COLORADO
Colorado Water Conservation Board
Department of Natural Resources

1313 Sherman Street, Room 718
Denver, CO 80203

P (303) 866-3441
F (303) 866-4474

Jared Polis, Governor

Dan Gibbs, DNR Executive Director

Rebecca Mitchell, CWCB Director

TO: Colorado Water Conservation Board Members

FROM: Matthew Stearns, P.E., Interim Program Manager
Finance Section

DATE: January 24-25, 2022 Board Meeting

AGENDA ITEM: Consent Agenda 4. Technical Assistance for Federal Cost-Share Grant (TAFC) Mancos Conservation District – Technical Assistance for Federal Funding Opportunity Announcement Applicants

---

Staff Recommendation
Staff recommends approval of up to $92,000 from the Technical Assistance for Federal Cost-Share Grant to help fund the "Technical Assistance for Federal Funding Opportunity Announcement Applicants" project.

Background
At the May 2017 CWCB meeting, the Board approved criteria for technical assistance funding, to assist applicants seeking competitive federal grant funds, as described in the 2017 Projects Bill (HB17-1248):

> **Technical assistance for federal irrigation improvement cost-sharing program - appropriation.** (1) For the 2017-18 state fiscal year, $500,000 is appropriated to the department of natural resources for use by the Colorado water conservation board. This appropriation is from the Colorado water conservation board construction fund created in section 37-60-121, C.R.S. To implement this section, the Colorado water conservation board may use this appropriation to provide technical assistance for applicants seeking competitive federal grant funds.

These funds have been expended consistent with Board direction over the past few years to assist ditch companies, conservation districts, and other agricultural entities to prepare feasibility studies and competitive applications for federal funding opportunities.

In November of 2020, the Board approved the Non-Reimbursable Investments proposed by staff to be included in the 2021 Projects Bill, including a continuation of the TAFC program. These additional funds were made available in July of 2021.

The Bureau of Reclamation has indicated that an upcoming Funding Opportunity Announcement (FOA) will be released in 2022. Workshops will be provided to engage potential applicants and provide information about the requirements and application process. CWCB staff will work with the Bureau and local partners to provide information about the opportunities available for feasibility studies and technical assistance through the TAFC program.

The Natural Resources Conservation Service (NRCS) PL-566 program assists local organizations and units of government plan and implement watershed projects. These projects are locally led to solve natural and human resource problems in watersheds up to 250,000 acres. Projects can include flood prevention and damage reduction, development of rural water supply sources, erosion and sediment control, fish

and wildlife habitat enhancement, wetland creation and restoration, and increased recreational opportunities. Technical and financial assistance are available through NRCS which provides allocations of funds for plan development and implementation of projects.

The National Fish Passage Program works with local communities on a voluntary basis to restore rivers and conserve aquatic resources by removing or bypassing barriers. Projects benefit both fish and people by removing obsolete and dangerous dams, permanently eliminating public safety hazards and restoring river ecosystems. The program also collaborates with landowners to adapt water diversion systems so that the systems are efficient at retrieving and moving water while saving fish. The National Fish Passage Program provides financial and technical assistance in support of fish passage projects.

Staff concludes this TAFC Grant application is complete. The proposed activity meets the eligibility requirements in the criteria & guidelines for the program. The TAFC Grant Application, Statement of Work, and Budget and Schedule are below.

Scope of Work
Mancos Conservation District
Technical Assistance for Colorado River Basin Salinity Control
2022-23 USBR, NRCS PL-566, USFW Fish Passage Funding Opportunity Announcement Applicants

Purchase Order Amount: $92,000
CWCB Funding Source: Construction Fund, HB17-1248, sec. 8
Contractor: Mancos Conservation District,
PO Box 694, 604 Bauer Ave, Mancos, CO 81328
Gretchen Rank, Executive Director
Phone: 970-533-7317, Email: mancoscd1@gmail.com
Taxpayer ID # 84-0164777

Project Purpose: Provide technical assistance (TA) and capacity to entities demonstrating a commitment to submitting high quality, cost competitive applications to US Bureau of Reclamation's 2022-23 Funding Opportunity Announcement (FOA) in support of the Colorado River Basin Salinity Control Program (CRBSCP), NRCS PL-566 Watershed and Flood Prevention Program, and USFW Fish Passage Program.

