Dolores divert above McPhee Reservoir while Cortez & Dove Creek use prior rights and Dolores Project M&I supplies. A more recent rural domestic system that diverts from McPhee was developed by Montezuma Water Company, with water rights acquired from MVIC. In this sparsely populated southwest Colorado area, municipal, domestic and industrial water diversions are important, but they represent a very minor volume of the demand on the Dolores watershed.

The Reclamations Era & Dolores Water Conservancy District

The Bureau of Reclamation started looking at Dolores Project development by the 1950's. To assist Reclamation's efforts, local citizen supporters, the Cortez Bootstraps, lobbied for federal water development that led to the 1961 formation of the Dolores Water Conservancy District. The Dolores Project was one of the last Federal projects authorized and constructed as part of the Colorado River Storage Project Act of 1968. Reclamation's studies culminated in the 1977 Definite Plan Report defining the Dolores Project. This information was welcomed locally and led to the 1977 District election that overwhelmingly supported the necessary financial contracts allowing Reclamation to start construction.

The Dolores Project was built to provide water to non-Indian and Ute Mountain Ute Tribal water users. The Project delivers water to Dolores and Montezuma Counties in southwestern Colorado extending from the Town of Dove Creek south to the Ute Mountain Ute Reservation.

Construction of the Dolores Project started in the spring of 1978, but was suspended under the Carter Administration's "hit list" until the Project was linked to the resolution of Colorado Ute Indian Water Rights Settlement. This settlement provided irrigation and municipal supplies for the Ute Mountain Ute Tribe from the Dolores Project. Construction resumed in 1979 and by 1986 McPhee Reservoir delivered water through new Project facilities to Cortez & the Montezuma Valley Irrigation Company. The first full-service irrigators moved from dryland to irrigated farming beginning in 1987. The Project facilities were completed by 1999 and have provided irrigation water utilizing pressurized pipe and meters to create one of Reclamations most efficient projects. Users were able to divert their full allocations as each phase of the Dolores Project came online. There are 446 square miles within the Dolores Water Conservancy District where 68,000 acres are irrigated on non-Indian lands and another 7,700 acres irrigated on Ute Mountain Ute Tribal lands. The Dolores Project secures 50-year municipal supplies for the Towns of Cortez, Towaoc, Dove Creek and adjacent rural areas. The Project provides full service irrigation to Dolores & Montezuma Counties and the Ute Mountain Tribe, and supplemental irrigation water to Montezuma Valley Irrigation Company as well as year-round fishery base flow releases to the lower Dolores River.

Dolores Project Current Status

Today MVIC still receives about 90% of their supply from their historic water rights, with usage averaging 130,000 AF per year. In addition to the supplemental water for MVIC, DWCD supplies the 30,000 acre Full Service Area from Yellow Jacket to Dove Creek with a 57,000 AF supply. DWCD also delivers 24,000 AF south to the 7,700 acre Ute Mountain Ute Tribal Farm and Ranch enterprise. Additionally the Dolores Project secures 9,000 AF of M&I supplies for Dove Creek, Cortez, and the Ute Mountain Ute Tribe. The DP allocations add to approximately 130,000 AF that come from storage including the second largest pool for the downstream fishery at just under 32,000 AF. Prior to the Dolores Project the downstream reaches effectively ran dry every summer. Now the downstream has its own pool to continually keep a year round flow available to the downstream fishery.

Water Issues of Concern

Hydrologic drought remains a perennial concern for Dolores Project full service irrigators, the Ute Mountain Tribal Farm and the downstream fishery all of whom rely strictly on Project storage. Lack of irrigation supply translates directly into diminished local income & profits that

support O&M payments used by DWCD to keep Project facilities functioning and in good repair. Three shortages have been declared for Project storage allocations including the downstream fishery since 2000, more deep and frequent shortages than the original Project planning documents foresaw. Droughts cause significant financial difficulty for both Project users and the District.

Water quality remains a concern. Though 81% of the land is publicly owned, limiting development, local providers want to remain vigilant to avoid any future degradation and continue providing safe and affordable domestic water supplies for all those in western Montezuma and Dolores Counties. A preliminary source water protection plan was developed, but did not go as far as defining a framework for strategic actions. Local municipal interests would like to complete strategic restoration planning for the long-term protection of their municipal supplies.

The upper Dolores is a forested watershed. National forests since their inception have always been recognized and managed for water supply. Healthy forests reduce the likelihood of severe forest fires, which can result in erosion and catastrophic sediment flows with detrimental effects to water resources. Studies of wildfire



Sage Hen Fire in 2016 as seen from McPhee Reservoir

damage to water storage systems in Colorado and other western states have shown that it is more cost-effective to reduce the threat of severe fires than to repair the damage after the fact. Healthy forests also support better interception, infiltration, storage, and release of the precipitation that falls in them. The Dolores Watershed Resilient Forest Collaborative exists to proactively protect the forests that underpin the Dolores Project water supply.

A large portion of the ponderosa pine forests that comprise much of the area surrounding McPhee Reservoir are out of sync with historical patterns due to a combination of livestock grazing practices, timber harvesting, and exclusion of fires during the last century. This has resulted in stands of trees that are overly dense, with ladder fuels and closed canopies that are more susceptible to both insect and disease attack and severe wildfires that can kill the trees and

scorch the soil over large areas. This is in contrast to more frequent, less severe ground fires that historically burned smaller fuels but left the larger trees unharmed.

Ponderosa pine forests in the watershed are also currently facing an outbreak of round-headed pine beetles. The Colorado State Forest Service has monitored an area of trees killed by round-headed pine beetles north of McPhee Reservoir that has grown from 8 acres in 2011 to 10,584 acres in 2017 with no signs of abating. Engelmann spruce-subalpine fir forests in the watershed are currently weakened by spruce budworms and root rot diseases and are likely to be affected soon by a spruce beetle epidemic that has been migrating westward from the Continental Divide. Many of the aspen stands in the watershed have deteriorated over the last two decades due to a combination of drought, insects, and diseases.

The local timber and wood products industry, in addition to being an economic driver for the communities, is important for changing the forest structure of the Dolores watershed in ways that make it more resistant to severe crown fires and the resulting erosion and sedimentation. Increasing the capacity for more harvesting, whether by improving markets for current businesses or adding new ones, will allow more needed treatment for forest stands.

There are many important species from the top to bottom of the watershed that the Dolores Watershed Resilient Forest Collaborative hopes to protect from multiple threats that come from an unhealthy forest. At the highest reaches multiple tributaries support rare native cutthroat trout in addition to more common sport trout species. At lower tributaries that directly flow into McPhee and below the dam, an additional native species of concern is the round tail chub. Reclamation has joined with six western states to support the round tail chub, bluehead sucker and flannelmouth sucker and avoid a US Fish & Wildlife listing of these species under the Endangered Species Act. Participation in the DWRF Collaborative is just one way that DWCD hopes to make Dolores Project water supplies more resilient to the increasing impacts of drought.

Project Location

The upper Dolores watershed is located in Dolores and Montezuma Counties in the southwestern most part of Colorado. It encompasses the communities of Dolores, Dunton, Groundhog, and Rico and provides additional trans-basin water to Cortez, Lewis, Yellow Jacket, Pleasant View Cahone, Dove Creek, and Towaoc. The project area encompasses HUC 14030002 – The Upper Dolores as far down drainage as the Dove Creek municipal pump station. The shapefile of

boundaries of the Dolores Watershed Resilient Forest Collaborative area can be found [here](#) (UTM zone 13N). A map with more detail is included in Geographic Scope on page 18.

Technical Project Description

The Dolores Watershed Resilient Forest (DWRF) Collaborative has existed for two and a half years as a strong ad-hoc watershed wildfire protection collaborative warranting this request in the Existing Watershed Group category.

The idea to convene around wildfire issues in the Upper Dolores Watershed came about when Dolores Water Conservancy District (DWCD) and FireWise of Southwest Colorado (FireWise) representatives attended a post-fire tour of the 109,615 acre West Fork Complex Fire together in the summer of 2015. The tour was hosted by the San Juan Headwaters Forest Health Partnership. Just a few watersheds to the east, that fire had burned across the rocky Continental Divide in the high-elevation wilderness, creating numerous water quality and water supply problems and prompting development of post-fire recovery groups.

The 71,739 acre Missionary Ridge Fire in 2002, about 25 miles east of the Upper Dolores Watershed, required extensive post-fire rehabilitation to protect Durango and Bayfield's water supplies. The 2012 Weber Fire in the neighboring Mancos Watershed which prompted evacuations and cost hundreds of thousands of dollars in post-fire recovery expenses, and the 2009 Narraguinnep Fire with debris flows that impacted the Dove Creek municipal water pumps were too close to the critical water resources of the Dolores River and McPhee Reservoir to ignore any longer. FireWise had also been participating in the [Fire Adapted Communities Learning Network](#), becoming acquainted with a nationally emerging focus on wildfire preparedness efforts to protect water resources including notable examples from Santa Fe, Flagstaff, Colorado Springs, and Ashland. FireWise also participates in the San Juan Headwaters Forest Health Partnership, which has served as one model to follow for forest health protection and restoration at a watershed scale with the coordinating organization, Mountain Studies Institute participating and offering support and guidance as needed to get the DWRF Collaborative off the ground.



