



COLORADO

Colorado Water
Conservation Board
Department of Natural Resources

DIRECTOR'S REPORT

September 2019

Interstate Compact Compliance • Watershed Protection • Flood Planning & Mitigation • Stream & Lake Protection
Water Project Loans & Grants • Water Modeling • Conservation & Drought Planning • Water Supply Planning



COLORADO

Colorado Water Conservation Board

Department of Natural Resources

TO: Colorado Water Conservation Board Members

FROM: Rebecca Mitchell
Andrew Rickert

DATE: September 18-19, 2019

SUBJECT: **Agenda Item 5d, September 2019 CWCB Board Meeting Director's Report**

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~STATEWIDE~

CWCB SMALL FEASIBILITY STUDY GRANT FUND UPDATE—

New grant applications approved:

1. No new grants

Previously approved grants in FY18/19:

1. Logan Irrigation District - Prewitt Reservoir Rehabilitation (\$29,512)
2. Town of Oak Creek - Sheriff Dam Rehabilitation (\$50,000)
3. Silt Water Conservancy District - Harvey Gap Reservoir Upgrades (\$13,400)
4. Evergreen Metro District - Evergreen Dam Evaluation (\$50,000)
5. Little Thompson Water District - Dry Creek Reservoir Expansion (\$25,500)
6. Lower Arkansas Water Management Association - West Farm Gravel Pit (\$9,500)
7. Roxborough Water and San District - Lambert Reservoir (\$46,275)
8. Genesee Water and Sanitation District - Genesee Water Storage Dam and Reservoir No. 2 (\$37,387)

Total funds approved for feasibility study grants in FY18/19: \$286,074.

~COLORADO RIVER BASIN~

COLORADO RIVER WATER USE—

2019 Colorado River Storage as of September 3rd, 2019			
	Elevation (feet above mean sea level)	Storage (MAF)	Percent of Capacity
Lake Mead	1,083.57	10.309	39%
Lake Powell	3,618.35	13.589	56%
Total System Active Storage		32.242	54%
2018 Total Active Storage		28.815	48%
		Flow (MAF)	Percent of Average
Forecasted Unregulated Inflow into Powell (Forecasted Water Year 2019)		13.510	125%

Forecasted CY 2019 Lower Basin Consumptive Use		
State	Use (MAF)	Total (MAF)
Arizona	2.624	6.918

California			
California Agricultural	3.460		
Metro. Water District	0.566	4.039	
Other	0.013		
Nevada			0.254

*Note MAF = million acre-feet

REQUEST FOR ADMINISTRATION OF INSTREAM FLOW WATER RIGHT — Staff investigated low flow alerts from the satellite monitoring system and placed a formal request for administration of the Beaver Creek ISF, tributary to the Eagle River. The District 37 Water Commissioner has worked to enforce the call by implementing terms and conditions decreed in Case No. 00CW282 (Application of Vail Associates, Inc. and the Beaver Creek Metropolitan District).

STREAM NAME	WATER DIVISION	CASE NUMBER	DATE OF FORMAL WRITTEN CALL	OUTCOME
Beaver Creek	5	75W2719	8/15/2019	Curtailment, Augmentation plan activated

The call letter and detailed information on the Board’s right that was administered can be found on the CWCB’s web page at: <http://cwcb.state.co.us/public-information/instream-flow-administrative-calls/Pages/main.aspx>

~ SAN MIGUEL/SAN JUAN/DOLORES RIVER BASIN ~

LOWER DOLORES WORKING GROUP UPDATE— The Lower Dolores Plan Working Group’s Drafting Team, appointed by the Group’s Legislative Subcommittee, completed the latest version of the draft National Conservation Area (NCA) legislation in December 2017. The Group continues to conduct outreach and education on the proposal, which Dolores and San Miguel Counties continue to support.

The Native Fish Monitoring and Recommendation Team (M&R Team) met in April 2019 to discuss projected accomplishments at the range of forecasted reservoir releases. The M&R Team also discussed multi-faceted native fish monitoring, a potential early release of water for thermal cooling to keep native fish from spawning in advance of the managed release, boating releases that will also allow Slickrock Canyon to be resurveyed, and the use of a pulse of water at the right time to disrupt smallmouth bass reproduction. All of these measures comport with the Native Fish Implementation Plan.

Water was released for boating over Memorial Day, with an extended release beginning June 6 and likely ending in late June or early July. Throughout the release, a subgroup of the M&R Team, including boating advocates, fishery managers, recreation and riparian coordinators, and water managers, has been meeting weekly to make adjustments in the release, and to jointly work on the website messaging, which is updated twice weekly at: <http://doloreswater.com/releases/>. All 2019 updates will remain posted to document the evolution of the release and set the stage for post-season evaluations. The M&R Team has developed hydrographs with flow objectives for different release rates. To date, the 2019 release exceeded 100,000 acre-feet, and all of the flow targets in the release range will be met. (Linda Bassi)

~ YAMPA/WHITE RIVER BASIN ~

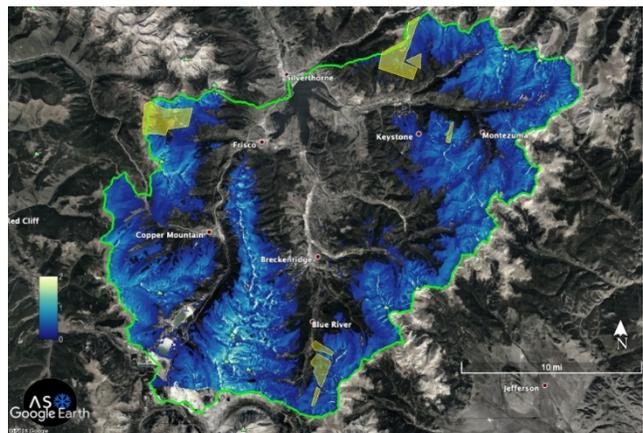
RECENTLY DECREED ISF WATER RIGHTS ON HAHN CREEK — On June 26, 2019, the Division 6 Water Court decreed instream flow (ISF) water rights to the CWCB on a reach of Hahn Creek in Case No. 18CW3039 for 0.75 cfs (11/01 - 09/30), 2.6 cfs (05/01 – 8/31), and 1.6 cfs (09/01 – 10/31), with an appropriation date of January 22, 2018. This reach is approximately 4.71 miles long and flows in a southeasterly direction through parts of Rio Blanco County. The upstream terminus is Hahn Creek’s headwaters, and the lower terminus is the confluence with Lost Creek. Colorado Parks and Wildlife recommended this reach to protect the creek’s self-sustaining, and pure conservation population of Colorado River Cutthroat Trout (*Oncorhynchus clarkia pleuriticus*).

RECENTLY DECREED ISF WATER RIGHTS ON DOUGLAS CREEK — On June 28, 2019, the Division 6 Water Court decreed instream flow (ISF) water rights to the CWCB on a reach of Douglas Creek in Case No. 18CW3037 for 2.7 cfs (03/16 - 06/15), and 1.6 cfs (06/16 – 06/30), with an appropriation date of January 22, 2018. This reach is approximately 26.29 miles long and flows in a northerly direction through parts of Rio Blanco County. The upstream terminus is the confluence of East and West Douglas Creeks, and the lower terminus is the confluence with the White River. The Bureau of Land Management (BLM) recommended this reach to protect Douglas Creek’s self-sustaining population of speckled dace (*Rhinichthys osculus*), and occurrences of northern leopard frog (*Rana pipiens*), a BLM sensitive species.

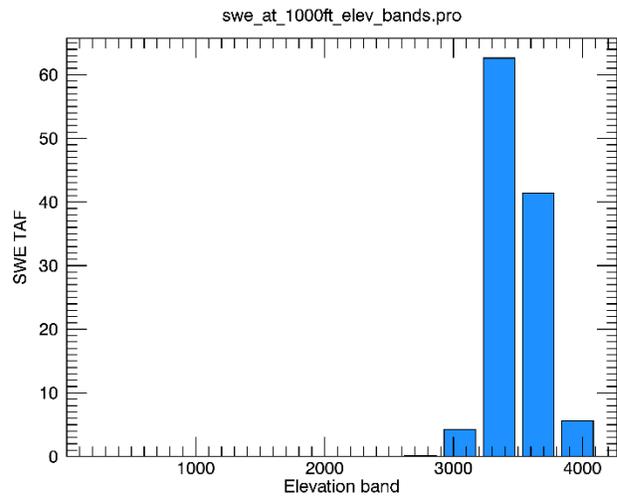
RECENTLY DECREED ISF WATER RIGHTS ON LOST CREEK — On June 28, 2019, the Division 6 Water Court decreed instream flow (ISF) water rights to the CWCB on a reach of Lost Creek in Case No. 18CW3038 for 1.3 cfs (10/01 - 03/31), 2.3 cfs (04/01 – 08/15), and 1.8 cfs (09/16 – 09/30), with an appropriation date of January 22, 2018. This reach is approximately 4.71 miles long and flows in a southerly direction through parts of Rio Blanco County. The upstream terminus is the confluence with Hahn Creek, and the lower terminus is the confluence with Long Park Creek. Colorado Parks and Wildlife recommended this reach to protect the creek’s self-sustaining, and pure conservation population of Colorado River Cutthroat Trout (*Oncorhynchus clarkia pleuriticus*).

~ GUNNISON RIVER BASIN ~

SNOW MAPPING IN BLUE RIVER AND GUNNISON BASINS — This year Denver Water and the CWCB teamed up to hire both NASA Aerial Snow Observatory and Quantum Spatial as a team to collect, process, and analyze snow data for two flights each. One peak and one late melt in both the Gunnison and Blue River basins.



From June 24th 2019 flights snow depth was calculated using densities from the LIDAR flights. The snow depths were converted to SWE using densities at SNOTEL sites. The elevation profile shown in the bar graph from late June shows substantial amounts of snowpack above in the 9,500-14,000 feet elevation band. The total SWE left in the Blue River watershed is still about 114,000 AF still remaining as of June 24. That presents just under half of the full pool volume at Dillon Reservoir. It is a good water year. (Joe Busto)



~ WATER CONSERVATION AND DROUGHT PLANNING UPDATES ~

CWCB WATER EFFICIENCY GRANT FUND PROGRAM (WEGP) UPDATE—

Two grant applications have been received since the July 2019 Director’s Report

- **Town of Erie** – Water Efficiency Plan Update
- **Town of Erie** – Drought Management Plan Update

One grant was approved since the July 2019 Director’s Report:

- **University of Colorado – Denver** – Land Use Planning Survey (\$42,034)

The following are deliverables sent to the CWCB since the last Director’s Report:

- **City of Steamboat Springs** – Water Efficiency Plan – *50% Progress Report*
- **Town of Firestone** – Drought Management Plan – *25% & 50% Progress Reports*
- **Town of Eagle** - Water Efficiency Plan - *75% Progress Report*

(Ben Wade)

WATER EFFICIENCY & DROUGHT PLANS UPDATE — The Office of Water Conservation & Drought Planning (OWCDP) continues to work with the following providers to approve their Water Efficiency and Drought Management Plans:

DROUGHT MANAGEMENT PLANS:

Approved Plans

- No Plans have been approved since the last Director’s Report.

Drought Management Plans In Review:

- No Drought Management Plans are currently under review.

WATER EFFICIENCY PLANS:

Approved Plans:

- **North Weld County Water District**
- **City of Cortez**
- **Town of Superior**

The following plans have been given conditional approval. CWCB staff will continue to work with these entities until their respective Water Efficiency Plans achieve approval status.

- **Rifle**
- **Town of Olathe**

Water Efficiency Plans in Review:

- **Widefield Water & Sanitation District**
- **Town of Eaton**
- **City & County of Broomfield**
- **City of Lamar**

(Kevin Reidy & Ben Wade)

GOVERNOR’S WATER AVAILABILITY TASK FORCE — The next Water Availability Task Force meeting will be on September 25 from 9:30am-11:00am at the Colorado Parks & Wildlife Headquarters 6060 Broadway, Denver, CO. Please check the website (<http://cwcb.state.co.us/public-information/flood-water-availability-task-forces/Pages/main.aspx>) for additional information. *(Ben Wade)*

DROUGHT UPDATE — August has been warmer than average across the majority of the state and each basin, except for the Republican basin, has experienced below average precipitation. The North American monsoon season has been disappointing in Colorado and other parts of the Southwestern U.S. The monsoon season sometimes results in beneficial moisture for south central Colorado and the eastern half of the state. Despite not receiving monsoon moisture, statewide precipitation for the Water Year, at mountain SNOTEL sites, is at 114% of average. After being the last state to experience a drought free U.S. Drought Monitor Map, which lasted eight weeks from late May through mid July, D0 has been introduced in various parts of the state. A portion of southwestern Colorado was downgraded to D1, moderate drought conditions. Reservoir storage across the state continues to be a bright spot at 116% of average.

- According to the U.S. Drought Monitor, released August 29, D0, abnormally dry has been introduced in the central mountains and has expanded in the southwest part of the state. D0 has shown up in pockets in Las Animas, El Paso & Larimer counties. D1, moderate drought, has been introduced back in La Plata & Montezuma counties.
- The weak El Niño has officially ended in favor of neutral conditions. The long term ENSO forecasts are trending toward neutral conditions remaining through the winter.
- Statewide monthly precipitation as of August 26 at mountain SNOTEL sites has been 56% of average. For the Water Year, statewide precipitation is 114% of average. The Climate Prediction Center’s one month outlook is predicting above average precipitation and temperature for most of the state for September.
- Reservoir storage across the state (as of the end of July) is 116% of average and 78% of capacity. At this time last year, statewide reservoir storage was at 86% of average. The Gunnison basin has seen significant recovery after storage was depleted last year. The South Platte basin reservoirs are in the best shape since the late 1990s.

- Water providers in attendance report their systems are in decent shape but water demand has increased due to above average temperatures in the past several weeks.
- Some agricultural producers are reporting that corn is behind schedule due to a late start to the season. They are hopeful that frost will not occur before the crops reach maturity. **(Ben Wade)**

MUNICIPAL DROUGHT MANAGEMENT PLAN GUIDANCE DOCUMENT UPDATE — The CWCB is in the process of contracting with Wood Inc. & Intera Inc to update the 2012 Drought Management Plan Guidance Document for water providers or local governmental entities who are developing or updating their Drought Management Plans. The update includes; case studies from more recent drought events, interweaving climate change considerations to include as a beneficial option in Plans, updating existing drought response strategies and measures, integration of drought planning efforts with the Analysis & Technical update for the Water Plan/Basin Implementation Plans and stream management planning. The final update is scheduled to be ready by the end of June 2020.
(Ben Wade)

CO WATER LOSS INITIATIVE— Kevin Reidy has started the CO Water Loss Initiative which will culminate in a 2-year training and technical assistance water loss control program for water providers across Colorado. Kevin convened a small advisory group to weigh in on the scope of work and to assist with the development of the programming. Approximately 120 water providers have signed up so far for the training. The first round of 8 workshops was completed in mid-May and were a resounding success. We have heard some great feedback from the participants as to the value and thoroughness of the program. At present, the consultant team is working through the one-on one technical assistance sessions with each participant utility to ensure the water loss audit data from the participating utilities is correct and valid. This represents phase Two of the Four phase project. The advisory team met by phone on July 31 and has another on October 9. Phase Three will consist of another round of in-person workshops in the fall of 2019 and another round of technical one-on-one meetings (Phase Four) happening in spring 2020. The initiative is still accepting participants so please spread the word! *(Kevin Reidy)*

LAND/WATER PLANNING NEXUS— Kevin Reidy is working with counterparts from DOLA to create trainings and other related projects specified in SB 15-008 (AKA the land use bill). This bill stated that the CWCB and DOLA would create trainings for land use and water planning professionals in order to incorporate water conservation and demand management best practices into land use planning. Additional work is as follows:

- Sonoran Institute, through a CWCB water plan grant, has extended their Colorado Growing Smart program to carry out 3 more additional workshops over the next 18-24 months. Kevin is on the advisory group for these trainings. The next training will take place in Estes Park September 11-13, 2019 and will host Boulder County, Colorado Springs, Commerce City, Greeley, Pueblo County, and Little Thompson Water District . As part of the same water plan grant, the Sonoran Institute is also designing a stakeholder process that will evaluate and ultimately select a set of metrics that community and state officials can use to track their progress in meeting the state water plan goal. The advisory team has developed a draft set of metrics and will be working through them with stakeholders at a workshop on Sept. 10.
- Also, the Colorado Growing Water Smart program has won the *2019 APA Colorado Honor Award* in the category of Sustainability and Environmental Planning from the Colorado chapter of the American Planning Association. Kevin Reidy will be accepting the award along with Sonoran Institute staff at the Colorado American Planning Association annual conference on September 19.
- Water Education Colorado and the Babbitt Center are teaming up with CWCB to implement several workshops and webinars through the end of the year to train local governments on integrating a land use element into their local water efficiency plans. These trainings will be based on the *Best Practices for Implementing Water Conservation and Demand Management Through Land Use Planning Efforts-*

Addendum to 2012 Guidance Document presented to the board in January 2019. So far, we have done a webinar sponsored by the Special Districts Association and held a small workshop at Water Congress. Future workshops will be held in Longmont (Sept. 16th), Durango (Oct. 30th), Pueblo (Nov. 5th) and Grand Junction (Nov. 12th). They are free so spread the word!

