



COLORADO
Colorado Water Conservation Board
 Department of Natural Resources

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TO: Colorado Water Conservation Board Members
FROM: Kirk Russell, P.E., Chief, Finance Section
DATE: November 18-19, 2020 Board Meeting
AGENDA ITEM: 8a. 2021 Projects Bill
 Non-Reimbursable Project Investments "En-Bloc" Approval

Recommendation

Staff recommends the Board approve the Non-Reimbursable Investments listed below for inclusion in the 2021 Projects Bill.

| | | | |
|-----|--|-----------|-------------|
| (1) | Satellite Monitoring System Maintenance Program - Continuation | Statewide | \$100,000 |
| (2) | Colorado Floodplain Map Modernization Program - Continuation | Statewide | \$500,000 |
| (3) | Litigation Fund - Budget est. \$1.5M (Refresh up to \$2M) | Statewide | \$2,000,000 |
| (4) | Technical Assistance for Federal Cost-Share - Continuation | Statewide | \$300,000 |
| (5) | Weather Modification Permitting Program - Continuation | Statewide | \$350,000 |
| | | Total | \$3,250,000 |

Introduction/Background

The Finance Committee reviewed the following Projects Bill - Non-Reimbursable Investment (NRI) applications on September 15, 2020, in a virtual meeting. The Committee supported projects listed above and recommended them for formal Board approval En-Bloc. If approved, these NRIs will be provided to the Projects Bill sponsors for inclusion in the 2021 Projects Bill. Data Sheets for each project are included. No formal presentations regarding these items will be made unless requested.

Attachments: Data Sheets





This project entails the continued, long-term operational viability of the State Satellite Linked Monitoring System and Stream Gage Refurbishment Program, which is administered by the Division of Water Resources (DWR). This program currently encompasses 650 satellite stream gaging stations that require continued replacement of outdated data collection platforms, upgrades to transmission components, and refurbishment of the associated infrastructure. In addition, many existing gaging stations need to be modified to provide critical stream flow data for both flood and low flow monitoring. Changes in technology, which will ultimately increase reliability and real time data transmission rates, will require the DWR to continue to upgrade the system in the future. In addition, this project provides annual maintenance for the Arkansas River Basin Compact Lysimeter Research Project. The costs associated with the continued refurbishment and operational viability of the Satellite Monitoring System is currently approximately \$50,000 per year. The cost associated with the Lysimeter Project is approximately \$50,000 per year. The total project cost is \$100,000. Future requests will likely increase from \$100,000 to \$250,000 to support ongoing maintenance of the monitoring network based on a 15-20 expected equipment life.

| P R O J E C T D E T A I L S | |
|--------------------------------|-------------------|
| <i>Project Cost:</i> | \$100,000 |
| <i>NRI Funding Request:</i> | \$100,000 |
| <i>Funding Source:</i> | Construction Fund |
| <i>Project Type:</i> | DWR Streamgaging |
| <i>Type of Grantee:</i> | State Agency |

| L O C A T I O N | |
|------------------------|------------|
| <i>Benefits:</i> | Statewide |
| <i>Water Source:</i> | Various |
| <i>Drainage Basin:</i> | All Basins |



Saguache Creek at Cemetery Road- Cantilever and Radar Installation (Division 3). Note these installations are more cost efficient as they require significantly less infrastructure than a typical stilling well and shelter.



Colorado has received approximately \$36 million in federal grant dollars for floodplain mapping activities as part of the floodplain Map Modernization/Risk Map Program (Program) initiated by FEMA in 2003. The FEMA funds are being matched by CWCB and local cost-share dollars to implement the map update work to create updated digital floodplain maps and flood risk tools. The initial Program funds authorized in the 2003 and all subsequent Construction Fund Bills have provided the required non-federal matching dollars (80/20 cost share program). The State funds are further leveraged by local cost share dollars and in-kind services from many communities thus far. The total funding amounts have been instrumental in keeping Colorado as a lead state within FEMA Region 8 and will continue to benefit Colorado communities in the future. It is expected that significant FEMA funding will continue as long as the Program exists. Program deliverables will become part of the Flood DSS system to increase data capture and enhance Colorado's decision support tools.

| P R O J E C T D E T A I L S | |
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| Project Cost: | \$9,200,000 |
| NRI Funding Request: | \$500,000 |
| Funding Source: | Construction Fund |
| Project Type: | Matching Funds for Grants |
| Type of Grantee: | State Government |

| L O C A T I O N | |
|-----------------|------------|
| Benefits: | Statewide |
| Water Source: | Various |
| Drainage Basin: | All Basins |

The Program impacts the entire state, and the objective is to develop updated watershed-based and/or countywide floodplain maps using current base map information within a digital environment. The use of GIS technology will be employed for all new countywide studies for ease of distribution, updating and viewing. The table below summarizes funding approved by FEMA for Federal Fiscal Year 2020, which starts October 1st and ends September 30, 2021.

