



COLORADO WATER CONSERVATION BOARD

DIRECTOR'S REPORT

SEPTEMBER 2011

STATE OF COLORADO

Colorado Water Conservation Board

Department of Natural Resources

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MEMORANDUM

TO: Colorado Water Conservation Board

FROM: Jennifer Gimbel
Brent Newman
CWCB Staff

DATE: September 13-14, 2011

SUBJECT: **Agenda Item 21d**, September 2011 CWCB Board Meeting Director's Report

John W. Hickenlooper
Governor

Mike King
DNR Executive Director

Jennifer L. Gimbel
CWCB Director

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~STATEWIDE~

GROUND WATER COMMISSION MEETING: The Ground Water Commission (GWC) held its quarterly meeting on August 19, 2011, in Castle Rock, CO. The agenda items included routine reports and a hearing on a request by Dean Goss for a variance to move his wells more than ½-mile and allow alternate points of diversion to these wells. The variance was denied. Presentations on possible legislative changes were also presented. Matt Poznanovic presented a possible legislative change to remove the requirement that municipalities put their full appropriation to use within three years of issuance of a well permit. Michael Shimmin presented a possible legislative change to expand the Ground Water Management Districts (GWMD) enforcement authority over wells and to allow them the ability to impose fines. Both Mr. Poznanovic and Mr. Shimmin were encouraged to proceed and bring back proposals at the November 2011 meeting. Lastly, presentations were given summarizing the administration and enforcement of well permits and the modified priority system and the status of recent discussions between staff and the Upper Black Squirrel Creek GWMD related to these matters. The Ground Water Commission will hold its next meeting on November 18, 2011, in Castle Rock, CO. For more information visit: <http://water.state.co.us/groundwater/CGWC/Pages/default.aspx>. (Suzanne Sellers)

FLOODPLAIN MAP MODERNIZATION/RISK MAP UPDATE: The following sections provide brief updates regarding Map Modernization and Risk Map activities in Colorado:

FY11 Activities: CWC in coordination with FEMA has held Discovery meetings for the St. Vrain, Clear Creek and Cache La Poudre watersheds. A Scope of Work has been completed and submitted to FEMA for a grant of about \$200,000 for LIDAR (digital topographic mapping) acquisition for future Risk Map projects. The grant is expected to be approved by the end of August 2011.

FY10 Activities: Work is underway for Chaffee, Logan and Pitkin Counties. Preliminary mapping for Pitkin County is almost completed. A meeting was held with Pitkin County to discuss the preliminary mapping as well as present Risk Map products available to the communities. The Risk Map products will be funded by FEMA. Hydraulic tasks and floodplain mapping tasks are continuing for Logan County. The LIDAR data for Chaffee County is being provided by the USGS and due to technical difficulties during the capture of the data, the topographic data will be delayed until December 2011.

FY09 Activities: The South Platte approximate floodplain delineation has been completed and approved by FEMA for Morgan County. The Morgan County DFIRM schedule has been delayed due to the levee in the Town of Wiggins. The Town is currently in the process of certifying the levee. The Beaver Creek study through the Town of Brush is underway and the preliminary report should be submitted to FEMA for review in early fall 2011.

The Prowers County DFIRM is progressing towards completing the floodplain mapping. The hydrology and hydraulic analyses have been completed and approved. Preliminary floodplain mapping is complete but not yet approved. There are three levees to analyze in the county and will be affected by the recent FEMA memo on de-accredited levees. A meeting was held with the communities in Prowers County to discuss the preliminary mapping for Prowers County, Lamar, Granada, and Holly. A preliminary schedule was recently sent to the communities

outlining steps needed to certify the levee. This project is currently on hold awaiting new guidance for levee mapping.

FY08 Activities: Work continues for Gunnison and Montrose counties. Montrose County DFIRM is now in the preliminary phase. Final and public meetings were held in late February 2011. The Elbert County DFIRMs are now effective. Rio Grande County is scheduled to become effective in September 2011.

The Pueblo County DFIRM has been put on hold due to the recent FEMA memo on de-accredited levees. The Fountain Creek hydrology has been approved and most of the hydraulic analyses and floodplain mapping has been completed in the County. A meeting was held in August with the Levee Conservancy District. The District will be waiting for the new levee guidance to be distributed.

FY07 Activities: Summit County DFIRM has been delayed due to Zone D delineations; however, the revised delineations have been completed and approved. A public meeting will be held in Summit County to inform homeowners about flood insurance. The projected date for effective maps in Summit will be in November 2011. La Plata County received their effective maps in August 2010. Park County has gone effective in December 2009. Delta County maps became effective in July 2010. Teller County and Archuleta County have gone effective since September 2009.

FY 06 Activities: Weld County detailed study work continues to progress. Weld County has identified levees in the Town of Evans. The DFIRM may be delayed due to the recent memo from FEMA on de-accredited levees. However, if the Town of Evans can provide written consent on the analysis that has already been completed on their levee, the project may be completed. In addition, FEMA has requested several LOMRs to be incorporated. If there is no delay caused by the levee in the Town of Evans, the Weld County DFIRM is expected to go preliminary in the summer of 2011. Fremont County DFIRMs are expected to go effective in January 2012. Clear Creek County preliminary maps were distributed in September 2010. The Pueblo County Arkansas River Levee floodplain study is in progress, finalization is still progressing. This project was delayed due to the Fountain Creek hydrology and is now put on hold due to their de-accredited levee which is impacted by the recent FEMA memo.

FY 05 Activities: Mesa County DFIRM became effective in June 2010. The Garfield County DFIRM is in draft preliminary stage. It is currently in the QC process by Baker. The preliminary DFIRMs should be sent out in early summer 2011. The Montezuma County DFIRM went effective September 28th 2008.

FY 04/03 Activities: All of the Boulder County levees have been identified. The South Boulder Creek Study has been completed and approved. Incorporation of this study into the DFIRM is now complete. FEMA has provided Provisionally Accredited Levees (PAL) agreements for two levees in the County. The Boulder County preliminary maps were sent in March 2010. A final meeting took place in July 2010 and a public meeting will be held after all comments have been addressed on the maps. A second round of comments is currently being reviewed the City of Boulder. Boulder County has 3 de-accredited levees which will be impacted by the recent memo sent out from FEMA. A meeting is scheduled at the end of May 2011 to discuss the guidance from FEMA and how it will impact DFIRM process for Boulder County. *(Thuy Patton)*

STATEWIDE MODEL FLOODPLAIN ORDINANCE: The CWCB has completed a final draft of the State model floodplain ordinance, which is being reviewed by the Technical Advisory Committee and Mapping Transition Group. The purpose of the document is to provide guidance to local governments regarding the 2011 Floodplain Rules and Regulations that went into effect on January 14, 2011. The model floodplain ordinance is adapted from the FEMA model ordinance and incorporates both the NFIP minimum standards and the new State minimum standards. Staff will be working closely with communities to answer questions and provide assistance during the transition period between now and January 2014. *(Tom Browning)*

WILDERNESS AREA LEGISLATION: Rep. Diana DeGette has introduced wilderness area legislation substantially similar to the legislation introduced last year that was unsuccessful. The proposed legislation would contain the same language that was used in the legislation establishing the Dominguez Canyons Wilderness Area, relying upon the state's Instream Flow Program to protect the water-related wilderness values. The streams that are located in the proposed wilderness areas covered by this language include Badger Creek, Beaver Creek and Grape Creek in Water Division 2, and Thompson Creek in Water Division 5. According to an August 20, 2011 article in the Pueblo Chieftain, the Southeastern Colorado Water Conservancy District board voted to oppose the wilderness legislation based upon concerns that it could hinder future water projects. *(Linda Bassi)*

~COLORADO RIVER BASIN~

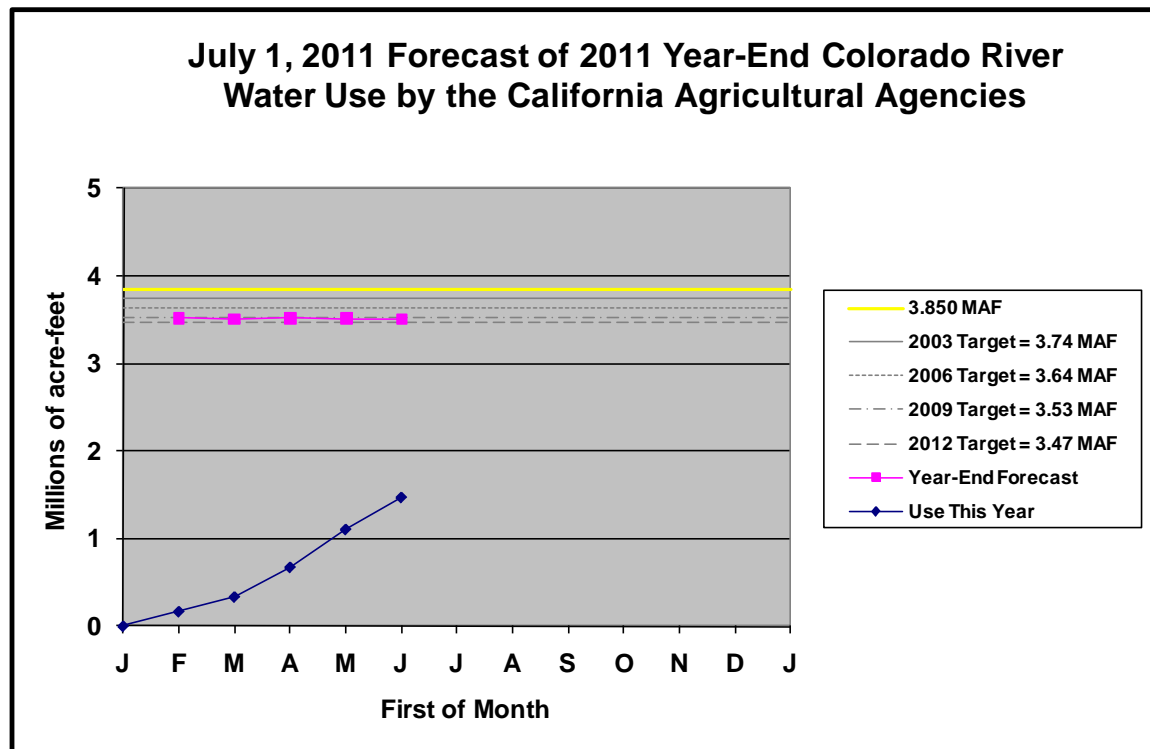
COLORADO RIVER WATER AVAILABILITY STUDY (CRWAS): The completed comment/response matrix for the Draft Phase 1 CRWAS report has been posted on the CWCB website. Model and reporting refinements are currently being initiated. The second round of public outreach is being scheduled with the BRT's. The second round will present the updated modeling results and completed draft final Phase 1 CRWAS report. Also part of the second outreach effort, the CRWAS team will discuss how the study can be used in each of BRT's specific basins. It is hopeful that we will be presenting to the Board the report at the January, 2012 meeting. *(Ray Alvarado)*

BUREAU OF RECLAMATION CONTINUES TO RELEASE FLOWS FROM LAKE POWELL AT NEAR FULL CAPACITY OF THE POWER PLANT: As of August 25, 2011, Lake Powell is 75% of capacity (18,169 kaf, Elevation 3657) and it is releasing approximately at rates between 24,000 cfs and 24,800 cfs. The release flows are being ramped down to approximately 15,000 cfs to comport with the fall steady flow experiment, which is in its final year of operation. Lake Mead is 48% full (12,550 kaf, Elevation 1112). The reservoir elevation of Lake Powell will decrease during the next several months, due to the fact that the BOR is operating under an Equalization tier. The August 24-month study projects Lake Powell WY 2011 annual release volume of 12.45 maf. Due to recent increases in the inflow forecast for Lake Powell, equalization cannot be fully achieved by the end of the water year. Due to increased releases from Lake Powell, shortage declarations in the Lower Basin will be avoided in 2012, and perhaps for several more years. We will continue to monitor the situation and we will update the Board at the September Board meeting. *(Ted Kowalski)*

COLORADO RIVER WATER USE: As of July 1, 2011, storage in the major Upper Basin reservoirs increased by 3,488,800 acre-feet and storage in the Lower Basin reservoirs increased by 334,200 acre-feet during June 2011. Total system active storage as of July 4 was 37.366

million acre-feet (MAF), or 63 percent of capacity, which is 2.724 MAF more than one year ago. (Upper Basin reservoirs increased by 1.539 MAF, and Lower Basin reservoirs increased by 1.185 MAF.)

The preliminary year-end estimate for 2011 California agricultural consumptive use of Colorado River water under the first three priorities and the sixth priority of the 1931 *California Seven Party Agreement* is 3.510 MAF. The target under the Interim Surplus Guidelines (ISG) for 2009 was 3.530 MAF, and the target for 2012 is 3.470 MAF. (*Andy Moore*)



U.S.-MEXICO BI-NATIONAL NEGOTIATIONS CONTINUE: The principals for the Colorado River Basin States continue to work with U.S. and Mexican federal officials and other stakeholders to explore opportunities to improve water management in a way that could benefit both countries. In addition, the workgroups have held a number of meetings in July and August to work through some of the finer details. We will update the Board at the upcoming Board meeting. (*Ted Kowalski*)

GLEN CANYON TECHNICAL WORK GROUP (TWG) AND ADAPTIVE MANAGEMENT WORK GROUP (AMWG) MEETINGS: The Technical Work Group meeting occurred on June 28-29, 2011 in Phoenix, AZ, where the hydrograph recommendation and the Annual Work Plan and Budget were the main topics on the agenda. The Adaptive Management Work Group (“AMWG”) meeting was held on August 23-24, 2011 in Phoenix, Arizona. Ted Kowalski attended both of these meetings as Jennifer Gimbel’s alternate to the AMWG due to the fact that these meetings were scheduled at the same time as the Colorado Water Congress Summer meetings. At the AMWG meeting, the AMWG approved the 2012 budget and workplan, the 2012 hydrograph, and continued work on finalization of the Desired Future Conditions Report to the Secretary. (*Ted Kowalski*)

WATER EDUCATION FOUNDATION'S COLORADO RIVER SYMPOSIUM: Director Gimbel and Ted Kowalski will both be presenting at this year's Colorado River Symposium entitled "Solving the Basin's Math Problem: Adapting to Change," which will be held in Santa Fe, New Mexico on September 21-23, 2011. *(Ted Kowalski)*

~ARKANSAS RIVER BASIN~

ARKANSAS RIVER DECISION SUPPORT SYSTEM (ARKDSS): The feasibility study for an Arkansas River decision support system (ArkDSS) commenced in late January 2010. The purpose of the feasibility study is to define the ArkDSS's purposes, uses, users, components, data requirements, costs and the schedule required to develop such a system. The results of the feasibility study will be used by the CWCB and DWR for recommending the development of an ArkDSS to the General Assembly.

A proposed implementation for ArkDSS has been formulated in coordination with an Arkansas Basin Roundtable technical subcommittee. The proposed plan was endorsed by the Roundtable in May, and it was approved by the Board at the July Board meeting. The draft report for the feasibility study is out for review through the end of August; it should be finalized in September. *(Ray Alvarado)*

ARKDSS IMPLEMENTATION: In November 2010, the Board approved \$500,000 for high-priority tasks identified early in the feasibility study. These include H-I Model enhancements and consumptive use and irrigate acreage data collection, mainly in the upper basin. CWCB and DWR staff are working on scoping these tasks so that they can go out to bid in the near future. *(Ray Alvarado)*

BUREAU OF RECLAMATION HOLDS LISTENING SESSIONS REGARDING REVENUES FROM THE FRYINGPAN-ARKANSAS PROJECT: On August 10 and 11, 2011, the Bureau of Reclamation held a meeting to discuss alternatives for using revenues from excess capacity contracts to pay off different parts of the Fry-Ark Project. Legislation passed in 2009 provides that these revenues shall be used to pay down three different aspects of the project—the Southern Outlet Works, the Fountain Valley Conduit, and Ruedi Reservoir. We have been working with participants of the Fry-Ark Project to see if there is a consensus alternative that the State and project participants can all support. We will update the Board about the status of these conversations, at the September Board meeting, and future Board meetings. *(Ted Kowalski)*

BUREAU OF RECLAMATION EXPLORES CRITERIA FOR MARKET RATE PRICING FOR EXCESS CAPACITY CONTRACTS FOR THE FRYINGPAN-ARKANSAS PROJECT: On August 10, 2011, the Bureau of Reclamation held a meeting to collect information and ideas about the proper criteria related to excess capacity contracts. The Bureau of Reclamation suggested that this work may result in a Temporary Directive and Standard for the Bureau of Reclamation, and it could have west-wide implications, despite the fact that it is limited to excess capacity contracts for the Fry-Ark project at first. The Bureau of Reclamation committed to holding additional technical meetings to further explore the issues associated with this effort, and indicated that their number one priority is "to get this done right, rather than quickly." We will be attending future meetings and we will update the Board as this work progresses. *(Ted Kowalski)*

~PLATTE RIVER BASIN~

SOUTH PLATTE DECISION SUPPORT SYSTEM (SPDSS): The South Platte alluvial groundwater modeling has been calibrated for the 1950-2005 study period. The calibration of the model had unique challenges because of the scope and breadth of the basin and hydrogeology; however the consulting firm was able to achieve a calibrated model. The Peer Review Committee was held on August 16, 2011, where the calibrated model was presented. The surface water model for Water Districts 1 and 64 is still progressing and the modeling team will be meeting with Dave Nettles, Division 1 engineer, to go over the administrative issues and how to handle them in the modeling arena. We are hopeful that a peer review meeting will be held by late summer or early fall to present results and get feedback. Results of these modeling efforts will hopefully be presented to the CWCB Board in January, 2012. (*Ray Alvarado*)

PLATTE RIVER RECOVERY PROGRAM: The Platte River Recovery Implementation Program (“Program”) Governance Committee has not met since the last CWCB meeting in July of this year. Since that time, Ms. Sellers participated in Water Advisory Committee, Technical Advisory Committee, Finance Committee and J2 Land Purchase Committee meetings and conference calls. Wendy Figueroa of the Colorado Division of Parks and Wildlife will participate in an upcoming Land Advisory Committee meeting. The next Governance Committee meeting will be held on September 13-14, 2011 in Scott’s Bluff, NE. Agenda items for the next Governance Committee meeting may include discussions on purchasing land for the J2 reregulating reservoir and discussions on program activities as they relate to the Platte River caddisfly. For more information, please visit:

<http://www.platteriverprogram.org/Pages/default.aspx>. (*Suzanne Sellers*)

SOUTH PLATTE RIVER MAINTENANCE UPDATE: The CWCB manages several miles of the South Platte known as the Chatfield Downstream Channel Improvement Project. The original project was designed and constructed by the U.S. Army Corps of Engineers (Corps) as a flood control project, and was then turned over to the State by agreement for annual operations and maintenance. Every year, the project is inspected and rated by the Corps. Activities in calendar year 2011 included several key items. A project team completed plans and approvals for modifications to Union Avenue Boat Chute #1. The project was contracted to Naranjo Civil Engineering and is on the order of \$100,000. Permits and approvals from the Corps are secured and the project agreement between Englewood and the CWCB is being executed. A sum of \$50,000 was used for continued vegetation management near the confluence of Bear Creek. A detailed survey of the upstream training dike near Columbine Valley showed that it is within a few inches of the design configuration for the east bank. Also, a video of a drainage pipe in the east bank training dike shows it is in fair to good condition, but doesn’t really convey flow based on new development and a new park above it.

There is a ribbon cutting ceremony on October 15th for the new one-mile stretch of recreation trail on CWCB right-of-way that was approved by the CWCB Board in January. Jennifer Gimbel has been invited to give a brief speech at the ceremony and the CWCB will be recognized as a significant project partner for this effort. That same day, the 20th anniversary of the 10,000 trees project will be recognized, and staff has worked with local partners to finance the excavation of holes for 200 trees that will be planted as part of a volunteer tree planting effort. Staff is also in the process of developing a new contract with UDFCD to put \$115,000 in an account that will

serve as our 25% share to be matched with a 75% share from UDFCD. This will generally be used for planning, design and implementation of three drop structures/boat chutes near Oxford Avenue. (*Joe Busto*)

~RIO GRANDE RIVER BASIN~

ALAMOSA LEVEE AND OUTREACH MEETING: Alamosa County will be included in the upcoming FEMA floodplain mapping update (Risk Map program, formerly Map Modernization program) with assistance from the CWCB as a Cooperating Technical Partner. The update will be part of the San Luis HUC-8 (hydrologic unit, 8-digit cataloging code) watershed, which is a portion of the Rio Grande watershed. The official start of the update will not begin until late Fall 2011. However, a preliminary meeting has been scheduled with the City of Alamosa and Alamosa County to discuss potential mapping and levee issues that could impact the overall mapping process and the community as a whole. In addition, the CWCB is in the process of coordinating with local officials to implement a public outreach strategy for residents in the Alamosa area who are either currently impacted or may be impacted in the future by important levee issues and related floodplain mapping efforts. The levee and outreach meeting is scheduled for August 30, 2011 (after the date of this article).

FEMA and the CWCB will be scheduling a “discovery” meeting (FEMA’s new terminology, but formerly known as “scoping” meeting) in the fall of 2011 with affected communities in the subject watershed to formally discuss the starting phase of the FEMA flood map update. The communities will have a large role in coordinating with FEMA and the CWCB during the entire mapping process to ensure more accurate flooding risks will be conveyed. From start to finish, the mapping update will likely take 3-5 years before the final products are completed.

The Rio Grande levee system through Alamosa will be a significant source of analysis during the upcoming flood map study. The Alamosa levee was completed by the Corps of Engineers in 1998. Recent inspections by the Corps have determined that there are concerns about the levee including land use, access, and vegetation issues. Staff acknowledges those concerns and is eager to assist the community in any way possible. As part of the mapping process, FEMA will require the City to obtain a certification for the levee by a registered Professional Engineer in order for it to be modeled and portrayed as protecting lands during a 100-year (1% chance per year) flood. The CWCB does not certify levees, and the ultimate decision of the structure’s worthiness will belong to a third-party engineer under contract to the City. Staff can provide guidance and technical assistance regarding levee issues and the overall process.

At the July 2011 CWCB meeting in Walden, board members strongly emphasized their position that citizens in Alamosa have the right to know about the current circumstances and how it may affect flood risks and related implications. In order to carry out its responsibilities and authorities, the Board directed to staff to ensure that a proper public outreach campaign in Alamosa is developed and implemented. This will be a significant portion of discussion between CWCB staff and local officials during the August 30th meeting in Alamosa. Staff will continue to update the Board on this topic as new information becomes available. (*Kevin Houck, Thuy Patton, & Tom Browning*)

~SAN JUAN/SAN MIGUEL-DOLORES RIVER BASIN~

RIVER PROTECTION WORKGROUP: The River Protection Workgroup (“RPW”) for the Animas River held its second meeting on July 28, 2011, in Silverton, Colorado and its next meeting is scheduled for August 25, 2011 at the same location. During this meeting the ground rules and the intent of the work group was reiterated. Also during this meeting, specific information was discussed regarding the Animas River Drainage above Baker’s Bridge; including the presence of CWCB instream flows within the reach and CWCB minimum lake levels within the area of focus. For more information, see the following link:

<http://ocs.fortlewis.edu/riverprotection>. (*Suzanne Sellers*)

LOWER DOLORES WORKING GROUP UPDATE: In July 2010, the Lower Dolores Working Group submitted a report to the Dolores Public Lands Office (“DPLO”) containing recommendations related to protection of the Outstandingly Remarkable Values (“ORVs”) and other values in the Dolores River corridor, including archaeology and cultural resources; scenery; rafting; and fish, wildlife and ecological issues, including invasive species. The report recommended management goals and objectives for the River corridor in connection with the DPLO’s Management Plan. As an alternative to a finding of suitability for Wild and Scenic designation for the Dolores River, the report’s consensus recommendation is to “pursue special legislation to protect the ORVs as well as water rights, agriculture and private property rights, recognizing that preliminary suitability will stay on the table until the special legislation passes.” The special legislation potentially would designate a National Conservation Area along the Dolores River. The DPLO sent a letter to the Lower Dolores Working Group on June 29, 2011 stating the DPLO’s intent to wait for the results of the legislative effort rather than update the current Dolores River Corridor Management Plan. The DPLO will use the Group’s report in formulating a management plan for the National Conservation Area, if such legislation is passed, or in updating the current Management Plan if the legislative effort does not move forward. See below for an update on the Lower Dolores Working Group Legislative Committee’s “A Way Forward” project. (*Linda Bassi*)

FINAL “A WAY FORWARD” REPORT PUBLISHED: The final report from the “A Way Forward” project was published in August 2011. “A Way Forward” is an inquiry by three expert scientists into the status of native fish on the Lower Dolores River combined with a multi-stakeholder consensus-building process, spearheaded by the Legislative Committee of the Lower Dolores Working Group. The desired outcome of “A Way Forward” is a list of “do-able” alternatives to improve the status of native fish on the Lower Dolores that will define which actions can be included in the legislation to establish a National Conservation Area as an alternative to Wild and Scenic River suitability status, and which actions will be pursued outside of the legislative process. The report contains: (1) a summary of information describing the status and trends of flannelmouth sucker, bluehead sucker and roundtail chub in the Dolores River, Colorado (specifically the reach downstream of McPhee Dam to the confluence with the San Miguel River), and a discussion reasons for those fishes’ decline; and (2) a presentation of nine potential management opportunities for improvement of the native fish community. The report concludes that no reaches of the study area have strong populations of the three fish species, and that a relatively large decline in populations has occurred. The potential management opportunities discussed and ranked in the report are: spill management, base flow management, sediment transport flows, habitat maintenance flows, thermal regime modification,

reducing effects of introduced cold water and warm water species, and supplementing native fishes. The report's authors ranked improvements to base flows, thermal management, and reductions in non-native fishes as the highest priorities, with sediment flushing flows, habitat maintenance flows and supplementation of native fishes receiving lower but still important ranking. The final report and notes from the researchers' April and June 2011 presentations to and discussions with the Way Forward Oversight Panel and Lower Dolores Working Group Legislative Committee can be viewed at <http://ocs.fortlewis.edu/drd/way-forward.htm>. The Lower Dolores Working Group will meet in early Fall 2011 to discuss the report and next steps. (Linda Bassi)

~AGENCY UPDATES~

FLOODDSS: The FloodDSS web map application has seen steady use since it was implemented in late 2010, averaging roughly 800 users a month. In May, with the advent of flooding threats from snowmelt, the number of users climbed to 1,200, peaking with almost 2,400 for the month of June. In July, with the snowmelt threat gone, the number of users dropped back down to the mid 700's.

It is expected that the FloodDSS will be upgraded to the latest version of its platform software before the flood season in 2012, and may get some enhancements in the process. (Ray Alvarado)

DIGITIZATION: The CSU Water Resources Archive has recently completed their latest digitization project, involving more than 30,000 pages of archival materials. These documents are available both through [finding aids](#) (look for the CD symbol) and through a [search](#) on the Water Resources Archive website home page (choose "Online documents and images").

Documents include materials from:

- the Groundwater Data Collection,
- the Delph Carpenter Papers,
- the Whitney Borland Papers,
- the Xeriscape Colorado Records,
- and much more.