<https://www.watereducationcolorado.org/lu-wep/> (Kevin Reidy)

DIRECT POTABLE REUSE— Through a water plan grant, Reuse Colorado has convened stakeholders along with CDPHE and CWCB to create a regulatory framework for direct potable reuse in Colorado. This project has also enlisted a panel of experts from across the nation to weigh in on the discussions and make recommendations on how to create the regulations and what should be in them. The final panel/ stakeholder meeting will take place on November 12 with the final report from this effort completed by the end of this year. (Kevin Reidy)

~WATERSHED AND FLOOD UPDATES~

MAPPING UPDATE—

FY19 Activities: The CWCB has been awarded \$5.6 million for FY19 FEMA grant funding for Risk Map projects. Currently, we are awaiting final award documents from FEMA.

FY18 Activities: The CWCB was awarded \$5.5 million from FEMA in their FY18 cycle for Risk Map projects. The following is a list of the FY18 Risk Map projects:

The CWCB received a \$231,823 from FEMA for Project management tasks. This also includes \$80,000 allocated to the Division of Water Resources Dam Safety office for a pilot project.

\$350,000 was awarded to fund Delta County Risk Map Phase 2, which will include data development tasks such as hydrology, hydraulics, and floodplain mapping throughout Delta County. Delta County Risk Map Phase 2 includes 41.5 river miles of enhanced flood study, post-fire flooding analysis, and an evaluation of sediment-bulked flooding.

The Upper White Watershed Risk Map project received an additional \$70,000 from FEMA to conduct analysis on two levees that were discovered within Rio Blanco County during the routine hydraulic analysis. The updated mapping results in a significant amount of shallow flooding in Rangely. The CWCB and FEMA are currently working on final floodplain mapping tasks. The next step will be distribution of Preliminary Maps to the communities and a Consultation Coordination Officer (CCO) meeting to be held sometime this Spring.

The Cache La Poudre Risk Map project is also receiving additional funds to address local community comments. A total of \$195,000 of FEMA funding is awarded to resolve the comments and complete the Risk Map project for Cache La Poudre. The CWCB mapping contractor has addressed comments and submitted to FEMA for their review. Additional community comments are being incorporated currently.

Analyzing levees continue to be a challenge for the Risk Map program. Fortunately, FEMA provides funding and resources to help Cooperating Technical Partners (CTPs), such as the CWCB to assess levee pre-certification options. The CWCB received \$275,000 from FEMA to evaluate the Templeton Gap levee in Colorado Springs. A

portion of this funding will also be used to conduct a high level base level engineering analysis for Teller County. This grant covers both Colorado Springs, El Paso and Teller Counties.

For the Animas River watershed, FEMA has awarded \$295,000 to complete this project through effective mapping. Phase 2 of this project was funded in 2017. Draft floodplain mapping has been completed and a Flood Risk Review meeting was held with La Plata, San Juan, and Archuleta counties and communities within those counties. The tentative schedule for distribution of Preliminary Maps will be summer of 2020.

FEMA has awarded the CWCB \$620,000 to complete the regulatory update for CHAMP Phase 3 projects through floodplain mapping and effective.

The CWCB funded regional hydrology updates for the Arkansas River from the headwaters near Leadville, Colorado to the Kansas State line as well as the Colorado River from Granby to the western border of Mesa County. The CWCB leveraged this work to obtain funds from FEMA this year to study the Arkansas River hydraulics and floodplain mapping. \$340,000 was awarded for this effort. Kick off meetings were held this past summer for all communities impacted by this map update.

Garfield County Phase 3 received \$346,752 from FEMA and this effort will include completing this Risk Map project through effective maps.

The CWCB has funded a hydrology update for the Yampa River basin. Work is underway currently, with paleo work conducted by Dr. Bob Jarrett.

FY17 Activities: The CWCB received a \$212,558 grant from FEMA to provide an updated hydrologic and hydraulic engineering and floodplain mapping for the Roaring Fork River and floodplain mapping services for the Colorado River within Garfield County (Phase 2). FEMA has awarded the CWCB funds for Phase 3 of this project in FY 2018. Hydraulics and Floodplain mapping tasks continue, with survey work almost complete.

The CWCB was able to leverage \$929,729 from FEMA to continue CHAMP through the FEMA regulatory process. This study involves analyzing streams across seven counties in northeast Colorado and will include 233 FIRM panel updates. The counties include Boulder, Logan, Larimer, Morgan, Weld, Washington, and Sedgwick Counties. The preliminary distribution for the Little Thompson River in Larimer County took place in January and the Consultation Coordination Officer (CCO) meeting took place in April. Larimer County public meeting was held for Little Thompson River. The appeal period will begin sometime in October 2019. The Jefferson County PMR will be entering the Appeal Period in late September or October 2019.

The CWCB previously funded a Discovery project in the Animas River Watershed. From that effort, the local communities were able to identify several mapping needs. FEMA awarded CWCB \$654,717 to fund the proposed projects that identified from the Discovery effort. This is Phase 2 and includes updated hydrologic and hydraulic engineering, (including post-fire conditions for Junction Creek), updated floodplain mapping, and sediment-bulked flooding along the Animas River, and an evaluation of ice jamming conditions in Silverton. Field survey work has been completed and additional coordination with local communities has taken place to determine if additional work to include impacts from the wild fires is needed. FEMA has awarded the CWCB funds for Phase 3 of this project, which will cover tasks through effective mapping.

The CWCB is funding a regional hydrology update for the Arkansas River from the headwaters near Leadville, Colorado to the Kansas State line. The CWCB is working with Wood (formerly Amec Foster Wheeler) on this analysis. The final report has been approved by FEMA. The final report is available on the CWCB website.

FY16 Activities: Upper White Watershed Risk Map Phase II preliminary map issuance will be delayed. A revised scope of work was submitted and approved by FEMA to conduct additional analysis. A meeting with the community officials took place in mid-December 2018 and a significant amount of coordination and discussion has taken place between Rangely, CWCB and FEMA regarding the hydrology analysis. A revised updated hydrology is being finalized by CWCB's mapping contractor and will be sent to FEMA and the local community for review concurrently. The funds from Phase 2 grant have been expended and work moving forward will be funded under Phase 3.

CWCB received \$3.4 million FEMA grant for LiDAR acquisition in Colorado for future floodplain mapping projects. This money was used to leverage an additional \$1 million from the USGS to supplement a late spring 2018 LiDAR acquisition in Eastern Colorado. This data has been collected and final deliverables are now available by request on the Colorado Hazard Mapping website (www.coloradohazardmapping.com)

A regional hydrology study update on the Colorado River near Granby to the border with Utah has been completed and the results have been approved by FEMA. The CWCB has met with nearly every local community affected by this update. Final results are available for viewing on the Colorado Hazard Mapping website and on the CWCB website. A CLOMR process is underway to conditionally accept the hydrology results with FEMA.

FY15 Activities: The Cache La Poudre Phase III project funds were re-scoped to address comments from Fort Collins, City of Greeley, and the City of Windsor. Comments are now being addressed and an updated schedule for this project will be provided this Fall 2018. FEMA provided additional funds for this effort in FY 2018.

Upper Gunnison Risk Map Project Phase 2 hydraulic tasks were recently submitted to FEMA for review. Draft results show increased flood risk throughout the Town of Crested Butte. The model was done in 2D and the mapping contractor is working on refining the results. A Flood Risk Review with local community officials took place on February 11, 2019 and the mapping contractor is working with the Town to incorporate their latest construction work.

FY14 Activities: The erosion zone study for the Salt Creek Wash near the Town of Collbran in Mesa County was approved by FEMA. This report is now available on the Risk Map website.

FEMA has provided funding to conduct a countywide approximate floodplain mapping for El Paso County, referred to as a Base Level Engineering (BLE) study. A part of this grant funding will be rescoped to fund the revised preliminary project for the El Paso County DFIRM project, which became effective on December 7, 2018.
(Thuy Patton)

2013 FLOOD RECOVERY UPDATE — In the wake of Colorado's 2013 floods the CWCB led or co-led an effort to construct 117 river restoration projects that cost over \$70 million. Most of the projects were built in Larimer, Boulder, Jefferson, Weld, and El Paso Counties across eight different watersheds. The CWCB is gathering data on all projects, and nearly 25% of the projects were chosen for robust field monitoring. Staff also recently assessed many projects during a high water tour. The intent of this qualitative assessment was to determine that the projects are adequately protecting life and property, and that they are meeting the objectives defined in the realm

of ecosystem restoration and enhancement. Many of the projects are performing well based on the visual inspection, however staff will rely on quantitative evidence to determine the long term efficacy.

The “harder elements” of most of the projects appear to be serving the design objectives. These elements include rock stabilization features, large wood revetments, soil lifts, and wood toe stabilization. The recovery program emphasized the need to use biostabilization methods, and restoration of riparian areas was high priority. These “softer elements” of the projects are also doing well. Most projects are meeting the plant survivability metrics established during contracting, however many areas are in need of weed control. Staff is working with the remaining watershed coalitions to adaptively manage the projects. This includes weed control, installation of native plants where necessary, temporary irrigation to improve survival rates, and removal of plants that are encroaching into the low flow channel (minor concern). At this point, staff has not identified any areas where adaptive management of the harder project elements are necessary, however this may change as the flows recede this summer.

Several of the coalitions have developed their own monitoring programs. These programs include citizen science volunteers. Citizen science is monitoring conducted through public participation under the direction of the coalitions. Staff is working with the coalitions to ensure that CWCB monitoring activities are complementary and not redundant to their own monitoring programs.

More information on the projects can be found at coloradoewp.com. Navigate to the “success story” page by clicking the bottom on the landing page. There are descriptions of the entire recovery effort, projects at the watershed scale, and individual projects as well. The resources on this page are being widely applied throughout the State, and staff has heard from neighboring states that value the resources as well. Monitoring results will likely be posted to this webpage as the CWCB and local coalitions develop information with the data being collected.

A staff presentation will be presented to the Board at the September meeting to discuss results. (*Chris Sturm*)

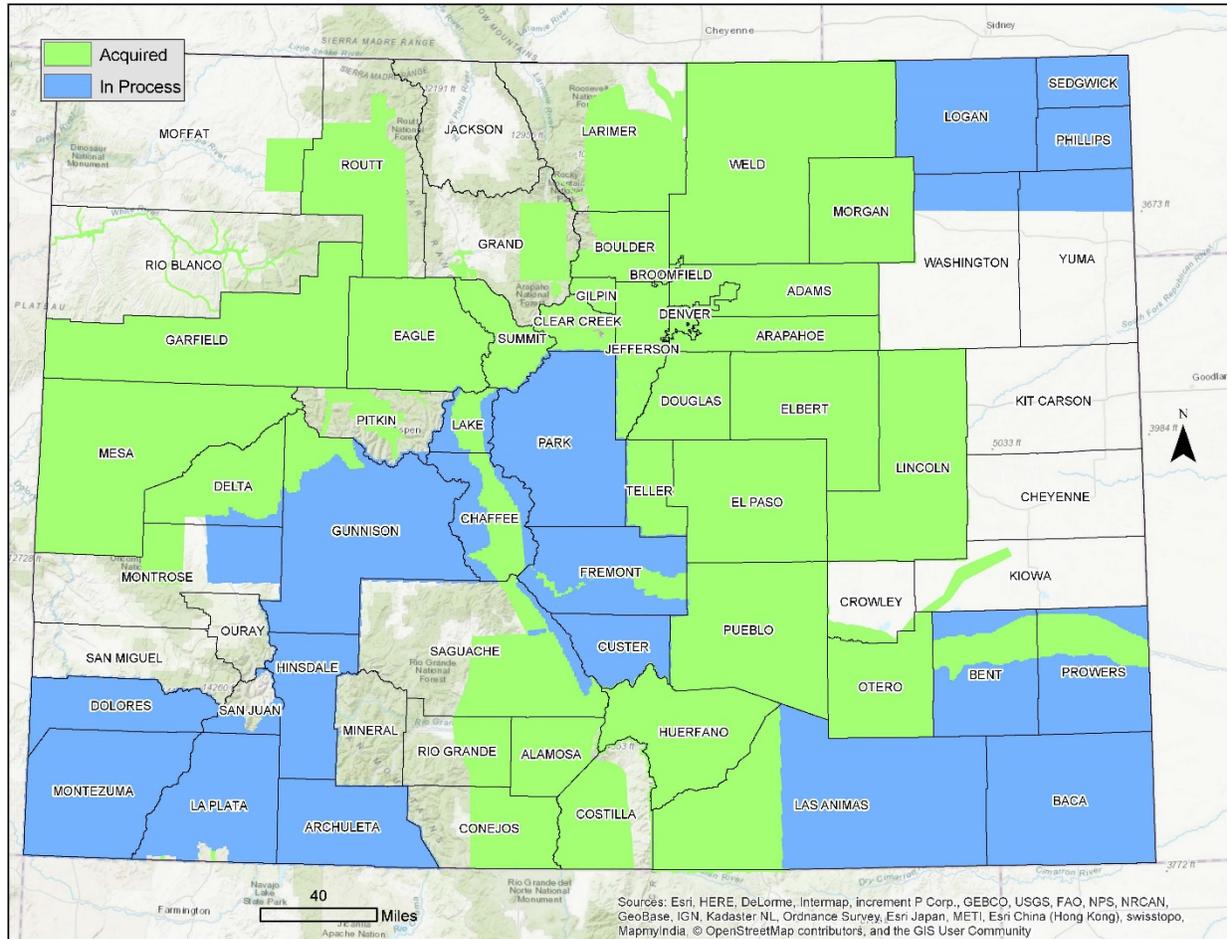
COLORADO LIDAR UPDATE — The CWCB was awarded approximately \$534,000 from the USGS for Lidar acquisition in parts of Montrose, Gunnison, Chaffee, and Lake Counties. FEMA, State, and local funds will be contributed to this project as well.

The acquisition along eastern Colorado from Weld County down to Huerfano County is complete and final deliverables are available at www.coloradohazardmapping.com. Park, Custer and Fremont Counties are in process of being acquired and it is anticipated that Park County Lidar data is now available to the public. The remaining data will be completed in late fall.

The 2018 FEMA grant for \$2.2 million will be utilized this summer for a new acquisition in southeast and northeast Colorado, as shown on map below. The task order has been completed and LiDAR vendor is currently collecting data.

The CWCB has been coordinating with DRCOG to contribute funds for their 2020 proposed acquisition around the Denver metro area. With the CWCB’s contribution the area acquired will be expanded to include small portions of Grand and Larimer Counties.

FEMA Region 8 may receive additional funding for Lidar and has submitted a request to obtain data in the remaining areas in Colorado that have not yet been acquired. There is no update to the status of this additional funding.



(Thuy Patton)

CWCB LONG TERM PROJECT MONITORING – UPPER FISH CREEK, ESTES PARK. — The September 2013 floods caused significant changes to the Fish Creek Corridor through Estes Park. This project stemmed from the NRCS initial Damage Survey report, which essentially listed all of Fish Creek in critical need. The Fish Creek neighborhoods were hit the hardest during this flood and many were left without sewer for 9 months. The Estes Valley Watershed Coalition worked with the Town of Estes Park to create a Fish Creek Master Plan. After the creation of this document, sections of Fish Creek were identified by the CWCB and NRCS as high priority project.

Fish Creek streambank erosion and sedimentation from the flood of 2013 were still impacting residences, businesses, and culverts. The project removed and reworked unstable sediment and, where feasible established a vegetated floodplain to reduce flood surfaces and store sediment. The project also provided bioengineering and rock toe protection to stabilize streambanks and in-stream structures to provide grade control. Additionally, a low-flow channel and woody material was added to create channel complexity and enhance aquatic habitat. Disturbed areas were planted with willows, trees, shrubs and/or were seeded and mulched.

The CWCB is collecting data on a reach of the project that employed the use of Temporary Wood Grade Structures (TWGS) to increase floodplain connectivity and channel complexity. This innovative approach employs large wood and live willow cuttings to establish grade, trap sediment, and promote a robust riparian ecosystem. Staff believes that this approach will create a healthier, more resilient stream reach that benefits the Fish Creek Watershed.



Post flood channel condition before project implementation. Unstable incised channel with no riparian vegetation.



After Project Implementation. Bottom to top = Upstream to Downstream. Temporary Wood Grade Structure (TWGS) can be seen on the downstream end of the picture.



Close up of TWGS one year after construction – Spring 2019



TWGS and associated riparian area present day (August 2019).
(Chris Sturm)

~AGENCY UPDATES~

FLOOD SECTION WINS THREE AWARDS FROM THE AMERICAN PUBLIC WORKS ASSOCIATION – COLORADO CHAPTER — The American Public Works Association of Colorado (APWA-CO) announced their list of annual project award winners on August 20th. The CWCB Flood Section was a winner of three of these projects.

The Colorado Emergency Watershed Protection (EWP) Program, which last year won the Engineering Excellence Award presented by the Colorado Association of Stormwater and Floodplain Managers (CASFM), was the winner of the “Disaster or Emergency Construction – Large Community” award. This program was a \$60M partnership with the NRCS to repair streams and associated infrastructure following the 2013 floods.