Alluvial fan following the Weber Fire in 2012.

FireWise had also been participating in the [Fire Adapted Communities Learning Network](#), becoming acquainted with a nationally emerging focus on wildfire preparedness efforts to protect water resources including notable examples from Santa Fe, Flagstaff, Colorado Springs, and Ashland. FireWise also participates in the San Juan Headwaters Forest Health Partnership, which has served as one model to follow for forest health protection and restoration at a watershed scale with the coordinating organization, Mountain Studies Institute participating and offering support and guidance as needed to get the DWRF Collaborative off the ground.

In this context DWCD and FireWise decided to host a scoping meeting on July 30th, 2015. With key buy-in, FireWise secured seed funding through both the Fire Adapted Communities Learning Network and DWCD to support group coordination and facilitation. The United States Forest

Service has made more significant investments in building the capacity of the DWRF Collaborative, which has allowed for funding a half-time contracted coordinator. The group has made steady progress since its inception including:

- Developing shared goals;
- Building a network of stakeholders;
- Moving from bi-monthly to monthly stakeholder meetings in 2016;
- Agreeing on a name: Dolores Watershed Resilient Forest (DWRF) Collaborative;
- Getting on the ground for field learning;
- Securing group coordination and capacity building support through the National Cohesive Wildland Fire Management Strategy;
- Professional presentations on risk models, forest susceptibility to climate trends, existing emergency response plans, and the emerging round-headed pine beetle outbreak;
- Leveraging private and public forest thinning projects ;
- Developing a Highly Valued Resources and Assets wildfire risk assessment with an ad-hoc working group and in-house support from Montezuma County GIS and the Southwest Interagency Fire and Aviation Management Fuels Specialist;
- Developing an Automated Geospatial Watershed Analysis of pre- and anticipated post-fire runoff and erosion;
- Hosting an Open Standards for the Practice of Conservation workshop;
- Launching a Timber Industry Working Group to increase local capacity for restoration work. The Working Group has developed a situation analysis and work plan and has teams working on a small-diameter wood product market study and on creating the conditions to make biomass power generation possible;
- Contracted messaging design support;
- Established a Coordinating Team in 2017 to guide organizational direction.

Eligibility of Applicant

The Dolores Water Conservancy District was formed in 1961 as a subdivision of the State of Colorado to contract with the federal government to operate and maintain the Dolores Project signing the Repayment Contract with the Bureau of Reclamation in 1977. DWCD has local government taxing authority as a water conservancy district. DWCD has participated in the Dolores Watershed Resilient Forest Collaborative since its inception. DWCD provides meeting room space and some financial assistance, as well as having two managers that regularly participate in meetings, field trips, and workgroups.

Goals and Objectives

The following goals and related objectives were developed by the DWRF Collaborative in 2016 and 2017.

Reduce risk from wildfires and post-fire flooding to people, property, water, and other public resources in the Upper Dolores Watershed.

Develop a watershed wildfire protection plan.

Incorporate wildfire risk reduction activities into source water protection plan.

Educate home and property owners on what they can do to reduce risk, improve forest health, and protect the watershed. Make Wildland-Urban Interface issues better known and understood.

Foster understanding of forest and watershed connection among local youth.

Garner political and public support for resilient forests in Dolores Watershed.

Improve baseline water monitoring data on the Dolores River and its tributaries.

Increase implementation of wildfire risk reduction and flood management projects in order to support the long-term ecologic and economic resilience of the Dolores River Watershed.

Acquire funding for additional treatments, including ecologic and economic effectiveness, and monitoring costs.

Accomplish at least 1,000 acres of cross-jurisdictional fuels reduction treatment annually for the next 3-5 years, increasing incrementally after the initial 5-year period.

Move towards expanded thinning and managed fire in large areas of National Forest land, that have gone through landscape level planning and environmental assessment.

Establish forest and water monitoring plans.

Compile a map of all work in the watershed in 2018 and as far back as appropriate.

Increase local capacity for prescribed fire.

Coordinate with forest health efforts to protect watersheds across the region.

Renew and recapitalize the local forest products industry toward self-sustaining, cost-effective forest restoration projects.

Demonstrate wood products supply security.

Improve connections with regional wood product markets.

Build industry capacity through business support, capital investment, and training.

Connect community stakeholders to better prepare for, respond to, and recover from a severe wildfire and resulting post-fire effects.

Spur risk mitigation among infrastructure managers.

Improve integration of emergency response notification and response between Dolores and Montezuma Counties.

Approach

A lack of formal organizational structure, bylaws, mission and vision statements, and long-range strategic plan present new challenges to the group's ability to efficiently work toward its shared goals as the group begins to secure resources for wildfire risk reduction activities. In order to become established as a sustainable organization, support for watershed group development (Task A) is needed. The group has made significant progress with modelling of wildfire and post-fire erosion risk to the watershed. A source-water protection plan for this basin was drafted in 2013, but it was not a comprehensive analysis of risks to the water supplies and was never adopted by the water users it was intended to serve. Additional working group coordination, facilitation, and mapping support will enable the Collaborative to incorporate these analyses and mapped values at risk on the landscape into comprehensive and integrated watershed restoration planning documents (Task B) complete with prioritized project recommendations (Task C).



Several members of the Collaborative discussed risks to water resources at the start of a group tour at the Town of Dolores water tanks.

Task A – Watershed Group Development

In order to further develop the watershed group (Task A), we plan to hire additional coordination and facilitation support. The Collaborative has existing funding through the USFS to coordinate ongoing stakeholder meetings, keep partners informed and engaged, sustain the timber industry working group, engage landowners in wildfire risk reduction activities, and improve coordination of local wildfire response. These objectives outlined in the agreement with the San Juan National Forest leave little funding available for organizational development and strategic planning. This grant would support the facilitation of the Coordinating Team to make recommendations for group organizational structure and governance and establish any associated documents such as articles of incorporation, memorandums of understanding, bylaws, and more.

The group has initiated an effort to develop an illustrated vision, but a professionally facilitated process is necessary to ensure the future vision reflects all that the group hopes to accomplish. A strategic planning facilitator can also guide the group through the development of a mission and core values. Following on the strong foundation of a Vision, Mission, and Core Values, a strategic planning facilitator can guide the group through strategic action planning. The group will leverage the coordinating team to guide the strategic planning process in consultation with

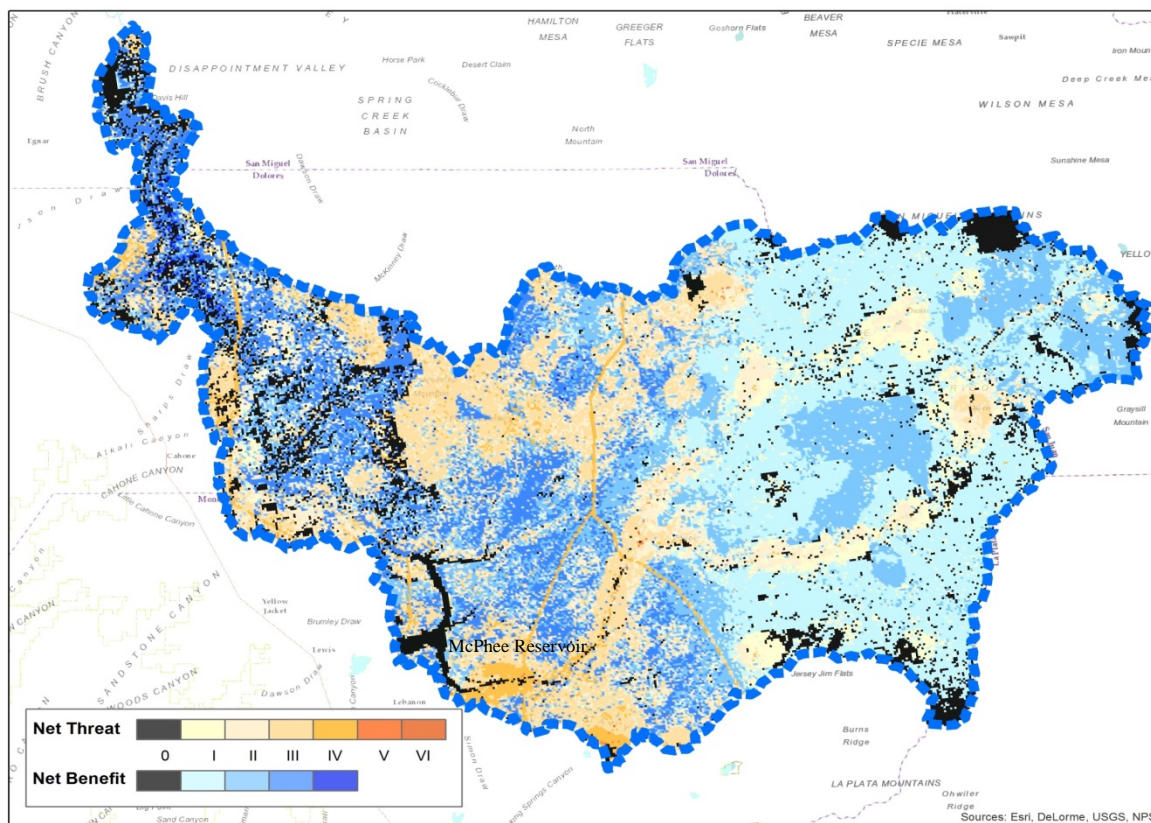
an experienced strategic planning facilitator. With the vision already initiated, the group hopes to keep moving along with that process and have a strategic plan in place for DWRF and participating partners going into the 2019 field season. The sooner that a strategic plan is in place from the vision all the way through to strategic actions, the sooner the group will be in a more competitive position to seek implementation funding for prioritized watershed needs and to make the most efficient use of all available resources, public and private.