A substantial amount of material related to the Arkansas River Basin was added through this effort. Funding was provided by the CWCB through a 2009 non-reimbursable project investment grant. (Ray Alvarado)

CWCB WEBSITE STATISTICS AUGUST 2010-2011: The "new" CWCB website has already been available to the public for a year, launching August 12th of 2010. Analyzing various statistics from the past year yields a little more than 1.6 million website visits, with an average viewing time of a little over a minute. The top content visited, following the home page, includes the IBCC home page, board meetings page and board member page. The United States is the country viewing the CWCB website most (China was first for a few months, likely due to hacking attempts), with Colorado producing 29% of the viewers, Washington state having 25% of viewers and California making up 14% of visits. Internet Explorer is the browser used more than 50% of the time for viewing CWCB's site, with Firefox coming in next at 13%. (Ray Alvarado)

CDSS AND RISK MAP WEBSITES: Development and testing is underway for two additional CWCB-related websites: the Colorado's Decision Support Systems (CDSS) website upgrade and the migration from the current Map Modernization (Map Mod) website to a new Risk MAP site. The CDSS site is nearing completion, with content and maps being finalized and a few minor technical difficulties being ironed out. The anticipated launch for the new CDSS site is September 2011. The new Risk MAP site page layout and content are in development, with maps and other relevant data moving over from the existing Map Mod website. The anticipated launch for the new Risk MAP site is late 2011 or early 2012. (*Ray Alvarado*)

RECENTLY DECREED ISF WATER RIGHTS: On June 7, 2011, the Division 6 Water Court decreed an instream flow water right to the CWCB on South Fork Slater Creek in Case No. 10CW052 for 4.1 cfs (April 1 – June 30), 1.25 cfs (July 1 – July 31), 0.65 cfs (August 1 – September 15) and 1.25 cfs (September 16 – March 31) with an appropriation date of January 26, 2010. The upstream terminus is the headwaters and the lower terminus is the confluence with West Prong South Fork Slater Creek. This ISF reach is approximately 4.55 miles long and flows in northerly direction in Routt County.

On June 13, 2011, the Division 4 Water Court decreed an instream flow water right to the CWCB on Cochetopa Creek in Case No. 10CW132 for 6.8 cfs (May 1 – November 15) with an appropriation date of January 26, 2010. The upstream terminus is the confluence of Alkali Creek and the lower terminus is the South Krueger Ditch headgate. This ISF reach is approximately 12.92 miles long and flows in a northerly direction in Saguache County. This right is in addition to an existing instream flow right on Cochetopa Creek decreed in Case No. 84CW375 in the amount of 8.5 cfs (January 1 – December 31) with an appropriation date of May 4, 1984.

On July 12, 2011, the Division 4 Water Court decreed an instream flow water right to the CWCB on West Prong South Fork Slater Creek in Case No. 10CW053 for 4.9 cfs (March 1 – July 31), 3.5 cfs (August 1 – October 31), and 2.5 cfs (November 1 – February 29) with an appropriation date of January 26, 2010. The upstream terminus is the headwaters and the lower terminus is the Decker Ditch No. 1 headgate. This ISF reach is approximately 4.58 miles long and flows in a northerly direction in Routt County.

On July 25, 2011, the Division 4 Water Court decreed an instream flow water right to the CWCB on Tabeguache Creek in Case No. 10CW186 for 4.75 cfs (March 15 – June 30) with an appropriation date of January 26, 2010. The upstream terminus is headgate of the Templeton Ditch and the lower terminus is the confluence with the San Miguel River. This ISF reach is approximately 9.7 miles long and flows in a southwesterly direction in Montrose County. (*Rob Viehl*)

AGRICULTURAL IMPACT TASK FORCE UPDATE: The Agricultural Impact Task Force (AITF) has been meeting weekly since its activation in May of this year. These AITF conference calls have enabled more fluid and frequent communication regarding drought

response, in particular the drought designations for numerous counties throughout southern Colorado. Primary disaster declarations for Baca, Otero, Crowley, Bent, Chaffee, Custer, Fremont, Huerfano, Kiowa, Las Animas, Prowers, Pueblo, Saguache, Alamosa, Rio Grande, Costilla, Conejos counties have been received from Secretary Vilsack following a request from Governor Hickenlooper. An additional request was sent by Governor Hickenlooper for Douglas and Elbert counties and is still pending.

An additional 12 counties have secondary status as a result of being contiguous to counties with primary declarations. As a result of these designations the AITF have cut back their meeting to twice a month, should the drought worsen or should more claims come in, these calls may be made more frequent.

Emergency grazing on CRP lands have been granted for Lincoln, Otero, Las Animas, Bent, Kiowa, Prowers, Baca, and Crowley counties. Although reports indicate that the grazing conditions of these lands is far from ideal. Ranchers will be able to use land in the Conservation Reserve Program through Sept. 30.

Three memos have also been sent to the executive directors of DNR, DOLA and Department of Agriculture from the AITF to keep them apprised of the drought conditions and response. (*Taryn Hutchins-Cabibi*)

CWCB WATER EFFICIENCY GRANT FUND PROGRAM (WEGP) UPDATE: Over the last few years of research/projects along with evaluating this grant program, CWCB staff is identifying trends in conservation planning and implementation. It is an on-going discussion as staff considers a guideline update for this grant program. CWCB staff is pleased to have the most recent grant application to be for drought planning.

Several Grant applications have been received and are being considered and reviewed:

- Town of Firestone – *Drought Planning Grant Application*
- Tri-County Water Implementation Grant – *Commercial Water Audits*
- City of Norwood – *Water Conservation Plan Grant*
- Dillon Valley Metro District – *Water Conservation Plan Grant*

Two grants under review at the time of the last Board meeting have been approved:

- St. Charles Mesa Water District – *Meter replacement program*
- Southeastern Colorado Water Conservancy District – *Audits to inform regional planning*

Three Water Efficiency Grants were completed. Deliverables to the CWCB is as follows:

- City of Durango Water Conservation Plan – *submitted for approval*
- Town of Superior Water Conservation Plan – *submitted for approval*
- Town of Frederick Water Conservation Plan – *submitted for approval*

(*Deborah Burrell*)

WATER CONSERVATION PLANS UNDER REVIEW: The Office of Water Conservation & Drought Planning (OWCDP) continues to work with the following providers to approve their Water Conservation Plans:

- **City of Arvada** – Review of the plan was completed on July 11. Comments were sent to the City on July 25. CWCB staff is in the process of trying to scheduling a meeting with the entity to go over comments.
- **City of Broomfield** – The Plan is under review.
- **City of Louisville** – Resubmission of a preliminary November 2009 version of their Water Conservation Plan is pending.
- **Grand Valley Regional Water Conservation Plan** – An updated version of the Regional Water Conservation Plan was submitted on July 25. Review is pending. Following CWCB's review, the Plan will be made available for public comment.
- **Meridian Metropolitan District** – CWCB staff reviewed plan in May and met with the District on July 21. Meridian staff will address comments and resubmit plan.
- **Town of La Junta** – Final review of the Plan was completed by CWCB staff and additional comments were sent back to the Town on May 13, 2011. Resubmission pending.
- **Douglas County Government** – Review of the Regional Water Conservation is under review.
- **Little Thompson Water District** – The District submitted a draft of their Water Conservation Plan on June 29. Review is pending.
- **Town of Superior** – The locally adopted Plan was submitted to the CWCB on August 1. Review is pending.
- **City of Durango** – The locally adopted Plan was submitted to the CWCB on August 4. Review is pending.
- **Town of Frederick** - The locally adopted Plan was submitted to the CWCB on August 3. Review is pending.

The CWCB has approved the following Water Conservation Plans from these water providers since the July 2011 Director's Report.

- City of Steamboat Springs/Mount Werner Water & Sanitation District (Regional Water Conservation Plan)
- Consolidated Mutual Water Company
- City of Monte Vista
- East Cherry Creek Valley Water & Sanitation District

(Ben Wade)

GOVERNOR'S WATER AVAILABILITY TASK FORCE: *Please see included August 2011 Drought Update for information on current drought conditions throughout the state (Attachment 2).* The next Water Availability Task Force Meeting is scheduled for September 22, 2011 at the Colorado Division of Parks & Wildlife Headquarters and Administrative Offices from 9:30a-12p. Please check the website (<http://cwcb.state.co.us/public-information/flood-water-availability-task-forces/Pages/main.aspx>) for additional information. *(Ben Wade)*

WATER CONSERVATION TECHNICAL ADVISORY GROUP/ HB1051/DATA

REPORTING WORKING GROUP: The Water Conservation Technical Advisory Group/HB1051 Working Group (TAG) has met twice since the last CWCB Board meeting – July 27 and August 23. During the July 27 meeting the TAG worked out the remainder of the conservation data section of the guidelines. The August 23 meeting consisted of the TAG, the Stakeholder Advisory Group (SAG) and Policy representatives. This meeting was held in Steamboat Springs in concert with the Colorado Water Congress' Annual conference to make it more accessible for water providers from the West Slope to attend. The group was given a briefing on progress made since the last SAG meeting and introduced the SAG members to the new conservation data categories and definitions developed over the last two months. The group reached agreement on progress to date and agreed with the decision to bring the first draft of guidelines to the CWCB Board. Additionally, Jennifer Gimbel presented an update to the Interim Water Resources Committee to inform the legislators on the progress to date. At present time, the Guidelines document process is on track with a presentation scheduled for the September CWCB board meeting. Next steps include a public comment period after the September CWCB Board meeting if the Board decides to move forward at that time. *(Kevin Reidy)*

CONSERVATION PLANNING GUIDANCE DOCUMENT REVISION UPDATE: The CWCB is revising the guidance documents for water conservation plans. A working group was selected from existing covered entities based on geographic and customer base diversity to assist in the development of the new water conservation planning documents. Since the last CWCB Board meeting in July, all workshops have been completed and a first draft of the guidance document and template is being reviewed internally. The document should be ready to be reviewed by the Water Conservation Technical Advisory Group in September with a public review period scheduled for October. The final guidance document will be ready by the end of 2011. *(Kevin Reidy)*

WATER CONSERVATION LEVELS ANALYSIS UPDATE: Following up on work done in 2010, the CWCB is working with Great Western Institute to refine and correlate the SWSI levels analysis with the Best Practices Guidebook to create a cohesive framework for prioritizing water conservation efforts. Presently, a first draft has been developed and reviewed by CWCB staff. Internal comments are being incorporated into the document with a review by the Water Conservation Technical Advisory Group scheduled for September. *(Kevin Reidy)*

DART (DROUGHT ASSESSMENT FOR RECREATION AND TOURISM): A contract is in place and work has begun on the DART project with Project Team meetings held on August 3 & 29. Stakeholder questionnaires and workshops will take place this fall. *(Taryn Hutchins-Cabibi)*

CLIMATE CHANGE TECHNICAL ADVISORY GROUP: The CCTAG met on August 15th to discuss the selection of models for 2070 in the CRWAS phase 1b. This new approach was taken in response to stakeholder and public comments regarding the distribution of the 2070 model runs. The new approach selects model runs that more closely capture the range of results and also are more comparable to 2040. The CCTAG members were in support of this new approach. *(Taryn Hutchins-Cabibi)*

PUBLIC AWARENESS RESEARCH PROJECT UPDATE: A statewide communications plan about the value and importance of water has been submitted to CWCB staff. The goal of

this plan is to raise awareness among all Coloradans of the value and importance of water. The next step is to meet with DNR leadership to discuss the role of the State in a statewide campaign to raise awareness among Colorado constituents. Staff looks forward to presenting this plan and make recommendations of the State's role to the board at the November Board meeting.

(Deborah Burrell)

CWCB PARTNERS WITH LOCAL & FEDERAL AGENCIES TO PROMOTE WATER EFFICIENT HOMES: The CWCB is partnering with local and federal agencies to help to promote two new water efficient homes in Golden and Colorado Springs. The Colorado Springs home is certified to be EPA WaterSense, EnergyStar and Leadership in Energy & Environmental Design (LEED) approved. The Golden home, built by Habitat for Humanity, is to be EPA WaterSense, EnergyStar and Indoor Air Plus certified. The EPA estimates that WaterSense homes will reduce water use by 20% or 50,000 gallons a year. The low income family who will live in the Habitat home can potentially save \$10-35/month on their water bill and \$46-80/month on their energy bill. The groundbreaking ceremony is tentatively scheduled for September 14, 2011. The EPA's Deputy Director, Bob Perciasepe, will be in attendance.

The WaterSense approved home in Colorado Springs was the first WaterSense home built in EPA's Region 8. GJ Gardner Homes-Northgate built the home in the Gold Hill Mesa area of Colorado Springs which is a former gold ore milling site. The 210 acre property has been restored and redeveloped for a traditional neighborhood under the supervision of the Colorado Department of Public Health & Environment. The EPA and CWCB are working with Colorado Springs Utilities to promote the home at a press event scheduled to be held at the end of September. The Springs Utilities is currently in communication with the Governor's Office and requesting Governor Hickenlooper attends the event.

WaterSense is a program developed by the EPA in 2007 to promote the value of water by educating citizens regarding water use and water-using products. The WaterSense program was also created to influence the marketplace by encouraging the public to purchase water efficient products and services. The EPA has recruited partners to promote the program nationwide. Manufacturers, retailers, utilities and state and local governments are participating in the program. Manufacturers who are WaterSense Partners have developed new products that meet WaterSense guidelines and have been installed in new homes in 6 states. The CWCB has been a WaterSense partner since 2007. *(Veva Deheza & Ben Wade)*

WATER/ENERGY CONFERENCE IN BOULDER: Kevin Reidy and Taryn Hutchins-Cabibi attended a workshop on the Water-Energy Simulator (WESim) tool that was developed by Pacific Institute and the University of California Santa Barbara. This is a tool that water utilities can use to calculate and track their water related energy use throughout their system. It is an impressive tool and will be available free to the public through the Pacific Institute website this fall. For additional information be go to <http://water-energy.lbl.gov/drupal.files/wett/9%20Heather%20Cooley.pdf> *(Kevin Reidy & Taryn Hutchins-Cabibi)*

STREAM AND LAKE PROTECTION SECTION DE MINIMIS CASES: The following table summarizes the applications that have the potential to injure the Board's instream flow water rights, but their impacts are considered de minimis. In each of these cases, the cumulative impact to the Board's rights is 1% or less. Pursuant to ISF Rule 8(e) (the de minimis rule), staff

has not filed Statements of Opposition in these cases and has provided the required notification to the Division Engineer and applicants. (*Don West*)

Case No.	Applicant	Stream/ Case Number	ISF Amount	<u>Percent</u> <u>Injury</u>	<u>Cumulative</u> <u>% Injury</u>	<u>Previous</u> <u>Cases</u>
4-11CW065	Rocky Mountain Biological Laboratory	Copper Creek/ 4-80CW089	7 cfs (summer) 7 cfs (winter)	0.0237 % 0.0015 %	0.0237 % 0.0015 %	0
4-11CW065	Rocky Mountain Biological Laboratory	East River/ 4-83CW226	25 cfs (summer) 15 cfs (winter)	0.0066 % 0.0007 %	0.0066 % 0.0007 %	0
4-11CW065	Rocky Mountain Biological Laboratory	East River/ 4-83CW230	10 cfs (summer) 10 cfs (winter)	0.0166 % 0.0011 %	0.9194 % 0.7433 %	9

COLORADO WATER CONGRESS SUMMER CONFERENCE 2011: The Colorado Water Congress (CWC) held the Summer Conference and Membership Meeting on August 23-25 at the Sheraton Steamboat Resort in Steamboat Springs, Colorado. This summer's theme was "Water and Energy: Meeting Today's Challenges & Tomorrow's Opportunities". The conference explored the nexus between water and energy supplies, especially contemplating the similarities between the two in the face of future increasing demands. Speakers and moderators of conference sessions included Director Gimbel, Ted Kowalski, and Eric Hecox from CWCB. Mike King and Alex Davis from DNR also spoke. The event was a great success and the weather couldn't have been better. We at the CWCB look forward to attending the Winter Conference. (*Brent Newman*)

GIMBEL RESPONDS TO COLORADO BASIN OIL SHALE INQUIRIES: Director Gimbel recently received a letter from Representative Edward Markey, Ranking Member of the House Natural Resources Committee, with some questions about the development of domestic energy sources as they relate to water supply. Representative Markey's letter, as well as Director Gimbel's response is included, as Attachment 3 to this Report. (*Brent Newman*)

WEATHER MODIFICATION PROGRAM UPDATE: CWCB cost-share funding for the winter 2010-11 snow season was dispersed for several on-going operations. A \$62,300 amount was issued to Desert Research Institute (DRI) to operate two high output seeding machines in the Winter Park/Denver Water target area. An additional \$25,500 to DRI was used to operate a Liquid Propane Dispenser and high output cloud seeding machine for the Water Enhancement Authority on the Grand Mesa. A \$40,000 commitment to Gunnison County was made for their seeding program.

ETi Instrument Systems was issued \$9,424 for precipitation gauges that are to be deployed at Purgatory and Telluride ski areas for detecting small gains from cloud seeding programs. Genor Inc. provided another similar type of precipitation gauge on the Grand Mesa. Staff believes that the precipitation gauge data correlated to radar data next winter will be helpful with spatial mapping of snowpack from seeded and unseeded events on the Grand Mesa.

Eight thousand dollars went to the Water Enhancement Authority to restock solution, purchase electronic equipment and software to operate a seeding machine and to contract with a

meteorologist. The meteorologist will hold the permit and guide the operations and reporting of the program. Also, \$30,000 will be used by Denver Water to extend operations of their program.

In 2009, a special contract was executed between the CWCB and San Juan Resource Development Council, a non-profit contracts administration group, based in Durango. The request was from the Southwestern Water Conservation District and the goal was to have one fiscal agent for all the funding dispersed to the cloud seeding contractor. Two task orders were issued: one last winter for \$94,906.26 and one this summer \$100,039.78, which will go towards three cloud seeding programs in Southwestern Colorado.

In terms of program funding obtained from outside of Colorado, the WY 2011 request to the Lower Basin was for \$175,000 but funding was received in June 2011, which was after the 2010-2011 cloud seeding operations in the state. Staff's plan to spend that funding involves the purchase of off-season seeding solution for the Western San Juan, Eastern San Juan, and Telluride ski area programs. The remaining amount will be mixed with this year's CWCB funds of \$175,000 to prepare for winter 2011-12.

Staff's plan for the upcoming winter is \$34,000 to the Water Enhancement Authority for the Grand Mesa, \$40,000 to Gunnison County, \$80,000 to Denver Water, \$22,000 to DRI through the SJRCDC for a weather station at Telluride (probable), \$28,000 to Western Weather Consultants to again fund a proposal for four additional generators in the San Juan mountains, and \$15,000 to install a snow gauge at Purgatory and restock seeding solution in the generator. The Durango based contractor will be supported as they move towards less modeling and more use of real-time data and equipment to commence seeding operations. At this point, approximately \$33,500 of CWCB funding is still unallocated from winter 2011-12. The new request to the Lower Basin will be \$127,000; that is \$60,000 for the three southwestern cloud seeding programs to extend their three month programs for additional time, \$45,000 to refurbish a DRI generator for deployment at the Grand Mesa indefinitely, and \$22,000 to DRI to install a specialized weather station at Vail Ski Area.

Recent highlights of Colorado cloud seeding are: City of Grand Junction employees manage the cloud seeding program and operate modernized equipment, and Powder Horn Ski area is interested in partnering with the Water Enhancement Authority. Denver Water has a higher level of collaboration with the seven water providers in the Front Range Water Council and Breckenridge, Winter Park, Breckenridge, and Keystone; collaborating on a \$286,500 program in the Upper Colorado River Basin. The CWCB and Colorado River Seven Basin States will make grants of \$80,000 which is 28% of the funding available for this new program in their first year. (*Joe Busto*)

WEATHER MODIFICATION RULES AND REGULATIONS: Staff has started working on a proposal for revised rules and regulations that were discussed in the recent weather modification sunset bill, and encouraged by the Department of Regulatory Agencies (DORA). The revised rules need to be adopted by July 1, 2012. Staff plans to work with the AGO and other state programs to discuss cloud seeding regulations and to conduct workshops and meetings to obtain input. One area where input is needed deals with the concept of having summer aerial cloud seeding in addition to winter operations. Staff will proceed carefully in this regard to see how to best handle the idea and possible regulatory language in the upcoming revision. Colorado statutes and existing rules are essentially silent on aerial programs, and no aerial permits have been issued in Colorado thus far. Along these lines, there is a low cost contractor in the Western Kansas Weather Modification

Program that has operated for thirty seven years. Their operations are very close to the Colorado border in the Arkansas River Basin, and they have expressed interest in developing target areas in Colorado for summer rains. Staff will certainly keep the Board informed and will seek guidance at a future Board meeting regarding the proposed rules and regulations update. (*Joe Busto*)

~ATTACHMENTS~

- 01 Finance Section – September Design and Construction Status Report
- 02 August 2011 Drought Update
- 03 Letter from Representative Markey and Director Gimbel’s Response
- 04 Finance Section – Non-Reimbursable Investments Status Report
- 05 WSRA Balance Summary – September 1, 2011
- 06 WSRA Open Grant Projects – Board Approved – Not Yet Contracted
- 07 WSRA In Progress
- 08 WSRA Completed Projects
- 09 Instream Flow and Natural Lake Level Program – Summary of Resolved Cases

STATE OF COLORADO

Colorado Water Conservation Board Department of Natural Resources

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TO: Colorado Water Conservation Board Members

FROM: Kirk Russell, P.E. Design & Construction Manager
Finance Section

DATE: August 25, 2011

SUBJECT: **Directors Report – September 13/14, 2011 Board Meeting**
Finance Section – Design & Construction Status Report

John W. Hickenlooper
Governor

Mike King
DNR Executive Director

Jennifer L. Gimbel
CWCB Director

The CWCB Finance Section has Substantially Completed nine projects in 2011. There are currently 38 projects under contract and in the Design and/or Construction Phase, involving over \$160,000,000 in loan funds

The attached spreadsheet and report summarizes the current project status, including loan/budget, construction schedule, and progress to-date.

Applicant/Borrower

Projects Substantially Completed in 2011

- 1 Raymond Dairy, Incorporated
- 2 Bijou Irrigation District
- 3 Orphan Wells of Wiggins, LLC
- 4 Stageson Owners Association
- 5 Las Animas Consolidated Canal Company
- 6 Consolidated Extension Canal Company
- 7 Trinchera Irrigation Company
- 8 WRCC, Inc.
- 9 North Sterling Irrigation District

Current Projects in Design or under Construction

- | | |
|----|--|
| 1 | New Cache La Poudre Irrigation Company |
| 2 | Mancos Water Conservancy District |
| 3 | Upper Arkansas Water Conservancy District |
| 4 | Union Ditch Company |
| 5 | Lower Poudre Augmentation Company |
| 6 | Bull Creek Reservoir Company |
| 7 | Overland Ditch and Reservoir Company |
| 8 | Montezuma Valley Irrigation Company |
| 9 | Platte Valley Irrigation Company |
| 10 | Greely Irrigation Company |
| 11 | Herrlynn Irrigation District |
| 12 | New Salida Ditch Company |
| 13 | Farmers Pawnee Canal Company |
| 14 | Republican River Water Conservation District |
| 15 | Ogilvy Augmentation Company |
| 16 | Boulder White Rock Ditch and Reservoir Company |
| 17 | Showerman Water and Sanitation District |
| 18 | Farmers Reservoir and Irrigation Company |
| 19 | Lower Latham Reservoir Company |
| 20 | Town of Gypsum |
| 21 | Town of Dillon |
| 22 | Lake Canal Reservoir Company |
| 23 | City of Monte Vista |
| 24 | Fort Morgan Reservoir and Irrigation Company |
| 25 | Joseph W. Bowles Reservoir Company |
| 26 | Grand River Ditch Company |
| 27 | Louden Irrigating Canal and Reservoir Company |
| 28 | Pagosa Area Water and Sanitation District |
| 29 | Supply Irrigating Ditch Company |
| 30 | Owl Creek Reservoir Company |
| 31 | Penrose Water District |
| 32 | Seven Lakes Reservoir Company |
| 33 | Duel and Snyder Improvement Company |
| 34 | Farmers' High Line Canal and Reservoir Company |
| 35 | Riverside Reservoir and Land Company |
| 36 | Riverside Ditch and Allen Extension Company |
| 37 | Parkville Water District |
| 38 | San Marcos Water and Sanitation District |

Project		County	Loan	Annual Delivery		Storage Created	Design		Construction	
			Amount	Size	Yield (AF)	(AF)	Status	Status	Start	End
Robert Raymond Empire Reservoir Rehabilitation - Dam Rehab. Well Augmentation Reservoirs Project	Concrete Ditch Reconstruction	Mesa	\$ 63,950	2,500 LF	386		100%		Nov-09	Feb-11
	Well Augmentation Project	Morgan/Weld	\$ 2,408,850	19,900 AF	19,900	2,682	100%		Nov-07	Feb-11
	Water Augmentation Reservoirs Project	Morgan	\$ 1,037,700	6,000 AF	6,000		100%		Nov-03	On-hold
	Well Augmentation Reservoirs Project	Park	\$ 192,708	20	20	20	100%		Sep-10	Apr-11
	Diversions Structure Rehabilitation	Bent	\$ 77,265	26,000 AF	26,000		100%		Oct-10	Mar-11
	Diversion Structure Rehabilitation	Bent	\$ 180,285	26,000 AF	26,000		100%		Oct-10	Mar-11
	Garland Canal #2 Pipeline Project	Costilla	\$ 251,793	2,300 LF	3,700		100%		Mar-11	Apr-11
	Cobb Lake Inlet Structure Rehabilitation	Larimer	\$ 1,352,592	35,000 AF	35,000		100%		Sep-10	Jan-12
	North Sterling Reservoir Rehabilitation	Logan	\$ 1,094,840	74,590 AF	82,207		100%		Sep-09	Jul-11
		SubTotal =	\$ 6,659,983		199,213	2,702				
Total =										
Construct 2 New Reservoirs and Pipeline Inlet and Outlet Canal Rehabilitation Reservoir Rehabilitation Well Augmentation Project Reservoir and Water Rights Purchase Reservoir Rehabilitation Project Overland Reservoir Rehabilitation May Lateral Pipeline Equalizer Reservoir Project Greeley Canal No. 3 Rehabilitation Horse Creek & Prospect Reservoir Rehabilitation Ditch Rehabilitation Ditch Flow Control Structures Compact Compliance Pipeline Well Augmentation Panama Reservoir Outlet Rehabilitation Zeigler Reservoir Water Management System Milton Reservoir and Barr Lake Improvement Proj. Well Augmentation Project LEDE Ditch and Reservoir Rehabilitation Old Dillon Reservoir Enlargement South Gray Reservoir Rehabilitation/Gray No. 3 Augmentation Water Rights Acquisition Pipeline Project - Augmentation Retiming Bows No. 1 Dam Rehabilitation Grand River Ditch Pipeline Rist Benson Reservoir Rehabilitation Dry Gulch Reservoir Land Acquisition Knott Reservoir Dam Rehabilitation Owl Creek Reservoir Rehabilitation Water Rights Purchase and Pipeline Installation Railroad Crossing Diversion Structure Rehabilitation System Rehabilitation Project Riverside Reservoir Spillway Enlargement Ditch System Rehabilitation Canterbury Tunnel Repair Zeigler Reservoir Expansion Project		Weld	\$ 7,200,000	4,500 AF	4,500	4,500	100%		Jun-05	Jan-14
		Montezuma	\$ 5,486,531	15,840 LF	9,000		75%		Jan-04	Jan-14
		Chaffee/Custer	\$ 3,520,000	500 AF	500	200	100%		Jan-05	Jan-13
		Weld	\$ 312,595	206 AF	206		75%		Sep-06	Jan-13
		Larimer/Weld	\$ 3,104,053	657 AF	657		100%		Oct-07	Jan-13
		Mesa	\$ 1,801,630	900AF	900	900	100%		Jul-08	Sep-11
		Delta	\$ 1,130,000	6,200 AF	17,000	971	50%	Permitting		
		Montezuma	\$ 5,292,400	5 Miles	128,000		100%		Nov-07	Jul-12
		Weld	\$ 2,388,650	431 AF	52,401	431	100%		Nov-10	Jul-12
		Weld	\$ 2,233,867	18,000 AF	13,850		90%		Feb-08	Jul-12
		Weld	\$ 2,184,327	13,850 AF	13,850	3,000	95%		Nov-08	Jul-12
		Chaffee	\$ 365,620	300 L.F.	7,000		100%		Oct-09	Jul-12
		Logan	\$ 255,530	27,260	27,260		100%		Oct-08	Jan-12
		NE. Colo	\$ 60,600,000	15,000 AF	15,000		100%		Aug-11	Jan-12
		Weld	\$ 1,010,808	60 AF	60		100%		Dec-08	Jul-12
		Boulder/Weld	\$ 2,864,164	300 L.F.	12,000	2,600	100%		Oct-09	Jan-12
		Pitkin	\$ 1,952,805	1,800 AF	1,800		100%		Feb-10	Feb-12
		Adams/Weld	\$ 3,335,000	64,900 AF	125,000		100%		Oct-09	Jan-12
		Weld	\$ 3,811,573	5,705 AF	5,705		100%		Nov-09	Jan-13
		Eagle	\$ 2,689,731	685 AF	1,200	254	60%		Jun-10	Jan-14
		Summit	\$ 1,515,000	286 AF	321	140	100%		Sep-10	Jan-14
South Gray Reservoir Rehabilitation/Gray No. 3 Augmentation Water Rights Acquisition Pipeline Project - Augmentation Retiming Bows No. 1 Dam Rehabilitation Grand River Ditch Pipeline Rist Benson Reservoir Rehabilitation Dry Gulch Reservoir Land Acquisition Knott Reservoir Dam Rehabilitation Owl Creek Reservoir Rehabilitation Water Rights Purchase and Pipeline Installation Railroad Crossing Diversion Structure Rehabilitation System Rehabilitation Project Riverside Reservoir Spillway Enlargement Ditch System Rehabilitation Canterbury Tunnel Repair Zeigler Reservoir Expansion Project		Larimer	\$ 393,900	1,120 AF	1,120	165	100%		Sep-10	Jan-12
		Rio Grande	\$ 1,693,770	321 AF	1,212		n/a		Oct-10	Jul-12
		Morgan	\$ 1,494,800	15,840 L.F.	37,058		100%		Sep-10	Jul-12
		Jefferson	\$ 1,703,870	2,062 AF	900		100%		Aug-10	Dec-11
		Garfield	\$ 543,380	14,500	14,500	150	100%		Sep-10	Jan-12
		Larimer	\$ 663,610	150AF	150		100%		Feb-11	Dec-11

Reservoir construction projects involving storage: new, enlargement, dredging or removal of a SEO restriction = 52,853

Kirk Russell, PE
Design and Construction Manager

Design & Construction Status Report

PROJECTS SUBSTANTIALLY COMPLETED IN 2011

1. Raymond Dairy, Incorporated – Concrete Ditch Reconstruction Project

Authorization: Construction Fund
 Water Source: Grand Valley Canal
 Terms of Loan: \$63,950@ 2.5% for 30 yrs.