| Grant Description | FEMA Funding | Grant Description | FEMA Funding |
|---|--------------|---|--------------|
| FY20 CTP Project Management | \$443,388 | Adams, Alamosa, and Morgan Counties Phase 1 (BLE/Discovery) | \$330,000 |
| El Paso Phase 2 Year II | \$1,250,000 | Hinsdale, Ouray, San Miguel, and Logan Counties Phase 1 (BLE/Discovery) | \$428,400 |
| Teller County Phase 3 | \$253,457 | Las Animas and Prowers County Phase 2 | \$615,675 |
| Park County Phase 2 | \$138,637 | Huerfano County Phase 2 | \$199,655 |
| Elbert County Phase 2 | \$131,616 | Lincoln and Phillips County Phase 4 | \$79,700 |
| Summit County Phase 1 (BLE/Discovery) | \$87,103 | LOMR Review Partner Program | \$670,000 |
| SW Colorado Phase 2 | \$1,409,153 | Garfield County Phases 3-4 Rescope | \$246,435 |
| FY20 COMS | \$371,027 | Bent, Otero, and Moffat Counties Phases 3-4 | \$387,352 |
| Gunnison County and Pueblo County Phase 1 (BLE/Discovery) | \$497,376 | Chaffee, Femont, and Mesa Counties Phase 2/Additional Studies | \$1,701,000 |
| Total FEMA Funding: | | \$9,239,974 | |



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Colorado Water Conservation Board

Department of Natural Resources

Litigation Fund (Refresh)

Colorado Water Conservation Board

November 2020 Board Meeting

Section 37-60-121(2.5) provides that the Colorado Water Conservation Board is authorized "to expend, pursuant to continuous appropriation and subject to the requirements of paragraph (b) of this subsection (2.5), a total sum not to exceed the balance of the litigation fund, which is created, for the purpose of engaging in litigation...to defend and protect Colorado's allocations of water in interstate streams and rivers..." Paragraph (b) of section 121(2.5) provides: "pursuant to the spending authority set forth in paragraph (a) of this subsection (2.5), moneys may be expended from the litigation fund at the discretion of the board if (l) with respect to litigation, the Colorado Attorney General requests that the Board authorize the expenditure of moneys in a specified amount not to exceed the balance of the fund for the costs of litigation associated with one or more specifically identified lawsuits meeting the criteria set forth in paragraph (a) of this subsection (2.5)."

| P R O J E C T D E T A I L S | |
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| <i>Project Cost:</i> | \$1,516,090 |
| <i>NRI Funding Request:</i> | \$2,000,000 |
| <i>Funding Source:</i> | <i>Construction Fund</i> |
| <i>Project Type:</i> | Legal Support |
| <i>Type of Grantee:</i> | State Government |

| L O C A T I O N | |
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| <i>Benefits:</i> | Statewide |
| <i>Water Source:</i> | N/A |
| <i>Drainage Basin:</i> | All Basins |

The CWCB has received a letter from Attorney General Phil Weiser stating that a total of \$1,516,090 will be needed in FY 20/21 to adequately: defend in negotiations; litigation; and other processes the State's apportionments under the Compacts. The funds will be allocated as follows:

- 1) Colorado River Basin: \$893,090 for FY 20/21
- 2) Republican River Basin: \$98,000 for FY 20/21
- 3) Rio Grande Basin: \$525,000 for FY 20/21

The CWCB will request a refresh of the Litigation Fund up to \$2,000,000 each year through annual appropriations in order for the Board to respond to unforeseen legal challenges.



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Technical Assistance for Federal Cost-Sharing (TAFC) Program

Colorado Water Conservation Board

November 2020 Board Meeting

Colorado's Water Plan values efficient and effective water infrastructure. Innovative solutions and additional conservation and efficiency measures are needed to stretch Colorado's water supplies and maintain aging reservoirs, canals, and distribution systems.

Multiple water users can benefit from improving and upgrading irrigation infrastructure. Water quality can be improved downstream in areas that are high in salinity or selenium, to the benefit of other water users and wildlife. Efficiencies in water delivery may lead to increased flows for environmental and recreational uses, while optimizing regional delivery systems for the benefit of other agricultural water users.

Though the cost of these improvements are often beyond the capacity of water users, several federal cost-share programs provide financial incentives to help defray those costs. These programs are competitive; to be awarded funds, proposals require sound planning and well-engineered feasibility studies with reasonable and accurate cost estimates. Additionally, collaborative programs and processes such as stream management plans or regional conservation plans may lead to more competitive applications, resulting in a more comprehensive and optimized water management scheme.

The funding requested herein will be used to provide technical assistance grants to entities applying for federal cost-share programs, and to successful applicants to use in design and project management of specific project elements when federal funding for those activities is limited. In these cases, federal program guidelines restrict what federal funds may be used for, and TAFC funds may be used as applicant cost-share for those specific tasks. For example, certain NRCS programs disallow use of funds for project management and stakeholder coordination costs. TAFC funds can be used for these important tasks so that project proponents can devote federal funds to allowable expenses such as project construction costs. CWCB has employed this approach with previous funding sources devoted specifically to the RCPP program.