With an informative and attractive graphic vision and a clearly defined mission, the DWRF Collaborative will be better positioned to engage a broader audience in doing their part to make the watershed more resilient. However, developing an effective outreach plan will take a significant investment. The DWRF Collaborative has secured a small amount of funding for vision illustration, logo design, and website development, but these investments are not part of a broader strategic outreach plan to promote understanding of the forest and water connection and help individuals find their place in supporting watershed wildfire protection. Support through this grant would enable the group to contract for the development of an outreach plan and during year two, to initiate outreach efforts as prioritized in the plan.

The Collaborative has done some work identifying the various upstream, in-stream, and downstream audiences that we want to reach and engage with outreach efforts. The decision to pursue an illustrated vision came out of group insights that there are too many people who transcend many of the outreach categories that the group has identified. By developing a picture, a person will be able to more easily discover one or many ways that he/she fits into the vision for a more resilient upper Dolores River basin.

Establishing group recognition, connecting residents with actions they should take to make the watershed more resilient, and building a will for investment in watershed wildfire protection are all important goals for outreach. The group has a long list of possible outreach opportunities and methods, but designing an effective strategy will require coordination of a working group made up of the most highly engaged participants. The group will determine what they can accomplish in-house and what needs to be contracted out to an outreach and communications firm. Once a plan is developed, there will be a need to hire a graphic designer to develop the DWRF Collaborative brand and specific products for outreach. By the second year of this grant, the group will need support for items like graphic design, printing, public tours, web hosting, and possibly videography.

In order to keep all of these tasks organized and understood by participants and the public, the group is also requesting support for professional notetaking. Generous participants have provided notes for the stakeholders group to document the progress of the group so far, but documentation of working group progress and tours has been inconsistent. In order to secure consistent documentation going forward, including the progress of working groups and the following watershed restoration planning efforts, notetaking will be a crucial support role for the Collaborative moving forward.



This figure from the Highly Valued Resources and Assets Wildfire Risk Assessment displays high risk to resources near the reservoir and on private lands.

Task B & C – Watershed Restoration Planning and Management Project Design

The group’s watershed restoration emphasis blurs the line somewhat between organizational planning and the development of a watershed restoration plan. The group has been convened solely around a set of shared goals for its first two and a half years and has been framing ongoing activities based on these goals. The DWRf Collaborative hosted professionals with The Nature Conservancy from the Conservation Coaches Network to provide a workshop on the Open Standards for the Practice of Conservation in 2017. This training provided one framework that the group is interested in employing toward its strategic action planning efforts (Task B). Work Planning has been ongoing with the stakeholders, but little time has been put into developing comprehensive and targeted objectives, developing the strategy around each objective, or the prioritization of activities (Task C).

Watershed Wildfire Protection Plan

The DWRF Collaborative launched into risk assessment of wildfires and post-fire flooding in the upper Dolores River basin by early 2016 to get an initial baseline on the groups key watershed issues. A working group including hydrologists, fire managers, foresters, and other scientists convened to design the Highly Valued Resources and Assets Wildfire Risk Assessment which was completed in the end of 2016. The group continued to work together to select a risk model for post-fire effects. While there are many research bodies that have recently designed methods for evaluating post-fire flood risk, our group selected the Automated Geospatial Watershed Assessment (AGWA) for its simplicity and practicality. This post-fire risk assessment was completed in July 2017. The Collaborative is seeking additional support to leverage the work of the risk assessment group to inform watershed restoration planning including coordination, facilitation, writing and GIS to develop a watershed wildfire protection plan. This plan will be an internal working document for the DWRF Collaborative outlining objectives and strategic actions to inform the work of the group.

Compiling base maps and spatial layers is underway at the time of this application. A small team including a contracted Coordinator, Hydrologist and GIS Specialist will build the base layers and subdivide the watershed into practical management units to be analyzed by a broader plan development group. The watershed wildfire protection plan outline and plan development process is scheduled to be complete by the end of March 2018.

A list of key stakeholders with management considerations in the watershed has already been created with the Colorado Department of Transportation being the only participant that has no prior engagement with the DWRF Collaborative. Existing planning group participants include: Dolores and Montezuma Counties; forest, water, fire, wildlife, and emergency managers; conservation organizations; Mountain Studies Institute; Colorado State Forest Service; electric utilities; and several retired forest managers, researchers, and planners. Watershed Restoration Plan support includes convening regular meetings of this working group to recommend and prioritize cross-jurisdictional restoration activities and integrate these activities with the ongoing work on outreach, treatment economics, monitoring, and wildfire response and recovery.

In addition to setting overarching restoration objectives for the Collaborative, this Watershed Wildfire Protection Plan will make the group more competitive for implementation funding. The management recommendations will also inform a proposed update and adoption process for Dolores River source water protection plans.

Source Water Protection Plan

In 2012 and 2013, a source water protection plan was drafted for the City of Cortez, Towns of Dolores, Dove Creek, and Rico, and Montezuma (Rural) Water Company. The Town of Rico was the only community that adopted the source water protection plan at that time, focused on a tributary source which has been offline since 2014 (though they are working to get this pump system back in working order). While the remaining Dolores River domestic water users did not

proceed through the public and decision making processes to get the plan adopted, the work in 2013 provides a strong backbone to build upon. The City of Cortez, the largest municipal water user sourcing water from the Upper Dolores River Basin, is motivated to pursue completion and implementation of a source water protection plan.

Contract support will enable the gathering of information about issues and needs related to water quality and quantity within the watershed and completion of pre-planning activities, including outlining the plan, researching relevant existing plans (or drafts), gathering baseline information, and identifying restoration needs for the watershed. These efforts would ordinarily be considered watershed group development tasks (Task A), but the opportunities identified will directly inform the water managers of these entities, who will implement their Source Water Protection Plans rather than direct implementation by the DWRF Collaborative. With less than a page on the potential risk to the watershed posed by wildfire and forest health issues in the 2012-13 draft, the DWRF Collaborative's key emphasis will be to incorporate the critical source-water protection issues and strategies to reduce risk that are identified in the watershed wildfire protection plan effort. Additional contracted GIS support is also anticipated for the source water protection plan.

Restoration plan components within the source water protection plan will include development of a risk-based vulnerability assessment. This assessment will identify and rank feasible risks to the intake systems along its water course from the Dolores River headwaters, through the McPhee Reservoir, to each participating water provider's water treatment facility, effectively prioritizing wildfire and post-fire erosion risks in their respective places among source water concerns.

The DWRF Collaborative will support the source-water protection plan by contracting for coordination, compiling, writing, and facilitating a public process for input and adoption with a subset of water management participants.

The process envisioned would start with identifying and describing the components of the water intake systems and ascertaining their condition. "State of the Dolores River" information would be compiled from a variety of sources to provide context. A working group of Water Division, DWCD staff, and other qualified individuals would convene to develop a matrix of risks and associated potential mitigation strategies. This would be integrated with the other ongoing efforts such as the watershed wildfire protection plan and presented for feedback from the DWRF Collaborative participants. It would then be presented to local government officials and staff for consideration and implementation. A feedback process would be established to loop back into other DWRF planning and projects.

Montezuma and Dolores Counties both adopted Natural Hazard Mitigation Plans within the last two years, and the additional detail on source water protection and wildfire risk reduction actions that can be incorporated by reference will enhance these key community mitigation plans.

Watershed Monitoring Plan

The Mountain Studies Institute (MSI), a DWRF Collaborative participant and key ecological research organization in the region, has received some funding for pre- and post-treatment monitoring of fuels reduction projects in the Upper Dolores Watershed. MSI is currently working with the Colorado Forest Restoration Institute (CFRI) to improve the forest restoration monitoring protocols that it has been using with the San Juan Headwaters Forest Health Partnership (SJHFHP) in nearby Archuleta County. MSI will implement these revised protocols for DWRF Collaborative-related projects in Montezuma and Dolores Counties as well as for SJHFHP-related projects in Archuleta County. This provides a good start on one aspect of needed monitoring but doesn't meet the full range of the Collaborative's monitoring needs.

Support from this grant would allow the DWRF Collaborative to work with MSI to develop a more comprehensive monitoring plan that incorporates information needs related to implementation of the watershed wildfire protection plan and the source-water protection plan. This will help the Collaborative evaluate which of its actions are most effective and help prioritize future projects. Additional monitoring design is needed around in stream baseline water quality and flow, in forest treatment hydrology, and treatment economics. This will contribute to an adaptive management framework that improves project design over time.