County: Mesa
 Project Yield: 386 AF
 Project Type: Ditch Rehabilitation

Raymond Dairy is located just northwest of Fruita, Colorado and is owned by Robert and Helen Raymond. The Raymond Ditch has a capacity of 3.5 cfs and is used to carry irrigation water to 125 acres of field crops for dairy cattle. This Project involved rehabilitating 2,400 feet of the ditch, and installing new head gates. This Project will decrease ditch seepage; thereby improving the environment by reducing salt leaching into the Colorado River. NRCS provided planning and design engineering services for this work. The total project cost was \$95,000. NRCS provided 33% cost share in the Project. CWCB funding consisted of an initial loan for \$95,950 which was reduced to \$63,950 after construction was complete. The Project was substantially completed on February 1, 2011.

2. Bijou Irrigating District – Empire Reservoir Rehabilitation Project

Authorization: Severance Tax Fund
 Water Source: South Platte River
 Terms of Loan: \$4,454,100@ 2.25% for 30 yrs.

County: Morgan/Weld
 Project Yield: 19,900 acre-feet
 Project Type: Reservoir Rehabilitation

The District owns and operates Empire Reservoir located west of Fort Morgan in Weld and Morgan Counties. It is an off-stream reservoir primarily impounded by four separate dams constructed in about 1905. Water is diverted from the South Platte River through the Empire Intake Ditch. The water storage rights are 37,709 acre-feet and there is one refill right. The reservoir has been restricted by the SEO due to wind erosion problems along the east embankment. The Project consists of repairing failed sections of parapet walls, removing trees along the upstream toe of the dam, and adding additional riprap slope stabilization along the East Dike Embankment. This will allow the reservoir to be filled to its full gage height. The Project will result in 2,682 AF of recovered storage. Due to increased cost of fuel and materials the loan contract was increased from \$2.4M to \$4.5M at the November 2008 Board Meeting. The Project was substantially completed on March 1, 2011.

3. Orphan Wells of Wiggins – Augmentation Project

Authorization: Construction Fund
 Water Source: South Platte Basin
 Terms of Loan: \$1,037,700 @ 2.5% for 30-years

County: Morgan
 Project Yield: 6,000 acre-feet
 Project Type: Well Augmentation

The Orphan Wells of Wiggins is a new company comprised of 31 separate agricultural operators that own 45 wells which irrigated approximately 4,500 acres of farmland. This project involves the construction of 1 recharge well, 1 augmentation well, various pipeline, and 23 recharge ponds. The project will generate augmentation credits to cover the depletions for the 45 existing wells. The project is currently 90% complete. The project has changed from its original scope to include additional piping and recharge sites. Additionally, the Company has purchased several Riverside Ditch shares that will improve augmentation efforts. The Company was approved for an increase of \$200,000 at the November 2006 Board Meeting to complete the additional recharge sites and for the purchase of the Riverside Ditch shares. These funds have

not been distributed. The Company elected to decline presenting its case in court, given strong objectors and the lack of senior water in its augmentation plan. Based on that decision the Company will not be able to operate and are currently in the process of dissolving the Company. CWCB is currently working with a few interested parties in purchasing the Company assets, which would be used to pay off or pay down the Company's existing debt with CWCB. Staff has met with the board members and they agreed to substantially complete the project and put the project in repayment. They have requested that the interest that has accumulated be forgiven, which staff has denied given the precedent it would make and project history. Staff did meet with the Company's Board Members in March 2010. The Board is currently pursuing the sale of 10 shares of Riverside Ditch and the augmentation project itself to hopefully generate sufficient revenue to pay off their \$900K loan with CWCB. There are a number of parties interested in purchasing Orphan Wells of Wiggins assets. The Project was substantially completed on March 1, 2011.

4. Stagestop Owners Association – Water Augmentation Reservoirs Project

Authorization: Construction Fund	County: Park
Water Source: Old House Creek/ Tarryall River	Project Yield: 20AF
Terms of Loan: \$192,708@ 2.25% for 20 yrs.	Project Type: Dam Rehabilitation

The Stagestop Owners Association represents property owners in the Stagestop subdivision, located near Jefferson, Colorado. The Association was incorporated in 1976 and is made up of 500 single-family residential lots. Individual wells supply water to each lot in the Association. There are 199 active wells at this time. Groundwater depletions from these wells are offset by an augmentation decree that includes storage and releases of water from Old House Creek. The water is stored in two reservoirs referred to as the Upper Reservoir and Lower Reservoir. Both reservoirs required outlet work repair and the Upper Reservoir was under a fill restriction by the Office of the State Engineer. This project replaced the outlet pipes at both reservoirs, installed new outlet structures and valves, and spillways. The Project was substantially completed on April 1, 2011.

5. Las Animas Consolidated Canal Company – Diversion Structure Rehabilitation

Authorization: Construction Fund	County: Bent
Water Source: Arkansas River	Project Yield: 26,000 AF
Terms of Loan: \$77,265@ 2.75% for 30 yrs.	Project Type: Diversion Rehabilitation

The Las Animas Consolidated Canal Company provides irrigation water to approximately 5,600 acres near Las Animas, Colorado. The Canal Company, along with the Consolidated Extension Canal Company, operates the Las Animas ditch diversion dam, located on the Arkansas River approximately 11 miles east of La Junta and about 7 miles west of Las Animas. The diversion dam was constructed in the late 1800s and is at the end of its useful life. The purpose of this project is to complete emergency repairs to support the dam and to minimize further downstream erosion and deterioration of the diversion dam so that safe and reliable future operations of the structure can be ensured. The loan request is for 6% of the estimated \$1,275,000 total cost of the project. The additional project funding will come from the Consolidated Extension Canal Company (through a CWCB loan) and from Xcel Energy (a large shareholder in both companies). The project construction was completed in March, 2011 and was substantially completed on June 1, 2011.

6. Consolidated Extension Canal Company – Diversion Structure Rehabilitation

Authorization: Construction Fund	County: Bent
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Water Source: Arkansas River
 Terms of Loan: \$180,285@ 2.75% for 30 yrs.

Project Yield: 26,000 AF
 Project Type: Diversion Rehabilitation

The Canal Company, along with the Las Animas Consolidated Canal Company, operates the Consolidated Ditch diversion dam, located on the Arkansas River approximately 11 miles east of La Junta and about 7 miles west of Las Animas. The diversion dam was constructed in the late 1800s and is at the end of its useful life. The purpose of this project is to complete emergency repairs to support the dam and to minimize further downstream erosion and deterioration of the diversion dam so that safe and reliable future operations of the structure can be ensured. The loan request is for 6% of the estimated \$1,275,000 total cost of the project. The additional project funding will come from the Las Animas Consolidated Canal Company (through a CWCB loan) and from Xcel Energy (a large shareholder in both companies). The project construction was completed in March, 2011 and was substantially completed on June 1, 2011.

7. Trinchera Irrigation Co – Garland Canal #2 Pipeline Project

Authorization: Construction Fund
 Water Source: Ute Creek
 Terms of Loan: \$251,793@ 2.75% for 30 yrs.

County: Costilla
 Project Yield: 3,700 AF
 Project Type: Ditch Rehabilitation

The Company owns and operates Smith Reservoir, Mountain Home Reservoir, and approximately 26 miles of canals and 45 miles of laterals to provide irrigation water for the benefit of its shareholders. The Company services approximately 14,100 acres of irrigated farm land. The received a loan to repair a portion of the Garland #2 Canal. The Canal was originally constructed around 1913 and a substantial portion of the ditch deteriorated and became unreliable and inefficient. Emergency repairs were made following a 2010 flash flood. The proposed project includes: replacement of the diversion headgate, modifying the siphon inlet to accommodate a new trash rack, installing rock riprap at the siphon outlet, and installing 2,300 linear feet of 36" irrigation pipe. The project construction was completed in the spring of 2011 and was substantially completed on June 1, 2011.

8. WRCC, Inc. – Cobb Lake Inlet Structure Rehabilitation

Authorization: Construction Fund
 Water Source: Cach La Poudre
 Terms of Loan: \$1,352,592@ 2.85% for 30 yr.

County: Larimer/Weld
 Project Yield: 35,000 AF
 Project Type: Reservoir Rehabilitation

WRCC, Inc. owns and operates six storage reservoirs in Larimer and Weld Counties including Cobb Lake. The inlet ditch to the Reservoir has been badly eroded over time and vertical degradation has resulted in very steep ditch side slopes that are a safety concern. The inlet structures were built in the early 1900s and have been patched over the years; however, they are to the point where they could be subject to sudden catastrophic failure. If the inlet failed, the Reservoir could not be filled. The project reconstructed the inlet structure/ditch to address both the safety and possible failure issues. Construction was completed November 2010 however additional cosmetic work was completed in the spring of 2011 with a loan contract increase in January 2011. The project was Substantially Completed on July 1, 2011.

9. North Sterling Irrigation District – North Sterling Reservoir Rehabilitation

Authorization: Construction Fund
 Water Source: South Platte River
 Terms of Loan: \$1,094,840@2.25% for 20 yrs.

County: Logan
 Project Yield: 74,590 acre-feet
 Project Type: Reservoir Rehabilitation

The District owns and operates the North Sterling Reservoir located in Logan County and provides stored and direct flow water to landowners within the District's 40,917 acre service area. The District service area begins just east of the Reservoir approximately 15 miles northwest of Sterling and extends east to Crook. The Reservoir faced the possibility of a storage restriction from the State Engineer's Office. Improvements to the current spillway and the dam were necessary in order to retain full storage capacity. Improvements included: enlarging the existing spillway, raise the dam crest, and installing a seepage collection system. Construction commenced in September of 2009 and was completed by September 2010. The project was Substantially Completed on June 1, 2011.

PROJECTS CURRENTLY IN DESIGN and/or UNDER CONSTRUCTION**1. New Cache La Poudre Irrigation Company – Reservoir Construction**

Authorization: Construction Fund	County: Weld
Water Source: South Platte	Project Yield: 4,500 acre-feet
Terms of Loan: \$7,200,000 @ 2.50% for 30-years	Project Type: New Reservoir

The Company provides irrigation water to a 35,000-acre service area. This project will provide water storage to equalize ditch flows and improve efficiency and the reliability of the irrigation system, and to meet future demands. The project involves the construction of three reservoirs near Barnesville, totaling 4,500 acre-feet of storage. Additionally, 8,200 feet of pipeline will be installed. The Barnesville Reservoir project was awarded to Barker Construction, Fort Collins, Colorado and has been completed and received final SEO approval. The Company received approval of a loan increase in Sept. 2007. The project will remain open until the land purchased to construct Cornish Reservoir is paid off in 2021.

2. Mancos Water Conservancy District - Canal Rehabilitation

Authorization: Severance Tax Perpetual Account	County: Montezuma
Water Source: West Mancos River	Project Yield: 9,000 acre-feet
Terms of Loan: \$5,486,531 @2.80% for 30-years	Project Type: Canal Rehabilitation

The Mancos Water Conservancy District supplies irrigation and municipal water within a 13,496 acre service area. The District's carriage facility is over 50-years old and the U.S. Bureau of Reclamation has recommended rehabilitation of the inlet and outlet canals. The proposed project is to rehabilitate inlet and outlet canals to the Jackson Gulch Reservoir and to replace its operational shops and headquarters. The District's goal is to have the entire project completed by 2014. The District has performed test sections with various lining materials to assist in determining the final design package for the ditch rehabilitation. The District has been in the process of asking the Federal Appropriations Committee for \$6,200,000 in grant funds to assist in completing the project, which was approved in March of 2009. They received \$1.8M Federal appropriation for 2010. The overall project is scheduled for completion in January of 2014. The District did undertake the rehabilitation of the critical portion of their ditch system in the summer 2009, involving the construction of retaining walls and access road along the ditch. District bid the piping phase in summer 2010 with construction completed in winter 2010. **UPDATE: An additional phase of ditch rehabilitation was bid in May 2011.**

3. Upper Arkansas Water Conservancy District – N. Fork Reservoir Rehabilitation

Authorization: Severance Tax Fund	County: Chaffee/Custer/Fremont
Water Source: N. Fork of S. Arkansas	Project Yield: 500 acre-feet
Terms of Loan: \$3,520,000 @ 3.50% for 30 yrs.	Project Type: Reservoir Rehabilitation

The UAWCD has operated the North Fork Reservoir since 1979 for domestic, municipal, industrial, recreational, and augmentation water supply. The reservoir is at elevation 11,400 feet and is located approximately 10 miles from Maysville on the North Fork of the South Arkansas River. This project involves replacement of the outlet gate, improved access, increased spillway capacity, seepage control, and raising the dam 15-feet to achieve a storage capacity of 500 acre-feet. The project is located on Forest Service property, which required a special use permit and an environmental assessment prior to construction. The project was awarded to ASI, Buena Vista, Colorado, who commenced construction in

August of 2006 and completed the work in May of 2007. The District will not be pursuing enlargement of the reservoir, due to issues associated with the Forest Service and the NEPA process. The District is currently working on remote monitoring equipment for North Fork Reservoir, and the NEPA process to continue operating at historic levels.

4. Union Ditch Company – Well Augmentation Project

Authorization: Severance Tax Trust Fund	County: Weld
Water Source: South Platte River	Project Yield: 206 acre-feet
Terms of Loan: \$312,595 @2.50% for 320-years	Project Type: Well Augmentation

The Union Ditch Company provides irrigation water to an area of 5,500 acres east of the Town of LaSalle and south of Greeley. The Union Ditch Company has filed application for an augmentation plan to provide replacement water for 40 junior wells owned by the shareholders, formerly serviced by GASP. This project involves the development of 3 recharge ponds, placement of flow measurement devices, and headgate structures into the ponds. The ponds will be filled by gravity flow from the Union Ditch. Union Ditch Company is currently constructing one recharge pond at the Miller Feedlot Site with an accompany diversion structure on the Union Ditch.

5. Lower Poudre Augmentation Company – Reservoir and Water Rights Purchase

Authorization: Severance Tax Fund	County: Larimer/Weld
Water Source: South Platte	Project Yield: 657 acre-feet
Terms of Loan: \$3,104,053@2.50% for 30 yrs.	Project Type: Reservoir & Water Rights

The Lower Poudre Augmentation Company (LPAC) is a non-profit company that was incorporated in 2004, by the New Cache La Poudre Irrigating Company (2/3 interest) and the Cache La Poudre Reservoir Company (1/3 interest). There are 88 wells owned by 35 individuals/entities and the augmentation demands are approximately 3200 AF. The LPAC has filed for a permanent Augmentation Plan, and has operated on a Substitute Water Supply Plan for 3-4 years. LPAC proposes to purchase the Timnath Flatiron Reservoir, and 4.5 shares of Boxelder Ditch, and construct the necessary improvements to utilize the reservoir for augmentation purposes. The reservoir currently has a storage capacity of approximately 657 AF, with a depth of 12-15 feet. The reservoir area was mined for sand and gravel and lined with clay once mining was complete. The reservoir has received SEO certification as a lined gravel pit storage facility. Construction of the reservoir is complete. Substantial completion is expected in mid-2011.

6. Bull Creek Reservoir Canal and Power Company – Reservoir Rehabilitation

Authorization: Severance Tax Fund	County: Mesa
Water Source: Colorado River	Project Yield: 900 acre-feet
Terms of Loan: \$1,801,630@ 2.5% for 30 yrs.	Project Type: Reservoir Rehabilitation

The Company is located in Mesa, Colorado, and has a service area of approximately 800 acres. The Company operates the Bull Creek Reservoirs for irrigation water. The Project is a repair to remove the current restriction on Reservoir #4 and provide additional storage necessary to store the Company's decreed rights. The Company has a Stipulation and Agreement with the SEO that requires the Company to repair Reservoir No. 4 in order to avoid abandonment of a portion of the senior water rights. The Project is located on the US Forest Service property and will require a Special Use Permit for access roadway work and dam construction. The reservoir is remote and located at 10,000 feet elevation. The project was approved by the Board in 2006, but has been re-scoped to address SEO concerns and higher than previously anticipated construction costs. The Company received SEO approval in August of 2008.

The contractor, Geer-up-Construction, completed the outlet works, seepage control, and 75% of the dam embankment reconstruction. Work was suspended in October of 2008 due to weather. The contractor negotiated a new contract with the Company to finish the remaining work in the summer of 2009. The Company elected to release the original engineering firm and hired Vista Engineer, Grand Junction, Colorado to finish the project. Geer-up-Construction mobilized in July of 2009 and was failed to complete the project by winter. The remaining items (spillway cutoff wall and rip rap, minor rip rap placement along the upper dam face, monitoring devices, final grading of the dam crest, re-vegetation, and cleanup) were completed in the summer of 2010 by Sorter Construction. The project construction is now 100% complete. The Company received approval of additional funding from CWCB in November 2010. The Company negotiated a lien settlement with Geer-up Const./S4 Corp. in April 2011. The project will be substantially completed in fall of 2011. **UPDATE: The Project will be Substantially Completed on September 1, 2011. The Company plans to begin marketing a portion of its water rights in order to comply with the amended loan contract requirement which requires a maximum assessment rate. In the event a sale is not feasible, the Company may ask the CWCB to reconsider the contract clause requiring the sale of water and the assessment limit.**

7. Overland Ditch and Reservoir Company – Reservoir Rehabilitation

Authorization: Severance Tax Fund

County: Delta

Water Source: Cow Creek

Project Yield: 17,000 AF

Terms of Loan: \$1,130,000@ 2.5% for 30 yrs.

Project Type: Reservoir Rehabilitation

The Company's 120 members own and operate the Overland Reservoir, located in Delta County in the Gunnison National Forest at elevation 10,000-ft. This project involves increasing the current reservoir capacity from 6,200 AF to 7,171 AF, raising the spillway elevation 3.8 feet, installing toe drains, increasing the dam crest width, and additional embankment protection. The Overland Ditch Company shareholders at their August 2006 Board Meeting, approved increasing the capacity of the reservoir. The project is currently under design, with construction on-hold until fens can be addressed on-site. High altitude fens on the Grand Mesa have become a significant issue and staff is currently working with area water users, local wetland consultants, and the Army Corps of Engineers to address this problem on a regional permit basis.

8. Montezuma Valley Irrigation Company – May Lateral Pipeline

Authorization: Severance Tax Fund

County: Montezuma

Water Source: Dolores River

Project Yield: 128,000 acre-feet

Terms of Loan: \$5,292,400@2.25% for 30 yrs.

Project Type: Pipeline

The Montezuma Valley Irrigation Company is a non-profit corporation established in the State of Colorado in 1920. The Company manages the delivery of irrigation water to the approximately 46,000 acre service area. The Company is proposing to install approximately five (5) miles of 36-inch pipe in the existing May Lateral Ditch alignment. The installation of pipe will improve delivery and significantly reduce leakage. The May Lateral water is diverted from the Dolores River and is routed through the McPhee Reservoir prior to delivery to shareholders. The new pipeline will carry approximately 18 cfs to the 105 shareholders that depend on the May Lateral for irrigation water. AgriTech Consulting has provided planning and preliminary design services. The Company has completed the installation of the entire pipe along the 5-mile project length. Substantial Completion is expected in 2011.

9. Platte Valley Irrigation Company – New Equalizer Reservoir Project

Authorization: Severance Tax Fund

County: Weld

Water Source: South Platte River
 Terms of Loan: \$2,388,650@2.25% for 20 yrs.

Project Yield: 52,401 AF
 Project Type: Reservoir Construction

PVIC is a Colorado mutual ditch company and non-profit corporation serving approximately 14,832 acres of irrigated farm land in Weld County east of Platteville. PVIC diverts water for irrigation from the South Platte River near Fort Lupton and shares a jointly owned headgate with Farmers Reservoir and Irrigation Company (FRICO), as well as about 10 miles of the jointly owned Platte Valley Canal. Average annual diversions are 52,401 acre-feet. PVIC needs an equalizer on the ditch to allow for more efficient management of the water, as well as additional measurement and control structures on their main ditch. The reservoir will have a junior water right for storage of water directed to PVIC's recharge program. In an average year the reservoir is expected to store 300 acre feet, with a 300 acre foot refill. Construction will consist of a 431 acre-foot reservoir with a 14 foot high dam embankment with 10:1 upstream slopes and 3:1 downstream slopes. The reservoir bottom will be lined using clay from the required excavation as necessary to exclude groundwater. The outlet will be a 48 inch RCP, configured to act as the principal spillway. The project also includes relocation of an existing section of Evans No. 2 Ditch below the split from the Platte Valley Canal, modification of the existing bifurcation structure, and construction of three (3) new Parshall Flumes in various reaches of the ditch, as directed by the Water Court. The project is being designed by Smith Geotechnical, Fort Collins, with construction anticipated to commence in July/August 2010.

10. Greeley Irrigation Company – Greeley No. 3 Canal Rehabilitation

Authorization: Severance Tax Fund
 Water Source: South Platte
 Terms of Loan: \$2,233,867@2.85% for 30 yrs.

County: Weld
 Project Yield: 18,000 acre-feet
 Project Type: Canal Rehabilitation

The Greeley Irrigation Company (GIC) provides irrigation water to a service area of 2,367 acres in Weld County, generally within the City of Greeley and east of the City. GIC operates the Greeley Canal No. 3, constructed in 1870 by the Union Colony. About 1,100 acres of the 3,500 original irrigated acres have been subject to dry-up, and water converted to augmentation use. Present canal usage is roughly 1/3 City of Greeley, 1/3 agricultural irrigation, and 1/3 augmentation. GIC facilities consist of a river diversion structure, approximately 13 miles of earthen canal, check structures, delivery headgates, spill structures, trash screens, and other minor structures. A portion of these facilities are in need of repair, upgrades, or replacement. The GIC Board is undertaking a number of phased improvements to the canal including: 1) repairs to, and partial replacement of, the river diversion; 2) piping or lining of portions of the canal; 3) consideration of canal automation using supervisory control and data acquisition (SCADA) equipment; 4) tree removal and tree pruning; 5) canal realignment, reshaping, and straightening; and 6) removal or repair of selected headgates and installation of new headgates. The project is nearly complete. The Company is currently working on their SCADA system and the realignment and reshaping of various sections of existing channel.

11. Henrylynn Irrigation District – Horse/Prospect Reservoirs Rehabilitation

Authorization: Severance Tax Fund
 Water Source: Denver/Hudson Canal
 Terms of Loan: \$2,184,327@2.25% for 30 yrs.

County: Weld
 Project Yield: 13,850 acre-feet
 Project Type: Reservoir Rehab.

The District diverts water through the Burlington Canal Headworks on the South Platte River, extending 16 miles to and past Barr Lake. From Barr Lake the Denver-Hudson Canal continues 25 miles to Horse Creek Reservoir, and then continues another 25 miles to Prospect Reservoir. Horse Creek Reservoir was constructed in 1910, and is a High Hazard, 64 ft high earth fill dam 4800 ft long with a 200 foot wide

earth-lined spillway. The decreed storage right is 19,515 AF, but normal storage is 18,747 AF. The project will provide a lining of the steel outlet works, install additional toe drainage, and resurface and re-grade the dam crest. Prospect Reservoir was constructed in 1914, and is a Significant Hazard, 43.5 ft high earth fill dam, 5,300 ft long with a 250 wide concrete/riprap spillway. The decreed storage right is for 7,660 AF, but the normal storage is 6,368 acre feet. The outlet works consist of a 48 in. concrete pipe that narrows to about 30 in. downstream of the control gate, due to previous re-lining projects. The reservoir has a restriction of 1.5 feet below the historic maximum stage, due to concerns about the stability of the downstream slope of the dam. The proposed project will provide a lining for the outlet works, and resurface and re-grade the dam crest. Zak Dirt Construction has completed reconstruction of outlet channel and has regraded the dam crest on Horse Creek Reservoir. The Prospect reservoir outlet pipe has been lined and dam crest regrading is complete. The Company is currently evaluating the need to increase the dam width of Horse Creek with the remaining loan funds with construction expected in the fall of 2011.