The “Disaster or Emergency Construction – Medium Community” award was given to the Wagonwheel Gap Road Reconstruction and Fourmile Canyon Creek Restoration Project. This was an individual project within the overall EWP program named above. The local sponsor for this project was Boulder County, and the CWCB was the funder and significant technical contributor.

The South Platte River Run Park received the “Project of the Year” Award. The group named as the winner for this project is the South Platte Working Group, a consortium of local governments along the South Platte River between Chatfield Reservoir and the City and County of Denver. CWCB is a partner member of this group and

participated heavily in the funding and implementation of this project. The project itself is a new park located near the Oxford Ave. crossing of the South Platte River in the City of Englewood near Broken Tee Golf Course. In addition to general parklands beside the river, it features a series of surfing waves that can be tuned to a variety of river flows. *(Kevin Houck)*

JOE BUSTO WINS TWO LIFETIME SERVICE AWARDS — At the 50th anniversary celebration of Urban Drainage and Flood District (now the Mile High Flood District due to a name change announced at this celebration) in July this



summer, staff member Joe Busto was recognized for his 20 years of work on the South Platte River navigating between the Corps of Engineers and local needs for the six miles of river just downstream of Chatfield spillway. Joe Busto helped with public safety projects that were balanced between: environmental, recreation, and flood conveyance.

Joe Busto is only the fourth recipient of this award in the last 50- years and was added to a list of Ken Wright, the UDFCD board chair for 20 years, and Jeff Shoemaker a well known river advocate of the SP River, who helped create Confluence Park near REI. He also helped with the Denver trails called the Mary Carter Greenway. The Mayor of Littleton Debbie Brinkman said in her speech regarding Joe, “He doesn’t follow all the rules, and he sometimes colors outside of the lines but this man gets “sh*t” done.

Joe Busto said in his speech for this award, “I have done so much work around the state where I am better known. But this award is rare and prestigious and means I had an impact in my own community”.

In related news, Joe Busto of the CWCB received the highest award the Weather Modification Association offers. Andrew Rickert received the award on behalf of Joe, who wasn’t able to attend the April conference. This award is given to someone for a lifetime achievement at adding to the art and science of weather modification. Through grants, rules updates, and other



programs, Joe has taken the weather modification program years forward during his time with CWCB. *(Kevin Houck)*

DOUG MAHAN HIRED AS NEW COMMUNITY ASSISTANCE PROGRAM COORDINATOR IN FLOOD SECTION — Doug Mahan was hired in July to the Flood Section’s Community Assistance Program Coordinator position. This position is 75% funded by FEMA, and is intended to serve as a state liaison for the National Flood Insurance Program. This position works with local communities and FEMA to insure that floodplain regulations are appropriately administered throughout the State. Doug fills the position that was previously occupied by Stephanie DiBetitto, who left in May to accept a position with FEMA Region VIII. Prior to accepting this position, Doug worked for five years as the CWCB Office Coordinator in the Administration Section. *(Kevin Houck)*

CWCB STAFF PROMOTION — The CWCB congratulates Vivian Pinelli on her promotion to CWCB Office Coordinator in the Operations and Administration Section. She replaces Doug Mahan, who accepted a position in the CWCB Watershed and Flood Protection Section. Having worked at the front desk previously, Vivian started in her new role on August 12th. She has a degree in Environmental Science and gained experience working with CWCB staff providing office, financial, and project assistance, which has prepared her for her new position. Vivian grew up in Colorado, has a great interest in the environment, and feels that the CWCB’s mission of preserving Colorado’s natural resources is of great importance. *(Tina Hetzel)*

~INSTREAM FLOW ATTACHMENTS~

- 01 Instream Flow and Natural Lake Level Program – Summary of Resolved Legal Protection Cases

~LOAN PROGRAM ATTACHMENTS~

- 01 Water Project Loan Program Interest Rates
- 02 Prequalified Project List and Loan Prospect Summary
- 03 Design and Construction Status Report
- 04 Loan Repayment Delinquency Report
- 05 Construction Fund, Special Funds and Severance Tax Funds Non-Reimbursable Investments Status Report Fiscal Year 2018-2019

**September 18-19, 2019 Board Meeting
Instream Flow and Natural Lake Level Program
Summary of Resolved Legal Protection Cases**

The Board's Instream Flow ("ISF") Rule 8i(1) states:

In the event the pretrial resolution includes terms and conditions preventing injury or interference and does not involve a modification, or acceptance of injury or interference with mitigation, the Board is not required to review and ratify the pretrial resolution. Staff may authorize its counsel to sign any court documents necessary to finalize this type of pretrial resolution without Board ratification.

Staff has resolved issues of potential injury in the following water court cases. Staff had (A) filed statements of opposition in some of the cases; (B) obtained agreement letters-in-lieu of filing statements of opposition in other cases, and (C) sent letters to applicants explaining why staff did not file statements of opposition in a few cases, as described below.

A. STATEMENTS OF OPPOSITION

- (1) Case No. 16CW3160 (Water Division 1) - Application of City of Boulder; and**
- (2) Case No. 17CW3212 (Water Division 1) - Application of City of Lafayette, and City of Boulder**

CWCB originally filed Statements of Opposition in these two cases, which were ratified at the Board's March 2018 meeting. However, because of the ISF acquisitions in these two cases, parties agreed to realign the CWCB's party status from opposer to co-applicant for the purpose of obtaining a decreed right to use the water storage right claimed in this case for instream flow purposes under the Agreement. On July 12, 2019, the Court granted the unopposed Motions to remove CWCB as an opposer in each case, and to add CWCB as a Co-Applicant in each case for the limited purpose of obtaining a decreed right to use water released from the Gross Environmental Pool for instream flow purposes in accordance with an Agreement between Boulder and the CWCB. CWCB will continue to work with the other applicants to protect the existing ISF water rights from potential injury from these applications. Both cases have been re-referred to the water judge.

- (3) & (4). Case No. 17CW3152 (Water Division 1) consolidated with Case No. 17CW3057 (Water Division 2) - Rules Governing the Review of a Substitute Water Supply Plan for the Lease, Loan, or Trade of a Decreed Agricultural Water Protection Water Right**

The Board ratified these Statements of Opposition at its January 2018 meeting. The State Engineer filed applications with the Division 1 and Division 2 Water Courts for approval of the Rules Governing the Review of a Substitute Water Supply Plan for the Lease, Loan, or Trade of a Decreed Agricultural Water Protection Water Right (the "Rules"), pursuant to 37-80-123, C.R.S. (2016). The State Engineer adopted the Rules on October 23, 2017.

These rules include in the definition of "Point of Diversion" in provision 2.8 "the decreed upstream location of a reach of the natural stream where the Lease Water will be put to beneficial use," so as to not preclude use of the changed and leased portion of an agricultural

water protection water right for instream flow purposes in a SWSP approved by DWR, which is the CWCB's primary interest in this rulemaking.

The Court granted the State Engineer's Unopposed Motion requesting the Court to resolve all protests, and the Rules were made effective on April 22, 2019, the date of the Order. The case is now closed.

(5) Case No. 17CW3210 (Water Division 1) - Application of City of Arvada

The Board ratified this Statement of Opposition at its March 2018 meeting. Applicant requested an Approval of Change of Rights, Plan for Augmentation, including Exchanges, and Appropriation of Return Flows. Staff, in cooperation with the Attorney General's Office, has negotiated a settlement to ensure that the CWCB's instream flow water rights will not be injured. CWCB's stipulation with applicant was approved by the water court on 8/27/2019. A 10-day trial is set to begin on 1/27/2020.

The CWCB holds many instream flow water rights in the South Platte and other basins that could have been injured by the application. The Applicant and CWCB have agreed to the following protective decree terms and conditions:

"47. Term and condition for Colorado Water Conservation Board. Any contract, sale, lease, or other means to otherwise dispose of the subject ditch water rights to third parties, which is intended to replace depletions that occur within or upstream of a stream reach for which the Colorado Water Conservation Board ("CWCB") holds a decreed instream flow water right by means other than the exchanges described in paragraphs 15. B, F, H and J, shall be implemented so as not to deprive any CWCB instream flow water rights of water to which those rights are entitled to by priority. In addition, unless otherwise publicly noticed, such third party shall provide written notice to the CWCB of its right to use the subject water rights as part of its: 1) application for a substitute water supply plan; 2) application for a plan for augmentation; or 3) procedure for adding an augmentation source to a decreed plan for augmentation, whether or not the decreed plan requires such notice."

(6) Case No. 16CW3103 (Water Division 2) - Application of Board of Water Works of Pueblo, Colorado

The Board ratified this Statement of Opposition at its March 2017 meeting. Applicant requested appropriative rights of exchange using several sources of water through several streams, including through some instream flow reaches, to several points of storage. In addition to traditional and defined appropriative rights of exchange, Applicant also requested general categories of "contract exchanges" and "inter-reservoir exchanges." Staff, in cooperation with the Attorney General's Office, has negotiated a settlement to ensure that the CWCB's instream flow water rights will not be injured. CWCB's stipulation with applicant was approved by the water court on 8/9/2019. A 14-day trial is set to begin on 11/4/2019.

The CWCB holds many instream flow water rights in the Arkansas River Basin, including the following in Division 2, that could have been injured by this application.

Case Number	Stream	Upper Terminus	Lower Terminus	CFS Rate (Dates)	Approp. Date
75W-4271	Lake Creek	Pt. of discharge Twin Lakes	confl Arkansas River	15 (1/1-12/31)	05/01/1975
77W-4654	Lake Fork	Sugar Loaf Dam	confl Willow Creek	15 (1/1-12/31)	01/19/1977
77W-4655	Lake Fork	confl Willow Creek	confl Arkansas River	20 (1/1-12/31)	01/19/1977

The Applicant and CWCB have agreed to the following protective decree terms and conditions:

"f. All diversions by exchange shall not exceed, on a daily basis, the lesser of either (1) the rate of flow that would have been released from a receiving on-channel reservoir facility had no exchange been made and had no storage right junior to the priority of the exchange been exercised to store water in the receiving reservoir (including rates of inflow to the reservoir in excess of the outlet capacity that would otherwise be stored inadvertently), or (2) the rate of delivery of substitute supply at the exchange-from point(s); (3) the rate at which the exchange is in priority within the relevant exchange reach; (4) the maximum diversion rate of flow from the stream in the exchange reach that will nonetheless continue to maintain a live stream; and (5) the physical capacity of the receiving structure at the exchange-to point that is legally available to Pueblo Water. The rate and time at which water is released from reservoirs for exchange is subject to control by the Division Engineer pursuant to C.R.S. § 37-87-102(4), which can reduce the amount of water available for subsequent exchange or use by Pueblo Water. Water diverted into storage by exchange shall be subject to any appropriate evaporation, leakage and overtopping charges, which can reduce the amount of water available for subsequent exchange or use by Pueblo Water. All water, if any, diverted out-of-priority under these exchanges, must be released back to the stream within 24 hours.

i. Notification of Water Commissioner. Pueblo Water shall provide 24 hours prior notice to the Water Commissioner or Commissioners of the proposed operation of any exchanges pursuant to this Decree, and shall receive approval from the Water Commissioner(s) before operating an exchange. The notification to the Water Commissioner(s) shall include, for each exchange, the maximum rate of the exchange in cfs, the source(s) of substitute supply, the location(s) of delivery of the substitute supply, the exchange-to point(s) and the duration of the exchange(s).

"j. Terms and Conditions for CWCB Instream Flows: Pueblo Water's claimed exchanges in this case are junior to the Colorado Water Conservation Board's instream flow water rights on Lake Creek decreed in Case No. W-4271 and on Lake Fork Creek decreed in Case Nos. W-4654 and W-4655, and such exchanges shall not be operated by Pueblo Water so as to deprive the foregoing instream flow water rights of water to which such rights are entitled by priority. When providing the Water Commissioner(s) with the notice required by paragraph 20.i of this Decree, Pueblo Water shall also provide notice to CWCB of the operation of exchanges under this Decree to Twin Lakes Reservoir, described in paragraph 16.f of this Decree, and Turquoise Reservoir, described in paragraph 16.g of this Decree, either by use of the Division Engineer's

online electronic request methodology on the Arkansas River Decision Support System, if available, for the exchanges, or by other alternative notice mutually acceptable to Pueblo Water and CWCB.”

(7) Case No. 18CW0051 (Water Division 4) - Application of Robert K. Robbins

The Board ratified this Statement of Opposition at its March 2019 meeting. Applicant requested a change of water right to add an alternate point of diversion. Staff, in cooperation with the Attorney General’s Office, has negotiated a settlement to ensure that the CWCB’s instream flow water rights will not be injured. CWCB’s stipulation was filed with the water court on 8/30/2019.

The CWCB holds instream flow water rights, including the following in Water Division 4 in the Upper Gunnison watershed, that could have been injured by this application:

Case Number	Stream	Upper Terminus	Lower Terminus	CFS Rate (Dates)	Approp. Date
84CW0377	Steuben Creek	confl W Steuben Creek	confl Blue Mesa Reservoir	1 (1/1 - 12/31)	05/04/1984

The Applicant and CWCB have agreed to the following protective decree terms and conditions:

“11. Under section 37-92-102(3)(b), C.R.S. (2018), Applicant and CWCB acknowledge that Applicant’s use of the requested alternate point of diversion for irrigation of approximately 25-30 acres from that point was made under appropriation or practices in existence at the time of CWCB’s appropriation of the instream flow water right on Steuben Creek decreed in Case No. 84CW0377.

17. While CWCB's instream flow water right decreed in Case No. 84CW0377 and described herein is subject to the Applicant's use under section 37-92-102(3)(b), the change of water right decreed herein will be administered subject to the prior appropriation system in relation to all other water rights. Administration of this provision shall not result in a general subordination of the CWCB instream flow water right to any other water rights.”

(8) Case No. 18CW3211 (Water Division 5) - Application of Sunny Ranch, LLC

The Board ratified this Statement of Opposition at its March 2019 meeting. This is an Application for enlargement of existing surface diversion right, enlargement of existing storage right, absolute storage right, and plan for augmentation and conditional right of exchange. Staff, in cooperation with the Attorney General’s Office, has negotiated a settlement to ensure that the CWCB’s instream flow water rights will not be injured. The CWCB’s stipulation was approved by the water court on 7/23/2019. Referee’s Ruling was entered on August 20, 2019.

The CWCB holds instream flow water rights, including the following in Water Division 5 in the Roaring Fork River Watershed, that could have been injured by this application:

Case Number	Stream	Upper Terminus	Lower Terminus	CFS Rate (Dates)	Approp. Date
85CW0646	Roaring Fork River	confl Maroon Creek	confl Fryingpan River	30 (10/1 - 3/31) 55 (4/1 - 9/30)	11/08/1985
85CW0639	Roaring Fork River	confl Fryingpan River	confl Crystal River	75 (10/1 - 3/31) 145 (4/1 - 9/30)	11/08/1985

The Applicant and CWCB have agreed to the following protective decree terms and conditions:

"G. Existing Water Rights: The original water rights decreed to Interspace Pipeline and Eastwick Reservoir described in paragraphs 6.A.i and 6.B.i, above, are decreed solely for irrigation and may not be stored in Snow Belle Pond or used to replace evaporation or augment depletions.

H. Sunny Ranch recognizes that the Colorado Water Conservation Board ("CWCB") has existing instream flow water rights decreed in Case Nos. 85CW646, 85CW639, and 10CW184 on the Roaring Fork River that were decreed prior to the filing of the Application in this Case No. 18CW3211.

I. The exchanges on the Roaring Fork River claimed herein are junior to CWCB's decreed instream flow water rights on the Roaring Fork River in Case Nos. 85CW0646, 85CW0639, and 10CW184. These exchanges shall not be operated when such decreed instream flows are not met and the stream is being administered.

J. At times when CWCB is using its acquired water right on the Roaring Fork River between Maroon Creek and the Fryingpan River, decreed in Case No. 10CW184 (originating from the Stapleton Brothers headgate on Maroon Creek), such acquired instream flow water cannot be used for this exchange."

B. LETTERS-IN-LIEU

The following cases were resolved by Staff through negotiated letters in lieu of filing water court Statements of Opposition. This method of settlement is preferred when facts and time allow such negotiation before the Statement of Opposition period ends. In each case, CWCB staff will continue to monitor the proposed rulings and decrees. In each case, Applicant has agreed to not oppose a motion to intervene if the agreed upon terms are not included. The following were negotiated to resolution:

(1) Case No. 19CW3080 (Water Division 1) - Application of Town of Estes Park

During the April 2019 Water Court Resume Review, CWCB staff identified concerns regarding potential injury to CWCB's instream flow water rights decreed in Case Nos. 89CW0200, 89CW0205, and 89CW0206 on the Big Thompson River. This case was resolved with CWCB by a letter agreement, dated July 17, 2019, by which CWCB agreed not to file a statement of opposition, provided Applicant incorporates the following terms and conditions into any draft and final decrees and Applicant agrees to not oppose a motion to intervene by CWCB if such terms and conditions are not included:

"Applicant recognizes that the Colorado Water Conservation Board's existing instream flow water right decreed in Case Nos. 1-89CW206, 1-89CW200, District Court, Water Division No. 1 on the Big Thompson River were decreed prior to the filing of this case.

The claimed Exchanges extend from the location of replacement water introduced to the stream up to the several exchange-to points with appropriation dates of April 30, 2019 and July 13, 1998 (depending of the exchange-to points).