Watershed Group Diversity and Geographic Scope

Diversity

The DWRF Collaborative has excelled at building trust among a very diverse array of affected stakeholders since our convening meeting in July 2015 and continues to strengthen exiting partnerships and build new ones. The group has operated as an ad-hoc stakeholders group since its inception, but particular attention was paid to launching with a broad invitation for participation and ensuring that key players are continually at the table.

The initial meeting attendees included representatives from the Bureau of Reclamation, Dolores Water Conservancy District, FireWise of Southwest Colorado, Montezuma County's Natural Resources and Public Lands Program, the Dolores Ranger District of the San Juan National Forest, the Dolores Volunteer Fire Protection District, Mountain Studies Institute (MSI), and the Colorado State Forest Service. BOR and MSI agreed to participate as needed and all other partners agreed that their organization wanted to actively pursue a restoration effort on the Upper Dolores.

Representative for Dolores County, the Town of Rico, and San Juan Citizen's Alliance (a local conservation group) were also invited and interested but unable to attend the first meeting due to scheduling conflicts. Straight out of the first meeting notes, "*The group asked that Timber Industry, Colorado Parks and Wildlife, Empire Electric Association, and the High Desert Conservation District be added to the invitation list. There was brief discussion about getting too*

big to function at this early stage, but that it is better to invite everyone in from the beginning, and let those participate who wish to. Then if someone isn't coming that we really want at the table, we reach out to meet their needs and include them." The DWRF Collaborative has operated by this philosophy of inclusion ever since.

By the group's second meeting, twenty-three stakeholders representing local government, timber industry, Colorado State Forest Service, United States Forest Service, and conservation and wildfire preparedness non-government organizations came together for focused discussion on the Dolores River Watershed upslope from McPhee Reservoir.

The group has grown to include a 96 person stakeholder list with one or more active participants representing over 40 active government, industry, and non-profit organizations and a handful of watershed residents.

The group set regular first Wednesday of the month stakeholder meetings beginning in March 2016 and has regular participation averaging at least 20 people at each meeting.

Participant organizations include:

Water Managers

Dolores Water Conservancy District
Bureau of Reclamation
Ute Mountain Ute Tribe
City of Cortez
Town of Dolores
Town of Dove Creek
Town of Rico
Montezuma Water Company

Federal Land Management

US Forest Service, San Juan National Forest, Dolores Ranger District
Bureau of Land Management, Tres Rios Field Office
Ute Mountain Ute Tribe
Natural Resources Conservation Service

State Agencies

Colorado State Forest Service
Colorado Parks and Wildlife

County Government and Special Districts

Dolores County
Montezuma County
High Desert Conservation District
Region 9 Economic Development District

Timber Industry

Aspen Wall Wood
Findley Logging
Montrose Forest Products
Stonertop Lumber
Short Forestry LLC
Western Excelsior

Fire Management & Preparedness

Colorado Division of Fire Prevention and Control
Southwest Colorado Fire & Aviation Management Unit
Dolores Interagency Fire (San Juan National Forest & Tres Rios BLM)
Dolores Volunteer Fire Protection District
FireWise of Southwest Colorado

Conservation Community

San Juan Citizens Alliance
The Nature Conservancy
Trout Unlimited
Mountain Studies Institute
Southwest Conservation Corps
Greater Dolores Action

Recreation

Dolores River Boating Advocates

Other

Dolores County Development Corporation
Empire Electric Association
Fort Lewis College Business Development Center
Interested Community Members
Montezuma Community Economic Development Association
Retired professionals in related fields

Targeting affected stakeholders

While the group boasts an impressive list of stakeholders, it still continues to expand. We foresee bringing more specific players to the table for the watershed wildfire protection and the source-water protection plans and for implementation of the outreach plan.

Recreation and Irrigation are two stakeholder groups that have a major connection to the river and have shown particular interest in complimentary efforts around water management for the

lower Dolores River. These groups are very important to the Collaborative; however, DWCD has been largely representing their interests in protecting storage and flows with its participation. More participation is expected from these user groups as the group moves toward more project implementation and public outreach.

This group has already made great strides in expanding dialogue among stakeholders with divergent interests. Building shared goals between public land managers and County governments around wildfire resilience and the timber industry capacity is the group's key example of this. Because the group has convened around an issue that transcends property boundaries and greatly impacts all interests, transforming relationships among entities who have not worked closely in the past into relationships of mutual respect and understanding has been made possible.

The proposed outreach plan will help the DWRF Collaborative to target all audiences with ways they can contribute to wildfire resilience for the upper Dolores River.

Geographic scope

DWRF Collaborative partners already represents the full geographic scope of the watershed and its users within its geographically large 8 digit hydrological unit code area. Both counties and all direct municipal and industrial water users across the watershed are already participating in the group. As all of the water diverted through the Dolores Project is delivered out of the basin into the neighboring Montezuma Valley and beyond, watering tributaries of the San Juan River, having trans-basin user engagement is also an important aspect of the group's representation. The conservation organizations and non-profits that are participating in the group have broader regional or even national service areas, but many have more local representation with a specific focus on the Dolores River.

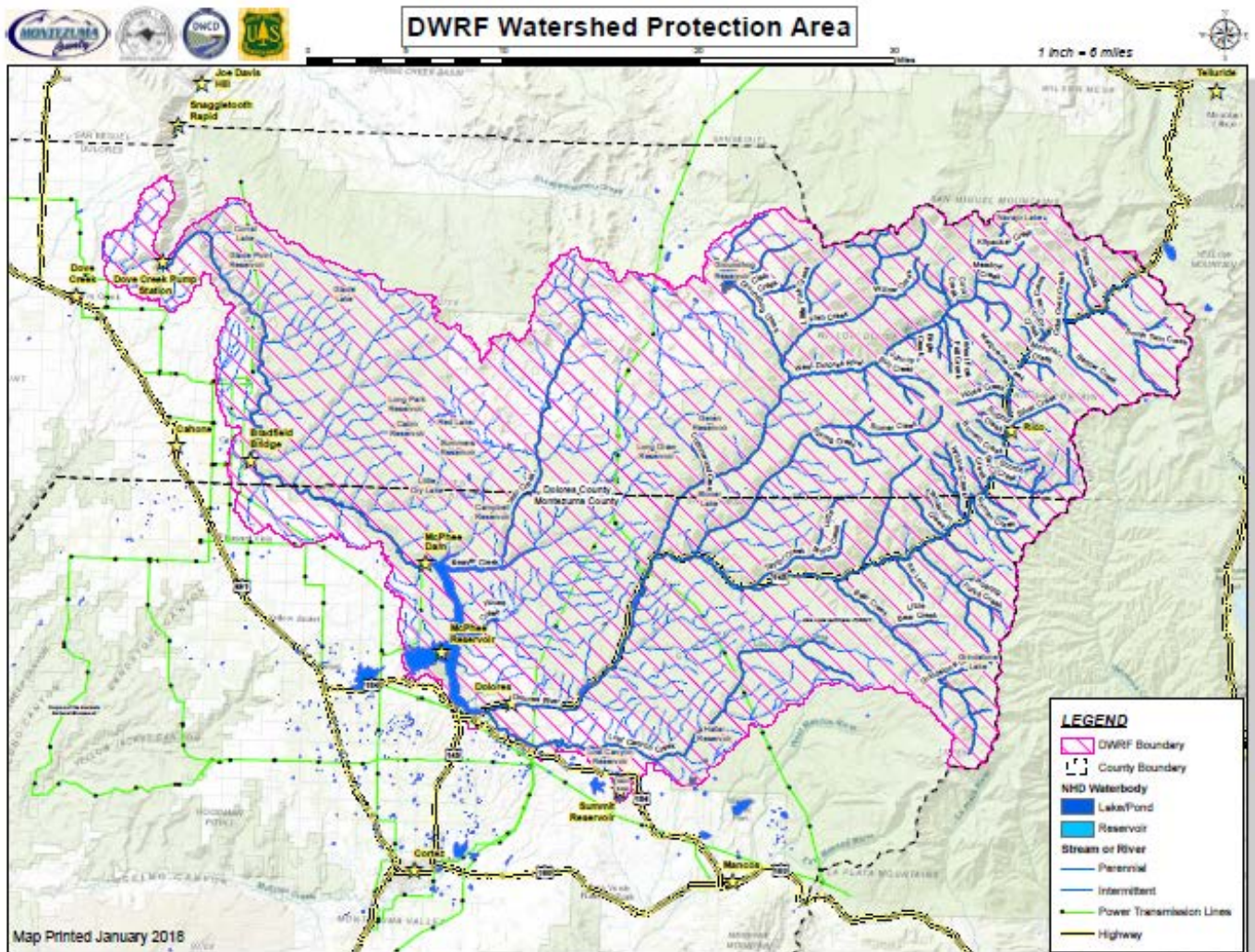
The focus of this group is on the upper Dolores River, but continuing efforts to compliment adjacent and nearby efforts, as well as learning and sharing among national watershed protection groups, is part of how the group has been functioning. DWCD and The Nature Conservancy bring a critical connection with the downstream efforts of the Dolores River Restoration Partnership and the Coordinator has kept up via phone, print materials, and meetings on downstream efforts. In the adjacent Mancos watershed, scientists have been working to synthesize the scientific knowledge on that River. Some of the same public and state land management agencies cover that watershed and the coordinator has also been participating in that effort to incorporate forest health and wildfire risk into the synthesis. The DWRF Collaborative would like to be positioned to support watershed group development in the Mancos Watershed in the near future.