12. New Salida Ditch Company – Ditch Rehabilitation

Authorization: Severance Tax Fund
 Water Source: Upper Arkansas River
 Terms of Loan: \$365,620@2.50% for 30 yrs.

County: Chaffee
 Project Yield: 7,000 acre-feet
 Project Type: Ditch Rehabilitation

The New Salida Ditch Company owns and operates the New Salida Ditch to deliver water to agricultural users from the Arkansas River through a diversion in Browns Canyon. The diversion is located 10 miles north of Salida and is approximately eight miles from its diversion to its end at Ute Gulch. In Browns Canyon, the Ditch runs parallel to the River for 1.25 miles. This section has historically been difficult for the Company to maintain and has suffered frequent breaks, resulting in costly repairs and the discharge of sediment into the adjacent river. The Company was cited by the Colorado Department of Health and Environment for a recent failure of the ditch in 2005. This project involves the installation of 3,200 feet of 42-inch pipe along the historically troubled ditch area. Project construction commenced in September of 2009 and will have a final phase completed in late 2011.

13. Farmers Pawnee Canal Company – Ditch Flow Control Structures

Authorization: Severance Tax Fund
 Water Source: South Platte River
 Terms of Loan: \$255,530@2.5% for 30 yrs.

County: Logan
 Project Yield: 27,260 acre-feet
 Project Type: Diversion Rehabilitation

The Farmers Pawnee Canal Company (Company) provides irrigation water to approximately 10,000 acres of land between Merino and Sterling, Colorado. It uses two separate structures to control flow in the Pawnee Ditch (Ditch). The first is a main diversion at the South Platte River. The second is a few miles down the Ditch and is used to adjust flow. The main diversion is a concrete rollover wall with vents to allow flushing of sand when opened. The secondary structure is currently controlled through the use of board style gates. Both structures are labor intensive and require monthly maintenance. To help with efficiency, the Company plans on replacing a portion of the main diversion with a new 12-foot radial gate. It also plans on replacing the board gates at the secondary structure with four 8-foot wide radial gates. Ransome Boone Excavating, Fort Morgan, Colorado has completed the ditch control structure. The Company recently completed improvements to their diversion structure and was approved for a loan contract increase in March 2011 to automate the new gate. Work should be completed by the end of 2011.

14. Republican River Water Conservation District – Compact Compliance Pipeline

Authorization: Severance Tax Fund

County: N. E. Colorado

Water Source: Republican River
 Terms of Loan: \$60,600,000@2.0% for 20 yrs.

Project Yield: 15,000 acre-feet
 Project Type: Pipeline Construction

December 2002, Colorado entered into a Stipulation with Kansas and Nebraska to address the U.S. Supreme Court case of *Kansas v. Nebraska and Colorado*. Colorado agreed to develop a ground water model to determine stream flow depletions caused by well pumping in the Basin and to a five-year running average to determine compliance with the Republican River Compact. In 2007, the State had exceeded its allocation under the Compact by an average of 11,350 AF/yr. To solve the problem the District elected to acquire ground water rights with a historical consumptive of 15,000 AF/yr. This water will be delivered to the North Fork of the Republican River via a Compact Compliance Pipeline to the stream gage at the Colorado-Nebraska state line to offset stream depletions. The District received approval of a \$60 million loan from the CWCB for engineering, construction and water acquisition related to the Pipeline Project. The loan represents approximately 85% of the estimated \$71 million total cost of the Project. Design was completed in 2009. The District will still need to resolve compact issues with Kansas regarding the recent concern over the proposed point of release of compact water on the North Fork of the Republican, which does not address the depletions on the South Fork of the Republican at the Colorado-Kansas state line and other related issues. The District did address issues of senior surface water users along the North Fork by the purchase of a 20-year lease from Yuma County Water Authority, who recently purchased the North Fork Water Rights under a separate CWCB loan contract. On June 19, 2009, the District purchased the \$49,000,000 Cure water rights with CWCB loan funds, which was a critical piece to the overall success of the compliance project. **UPDATE: Garney Construction is under contract and construction is underway. Construction is scheduled to continue until through the summer of 2012.**

15. Ogilvy Augmentation Company – Well Augmentation Project

Authorization: Severance Tax Fund
 Water Source: South Platte River
 Terms of Loan: \$1,010,808@2.5% for 30 yrs.

County: Weld
 Project Yield: 60 acre-feet
 Project Type: Augmentation

The Ogilvy Augmentation Company (Augmentation Company) was established in 2005 to augment wells that operate under the Ogilvy Irrigating and Land Company service area. Approximately 1,400 acres of land are irrigated by the Augmentation Company members in an area north of Kersey, Colorado. There are 17 wells in the Augmentation Company that operate under its temporary substitute water supply plan (SWSP). The SWSP is currently operated using leased water. A permanent water supply is necessary for the Augmentation Company to obtain a permanent augmentation plan. Funds are being requested from the CWCB to: purchase water rights, construct a recharge facility, construct a storage reservoir, and install monitoring devices. The Augmentation Company intends to purchase the water rights upon the approval of the CWCB funding and construct the recharge facility in fall/winter of 2008. It will file for its permanent augmentation plan in 2009. Once the permanent augmentation plan is approved, construction will begin on the storage reservoir. The Company has purchased the water rights and has constructed the recharge facility. The Company is waiting on approval of their augmentation plan before proceeding with the construction of the reservoir.

16. Boulder White Rock Ditch and Reservoir Company – Reservoir Rehabilitation

Authorization: Severance Tax Fund
 Water Source: South Platte River
 Terms of Loan: \$2,864,164@3.45% for 30 yrs.

County: Boulder/Weld
 Project Yield: 12,000 acre-feet
 Project Type: Reservoir Rehabilitation

The Boulder White Rock Ditch and Reservoir Company (Company) delivers irrigation water to land in Boulder and Weld Counties. It diverts water from Boulder Creek in downtown Boulder through the Boulder White Rock Ditch and stores water in two of its facilities: Six Mile Reservoir and Panama Reservoir. Due to recent operational changes, the Company no longer exchanges water with nearby ditches and needs to improve the flexibility in its own system to meet its shareholder's needs. The Company intends to build a reservoir pump station at the Panama Reservoir outlet in order to use water stored in the reservoir that is unable to be accessed through the existing gravity outlet. The Company was approved for a loan increase in the amount of \$434,000. The project construction was completed in 2010 however additional dredging work is currently being considered.

17. Snowmass Water and Sanitation District – Zeigler Reservoir Water Management System

Authorization: Construction Fund

County: Pitkin

Water Source: Snowmass Creek

Project Yield: 1,800 acre-feet

Terms of Loan: \$1,952,805@4.25% for 20 yrs.

Project Type: System Improvements

The District's project involves the constructing of a new delivery system; which includes the construction of a pump house, approximately 1,400 ft of pipe, construction of a flow control building, installation of telemetry and electric power. The District diverts water for treatment from East Snowmass Creek and East Snowmass Creek Spring, Brush Creek and Snowmass Creek. The District presently does not have a useable raw water storage facility, but purchased Ziegler Reservoir (aka Lake Deborah) in 2008 for the express purpose of improving system reliability by expanding the reservoir from its current 57 AF to approximately 225 AF. The District currently serves approximately 3,500 full time residents and during the winter ski season an additional 10,000 to 12,000 residents. To regulate flows and provide a supply during times of diminished stream flows, a system to divert water to and pump water from the reservoir is required. The construction was completed in 2010 and Substantial Completion is expected in 2011.

18. Farmers Reservoir and Irrigation Company – Milton Reservoir and Barr Lake Improvements

Authorization: Construction Fund

County: Adams/Weld

Water Source: Beebe Seep Canal/Platte Valley Canal

Project Yield: 125,000 AF

Terms of Loan: \$3,535,000@3.7% for 30 yrs.

Project Type: Spillway

Farmers Reservoir and Irrigation Company operates a ditch and reservoir system extending 3,500 square miles along the Front Range corridor, from Golden to Kersey, Colorado. The system consists of four major reservoirs (Standley Lake, Marshall Lake, Barr Lake and Milton Reservoir) numerous smaller reservoirs, and approximately 400 miles of diversion and delivery canals. This loan request specifically relates to work to be completed at Milton Reservoir and Barr Lake. The Company intends to complete the following three projects: Milton Reservoir Outlet Works (replacing the upstream outlet gate structure and a portion of the piped outlet works), Milton Spillway (enlarging the existing spillway), and Barr Lake Spillway (enlarging the existing spillway and raising the perimeter dike). These projects are nearly complete and complete Substantial Completion is expected in late 2011.

19. Lower Latham Reservoir Company – Well Augmentation Project – Phase III

Authorization: Construction Fund

County: Weld

Water Source: South Platte River

Project Yield: 5,705 acre-feet

Terms of Loan: \$3,811,573@2.75% for 30 yrs.

Project Type: Augmentation

The Lower Latham Reservoir Company (Company) is acquiring five shares of Lower Latham Ditch Company, for the purpose of providing augmentation water for existing shareholder wells. It is also constructing groundwater recharge facilities and other system improvements to utilize these shares and shares acquired in phases I & II of the project (both of which were financed by the CWCB). The Company provides augmentation water for 84 wells in Weld County by replacing out-of-priority pumping depletions. 39 of these wells were formerly in the GASP Augmentation Plan, and the remaining 45 wells are covered in the Augmentation Plan of Central Colorado Water Conservancy District's GMS. The Company is attempting to cover the former GASP wells, and supplement coverage of the GMS wells with their own augmentation plan. In 2003, the Company filed a permanent well augmentation plan that is pending. The Company has concluded that additional replacement sources are necessary to provide sufficient replacement water during extended drought years. A 2010 SWSP for the Company was revised and submitted to the SEO in December 2009. To-date the Company has been reimbursed for its water rights purchase and they are currently finalizing the construction of the augmentation ponds.

20. Town of Gypsum – LEDE Ditch and Reservoir Rehabilitation

Authorization: Construction Fund	County: Eagle
Water Source: Colorado River	Project Yield: 685 acre-feet (254 new)
Terms of Loan: \$2,689,731@4.5% for 30 yrs.	Project Type: Reservoir Rehabilitation

The Town purchased the LEDE Ditch and LEDE Reservoir water rights in 2006. The original water rights are decreed for irrigation uses, and provide storage for up to 947 AF in the reservoir. The Reservoir was built to a capacity of 431 AF. The Town seeks to increase capacity to 685 AF in order to accommodate continued agricultural irrigation, and for future water supplies to the Town. This upstream storage is required to assist in managing Gypsum Creek water rights calls and dry year operations. The reservoir storage will become even more important as the Town's population continues to increase. The Town wishes to repair and improve the reservoir to utilize its potential, and to protect valuable senior storage rights in the reservoir. The reservoir is located in the headwaters of Gypsum Creek, south of Gypsum within the White River National Forest. Dam design and permitting is expected to occur in 2010/2011. The Town received a WSRA grant for additional enlargement of the reservoir. The pipeline construction was completed in September 2010.

21. Town of Dillon – Old Dillon Reservoir Enlargement

Authorization: Construction Fund	County: Summit
Water Source: Salt Lick Gulch	Project Yield: 286 acre-feet (140 new)
Terms of Loan: \$1,515,000@4.0% for 30 yrs.	Project Type: Reservoir Enlargement

The Town of Dillon is applying for a loan to participate in the enlargement of the Old Dillon Reservoir. In 2004, the Town, Summit County and Town of Silverthorne signed an agreement to enlarge the reservoir. The Town's participation cost is approximately 27% of the construction costs and 20% of the Engineering costs. The Town and the County initiated a feasibility study in 1995. The Reservoir was originally constructed as a 46 AF raw water storage reservoir filled via the Dillon Ditch, which diverts from Salt Lick Gulch. The Reservoir site is southwest of the Dillon Reservoir Dam. In the summer of 2008, the SEO issued an order to drain the Reservoir due to concerns over the integrity of the north dam. The Reservoir is currently not available for storage. The project will increase the reservoir capacity from 46 to 286 acre-feet. Permitting and design have been completed and a contractor was selected. Construction has commenced and is expected to be completed in 2012.

22. Lake Canal Reservoir Company – South Gray and Gray No. 3 Reservoir Rehabilitation

Authorization: Construction Fund

Water Source: Box Elder Creek

Terms of Loan: \$433,000@3.15% for 30 yrs.

County: Larimer/Weld

Project Yield: 1,120 AF (165 AF new)

Project Type: Reservoir Rehabilitation

The Lake Canal Reservoir Company is requesting a CWCBC loan for reservoir improvements that include: 1) the installation of toe drains on the South Gray dam 2) the breaching of Gray No. 3 dam including erosion protection and access road realignment. The Project is necessary to address a SEO Dam Safety hazard and avoid the potential for a reservoir storage restriction. The South Gray Reservoir dam has excessive seepage along a major portion of the dam. The Reservoir Company desires to preserve the storage right on this reservoir and is interested in adding a toe drain or other seepage measures to ensure the safety of the dam. Gray Reservoir No. 3 is restricted to zero storage by the SEO due to the poor condition of the dam and outlet works. The Reservoir Company has received a court decree allowing the storage to be moved to other locations. Construction was completed in June 2011.

23. City of Monte Vista – Augmentation Water Rights Purchase

Authorization: Construction Fund

Water Source: Rio Grande River

Terms of Loan: \$1,693,770@4.0% for 30 yrs.

County: Rio Grande

Project Yield: 321 AF

Project Type: Water Rights

The City of Monte Vista, by and through its water activity enterprise, provides water to 4,300 residents in the San Luis Valley. The City's water system consists of five wells in a confined aquifer and three wells in an unconfined aquifer. Upcoming rules from the Office of the State Engineer will require water users in the San Luis Valley to replace depletions from pumping of wells in both the confined and unconfined aquifers tributary to the Rio Grande River. The water rights currently owned by the City are insufficient to fully replace the City's depletions. The City needs an additional 321 AF of replacement water. In order to meet this need, the City is purchasing Anderson Ditch water rights and storage in the Rio Grande Reservoir to store both the excess credits from the water it is purchasing and to store additional water it intends on leasing. The City executed the purchase of the Anderson Ditch rights and will soon file a water court application to enable the use of those rights to replace depletions as soon as possible. The Town has executed an agreement with the San Luis Valley Irrigation District for the purchase of storage space in the Rio Grande Reservoir. CWCBC has disbursed funds for part of the water purchase and the Reservoir storage space.

24. Fort Morgan Reservoir and Irrigation Company – Pipeline Project/Augmentation Retiming

Authorization: Construction Fund

Water Source: South Platte River

Terms of Loan: \$1,494,800@2.9% for 30 yrs.

County: Morgan

Project Yield: 37,058 AF

Project Type: Augmentation/Pipeline

The Company operates a ditch system that serves surface water to approximately 15,000 acres of irrigated land between Weldona and Brush, and operates a recharge and augmentation plan that provides augmentation water for approximately 90 irrigation wells. In addition, the Company has an operational agreement with Groves Farms, LLC, which is a family farming corporation also located in Morgan County, for a recharge/augmentation plan. The Company, with Groves Farms, has designed a plan to re-divert and re-time augmentation credits from the Company's more senior recharge projects at certain times when they are not needed for direct augmentation use, and to divert water under new junior water rights when available for recharge and augmentation use. The Project involves installing one 24" pipe from the River extending three miles to recharge ponds on Groves Farms' land; installing two pumps to

pump water from the River through the pipeline; installing one augmentation well and pumping equipment near Groves' ponds to pump ground water back to the South Platte River; and installing seven recharge /augmentation ponds on Groves Farms' land. The Company has completed the project however there are some complications with the pumps ability to pump the specified amount of water to the recharge ponds. A primary concern is that the screen in the river is not functioning as designed during sandy/silty river flows.

25. Joseph W. Bowles Reservoir Company – Bowles No. 1 Dam Rehabilitation

Authorization: Construction Fund

Water Source: Bear Creek

Terms of Loan: \$1,703,870@4.65% for 30 yrs.

County: Jefferson

Project Yield: 2,062 acre-feet

Project Type: Reservoir Rehabilitation

The Joseph W. Bowles Reservoir Company (Company) owns and operates Bowles No. 1 Reservoir, located in the southwest metropolitan area of Denver. The Company was formed in 1906 and currently has 50 shareholders who use the water for golf courses, parks, open space, and some individual ranches for irrigation water. The Company is applying for a loan to implement several repairs to correct dam-safety deficiencies and improve the long-term performance of Bowles No. 1 Dam and to rehabilitate the deteriorating reservoir inlet ditch. The dam rehabilitation includes widening the crest, reconstructing the upstream slope, and installing a seepage collection and toe drain system on the downstream slope. Work on the inlet ditch includes removing trees, reconstructing the ditch cross section and alignment, placing slope protection in high erosion areas, and installing a flow control pipe that will provide for discharge of excessive ditch flows into an existing spillway and drainage structure. Dam construction project completion expected by Spring 2011. Ditch construction is expected to continue thru 2011.

26. Grand River Ditch Company – Grand River Ditch Pipeline

Authorization: Construction Fund

Water Source: Colorado River

Terms of Loan: \$543,380@4.20% for 30 yrs.

County: Garfield

Project Yield: 14,500 AF

Project Type: Ditch Rehabilitation

The Grand River Ditch Company operates the Grand River Ditch by providing direct flow irrigation water from the Colorado River. The ditch is 14 miles long and runs on the north side of the river from three miles west of New Castle to about a mile east of Rifle. In the spring of 2010, a retaining wall that protects the ditch from the river collapsed. The Company plans to repair the ditch by piping the damaged section, and by installing riprap and rock jetties in the river. Construction was completed in December 2010. NRCS has provided design engineering services for the Project. The Company has been approved for a \$100,000 grant from the USDA Farm Service Agency Emergency Conservation Program for this Project along with a \$20,000 WSRA Basin Grant. CWCB loan funding will allow for an initial loan for 100% of construction costs which will be reduced by the grant dollars received. The Company received a Colorado River District grant for \$85K. The balance of the principal will become a 30-year CWCB Loan. Project was completed in November 2010. Substantial Completion is expected in the fall of 2011.

27. Loudon Irrigating Canal and Reservoir Company – Rist Benson Reservoir Rehabilitation

Authorization: Severance Tax Fund

Water Source: Big Thompson River

Terms of Loan: \$263,610@3.5% for 30 yrs.

County: Larimer

Project Yield: 150 acre-feet

Project Type: Reservoir Rehabilitation

The Company owns and operates the Rist Benson Reservoir, which is on the west side of Loveland, Colorado. Since 2005, the Reservoir has been restricted to a gauge height of 10.0 feet due to seepage

problems along the dam. The Borrower has repaired two sections of the embankment in previous years. This Project is the third phase of repairs and once completed will increase storage by 150 AF allowing for full storage of 491 AF. The rehabilitation involves excavating and re-compacting sections of the embankment, installation of a toe drain, and installing riprap on the upstream face of the dam. Construction was completed in June 2011 and the SEO acceptance letter is expected soon.

28. Pagosa Area Water and Sanitation District – Dry Gulch Reservoir Land Acquisition

Authorization: Construction Fund	County: Archuleta
Water Source: San Juan River	Project Yield: 35,000 acre-feet
Terms of Loan: \$11,217,060@3.50% for 30 yrs.	Project Type: Land Acquisition

District serves 9,500 residents in the 100 sq. mile District service area. Drought and demand from growth is requiring additional storage and of around 12,400 AF of storage by 2040. Growth projections estimate the need for a 35,000 AF reservoir to meet demand through 2100. Dry Gulch site is the only reasonably valued site available due to land development. Primary fill source will be pumping of San Juan River water to the reservoir. A CWCBC loan will be used to purchase two parcels of land to begin the process of meeting the needs of the District. The land is needed for both sizes of reservoir. Preliminary design and permitting is expected to start in 2008 and construction of the reservoir is projected to start in 2020. CWCBC has disbursed just under \$10,000,000 in loan funds for land purchases to-date.

29. Supply Irrigation Ditch Company – Knoth Reservoir Dam Rehabilitation

Authorization: Severance Tax Fund	County: Boulder – N.E. of Lyons
Water Source: St. Vrain Creek	Project Yield: 4,800 acre-feet
Terms of Loan: \$1,515,000@2.6% for 30-years	Project Type: Dam Rehabilitation

Supply Irrigating Ditch Company services approximately 8,500 acres of irrigated farmland in Boulder County between Lyons and Mead. Currently the water for irrigation is supplied by a direct flow decree and from the Beaver Park Reservoir (which is approx. 25 miles west of the start of the Supply Ditch near the continental divide). Supply Irrigating Ditch Company is in the process of acquiring a storage decree within Knouth Reservoir in exchange for the rehabilitation of the reservoir. This reservoir will give the Company some system flexibility, as this storage is significantly closer to users than Beaver Park Reservoir. The reservoir improvements include: construction of a spillway, removing vegetation from the embankment of the dam, lining select areas on the upstream dam face with a clay liner, placing riprap along the upstream dam face, enclosing an irrigation ditch within a pipe, and installing dam instrumentation. URS Corporation is currently working on the final SEO plans, which could be approved sometime this summer. Design changes and refinement of the original cost estimate have resulted in an increase to the overall project cost. The Company was approved for additional loan funds at the November 2009, for a new loan amount of \$1,515,000. The Company was recently informed by Little Thompson Water District that they will not be participating in the project, given the cost per acre-foot to complete the project. The Company is currently evaluating its options to continue with the project.

30. Owl Creek Reservoir Company - Reservoir Rehabilitation

Authorization: Construction Fund	County: Weld
Water Source: Owl Creek Basin	Project Yield: 1,200 acre-feet
Terms of Loan: \$1,125,000 @2.75% for 30-years	Project Type: Reservoir Rehabilitation

Owl Creek Reservoir is located approximately 6 miles east and 3 miles north of the Town of Ault. The reservoir was originally constructed in 1896 to store water for irrigation. The dam was constructed of granular material, and over the years has suffered structural damage due to seepage. Given the condition of the dam embankment and the potential for failure, the dam was intentionally breached in 1983. The proposed project involves rehabilitating the existing dam embankment, the construction of a controlled outlet structure, and the construction of an emergency spillway. The project was bid in the fall of 2003. The Reservoir Company is currently exploring its options increasing the dredging quantity to obtain its full storage decree of 1,750 acre-feet. The Company is considering applying for additional funds from the Board to achieve the full reservoir capacity. Additionally, the Company has amended the loan contract for a 1-year time extension to complete the work. The Company is also researching the possibility of utilizing Owl Creek Reservoir as storage facility from flows outside of Owl Creek. This could be accomplished by pumping water from the Larimer Weld Canal, located approximately $\frac{3}{4}$ of a mile downstream of the reservoir. The Company has received bids and is currently negotiating with Barker Construction, Fort Collins, Colorado to construct project for approximately \$1,250,000. The Company has expended approximately \$450,000 to-date for permitting, soils, and design and will need an additional \$600,000 to complete the project. Staff has indicated to the Company that additional collateral will be required to proceed forward with a loan increase, which is currently being considered.

31. Penrose Water District – Water Rights Purchase and Pipeline Installation

Authorization: Severance Tax Fund	County: Fremont
Water Source: Arkansas River	Project Yield: 339 AF - Consumptive
Terms of Loan: \$8,844,570@3.25% for 30 yrs.	Project Type: Pump/Pipeline/Reservoir

The District currently provides domestic water to approximately 4,000 people with 1,700 taps in and around the Town of Penrose, with existing demand of 489 acre-feet per year. The District's water supply is a lease with the Beaver Park Water, Inc. (BPW) who owns and operates Brush Hollow Reservoir. The 1990 lease has a 30-year term, and provides an increasing amount of water each year, 751 AF in 2006, leveling out at 1,000 AF in 2020. In drought years, the amount available to PWD is further reduced below the contract amount. Future build-out demand in 2040 is projected to be 1,200 acre-feet for about 8,000 residents and 3,240 taps. The Project includes the acquisition of $\frac{5}{6}$ th of the Pleasant Valley Ditch water rights. Water will be diverted through alluvial wells and pumped 6 miles through a 12-inch pipe to Brush Hollow Reservoir. Brush Hollow will be used to store the water through a storage agreement. Water rights were purchased in 2005 with bridge financing. A water court application was filed in 2006.

32. Seven Lakes Reservoir Company – Reservoir Rehabilitation

Authorization: Severance Tax Fund	County: Weld and Larimer
Water Source: South Platte	Project Yield: 7,796 acre-feet
Terms of Loan: \$772,842@ 2.95% for 30 yrs.	Project Type: Reservoir Rehabilitation

The Seven Lakes Reservoir Company (SLRC) and its sister company Greeley and Loveland Irrigation Company (GLIC), own and operate an extensive system of reservoirs and canals in the Loveland and Greeley area. GLIC owns 4 reservoirs (including Lake Loveland and Boyd Lake) and SLRC owns 5 reservoirs (including Horseshoe Lake, immediately adjacent to Boyd Lake.). SLRC uses GLIC's Big Barnes Ditch to fill Horseshoe Reservoir. Water is carried in the Big Barnes Ditch and discharges into Lake Loveland at a decreed rate of 1000 cfs. SLRC desires to remove and replace an existing deteriorated 5-tunnel railroad crossing structure with a new bridge in order to safely move 1,000 cfs from the Big Thompson River through Lake Loveland to Horseshoe Reservoir, thus removing a serious bottleneck in the flow path of water. This project plans included a new pre-fabricated railroad bridge based on BNSF Railroad design requirements. Construction will occur while the track remains in continuous service, with

trains expected on a frequency of one about every six hours. The Company has experienced significant delays in getting contracts in-place to conduct the work with BNSF and is considering the use of a tunnel bore in lieu of a bridge. The project is in re-design with a new approach that includes a bore under the tracks.

33. Duell and Snyder Improvement Company – Diversion Structure Rehabilitation

Authorization: Severance Tax Fund
Water Source: South Platte
Terms of Loan: \$90,900@2.50% for 30 yrs.

County: Morgan
Project Yield: 4,950 acre-feet
Project Type: Diversion Rehabilitation

The Duell and Snyder Improvement Company provides irrigation water to a 1,650 acre service area located in Morgan County. The Company operates a sand gate located on a South Platte River diversion structure. The sand gate is a vent section through the concrete rollover wall which is boarded up when the Company needs to divert water. Boards must be removed during the winter to allow excess sand (which builds up in front of the Company's diversion point) to wash down river. Currently, in order to remove boards and open the gate, a Company employee must walk several yards along the crest of the rollover wall to reach the sand gate. There is not a walkway or handrail for safety. Because this is a major safety concern for the Company, it evaluated alternatives to both improve the safety conditions for its employees and more efficiently operate the gate. The Company elected to replace the existing board gates with a new radial gate. However, after further evaluation from the contractor and engineer it was determined that the foundation of the entire diversion structure has been compromised over time due to long term erosion. Therefore, the Company is currently evaluating its options on how to address the foundation issue prior to commencing with any improvement above. The project costs could escalate considerably.