Task Descriptions:

1. **Consultant Technical Assistance Grants:**
   A. District shall develop criteria and conduct a selection process to determine ditch and reservoir companies eligible for grant funding. Criteria shall include previous participation, willingness to provide non-federal program funding for project, number of irrigated acres served, and likelihood of successful participation in the one of the above grant programs. Criteria may also include a reimbursement cap and a requirement for matching funds as part of the grant award. District shall review proposed ditch and reservoir company selections with the approval of CWCB and the Gunnison Basin Salinity Coordinator prior to final award of TA grants. At the request of, and/or with the permission of the CWCB the District may award grants to entities outside its historic service area.
   B. Provide technical assistance through our District Conservation Technicians and service grants to ditch and reservoir companies to defray the actual cost of engineering services and scoping retained to applications for the above programs. Technical services must be provided by registered engineers licensed to do work in the State of Colorado.
   C. Provide technical assistance through our District Conservation Technicians and service grants to ditch and reservoir companies to defray the actual cost of engineering services related to interim studies, engineering, or feasibility for cooperative projects before the next announced grant dates. Technical services must be provided by registered engineers licensed to do work in the State of Colorado. District shall review proposed ditch company selections with the approval of CWCB and the Gunnison Basin Salinity Coordinator prior to final award of TA grants.
   D. District shall manage all aspects of the grant program including: assisting water users with consultant selection, documentation of claims for reimbursement, disbursement of funds, and preparation of deliverables. District shall reimburse grantees for final engineering costs only after the entity submits a written copy of its grant application.
2. **Project Administration:**
   District may charge the CWCB up to 10% of the costs of task 1C to defray a portion of the project management and administration expense it incurs in providing those services and preparation of all deliverables.

Deliverables:

1. Provide status reports documenting all task activities with each invoice.
2. Provide copy of grant applications for each ditch or reservoir company.

Identified Projects and Federal Funding Source:

1. **Upper Dolores Sub- Watershed, Summit Lake Reservoir and Irrigation Company Piping and Reservoir Project**

Summit Lake Reservoir & Irrigation Company is in need of substantial assistance with design, design implementation/coordination, and financial assistance to address aging (100 plus year old) infrastructure associated with the extensive water collection, delivery and storage systems associated with the irrigation company. In general, these infrastructure needs include;

- The Lost Canyon diversion structure which diverts the primary water source to Summit Lake. This structure is currently in a state of structural failure. It is anticipated that this structure could completely fail if a high snowmelt water runoff event occurs.
- Miles of open canal which are subject to yearly rockfall events that block the ditch as well as embankment failures in certain areas of the canal.
- The Summit Lake dam structure exhibits areas of over-steepened embankment as well as isolated areas of high water seepage (dependent on the impounded water level) that have been identified by the State of Colorado Dam Safety Division as areas of concern.
- The Lower outlet for the reservoir is located in the BOR Salinity area and has been identified for the next FOA round.

Summit Lake Reservoir and Irrigation Company's projects qualify for the Colorado River Basin Salinity Control Program (CRBSCP) for the outlet piping project estimated at $6M and the NRCS PL-566 Watershed and Flood Prevention Program for the above listed projects estimated up to $24M.

2. **Upper Mancos Sub-Watershed Project**

The West Mancos River headwaters are in a densely forested area of the San Juan National Forest and from there the tributary flows downstream through parcels of federal, state and private lands. Fire risk modeling completed by the San Juan National Forest and the Colorado State Forest Service show that high severity wildfires in this watershed could have catastrophic impacts, negatively affecting the livelihoods of all of the people in the Mancos Valley. Assessing the West Mancos River corridor is a necessary step toward prioritizing and focusing planning efforts on locations in the West Mancos watershed where actions can be taken to have the largest impact in mitigating negative effects of high severity wildfire and the creation of a drought contingency plan with the goal of protecting the ecological services and agricultural future of the Mancos Watershed.

The West Mancos River is critical to providing agricultural, municipal, recreational and environmental water throughout the Mancos watershed, and is currently at risk due to climate change and drought. Many resources and assets supplying water to Mesa Verde National Park, Jackson Gulch Reservoir, the Town of Mancos and Mancos Rural Water are at risk of wildfire. This water infrastructure could be susceptible to the flash floods, and mud and debris flows that are common after wildfire. Water delivered through this aging infrastructure provides the entire supply for municipal and agricultural water users in the Mancos watershed.