The DWRF Collaborative coordinator participated in a four corners team with the Animas Watershed Group and the San Juan Headwaters Forest Health Partnership to explore the possibility of a Four Corners Water Fund at The Nature Conservancy’s inaugural water fund workshop in Santa Fe in 2017. The contract Coordinator with FireWise of Southwest Colorado also actively participates in the Colorado Watershed Wildfire Protection Group where she gets legislative updates and ideas from other groups in the state. She also participates as a core member of the National Fire Adapted Communities Learning Network in which many participants focus on the wildfire resilience of their watersheds. This perspective gained through regular communication with other watershed groups near and far is a great advantage to the DWRF Collaborative.

Addressing Critical Watershed Needs

Critical Watershed Issues

The DWRF Collaborative’s key watershed issue is protecting water quality from post-fire



impacts which include short-term ash, sediment, and debris contamination and longer-term increases to nutrient loading. The impacts of high-severity wildfires to water resources will vary depending on their footprint within the watershed. Forest, brush, and grass fires are an annual occurrence within the Dolores Watershed, with a modelled 4,750 acres burning in fires greater than 247 acres in size each year. While many fires burn at low intensities or remain small, the probability of a large fire with areas of high-severity with major consequences to water resources is high. Nearby watersheds have experienced huge and severe wildfires in the last decade. The 2009 Narraguinnep Wildfire within this watershed impacted the Dove Creek municipal water pumps and the lower Dolores River fishery. As this application is written, the Dolores watershed sits at less than 40% of winter snowpack for the time of year. This dry season is comparable, though considerably warmer, than the 2001-02 winter which was followed by a severe wildfire season in southwest Colorado and the explosion of a Piñon Ips bark beetle epidemic.

Having a strong network of private and public individuals and organizations that are ready to respond together to any disaster in the watershed is probably the best thing that any community can do to reduce the impacts of a wildfire disaster on people, water resources, and all of the other valued assets of the community. Building better relationships to respond and recover from wildfire and other catastrophic events (such as flooding, drought and forest pathogens) is another reason that the DWCD is participating in the DWRF Collaborative.

The DWRF Collaborative focuses on wildfire impacts, something that everyone can pretty well agree on, while recognizing that impacts from wildfire are just one water quality issue that affects the watershed. Wildfire is also just one of the risks to the watershed that can be mitigated by a strong set of relationships. By engaging in source water protection plan development through this grant with support of DWCD and members of the DWRF Collaborative, other water quality issues will also be addressed, and DWRF partnerships will be strengthened.

Recreation, riverine biology, riparian corridor landscape, rural and urban development in the river valley, municipal or irrigation water users, and more, are at risk from the downstream impacts that will likely occur following a high impact wildfire. Floods follow fires, and they occur frequently in any functioning river system regardless of fire activity. A big flood in the upper Dolores River has not occurred since 1911. The management recommendations to reduce flooding impacts whether a flood follows a fire, a spring melt, or a fall downpour are similar. Efforts of the DWRF Collaborative to reduce post-fire flooding impacts will reduce all negative flood impacts by raising awareness of flood hazard, identifying opportunities to make residents and infrastructure more resilient to flood events, and implementing flood resilience projects.

While water quality has the potential to be affected in any year by wildfire, water flows have the possibility of being improved through fire and fuel management over the long-term. With demands on the Dolores River that exceed its flows, and a downward trend in flows, DWCD wants to see the upland forests and mountains of the Dolores River watershed functioning at their peak for water storage and steady releases. Healthier forests with lower vegetation

densities and more diverse stand structures have been proven time and time again through paired basin studies, pre- and post-thinning research, and modelling to provide better hydrologic function. Opportunities to scale-up forest restoration activities including thinning and reintroduction of lower intensity prescribed fire and managed natural ignitions that are likely to improve the hydrologic function of the watershed is a goal of the DWRF Collaborative.

Developing Strategies to Address Critical Watershed Issues

This existing watershed group already has a wealth of participants who are knowledgeable about a wide range of watershed issues and past planning efforts and who are broadly representative of the watershed stakeholders. The group plans to build teams to accomplish its watershed restoration plan development leveraging the same culture of inclusion that the group has had since its founding. The proposed illustrated vision as well as a clear mission and goals and a website with easily accessible background information will make it easier to engage new participants in the DWRF Collaborative.

Gathering and further analyzing existing data will be critical to the Watershed Wildfire Protection and overall Source Water Protection planning efforts. In order to develop effective strategies for addressing watershed issues, a coordinator with experience facilitating planning processes is needed.

Many participants in the group have experience in planning processes. This experience within the existing group will support finding effective coordinators and facilitators to engage stakeholders and the public and inform the planning processes for both watershed restoration planning efforts.

Leveraging the open standards for practice of conservation planning methodologies is the approach likely to be chosen for the Watershed Wildfire Protection Plan. Within the plan, priority landscapes will be identified as well as priority actions within each landscape. The full DWRF Collaborative will have the opportunity to review and provide input on the plan throughout its development.

Abundant background has already been obtained or developed to inform the existing and anticipated watershed conditions. This includes the Highly Valued Resources and Assets Wildfire Risk Assessment that was completed in house and models thousands of fire starts in the landscape and evaluates each pixel based on the values on the landscape and their anticipated response to fires of differing severity.

The Automated Geospatial Watershed Assessment which the initial watershed risk working group commissioned for under \$5,000 with the University of Arizona breaks the watershed into nearly 26,000 hillslopes and 10,387 channel reaches and models runoff and sediment yield for each hillslope and channel with current condition, following a fire with soil burn severity approximated based on the wildfire risk assessment, and provides a percent change before and after the modelled fire.

This relative risk for post-fire runoff and erosion between hillslopes, overlaid with mapped values on the landscape will contribute to project prioritization. The DWRF Collaborative also has the source water protection plan for the Town of Rico, forest susceptibility to climate trends modelling, aerial insect and disease inventories, US Geological Survey New Mexico Debris flow modelling which includes this area in southwestern Colorado, and available timber and other landscape details such as locally calibrated LANDFIRE data that provide the parameters for what kinds of projects are achievable.

Many water issues were identified in the source water protection planning process of 2012 and 2013 building off of a Colorado Department of Health and Environment Assessment of the Dolores River. The group convened around source water protection planning will review and adjust the issues identified in the draft plan as needed. A vulnerability assessment matrix will be used for ranking source-water protection priorities in the Source Water Protection Plans. The DWRF Collaborative will provide input on the watershed wildfire protection issues to be included in the plan, but the process for plan development will include a subset of primarily water resource managers and their jurisdictional decision makers.

By developing these restoration plans with the best available research and engaging diverse teams in plan development, the group expects to incorporate best management strategies for achieving desired results into plan documents.

A key project design component that the DWRF Collaborative would like to accomplish with these funds is the development of a monitoring plan. Monitoring design is needed for stream baseline water quality and flow, in forest treatment hydrology, and treatment economics in relation to water monitoring. Monitoring and documentation will also be critical to inform adjustments to project design and implementation strategies as part of the group's adaptive management framework. Experienced research groups are engaged with the DWRF Collaborative and will be able to design monitoring strategies that tie in with the schedule established for watershed restoration projects in the aforementioned plans. The needs for environmental and cultural review for monitoring protocol will be incorporated into the monitoring design by these experienced science organizations.

The group hopes to pursue federal sources for project implementation on both public and private lands in the future including Phase II of the WaterSMART Cooperative Watershed Management Program, the Joint Chiefs Landscape Restoration Partnership, and the Rural Conservation Partnership Program. Current federal Forest Service and Bureau of Land Management group participants The United State Forest Service will be instrumental in achieving environmental and cultural compliance on public lands and informing compliance needs for private land projects.

The neighboring Grand Mesa Uncompahgre and Gunnison National Forest has been utilizing a landscape environmental compliance approach for thinning projects and the San Juan National Forest had their first decision on a landscape environment assessment for prescribed fire in 2017.

This is one approach for low impact activities that the group would like to pursue to enable the use of federal dollars for restoration across jurisdictional boundaries including private lands. There are also many state and federal pass through programs that do not require environment analysis for private land projects. Ultimately, the DWRF Collaborative would like to see more forest restoration activities paying for themselves through the marketing of value added wood products.

Implementation and Results

Understanding of and Ability to Meet Program Requirements

The following schedule outlines the proposed activities with this grant. Further detail of each project is outlined in the technical proposal.