34. Farmers Highline Canal and Reservoir Co. – System Rehabilitation

Authorization: Construction Fund
Water Source: Clear Creek
Terms of Loan: \$1,410,768@4.65% for 30 yrs.

County: Adams/Jefferson
Project Yield: 24,000 AF
Project Type: Reservoir Rehabilitation

The Company was established in 1885 and it diverts water off of Clear Creek and it delivers water through a 31 mile canal running from Golden to Northglenn, through Arvada and Westminster. The Company has completed a canal evaluation and engineering planning study and identified a list of improvements it intends to do with the CWCBA loan proceeds. These items include: replacement of corroded drain pipes, replacement of three siphons, headgate rehabilitation, SCADA control system installation at the headgate, diversion dam rehabilitation, and tree removal along the ditch. This work is expected to be completed between the fall of 2010 through 2014.

35. Riverside Reservoir and Land Company – Riverside Reservoir Spillway Enlargement

Authorization: Severance Tax Fund
Water Source: South Platte River
Terms of Loan: \$2,838,100@2.5% for 30 yrs.

County: Weld
Project Yield: 64,000 AF (200 new)
Project Type: Spillway

The Riverside Reservoir and Land Company owns and operates the 64,000 acre-foot capacity Riverside Dam and Reservoir, an inlet canal known as Riverside Ditch, and a river diversion structure located near the town of Kersey, Colorado. The Company diverts water from the South Platte River, approximately 10 miles downstream of Greeley, Colorado. It stores water primarily during winter months for irrigation releases during the following water season. The Company delivers irrigation water to approximately 50,000 acres. There is a restriction of ½ foot (200 AF of storage loss) due to the lack of a spillway per State Dam Safety.

In order to prevent further storage restrictions, the Project includes constructing an emergency spillway. Construction is expected in the fall of 2011.

36. Riverside Ditch and Allen Extension Company – Ditch System Rehabilitation

Authorization: Construction Fund	County: Chaffee
Water Source: Arkansas River	Project Yield: 3,250 AF
Terms of Loan: \$186,345@2.75% for 30 yrs.	Project Type: System Rehabilitation

The Riverside Ditch and Allen Extension Company, located near Buena Vista, owns and operates the Riverside Ditch that provides irrigation water to a 450 acre service area within Chaffee County. A significant portion of the Company's structures along the 125 year old canal are in need of repair or replacement. The Company intends to complete a number of phased improvements to the canal that include: repairs to the river diversion; lining of portions of the canal to reduce seepage; installation of canal monitoring using SCADA equipment; phreatophyte removal; repair/replacement of aging headgates; and installation of standardized flumes. The proposed improvements would benefit the shareholders by improving overall canal efficiency, thereby increasing the consistency of shareholder headgate deliveries. Improvements are expected to be completed by the spring of 2012. Ditch lining phase of the project was completed in December 2010. Additional phases will be constructed in the winter of 2011.

37. Parkville Water District – Canterbury Tunnel Repair

Authorization: Construction Fund	County: Lake
Water Source: East Fork Arkansas	Project Yield: 1.086 AF
Terms of Loan: \$1,838,200@4.0% for 30 yrs.	Project Type: Tunnel Repair

The Parkville Water District provides municipal water for the Town of Leadville and surrounding areas. The District provides service to about 2300 taps. The Canterbury Tunnel has been a critical water supply source to the District for over 45 years. The Tunnel originally served as mine drainage; however, because it was of such good quality and reliability the District added it to its water supply system. About 15 years ago, the flow of water was significantly reduced due to a collapse in the tunnel. The District proposes to drill a new well to access the functioning part of the tunnel and pump the water to the District's distribution system. The Project design is complete. Use of CWCB funding for this project is in question.

38. Snowmass Water and Sanitation District – Ziegler Reservoir Expansion Project

Authorization: Construction Fund	County: Pitkin
Water Source: Snowmass Creek	Project Yield: 240 AF
Terms of Loan: \$2,873,804@4.75% for 20 yrs.	Project Type: Reservoir Construction

The District was approved for a loan to enlarge Ziegler Reservoir that it purchased in 2008. Prior to that, it did not have a useable raw water storage facility. The District purchased the reservoir to enlarge it from 57 AF to 240 AF. It will allow the District to regulate flows and provide a supply during times of diminished stream flows. The CWCB previously approved a loan to the District in May 2009 to construct the pipeline to deliver water to and from this reservoir. The reservoir expansion plans were submitted to the State Engineers Office in November of 2010. **UPDATE: Hudick Construction Company is currently building the dam with construction components completed by the end of 2011.**

APPROVED BUT NOT UNDER CONTRACT**Lake Durango Water Authority – Source Water Supply Project (NOT UNDER CONTRACT)**

Authorization: Construction Fund
 Water Source: Animas River via Lake Nighthorse
 Terms of Loan: \$2,525,000 @ 4.0% for 30 yrs.

County: La Plata
 Project Yield: 309 AF
 Project Type: Water Rights/Infrastructure

The Authority serves 1,435 taps in southwest La Plata County. A safe yield analysis has indicated that the Authority can only supply water to 792 taps in a drought year. This was an issue in the 2002-2003 drought, so the Authority was approved for a loan and grant from CWCB to purchase additional supply and storage to safely serve its customers. The Authority is planning on purchasing 100 AF of A-LP water from the Colorado Water Resources and Power Development Authority, constructing a pump station at Lake Nighthorse, building an access road, and installing a pipeline to bring water from Lake Nighthorse to Lake Durango where the Authority currently stores the majority of its water.

Southeastern Colorado Water Conservancy District – Arkansas Valley Conduit (NOT UNDER CONTRACT)

Authorization: Severance Tax Fund
 Water Source: Arkansas – Fry Ark Project
 Terms of Loan: \$60,600,000@3.25% for 30 yrs.

County: Pueblo, Crowley, Otero, Bent
 Project Yield: 6,555 AF
 Project Type: Raw Water Pipeline

The Arkansas Valley Conduit is designed to bring relatively clean raw water to 41 water providers in the lower Arkansas Valley, who currently either take water from the Arkansas River, and/or pump from shallow and/or deep aquifers. This pumped water has quality problems and requires significant treatment before it meets Clean Drinking Water standards. The conduit will begin at Pueblo Reservoir Dam, where a 30.94 cfs municipal outlet is already in place and reserved for the specific use of the conduit. The conduit will gravity flow approximately 138 miles down the Arkansas River Valley to Lamar. The conduit water will flow by the St. Charles Mesa Water District where it will enter a water filtration plant. As the conduit moves down the valley, spurs will take off the main line to deliver water to local and regional water providers. The conduit will receive its water from the USBR Fryingpan-Arkansas Project. Currently, about 5,779 acre-feet of water per year is available for entities East of Pueblo in an average year. Additionally, Return Flows are retained by the District and can be exchanged back up to Pueblo Reservoir for delivery. These Return Flows can provide up to an additional 1,600 acre-feet of water. Storage is available to these entities in Pueblo Reservoir because they are in the SECWCD service area. This storage will help provide water in the years when less than average water is provided by the Fry-Ark Project. The water will be provided strictly for municipal and industrial purposes. Final chlorination or treatment will be left up to each water provider. The conduit is currently planned to be paid 80% (approximately \$240 million) by the federal government. The District is proceeding with NEPA permitting efforts with Federal funding assistance.

Huefano-Cucharas Irrigation Co. – Cucharas Reservoir Rehabilitation (NOT UNDER CONTRACT)

Authorization: Severance Tax Fund
 Water Source: Cucharas River
 Terms of Loan: \$1,622,060@2.5% for 30 yrs.

County: Pueblo/Huerfano
 Project Yield: 7,500 AF (New)
 Project Type: Reservoir Rehabilitation

The Huerfano-Cucharas Irrigation Company provides irrigation water to farmers in the Arkansas valley. The Company was organized in 1944 and currently has 47 shareholders. The Company owns and operates

the Cucharas Reservoir, located east of Walsenburg. The dam is a 145-foot high rock fill dam that has undergone several enlargements since the original construction in 1914. The reservoir has a capacity of 35,395 acre-feet. A storage restriction has been in place since 1988 with a deadline of October 1, 2010, imposed by the SEO either to rehabilitate the existing dam, replace it with a new dam or a zero no-storage restriction will be imposed followed by an order to breach the dam and remove the hazard it represents. The Company plans to rehabilitate the existing dam to allow a reduced level (7,500 AF) of storage. The Project involves lowering the spillway, replacing outlet gates, installing a satellite monitoring system, and updating a new Emergency Action Plan. Pending SEO plan approval, project construction might begin during the winter of 2010/11. The owners of the project have changed since the original authorization by the Board. The project is to be de-authorized and a new project presented to the Board at the November 2010 meeting based on the new owner's financials and project plan.

South Metro Water Supply Authority – Raw Water Delivery (NOT UNDER CONTRACT)

Authorization: Construction Fund

Water Source: South Platte

Terms of Loan: \$5,090,400@4.50% for 30 yrs.

County: Adams/Denver/etc.

Project Yield: 10,750 acre-feet

Project Type: Raw Water Delivery

South Metro Water Supply Authority (Authority) is made up of 13 independent water providers that serve communities in the southern area of metro Denver. Currently, the Authority members rely mainly on groundwater aquifers to supply the area's M&I needs. Because this source is nonrenewable, members have been working to identify new supplies of water and opportunities to share resources and infrastructure to reduce dependence on groundwater. The Authority intends to acquire capacity in the East Cherry Creek Valley Water and Sanitation District (ECCV) Northern Supply Pipeline as a means to convey renewable water supplies, recapture consumable return flows, and increase operational flexibility. The Pipeline is a 48-inch steel pipe that runs from Barr Lake to ECCV's service area (located to the east of Cherry Creek Reservoir). The capacity is 47 mgd. The Pipeline is a regional transmission line and will deliver water both to storage reservoirs and directly to Authority members who will then deliver the water through their distribution systems. The Authority is acquiring a total of 31.98 mgd of excess capacity from ECCV. The four members seeking funding from the CWCB will be acquiring 6.55 mgd of this total capacity. Final purchase and operating agreements are still under negotiation.



August 2011 DROUGHT UPDATE

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Executive Summary

Activation of Phase 2 of the State Drought Mitigation and Response Plan, and the activation of the Agricultural Impact Task Force remain in effect to respond to serious drought conditions in southeastern and south central Colorado.

Exceptional and extreme drought conditions continue to impact south central and southeast Colorado. While some drought stricken areas did receive decent late July moisture, the San Luis Valley received only ¼ inch during the month. Reported impacts such as failed crop acreage continue to rise and with poor grazing conditions cattle sales also remain high. July temperatures were two degrees above average for the state, and the month ranked as the 7th warmest July on record. Areas of Southeastern Colorado were 4-6 degrees above average for the month.

The northern half of the state continues to benefit from well above average precipitation for the current water year, October 2010 – present. Reservoirs are full in the Yampa/White, Gunnison, Colorado, and South Platte Basins, and while July rains kept demands low in these areas, a drier August has resulted increased demands. Statewide, reservoir storage is 108% of average. The Rio Grande and the Arkansas River basins have the lowest reservoir storage levels in the state at 57 and 87% of average, respectively.

- As of August 16th, 39% of the state is now experiencing D0, D1, D2, D3 or D4 status according to the U.S. Drought Monitor. Down from 45% of the State last month. D0-D4 represents abnormally dry, moderate, severe, extreme and exceptional drought conditions, respectively. D3 represents the largest portion of drought impacted areas at 17% of the state. D4 conditions have been scaled back slightly in both the San Luis Valley and Baca County due to some localized moisture.
- Alamosa is having one of its driest water years on record with only 2.3 inches since October.
- Reference Evapotranspiration (ET) in the San Luis Valley is also at a record high.
- The Agricultural Impact Task Force, activated in May by the Governor, has been meeting regularly to monitor and respond to the situation. As of August 17th Primary disaster declarations have been granted for Baca, Otero, Crowley, Bent, Chaffee, Custer, Fremont, Huerfano, Kiowa, Las Animas, Prowers, Pueblo, Saguache, Alamosa, Rio Grande, Costilla, Conejos counties. An additional request was sent by Governor Hickenlooper for Douglas and Elbert counties. An additional 13 counties have secondary status as a result of being contiguous to counties with primary declarations.
- Initial wheat and corn harvest data indicates the yields are down from last year with better production in the northern areas of the state where there has been sufficient moisture. Grass and Hay producers continue to struggle. Fall planting will begin at the end of the month and with this additional information is likely to come in on failed and prevented planting should the dry conditions persist.
- Fire danger has moderated somewhat in Colorado with no fires under the state's jurisdiction.
- The fire situation rating for the Rocky Mountain Area remains at Preparedness Level 2, indicating that resources within local dispatch areas are adequate, with the potential for some mobilization of additional resources from other local dispatch areas. Close monitoring of the wildfire situation will continue.

August 2011 DROUGHT UPDATE

The adjacent map shows the U.S. Drought Monitor for Colorado as of August 16, 2011. D4, exceptional drought conditions have been slightly scaled back in both Baca County and the San Luis Valley while D3, extreme conditions, have expanded. D0, abnormally dry conditions, been scaled back to the north, but remain in the Southwestern Basin. For this reason, **the State Drought Plan remains activated for southeastern and south central Colorado.**

U.S. Drought Monitor

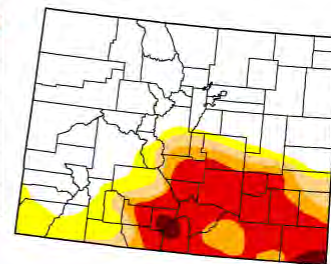
August 16, 2011

Valid 7 a.m. EST

Colorado

	Drought Conditions (Percent Area)						
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4	
Current	81.06	38.84	30.11	24.84	18.43	1.23	
Last Week (8/9/2011 map)	81.06	38.84	30.11	24.84	18.37	1.45	
3 Months Ago (5/17/2011 map)	42.60	57.40	45.12	31.10	7.63	0.34	
Start of Calendar Year (1/2/2010 map)	40.40	59.60	49.57	10.13	0.00	0.00	
Start of Water Year (9/26/2010 map)	28.86	71.14	10.70	0.00	0.00	0.00	
One Year Ago (8/10/2010 map)	83.63	16.37	0.00	0.00	0.00	0.00	

Intensity:



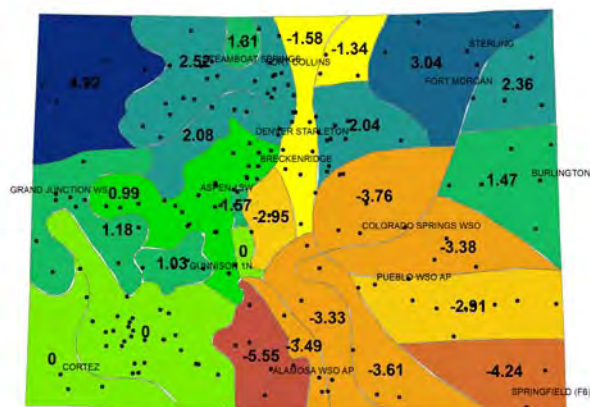
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

<http://drought.unl.edu/dm>



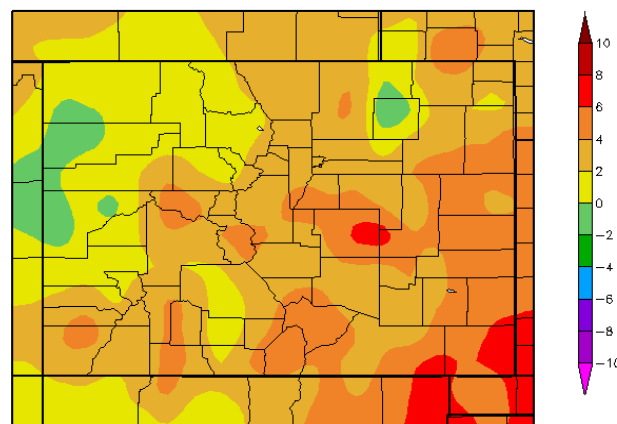
Released Thursday, August 18, 2011
Laura Edwards, Western Regional Climate Center

Preliminary Modified Palmer Drought Severity Index for Colorado
July 2011



The adjacent map shows the Preliminary Modified Palmer Drought Severity Index for Colorado for July 2011. The Rio Grande region had the lowest value at -5.55, where -4 indicates "extreme drought." The Upper Rio Grande basin has received below average precipitation since January 2011 and is currently at 85% of average for the water year. The mountains in the basin have gotten the bulk of that moisture, while the valleys have been significantly drier.

Departure from Normal Temperature (F)
7/1/2011 - 7/31/2011



The map to the right shows the departure from normal temperature for the month of July. On average the state was two degrees above normal, but the southeastern and south central portions of the state ranged from 4-6 degrees above average. High temperatures can escalate drought conditions by increasing ET rates.

Generated 8/11/2011 at HPRCC using provisional data.

Regional Climate Centers

NOTE:

The next WATF meeting is scheduled for September 22, 2011, from 9:30-12 noon at the Colorado Division of Wildlife, 6060 Broadway, Denver, CO. Should you wish to participate via web conference, please contact Ben Wade at Ben.wade@state.co.us

U.S. House of Representatives
Committee on Natural Resources
Washington, DC 20515

August 17, 2011

Ms. Jennifer Gimbel, Director
Colorado Water Conservation Board
Dept. of Natural Resources
1313 Sherman St, Rm 721
Denver, CO 80203

Dear Director Gimbel,

As the Ranking Member of the House Natural Resources Committee, I am interested in learning more about the impacts that the development of our domestic energy sources may have on all of our natural resources, especially our water supply. Water supply and energy production are inextricably linked, and I am writing to request more information regarding the potential impacts of unconventional oil and gas development on our nation's water resources.

Much of the growth in the energy sector is concentrated in regions with already intense competition over the limited water supply. This has special significance in the West, where the development of unconventional oil and natural gas in the states of Colorado and Utah is occurring in the Green River Formation within the Colorado River Basin. By all accounts, the Colorado River is already over allocated, serving as the water supply for more than 30 million people in seven western states, as well as irrigating nearly 4 million acres of land across seven states. The Colorado River is also the lifeblood for 15 Native American tribes and communities, 7 national wildlife refuges, 4 national recreation areas, and 11 national parks.

The potential demand for water is further complicated by the past decade of drought in the West and projections of a warming climate in the future. In one of the scenarios assessed in the interim report of the Colorado River Basin Water Supply and Demand Study, water supply in the Colorado could decrease by 9 to 20 percent by midcentury.

If western shale formations are developed in the future for oil and natural gas, the water demands for energy production will increase even further. An October 2010 Government Accountability Office Report entitled "The Energy-Water Nexus, a Better and Coordinated Understanding of Water Resources Could Help Mitigate the Impacts of

Potential Oil Shale Development” (GAO-11-35), indicated that the expected total water needs for the entire life cycle of oil shale production ranges from about one barrel (42 gallons) to 12 barrels of water per barrel of oil produced from in-situ operations. On average, estimates range from 1 to 3 barrels of produced water per barrel of shale oil.

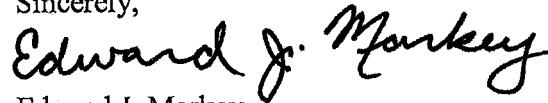
The report also found that while water may be available during the initial development of this resource, there have been very few studies that document the long-term viability of the production of fossil fuels from shale formations and water supply. Some analysts also project that large scale oil shale development within Colorado could require more water than is currently supplied to over 1 million residents of the Denver metro area and that water diverted for oil shale operations would restrict agricultural and urban development.

In order to inform the Committee’s ongoing oversight and legislative responsibilities in this area, I request your response to the following questions.

1. What are the projected future water demands for the state of Colorado in the Colorado River Basin? How does this compare with existing water demands in the basin?
2. What is the current fresh water demand and consumption for oil and gas development in the major fields within the Colorado River watershed?
3. Are the water requirements of the variety of energy resources and technologies used for domestic onshore oil and gas exploration and production widely understood?
4. Much of the water used for unconventional oil and gas development in the West is groundwater. Do we have a comprehensive understanding of the baseline conditions for groundwater and surface water supplies in the regions where shale formations are expected to be developed for oil and natural gas?
5. Are state water supply planning efforts incorporating current and future municipal and industrial demand and consumptive use as well as the water needs of unconventional oil and gas development during the full range of multi-year dry and wet periods?
6. Have studies been completed on the impact of unconventional oil and gas production (including hydrofracking and retorting oil shale) on water supplies for drinking water, agriculture, or other beneficial uses of water resources?
7. Have studies been completed on the effects of unconventional oil and gas production (including hydrofracking and retorting oil shale) and water demand on other energy resources (for example, hydropower)?

Thank you for your assistance and cooperation in this matter. Should you have any questions about this request, please contact Ms. Camille Calimlim Touton of the Committee's Democratic Staff at 202-225-6065.

Sincerely,

A handwritten signature in black ink that reads "Edward J. Markey". The signature is written in a cursive, flowing style.

Edward J. Markey

STATE OF COLORADO

Colorado Water Conservation Board Department of Natural Resources

1313 Sherman Street, Room 721
Denver, Colorado 80203
Phone: (303) 866-3441
Fax: (303) 866-4474
www.cwcb.state.co.us



The Honorable Edward J. Markey, Ranking Member
Subcommittee on Water and Power
House Committee on Natural Resources
1329 Longworth House Office Building
Washington, DC 20515

John W. Hickenlooper
Governor

Mike King
DNR Executive Director

Jennifer L. Gimbel
CWCB Director

Dear Ranking Minority Member, Committee on Natural Resources:

Thank you for your correspondence dated August 17, 2011 regarding the impacts of energy development on water supplies. I am pleased to provide answers to the questions you raise in that letter. By way of background, I am the Director of the Colorado Water Conservation Board (CWCB), the agency charged with developing water policy and water information for the State of Colorado.

1. What are the projected future water demands for the state of Colorado in the Colorado River Basin? How does this compare with existing water demands in the basin?

On behalf of the State of Colorado, the CWCB recently completed and published the Statewide Water Supply Initiative (SWSI) 2010 Report (<http://cwcb.state.co.us/water-management/water-supply-planning/Pages/SWSI2010.aspx>). This report describes in great detail water demand projections for Colorado. In addition, the CWCB is working with the United States Bureau of Reclamation (USBOR) and the other Colorado River basin states to explore projected water supplies and demands through 2060. This work is ongoing, but it is clear that the projected water demands for the State of Colorado and the rest of the Colorado River Basin are increasing. These circumstances present many challenges, but the Colorado River Basin states, along with our federal partners, are prepared to meet these obstacles as they are encountered.

2. What is the current fresh water demand and consumption for oil and gas development in the major fields within the Colorado River watershed?

The current demands and consumption for oil and gas development within the Colorado River watershed, within Colorado are more than 26,000 acre-feet, which may be an underestimate of the current demands for energy and thermoelectric uses. The SWSI 2010 Report provides additional information and descriptions of these uses.

3. Are the water requirements of the variety of energy resources and technologies used for domestic onshore oil and gas exploration and production widely understood?

Water requirements for commercial oil and gas production are well understood. However the water requirements for future oil shale are not well understood as there have been no commercial developments of oil shale. One of the reasons estimates vary so widely is because the potential technologies for oil shale extraction vary and it is not clear which one(s) will dominate any future commercial production. In situ oil shale extraction has several different technologies, from heating the rock with natural gas or coal powered electricity to “down hole” combustion. The technology that would require the most water for in situ would involve using coal fired power plants to generate enough electricity for heating. Differing technologies for surface retorting of the oil shale also has a broad range of water requirements. It is also not well understood whether the hydrolyzed water chemically produced from oil shale would provide additional water to downstream users, thus offsetting some of the water requirements, or whether it would be disposed of through deep well injection. The issues associated with water supplies for oil shale development within the Colorado River basin, within Colorado, are extraordinarily complex. Some of the water limitations related to interstate compacts, water right administration issues, and Endangered Species Act requirements. As such, the water issues must be considered in the context of oil shale development opportunities.

4. Much of the water used for unconventional oil and gas development in the West is groundwater. Do we have a comprehensive understanding of the baseline conditions for groundwater and surface water supplies in the regions where shale formations are expected to be developed for oil and natural gas?

This question considers both water quality and water quantity. In neither case is there a comprehensive understanding of the baseline conditions. Initial research in Colorado indicates that there are not likely to be adequate non-tributary groundwater resources (those that are not connected to streams or rivers) to supply needs for oil shale. With regard to water quality baseline data, some studies have been conducted, such as the 2007 study entitled *Piceance Basin Phase IV Baseline Water Quality Study –Garfield County, Colorado*. However there is not sufficient baseline data to understand whether any impacts to future water quality may be caused by oil and gas development region-wide at this point.

5. Are state water supply planning efforts incorporating current and future municipal and industrial demand and consumptive use as well as the water needs of unconventional oil and gas development during the full range of multi-year dry and wet periods?

Colorado recently completed its SWSI 2010 report, referenced above. This report does consider the potential for oil shale and other energy developments in the state in 2050. However, it does not provide information on the full range of multi-year dry and wet periods and instead focuses on average annual values.

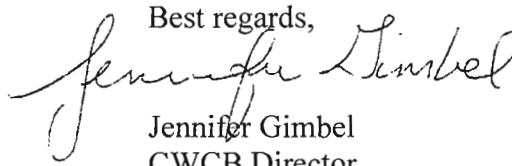
6. Have studies been completed on the impact of unconventional oil and gas production (including hydrofracking and retorting oil shale) on water supplies for drinking water, agriculture, or other beneficial uses of water resources?

The CWCB has developed a portfolio tool, which allow users to see the relative impact of oil shale being developed and how relates to other water uses and water development opportunities. However, I am not aware of any specific studies on this topic.

7. Have studies been completed on the effects of unconventional oil and gas production (including hydrofracking and retorting oil shale) and water demand on other energy resources (for example, hydropower)?

I am not aware of any specific studies on this topic.

Thank you again for the opportunity to respond. Please let us know if you require any additional information.

Best regards,

Jennifer Gimbel
CWCB Director

**Colorado Water Conservation Board
Construction Fund, Special Funds and Severance Tax Trust Fund Accounts
Non-Reimbursable Investments Status Report
Fiscal Year 2010-2011**

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, Special Funds and Severance Tax Accounts. The following table summarizes the non-reimbursable investment projects in progress from July 2010 thru June 2011. This table provides the beginning and ending balances for funds available for each project during the fiscal year. Following this table, are project summaries provided by each project manager that detail the financial data, implementation and status of each project. Following this section is the Severance Tax Trust Fund Operational Account Grant Program status for the same period.