The Exchanges claimed herein are junior to CWCB's previously decreed instream flow water rights on the Big Thompson River and will not be operated when such decreed instream flow water rights that are within the particular exchange reach are not met and the stream is being administered."

(2) Case No. 19CW3069 (Water Division 5) - Application of Eagle Rocks Aggregate, Inc.

During the June 2019 Water Court Resume Review, CWCB staff identified concerns regarding potential injury to CWCB's instream flow water rights decreed in Case No. 80CW0124 on the Eagle River. This case was resolved with CWCB by a letter agreement, dated August 27, 2019, by which CWCB agreed not to file a statement of opposition, provided Applicant incorporates the following terms and conditions into any draft and final decrees and Applicant agrees to not oppose a motion to intervene by CWCB if such terms and conditions are not included:

"Applicant recognizes that the Colorado Water Conservation Board's existing instream flow water right on the Eagle River decreed in Case No. 80CW0124 was decreed prior to the filing of this case.

The claimed Exchange on the Eagle River extends from the location of replacement water introduced to the stream up to the point of depletion for the Tower Pit Well with an appropriation date of June 1, 2019. Because the Eagle River Exchange claimed herein is junior to CWCB's previously decreed instream flow water right on the Eagle River, it shall not be operated when such decreed instream flows that are within the particular exchange reach are not met and the stream is being administered.

When the decreed instream flow water right downstream of the Tower Pit Well is not met and the stream is being administered, applicant shall make replacements under its augmentation plan from its upstream source on the Eagle River, Eagle Park Reservoir."

C. LETTERS to APPLICANT - NO OTHER ACTION TAKEN

CWCB staff sent letters to the Applicant with a copy to the State and Division Engineers for the purpose of notifying the Applicant that while staff sees a potential for injury to ISF water rights from the specified claims in the application, staff did not file a Statement of Opposition based upon its understanding of the law as it applies to those claims, and in reliance on priority water rights administration. In

addition, the letter stated that if CWCB places a call for its ISF water rights to be administered within an intervening reach, the Division Engineer's enforcement of the call could curtail the exercise of some of the claimed uses and mechanisms of uses.

- (1) Case No. 19CW3074 (Water Division 1) - Application of Arapahoe County Water and Wastewater Authority;
- (2) 19CW3084 (Water Division 1) - Application of East Cherry Creek Valley Water and Sanitation District; and Case No.
- (3) Case No. 19CW3075 (Water Division 1) - Application of Arapahoe County Water and Wastewater Authority and East Cherry Creek Valley Water Sanitation District, United Water and Sanitation District, and 70 Ranch, LLC.

During the April and May 2019 Water Court Resume Review, CWCB staff identified concerns regarding potential injury to CWCB's instream flow water rights in their review of the above applications for water rights and plan for augmentation and substitution. Rather than filing statements of opposition, CWCB staff sent letters to the applicant with copies to the State and Division Engineers.

The letters state the following:

"Based upon the information provided in the application, as described below, CWCB believes that a decree in this case could result in injury to ISF water rights held by the Board in the South Platte Basin and other basins to which Applicant might exchange or contract this water for use by others. However, for the reasons listed below, CWCB staff has decided to not file a Statement of Opposition (SOP) to the application.

1. The claims in this case to use the subject water rights in a place of use "as necessary to meet contractual water service obligations," and to store the water "in any facility ACWWA, ECCV, are "legally permitted to store water,"¹ does not request, and the court cannot grant, a water right priority for any undefined "exchanges" or other type of newly depleted reaches of stream that could occur from such contracted uses². Consequently, such uses may only occur through: (a) administrative approval or a

¹ Application in 19CW3084, paragraphs 6.1.5, 6.2, 7.1.5, and 7.2.

Application in 19CW3074, paragraph 2.7.6, at page 5-6. (The claims in this case to use the subject water rights by "exchange with other water systems and with other water users, and for all other beneficial uses within ACWWA's current or future service area, and/or the service area of others with whom ACWWA may contract to provide water...").

Application in 19CW3075, paragraph 2.7.6, at page 7 (The claims in this case to use the subject water rights by "exchange with other water systems and with other water users, and for all other beneficial uses within ECCV's current or future service area, and/or the service area of others with whom ECCV may contract to provide water...").

² One example of newly depleted reaches of stream that could occur as a result of the contracts requested in this application could result from Applicant providing return flow replacement water to a point downstream of the historical return flow accrual or decreed point of replacement.

subsequent decree; and (b) without injury to other water rights, including ISF water rights that may exist on intervening depleted reaches.

2. The water use occurring by contract and administrative approval is subject to all existing decreed water rights, whether junior or senior to the priority of the claimed water rights in this case. Therefore, no injury should occur to CWCB's ISF water rights. CWCB will work closely with the Division of Water Resources to monitor such uses to ensure that CWCB's ISF water rights are not injured."

"Although staff is not filing a Statement of Opposition, under state water law, CWCB has a fiduciary duty to protect the ISF water rights that it holds on behalf of the people of the state of Colorado, *Aspen Wilderness Workshop, Inc. v. CWCB*, 901 P.2d 1251 (Colo. 1995). CWCB may not reduce its water rights by accepting injury absent Board approval, and pursuant to specific instream flow rules.

The purpose of this letter is to notify the Applicant that while staff sees a potential for injury to ISF water rights from the specified claims in the application, staff is not filing a SOP based upon its understanding of the law as it applies to those claims, and in reliance on priority water rights administration. Please note that if CWCB places a call for its ISF water rights to be administered within an intervening reach, the Division Engineer's enforcement of the call could curtail the exercise of some of the claimed uses and mechanisms of uses."



COLORADO

**Colorado Water
Conservation Board**

Department of Natural Resources

1313 Sherman Street
Denver, CO 80203

P (303) 866-3441
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Jared Polis, Governor

Dan Gibbs, DNR Executive Director

Rebecca Mitchell, CWCB Director

TO: Colorado Water Conservation Board Members

FROM: Kirk Russell, P.E., Finance Section Chief

Board Meeting: September 18-19, 2019 Board Meeting

Directors Report: Water Project Loans
Interest Rates

Introduction

The CWCB establishes interest rates bi-monthly for the Water Project Loan Program (per Financial Policy #7).

The current rates for a 30-year term are as follows:

- 1.55% - Agricultural
- 2.15% - Low-income Municipal
- 2.45% - Middle-income Municipal
- 2.75% - High-income Municipal
- 6.00% - Commercial
- 2.00% - Hydroelectric

The standard loan term is 30 years. Rates are reduced by 0.25% for 20-year loans, and by 0.65% for 10-year loans. Rates are increased by 0.25% for 40-year loans.

The rates can also be found on the CWCB web site under the "Loans and Grants" tab. These rates will be applicable for loans presented at this Board meeting.





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Jared Polis, Governor

Dan Gibbs, DNR Executive Director

Rebecca Mitchell, CWCB Director

TO: Colorado Water Conservation Board Members

FROM: Matthew Stearns

DATE: September 18-19, 2019 Board Meeting

DIRECTORS REPORT: Water Project Loan Program
Prequalified Project List and Loan Prospect Summary

The Finance Section compiles a list of prequalified projects for the Water Project Loan Program. In order to be included on this list, potential borrowers must submit a Loan Application and three years of financial statements to the CWCB staff. In addition, Borrowers requesting to be placed on the Prequalification Project List have a defined project, have performed preliminary engineering, and have a reasonable estimate of the project costs.

Projects on this list fit the initial criteria of the Water Project Loan Program; however, the list does not constitute loan approval. In order to receive a loan, borrowers must additionally submit a completed Loan Feasibility Study for review by CWCB staff. Staff will then prepare a recommendation to the Board for approval at a future CWCB meeting. Projects will remain on this list for one year from the date of the application or until Board approval of a loan.



Prequalified Project List

BORROWER	PROJECT NAME	APPLICATION DATE	BASIN	PROJECT DESCRIPTION	PROJECT COST/LOAN AMOUNT
Previously Approved Applications					
<i>No prequalified projects at this time</i>					
Total					\$ -



The Finance Section also compiles a list of potential borrowers/projects for the Water Project Loan Program. This list represents borrowers that have contacted the CWCB about a potential need for funding but have not submitted a loan application and loan feasibility study.

BORROWER	PROJECT NAME	POTENTIAL LOAN AMOUNT
South Platte		
NISP Participants	NISP	\$100,000,000
Woods Lake Mutual Ditch Company	Culvert Replacement	\$150,000
Town of Kersey	Water Line Project	TBD
Tunnel Water Company	Ditch Rehabilitation	\$8,800,000
Riverside Reservoir and Land Company	Ditch Rehabilitation	\$250,000
Town of Bennett	Raw Water Tank	\$500,000
Evergreen Metro District	Evergreen Dam Enlargement	TBD
Left Hand Water District	Dry Creek Reservoir	TBD
Roxborough Water & Sanitation District	Reservoir Rehabilitation	TBD
Shawnee Water Consumers Association	Reservoir Rehabilitation	\$200,000
Boulder and White Rock Ditch & Res. Co.	Reservoir Dredging	TBD
Western Mutual Ditch Company	Reservoir Dredging	TBD
Bergen Ditch and Reservoir Company	Reservoir Rehabilitation	TBD
Louviers Water and Sanitation District	Regional Connection	TBD
City of Fort Collins	Irrigation Ditch Piping	\$20,000,000
Northern Colorado WCD	Windy Gap Firming (increase)	\$40,000,000
Cherry Creek Water Project Authority	Walker Pit	\$8,000,000
Subtotal		\$177,900,000
Arkansas		
Oxford Ditch	Siphon Repair	\$1,800,000
Town of Manitou Springs	Raw Water Pipeline	\$3,000,000
City of Woodland Park	Storage Project	\$1,000,000
Fort Lyon Canal Company	Adobe Creek Enlargement	\$8,000,000
Deweese Ditch and Reservoir Co.	Reservoir Enlargement	TBD
Holbrook Ditch Company	Reservoir Enlargement	TBD
Lake County	New Reservoir	TBD
Catlin Canal Company	Canal System Improvement	\$1,500,000
Empire Lodge HOA	Water Rights Purchase	\$700,000
Southeastern Colorado WCD	Arkansas Valley Conduit (increase)	\$40,000,000
Subtotal		\$56,000,000
San Miguel/Juan		
Town of Bayfield	Ditch Piping Project	\$500,000
Redmesa Reservoir and Ditch Company	Redmesa Reservoir Enlargement	\$5,000,000
City of Cortez	Distribution System (Loss Prevention)	\$10,000,000
Subtotal		\$15,500,000



BORROWER	PROJECT NAME	POTENTIAL LOAN AMOUNT
Colorado		
Town of Breckenridge	Goose Pasture Tarn Dam	\$20,000,000
Orchard Mesa Irrigation District	Lateral Piping	\$300,000
Silt Water Conservancy District	Harvey Gap Reservoir	\$300,000
Middle Ditch	Ditch Piping Project	TBD
Subtotal		\$20,600,000
Gunnison		
Gunnison County Electric	Taylor Park Hydro	\$1,000,000
Subtotal		\$1,000,000
North Platte		
No projects at this time		
Subtotal		\$0
Rio Grande		
Manasa Land & Irrigation Co.	Ditch Rehabilitation	\$6,000,000
Baca Grande Water and Sanitation District	Water Rights Purchase	\$1,000,000
Sanchez Ditch and Reservoir Co.	Dam Rehabilitation	\$4,000,000
Rio Grande WCD - Subdistrict #1	Water Rights Purchase	\$5,000,000
Trinchera Water Conservancy District	Water Rights Purchase or Lease	\$2,000,000
Town of Center	Water Meter Project	\$200,000
Town of South Fork	Water Rights Purchase	\$450,000
Subtotal		\$18,650,000
Yampa		
Town of Oak Creek	Reservoir Rehabilitation	\$500,000
Rio Blanco Water Conservancy District	Wolf Creek Reservoir	\$100,000,000
Subtotal		\$100,500,000





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TO: Colorado Water Conservation Board Members

FROM: Kirk Russell, P.E., Finance Section Chief
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Board Meeting: September 18-19, 2019 Board Meeting

Directors Report: Water Project Loan Program
Design & Construction Status Report

The CWCB Loan Program has Substantially Completed nine (9) projects in Calendar Year 2019 as shown in Table 1. There are currently fifty seven (57) projects authorized to receive loan funding totaling \$392 million. There are forty four (43) projects currently under contract and in the Design and Construction phase totaling \$225 million.

The attached spreadsheet summarizes the status of the projects. A detailed description about each project is provided in the digital version of the Director's Report.

TABLE 1

	Borrower	Project	County	Loan Amount	Complete
1	Lake Durango Water Authority	Source Water Supply Project	La Plata	\$2,525,000	1/1/2019
2	Riverside Reservoir and Land Company	Riverside Reservoir Spillway Project	Weld	\$1,493,650	5/1/2019 (a)
3	Parker Water and Sanitation District	Water Infrastructure and Supply Efficiency (WISE)	Douglas/Arapahoe	\$5,650,933	6/1/2019
4	Overland Ditch and Reservoir Company	Overland Reservoir Rehabilitation	Delta	\$271,655	6/1/2019
5	Lamar, City of	Repurposing of Wells 12 and 13	Prowers	\$83,200	7/1/2019
6	Trinchera Irrigation Company	Mountain Home Dam Outlet Rehabilitation Phase III	Costilla	\$643,715	9/1/2019 (b)
7	Central Colorado Water conservancy District	Chatfield Reallocation	Arapahoe, Douglas, Park, Weld	\$19,812,059	9/1/2019 (c)
8	Bonus Ditch Company	St. Vrain Diversion Replacement	Longmont/Boulder	\$1,144,351	9/1/2019
9	Castle Pines North Metropolitan District	Chatfield Reallocation	Arapahoe, Douglas, Park, Weld	5,462,484	9/1/2019 (d)
			Total	\$37,087,047	

Calendar Year - 2019 has added or preserved 87,244 acre-feet of reservoir storage (a) 64,000; (b) 17,964; (c) 4,274; (d) 1,006



Projects	County	Loan Amount	Design Status	Const. Start/End	Const Status	PM	Status Description/Update	
Projects in Design or Construction								
1	Arabian Acres >Automatic Meter Implementation CT2019-2792	Teller	\$404,000	100%	Fall 2018 - Fall 2020	0%	RP	Approx. half of meters connected. Continuing construction through completion.
2	Bessemer Irrigation Ditch Company >Landslide Stabilization and Ditch Lining CT2018-2832	Pueblo	\$909,000	100%	March 2018 - Dec 2019	98%	RP	Ditch stabilization phase complete. Backfill complete along wall. Winter 2019 design/bid ditch lining. Ditch lining complete by 3/17/2019.
3	Big Elk Meadows Association >Emergency Raw Water Storage Repair CT2015-039 (C150391)	Boulder/ Larimer	\$2,020,000	80%	July 2014 - Dec 2019	70%	JH/CB	Project will rebuild 5 dams damaged in 2013 flood. 3 dams completed: Mirror Dam (2015), Rainbow Dam (2016), Willow Dam (2017). Meadow Dam construction started Oct 2017. Sunset Dam design pending. Loan increased at March 2017 Board meeting, 0% interest thru 2/2020.
4 - CHATFIELD Reallocation Project - First Cost of Storage								
a	Castle Pines North Metropolitan District >(C150404A) CT2018-1617	Arapahoe Douglas Park Weld	\$723,160	N/A	N/A	0%	JH/KR	This contract is to provide reimbursement for the Chatfield Reallocation Project, specific to the "first cost of storage." Payment will be due once storage in the new reservoir pool is allowed (after Phase 1 Mitigation contract is complete).
b	Centennial Water & Sanitation District >(C150405A) CT2016-2053	Arapahoe Douglas Park Weld	\$4,978,290	N/A	N/A	0%	JH/KR	
c	Center of Colorado Water Conservancy District >(C150406A) CT2016-2047	Arapahoe Douglas Park Weld	\$94,637	N/A	N/A	0%	JH/KR	
d	Central Colorado Water Conservancy District >(C150407A) CT2016-2057	Arapahoe Douglas Park Weld	\$3,187,560	N/A	N/A	0%	JH/KR	
5- CHATFIELD Reallocation Project - Phase 1 Mitigation								
a	Castle Pines North Metropolitan District >(C150404B) CT2018-1616	Arapahoe Douglas Park Weld	\$0	100%	Sept 2017 - Fall 2019	100%	JH/KR	This contract is to provide reimbursement for the Chatfield Reallocation Project, for engineering, recreation facilities construction, on-site mitigation, off-site mitigation, and mitigation monitoring. Phase 1 covers the majority of work required before storage is allowed. All construction funds will come out of Phase 1 contract until fully disbursed, and then construction funds will come out of Phase 2's contract.
b	Centennial Water & Sanitation District >(C150405B) CT2016-2055	Arapahoe Douglas Park Weld	\$37,573,717	100%	Sept 2017 - Fall 2019	100%	JH/KR	
c	Center of Colorado Water Conservancy District >(C150406B) CT2016-2048	Arapahoe Douglas Park Weld	\$511,363	100%	Sept 2017 - Fall 2019	100%	JH/KR	
							\$19,522,290	
A majority of the park has reopend and nearly all onsite construction activities will be completed by fall 2019. Phase 1 contracts were fully disbursed in the July 2019 pay request with exception of Center of Colorado's contract as they are paying cash instead of using its loan funds.								