SCHEDULE OF ACTIVITIES						
Task/ Milestones	Responsible Party	Start	End	Cost FY1	Cost FY2	
Strategic Planning		July 2018	Sept. 2019	\$10,500		
Vision	Stakeholders	July 2018	July 2018			
Mission, Values,	Stakeholders	July 2018	Sept. 2018			
Strategic Action Plan	Working Groups and Stakeholders	Oct. 2018	Sept. 2019			
Organizational Structure	Coordinating Team	July 2019	June 2020			\$5,250
Outreach Plan		July 2018	Dec. 2018	\$10,500		
RFP	Coordinator	Apr. 2018	May 2018			
Draft	Outreach Plan contractor		Oct. 2018			
Final	Outreach Plan contractor		Dec. 2018			
Outreach Materials designed	Contract graphic design		June 2019			\$4,000
Outreach material printing & distribution	Coordinators	July 2019	June 2020			\$3,750
Outreach tours	Coordinators	May 2018	May 2020	\$1,000		\$2,000
Watershed Wildfire Protection Plan	Assistant Coordinator and WWPP working group	Feb. 2018	Feb. 2019	\$16,300		
Background Data compiled	Coordinator and Assistant Coordinator	Feb. 2018	Feb. 2018			
Base maps completed	Hydrology and GIS	Feb. 2018	Feb. 2018	\$3,675		
Working Group convened	Assistant Coordinator	Mar. 2018				
Outline finalized	Assistant Coordinator		Apr. 2018			
Resilience Recommendations drafted	Assistant Coordinator and WWPP working group		Aug. 2018			

SCHEDULE OF ACTIVITIES						
Task/ Milestones	Responsible Party	Start	End	Cost FY1	Cost FY2	
Mapping of recent projects	Assistant Coordinator and GIS			\$2,210		
Source Water Protection Plan	Contract planner	Apr 2019	June 2020		\$16,300	
RFP	City of Cortez	Apr. 2019	June 2019			
Participant commitments	Contractor and water providers	June 2019	July 2019			
Systems mapped	Contractor, GIS, & water	July 2019	Sept. 2019	\$2,205		
Background Research	Contractor and water providers	July 2019	Sept. 2019			
Risk Matrix completed			Dec. 2019			
Risk Mitigation Strategies drafted			Mar. 2020			
Public Hearings		Apr. 2020	May 2020			
Monitoring Design	Mountain Studies Institute	July 2019	Sept. 2019		\$15,000	
Notetaking and Documentation	Contracted note taker	Mar. 2018	June 2020	\$1,050	\$1,050	
PROJECT TOTALS				\$47,440	\$47,350	

Building on Relevant Federal, State, or Regional Planning efforts

The strategic planning that will be enabled by funding from the WaterSMART Watershed Management Program, will integrate with a variety of Federal, State, and Regional Plans:

- 2012 – Montezuma Community Wildfire Protection Plan
- 2013 – San Juan National Forest Land and Resource Management Plan
- 2013 – Colorado Statewide Forest Resource Assessment & Strategy
- 2014 – DWCD Water Management and Conservation Plan
- 2014 – Lower Dolores River Implementation, Monitoring and Evaluation Plan for Native Fish in accordance with the Six State, Three Species Agreement of which the State of Colorado and Reclamation are signatory.
- 2015 – Bureau of Land Management Tres Rios Field Office Resource Management Plan
- 2015 – Southwest Basin Implementation Plan as a basin level component of the Colorado Water Plan
- 2015 – The Colorado Water Plan
- 2016 – Montezuma County All Hazards Mitigation Plan
- 2017 – Dolores County All Hazards Mitigation Plan
- 2017 – Forest Management to Protect Colorado’s Water Resources, directed by the Colorado Legislature in HB 16-1255 as an addendum to the Colorado Water Plan. This legislation also created the Forest Health Advisory Council to advise the State Forester and the Colorado Legislature on Forest Health of which the DWCD Manager is a member.

- 2018 – Dolores Project Drought Contingency Plan, final draft currently under review by Reclamation.

Nexus to Department of the Interior Initiatives

The Dolores Watershed Resilient Forest Collaborative directly supports several Department of the Interior Initiatives. DWRF directly implements the National Cohesive Strategy for Wildland Fire Management with a focus on creating resilient landscapes but also addressing the other facets of more fire adapted communities and more effective fire response. The DWRF Collaborative also supports National Drought Resiliency Partnership goals of building drought planning and capacity, coordinating federal (and state and private) activities at the local level, and developing market-based approaches to forest restoration projects with the potential to improve hydrologic function, providing some mitigation of drought conditions.

The DWRF collaborative also has the potential to contribute to the renewable energy initiative of the Bureau of Land Management as the timber industry working group explores biomass power options and partners with the Colorado State Forest Service and the State's Forest Health Advisory Council to seek legislative solutions to enable biomass gasification facilities. Well-functioning forests and the group's efforts to keep McPhee Reservoir free of ash and debris will also protect the operation of existing major powerline corridors, including the Tri-State G&T and WAPA power transmission lines crossing the forested lands that are a major asset that the DWRF strategy intends to protect.

This group also functions to protect the landscape and water resources included in the Dolores Project. The Dolores Project provides 24,000 acre feet annually, as part of the Ute Indian Water Rights Settlement and provides the water to the City of Cortez which treats and delivers water to the Ute Mountain Ute capital of Towaoc. The Ute Mountain Ute Tribe has actively participated in the DWRF Collaborative almost since its inception.

When identifying the initial working area for the DWRF Collaborative, participants elected to reach beyond the McPhee dam for several reasons. The Dove Creek pumps which provide winter municipal water supplies to the town of Dove Creek was a logical downstream endpoint for the group. By including the Dove Creek pumps, the Collaborative was able to bring in over 38,000 acres of land managed by the Bureau of Land Management. This decision also solidified the importance of water quantity to the group by including a stretch of the river that is impacted by Dolores Project contracts and related water management. Improving upland hydrologic function and reducing the risk of high-impact wildfires will have a positive influence on riparian and aquatic habitat and native fish populations that are negatively impacted by drought, low inflows, and shortened release allocations. A healthy watershed will improve river yields into McPhee Reservoir and increase carry-over storage so as to reduce the probability of shorted allocations.

Environmental and Cultural Resource Compliance

No Environment or Cultural compliance is needed for any of the group development or watershed restoration planning outlined in this proposal. A limited amount of evaluation of future compliance needs is proposed in year two as part of the monitoring plan and as follow up to the restoration planning processes.

Required permits or approvals

Governing bodies of the water distributors will need to adopt the source water protection plan for their respective water resources, including the Town of Dolores, Town of Dove Creek, City of Cortez, Ute Mountain Ute Tribe, and Montezuma Water Company. No other permits or approvals are anticipated for this proposal.

Project Budget and Narrative

Budget Proposal

BUDGET DESCRIPTION	ITEM	COMPUTATION		Quantity	TOTAL
		\$/Unit	Quantity	Type	COST
Salary and Wages					\$0
Fringe Benefits					
Fulltime Employees					\$0
Parttime Employees					\$0
Travel					\$0
Equipment					\$0
Supplies and Materials		\$3,750	1.00		\$3,750
Contractual					
Strategic/Organizational Planning		\$10,500	1.00	contract	\$10,500
Develop Organizational Structure		\$5,250	1.00	contract	\$5,250
Outreach Planning		\$10,500	1.00	contract	\$10,500
Outreach Materials Graphic Design		\$2,000	1.00	contract	\$2,000
Outreach Materials Distribution		\$3,000	1.00	contract	\$3,000
Outreach Tours		\$2,000	1.00	contract	\$2,000
Watershed Wildfire Protection Plan		\$16,300	1.00	contract	\$16,300
Source Water Protection Planning		\$16,300	1.00	contract	\$16,300
GIS Support		\$8,090	1.00	contract	\$8,090

Note Taking	\$2,100	1.00	contract	\$2,100
Monitoring Plan Development	\$15,000	1.00	contract	\$15,000
Total Contractural				\$91,040
Other				\$0
Subtotal				\$94,790
Indirect Costs	5 percent indirect cost rate for DWCD			\$4,740
Total Grant Costs				\$99,530
Contributed Costs				\$10,229
Grant Costs + Contributed Costs				\$109,759

BUDGET ITEM DESCRIPTION	COMPUTATION		Quantity	TOTAL
	\$/Unit	Quantity	Type	COST
Salary and Wages				\$0
Fringe Benefits				
Fulltime Employees				\$0
Parttime Employees				\$0
Travel				\$0
Equipment				\$0
Supplies and Materials	\$2,750	1.00		\$2,750
Contractual				
Strategic/Organizational Planning	\$10,500	1.00	contract	\$10,500
Develop Organizational Structure	\$5,250	1.00	contract	\$5,250
Outreach Planning	\$10,500	1.00	contract	\$10,500
Outreach Materials Graphic Design	\$4,000	1.00	contract	\$4,000

Outreach Materials Distribution	\$2,000	1.00	contract	\$2,000
Outreach Tours	\$2,000	1.00	contract	\$2,000
Watershed Wildfire Protection Plan	\$16,300	1.00	contract	\$16,300
Source Water Protection Planning	\$16,300	1.00	contract	\$16,300
GIS Support	\$8,090	1.00	contract	\$8,090
Note Taking	\$2,100	1.00	contract	\$2,100
Monitoring Plan Development	\$15,000	1.00	contract	\$15,000
Total Contractual				\$91,040
Other				\$0
Subtotal				\$94,790
Indirect Costs	5 percent indirect cost rate for DWCD			\$4,740
Total Grant Costs				\$99,530
Contributed Costs				\$10,229
Grant + Contributed Costs				\$109,759

Budget Narrative

The Dolores Water Conservancy District is requesting \$99,530 to support the Dolores Watershed Resilient Forest Collaborative with a request of \$49,812 in year one and \$49,718 in year two. The work performed under this grant’s funding will be accomplished primarily by contracts to a mixture of individuals and entities, administered by the Dolores Water Conservancy District. DWCD will retain 5 percent of the funding to cover indirect costs. An explanation of rows comprising the budget table follows. The Schedule of Projects clearly identifies work to be performed in each year of this request.