<u>No.</u>	<u>Manager</u>	<u>Project</u>	<u>July 1 Balance</u>	<u>June 30 Balance</u>
1	Alvarado	Arkansas River Basin DSS Feasibility Study	\$136,317	\$35,654
2	Alvarado	Co DSS Modeling and Engineering Support Services	\$76,114	\$41,464
3	Alvarado	Colorado Flood Decision Support System	\$199,876	\$74,188
4	Alvarado	Colorado Water Needs and Alternatives Analysis	\$864,459	\$706,903
5	Alvarado	Denver Basin Pumping Optimization Model	\$34,088	\$815
6	Alvarado	Instream Flow Decision Support System	\$65,629	\$64,362
7	Alvarado	Modflow Enhancement for Co DSS	\$50,000	\$0
8	Alvarado	Project Imaging System	\$179,492	\$147,805
9	Alvarado	South Platte River Decision Support System	\$2,027,327	\$1,733,202
10	Alvarado	Water Resource Information Center & Data Harvesting	\$550,000	\$500,000
11	Bassi	Acquisitions of Water for Instream Flow	\$1,000,000	\$1,000,000
12	Bassi	Instream Flow Engineering Support Services	\$141,008	\$141,008
13	Bassi	CWCB Stream Gaging	\$302,014	\$255,104
14	Bassi	Satellite Monitoring System – State Eng Office	\$353,430	\$39,466
15	Bassi	Stream Gage Fund	\$264,352	\$264,352
16	Browning	Cache La Poudre River Floodway Project	\$150,000	\$0
17	Browning	Chatfield Channel Improvement	\$160,834	\$160,834
18	Browning	Chatfield Reservoir Reallocation Project	\$2,000,000	\$2,000,000
19	Browning	Chatfield Reservoir Reallocation Study	\$158,926	\$127,938
20	Browning	Colorado Floodplain Map Modernization	\$1,139,250	\$735,038
21	Browning	Fish and Wildlife Resources Fund	\$2,979,287	\$2,723,417
22	Browning	Flood Response Fund	\$484,518	\$282,384
23	Browning	Floodplain Technical Services	\$118,160	\$109,028
24	Browning	National Oceanic & Atmospheric Admin	\$300,000	\$300,000
25	Browning	Watershed Restoration	\$556,484	\$390,552
26	Browning	Weather Modification Program	\$448,033	\$105,380
27	Deheza	Climate Change Effects on Co Water Resources Study	\$59,509	\$27,048
28	Deheza	Co Drought Mitigation & Response Plan Implement	\$171,691	\$84,423

<u>No.</u>	<u>Manager</u>	<u>Project</u>	<u>July 1 Balance</u>	<u>June 30 Balance</u>
29	Deheza	Drought Mitigation Planning Technical Assistance	\$58,505	\$52,316
30	Deheza	Water Adaptation Partnership Program	\$500,000	\$460,000
31	Deheza	Water Conservation Public Awareness Research Study	\$150,000	\$150,000
32	Feehan	Animas-La Plata Project Water	\$12,000,000	\$12,000,000
33	Feehan	Canal Modern & Radio Telemetry Demonstration	\$63,629	\$63,629
34	Feehan	CCC Ditch Diversion Rehab on the San Miguel River	\$53,575	\$36,525
35	Feehan	Closed Basin	\$175,389	\$175,389
36	Feehan	Rocky Mountain Fen Demonstration Project	\$100,000	\$100,000
37	Hecox	Ag Water Transfer Sustainability Program	\$2,488,532	\$1,798,397
38	Hecox	Water Education Foundation	\$150,000	\$0
39	Kowalski	Ark River Surface Water Rules Tech & Financial Asst	\$162,021	\$74,616
40	Kowalski	Colorado River Augmentation Project Development	\$75,000	\$75,000
41	Kowalski	Co River Compact - State Water Right Administration	\$500,000	\$500,000
42	Kowalski	Colorado River Delta in Mexico Consultation	\$131,855	\$131,855
43	Kowalski	High Resolution Gridded Sublimation Estimate Study	\$25,145	\$0
44	Kowalski	Litigation Fund	\$3,723,700	\$3,256,598
45	Kowalski	Lower South Platte Water Mgmt & Storage Site Study	\$500,000	\$500,000
46	Kowalski	Purgatoire River Channel Capacity and Improvement	\$25,000	\$25,000
47	Kowalski	Tamarisk Control Cost-Sharing Program	\$865,143	\$492,254
48	Kowalski	Water Planning Studies	\$128,626	\$128,626
49	Kowalski	Wild and Scenic Rivers Fund	\$457,754	\$400,001
50	Kowalski	Wild and Scenic Rivers Study	<u>\$110,123</u>	<u>\$11,472</u>
Total Balances for Non-Reimbursable Investments			<u>\$37,414,795</u>	<u>\$32,482,041</u>

Note: * Indicates that there are additional contracts covering the project in the details below.

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

1. Arkansas River Basin Decision Support System Feasibility Study

Authorization: SB 07-122

Contract No. C154156

Grant Amount: \$200,000

Previous Disbursements: \$ 63,684

Available Balance: \$136,317

Current Disbursements: \$100,663

Ending Balance: \$ 35,654

Water Source: Statewide Streams

Location: Statewide

Sponsor: CWCB

Project Type: Decision Support System

Project Manager: Andy Moore

Beneficiary: Statewide Water Users

Work began in February 2010, and the final report should be completed in September 2011. At the July 2011 Board Meeting, the feasibility study results were presented, and the plan for implementation of the ArkDSS was approved by the Board.

2. Colorado Decision Support System Modeling and Engineering Support Services

Authorization: SB 07-122	Grant Amount: \$200,000
Contract No. C154103	Previous Disbursements: <u>\$123,886</u>
	Available Balance: \$ 76,114
	Current Disbursements: <u>\$ 34,650</u>
	Ending Balance: <u>\$ 41,464</u>

Water Source: Statewide Streams
Location: Statewide
Sponsor: CWCB

Project Type: Decision Support System
Project Manager: Ray Alvarado
Beneficiary: Statewide Water Users

Fiscal Year 2010-2011 Work focused on implementing code changes to StateMod, the DSS water allocation model. Code changes and enhancements were identified through work associated with Phase 1 of the CRWAS and SPDSS. Work will be completed by 2012.

3. Colorado Flood Decision Support System

Authorization: SB 07-122	Grant Amount: \$250,000
HB 08-1346	<u>\$250,000</u>
	Total: \$500,000
	Previous Disbursements: <u>\$300,124</u>
	Available Balance: \$199,876
Contract No. C154138	Current Disbursements: <u>\$125,688</u>
	Ending Balance: <u>\$ 74,188</u>

Water Source: Statewide Streams
Location: Statewide
Sponsor: CWCB

Project Type: Decision Support System
Managers: Ray Alvarado/Tom Browning
Beneficiary: Statewide Water Users

The work on the FloodDSS was completed in 2011 and the website went public in May 2011. The remaining funds will be used to enhance or support this website if needed.

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

Authorization: SB 07-122	Grant Amount: \$ 500,000
HB08-1346	\$ 500,000
SB09-125	<u>\$1,000,000</u>
	Total: \$2,000,000
	Previous Disbursements: <u>\$1,135,541</u>
Contract No. C154096 *	Available Balance: \$ 864,459
	Current Disbursements: <u>\$ 157,556</u>
	Ending Balance: <u>\$ 706,903</u>

Water Source: Colorado River and its Tributaries
Location: Statewide
Sponsor: CWCB

Project Type: Water Availability Analysis
Project Manager: Ray Alvarado
Beneficiary: Statewide Water Users

A draft report on the CRWAS Phase 1 effort was presented to the Board in March 2011. The Board gave staff direction in finalizing the report which included additional public outreach and technical refinements to the study. A final CRWAS Phase 1 report will be present to the Board in January 2012.

5. Denver Basin Pumping Optimization Model

Authorization: HB 08-1346

Grant Amount: \$84,000

Previous Disbursements: \$49,912

Available Balance: \$34,088

Current Disbursements: \$33,273Ending Balance: \$ 815

Contract No. 09000000055

Water Source: Statewide Streams

Location: Statewide

Sponsor: CWCB

Project Type: Model

Project Manager: Andy Moore

Beneficiary: CWCB Staff, and
Statewide Water Users

A groundwater model for the Denver Basin has recently been revised by the USGS. In this project, the model is being utilized by the USGS to investigate the optimization of groundwater pumping for the benefit of the aquifer system. The project is underway with completion expected during the current fiscal year.

6. Instream Flow Decision Support System

Authorization: SB 03-110

Grant Amount: \$440,000

Previous Disbursements: \$374,372

Available Balance: \$ 65,629

Current Disbursements: \$ 1,267Ending Balance: \$ 64,362

Contract No. C154020 *

Water Source: Statewide Streams

Location: Statewide

Sponsor: CWCB

Project Type: Decision Support System

Managers: Ray Alvarado / Jeff Baessler

Beneficiary: CWCB Staff, and
Statewide Water Users

No additional work was done associated with the ISFDSS. The ISFDSS is currently being used on a daily basis by the Stream and Lake Protection Section. In Fiscal Year 2010, the annual maintenance contract for ArcGIS was renewed.

7. Modflow Enhancement for Colorado Decision Support Systems

Authorization: SB 09-125

Grant Amount: \$50,000

Current Disbursements: \$50,000Available Balance: \$ 0

Project Type: Decision Support System

Project Manager: Andy Moore

Beneficiary: CWCB Staff, and
Statewide Water Users

Contract No. 10000000043

Water Source: Statewide Streams

Location: Statewide

Sponsor: CWCB

MODFLOW is a USGS groundwater flow model utilized in CDSS to aid in water resources planning. The proposed enhancements were solicited by CWCB and DWR in order to make MODFLOW more useful in CDSS modeling. USGS is contributing \$12,500 in matching funds. Work has begun and will be completed by the end of 2011.

8. CWCB – Imaging System Project

Authorization: SB 99-173

Grant Amount: \$270,000

HB 02-1152

\$150,000

SB 03-110

\$150,000

HB 04-1221

\$145,000

SB 05-084 Contract No. PO100334 *	<table border="0"> <tr> <td></td> <td style="text-align: right;"><u>\$275,000</u></td> </tr> <tr> <td>Total</td> <td style="text-align: right;">\$990,000</td> </tr> <tr> <td>Previous Disbursements:</td> <td style="text-align: right;"><u>\$810,508</u></td> </tr> <tr> <td>Available Balance:</td> <td style="text-align: right;">\$179,492</td> </tr> <tr> <td>Current Disbursements:</td> <td style="text-align: right;"><u>\$ 31,687</u></td> </tr> <tr> <td>Ending Balance:</td> <td style="text-align: right;"><u>\$147,805</u></td> </tr> </table> Water Source: N/A Location: Denver Sponsor: CWCB		<u>\$275,000</u>	Total	\$990,000	Previous Disbursements:	<u>\$810,508</u>	Available Balance:	\$179,492	Current Disbursements:	<u>\$ 31,687</u>	Ending Balance:	<u>\$147,805</u>	Project Type: Imaging System Project Manager: Susan Lesovsky Beneficiary: CWCB
	<u>\$275,000</u>													
Total	\$990,000													
Previous Disbursements:	<u>\$810,508</u>													
Available Balance:	\$179,492													
Current Disbursements:	<u>\$ 31,687</u>													
Ending Balance:	<u>\$147,805</u>													

In 1999, the General Assembly authorized \$270,000 under SB99-173, Section 8, for the CWCB's participation in the Department of Natural Resource's Electronic Document Imaging System, which corresponds with the statewide transition to electronic imaging of documents. CWCB's purpose of acquiring an imaging system was (1) to make information easily accessible to staff and the public, and (2) to minimize the amount of office space required to store paper records.

The accomplishments of the CWCB Imaging System Project during Fiscal Year 2011 concentrated on system operating and maintenance, and enhancement of built-in, online WebLink searches for the CWCB and CDSS websites. Other activities included funding brochure development, to better align our education and outreach efforts with the new CWCB website.

9. South Platte River Decision Support System

Authorization: SB 99-173 SB 01-157 HB 02-1152 HB 04-1221 SB 05-084 HB 06-1313 HB 08-1346 SB 09-125	<table border="0"> <tr> <td>Grant Amount:</td> <td style="text-align: right;">\$ 100,000</td> </tr> <tr> <td></td> <td style="text-align: right;">\$ 2,000,000</td> </tr> <tr> <td></td> <td style="text-align: right;">\$ 2,000,000</td> </tr> <tr> <td></td> <td style="text-align: right;">\$ 2,500,000</td> </tr> <tr> <td></td> <td style="text-align: right;">\$ 1,500,000</td> </tr> <tr> <td></td> <td style="text-align: right;">\$ 2,000,000</td> </tr> <tr> <td></td> <td style="text-align: right;">\$ 1,000,000</td> </tr> <tr> <td></td> <td style="text-align: right;"><u>\$ 150,000</u></td> </tr> <tr> <td>Total</td> <td style="text-align: right;">\$11,250,000</td> </tr> <tr> <td>Previous Disbursements:</td> <td style="text-align: right;"><u>\$ 9,222,673</u></td> </tr> <tr> <td>Available Balance:</td> <td style="text-align: right;">\$ 2,027,327</td> </tr> <tr> <td>Current Disbursements:</td> <td style="text-align: right;"><u>\$ 294,125</u></td> </tr> <tr> <td>Ending Balance:</td> <td style="text-align: right;"><u>\$ 1,733,202</u></td> </tr> </table> Contract No. C153953 *	Grant Amount:	\$ 100,000		\$ 2,000,000		\$ 2,000,000		\$ 2,500,000		\$ 1,500,000		\$ 2,000,000		\$ 1,000,000		<u>\$ 150,000</u>	Total	\$11,250,000	Previous Disbursements:	<u>\$ 9,222,673</u>	Available Balance:	\$ 2,027,327	Current Disbursements:	<u>\$ 294,125</u>	Ending Balance:	<u>\$ 1,733,202</u>
Grant Amount:	\$ 100,000																										
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Ending Balance:	<u>\$ 1,733,202</u>																										

Water Source: South Platte River Location: South Platte Basin Sponsor: CWCB	Project Type: Decision Support System Project Manager: Ray Alvarado Beneficiary: Statewide Water Users
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The South Platte Decision Support System (SPDSS) completed its Phase 5. The alluvial groundwater model for the basin has been completed and has been presented to a peer review committee in August 2011. The lower South Platte surface water model is in the midst of calibration. The calibration task was put on hold until several StateMod coding changes and enhancements were implemented and tested. The lower South Platte surface water model will be completed by the end of 2011.

10. Water Resource Information Center and Data Harvesting Initiative

Authorization: SB 09-125 Contract No. 11000000032	<table border="0"> <tr> <td>Grant Amount:</td> <td style="text-align: right;">\$550,000</td> </tr> <tr> <td>Current Disbursements:</td> <td style="text-align: right;"><u>\$ 50,000</u></td> </tr> <tr> <td>Ending Balance:</td> <td style="text-align: right;"><u>\$500,000</u></td> </tr> </table>	Grant Amount:	\$550,000	Current Disbursements:	<u>\$ 50,000</u>	Ending Balance:	<u>\$500,000</u>
Grant Amount:	\$550,000						
Current Disbursements:	<u>\$ 50,000</u>						
Ending Balance:	<u>\$500,000</u>						

Water Source: N/A Location: Statewide	Project Type: Water Information Project Manager: Susan Lesovsky
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Sponsor: CWCB

Beneficiary: Statewide

In 2009, the General Assembly authorized \$550,000 under SB09-125, Section 13, for CWCB to: (1) adopt and implement a standard for sharing/harvesting data among document management systems; (2) integrate the CWCB's and Colorado State University's (CSU) systems using the above standard; (3) join with other interested water entities who want to share their water-related information; and (4) provide funding for furthering CSU's digitization of documents, such as the Delph Carpenter collection.

The accomplishments of the CWCB Water Resource Information Center and Data Harvesting Initiative during Fiscal Year 2011 concentrated on appropriating money to CSU's digitization efforts, which included scanning, indexing and making available (through the CSU Water Resources Archive) papers, maps and slides from the Groundwater Data Collection, the Ival V. Goslin Water Resources Collection, and from Delph E. Carpenter and Family, James L. Ogilvie, Gilbert G. Stamm, Robert E. Glover, Ivan D. Wood, Whitney M. Borland, Rollin Q. Tenney, and/or the records of the Iliff and Platte Valley Ditch Company.

11. Acquisitions of Water for Instream Flow

Authorization: HB 08-1346

Grant Amount: \$1,000,000

Current Disbursements: \$ 0

Contract No. C154170

Ending Balance: \$1,000,000

Water Source: Statewide Streams

Project Type: Water Acquisitions

Location: Statewide

Project Manager: Linda Bassi

Sponsor: CWCB

Beneficiary: Statewide Water Users

In Fiscal Year 2010-2011, CWCB did not spend any money from this funding source. CWCB staff is coordinating with the Colorado Water Trust on some potential water rights purchases that may be completed in Fiscal Year 2011-2012.

12. Instream Flow Engineering and Technical Support Services

Authorization: SB 05-084

Grant Amount: \$ 50,000

HB 06-1313

\$100,000

HB 08-1346

\$150,000

SB 09-125

\$ 50,000

HB 10-1250

\$ 50,000

Total \$400,000

Contract No. 07000000005 *

Previous Disbursement: \$258,992

Available Balance: \$141,008

Current Disbursements: \$ 0

Ending Balance: \$141,008

Water Source: N/A

Project Type: Technical Services

Location: Statewide

Managers: Jeff Baessler

Sponsor: CWCB

Beneficiary: Statewide

Funding is to provide temporary help with technical support for ongoing instream flow (ISF) projects, ISF recommendation investigations and to acquire as-needed engineering services for legal protection of ISF water rights. This fiscal year funding for this assistance was provided with Severance Tax funds.

13. CWCB Stream Gaging

Authorization: SB 01-157 to HB 06-1313

Grant Amount: \$1,361,000

Previous Disbursements: \$1,058,986

Contract No. 07000000030 *

Available Balance: \$ 302,014

Current Disbursements: \$ 46,910

Ending Balance: \$ 255,104

Water Source: Statewide Streams

Location: Statewide

Sponsor: CWCB

Project Type: Stream Gaging

Project Manager: Jeff Baessler

Beneficiary: CWCB Staff, and

Statewide Water Users

Background

As the state's water planning agency, CWCB relies upon gages operated by the Division of Water Resources (DWR), United States Geological Survey (USGS) and private entities in order to meet the needs of its mission critical program areas including Compact Protection, Decision Support System Development, Floodplain Management and Stream and Lake Protection. However, CWCB gaging needs are often different from those of the DWR and USGS. Although many existing gages provide needed data, the DWR's mission is to administer the state's water rights, while the USGS collects data for its co-op entities as well as for long-term scientific record purposes. As a result, stream gages are not always located where CWCB needs them, nor are they necessarily designed to fit CWCB data collection parameters. Implementation of this project enables CWCB to strengthen its cooperative efforts with the DWR and USGS to expand, refurbish, redesign and create new gages as well as develop new cost effective strategies to obtain data that will not only benefit CWCB but statewide stakeholder interests.

Current Projects / Programs

The following provides a summary of each current CWCB gaging project:

- USGS Gage ID 09172500: San Miguel River near Placerville, CO gage station operation and maintenance (O&M). This gage was slated to be discontinued by USGS because cooperator funds were unavailable. This gage has over 75 years of record and is an important data gage and useful for ISF administration. CWCB has been funding this gage for the past two year. USGS had hoped to allocate National Streamflow Information Program (NSIP) funds to this gage in Fiscal Year 2010-2011 to reduce or eliminate costs to CWCB. It is anticipated that NSIP funds may become available in Fiscal Year 2011-2012.
- USGS Gage Station ID 09242500: Elk River near Milner, CO gage station O&M. This gage was slated to be discontinued by USGS because cooperator funds were unavailable. This gage is important for ISF administration. CWCB has been funding this gage for the past two years. DWR is also interested in this gage and CWCB staff will be looking to potentially cooperate with DWR on future O&M at this gage.
- Cottonwood Creek below Road 361 near Buena Vista, CO staff gage O&M. CWCB is cooperating with USGS on this staff gage which is used for ISF administration.
- DWR Gage ID ROAFRYCO: Roaring Fork River above Fryingpan River near Basalt, CO. Staff is continuing to work with DWR on funding installation of a cableway for high flow ratings. This gage is important to the Town of Basalt and the CWCB's Watershed and Flood Protection Section as well for ISF administration. An engineer has been hired for design, a draft easement agreement has been drafted, and the Corp of Engineers has been contacted regarding permitting.
- Portable Meteorology Station: Staff has purchased a meteorology station to obtain accurate CU parameters to better define water availability at sites important to CWCB around the state.
- Radar level gage equipment: This equipment was purchased primarily for bridge installations and for use in the Watershed and Flood Protection Section's mobile radar project to help better define and translate rainfall to creek surge. It will be repurposed in the future for ISF water availability analyses and to meet other section needs.

14. Satellite Monitoring System – State Engineer’s Office

Authorization: HB 93-1273 to HB 10-1250

Contract No. N/A

Grant Amount: \$4,393,000

Previous Disbursements: \$4,039,570

Available Balance: \$ 353,430

Current Disbursements: \$ 313,964Ending Balance: \$ 39,466

Water Source: Statewide Streams

Location: Statewide

Sponsor: State Engineer’s Office

Project Type: Stream Gaging

Managers: Jeff Baessler / Tom Ley

Beneficiary: Statewide Water Users

The Satellite Monitoring System includes funding for maintenance and refurbishment of the State Engineer’s Satellite Monitoring System. The State Engineer is continuing to make progress in its replacement and refurbishment activities which are required as a result of new satellite data requirements which are being imposed by the National Oceanic and Atmospheric Administration (NOAA).

15. Stream Gage Fund

Authorization: SB 07-122

Contract No. 08000000131 *

Grant Amount: \$598,155

Previous Disbursements: \$420,559

Available Balance: \$264,352

Current Disbursements: \$ 0Ending Balance: \$264,352

Water Source: Statewide Streams

Location: Statewide

Sponsor: CWCB

Project Type: Stream Gaging

Project Manager: Jeff Baessler

Beneficiary: Statewide Water Users

CWCB has begun to utilize this funding, in addition to the funds authorized under CWCB’s Projects Bills in 2001 through 2006, for the installation of new CWCB gages around the state (see Item #13 above). Although no expenditures were made from this fund last year, staff has identified and is working on scoping out equipment needs and collaborative efforts with USGS and/or DWR on the following new or on-going projects. In addition, staff continues to work with various stakeholders to identify and plan for future stream gage installations that will aid Board programs with an objective of prioritizing gages that benefit multiple CWCB sections and stakeholders. When possible, matching funds or in-kind services will be requested from participating stakeholders. Funding from CWCB Stream Gaging (Item #13 above) and this Stream Gage Fund will be utilized for these projects with the goal of first depleting funds still available under Item #13; following are the projects underway:

- Basalt Cableway – complete installation;
- Acoustic Doppler Current Profiler (ADCP) – purchase equipment for larger stream data collection efforts;
- South Boulder Creek at Eldorado Springs – install bank operated cableway, unit procured in 2009;
- South Crestone Creek near Crestone – new well, inlets, shelter placement;
- Los Pinos River near Ortiz (compact gage) – cableway replacement;
- San Antonio River at Ortiz (compact gage) – channel work, install bank operated cableway, unit procured;
- Fryingpan River near Thomasville – replace old bank operated cableway with Tacoma type; and
- Crystal River at Fish Hatchery near Carbonale – installed concrete mass anchor for orifice line.

16. Cache La Poudre River Floodway ProjectAuthorization: SB 03-110
HB 08-1346Grant Amount: \$150,000
\$150,000

Contract No. C154042

Total	\$300,000
Previous Disbursements:	<u>\$150,000</u>
Available Balance:	\$150,000
Current Disbursements:	<u>\$150,000</u>
Ending Balance;	<u>\$ 0</u>

Water Source: Cache La Poudre River
 Location: City of Greeley
 Sponsor: City of Greeley, Corps of Engineers

Project Type: Feasibility Study
 Project Manager: Joe Busto
 Beneficiary: City of Greeley

CWCB worked with the City of Greeley to partner on the non federal sponsor cost share funding for this federal General Investigation Study. Led by the Omaha Corps, this Study was looking at a levee system on the north east side of Greeley and environmental restoration work in a seventeen mile reach upstream on the Cache La Poudre to lessen potential flood damages. The Contract and Scope of Work mirrored the Corps project management plan meaning that once the Corps finished a study Greeley could invoice CWCB. The final invoice was paid out in January 2011 which closed out the contact between CWCB and the City of Greeley. The Study Tasks completed under the CWCB contract were: Existing Conditions, Future Without Project Conditions, Delineation of flood damage reduction alternative and cost comparison, Draft Feasibility Report, Independent Technical Review of the draft report and appendices, Initial Public Involvement, Feasibility Scoping Meeting with the Vertical Team (Headquarters, Division, District). This satisfied the deliverables and closed out the contract between Greeley and CWCB. The tasks ahead are: enhancement and comparison of alternatives, plan selection and recommendations. CWCB still participates in the project but has no more funding to allocate to this project. Copies of the reports funded by CWCB are available from staff or found at <http://greeleygov.com/Engineering/CacheLaPoudre.aspx>.

17. Chatfield Channel Improvement

Authorization: SB 79-537 – SB 90-41

Contract No. C153882 *

Grant Amount:	\$7,272,000
Previous Disbursements:	<u>\$7,111,166</u>
Available Balance:	\$ 205,383
Current Disbursements:	<u>\$ 0</u>
Ending Balance:	<u>\$ 160,834</u>

Water Source: South Platte River
 Location: Downstream of Chatfield Reservoir
 Sponsor: CWCB

Project Type: Flood Control
 Managers: Tom Browning / Joe Busto
 Beneficiary: CWCB – Metro Area

The original 1979 authorization listed was the original state and federal funding left over from the land purchase and construction of the Chatfield Downstream Channel Improvement Project (Project). The Project was to straighten the South Platte River to accommodate up to 5,000 CFS and once constructed, it was turned over to CWCB as the non federal project sponsor. At the request of Littleton, the area between C470 and Mineral was excluded from the flood control project. This was once known as Littleton Floodplain Park and is now known as South Platte Park and is a great urban naturalist and educational amenity. The next reach is the CWCB/Corps Project that is the South Platte River from Mineral Avenue to Hampden Avenue. Annually the Flood Readiness Branch of the Omaha Corps of Engineers grades the Project. Several years of minimally acceptable ratings and tougher Corps inspection reports, after recent levee failures, has led to increased vegetation removal and maintenance activities by UDFCD contractors on behalf of CWCB. In this fiscal year, \$100,000 total between (CF and ST funds) were signed into agreements between the CWCB and UDFCD and put in a 50/50 match account. The mile-stones were continued vegetation removal and planning and engineering for boat chute improvements for public safety at Union Avenue #1. McLaughlin Water Engineers was hired for the planning and design work and Naranjo Civil Engineering of Greeley is under contract to construct the boat chute

improvements scheduled for October 2011. The CWCB is also surveying a training dike, providing video inspections of drainage pipes and removing vegetation down at the confluence of Bear Creek.

18. Chatfield Reservoir Reallocation Project

Authorization: HB 08-1346

Grant Amount: \$2,000,000

Current Disbursements: \$ 0

Contract No. 09000000037*

Ending Balance: \$2,000,000

Water Source: South Platte River

Project Type: Study

Location: 10 miles South of Denver

Project Manager: Tom Browning

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

Beneficiary: Statewide Water Users

The purpose of this authorized funding is to act as “seed money” for implementation of the Chatfield Reservoir Reallocation Project (Project) in partnership with local water providers. The seed money may assist, to some extent, with finalization of FR/EIS study tasks, but more importantly will assist with the implementation phase of the Project. Implementation, pending Project approval by the federal government, will consist of contracting with the U.S. Army Corps of Engineers for water supply storage space in the reservoir and the completion of recreation modifications and environmental mitigation. This funding has been untapped for the time being so that it can be used in the most meaningful and efficient manner when the time is right. The funds are still greatly needed and will be encumbered appropriately for the intended purposes.