	Projects	County	Loan Amount	Design Status	Const. Start/End	Const Status	PM	Status Description/Update
d	Central Colorado Water Conservancy District >(C150407B) CT2016-2058	Arapahoe Douglas Park Weld	\$0	100%	Sept 2017 - Fall 2019	100%	JH/KR	
6 - CHATFIELD Reallocation Project - Phase 2 Mitigation								\$7,000,310
a	Castle Pines North Metropolitan District >(C150404C) CT2018-1990	Arapahoe Douglas Park Weld	\$1,587,720	100%	Fall 2019 - Summer 2020	10%	JH/KR	This contract is to provide reimbursement for the Chatfield Reallocation Project, for engineering, recreation facilities construction, on-site mitigation, off-site mitigation, and mitigation monitoring. Phase 2 covers the construction work remaining after Phase 1 loan funds are fully depleted. Phase 2 began disbursment of funds with the July 2019 pay request. It was originally estimated Phase 2 work could last until 2028. However, the on-site mitigation in Phase 1 is proving more effective than planned, lessening the amount of off-site mitigation in Phase 2. It is currently anticipated that Phase 2 could be completed by summer 2020.
b	Centennial Water & Sanitation District >(C150405C) CT2016-2056	Arapahoe Douglas Park Weld	\$10,934,260	100%	Fall 2019 - Summer 2020	10%	JH/KR	
c	Central Colorado Water Conservancy District >(C150407C) CT2016-2060	Arapahoe Douglas Weld	\$7,000,310	100%	Fall 2019 - Summer 2020	10%	JH/KR	
7	Centennial Irrigating Ditch Company >Centennial Diversion Replacement CT2018-1999	Rio Grande	\$232,300	100%	Jan 2018 - Fall 2019	95%	JH/CB	This project is part of the Rio Grand Five Ditches WSRF Project and consisted of replacing the existing diversion dam. Contractor mobilized to site in January 2018 and construction was substantially completed by the end of March 2018. Miscellaneous site work will occur.
8	Central Colorado Water Conservancy District >Shores Lakes Pond C Infrastructure Improvement CT2018-2851	Weld	\$2,367,440	100%	Feb 2019 - Dec 2019	75%	JH/CB	This project will increase the efficiency by which the Shores Lakes can capture and release water for augmentation use by making infrastructure improvements at the site of an old gravel pit. Contractor mobilized to site at the end of February. Construction to be complete by Dec 2019.
9	Chilcott Ditch Comapny >Chilcott Augmentation Station CT2019-2253	El Paso	\$505,000	100%	Jan 2019 - Jun 2019	99%	RP	Construction to begin in Spring 2019. Out for bid November 2018. PreCon 12/18/2018. Construction begins Jan2019.
10	Church Ditch Water Authority >Ditch System Improvements CT2018-1335	Jefferson	\$3,615,800	90%	Dec 2017 - Apr 2020	90%	RP	Loan covers 5 individual projects within the Church Ditch system. Leyden Flushing Structure, Headgate 53 Retaining Wall complete. The Area 15 Ditch Lining, Ford Street Siphon, and Legacy Farms Culvert complete. Area 15 Ditch lining complete April 2019.
11	Consolidated Ditch and Headgate Co >Consolidated Diversion and Headgate Replacement CT2018-1017	Rio Grande	\$1,010,000	100%	Jan 2018 - Fall 2019	95%	JH/CB	This project is part of the Rio Grand Five Ditches WSRF Project and will consist of replacing the existing diversion dam and headgate. Headgates were completed over spring 2018 and diversion dam completed spring 2019. Misc. site work (guard rails, bank stabilization) to occur fall 2019.
12	Duke Ditch Company >Piping the Duke Ditch CT2017-915 CTGG1 2017-212 (WSRF)	Delta	\$90,900	100%	No Est.	0%	AM	NRCS finalized the design in August 2018. Federal grant expired. Company is evaluating options of reapplying for federal funding in 2019 or possibly applying for a loan increase and completing project without federal grant dollars.
13	Florida Consolidated Ditch Company >Hess Lateral Improvement CT2019-2034 CTGG1 2020-XXXX (WSRF)	La Plata	\$1,085,750	0%	Spring 201x - Fall 202x	0%	KR	May bid proj before loan contracting. concern \$ total \$1M CDOT money. Using CDOT seed \$ for ROW Const fall of 2019 (two seasons)

	Projects	County	Loan Amount	Design Status	Const. Start/End	Const Status	PM	Status Description/Update
14	Fort Lyon Canal Company >Adobe Creek Dam Rehabilitation CT2018-1960 CTGG1 2018-806 (WSRF)	Bent	\$8,181,000	100%	Sept 2018 - June 2020	99%	RP	Waiting Dam Safety conditional approval 8/31/2018. Out for bid 7/31/2018. Award 9/5/2018. PreCon 9/13/2018. Work continues placement mud mat, outlet conduit, intake gate tower and left toe drain 2/2018. Final walk-thru 6/2019. Seeding/Reveg will follow in Fall2019/Spring2020
15	Fowler, Town of >Augmentation Pipeline Project C150359 (CT2015-054)	Otero	\$277,245	100%	Fall 2018 - Fall 2019	0%	RP	Engineering completed. Easement & appraisal processes causing delay; may result in litigation per Town 5/23/17. Bid process on hold. Town Clerk- no updates, no response on extension letter request 11/2018. May 2019 update: per L.Spady Oxford Farms Ditch and Fowler are at stand-still with easement issues with property owners. Must start over their planning.
16	Fruitland Irrigation Company >Tunnel and Canal Renvation CT2019-2848 CTGG1 2019-2449 CTGG1 2019-2475	Delta & Montrose	\$1,746,290	95%	Spring 2019 - Fall 2022	0%	RP	Contract needed by - 11/30/2018. Sept 2018 letter from Bureau of Reclamation recvd. Require letter prior to CWCB contract. Finishing permit process, anticipate bid-set and pre-bid in Nov 2019
17	Grand Mesa Water Conservancy District >Peak Res. & Blanche Park Res. Rehabilitation C150354 (CT2015-061)	Delta	\$227,250	100%	Mar 2013 - Sept 2019	50%	JH/MS	Construction on Peak Reservoir began in the 2013 season and was completed in Oct 2014. Blanche Park construction was delayed due to Forest Service permit issues. Access road construction began Fall 2018 and dam construction will begin summer 2019.
18	Grand Valley Water Users Association >Grand Valley Power Plant Rehabilitation CT2017-2875 - SCTF	Mesa	\$1,717,000	100%	Fall 2019 - Spring 2021	0%	JH/MS	Project was delayed due to a Dept of the Interior review of pending projects nationwide. Design is 100% complete but has not had final approval from Bureau of Reclamation. Final approval is pending. Meeting with Reclamation Technical Services scheduled for late July 2019
19	Groundwater Management Subdistrict of CCWCD >Pioneer Reservoir CT2019-3687	Weld	\$8,697,110	50%	Fall 2021 - Spring 2022	0%	JH/CB	This Project invovles the purchase of a slurry wall lined gravel pit that will be reclaimed into a water storage reservoir. The subdistrict initially closed on the property in May 2019 (\$3.2M-ish) and final closing will occur by January 2022 with construction being complete by spring 2022.
20	Huerfano County Water Conservancy District >Regional Augmentation Project C150364 (CT2015-047)	Huerfano	\$2,222,000	95%	Jan 2014 - Jun 2020	99%	RP	Land and water rights purchase occurred in January 2014. Phase I completed Oct 2017. Sheep Mtn. Ph2 construction of access roads and pipeline to Aug. Pond under construction. Ph 3 - Reservoir and Embankment PreCon 4/2019. Reservoir liner complete 8/2019.
21	Larimer & Weld Irrigation Company >Headgate Structure Replacement CT2017-2253	Larimer & Weld	\$681,750	100%	Nov 2017 - Apr 2018	98%	JH/KR	Constructin began in November 2017 and was substantially completed in April 2018. Final billing remains.
22	Left Hand Ditch Company >Allen's Lake Filler Canal Improvements CT2019-3463	Boulder	\$671,650	75%	Fall 2019 - Spring 2020	0%	JH/CB	This Project will pipe a 2,400-foot reach of the Lake Ditch which parallels the west shore of Allen's Lake. Construction is delayed as Company decided to pipe an additional 350 LF of ditch. Designs are being updated. Company will seek a loan increase to cover the additional pipe length
23	Left Hand Water District >Participation in Southern Water Supply Project II CT2018-2028	Broomfield & Weld	\$10,000,000	100%	July 2018 - March 2020	50%	JH/CB	Project is managed by Northern Water with Left Hand Water District paying for its prorata share based on pipeline capacity. Contractor mobilized July 2018 and began laying pipe at the end of August 2018.
24	Missouri Heights Mountain Meadow Irr Company >Ditch Piping Phase B CT2019-2241	Garfield	\$404,000	100%	Oct 2018 - Spring 2020	50%	JH/CB	Phase B1 lining began in October 2018 and completed Dec 2018. Phase B2 lining to begin Fall 2019 pending NRCS approval of grant funds. Company was notified at end of May 2019 Phase B2 was approved for NRCS funding.

	Projects	County	Loan Amount	Design Status	Const. Start/End	Const Status	PM	Status Description/Update
25	Ogilvy Irrigating and Land Comapny >Seely Reservoir Dredging CT2019-2099 CTGG1 2019-2018 (WPG)	Weld	\$2,274,520	0%	Spring 2019 - Fall 2022	0%	RP	Permitting considerations being made. Permitting/Eval by December 2019.
26	Orchard Mesa Irrigation District >Grand Valley Power Plant Rehabilitation CT2017-2878 - SCTF	Mesa	\$1,717,000	100%	Fall 2019 - Spring 2021	0%	JH/MS	Project was delayed due to a Dept of the Interior review of pending projects nationwide. Design is 100% complete but has not had final approval from Bureau of Reclamation. Final approval is pending. Meeting with Reclamation Technical Services scheduled for late July 2019
27	Orchard Ranch Ditch Company >Orchard Ranch Ditch Pipe Project CT2016-2795 POGG1 2017-493	Delta	\$151,500	100%	Dec 2018 - May 2020	95%	RP	PreBid 7/23/18. Material supply issue - JUB redesign and rebid 10/2018. Construction begin 12/2018. Spring 2020 reseeding and habitat replacement plan complete. July 2019 construction complete and started pipeline and working well.
28	Pueblo Conservancy District >Arkansas River and Wildhorse Creek Levees CT2019-366	Pueblo	\$17,170,000	100%	Dec 2014 - Sep 2019	99%	RP	Funds approved June 2018. Phase 5 under construction - removing, replacing concrete where Ph4 ended. Phase 5A under construction - grouting, filling voids in toe of levee for future Ph6. Waiting on as-builts.
29	Roxborough Water and Sanitaion District >Ravenna Development Interconnect CT2019-2250	Douglas	\$1,584,690	100%	Nov 2018 - Apr 2019	95%	JH/CB	This Project will connect the Ravenna water service area into Roxboroughs water system. Construction started of November 2018 and on track for completion for April 2019. Final billing to occur.
30	San Luis Valley Canal Company >San Luis Valley Canal Headgate Construction CT2019-2046	Rio Grande	\$303,000	100%	Jan 2019 - May 2019	95%	JH/CB	This project is part of the Rio Grand Five Ditches WSRF Project and consists of replacing the existing diversion dam. Contractor mobilized onsite in Jan 2019 and construction was substantially completed in May 2019. 2019 runoff resulted in some damage to earth slopes, will install riprap when possible.
31	San Luis Valley Irrigation District >Rio Grande Reservoir Rehabilitation CT-2018-3303, CTGG1-2018-1805	Hinsdale, Rio Grande	\$15,000,000	100%	Aug 2018 - June 2020	50%	KR	Moltz Constructors completed the first year of Outlet Tunnel work. Res. filling w/ heavy season snow. Second season of construction has begun with the foundation work on the gate house.
32	Schneider Ditch Company >Diversion Structure Replacement CT2020-437	Logan	\$1,245,330	50%	Sep 2019 - May 2020	0%	RP/CB	Construction scheduled to begin the Fall 2019, when low water and non-irrigation season.
33	St. Vrain & Left Hand Water Conservancy District >Lake No. 4 Outlet Pipeline Repair CT2017-3213	Boulder	\$864,560	100%	Sept 2019 - April 2020	0%	JH/CB	Project is being done in partnership with Emergency Rock'n WP Ranch Lake No. 4 Repair, as well as repairs to Boulder County's West Lake and A-Frame Lake. County is lead agency for all projects. Project was bid and construction contracting is underway.
34	St. Vrain & Left Hand Water Conservancy District > Emergency Rock'n WP Ranch Lake No. 4 Repair CT2016-2452	Boulder	\$4,545,000	100%	Sept 2019 - April 2020	0%	JH/CB	Project is being done in partnership with Emergency Rock'n WP Ranch Lake No. 4 Repair, as well as repairs to Boulder County's West Lake and A-Frame Lake. County is lead agency for all projects. Project was bid and construction contracting is underway.
35	Southeastern CO Water Conserv. District >Pueblo Dam Hydroelectric Project CT2018-833	Pueblo	\$17,392,200	100%	June 2017 - Oct 2019	99%	RP	Construction beginning fall 2017. District anticipates power production by fall of 2018. Tie-in to SDS complete April 2018. Waiting on transformer approval from Black Hills.Turbine and generator placement and fiber optic line approval. Fully functional and running.

Projects		County	Loan Amount	Design Status	Const. Start/End	Const Status	PM	Status Description/Update
36	Firestone, Town of >Storage Development and Water Rights Purchase CT2017-2880	Weld	\$10,000,000	95%	May 2018 - Dec 2019	50%	RP	LG Everist to complete mining and reclamation of future reservoir in Fall 2017/Winter 2018. Lower Boulder water rights purchased in July 2017. Final design pending - engineer looking to fill reservoir via wells/pipelines instead of diversion off river. Change case appl filed 2017 reservoir water rights.
37	Tunnel Water Company >Laramie-Poudre Tunnel Rehabilitation CT2016-2001	Larimer	\$1,111,000	100%	Sept 2015 - Fall 2019	55%	JH/RP	Phase 1 (Inlet) complete in 2016. Phase 2 (outlet) construction was delayed due to need to reroute access road. Construction of Phase 2 started fall 2018, stopped for winter, and will resume fall 2019. Company received a loan increase at March 2018 meeting to fully cover expected Phase 2 costs.
38	Tunnel Water Company >West Half Laramie-Poudre Tunnel Rehabilitation CT2019-3706	Larimer	\$9,090,000	100%	Sep 2019 - Sep 2020	0%	JH/RP	Construction scheduled to begin the Fall 2019, when low water and non-irrigation season.
39	Walsenburg, City of > City Lake Dam Rehabilitation & Enlargement CT2019-648 Grant CTGG1 2019-094	Huerfano	\$6,889,210	100%	Jan 2019 - Nov 2019	50%	RP	Continued dewatering and reservoir control, Continue concrete structure construction, majority embankment slope protection riprap installed, tower work continues, work continues at dam, concrete outletworks complete, spillway under construction.
40	Wiggins, Town of >Wiggins Recharge Facility at Glassey Farms CT2018-892	Morgan	\$2,408,850	95%	Spring 2019 - Summer 2019	0%	JH/CB	Town purchased Galssey Farms in 2017. (\$1.2Mish) Final design of the project is pending, looking for spring construction. Town is finishing agreement with Morgan Community College to allow land to be used for an experimental precision agricultural program.
41 -WISE Project - Phase 1 Infrastructure								\$10,017,180
a	Cottonwood W&S Dist - C150408B (CT2015-106)	Douglas/ Arapahoe	\$2,636,100	100%	Spring 2015 - Dec 2019	95%	RP	Infrastructure to treatment plant completed. 42-inch Pipeline construction on Ridgeway line continues. E470 bore complete. All lines in ground and connections in place. Next step, testing. Waiting on water treatment piece before startup testing in May 2018. Ridgegate pipeline complete - punchlist items. WISE system has been delivering water since August of 2017 as connection come online. All but 2 members connected to the pipeline and those connections have been tested. Centennial Water and Sanitation has built their connection and is working on finalizing the controls programming. Anticipate CWSD start up around Fall 2018. Pinery working on physical connection and anticipate accepting water Fall 2018.
b	Inverness W&S Dist - C150409B (CT2015-118)	Douglas/ Arapahoe	\$1,181,700	100%	Spring 2015 - Dec 2019	95%	RP	
c	Parker W&S Dist - C150410B (CT2015-108)	Douglas/ Arapahoe	\$0	100%	SC June 1, 2019	100%	RP	
d	Pinery (Den SE WSD)C150411B (CT2015-085)	Douglas/ Arapahoe	\$6,199,380	100%	Spring 2015 - Dec 2019	95%	RP	
42 - WISE Project - Phase 2 Infrastructure								\$7,400,078
a	Cottonwood W&S Dist - C150408C (CT2015-105)	Douglas/ Arapahoe	\$1,127,160	80%	Spring 2019 - Fall 2021	0%	RP	Binney Connection Pipeline of Water Infrastructure and Supply Efficiency project will increase WISE flow capacity to 30MGD and provide infrastructure from Aurora Binney Facility to SMWA Engineer Prebid
b	Inverness W&S Dist - C150409C (CT2015-119)	Douglas/ Arapahoe	\$1,427,130	80%	Spring 2019 - Fall 2021	0%	RP	