There are close to 50 ditches that have diversion structures in the Mancos River. The Jackson Gulch Reservoir inlet structure and release structure are both located on the West Mancos River, in addition to the diversion structure that supplies the Town of Mancos with their municipal water. Mesa Verde National Park and Mancos Rural Water also receive their municipal water from the West Mancos River.

The modeling and assessment of fire-related hazards in the West Mancos River corridor was identified as a top priority in the recently completed Mancos Watershed Stream Management Plan Phase I.

The West Mancos River is critical to providing agricultural, municipal, recreational and environmental water throughout the Mancos watershed. Fire risk modeling completed by the San Juan National Forest and the Colorado State Forest Service show that high severity wildfires in this watershed could have catastrophic impacts, negatively affecting the livelihoods of all of the people in the Mancos Valley. Many

highly valued resources and assets supplying water to Agriculture, Mesa Verde National Park, Jackson Gulch Reservoir, the Town of Mancos and Mancos Rural Water are at risk of wildfire. This water infrastructure, including inlets and key diversion structures could be susceptible to the flash floods, and mud and debris flows that are common after wildfire. Water delivered through this infrastructure provides the entire supply for municipal and agricultural water users in the Mancos watershed, and there is not a backup system or alternative sources of water.

Assessing the West Mancos River corridor is a necessary step toward prioritizing and focusing planning efforts on locations in the West Mancos watershed where actions can be taken to have the largest impact in mitigating negative effects of high severity wildfire and the creation of a drought contingency plan with the goal of protecting the ecological services and agricultural future of the Mancos Watershed.

- Work with the watershed partners to undertake wildfire models to better integrate watershed erosion models with the wildfire risk model. This will facilitate the identification and ranking of key water assets throughout the watershed, including the high value assets in West Mancos River.
- Coordinate with a team consisting of a GIS specialist, a fluvial geomorphologist, and a geologist/hydrologist to complete modeling using the Revised Universal Soil Loss Equation to estimate soil erosion potential in conjunction with the Fluvial Hazard Zone Delineation Protocol developed by the Colorado Water Conservation Board to help identify where pre-fire planning and post-fire triage mitigation activities will be most effective at reducing risk to water quality, water infrastructure and wildlife habitat.
- Work with watershed partners to investigate alternative water supply options and backup strategies that could provide water to municipal and agricultural users.
- Install protection structures for existing vulnerable infrastructure, replace and improve aging and degraded agricultural systems, and create an emergency action plan for future wildfire events.

The Upper Mancos Sub-Watershed Projects qualify for the Colorado River Basin Salinity Control Program (CRBSCP) for the East Mancos Highline piping project estimated at $5M and the NRCS PL-566 Watershed and Flood Prevention Program for the above listed projects estimated up to $24M. There is also the potential for additional BOR funds connected to Jackson Gulch Reservoir for forest mitigation implementation.

3. Mancos Agricultural Diversion Project Phase VI

The Field, Sheek and Bolen Diversions are irrigation diversion structures located on the West Mancos River, in southwest Colorado. The West Mancos River provides ideal habitat for a variety of aquatic organisms, including several species of warm water fish including the Bluehead Sucker (*Catostomus descoblus*), Flannelmouth Sucker (*Catostomus latipinnus*), and Roundtail Chub (*Gilia robusta*). These warm water fish are highly vulnerable to low summer stream flows, frequency of drought and habitat fragmentation and rely on habitat that is connected by flow and tolerable water temperatures. Climate change has the potential to impact warm water fish habitat connectivity as does fragmentation caused by instream water diversions. These three diversions are significant barriers to these warm water fish, and the addition of step and ramp structures below these barriers, in coordination with the Webber Diversion Fish Passage Project, would open over 25 additional miles of river habitat for warm water fish and help to stabilize the diversion structures and improve the irrigation infrastructure. As climate change continues to impact southwest Colorado, it is important to ensure that the ‘three species’ have access to tolerable habitats while continuing to support the livelihood of the agricultural producers who are also affected by drought. Partnering with landowners to eliminate barriers to fish passage for warm water species has become an important part of the Mancos Watershed Stream Management Planning effort.