19. Chatfield Reservoir Reallocation Study

Authorization: SB 97-008

Grant Amount: \$ 300,000

HB 98-1189

\$ 200,000

SB 07-122

\$ 600,000

Contract No. C153882A*

Total \$1,100,000

Previous Disbursements: \$ 941,074

Available Balance: \$ 158,926

Current Disbursements: \$ 30,988

Ending Balance: \$ 127,938

Water Source: South Platte River

Project Type: Reservoir Supply Study

Location: 10 miles South of Denver

Project Manager: Tom Browning

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

Beneficiary: Colorado Water Users

This project involves a partnership with the U. S. Army Corps of Engineers (Corps) and local water providers to complete a Feasibility Report and Environmental Impact Study (FR/EIS) regarding the reallocation of up to 20,600 acre-feet of existing storages space in Chatfield Reservoir. The reallocation study is investigating several alternatives including impacts, mitigation needs, and costs. The Corps has determined that 20,600 AF of flood control space can be converted to multi-use space with no reduction in downstream flood control benefits.

The current water providers involved in the FR/EIS include the South Metro Water Supply Authority, Centennial W&S District, Town of Castle Rock, Roxborough Metro District, Castle Pines Metro District, Castle Pines North Metro District, Perry Park Country Club, Center of Colorado WCD, Mt. Carbon Metro District, City of Aurora, City of Brighton, Central Colorado WCD, Western Mutual Ditch Company, Colorado State Parks, and Denver Botanic Gardens. A large coalition of stakeholders has been assembled to allow for input on all aspects of the proposed reallocation, and affected DNR agencies are working closely together as well.

20. Colorado Floodplain Map Modernization

Authorization: SB 03-110 to HB 10-1250

Grant Amount: \$2,460,884

Contract No. C154013 *	Previous Disbursements: <u>\$1,367,327</u>
	Available Balance: \$1,093,557
	Donations: \$ 45,693
	Adjusted Balance: \$1,139,250
	Current Disbursements: <u>\$ 404,212</u>
	Ending Balance: <u>\$ 735,038</u>
Water Source: N/A	Project Type: Floodplain Delineation
Location: Statewide	Project Manager: Thuy Patton
Sponsor: Statewide	Beneficiary: CWCB – Statewide

This program is a federally funded but state-managed floodplain mapping program, with matching funding from state and local governments. Floodplain maps originally prepared as part of the Federal Emergency Management Agency's (FEMA's) National Flood Insurance Program (NFIP) are being updated and revised. The new maps are digital and are prepared in a countywide format. Beginning in Fiscal Year 2004, CWCB worked directly with FEMA and the affected local governments to start the process of updating and revising old Flood Insurance Rate Maps into the new digital format. Counties, which include the county and its incorporated communities, that have been completed or are in progress are: Boulder, Garfield, Pitkin, Fremont, Clear Creek, Pueblo, Weld, Summit, El Paso, Rio Grande, Montrose, Morgan, Prowers, Logan, Chaffee, Prowers, and Gunnison Counties and the City of Boulder.

Starting in 2009 the program has transitioned to Risk Map, which will incorporate additional products to assist local communities in conveying flood risk hazards within their communities. FEMA floodplain maps will continue to be updated based on a watershed level instead of a countywide level.

The Denver Metropolitan area counties were all managed by the Urban Drainage and Flood Control District with technical and financial assistance from CWCB. All other studies are being managed by CWCB staff with consulting assistance from two engineering teams that were selected and contracted for this work.

The CWCB Map Modernization Fund has been instrumental for leveraging local and state funds to maximize federal grants to the program. Typically the local funding is contributed to CWCB at some point during the project duration. The local contribution is reflected as a donation as listed above. Colorado is seen as a floodplain mapping leader within FEMA Region VIII and within the country as a whole. The remaining balance does not reflect approximately \$546,106 that has been encumbered for projects currently in progress. The encumbered balance was transferred to Fiscal Year 2012 as these are multiple year projects.

21. Fish and Wildlife Resources Fund

Authorization: SB 01-157, HB 02-1152	Grant Amount: \$5,000,000
	Previous Disbursements: <u>\$2,020,713</u>
Contract No. C150219 *	Available Balance: \$2,979,287
	Current Disbursements: <u>\$ 255,870</u>
	Ending Balance: <u>\$2,723,417</u>
Water Source: Various	Project Type: Grant Program
Location: Statewide	Managers: Ted Kowalski / Chris Sturm
Sponsor: CWCB	Beneficiary: Statewide

In 1987, HB 87-1158 created the Fish and Wildlife Resources Account, also known as the "Mitigation" Account, in the Construction Fund. Procedures for obtaining mitigation grant approvals are found under section 37-60-122.2, CRS. SB 01-157 transferred the account into a special fund.

Expenditures from the fund in Fiscal Year 2011 were to the Platte River Recovery Implementation Program. In addition, expenditures were made to the Fountain Creek Diversion Dam Fish Passage Design, sponsored by Colorado Springs Utilities and the Hartland Diversion Dam Reconstruction, sponsored by Painted Sky R C & D Council.

22. Flood Response Fund

Authorization: SB 01-157 to HB 10-1250

Contract No. C154008 *

Water Source: All Colorado streams

Location: Statewide

Sponsor: CWCB

Grant Amount: \$1,292,353

Previous Disbursements: \$ 807,835

Available Balance: \$ 484,518

Current Disbursements: \$ 202,134

Ending Balance: \$ 282,384

Project Type: Quick Response to flooding

Project Manager: Kevin Houck

Beneficiary: CWCB - Statewide

The Flood Response Fund (Fund) provides CWCB with opportunities to participate in flood preparedness, response and recovery activities throughout Colorado. The Fund supports five elements of the program, which are Flood Forecasting and Preparation, Aerial Photography of Flooded Areas, Flood Documentation and Identification of Specific Hazards, Evaluations and Revisions of Floodplain Designations, and Development of Disaster and Recovery Mitigation Plans.

The Board has previously approved the staff's program mission and guidelines for the administration of the Fund. The program is administrated by the CWCB's Flood Protection Section and is fully operational at this time. In fact, four out of the five program elements were invoked and utilized during Fiscal Year 2011 with successful results. These activities included snowmelt flood preparation activities, long-term weather outlooks for flood and drought purposes, post-flood documentation for various flooding events, and floodplain evaluations to assess CWCB designated floodplains for validity. A portion of this work also proved to be valuable for the Colorado Flood Task Force and Water Availability Task Force.

It is important to note that a substantial amount of the funds in this account are intentionally held back each year in order to have funding available to respond to a serious flood disaster. When no disaster occurs, as was the case this fiscal year, many of the funds go unspent. It is important to emphasize that this does not mean that the funds are not needed; merely, it is the nature of how this fund is set up that occasionally significant monies are still remaining at the close of the period.

23. Floodplain Technical Services

Authorization: SB 05-084
HB 06-1313
SB 09-125

Contract No. C154050 *

Water Source: Various

Location: Statewide

Sponsor: CWCB

Grant Amount: \$175,000

\$175,000

\$125,000

Total \$475,000

Previous Disbursements: \$356,840

Available Balance: \$118,160

Current Disbursements: \$ 9,132

Ending Balance: \$109,028

Project Type: Technical Assistance

Project Manager: Kevin Houck

Beneficiary: Colorado Water Users

This program helped develop the statewide Meteorological Flash Flood Prediction Program for the State of Colorado. This program is performed during the flood season from May through September by HDR Engineering for the purpose of providing daily notification of flood threats based on

meteorological conditions. Other tasks funded by this account include a series of workshops held by Dewberry to market the new Statewide Floodplain and Drainage Criteria Manual and assist with its use, a contract with McLaughlin Rincon to assess stream alteration activities on floodplains, assistance to the City of Woodland Park for floodplain map revisions, preparation of an annual report for the section for distribution to CWCB and the public, assistance to the Town of Granada for levee repairs to remain within compliance with the Corps of Engineers' Inspection of Completed Works Program, on-call services by Ayres Associates to the City of La Junta and the City of Las Animas, development of a sediment transport analysis for Fountain Creek by the USGS for the benefit of El Paso and Pueblo Counties, preparation of a drainage master plan for a repetitive flooding watershed in Mesa County, a matching amount to leverage other state and local funds for a rainfall analysis study for the City of Colorado Springs, and operating expenses incurred by the Flood Protection Section to carry out its duties around the state. Additional work completed during Fiscal Year 2011 included a partnership with CDOT for a comprehensive analysis of the Beaver Creek floodplain through Brush and a partnership with the Boxelder Creek Watershed Authority for the design of the Edson Reservoir in Larimer County, which the Authority will use in the process of obtaining an eventual FEMA grant for construction. Overall, the approximately \$355,000 spent from this account has been leveraged with over \$500,000 of other federal, state, and local funds for the projects identified above. Most of the funding recipients indicated that the project could not have taken place without the CWCB funds. Final reports have been obtained for all completed projects.

24. National Oceanic and Atmospheric Administration Statewide Precipitation Atlas Update
 Authorization: SB 09-125 Grant Amount: \$300,000
 Current Disbursements: \$ 0
 Contract No. None Ending Balance: \$300,000
 Water Source: N/A Project Type: Scientific Study
 Location: Statewide Project Manager: Kevin Houck
 Sponsor: CWCB / NOAA Beneficiary: Statewide Water Users

Funds have been allocated for the purposes of partnering with the National Oceanic and Atmospheric Administration (NOAA) to update design rainfall information for the State of Colorado. Currently effective design rainfall information is over 35 years old, and using information from that age potentially results in overdesigning or underdesigning flood control and water supply facilities. Updates of the Rainfall Atlas will result in more current, proper design of these facilities from this point forward. NOAA is currently updating rainfall information around the country in groups of states. Colorado will be updated with a group of six Midwestern states. This account serves as the non-federal portion of this project. After lengthy contract negotiations, a contract with NOAA was signed on June 24, 2011. It is anticipated that this project will be completed during Fiscal Year 2012.

25. Watershed Restoration
 Authorization: HB 06-1313 Grant Amount: \$150,000
 SB 09-125 \$250,000
 HB 10-1250 \$250,000
 Total \$650,000
 Previous Disbursements: \$ 93,516
 Contract No. 07000000077 * Available Balance: \$556,484
 Current Disbursements: \$165,932
 Ending Balance: \$390,552
 Water Source: Various Project Type: Watershed Restoration
 Location: Statewide Project Manager: Chris Sturm
 Sponsor: CWCB Beneficiary: Watershed Interests

The entire grant amount has been allocated to projects through the CWCB Colorado Watershed Restoration Program January 2009 - 2011 competitive grant cycles. Completed projects from the January 2009 grant cycle include Eagle River riparian re-vegetation maintenance/monitoring, Upper South Platte (Horse Creek Watershed) channel stabilization prioritization, and the Metro Area Westerly Creek Master Plan. Active projects from the January 2009 grant cycle include Lake Fork Gunnison Floodplain/Channel Design and Mancos River Diversion Dam Assessment. Completed projects from the January 2010 grant cycle include bank stabilization and riparian zone re-vegetation on Fourmile Creek in South Park. Active projects from the January 2010 grant cycle include North Fork Gunnison River channel stabilization near Paonia, Eagle River channel stabilization near Edwards, South Platte River restoration design below Chatfield, Coal Creek channel stabilization in Crested Butte, and Campbell Creek channel stabilization near Fort Collins. New projects awarded funding from the January 2011 grant cycle include channel stabilization on Trail Creek (Lake George), Clear Creek (Golden), North Massey Draw (Ken Caryl Ranch), West Beaver Creek (Pikes Peak), Union Creek (Leadville), Kerber Creek (Villa Grove), Yampa River (Craig), and the Blue River (Breckenridge). Other new 2011 projects include ditch diversion reconstruction on the San Miguel River, Coal Creek (Crested Butte), and Gunnison River (Upstream of Delta); river restoration planning for Lightner Creek (Durango); and riparian restoration on Boulder Creek.

The CWCB also received a 2010 Regional Forester's Honor Award from the USFS for its role in restoring and monitoring restoration work on Squirrel Creek in the Kerber Creek Watershed (Villa Grove, Rio Grande Basin). The restoration work was funded through a 2009 CWCB Colorado Watershed Restoration Program grant.

26. Weather Modification Program

Authorization: HB 04-1221 to HB 10-1250

Contract No. 07000000053 *

Grant Amount: \$830,000

Previous Disbursements: \$564,266

Subtotal: \$265,734

Donations: \$182,299

Available Balance: \$448,033

Current Disbursements: \$342,653

Ending Balance: \$105,380

Water Source: N/A

Location: Denver

Sponsor: CWCB

Project Type: Cost Share Grants

Manager: Joe Busto

Beneficiary: Statewide

At the request of water users CWCB has had grants for wintertime cloud seeding for additional snowpack for water supplies since 2004. In 2007, through the Colorado River Seven Basin States process, state to state agreements were signed that bring in additional grant funding to be dispersed to Colorado's locally sponsored cloud seeding programs. The reporting on this funding gets complicated as the WM appropriation house funding from five different states that is all used for a variety of new equipment and operational activities to enhance and modernize cloud seeding programs. The Colorado River agreements are more on a Water Year basis that need to go to all the boards and commission in the various states so it has become common over the last four years to have Lower Basin checks arrive in May and June creating large end of state fiscal year balance sheets. At the end of this fiscal year, there was \$105,379.80 not under contract.

In this fiscal year P.O. 10-2 for \$62,300 was issued to Desert Research Institute to operate to high output cloud seeding machines targeting Winter Park Ski Area for Denver Water. PO 10-33 for \$25,500 was for DRI to operate a LP Dispenser and high output cloud seeding machine for the Water Enhancement Authority on the Grand Mesa. P.O. 11-50 was for \$40,000 for grants to Gunnison County for their operational program. P.O. 11-62 was for \$9,424 to ETi Instrument Systems for precipitation gauges that are to be deployed at Purgatory and Telluride Ski Areas. High resolution precipitation gauges are best for

detecting small gains from cloud seeding programs. P.O. 11-63 was to Genor Inc. for another precipitation gauge that will be deployed on the Grand Mesa. P.O. 11-64 was \$8,000 to the Water Enhancement Authority to restock solution, purchase a laptop and software to operate a DRI built for Colorado machine and hire and operational meteorologist for the permit renewal and operations of the program. P.O. 11-80 was for \$40,000 to Denver Water to extend operations of their program but only \$30,000 could be utilized and \$10,000 needs to be unencumbered from the P.O. In 2009, a special contract was executed between the CWCB and San Juan Resource Development Council a non-profit contracts administration group based in Durango. Two task orders were issued for \$94,906.26 and \$100,039.78 for extensions of Western Weather Consultants Operations and to fund proposals from DRI to develop a specialized cloud seeding weather station at Purgatory to detect seeding potential

27. Climate Change Effects on Colorado Water Resources Study

Authorization: HB 08-1346	Grant Amount: \$100,000
	Previous Disbursements: <u>\$ 40,491</u>
Contract No. C154126 *	Available Balance: \$ 59,509
	Current Disbursements: <u>\$ 32,461</u>
	Ending Balance: <u>\$ 27,048</u>
Water Source: N/A	Project Type: Study
Location: Statewide	Project Manager: Veva Deheza
Sponsor: CWCB	Beneficiary: Statewide

Climate change has the potential to greatly impact Colorado's natural resources, including water resources. Governor's Ritter's Climate Action Plan laid out a number of goals, two of which included adaptation, and education and outreach. In accordance with these goals, CWCB worked with Western Water Assessment (WWA) and NOAA to produce a synthesis report entitled "Climate Change in Colorado" which was released in October of 2008. CWCB has also partnered with WWA and NOAA to hold a series of workshops entitled "Dealing with Drought in a Changing Climate" to educate Coloradoans on the report findings. Lastly, CWCB partnered with a number of Front Range utilities to examine how changes in climate can impact Front Range municipal water resources. This study, "The Joint Front Range Climate Change Vulnerability," is complete and is in the editing process with the Water Research Foundation.

28. Colorado Drought Mitigation and Response Plan Implementation Program

Authorization: HB 08-1346	Grant Amount: \$300,000
	Previous Disbursements: <u>\$128,309</u>
Contract No. C154152	Available Balance: \$171,691
	Current Disbursements: <u>\$ 87,268</u>
	Ending Balance: <u>\$ 84,423</u>
Water Source: N/A	Project Type: Drought Plan
Location: Statewide	Project Manager: Veva Deheza
Sponsor: CWCB	Beneficiary: Statewide

In compliance with the Federal Emergency Management Agency (FEMA) requirements, CWCB completed a comprehensive revision to the State Drought Mitigation Response Plan, approved by the CWCB Members, Governor Hickenlooper and FEMA. The plan recommended a multitude of implementation projects that will bolster the State's drought mitigation and monitoring efforts as well as aid in the local drought planning process. These efforts are now underway.

29. Drought Mitigation Planning Technical Assistance

Authorization: SB 07-122	Grant Amount: \$150,000
	Previous Disbursements: <u>\$ 91,495</u>
Contract No. 09000000020	Available Balance: \$ 58,505

Current Disbursements: \$ 6,189
 Ending Balance: \$ 52,316

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

Project Type: Tech. Planning Asst.
 Project Manager: Veva Deheza
 Beneficiary: Statewide Water Users

The Drought Mitigation Planning Technical Assistance Program seeks to implement major issues identified in the 2004 and 2007 CWCB-commissioned Drought & Water Supply Assessment Study. Issues included the need for future drought mitigation planning projects whereby public information and education, as well as technical assistance, in drought planning would be critical in addressing the availability and reliability of water supplies in the future. Among the key recommendations made in this study, the need for technical support was highlighted. To address these needs, the State could provide technical assistance to support local entities in their various water planning and implementation efforts.

As part of the 2010 revision to the State Drought Mitigation and Response Plan, CWCB has developed a web-based toolbox that can act as a “how to guide” for drought planning for municipal water providers. The development of these tools will make drought planning less resource intensive for local communities. A series of workshops teaching providers how to utilize these tools was completed in May and June of 2011.

30. Water Adaptation Partnership Projects

Authorization: SB 09-125

Grant Amount: \$500,000

Current Disbursements: \$ 40,000

Contract No. 10000000129

Ending Balance: \$ 460,000

Water Source: N/A
 Location: Statewide

Project Type: Planning
 Managers: Veva Deheza / Ray Alvarado /
 Michelle Garrison / Joe Busto

Sponsor: CWCB

Beneficiary: Statewide

In order to address the state’s progress towards meeting one of the goals of the Colorado Climate Action Plan: preparing the state to adapt to unavoidable climate changes, CWCB has partnered with multiple state agencies and stakeholders to assess current and planned efforts on climate change adaptation. The primary purpose of this effort was to develop a snapshot of current and planned adaptation efforts for Governor Hickenlooper to help determine the next steps for planning for and adapting to climate variability and change.

The effort will cover five key sectors: (1) water, (2) agriculture, (3) wildlife, ecosystems and forestry, (4) climate-sensitive recreation and tourism, and (5) energy. It will also considered the interactions between sectors; for example, water and energy are linked and decisions in one sector (e.g., convert power plants to natural gas) can affect the other sector (e.g., consume less water). A final report, “Climate Preparedness in Colorado” summarizing all of these efforts was completed in the spring of 2011.

31. Water Conservation Public Awareness Research Study

Authorization: SB 07-122

Grant Amount: \$150,000

Current Disbursements: \$ 0

Contract No. None

Ending Balance: \$ 150,000

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

Project Type: Research Study
 Project Manager: Veva Deheza
 Beneficiary: Statewide Water Users

A comprehensive Statewide Water Conservation Public Awareness Research Study will be conducted to pinpoint critical attitudes and behaviors among Coloradoans and those affected by recommended water efficiency best management practices. A combination of qualitative and quantitative research will be conducted strategically to benchmark statewide attitudes and perceptions about water efficiency. Since attitudes, microclimates, and water supplies vary in Colorado, the research studies will be segmented geographically according to the nine HB 05-1177 roundtable basins around the State. The water awareness strategy will focus on three research target groups for all regions, regulated community, stakeholders, and citizens. The research strategy would include a quantitative and qualitative survey, in-depth interviews, and focus groups.

The study findings may be used as benchmarks for a future Water Conservation Public Awareness and Education Campaign, and as a resource from which to develop the most effective messaging and umbrella brand for the State's potential future water awareness and conservation efforts. Potential statewide marketing objectives include educating individual Coloradoans of the importance of water conservation to their future as residents of the State and to complement and reinforce other local and regional water conservation public-awareness programs and activities; striving to make all Coloradoans aware that their natural water resources are limited and not immune to the consequences of their individual behaviors. Similar research in other states indicates that the more people know about their water the more likely they are to conserve it.

32. Purchase of Colorado's Allotment of Animas-La Plata Project Water

Authorization: HB 10-1250	Grant Amount:	\$12,000,000
	Current Disbursements:	\$ <u>0</u>
Contract No. None	Ending Balance:	<u>\$12,000,000</u>
Water Source: Animas River	Project Type: Water Purchase	
Location: Durango, CO	Managers: Tim Feehan / Vaughn	
	McWilliams / Ted Kowalski	
Sponsor: CWCB / USBR	Beneficiary: State of Colorado	

Staff is currently in negotiations with the Bureau of Reclamation to finalize an agreement to purchase all or a portion of the State's allotment of 10,460 acre feet of Municipal and Industrial (M&I) water in Lake Nighthorse. State will need to have an agreement in place before the final cost allocation for the project is completed, which is anticipated by the summer of 2012, or the State's water will revert equally to the two Tribes. Staff has held three public meetings and is waiting on a formal decision on the interest during construction payment due and direction from the Colorado Water Conservation Board members on how much water to purchase.

33. Canal Modern and Radio Telemetry Demonstration Project

Authorization: HB 06-1313	Grant Amount:	\$100,000
	Previous Disbursements:	<u>\$ 36,371</u>
Contract No. C150227	Available Balance:	\$ 63,629
	Current Disbursements:	\$ <u>0</u>
	Ending Balance:	<u>\$ 63,629</u>
Water Source: South Platte River	Project Type: Canal Modernization	
Location: Logan County	Project Manager: Anna Mauss	
Sponsor: CWCB	Beneficiary: Statewide Water Users	

Funding was awarded to the South Platte Ditch Company and project implementation began in April 2007, with the initial purchases of equipment and supplies. The participating ditch companies include the South Platte Ditch Company (SPDC) and three participating shareholders of the Johnson and

Edwards Ditch Company (J&E). The objective of this project is to demonstrate the value of electronic control equipment with integral radio communications capability in managing the conjunctive operation of a surface diversion system, groundwater pumping, groundwater recharge, pumped augmentation flows and reservoir storage releases. Targeted capabilities will be improved efficiency in water management, and development of data streams that can facilitate leasing and trades of water supplies both within the participating ditch companies as well as with other water users in the South Platte Basin. The proposed demonstration project will feature radio/control equipment that provide real-time two-way communications capability plus local automated control capability. Project tasks have been arranged for completion in three phases, that generally follow a progression from more basic functions, such as flow monitoring, on toward higher-level applications that include local automation and remote adjustment capabilities. Specific sites to be monitored include various points of measurement for canal surface diversions and end-of-system outflow points, recharge sites, and alternate point of diversion wells. Project participants have increased the number of telemetry sites and have received additional grant funding from other sources to increase the scope of the project, thereby gaining the additional benefit of more data collected and more efficient ditch operations.

34. CCC Ditch Diversion Rehabilitation on the San Miguel River

Authorization: SB 07-122	Grant Amount: \$65,000
	Previous Disbursements: <u>\$11,425</u>
Contract No. C154096	Available Balance: \$53,575
	Current Disbursements: <u>\$17,050</u>
	Ending Balance: <u>\$36,525</u>
Water Source: San Miguel River	Project Type: Demonstration Project
Location: Statewide	Project Manager: Tim Feehan
Sponsor: CCC Ditch Company, San Miguel	Beneficiary: Statewide
Watershed Coalition, and Colorado Water Trust	

Funding was awarded to the Colorado Water Trust for a demonstration project on the San Miguel River to modify the diversion structure of the CCC Ditch to eliminate the barrier the structure currently causes to fish migration and recreational boats while still providing a full supply of irrigation water to the CCC Ditch. The project is currently being designed by the CCC Ditch Company and the Water Trust Fund. To date, approximately \$59,275 has been disbursed for planning, design and construction. Project is anticipated to be complete by the fall of 2011.

35. U.S. Bureau of Reclamation / State Land Board Rights-of-Way – Closed Basin Project

Authorization: SB 79-537	Grant Amount: \$625,000
HB 00-1419	<u>\$188,000</u>
	Total \$813,000
	Previous Disbursements: <u>\$637,611</u>
	Available Balance: \$175,389
	Current Disbursements: <u>\$ 0</u>
Contract No. PDANNC153421	Ending Balance: <u>\$175,389</u>
Water Source: Closed Basin	Project Type: Right of Way Acquisition
Location: San Luis Valley N. of Alamosa	Project Manager: Vaughn McWilliams
Sponsor: CWCB	Beneficiary: State of Colorado

This project is the acquisition of rights-of-way (ROW) for the Closed Basin Project (Project) in the San Luis Valley. In Fiscal Year 2010, CWCB, the State Land Board and the Bureau of Reclamation (BOR) completed all of the conveyance documents for assigning the easements and ROW in the Project to the BOR. The Project was completed, with the final assignment of the easements and ROW being recorded by the BOR in September 2010. The remaining funds can be returned to the Construction Fund.

36. Rocky Mountain Fen Demonstration Project

Authorization: SB 07-122

Grant Amount: \$100,000

Current Disbursements: \$ 0

Contract No. None

Ending Balance: \$100,000

Water Source: N/A

Project Type: Demonstration Project

Location: N/A

Project Manager: Tim Feehan

Sponsor: Colorado Mountain College

Beneficiary: Statewide

City of Aurora, Pueblo Board of Water Works

Funding was awarded to the Colorado Mountain College-Timberline Campus for a demonstration project designed to explore the extent to which the harvest and transplantation of slow-forming organic peat soils, from an area of potential impact to specifically prepared receiver sites, can serve as mitigation of impacts to fens. The funding for the project is dependent on the project sponsor acquiring a 50/50 cost share from other outside sources to match the CWCB funds. To date, no matching funds have been acquired by the project sponsor, and therefore, no Construction Fund monies have been expended on this project.

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

Authorization: SB 07-122

Grant Amount: \$1,500,000

SB 09-125

\$1,500,000

Total: \$3,000,000

Contract No. C154026 *

Previous Disbursements: \$ 511,468

Available Balance: \$2,488,532

Current Disbursements: \$ 690,135

Ending Balance: \$1,798,397

Water Source: South Platte & Arkansas Rivers

Project Type: Alternative Methodologies

Location: Statewide

Project Manager: Todd Doherty

Sponsor: CWCB

Beneficiary: South Platte & Arkansas River Basin Water Users

This grant program focuses on identifying and assisting in the development of agricultural transfer methods (ATM)/programs that reduce consumptive use by reducing the amount of irrigation water applied to the crops, change in the type of crops planted, reducing the number of irrigated acres from historic levels while lessening the impact to rural communities. Several types of agricultural transfers have been proposed as potential alternatives to the traditional agricultural transfers that often result in permanent dry-up of all or a large portion of irrigation systems as a means to obtain additional water supplies for emerging needs. Possible transfer methods include, but are not limited to: 1) interruptible water supply agreements; 2) long-term agricultural land fallowing; 3) water banks; 4) reduced consumptive use through efficiency or cropping changes while maintaining historic return flows; and 5) purchase by end users with leaseback under defined conditions.