Projects		County	Loan Amount	Design Status	Const. Start/End	Const Status	PM	Status Description/Update
c	Parker W&S Dist - C150410C (CT2015-109)	Douglas/ Arapahoe	\$3,418,658	80%	Spring 2019 - Fall 2021	0%	RP	Infrastructure from Aurora Binney Facility to SIMWA. Engineer Fredo 11/15/18. Jacobs selected. Pump and Pipeline construction bid Nov2019, Award Jan2020.
d	Pinery (Den SE WSD)C150411B (CT2015-086)	Douglas/ Arapahoe	\$1,427,130	80%	Spring 2019 - Fall 2021	0%	RP	
43 - WISE Project - DIA Connection								
a	Cottonwood W&S Dist - C150408D (CT2015-104)	Douglas/ Arapahoe	\$363,600	60%	N/A	60%	RP	Annual disbursement to be made on this loan through 2021.Design Status indicates percent of funds disbursed to date. No orthophosphate determination created need for alternatives and renegotiations. Working through alternatives and have finalized by Dec2019.
b	Inverness W&S Dist - C150409D (CT2015-120)	Douglas/ Arapahoe	\$454,500	60%	N/A	60%	RP	
c	Parker W&S Dist - C150410D (CT2015-110)	Douglas/ Arapahoe	\$1,099,890	60%	N/A	60%	RP	
d	Pinery (Den SE WSD)C150411B (CT2015-087)	Douglas/ Arapahoe	\$454,500	60%	N/A	60%	RP	
Projects Under Contract			\$225,193,110	100%				
Approved Projects - Not Under Contract								
a	San Juan Water Conservancy District >Dry Gultch Reservoir Land Acquisition CT2020-XXXX	Archuleta	\$2,000,000	0%	Spring 201x - Fall 202x	0%	KR	Contract needed by - Postponed Indefinitely CWCB approval is conditioned on voters approving debt. Debt approval failed at November 2017 election. District is regathering to determine if/how/when to move the project forward.
b	Southeastern CO Water Conserv. District > Arkansas Valley Conduit CT2020-XXXX	Crowley	\$40,000,000	0%	Spring 201x - Fall 202x	0%	KR	Pending Federal Appropriation. Southeastern's Pueblo Dam Hydro project was taken out of these loan funds.
c	Municipal Subdistrict >Windy Gap Project CT2020-XXXX	Larimer	\$90,000,000	0%	Spring 201x - Fall 202x	0%	JH/CB	Contract needed by - Contracts waiting on participant water storage agreements with Northern.

Projects	County	Loan Amount	Design Status	Const. Start/End	Const Status	PM	Status Description/Update
	Not Under Contract SubTotal =	\$166,587,179					
	Grand Total =	\$391,780,289					

**WATER PROJECT CONSTRUCTION LOAN PROGRAM
 LOAN REPAYMENT DELINQUENCY REPORT
 LOAN FINANCIAL ACTIVITY REPORT
 SEPTEMBER 2019**

LOAN REPAYMENT DELINQUENCY

Loan Repayments received relative to the Water Project Construction Loan Program have been reviewed for the period covering July 2019 through August 2019. The effective due date of the payment is inclusive of the Board's current 60 day late policy. Hence, the date the payment was received was compared to the last day allowable prior to the payment being considered late.

Repayments due for Fiscal Year 2020 totaled 45. All loans payments were made on time.

LOAN FINANCIAL ACTIVITY

Loan Financial Activity relative to the Water Project Construction Loan Program for Fiscal Year 2020 is summarized as follows: Funds received relative to loans in repayment totaled \$8.4M for this year. Funds disbursed relative to new project loans totaled \$5.8M for this year. Net activity resulted in \$2.6M received by the CWCB Construction Fund and the Severance Tax Perpetual Base Fund (STPBF) over the total disbursed.

Further breakdown is summarized as follows: The Construction Fund portion consists of \$4.1M in receivables and \$2.7M in disbursements for a total net activity of \$1.4 M received over disbursed. The STPBF consists of \$4.3M in receivables and \$3.1M in disbursements for a total net activity of \$1.2M received over disbursed.

CONSTRUCTION FUND

Period	Principal	Interest	Total Received	Disbursements	Net Activity
July 2019	\$ 660,666	\$ 71,225	\$ 731,892	\$ 273,915	\$ 457,977
August 2019	\$ 2,992,758	\$ 358,081	\$ 3,350,839	\$ 2,390,397	\$ 960,442
FY 2020 Construction Fund	\$ 3,653,424	\$ 429,307	\$ 4,082,731	\$ 2,664,312	\$ 1,418,419

SEVERANCE TAX TRUST FUND PERPETUAL BASE ACCOUNT

Period	Principal	Interest	Total Received	Disbursements	Net Activity
July 2019	\$ 47,905	\$ 27,699	\$ 75,605	\$ -	\$ 75,605
August 2019	\$ 3,046,883	\$ 1,133,218	\$ 4,180,101	\$ 3,115,484	\$ 1,064,617
FY 2020 Severance Tax PBF	\$ 3,094,788	\$ 1,160,917	\$ 4,255,705	\$ 3,115,484	\$ 1,140,221

GRAND TOTALS	\$ 6,748,212	\$ 1,590,224	\$ 8,338,436	\$ 5,779,796	\$ 2,558,640
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Colorado Water Conservation Board

**Construction Fund, Special Funds and Severance Tax Funds
Non-Reimbursable Investments Status Report
Fiscal Year 2018-2019**

Construction Fund - Non-Reimbursable Investments

The Colorado Water Conservation Board (CWCB) Non-Reimbursable Investments Status Report has two sections. This section includes the non-reimbursable investment projects from the Construction Fund and Special Funds. The following table summarizes the non-reimbursable investment projects in progress from July 2018 through June 2019. This table provides the beginning balances, contracted amounts, disbursed amounts and funds available for each project during the fiscal year. Following this table, are project summaries provided by each project manager that detail the implementation and status of each project.

Following this section is the Severance Tax Operational Fund Grant Program status for the same period.

<u>No.</u>	<u>Staff</u>	<u>Project</u>	<u>July 1</u>	<u>Amount</u>		<u>Amount Not</u>
			<u>Balance</u>	<u>Contracted</u>	<u>Disbursed</u>	<u>Contracted</u>
1	Bassi	Acquisitions-Wtr for Instream Flow	\$1,000,000	\$464,403	\$325,873	\$209,724
2	Bassi	ISF Engineering Support Services	\$50,366	\$5,000	\$13,280	\$32,086
3	Bassi	Satellite Monitoring - SEO	\$380,049	\$0	\$379,632	\$417
4	Bassi	Stream Gage Fund	\$250,000	\$7,268	\$45,692	\$197,040
5	Houck	Chatfield Channel Improvement	\$38,014	\$38,014	\$0	\$0
6	Houck	Co Floodplain Map Modernization	\$862,251	\$170,819	\$689,595	\$1,836
7	Houck	Fish and Wildlife Resources Fund	\$929,058	\$42,240	\$766,754	\$120,064
8	Houck	Flood and Drought Response Fund	\$635,614	\$197,457	\$197,029	\$242,128
9	Houck	Rio Grande Forecasting Develop	\$10,180	\$0	\$0	\$10,180
10	Houck	Tamarisk Control Cost-Sharing Prg	\$20,094	\$5,000	\$1,000	\$14,094
11	Houck	Water Forecasting Partnership	\$1,269,262	\$566,780	\$509,471	\$193,011
12	Houck	Watershed Restoration	\$8,811,582	\$3,522,335	\$2,092,457	\$3,196,790
13	Houck	Weather Modification Program	\$642,414	\$266,102	\$322,527	\$53,785
14	Houck	Acquisition of Lidar Data	\$805,723	\$277,523	\$140,752	\$387,448
15	Johnson	Colorado Mesonet	\$207,864	\$128,081	\$79,783	\$0
16	Johnson	Water Adaptation Partnership Prg	\$20,056	\$12,220	\$0	\$7,836
17	Johnson	Statewide Water Supply Initiative	\$1,326,638	\$519,606	\$517,952	\$289,080
18	Johnson	Water Con Public Awareness Study	\$29,062	\$0	\$0	\$29,062
19	Johnson	Water Loss Control Initiative	\$1,100,000	\$843,818	\$255,987	\$194
20	Johnson	Water Planning Studies	\$100,000	\$0	\$0	\$100,000
21	Newman	Alt Ag Water Transfer Sustain Prg	\$1,427,229	\$583,261	\$154,094	\$689,874
22	Newman	Arkansas River Decision Support	\$1,952,324	\$795,944	\$707,920	\$448,460
23	Newman	Bear Creek Reservoir Reallocation	\$2,500,000	\$52,538	\$1,971	\$2,445,492
24	Newman	Co Decision Support Systems O & M	\$287,315	\$0	\$87,315	\$200,000
25	Newman	Co Flood Decision Support System	\$69,239	\$0	\$0	\$69,239
26	Newman	Co River Augmentation Project	\$60,000	\$59,983	\$0	\$17
27	Newman	Co Water Needs & Alternatives	\$760,054	\$0	\$0	\$760,054
28	Newman	Litigation Fund	\$3,462,900	\$0	\$611,384	\$2,851,517
29	Newman	L. So Platte Water Mgmt & Storage	\$500,000	\$0	\$0	\$500,000
30	Newman	SP Groundwater Level Data Collect	\$954,429	\$13,869	\$12,060	\$928,500
31	Newman	UDSA Regional Con Partnership	\$284,119	\$140,376	\$111,776	\$31,967

<u>No.</u>	<u>Staff</u>	<u>Project</u>	<u>July 1</u>	<u>Amount</u>		<u>Amount Not</u>
			<u>Balance</u>	<u>Contracted</u>	<u>Disbursed</u>	<u>Contracted</u>
32	Newman	Underground Storage Pilot Projects	\$100,000	\$100,000	\$0	\$0
33	Newman	Water Resource Information Center	\$407,812	\$36,038	\$19,551	\$352,223
34	Newman	Wild and Scenic Rivers Fund	\$481,635	\$93,013	\$288,332	\$100,291
35	Ris	Water Education Foundation	\$150,000	\$0	\$150,000	\$0
36	Russell	Chatfield Res Reallocation Project	\$686,967	\$0	\$565,000	\$121,967
37	Russell	Chatfield Res Reallocation Imp.	\$30,564,534	\$24,958,427	\$840,841	\$4,765,166
38	Russell	Chatfield Res Reallocation Study	\$217,015	\$7,986	\$0	\$209,029
39	Russell	Feasibility Study Grant Fund	\$716,350	\$170,850	\$182,343	\$363,157
40	Russell	Max Precipitation for Rainfall Spill	\$52,884	\$0	\$52,884	\$0
41	Russell	Reservoir Dredging Project	\$975,622	\$99,190	\$876,432	\$0
42	Russell	Rio Grande Cooperative Project	\$10,260,656	\$6,724,046	\$3,536,609	\$1
43	Russell	Rocky Mt. Fen Demonstration	\$100,000	\$72,677	\$27,323	\$0
44	Russell	Windy Gap Res Bypass Channel	\$2,200,000	\$0	\$0	\$2,200,000
45	Russell	Republican River Matters	\$8,000,000	\$0	\$6,000,000	\$2,000,000
46	Russell	Emergency Dam Repair	\$1,000	\$0	\$670,803	\$329,197
Total Balances for Non-Reimbursable Investments			<u>\$86,509,311</u>	<u>\$40,974,864</u>	<u>\$21,084,422</u>	<u>\$24,450,926</u>

Details of the Status of the above Projects are as follows:

1. Acquisitions of Water for Instream Flow

Authorization: Continuous

Water Source: Statewide Streams

Location: Statewide

Sponsor: CWCB

Project Type: Water Acquisitions

Project Manager: Linda Bassi

Beneficiary: Statewide Water Users

Funding in the amount of \$228,375 was provided to the Colorado River Water Conservation District to lease water for winter releases from Ruedi Reservoir to the Fryingpan River. The objective of the lease was to maintain Fryingpan River flows at a rate of 70 cfs to prevent the formation of anchor ice at times when temperatures and low flows could otherwise combine to create anchor ice during the time period of January 1 - March 31. On April 1, the leased water was delivered to the 15-Mile Reach as needed to help meet or reduce shortfalls to the U.S. Fish and Wildlife Service's ("USFWS") flow recommendations for the endangered fish critical habitat in that reach. The remaining balance of funding was provided to the Colorado Water Trust as part of its master contract to provide services to support the acquisition of water rights for use in the ISF program.

2. Instream Flow Engineering and Technical Support Services

Authorization: SB 05-084 | HB 10-1250

Water Source: N/A

Location: Statewide

Sponsor: CWCB

Project Type: Technical Services

Project Manager: Rob Viehl

Beneficiary: Statewide

The Stream and Lake Protection Section used these funds to fill a temporary shortfall during the transition in staff for the section's engineer position.

3. Satellite Monitoring System – State Engineer’s Office

Authorization: SB18-218

Water Source: Statewide Streams

Location: Statewide

Sponsor: State Engineer’s Office

Project Type: Stream Gaging

Managers: Brandy Logan

Beneficiary: Statewide Water Users

DWR used this fund to procure and install satellite-linked monitoring equipment. High data rate upgrades have now been completed at all DWR gage stations, which will need replacing every 10 to 12 years. In addition, a number of stream gage sites were refurbished. Just over \$50,000 was spent for the ongoing Arkansas lysimeter research project.

4. Stream Gage Fund

Authorization: SB01-157 | HB06-1313 | SB 07-122

Water Source: Statewide Streams

Location: Statewide

Sponsor: CWCB

Project Type: Stream Gaging

Project Manager: Jack Landers

Beneficiary: Statewide Water Users

Provided funding for purchasing equipment and supplies for temporary stream gages used to monitor new instream flow recommendations. Funded travel expenses for visiting ISF stream gages and field sites. Funds were also used to purchase supplies for the installation of a permanent telemetry stream gage on Abrams Creek. Provided funding for the operation and maintenance of the Washington Gulch Bypass Structure to monitor the Breem Ditch ISF acquisition. Provided funding for the annual operation and maintenance of the USGS Dolores River at Slick Rock stream gage.

5. Chatfield Channel Improvement

Authorization: SB79-537 | SB90-41 | SB18-218

Water Source: South Platte River

Location: Downstream of Chatfield Reservoir

Sponsor: CWCB

Project Type: Flood Control

Project Manager: Joe Busto

Beneficiary: Denver Metro Area

Annually the Corps of Engineers inspects the CWCB owned 4 miles of river channel downstream of Chatfield Reservoir. A P.O. was issued to Urban Drainage and Flood Control District for \$38,000 for vegetation removal for flood conveyance as recommended by the Corps.

6. Colorado Floodplain Map Modernization

Authorization: SB18-218

Water Source: N/A

Location: Statewide

Sponsor: CWCB

Project Type: Floodplain Delineation

Project Manager: Thuy Patton

Beneficiary: Statewide

Provide funding to update FEMA regulatory floodplain mapping and non-regulatory products for communities and provide all related activities to help community officials make better land use decisions and protect people and property from future flood events.

7. Fish and Wildlife Resources Fund

Authorization: SB 01-157, HB 02-1152

Water Source: Various

Location: Various

Sponsor: CWCB

Project Type: Grant Program

Managers: Chris Sturm

Beneficiary: Statewide

Urban Drainage and Flood Control District has expended \$397,260 of a \$439,500 grant to create wetland and riparian benches to improve fish habitat on the South Platte River below Chatfield Reservoir.

8. Flood and Drought Response Fund

Authorization: SB18-218

Water Source: All Colorado Streams

Location: Statewide

Sponsor: CWCB

Project Type: Response to Flood & Drought

Managers: Kevin Houck

Beneficiary: Statewide

Provided funding for the Flood Threat Bulletin during the flood season, an evaluation into flood hydrology for the Arkansas River mainstem, an update into flood mitigation plans, drought meetings with NOAA, mobile radar for the 416 Fire scar, and funding for raingauges to be used in the CoCoRaHS program.

9. Rio Grande Forecasting Development Project Implementation

Authorization: SB 13-181

Water Source: Rio Grande & Conejos Rivers

Location: Rio Grande

Sponsor: CWCB, USBR, Rio Grande BRT

Project Type: Demonstration Project

Project Manager: Joe Busto

Beneficiary: Rio Grande Water Users,
West Gulf River Forecast Center, DWR

The National Center for Atmospheric Research built the national water model for the NWS and has been a part of the Rio Grande Forecasting work since 2011. NCAR provided spring and summer run off forecasts to the Division 3 Engineer (Rio Grande) for administrative use and comparison to the official water supply forecasts provided by the NWS - West Gulf Basin River Forecast Center in Fort Worth, TX.