The Mancos Conservation District is also proposing a post-monitoring strategy that involves both pit-tagging and EDNA sampling to determine the new structure’s effectiveness and start to establish the delineation within our tributaries for warm and cold-water species habitat. With our highly variable water temperatures, current data suggests that these specific reaches are the areas in our watershed where cross over may occur during different seasons and based on weather patterns.

Consultations with both Colorado Parks and Wildlife and US Fish and Wildlife have indicated that these diversion structures pose barriers to both cold water and warm water fish species. The landowner and the water rights holders are all in favor of restoring the stream in order to promote fish passage for the 'three species' of warm water fish.
Partnering with landowners and those who hold rights to divert water to eliminate barriers to fish passage for warm water species has become an important part of the Mancos Watershed Stream Management Planning effort.

Specifically, the objectives of the Field Diversion Warm Water Fish Barrier Removal Project are:

- To remove a significant fish passage barrier to the 'three species' of warm water fish. These fish are highly vulnerable to climate change and shifting water temperatures, and removal of this barrier would open valuable miles of stream habitat for warm water fish in the West Mancos River.
- Provide stabilization to the Field Diversion, to ensure water may be efficiently diverted for agricultural use, while providing fish accessible passage.
- Pit-tagging and EDNA post-monitoring strategy.
- Annual diversion and structure inspections by MCD Technician to determine continued functionality and O&M recommendations.
- Outreach and Reporting on the successes of cooperative projects for overall stream restoration and watershed health.

The Mancos Agricultural Diversion Project qualify for the USFW Fish Passage Funding Opportunity for diversion improvements estimated at $1.5M, these diversions are included in the Upper Mancos Sub-Watershed and portions of the projects qualify for the NRCS PL-566 Watershed and Flood Prevention Program included in the $24M listed above, while understanding that these funding sources cannot be combined.

Task Schedule: Complete project by September 30, 2023

Payment Schedule: CWCB will reimburse the District on a monthly basis after receipt of invoices for costs related to the task described above at the rates set forth below.

Project Title	Tasks Identified	Quantity Hours	Max. Unit Charge	Maximum Reimburse
Upper Dolores Sub-Watershed SLRIC	1A, 1B, 1C, provided by MCD staff and Conservation Technicians: project facilitation and scoping, surveys, preliminary engineering, project designs, grant and funding application assistance	540	$55	$29,550
Upper Dolores Sub-Watershed SLRIC	1D, provided by engineering firm: final engineering and feasibility within application requirements	40	$250	$10,000
Upper Mancos Sub-Watershed	1A, 1B, 1C, provided by MCD staff and Conservation Technicians: project facilitation and scoping, surveys, preliminary engineering, project designs, grant and funding application assistance	280	$55	$15,000
Upper Mancos Sub-Watershed	1D, provided by engineering firm: final engineering and feasibility within application requirements	13	$250	$3,250
Mancos Ag Diversion Phase IV	1A, 1B, 1C, provided by MCD staff and Conservation Technicians: project facilitation and scoping, surveys, preliminary engineering, project designs, grant and funding application assistance	280	$55	$15,000
Mancos Ag Diversion Phase IV	1D, provided by engineering firm: final engineering and feasibility within application requirements	40	$250	$10,000

Invoice Items by Task	Quantity Hours	Max. Unit Charge	Maximum Reimburse
1A, 1B, 1C: District Capacity	1,100	$55.00	$59,550
1D. Consultant Technical Service Grants (actual consultant invoiced cost not to exceed)	93	$250	$23,250
2. Project Administration @ 10% of cost for tasks 1 - 3 above			$9,200
Total			**$92,000**

Budget Notes:

Project 2. Upper Mancos Sub-Watershed Project:
MCD has requested a portion of this project's funding through Phase II of our Stream Management Plan application to CWCB Watershed Program. If both awards are granted to MCD, we will be completely

transparent in our administration and reporting to designate that those funds were not duplicated for MCD staff, Conservation Technicians or Private Contractors. The above request will not be used for implementation of the SMP Phase II but will be solely utilized to move forward with the NRCS PL-566 Watershed and Flood Prevention Program and the potential for additional BOR funds connected to Jackson Gulch Reservoir for forest mitigation implementation.