No funds are allocated to employee salaries, fringe benefits, or travel. DWCD employee time, benefits, and travel related to this grant will be donated other than administrative support funded by the indirect costs. No equipment purchases or construction expenses are requested. No environmental or regulatory compliance costs are anticipated.

The \$2,750 for supplies and materials is for the non-labor aspect of producing educational and outreach materials, such as brochures, displays and supplies for field tours. These are the materials that would be purchased directly by DWCD. Costs of materials needed by contractors are embedded in the contracts. This estimate is based on previous experience with similar projects. It is difficult to give a detailed breakdown at this point because the work to identify the educational materials needed and to develop them would be performed as an earlier stage of this grant.

The contracts listed correspond to the tasks listed in the Schedule of Activities table earlier, which also shows responsible parties, projected beginning and ending dates, and the cost split

between years one and two. If DWCD already has a proposed contractor for a task, they are identified below; if not, they will be identified after the grant is awarded.

Strategic Planning - This contract would be for someone to lead the strategic planning effort, working with DWRF stakeholders and DWRF working group members to accomplish the work described earlier under Task A, Watershed Group Development. The most effective way to accomplish this would be to contract for more hours for the current part-time DWRF Coordinator, Rebecca Samulski. So her hourly rate and time estimate was used to develop this cost. This would entail approximately 260 hours at a rate of \$40 per hour. Contributed costs from DWRF members participating in the project are estimated to be approximately \$1,817 (70 hours at \$25.96 per hour [based upon the independent sector rate for volunteers in Colorado]). This would consist of volunteers participating in a mix of several large-group meetings, working groups, and individual review and commenting on drafts.

Developing Organizational Structure - This contract would be for someone to work with the DWRF Coordinating Team and DWRF participants to accomplish the work described earlier under Task A, Watershed Group Development. The most effective way to accomplish this would be to contract for more hours for the current part-time DWRF Coordinator, so her hourly rate and time estimate was used to develop this cost. This is expected to entail 130 hours at a rate of \$40 per hour. Contributed costs from DWRF members participating in the project are estimated to be approximately \$779 (30 hours at \$25.96 per hour). This would consist of DWRF Coordinating Team members participating in several meetings to explore and evaluate different options for group structure and governance.

Outreach Planning - This contract would be awarded to an individual or organization with demonstrated experience in the types of tasks described earlier under Task A, Watershed Group Development. The concept for this contract is based on a contract recently awarded for a partnership working on the Lower Dolores River. This is estimated to involve about 175 hours at a rate of \$60 per hour, based on the skill level that is needed. Contributed costs from DWRF members participating in the project are estimated to be approximately \$1,038 (40 hours at \$25.96 per hour). This would be working group volunteers helping identify people and organizations to contact and messages to share, and in some cases, making the contacts. Additional contributions for Coordinator and Assistant Coordinator consultation with the outreach plan contractor.

Outreach Materials Graphic Design - This contract would consist of about 50 hours at \$40 per hour for a graphic artist to develop illustrations and layouts to present ideas developed in the Outreach Plan. This is based on experienced costs for similar contracts. An additional \$2,000 is included based on recent videography bids to DWRF participants. Contributed costs from DWRF members participating in the project are estimated to be approximately \$260 (10 hours at \$25.96 per hour). This would consist of volunteers reviewing and commenting on draft

materials. Paid DWRF Coordinator time is also expected to be contributed to the development of outreach materials.

Outreach Materials Distribution - This contract would consist of time for someone to public and partner presentations and filling regular brochure locations such as the public libraries. The most effective way to accomplish this would be to use the current (part-time) coordinator and an assistant coordinator (tentatively identified as Misty Fowlds, who is currently doing some contract work for DWRF) because they already have the background knowledge needed for this task. Their current rates and time estimates were used to develop these costs. This contract is estimated to entail up to 50 hours at a rate of \$40 per hour. Contributed costs from DWRF members participating in the project are estimated to be approximately \$260 (10 hours at \$25.96 per hour).

Outreach Tours - This contract would be for coordinating and conducting tours for the group, students, and the public in the Upper Dolores Watershed so that people can see current conditions, potential threats, and possible projects. Current part-time Coordinator and Assistant coordinator rates were used to estimate these costs. This would entail 50 hours at a rate of \$40 per hour. Contributed costs from DWRF members participating in the project are estimated to be approximately \$623 (24 hours at \$25.96 per hour). This only includes volunteers helping to lead the tours because of their subject matter expertise, not all of the tour participants.

Watershed Wildfire Protection Plan - This contract would be for someone to organize and facilitate the tasks described earlier under Task B, Watershed Wildfire Protection Plan. This cost was estimated by assuming it could best be accomplished by using a small amount of time from the current (part-time) Coordinator and a larger amount of time from the Assistant Coordinator. So their current rates and time estimates were used to develop these costs. A number of people, described under Task B, are contributing their time to this project but someone is needed to lead the effort. This would entail about 62 hours at a rate of \$40 per hour for the coordinator and 600 hours at a rate of \$22.50 per hour for the assistant, plus \$300 (600 miles at \$0.50 per mile) for travel. Contributed costs from DWRF members participating in the project are estimated to be approximately \$2,077 (80 hours at \$25.96 per hour). This would consist of volunteers participating in working group meetings and reviewing and editing documents.

Source Water Protection Plan - This contract would be awarded to an individual or organization with demonstrated experience to lead a source water protection planning effort. Other people involved in this task would contribute their time. Consultant work needed is estimated to be 320 hours at a rate of \$50 per hour, plus \$300 (600 miles at \$0.50 per mile) for travel. The City of Cortez water manager who had worked on a previous source water protection plan provided this cost estimate based on his experience. Contributed costs from DWRF members, water managers, and local government officials and personnel participating in the project are estimated to be approximately \$2,077 (80 hours at \$25.96 per hour). This would consist of volunteers with relevant technical expertise interacting with the contractor.

GIS Support - This contract would be for GIS work to support Tasks B and C with analysis and mapping. This is expected to entail approximately 230 hours at \$35 per hour based on a time estimate and hourly rate provided by the Montezuma County GIS Department. Contracting with an individual that already has some experience with DWRF would be desirable. Rachel Medina has tentatively been identified as a good source for this work.

Note Taking – This contract would be for someone to record DWRF meetings and field trips. This is estimated to entail about 96 hours (24 meetings/field trips at 2 hours of meeting time and 2 additional hours of preparation) at \$22.50 per hour (based on the Assistant Coordinators rate).

Monitoring Plan - This contract is proposed to be awarded to the Mountain Studies Institute to complete a water monitoring plan. They are the most experienced local group involved with the types of monitoring that are anticipated and are already working in nearby watersheds (San Juan, Animas, and Mancos). Other people involved in this task would contribute their time. Contract costs are estimated to be about 80 hours at a rate of \$45 per hour for their program director (\$3,600), about 250 hours at \$35 per hour for the project manager, \$100 (200 miles at \$0.50 per mile) for travel, and \$2,550 for MSI overhead (17%). Contributed costs from DWRF members participating in the project are estimated to be approximately \$1,298 (50 hours at \$25.96 per hour). This would consist of volunteers participating in several meetings to identify monitoring priorities and a small group reviewing and editing documents. Paid DWRF Coordinator time is also expected to be contributed to development of the Monitoring Plan.

January 18, 2018

Bureau of Reclamation
Financial Assistance Support Section
Attn: Darren Olson

Dear Mr. Olson,

We are writing in support of the WaterSMART Cooperative Watershed Management Program submitted by the Dolores Water Conservancy District on behalf of the Dolores Watershed and Resilient Forests Collaborative (DWRf).

As Town Manager of Dove Creek, Colorado, I have participated actively in the DWRf process along with the Dolores County Commissioners. Dove Creek has important interests in improving the health of the McPhee Reservoir watershed as do irrigators in rural Dolores County.

The Dove Creek pumps is a municipal source of supply for the Town of Dove Creek in the winter and we are alarmed to see the damage the round nosed pine beetle has done to this part of the watershed. On a larger scale, McPhee Reservoir supplies water to irrigators throughout Dolores County as well as summer domestic supplies to Dove Creek.