10. Tamarisk Control Cost-Sharing Program

Authorization: HB 08-1346 | SB 12S-002 | HB15-1006

Water Source: Various

Location: Various

Sponsor: CWCB

Project Type: Phreatophyte Control

Managers: Chris Sturm

Beneficiary: Statewide Water Users

RiversEdge West Annual Conference Sponsorship

11. Water Forecasting Partnership Project

Authorization: SB18-218

Water Source: Rio Grande & Conejos Rivers

Location: Rio Grande & Gunnison Basins

Sponsor: CWCB

Project Type: Forecasting

Project Manager: Joe Busto

Beneficiary: Statewide

CWCB funds were used to partner with CDOT, Disaster Recovery funds from the Rio Grande fires, and the Capitol Development Committee on a permanent locally owned C-band dual polarized commercial weather radar. Funding was also used to purchase and deploy 6 SNO-Lite stations (four at Wilderness area boundary, two are in the Wilderness area in the Conejos Basin to fill in a 20 mile gap between the two SNOTELs in the area. SNO-lites are a NCAR and CWCB exploration into a more modern snowpack and atmospheric measurements that need to be locally owned and managed but provide are cheaper and provide more data than a traditional NRCS SNOTEL

12. Watershed Restoration

Authorization: SB18-218

Water Source: Various

Location: Statewide

Sponsor: CWCB

Project Type: Watershed Restoration

Project Manager: Chris Sturm

Beneficiary: Watershed Interests

Provided funding for grants approved through the Colorado Watershed Restoration Program. These include Stream Management Planning grants in the Colorado, South Platte, Southwest, Metro, Rio Grande, and Gunnison Basing. Funds were also provided for post-fire recovery activities in Fremont, Huerfano, and La Plata Counties. Other projects include stream restoration and riparian re-vegetation statewide, Forest Health education and outreach efforts were funded in the South Platte (Fourmile Watershed) and Southwest (Dolores) Basins. The Program also approved funding for fish passage studies through reconstructed diversion structures, diversion reconstruction, and monitoring & adaptive management of existing restoration projects.

13. Weather Modification Program

Authorization: SB18-218

Water Source: N/A

Location: Denver

Sponsor: CWCB

Project Type: Cost Share Grants

Project Manager: Joe Busto

Beneficiary: Statewide

Funding was matched with \$320K from the Colorado River Lower Basin water users, and \$20K from the New Mexico Interstate Stream Commission for the following projects. Grants to six water district managed programs to support their manual generator programs with their contractors. Funding was used to purchase two remote operated generators from the Idaho Power Company. Those two seeders were deployed near Beaver Creek SNOTEL and at Camp Hale to target Breckenridge and Keystone. Funding was used to purchase one Desert Research Institute seeder for the Southern San Juan Mountains program. Funding was used to lease to own a radiometer that was deployed in Walden. This was to support the new partnership between Wyoming Water Development Office and Jackson County WCD sponsored aerial seeding program that targets the Never Summer Mountain Range in the south east part of the Basin. Small amounts of funding were used to support the new remote seeders and weather stations that have been deployed in Colorado.

14. Acquisition of Lidar Data

Authorization: 37-60-121 | SB18-218

Water Source: N/A

Location: Statewide

Sponsor: CWCB

Project Type: Technical

Project Manager: Thuy Patton

Beneficiary: Statewide

Funds authorized by statute are used to help pay for LIDAR acquisitions that the state has already acquired. Funds authorized by SB18-218 will be used to acquire LIDAR Data for counties, which are used for floodplain mapping and other uses in Colorado.

15. Colorado Mesonet

Authorization: SB18-218

Water Source: N/A

Location: Statewide

Sponsor: CWCB/CSU

Project Type: Weather Monitoring

Project Manager: Ben Wade

Beneficiary: Statewide

Funding through the end of Fiscal Year 2019 has been used to continue calibration of soil moisture stations and develop tools for better visualizations, developing evaporative demand tracking tools based on CoAgMET data, integrating the Regional Climate Reference Network (RCRN) into CoAgMET and working to improve measurements of important weather variables at CoAgMET stations, including better and higher wind measurements and all-weather precipitation gauges. Funds have also helped advance the dissemination of data with our web-based tools. Development of the climate summaries for long-term stations is ongoing. Future work will be completing calibration of soil moisture sites and displaying the data online with tools for user friendly visualization. Evaporative demand tools will be automated and online for easy access. More RCRN stations are anticipated to go online with tools for calculating evaporative demand and the climate summaries will be completed and on the CoAgMET and Colorado Climate Center sites.

16. Water Adaptation Partnership Program

Authorization: SB 09-125

Water Source: N/A

Location: Various

Sponsor: CWCB

Project Type: Planning

Managers: TBD

Beneficiary: Statewide

No update for FY 18/19.

One of the goals of Gov. Hickenlooper 2017 Executive Order on Climate Change, as well as the Colorado Climate Plan, released in January 2018, is to prepare the state to adapt to unavoidable climate changes. To help meet that goal, CWCB has partnered with multiple state agencies and stakeholders to undertake Water Adaptation Projects to increase understanding of climate change; communicate the information to those who need to plan and implement adaptation strategies and build partnerships that will produce the models and data upon which actions are based. CWCB is working to implement its strategy in the following areas: enhance our climate observation systems with the goal of identifying long-term trends; scrutinize and detect bias in climate change models; fund partnerships to ensure new data is useful at a local planning level; adapt information for use in the Colorado Decision Support System; utilize information to meet federal drought planning requirements; and to improve forecasting and projections. With 2018 a significant dry year in Colorado- we have a number of project about to kick off that will help to further these objectives and expect this fund to be fully encumbered in FY2019.

17. Statewide Water Supply Initiative Continuation

Authorization: SB 13-181, SB 16-174

Water Source: N/A

Location: N/A

Sponsor: CWCB

Project Type: Study

Project Manager: Russ Sands

Beneficiary: Statewide Water Users

Completed July 2019. Renamed Analysis and Technical Update to the Colorado Water Plan. Remaining funds could potentially be used for BIP/CWP update process.

18. Water Conservation Public Awareness Research Study

Authorization: SB 07-122

Water Source: N/A

Location: Statewide

Sponsor: CWCB

Project Type: Research Study

Project Manager: Ben Wade

Beneficiary: Statewide Water Users

Project has been on hold after initial funding was used to create a draft survey. To complete the survey with ongoing stakeholder input, the remaining amount of \$29,062 and additional funding requested (and made available July 1, 2019) will be used to finalize and conduct the survey.

19. Colorado Water Loss Initiative

Authorization: HB 17-1248

Water Source: N/A

Location: Various

Sponsor: CWCB

Project Type: Technical Assistance

Project Manager: Kevin Reidy

Beneficiary: Statewide

Project is one third of the way completed. Fall 2019 will complete another third of the project with workshops. Project on schedule and on budget for completion in beginning of 2021.

20. Water Planning Studies

Authorization: SB 99-173, SB 09-125

Water Source: N/A

Location: N/A

Sponsor: CWCB

Project Type: Water Planning

Project Manager: Kevin Reidy

Beneficiary: Statewide

Data visualization project for tech update currently underway. Currently contracting with RS21 (August 2019).

21. South Platte River and Arkansas River Basins Alternative Agriculture Water Transfer Sustainability Grant Program

Authorization: SB 07-122 to HB 17-1248

Water Source: Statewide

Location: Statewide

Sponsor: CWCB

Project Type: Alternative Methodologies

Project Manager: Alex Funk

Beneficiary: Statewide Water Users

CWCB funded two ATM grants in FY19 - grant to Rio Grande Headwaters Land Trust to implement an ATM in the San Luis Valley to offset groundwater pumping and a grant to the Division of Water Resources to integrate new CU methodology into the Lease-Fallow Tool.

22. Arkansas River Decision Support System (ArkDSS)

Authorization: SB18-218

Water Source: N/A

Location: Arkansas Basin

Sponsor: CWCB

Project Type: Decision Support System

Project Manager: Brian Macpherson

Beneficiary: Statewide Water Users

Phase I of ArkDSS is well underway and should be completed by June 2020. The GIS subtask is at 98% completion, the modeling subtask is at 54% completion, and the administration tools subtask is at 91% completion. A new river gage "Purgatoire River below Hoehne Dam" was also installed with these funds.

23. Bear Creek Reservoir Reallocation Study

Authorization: SB 16-174

Water Source: Bear Creek and Turkey Creek

Location: South Platte River Basin

Sponsor: CWCB/ US Army Corp of Engineers

Project Type: Reallocation Study

Project Manager: Erik Skeie

Beneficiary: Local Water Users

CWCB and the City of Brighton partnered on a permanent stream gage installation in Turkey Creek above Bear Creek Lake. This stream gage allows the CWCB to collect accurate inflow data into Bear Creek Lake from Turkey Creek and is available here: <https://waterdata.usgs.gov/nwis/uv?06711040>

24. Colorado's Decision Support Systems (CDSS) Operations and Maintenance (O & M)

Authorization: SB 13-181, HB 14-1333

Water Source: N/A

Location: N/A

Sponsor: CWCB

Project Type: O&M

Project Manager: Brian Macpherson

Beneficiary: Statewide

Phase I of the OpenCDSS project was completed with the money disbursed in FY2019. With this effort, the CDSS software products of StateCU, StateDMI, StateMod, StateView, and TSTool were moved to an open source platform. This involved creating open source licensing in collaboration with the AG's office as well as porting the source code to a cloud repository. The developer environment for each piece of software was improved and all developer tools were moved to open source tools. Developer documentation was created for the software and is hosted on a new website. New user documentation for TSTool and StateDMI was created. Bug fixes to CDSS software were also made with these funds.

25. Colorado Flood Decision Support System

Authorization: SB 07-122 to HB 08-1346

Water Source: Statewide Streams

Location: Statewide

Sponsor: CWCB

Project Type: Decision Support System

Managers: Carolyn Kemp / Kevin Houck

Beneficiary: Statewide Water Users

No update for FY 18/19.

The work on the FloodDSS was completed in 2011 and the website went public in May 2011. The remaining funds will be used to further enhance the Colorado Hazard Mapping & Risk Map Portal site, which has taken over many of the objectives of the FloodDSS website.

26. Colorado River Augmentation Project Development

Authorization: HB 08-1346

Water Source: Colorado River

Location: Colorado River Basin

Sponsor: CWCB/ Seven Basin States

Project Type: Study

Project Manager: Michelle Garrison

Beneficiary: Colorado River Compact

The last of these funds are being used to fund Colorado's share of an updated Colorado River Basin Climate and Hydrology State of the Science report. Report will be completed in early 2020.

27. Colorado Water Needs and Alternatives Analysis (Colorado River Water Availability Study)

Authorization: SB 07-122 to SB 12S-002

Water Source: Colorado River and its Tributaries

Location: Statewide

Sponsor: CWCB

Project Type: Water Availability Analysis

Project Manager: Brian Macpherson

Beneficiary: Statewide Water Users

These funds will be used for future phases of the Colorado River Water Availability Study (CRWAS). No modeling or studies were completed in 2019.

28. Litigation Fund

Authorization: SB18-218

Water Source: N/A

Location: Statewide

Sponsor: CWCB

Project Type: Legal Services

Project Manager: Andrew Rickert

Beneficiary: CWCB Staff, and Statewide Water Users

Colorado River Basin: Fund 2.5 FTE Attorneys and 1 Paralegal and contracting work associated with implementation of the Glen Canyon Dam LTEMP compact administration considerations; fund needed software including management of the Colorado River Database. Republican River Basin: Case work and work of expert consultants to implement accounting consistent with settlements and court decisions; travel and operating costs to finalize settlements with Kansas and Nebraska; defend State Engineer's Office Compact Rulemaking efforts. Rio Grande Basin: Travel and operating costs to conduct discovery, prepare briefs and attend arguments before the Special Master and potentially the U.S. Supreme Court.

Each year, CWCB staff reports to the Board and the General Assembly about the status of the fund, including all expenditures from the fund. For more information, please refer to the litigation account agenda item from the May 2018 Board meeting ([Item 24-b](#)). In addition, the Board has authorized additional amounts that are not reflected in the

ending balance but will be disbursed in the current fiscal year. This fund is typically refreshed each fiscal year to be restored to \$2 million on July 1, from the Construction Fund.

29. Lower South Platte Water Management and Storage Sites Investigation and Sustain Study

Authorization: HB 00-1419, SB 01-157

Water Source: South Platte River

Location: N/A

Sponsor: CWCB

Project Type: Multi-Use Water Planning

Project Manager: Brian Macpherson

Beneficiary: Potential Statewide

These funds will be used for a future study of Lower South Platte storage alternatives. No modeling or studies were completed in 2019.

30. South Platte Groundwater Data Collection and Analysis

Authorization: SB18-218

Water Source: N/A

Location: South Platte Basin

Sponsor: CWCB

Project Type: Data Collection/Planning

Project Manager: Erik Skeie

Beneficiary: Local Water Users

There were no applications for the Damaging High Groundwater Program. Modeling efforts were conducted to assess the efficacy of a dewatering well installation in the Town of Gilcrest

31. UDSA Regional Conservation Partnership Program (RCPP)

Authorization: SB15-253

Water Source: Gunnison River

Location: Gunnison Basin

Sponsor: CWCB

Project Type: Technical

Project Manager: Brent Newman

Beneficiary: Local Water Users

No update for FY 18/19.

Funds are being used to support the first phase of the Gunnison Basin RCPP project sponsored by the Colorado River Water Conservation District (CRWCD). This will provide technical support to water users and ditch companies through local conservation districts and for advanced design work by the CRWCD. Construction on several features of the Phase 1 RCPP began during fiscal year 2017/2018. Further engineering and technical assistance will be provided in FY 2018/2019.

32. Underground Storage Pilot Projects

Authorization: SB16-174

Water Source: N/A

Location: South Platte and Arkansas Basins

Sponsor: CWCB

Project Type: Storage Study

Project Manager: Erik Skeie

Beneficiary: Local Water Users

Upper Arkansas Water Conservancy District was not able to complete their project on Trout Creek this summer, but anticipates work to begin again Spring 2020.

33. Water Resource Information Center & Data Harvesting

Authorization: SB 09-125

Water Source: N/A

Location: Statewide

Sponsor: CWCB

Project Type: Water Information

Project Manager: Carolyn Kemp

Beneficiary: Statewide

Money will be put toward the Grant Portal in FY19/20

34. Wild and Scenic Rivers Fund

Authorization: SB 09-125

Water Source: Various

Location: Various

Sponsor: CWCB

Project Type: Study

Project Manager: TBD

Beneficiary: Statewide

No update for FY 18/19.

In 2009, the General Assembly passed legislation establishing a fund for this project that is automatically refreshed every July 1 up to \$400,000 for work in this regard. Within Colorado, a number of river segments have been classified as eligible or suitable for "wild and scenic" designation by various federal agencies. In response, a number of stakeholder groups have formed to explore and implement alternatives for resource protection that may include wild and scenic designation as well as many other options. Over the past year, these groups were located in the San Juan River Basin, the Dolores River Basin, and the Upper Colorado River Basin. To date, funds have been used within each of these different basins for facilitators, informational studies, and other operating expenses. This Wild and Scenic Rivers Fund is needed to fund ongoing work, including the implementation of: 1) the Upper Colorado River Wild and Scenic Alternative Management Plan and 2) the Implementation, Monitoring and Evaluation Plan and other work by the Lower Dolores Plan Working Group in the Dolores River Basin.

35. Water Education Colorado

Authorization: HB 02-1152

Water Source: N/A

Location: Denver

Sponsor: Co Foundation for Water Education

Project Type: Education

Project Manager: Lauren Ris

Beneficiary: Statewide

Each year, CWCB staff executes a grant contract with Water Education Colorado (WECO) to provide funds for the on-going operation of the Foundation. The CWCB Board is provided with an annual presentation on WECO's work plan during the May Board meeting each year. The Board reviews, comments on, and approves the final work plan. More information is available at www.watereducationcolorado.org/ and www.cwcb.state.co.us.

36. Chatfield Reservoir Reallocation Project

Authorization: SB18-218

Water Source: South Platte River

Location: 10 miles South of Denver

Sponsor: CWCB, U.S. Army Corps of Engineers

Project Type: Study

Project Manager: Kirk Russell

Beneficiary: South Plate Basin

Chatfield Reallocation is an important storage project, located along the Front Range, involving strong participation from the State as well as six other municipal and agricultural water providers. Construction is underway. This authorization provides facilitation cost associated with state-federal contracting, but project implementation costs. The remaining funds are available for the operational costs for the mitigation company to support CWCB and CPW involvement.

37. Chatfield Reservoir Reallocation Project Implementation

Authorization: SB 12S-002

Water Source: South Platte River

Location: 10 miles South of Denver

Sponsor: CWCB, U.S. Army Corps of Engineers

Project Type: Construction

Project Manager: Kirk Russell

Beneficiary: South Platte Basin

Related to the item above, this piece of legislation focused on CWCB's role of owning storage shares in the Chatfield project. 6796 AF out of the 20,600 AF of total project shares are owned by CWCB. CWCB will retain ownership of those shares until such time as they are used for: 1) the environmental pool or 2) sold to providers within the water community.

38. Chatfield Reservoir Reallocation Study

Authorization: SB 97-008 to SB 07-122

Water Source: South Platte River

Location: 10 miles South of Denver

Sponsor: CWCB, U.S. Army Corps of Engineers

Project Type: Reservoir Supply Study

Project Manager: Kirk Russell

Beneficiary: South Platte Basin

Funding from a series of authorizations allowed CWCB to act as the non-federal sponsor with the U.S. Army Corps of Engineers to develop a feasibility study and EIS for the Chatfield project. The contract was first signed in 1999 and was based on a 50/50 cost-share arrangement.