By providing grants for technical assistance to prepare applications in past programs, the CWCB and partner institutions have improved the success rate of Colorado water users applying for these federal funds. In addition, by providing funds for engineering design and environmental compliance activities by the successful applicants, CWCB has helped accelerate the actual implementation of projects, and preserved federal grant funds for project construction. Similar grant opportunities have been funded by the Board, and used successfully for these purposes, in 2014, 2015, and 2017.

Federal programs which provide incentives for greater efficiency include the USDA Regional Conservation Partnership Program [RCPP] which is offered statewide, the Colorado River Basin Salinity Control Program which is available throughout Western Colorado, and the Gunnison Selenium Management Program which is only available in the Gunnison Basin below the Aspinall Unit. These funds may also be used to leverage funds from the Bureau of Reclamation's WaterSMART program, and EPA cost-share programming, such as application preparation and technical assessment for potential Section 319 Nonpoint Source Management Program grants.

These technical assistance funds will increase the success rate of applicants for competitive federal grant funds and thus will be highly leveraged. In addition, successful participants in these federal programs have, and will continue to have, a strong incentive to use the CWCB loan program to finance a portion of the non-federal implementation costs.

**P R O J E C T
D E T A I L S**

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|-----------------------------|-------------------|
| <i>Project Cost:</i> | \$300,000 |
| <i>NRI Funding Request:</i> | \$300,000 |
| <i>Funding Source:</i> | Construction Fund |
| <i>Project Type:</i> | Grant Program |
| <i>Type of Grantee:</i> | State Government |

L O C A T I O N

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|------------------------|------------|
| <i>Benefits:</i> | Statewide |
| <i>Water Source:</i> | Various |
| <i>Drainage Basin:</i> | All Basins |

The CWCB has had grants since 2004 for water district sponsored cloud seeding programs developed after the early 2000s drought. In 2007, State-to-state agreements were signed to provide grants in Colorado. CWCB distributes grants from the CWCB, New Mexico Interstate Stream Commission, Southern Nevada Water Authority, Central Arizona Water Conservation District, and California Six Agency Committee. CWCB funding leverages pledged match funding from Lower Basin States water users. This funding helps meet CWCB goals to have industry standard equipment in operation for efficient and effective programs.

In 2019, the State of Wyoming collaborated with the CWCB and the Jackson County Water Conservancy District to launch Colorado's first permitted aerial cloud seeding program. Some of the requested funding increase will help to continue this new state-to-state collaboration in the North Platte Basin. A 2015 National Center for Atmospheric Research Climatology of Seeding Potential study showed high seeding potential in the North Platte Basin. The program goal is to augment snowpack in the southeastern part of the basin. Potential programs for this upcoming water year seek to gather and process the data we have collected from two years of aerial seeding to accurately gauge increases in snowpack and streamflow.

Since 2007 the Lower Basin Water Users in the Colorado River (Southern Nevada Water Authority, California Six Agency Committee, and Central Arizona Water Conservation District) have donated \$3.3M to match the CWCB's \$2.6M to bolster locally sponsored cloud seeding in Colorado. Each year, about \$1.4M is spent on supporting current operations, upgrading equipment, and financing various weather modification studies around the state.

Effective cloud seeding requires siting cloud seeders high onto ridges in areas of good airflow to ensure the silver iodide particles are regularly transported into clouds. We have had success at helping upgrade programs with new high elevation seeders at: Winter Park, Grand Mesa, Crested Butte, above McPhee Reservoir, near Mancos, and Telluride. These seeders are now owned by water districts. It has been clearly demonstrated that low elevation manually operated seeders are not particularly effective at getting seeding material into the clouds. High elevation seeding equipment is needed. Colorado has high elevation terrain and siting remote generators at high altitudes is vital for effective seeding.

The CWCB has ten years of facilitating successful multi-state collaborations to benefit local water supplies and downstream compact obligations. In 2015, a ten year \$15M winter research experiment in Wyoming concluded that a 5-15% increases in snowpack can be expected but only from about 30% of the storms appropriate for seeding. Therefore, a 1-5% increase in snowpack was demonstrated and can be expected in well designed and executed programs. As we move forward, Colorado must continue to investigate and pursue opportunities for collaboration between basins to benefit multiple watersheds and thus the entire state as a whole.

| P R O J E C T D E T A I L S | |
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| <i>Project Cost:</i> | \$1.4M (matching from Lower Basin States and local sponsors) |
| <i>NRI Funding Request:</i> | \$350,000 |
| <i>Funding Source:</i> | Construction Fund |
| <i>Project Type:</i> | Snowpack augmentation |
| <i>Type of Grantee:</i> | Local Water Districts |

| L O C A T I O N | |
|------------------------|------------|
| <i>Benefits:</i> | Statewide |
| <i>Water Source:</i> | Various |
| <i>Drainage Basin:</i> | All Basins |