We are highly concerned about the damage unmanaged wildfire could to Dove Creek and Dolores County domestic and irrigation supplies. DWRf has taken on the challenge of addressing such risks throughout the McPhee Reservoir watershed. The DWRf involves committed and active stakeholders working to identify actions to address wildfire risks.

What DWRf needs at this point is a plan that organizes current and potential actions into a strategic framework. This needs to be coupled with community outreach to garner public support for the efforts that lie ahead to improve watershed health. There is strong interest in our community in hosting wood businesses that are essential to restoring forest health.

Please give this application your careful consideration.

Sincerely,



Sonny Frazier, Manager
Town of Dove Creek



Steve Garcher, Chairman
Dolores County Commission



File Code: 1580
Date: January 19, 2018

Darren Olson
Bureau of Reclamation
Financial Assistance Support Section

Dear Mr. Olson:

I am writing in support of the WaterSMART Cooperative Watershed Management Program submitted by the Dolores Water Conservancy District on behalf of the Dolores Watershed and Resilient Forests Collaborative (DWRF).

As San Juan National Forest Dolores District Ranger, which encompasses the McPhee Reservoir watershed, I have been actively engaged, along with key members of my staff in the DWRF process. We are working to identify areas of risk and opportunity for forest health improvement in this watershed.

We are in the midst of an extremely dry winter and experiencing increasing mortality from bug invasions over large areas. We are facing both short term and long term challenges that are best dealt with collaboratively.

Participating in the DWARF collaborative has substantially improved communication and collaboration with the full range of stakeholders that need to be engaged in the forest health effort. Conservation groups and local wood producers are working with the San Juan Forest, State Forest Service, and local governments to work jointly on improved forest health and post fire response planning.

This collaboration has brought committed people and resources to the DWRF effort. What is most needed at this point is to frame the identified needs, opportunities and supporting resources into a strategic framework. The WaterSMART grant will provide the means to undertake this important step for a group that has been organizing since the summer of 2015.

Please give favorable consideration to the proposal from DWCD on behalf of the DWRF collaborative.

Sincerely,

DEREK PADILLA
District Ranger

cc: Michael Preston, DWCD



January 19, 2018

Bureau of Reclamation
Financial Assistance Support Section
Attn: Darren Olson

Dear Mr. Olson,

I am writing in support of the WaterSMART Cooperative Watershed Management Program submitted by the Dolores Water Conservancy District on behalf of the Dolores Watershed and Resilient Forests Collaborative DWRP.

As Water Plant Superintendent for the City of Cortez, I have stayed involved in DWRP for the past few years. I have a particular interest in source water protection of our municipal supplies, and see this grant as a way to thoroughly assess our risks and make the most of opportunities to reduce those risks.

As a City of Cortez Superintendent, I am also looking out for the broader interests of the residents of Cortez. The strategic watershed plan that will result from this grant will protect many other assets, such as housing in the urban-wildland interface and key utilities such as the power grid, that are at risk in forested corridors.

I appreciate the active, broad-based collaboration that has characterized DWRP, the amount we have all learned about watershed health and wildfire risk, and the active search for options to reduce risks associated with wildfire. Bringing all of this together in a coherent action oriented strategy is the outcome I can see coming out of this grant.

It is mid-January and the snowpack is extremely poor. We are moving into a time of great risk, but also a time when people will be very receptive to the educational component that is part of this grant request.

Please consider local readiness, and the importance to the City of Cortez and our partners of systematically addressing these risks.

Sincerely,



Richard Landreth, CWP
Water Plant Superintendent
City of Cortez



County Commissioners:

James R. Lambert
Keenan G. Ertel
Larry Don Suckla

County Administrator:

Melissa A. Brunner

Board of County Commissioners

109 West Main, Room 302
Cortez, CO 81321
(970) 565-8317
(970) 565-3420 Fax

January 29, 2018

Bureau of Reclamation
Financial Assistance Support Section
Attn: Darren Olson

Dear Mr. Olson,

I am writing in support of the WaterSMART Cooperative Watershed Management Program submitted by the Dolores Water Conservancy District on behalf of the Dolores Watershed and Resilient Forests Collaborative (DWRF).

Montezuma County has a strong interest in protecting assets within the National Forest and adjacent private lands including: water infrastructure, powerline corridors and public and privately-owned structures that are at risk from large scale unmanaged wildfires. To that end, the County GIS program has provided asset management mapping as part of our contribution to the DWRF effort.

Montezuma County also realizes that local and regional wood products businesses are the key to generating commercial value that can support the large magnitude of work needed to get the forests back in good health. We are a natural resource oriented County, with a long history of local logging and wood processing businesses. We have a strong interest in re-growing our wood businesses to meet the forest health challenges we face.

We encourage you to fund this application. We have been part of a strong stakeholder group with participation by all relevant parties. The funding requested from WaterSMART will accelerate strategies and actions needed to address the risks associated with poor forest health, drawing on both public and private sector resources.

Sincerely,

James Dietrich, Natural Resources Department
Montezuma County

January 25, 2018

Bureau of Reclamation
Financial Assistance Support Section
Attn: Darren Olson

Dear Mr. Olson,

I'm writing in support of the WaterSMART Cooperative Watershed Management Program submitted by the Dolores Water Conservancy District on behalf of the Dolores Watershed and Resilient Forests Collaborative (DWRF).

The Colorado State Forest Service has been actively engaged in the DWRF collaborative from the outset. The DWRF has provided a community based forum for the growing level of cooperation between State, Federal and local communities that is becoming a key factor in restoring forest health, safeguarding watersheds, and protecting critical assets in the wildland-urban interface including major assets such as the power grid in forested areas.

We are in an extremely dry winter, with no real relief in sight, and continually finding increasing mortality from bark beetles over large areas of federal, state and private forest land. The DWRF collaborative has focused primarily on long term efforts to restore forest health in the McPhee Reservoir watershed, but if we find ourselves facing a serious fire season, the communication built by DWRF will be helpful. These conditions heighten public awareness and provide an educational opportunity to prepare our communities for the long term commitments that will need to be made to restore watershed and forest health.

A critical part of the forest health challenge is the need to both support and expand capacity in the wood products industry, which will be essential in addressing the problems caused by overcrowded, unhealthy forests on any meaningful scale. The Colorado State Forest Service has a history of connecting landowners with the wood products industry that will be a benefit to this process.

This DWRF collaborative has already been successful in bringing together committed people and financial resources, but what is most needed at this point is to frame the identified needs, opportunities and supporting resources into a strategic framework. The WaterSMART grant will provide the means to undertake this important step for a group that has been organizing since the summer of 2015 and, I believe, will be a key factor in renewing and sustaining the health and resiliency of the Dolores Watershed going forward.

Please consider funding the proposal from DWCD on behalf of the DWRF collaborative.

Sincerely,



Ryan E. Cox,
Colorado State Forest Service



January 29, 2018

Bureau of Reclamation
Financial Assistance Support Section
Attn: Darren Olson

Dear Mr. Olson,

I am writing in support of the WaterSMART Cooperative Watershed Management Program submitted by the Dolores Water Conservancy District on behalf of the Dolores Watershed and Resilient Forests Collaborative (DWRF).

As Emergency Manager for Montezuma County, Colorado, I have participated and support the activities of DWRF. One of the most damaging potential emergencies in our area is unmanaged wildfire. Given the dry conditions and poor snowpack this winter, we may be facing a tense high-risk fire season in 2018.

DWRF has already improved communication and understanding around wildfire hazards that will be helpful if we do face fire emergencies. Hopefully we can escape 2018 without serious incident, while using heightened public awareness to build support for long term action to improve forest health. The Watershed grant will support both the education and the strategic planning that are critical to long-term success.

I encourage you to fund this application. We have a strong stakeholder group with participation by all relevant parties. The funding requested from WaterSMART will accelerate strategies and actions needed to address the risks associated with poor forest health.

Sincerely,

A handwritten signature in blue ink, appearing to read "P. Hollar".

Paul Hollar, Emergency Manager
Montezuma County



The Nature Conservancy in Colorado
1109 Oak Drive
Durango, CO 81301

tel (970) 375-0183

nature.org/colorado

January 30, 2018

Bureau of Reclamation
Financial Assistance Support Section
Attn: Darren Olson

Dear Mr. Olson,

Please accept this letter from The Nature Conservancy supporting the WaterSMART Cooperative Watershed Management Program submitted by the Dolores Water Conservancy District (DWCD) on behalf of the Dolores Watershed and Resilient Forests Collaborative (DWRf). The Nature Conservancy has worked in partnership with DWCD on water management and watershed efforts on the Dolores River for many years and participates in the collaborative work of DWRf.

DWCD's WaterSMART project will allow DWRf, which has been organizing since the summer of 2015, to frame the identified needs, opportunities, and supporting resources into a strategic framework for the group. This work will help DWRf refine its strategic approach to collaborative watershed work with more than 40 diverse participating entities.

Please give favorable consideration to the proposal from DWCD on behalf of the DWRf collaborative.

Sincerely,

A handwritten signature in blue ink that reads "Celene Hawkins".

Celene Hawkins
Western Colorado Water Project Director
The Nature Conservancy