39. Feasibility Study Grant Fund

Authorization: SB18-218

Water Source: N/A

Location: Statewide

Sponsor: CWCB

Project Type: Feasibility Study

Project Manager: Anna Mauss | Matt Stearns

Beneficiary: Local Water Users

On going program to help applicants with Water Project Loan Program Loan Feasibility Study preparation. In FY19, nine grants were awarded.

40. Maximum Precipitation for Rainfall Spillway Sizing Project

Authorization: SB 15-253

Water Source: N/A

Location: Various

Sponsor: CWCB

Project Type: Study

Project Manager: Anna Mauss

Beneficiary: Statewide

Division of Water Resources requires owners of state-regulated dams construct and operate facilities that will safely accommodate runoff from extreme rainfall events. This project was done to evaluate and update the methodology to estimate both the magnitude and frequency of rare storm events and to specifically update the estimate of Probable Maximum Precipitation for dam design.

41. Reservoir Dredging Project

Authorization: SB 16-174

Water Source: South Platte River

Location: Statewide

Sponsor: CWCB

Project Type: Dredging

Project Manager: Anna Mauss

Beneficiary: Local Water Users

Funding was provided to dredge Georgetown Lake to provide more storage of augmentation water. In total 37 acre-feet of storage was recovered.

42. Rio Grande Cooperative Project

Authorization: SB 12S-002 & HB17-1248

Water Source: Rio Grande River

Location: Rio Grande County

Sponsor: CWCB / SLVID

Project Type: Reservoir Rehabilitation

Project Manager: Kirk Russell

Beneficiary: Rio Grande Water Users

Seven contracts worth \$15M have been executed towards this effort that includes project design, project management, federal land exchange, and construction. To-date, the San Luis Valley Irrigation District (District) has completed the: clay liner project, final design of the outlet works, the federal land exchange, access road construction. The District is under contract with Moltz Civil, LLC for the construction of the rehabilitated outlet structure. The Project is expected to be complete in 2020. Funding includes a \$15 million loan to the District. Project is approximately 50% complete.

43. Rocky Mountain Fen Demonstration Project

Authorization: SB 07-122

Water Source: N/A

Location: Leadville Area

Sponsor: Colorado Mountain College

Project Type: Demonstration Project

Managers: Jojo La

Beneficiary: Statewide

Funding was awarded to the Colorado Mountain College-Timberline Campus for a demonstration project designed to explore the extent to which the harvest and translocation of slow-forming organic peat soils, from the specifically-prepared receiver sites, can serve as mitigation of impacts to fens. In 2016, the fen was relocated and current funding is supporting 5 years of monitoring. 2019 marks the second year of CWCB-supported monitoring. Funds were used to monitor the fen wetland during summer/fall of 2019 to help determine project success. Monitoring included vegetation surveys, hydrology, and soil monitoring. Significant progress on the project includes reparation of the oxidation-redox probes, water chemistry laboratory analyses, and preparation of the 2018 and 2019 monitoring report. The total non-CWCB partner match is \$64,000.

44. Windy Gap Reservoir Bypass Channel Project

Authorization: SB 13-181, SB 16-174

Water Source: Colorado River

Location: Windy Gap Reservoir

Sponsor: Northern Colorado WCD

Project Type: Diversion Structure

Project Manager: Kirk Russell

Beneficiary: Local Water Users

Funding was provided for the planning, design and construction of the Windy Gap Reservoir Bypass Project by CWCB and the Northern Colorado Water Conservancy District in an amount of \$2 million each toward the project. However, the estimated cost of the project exceeds \$15 million and the project is on hold while additional funding options are explored. Senate Bill 16-174 provided funding in the amount of \$200,000 toward a feasibility study. Additional funding has been provided by the CWCB via the Colorado Water Plan Grant Program.

45. Republican River Matters

Authorization: HB18-218

Water Source: Republican River

Location: Nebraska Border

Sponsor: CWCB

Project Type: Legal

Project Manager: Kirk Russell

Beneficiary: State of CO

\$4M was paid to the state of Nebraska and \$2M to the state of Kansas to resolve disputes over Colorado's past use of water under the Republican River Compact.

46. Emergency Dam Repair

Authorization: HB18-218

Water Source: Huerfano-Cucharas River

Location: Huerfano County

Sponsor: Dam Safety

Project Type: Dam Safety

Project Manager: Kirk Russell

Beneficiary: N/A

This money was used in the removal of the unsafe Cucharas #5 Dam as part of a safety mitigation effort by the DWR Dam Safety Branch. It is anticipated that the money will be returned to the fund when collected by the dam owner.

NOTE: *Severance Tax Operational Fund Project Status begins on the following page.*

Severance Tax Operational Fund

The following table summarizes the Severance Tax Operational Fund projects authorized by the Long Bill and monitored by the Colorado Water Conservation Board Staff during the fiscal year. Details of the projects follow this summary.

<u>No.</u>	<u>Manager</u>	<u>Project Name</u>	<u>FY 19 Amount</u>
1	Skeie	Work related to Recreational Projects	\$39,895
2	Garrison	Colorado River Modeling	\$12,660
3	Fritz	CSU Water Resources Archive	\$20,000
4	Garrison	Decision Support System - Colorado	\$93,989
5	Skeie	Bear Creek Lake Water Rights Engineering	\$97,997
6	Skeie	Traveling Colorado River Museum Exhibition	\$25,000
7	MacPherson	Colorado Groundwater Atlas Update	\$50,000
8	Skeie	County Groundwater Resource Assessment	\$40,000
9	MacPherson	StateDMI Web Services	\$25,000
10	MacPherson	StateMod Software Next Generation Evaluation	\$50,000
11	Logan	R2Cross Program Modernization	\$82,564
12	Hernandez	Dam Safety Inundation Mapping Grant Program	\$20,000
13	Hernandez	Dam Safety Comprehensive Dam Safety Evaluation (CDSE) Program	\$30,000
14	Bassi	Case Management and Litigation Support	\$65,000
15	Viehl	Stream and Lake Protection Section Outreach and Education	\$20,161
16	Houck	Flood Mitigation and Project Compliance	\$94,525
17	DiBetitto/Mahan	FEMA Coordinator Matching Program	\$57,486
18	Pittinger	Headgates Study on Cucharas & Huerfano Rivers	\$76,951
19	Houck	Spring Post Fire	\$67,325
20	Skeie	Investigating Major Influences on Groundwater Levels in the LaSalle/Gilcrest Area	\$37,008
21	Funk/MacPherson	Assessing Temporal and Spatial Irrigation Efficiencies Using Unmanned Aerial Systems	\$50,000
22	MacPherson/Kemp	User-Friendly Web Application for Water Data Statistical Analysis and Visualization	\$36,626
23	Busto	Cloud Seeding	\$35,000
24	Logan	Streamflow Estimation in Colorado Ungauged Basins	\$48,584
25	Houck	Review of Published Studies of Floodplain Storage Capacity and Changes Associated Flooding	\$29,295
26	Sturm/Skeie	Successional Trajectories of the Riparian Forest Along the South Platte River	\$49,987

Total Severance Tax Expended for FY 18

\$1,255,053

Details of the Grants Provided for the above Projects are as follows:

1. Work Related to Recreational Projects

Water Source: Various
Location: Various
Sponsor: CWCB

Project Type: Technical Assistance
Project Manager: Erik Skeie
Beneficiary: Local Water Users

Two projects were funded for recreational access improvements. Moffat County received \$15,000 for improvements to their Loudy Simpson Park, and the City of Craig received \$15,000 for improvements to their Diversion Park.

2. Colorado River Modeling

Water Source: Colorado River Basin
Location: Colorado River Basin
Sponsor: CWCB

Project Type: Technical
Project Manager: Michelle Garrison
Beneficiary: Upper Colorado River Planners

Funds were unused and redistributed to other projects.

3. CSU Water Resources Archive

Water Source: N/A
Location: N/A
Sponsor: CSU

Project Type: Digitizing
Project Manager: Carolyn Fritz
Beneficiary: Statewide

The Archive digitized 21,901 total pages/items, including 11 photo albums and scrapbooks.

Selected and digitized materials from 5 collections:

- o North Poudre Irrigation Company Records
- o San Luis Valley Irrigation District Records
- o Irrigation Research Papers
- o National Water Resources Association Papers
- o Arkansas Valley Sugar Beet and Irrigated Land Company Photographs

Material types selected include correspondence, annual reports, engineering documents, reports, financial information, data, and conference proceedings.

4. Decision Support System – Colorado River Technical Services

Water Source: Colorado River Basin
Location: Colorado River Basin
Sponsor: CWCB

Project Type: Technical Assistance
Project Manager: Michelle Garrison
Beneficiary: Local Water Users

Wilson Water Group held four workshops for CWCB and DWR staff that covered topics such as basin background, consumptive use, modeling efforts and datasets, and the Recovery Programs. WWG also provided technical support for Recovery Program depletion accounting, StateMod modeling, and Colorado River Compact matters.

5. Bear Creek Lake Water Rights Engineering

Water Source: Various
Location: Statewide
Sponsor: CWCB

Project Type: Technical Assistance
Project Manager: Erik Skeie
Beneficiary: Local Water Planners

Brown and Caldwell developed a spreadsheet model to examine operations of new water rights for stakeholders in the Bear Creek Lake Reallocation Project. The first round of modeling was completed, and a final Water Rights Engineering report with updated data from the stakeholders will be complete FY 19/20.

6. Traveling Colorado River Museum Exhibition

Water Source: N/A
Location: N/A
Sponsor: CWCB

Project Type: Technical Assistance
Project Manager: Erik Skeie
Beneficiary: Statewide Water Users

A fundraising website was developed for a traveling museum exhibit on the Colorado River. Funds were also used to establish the funding base for the project. The website is currently live, please go to: <https://reachofariver.org/>

7. Colorado Groundwater Atlas Update

Water Source: Various
Location: Statewide
Sponsor: CGS

Project Type: Technical Assistance
Managers: Brian MacPherson
Beneficiary: Local Water Planners

GIS data has been collected and the draft Groundwater Atlas web platform has been developed. Demonstrations have been given to the project sponsors, CWCB and CDPHE. The project will be completed with the remaining CDPHE funds.

8. County Groundwater Resource Assessment

Water Source: N/A
Location: La Plata County
Sponsor: CGS

Project Type: Study
Project Manager: Erik Skeie
Beneficiary: Local Water Users

Colorado Geologic Survey collected geologic and hydrogeological data for La Plata County. A complete La Plata County Groundwater map is anticipated in late 2020.

9. StateDMI Web Services

Water Source: Various
Location: Statewide
Sponsor: Open Water Foundation

Project Type: Technical Assistance
Project Manager: Brian MacPherson
Beneficiary: Local Water Planners

StateDMI 5.00.00 was developed and released which incorporates CDSS REST web services. The documentation for the software was updated with the new enhancements.

10. StateMod Software Next Generation Evaluation

Water Source: Various
Location: Statewide
Sponsor: Open Water Foundation

Project Type: Technical Assistance
Project Manager: Brian MacPherson
Beneficiary: Local Water Planners

Programming languages were evaluated, interviews were performed, and a final report was drafted that communicates the findings.

11. R2Cross Program Modernization

Water Source: Various
Location: Statewide
Sponsor: CWCB

Project Type: Modeling
Project Manager: Brandy Logan
Beneficiary: Local Water Planners

Funding was used to update and modernize R2Cross, a hydraulic model which is used to help determine ISF flow rates. The new web-based interface includes new tools for analyzing pebble counts and discharge measurements, mapping functions, and generating reports. This project also included development of a new user's manual to assist recommenders.

12. Dam Safety Inundation Mapping Grant Program

Water Source: Various
Location: Various
Sponsor: SEO

Project Type: Mapping Study
Project Manager: Jonathan Hernandez
Beneficiary: Local Water Users

Grant funds were used to help fund dam breach modeling studies and inundation mapping for 10 dams located along the Poudre River that are owned by the City of Greeley, City of Fort Collins, and the Water Supply & Storage Company.

13. Dam Safety Comprehensive Dam Safety Evaluation (CDSE) Program

Water Source: Various
Location: Statewide
Sponsor: SEO

Project Type: Technical Assistance
Project Manager: Jonathan Hernandez
Beneficiary: Local Water Users

Funds were provided directly to DWR to provide a 50% cash match to FEMA funds for DWR's contract with AECOM to perform a CDSE pilot project.

14. Case Management and Litigation Support

Water Source: N/A
Location: Denver
Sponsor: CWCB

Project Type: Admin Support
Project Manager: Linda Bassi
Beneficiary: Statewide

Hired temporary employees to provide assistance on ISF transactions, appropriation of new ISF water rights, paralegal work on loan documents, analyses of ISF rules, analyses of federal laws and impact to state of Colorado, and legal research on the history of the ISF program.

15. Stream and Lake Protection Section Outreach and Education

Water Source: N/A
Location: Denver
Sponsor: CWCB

Project Type: Operations
Project Manager: Rob Viehl
Beneficiary: CWCB

Funding was provided for staff to travel and conduct public outreach meetings on the instream flow program and to seek input on upcoming recommendations.

16. Flood Mitigation and Project Compliance

Water Source: Various
Location: Various
Sponsor: CWCB

Project Type: Design/Study
Project Manager: Kevin Houck
Beneficiary: Statewide Water Users

Provided funding for Creede levee certification analysis, work along South Platte channel downstream of Chatfield, mobile radar for the 416 burn scar, post-wildfire watershed analysis for Spring Fire, study into impacts of climate change on rainfall intensities, and other flood-related projects.

17. FEMA Coordinator Matching Program

Water Source: N/A
Location: Various
Sponsor: CWCB

Project Type: Matching Program
Project Manager: Stephanie DiBetitto | Doug Mahan
Beneficiary: NFIP Interests

Provided non-federal cost-share for FEMA CAP position.

18. Headgates Study on Cucharas & Huerfano Rivers

Water Source: Arkansas River
Location: Pueblo County
Sponsor: CWCB

Project Type: Planning and Study
Project Manager: Rachel Pittinger
Beneficiary: Cucharas & Huerfano Water Users

Study conducted to determine which headgates and diversions are at greatest risk of damage or destruction by potential post-fire flooding event originating from 2018 Spring Fire burn scar. Engineering models were developed and presented to the community that show risk levels for a range of flow rates and return periods.

19. Spring Post Fire

Water Source: Arkansas River
Location: Pueblo County
Sponsor: CWCB

Project Type: Planning and Study
Project Manager: Kevin Houck
Beneficiary: Cucharas & Huerfano Water Users

Provided funding for post-wildfire work in Huerfano County following the Spring Fire of 2018.

20. Investigating Major Influences on Groundwater Levels in the LaSalle/Gilcrest Area

Water Source: Various
Location: La Salle & Gilcrest
Sponsor: CSU

Project Type: Technical
Project Manager: Erik Skeie
Beneficiary: Statewide Water Users

Dr. Ryan Bailey completed modeling various scenarios in the Gilcrest/La Salle area to determine BMPs for mitigating high groundwater. This was a continuation of previous work to develop a higher resolution groundwater model for the area of concern, and will continue in FY19/20 to evaluate groundwater recharge in the area.

21. Assessing Temporal and Spatial Irrigation Efficiencies Using Unmanned Aerial Systems

Water Source: Various
Location: Statewide
Sponsor: CSU

Project Type: Study
Project Manager: Alex Funk/Brian MacPherson
Beneficiary: Statewide Water Users

Study exploring the potential to utilize UAV to measure CU. Research completed and final report in development.

22. User-Friendly Web Application for Water Data Statistical Analysis and Visualization

Water Source: Various
Location: South Platte River Basin
Sponsor: CSU

Project Type: Study
Project Manager: Brian MacPherson/Carolyn Kemp
Beneficiary: Statewide Water Users

Dr. Oikonomou has built the tool and is in the process of deployment. A final report will be submitted by the end of August.

23. Cloud Seeding

Water Source: N/A
Location: Central Rockies
Sponsor: CWCB

Project Type: Cloud Seeding
Project Manager: Joe Busto
Beneficiary: Local Water Users

An independent study was conducted by a 3rd party paid for by the contractor. The study is an analysis of three cloud seeding flights conducted last winter in the Never Summer Mountain Range.

24. Streamflow Estimation in Colorado Ungauged Basins

Water Source: N/A
Location: Statewide
Sponsor: MSU

Project Type: Study
Project Manager: Brandy Logan
Beneficiary: Statewide Water Users

Dr. Kampf and her team have completed their test of 3 different methods to predict streamflow at ungauged basins. This project included development of a new empirical regression model that appears to outperform the USGS models during snowmelt runoff. The final report has been received and this group has additional funding to continue to explore the utility of one of the models.

25. Review of Published Studies of Floodplain Storage Capacity and Changes Associated Flooding

Water Source: N/A
Location: Statewide
Sponsor: CSU

Project Type: Study
Project Manager: Kevin Houck
Beneficiary: Statewide Water Users

Study completed and posted online.

26. Successional Trajectories of the Riparian Forest Along the South Platte River

Water Source: South Platte River Basin
Location: South Platte
Sponsor: CSU

Project Type: Study
Project Manager: Chris Sturm/Erik Skeie
Beneficiary: Statewide Water Users

The study was completed and the final report is currently in development.