The Board approved six grant applications that totaled \$1,500,000 at the May, July and November 2008 CWCB meetings. The Lower Arkansas Valley Water Conservancy District was awarded \$320,000 to assist in funding of the Super Ditch Company's rotational fallowing program. The Parker Water and Sanitation District was awarded \$477,500 to assist in funding of the Lower South Platte Irrigation Research and Demonstration Project. The Farmers Reservoir and Irrigation Company (FRICO) was awarded \$202,500 to assist in funding of the Alternative Water Transfers in the South Platte Basin using the FRICO System Project. CSU Extension Office was awarded \$80,350 to study the effects of fallowing. The Highline Canal Company was awarded \$70,000 to further fallowing lease agreements in

their canal system. The Colorado Corn Growers Association was awarded \$349,650 to examine a variety of alternative methods within the South Platte Basin.

Since these projects were awarded their funding, much progress has been made by CWCB and the project sponsors in furthering alternatives to permanent water transfers in Colorado. Through these ATM grant projects, CWCB and others have identified numerous hurdles that must be overcome for these alternative water transfer methods to be successful in Colorado. Specifically, the major hurdles facing the implementation of ATM programs in Colorado include: (1) high transaction costs, (2) ability to transfer a portion of a water right (3) certainty of long-term supplies and (4) water rights administration. In January and May 2011, the Board approved an additional \$1,368,776 in grants that will build upon the recent findings and develop solutions to the major hurdles.

38. Water Education Foundation

Authorization: HB 02-1152

Contract No.: C154055

Location: Denver

Sponsor: Colorado Foundation for Water Education

Grant Amount: \$150,000

Project Type: Education

Project Manager: Eric Hecox

Beneficiary: Statewide

Each year, CWCB staff executes a grant contract with the Colorado Foundation for Water Education (Foundation) to provide funds for the on-going operation of the Foundation. CWCB Board members annually review and accept the Foundation's annual work plan in May. More information is available at www.cfwe.org and www.cwcb.state.co.us.

39. Arkansas River Surface Water Rules Technical and Financial Assistance

Authorization: SB 09-125

Contract No. C154165

Grant Amount: \$250,000

Previous Disbursements: \$ 87,979

Available Balance: \$162,021

Current Disbursements: \$ 87,405

Ending Balance: \$ 74,616

Water Source: Arkansas River

Location: Arkansas River Basin

Sponsor: CWCB

Project Type: Technical Assistance

Project Manager: Steve Miller

Beneficiary: Local Water Users

This project was authorized to offer technical assistance to entities in the Arkansas Basin that had an interest in designing and administering compliance plans that were encouraged under the State Engineer's Office (SEO) proposed Surface Water Irrigation Efficiency Improvement Rules. These rules are essential to maintaining Colorado's water use within the limitations of Article IV.D of the Arkansas River Compact. The Lower Arkansas Valley Water Conservancy District (LAVWCD) agreed to provide a basinwide compliance plan and CWCB offered a \$250,000 grant to the LAVWCD in two phases. The LAVWCD selected two consultants, Leonard Rice Engineers and Peter Nichols to do the necessary engineering and legal analysis. Phase I, at approximately \$100,000, examined the basic feasibility of such a compliance plan and provided the LAVWCD with sufficient information to decide to move forward and offer a compliance plan to basin irrigators. The Phase II grant of approximately \$150,000 to design and administer a compliance plan is approximately 75% completed and the first Rule 10 Plan covering 2011 sprinkler operations has been tentatively approved allowing operation of approximately 85 sprinkler systems in compliance with the new rules and the Compact. The remaining grant funds will be used to refine the compliance plan for 2012 based on experience gained during the 2011 irrigation season and to assist the LAVWCD in acquiring long term replacement water supplies to cover sprinkler depletions.

40. Colorado River Augmentation Project Development

Authorization: HB 08-1346

Grant Amount: \$150,000

Contract No. 10000000096 Water Source: Colorado River Location: Colorado River Basin Sponsor: CWCB/ Seven Basin States	Previous Disbursements: \$ <u>75,000</u> Available Balance: \$ <u>75,000</u> Current Disbursements: \$ <u>0</u> Ending Balance: \$ <u>75,000</u> Project Type: Study Project Manager: Ted Kowalski Beneficiary: Colorado River Compact
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The seven Colorado River Basin States (States) have been investigating potential ways to augment and increase the water supply of the Colorado River for several years. In January 2010, the Bureau of Reclamation awarded the States a \$1 million grant through the Basin Study Program, under the auspices of the Water Smart Program. The States provided a \$1 million match under that application. This study's focus is on identifying the current and projected water supply and demand throughout the entire Colorado River Basin and adjacent areas of the seven States that receive Colorado River water up to the year 2060. The general focus of the Study includes a comprehensive review, evaluation and characterization of current and long-term water supply and demands, and identification and quantification of future augmentation needs and recommended options to address these needs. Both consumptive and non-consumptive uses associated with Colorado River water will be examined. A review and analysis of the known and potential effects of drought, and climate change on the Colorado River and their implications on current and future water supplies and associated uses in the Basin will be completed. Strategies will be developed or refined as needed to move forward on any needed augmentation project for the Basin. The estimated total cost of the Study originally was between \$2 and \$3 million depending on the final scope, and current work suggests that the total cost may be closer to \$4 million. The seven basin states and the U.S Bureau of Reclamation (Reclamation) are sharing costs of the study with each State's proportionate share being approximately \$300,000 with some of the cost share occurring in the form of in-kind services. This Study is being managed through collaboration between Reclamation, the States and several non-federal partners from the seven basin states. This work began in February 2010, and will continue through 2012. Colorado has spent \$75,000 and the remaining funds will be disbursed within the next several months.

41. Colorado River Compact – State Water Right Administration Issues and Options Study

Authorization: HB 08-1346 Contract No. None Water Source: Colorado River Location: Colorado River Basin Sponsor: CWCB	Grant Amount: \$500,000 Current Disbursements: \$ <u>0</u> Ending Balance: \$ <u>500,000</u> Project Type: Study Project Manager: Michelle Garrison Beneficiary: Colorado River Compact
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This project is a technical study to: 1) identify issues associated with the administration of state water rights in the Colorado River Basin under the terms of the Colorado River Compact and Upper Colorado River Basin Compact, 2) develop and evaluate options to avoid, minimize or delay a Compact curtailment of uses if at all possible, and 3) identify, develop and evaluate (pros and cons) concepts for curtailing water uses in Colorado in the event curtailments are required to comply with Article III of the Colorado River Compact and to implement those curtailments in a manner that will allow the maximum use possible of Colorado's entitlements under the terms in the Colorado River Compact and Upper Colorado River Basin Compact and do so as equitably as possible.

Michelle Garrison, CWCB, and Mike Sullivan, Deputy State Engineer, serve as co-leads for the project along with Karen Kwon and Shanti Rosset O'Donovan, Attorney General's Office, and Rebecca Mitchell, Department of Natural Resources.

The project was delayed in Fiscal Year 2009-2010 due to budgetary concerns but resumed in 2010-2011. Task 1 is in progress.

42. Colorado River Delta in Mexico Consultation

Authorization: HB 02-1152
HB 08-1346

Grant Amount:	\$100,000
	<u>\$150,000</u>
Total	\$250,000
Previous Disbursements:	<u>\$118,145</u>
Available Balance:	\$131,855
Current Disbursements:	\$ 0
Ending Balance:	<u>\$131,855</u>

Contract No. 07000000005 *

Water Source: Colorado River and Tributaries
Location: Seven Colorado River Basin States
and the Republic of Mexico
Sponsor: CWCB

Project Type: Compact Consultation
Project Manager: Ted Kowalski

Beneficiary: State of Colorado, Colorado
River Basin States, and the Republic of
Mexico

These funds are being utilized by CWCB staff and Colorado's Upper Colorado River Compact Commissioner to participate in the investigation of issues pursuant to Minute 306 of the *1944 Treaty between the United States and Mexico Concerning the Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande* to assure that such investigations and any solutions that might be offered to comply with Minute 306 do not interfere with or otherwise jeopardize the terms of the Colorado River and Upper Colorado River Compacts. In addition, the United States and Mexico have initiated a bi-national conversation about opportunities for bi-national cooperation on water projects that will have bi-national benefits. These funds are being used for assistance associated with this bi-national process, and for travel and other incidental costs associated with this work.

By way of background, the Yuma Desalt Plant (YDP), which was constructed to treat agricultural drainage water from the Welton-Mohawk and Yuma areas, has not operated since 1992. The YDP was constructed to treat and return water to the river to satisfy part of the delivery obligations to Mexico and to ensure that the Colorado River water delivered to Mexico meets the Minute 242 water quality standard for salinity. The YDP has not been operated because of the expense of operation and because there has been replacement water available from the lining of a section of the Coachella Canal. As a result, 108,000 acre-feet of drainage water annually has not been treated and returned to the Colorado River, but bypassed instead to the Santa Clara Slough. Consequently, a significant portion of the Colorado River Delta wetland has been rejuvenated. This rejuvenation has resulted in a number of environmental organizations and the government of Mexico wanting to re-establish the entire Colorado River Delta wetland area. The initial step in this effort was the adoption of Minute 306 to the 1944 Treaty in December 2000, which created a framework for a formal process to address Colorado River Delta matters. Subsequently, a Symposium on the Colorado River Delta was held on September 11-12, 2001, the proceedings of which were released on September 17, 2002.

Since then, a States Technical Workgroup has been formed and Colorado has been represented on this workgroup by Ted Kowalski. To date, the technical workgroup has summarized the surface water and groundwater resources available to Mexico in an effort to develop a water budget that will help identify opportunities to improve conditions for the Colorado River Delta in Mexico. The Technical Workgroup has also created a "Broad Brush Concept Document" that identifies possible water supplies available to meet the needs of the Colorado River Delta. These concepts and alternatives have been categorized into groups and the pros and cons of each identified. This information is currently being discussed among the seven basin states and they will make recommendations as appropriate to the International Boundary and Water Commission (IBWC).

The IBWC has issued a "Terms of Reference" document, which describes the issues that IBWC will discuss and the process that will be followed. In addition, there is a draft Minute (or amendment) to the U.S.-Mexico Treaty of 1944. This Minute is being discussed among the seven basin states, the United States, Mexico, and Mexican stakeholders. Given the complexity of these issues, and the stakeholders involved, it is not surprising that these negotiations have taken some time to advance. Nevertheless, both countries and all of the stakeholders involved are making progress, and it is expected that this effort will require these funds for travel costs, and/or costs of the related Colorado River augmentation study (Basin Study) within the next year.

43. High Resolution Gridded Sublimation Estimate Study

Authorization: HB 08-1346

Contract No. 09000000124

Water Source: Colorado & So Platte Rivers
Location: Co River Watershed & So Platte Basin
Sponsor: CWCB

Grant Amount: \$65,000
Previous Disbursements: \$39,855
Available Balance: \$25,145
Current Disbursements: \$25,145
Ending Balance: \$ 0

Project Type: Study
Project Manager: Michelle Garrison
Beneficiary: Co River Water Users

Sublimation can be a significant factor in snowpack runoff efficiency. Sublimation losses from the snowpack can vary greatly between basins and between years. High sublimation losses result in unexpectedly low spring runoff. Very little detailed information about sublimation in Colorado is available. In this study the USGS is developing spatial estimates of sublimation from the snow surface for a 2000 square kilometer area in the Upper Colorado and South Platte River Basins.

The USGS installed and operated equipment through the winter and spring of 2009-2010 and 2010-2011. Sublimation and weather data was collected. These data were combined with other available climate data to parameterize SNOWMODEL, which is a high-resolution snowpack accumulation/evolution model. SNOWMODEL was used to estimate sublimation at 100 meter resolution for the Front Range for the 2010 and 2011 snow seasons. Data is being analyzed and a publication will be prepared. A website was created for the public to view sublimation data from the study area.

44. Litigation Fund

Authorization: HB 95-1155, SB 01-157
SB 99-173

HB 06-1313, SB 09-125

Contract No. C154005 *

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

Grant Amount: \$4,000,000
Reduction: \$1,000,000
\$3,000,000
Interest Revenue \$ 480,713
Replenish \$3,366,214
Total Authorized: \$6,846,927
Previous Disbursements: \$3,123,227
Available Balance: \$3,723,700
Current Disbursements: \$ 467,102
Ending Balance: \$3,256,598

Project Type: Legal Services
Managers: Ted Kowalski / Steve Miller
Beneficiary: CWCB Staff, and
Statewide Water Users

The Litigation Fund was authorized an amount of \$4 M initially. In 1999, an amount of \$1 M was transferred to the Species Conservation Trust Fund that left a balance of \$3 M. In Fiscal Year 2007,

the maximum authorized amount was restored to \$4 M with funds from the Severance Tax Trust Fund Operational Account. Interest earned from the Treasury is remitted to the fund each year. Expenditures from this fund continued to occur until recently when the fund balance had been lowered to approximately \$1.4 million. Twice, in 2009 and 2011, the General Assembly restored the balance as of July 1, 2009 and July 1, 2011 to \$4 million.

To date funds have been used in the following manner:

- Kansas v Colorado litigation support related to the Arkansas River Compact:
In Fiscal Year 2010-2011, at a cost of approximately \$48,500, CSU completed a final report describing approximately 5 years of irrigation field research on irrigation efficiencies and crop yields. The final report is undergoing final editing and will be made available to all interested parties and will also provide the basis for additional published papers by CSU.
In Fiscal Year 2010-2011, at a cost of approximately \$100,000, research on alfalfa crop consumptive use continued at CSU's Rocky Ford Research Center using the two weighing lysimeters previously installed with CWCB litigation account funds. Research is now scheduled to continue through the 2012 growing season using litigation account funds and other sources. In 2013, a journal quality report will be prepared describing the project. Prior to the end of 2012, efforts will be made to secure additional (non-CWCB) funding to support continued ET research on additional crops prevalent in the Arkansas Basin. ET results may be used to modify parameters in the HI model utilized for Compact compliance determinations;
- initiation and implementation of the Defense of the Colorado River Attorney General subunit to prepare for potential litigation regarding Colorado's allocations under the Colorado River Compact and the law of the river; defense of Colorado's interests involving the Republican River;
- work associated with the Platte River Recovery Implementation Program negotiations; and,
- work associated with the Republican River arbitration and subsequent U.S. Supreme Court litigation between Kansas, Nebraska, and Colorado.

This fund will continue to see disbursements in the upcoming years, particularly for Colorado's defense related to the Republican River Compact, and for the defense of the Colorado River work.

45. <u>Lower South Platte Water Management and Storage Sites Investigation and Sustain Study</u>			
Authorization: HB 00-1419		Grant Amount:	\$140,000
SB 01-157			<u>\$500,000</u>
		Total	\$640,000
Contract No. C153904		Previous Disbursements:	<u>\$140,000</u>
		Available Balance:	\$500,000
		Current Disbursements:	\$ 0
		Ending Balance	<u>\$500,000</u>
Water Source: South Platte River		Project Type: Multi-Use Water Planning	
Location: Logan and Sedgwick		Managers: Ted Kowalski	
Sponsor: CWCB		Beneficiary: Statewide or Individual	
		Water User Group depending on project characteristics/operating rules	

In the summer of 2000, the Colorado Water Conservation Board (CWCB) acting through the Water Supply Protection Section, completed a Reconnaissance Level Study of Water Management and Storage Sites in the lower South Platte River. The initial results of the study indicated several potential projects, which warranted future investigation and the CWCB authorized funding to conduct a feasibility

level study of these “preferred alternative(s)”, and if warranted, to complete an engineering design of the selected alternative(s).

The overall purpose of the project is to identify water management and storage options in the lower South Platte River that could facilitate Colorado’s management of South Platte flows, including coordination with ground water recharge projects for in-state beneficial uses, such as water rights and South Platte River Compact administration and providing benefits for biological species of concern in Colorado, and for participation in an endangered species program being developed pursuant to the Platte River Cooperative Agreement.

Shortly after CWCB’s authorization of the project, staff and management were approached by representatives of the Ground Water Appropriators of the South Platte (GASP), one of the potential beneficiaries of a future project, and were asked to delay the feasibility study because of a pending water right filing. The sensitivity of the water right filing and GASP’s desire to implement one of the alternatives identified in the reconnaissance study lead staff and management to conclude that it would be prudent to delay implementation of the feasibility study.

Significant changes to the State Engineers authority to administer ground water diversion (Senate Bill 73) have dramatically changed water management in the South Platte River. While GASP was successful in acquiring land for one of the physical storage sites, they have experienced significant impacts from S.B. 73. As a result, GASP is no longer a viable entity. Former members of GASP and other water management interests have formed the Ovid Reservoir Company but it is uncertain whether the new company will be able to complete the project. The Ovid Reservoir Company obtained a grant from the Water Supply Reserve Account, South Platte River Basin Roundtable to see if some of the financial, engineering, and legal hurdles can be overcome. The Ovid Reservoir Company is pursuing these options and has met with CWCB staff several times, within the last two years, to explore the best options for proceeding with the construction of Ovid Reservoir. The location of the reservoir site continues to offer potential advantages to address water user and endangered species issues/needs. Given the complexity of the problem and the need for additional water management options, Staff recommends that the current authorization remain in place to allow coordination with the Ovid Reservoir Company’s other work associated with the feasibility study.

46. Purgatoire River Channel Capacity and Improvement Study

Authorization: HB 08-1346	Grant Amount: \$50,000
	Previous Disbursements: <u>\$25,000</u>
Contract No. 09000000010 *	Available Balance: \$25,000
	Current Disbursements: \$ 0
	Ending Balance: <u>\$25,000</u>
Water Source: Purgatoire River	Project Type: Study
Location: Trinidad Dam	Project Manager: Steve Miller
Sponsor: CWCB/US Army Corps of Engineers	Beneficiary: PRWCD Water Users
Purgatoire River WCD (PRWCD)	

This project is being done in two phases with the PRWCD as the lead sponsor. The first goal of the project is to determine what level of reservoir flood releases can be safely passed through the PRWCD service area, and to identify remedial actions that could improve channel capacity to reduce flood damages during flood operations while also protecting downstream water rights in Colorado and Kansas.

In Phase 1, with \$25,000 of CWCB cost-sharing, the PRWCD contracted with the USBR to conduct a hydraulic study of a 20 mile reach of the Purgatoire River below Trinidad Reservoir. The Phase 1 analysis indicated that the channel is not as degraded as originally feared and flows as high as 5,000 cfs. can be routed through the district with minimal problems. Phase 2 funds were intended to be

used to mitigate capacity problems identified in Phase 1. With the minimal flood hazard risk found in Phase 1, the best way to use the remaining funds was determined to be riparian restoration efforts in the modeled reach of the Purgatoire which will provide conveyance improvements at lower flows. CWCB recently entered into an agreement with the PRWCD to assist in channel improvements in the vicinity of the City of Trinidad using the Phase 2 funds. The project, with multiple sponsors, will remove minor channel and streambank obstructions and includes native revegetation and improved river corridor access.

47. Tamarisk Control Cost-Sharing Program

Authorization: HB 08-1346

Contract No. C154150 *

Grant Amount: \$1,000,000

Previous Disbursements: \$ 134,857

Available Balance: \$ 865,143

Current Disbursements: \$ 372,889

Ending Balance: \$ 492,254

In Fiscal Year 2010-2011, grantees made significant progress on implementing their control projects. Projects were initially planned to be completed by June 30, 2011, but many requested additional time and were approved for extensions through June 2012, primarily to reflect the seasonal nature of the control work, but also to more effectively utilize their grant funds. It appears that the CWCB funds have on average been leveraged with other funds at a ratio of 1:2 at a minimum, meaning each dollar from the CWCB has produced at least \$3 of control work.

Control Project Grants				
App #	Applicant	Project Name	Grant Amount	Est. % Complete
NW2	City of Grand Junction	Watson Island Complex Restoration	\$100,000	25
SE3	Branson-Trinchera Cons. Dist.	Purgatoire River Watershed Riparian Restoration	\$100,000	75
NE4	Yuma County Pest Control Dist.	Republican River Watershed Riparian Restoration	\$100,000	90
SW3	The Nature Conservancy	Dolores Restoration	\$100,000	80
SW1	Ute Mountain Ute Tribe	Ute Mountain Tribe TRO	\$75,000	25
SE4	Sangre de Cristo RC&D	Upper Arkansas Watershed Riparian Restoration	\$75,000	75
NE1	Boulder County Parks & Open Space	Boulder County Collaborative TRO	\$85,000	95
NW1	Delta County Noxious Weed Program	Delta County River Restoration	\$40,000	90
NW3	Western Colorado Conservation Corps	Island Acres TRO	\$10,000	100
NE2	Sedgwick County Cons. Dist.	TRO Removal, Wildlife Approval	\$10,000	75
SW2	Dolores Cons. Dist.	McElmo Creek Tamarisk Removal	\$25,000	50

NE3	Weld County Weed Div.	TRO - Cache La Poudre River	\$30,000	95
SE1	Southeastern Colorado WCD	ARKWIPP Riparian Restoration	\$150,000	95
Science & Administration Projects				
	Tamarisk Coalition	Jan. 2010 Grand Junction Symposium		100
	Tamarisk Coalition	Reno Research Symposium		100
	Tamarisk Coalition	Technical services for grant administration		100
	Sangre de Cristo RC&D	CSU Feasibility/Monitoring Study		50
	Tamarisk Coalition	Salt Wash Monitoring & Demo		10
	CSU Weed Lab	Knapweed strategies for reveg areas		50

48. Water Planning Studies

Authorization: SB 99-173
SB 09-125

Grant Amount: \$225,000
\$100,000
Total \$325,000
Previous Disbursements: \$196,374
Available Balance: \$128,626
Current Disbursements: \$ 0
Ending Balance: \$128,626

Contract No. C153889 *

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

Project Type: Water Planning
Project Manager: Ted Kowalski
Beneficiary: Statewide

The Dolores Water Conservancy District (District), Ute Mountain Ute Tribe (UMUT), and CWCB are performing a joint reconnaissance level study to evaluate potential water supplies to serve the (UMUT). This will include the Totten Reservoir and the potential new construction of the Plateau Creek Reservoir to store approximately 21,000 AF of water. The study is a cost-share project between all parties. Harris Engineering, Durango, Colorado, was hired to conduct the study and has performed a considerable amount of work to-date. One of the potential water sources for the UMUT was Montezuma Valley Irrigation (MVIC) Company's Class B water under various storage scenarios. Unfortunately, MVIC and the District are currently involved in an unresolved lawsuit that has indirectly caused the above water study to be put on-hold. Based upon recent discussions with the general manager of the District, Mike Preston, the lawsuit between MVIC and the District should be resolved in the near future. Upon resolution of the lawsuit, it is anticipated that discussions with all parties will continue and the study can be completed.

49. Wild and Scenic Rivers Fund

Authorization: SB 09-125

Grant Amount: \$400,000
Replenishment: \$ 57,754
Available Balance: \$457,754
Current Disbursements: \$ 57,753
Ending Balance: \$400,001

Contract No. C154161 *

Water Source: Various
 Location: Various
 Sponsor: CWCB

Project Type: Study
 Project Manager: Ted Kowalski
 Beneficiary: Statewide

Within Colorado a number of river segments have been classified as eligible for “wild and scenic” designation by various federal agencies and the federal agencies are considering whether these rivers should be classified as suitable for wild and scenic designation. In response, a number of stakeholder groups have formed to explore alternatives for resource protection that would include wild and scenic designation as well as many other options. These groups exist in the San Juan River Basin, the Dolores River Basin, the Upper Colorado River Basin, and the Lower Colorado River Basin. To date, funds have been used within each of these different basins for facilitators, informational studies, and other operating expenses. 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. This work is ongoing, and there are other stakeholder alternatives groups that conducted work over the last several years. This work will likely continue to use funds for the next several years. Prior to using the fund, staff will draw down the money in the Wild and Scenic Rivers Study until it is depleted, and then staff will tap into the Wild and Scenic Rivers Fund. Since the Wild and Scenic River Study is nearly depleted, this fund will be needed to fund work associated with implementation of the Upper Colorado River Wild and Scenic Alternative Management Plan (endorsed by CWCB in March 2011), and to develop additional alternatives within the Gunnison, San Juan, and Dolores River Basins.

50. Wild and Scenic Rivers Study
 Authorization: HB 08-1346

Contract No. 09000000023 *

Grant Amount: \$400,000
 Previous Disbursements: \$289,877
 Available Balance: \$110,123
 Current Disbursements: \$ 98,651
 Ending Balance: \$ 11,472

Water Source: Various
 Location: Various
 Sponsor: CWCB

Project Type: Study
 Project Manager: Ted Kowalski
 Beneficiary: Statewide

Within Colorado a number of river segments have been classified as eligible for “wild and scenic” designation by various federal agencies and the federal agencies are considering whether these rivers should be classified as suitable for wild and scenic designation. In response, a number of stakeholder groups have formed to explore alternatives for resource protection that would include wild and scenic designation as well as many other options. These groups exist in the San Juan River Basin, the Dolores River Basin, the Upper Colorado River Basin, the Lower Colorado River Basin, and the Gunnison Basin. To date, funds have been used within each of these different basins for facilitators, informational studies, and other operating expenses. 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. This work is ongoing, and there are other stakeholder alternative groups forming right now. This work will likely continue to use funds for the next several years. Prior to using the fund, staff will draw down the money in the Wild and Scenic Rivers Study until it is depleted, and then the staff will tap into the Wild and Scenic Rivers Fund. Since these funds are nearly depleted, it is expected that these funds will be used within the next several months, and then the Wild and Scenic Fund will be used to complete additional work.

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

Severance Tax Trust Fund Operational Account

The following table summarizes the Severance Tax Trust Fund Operational Account projects monitored by the Colorado Water Conservation Board staff during the fiscal year. Details of the projects follow this summary.

<u>No.</u>	<u>Project</u>	<u>Project Manager</u>	<u>FY11 Amount</u>
Water Supply Protection Program			
1	Statewide Planning and Local Planning Grants	Various	\$100,100
2	Recreational Support	Kowalski	\$ 60,730
3	Zebra Mussels Containment Study	Bassi	\$ 50,000
4	Tamarisk Bio-Control & Vegetative Response	Kowalski / Miller	\$ 90,000
5	Streamflow Forecast Improvement Study	Kowalski/Garrison/Busto	\$ 99,800
Stream and Lake Protection Program			
6	Water Development Impacts on Yampa River	Bassi / Baessler	\$ 75,000
7	Stream & Lake Protection Outreach & Education	Bassi / Baessler	\$ 10,200
8	Case Management and Litigation Support	Bassi / White	\$ 65,200
Water Conservation Planning Program			
9	Drought Planning and Water Adaptation	Deheza	\$101,000
10	Statewide Water Conservation Initiative Project	Deheza	\$ 75,000
11	Water Education	Deheza / Johnson	\$ 50,000
Flood Protection Program			
12	Multi-Objective Watershed Restoration Projects	Browning / Sturm	\$175,800
13	Flood Mitigation and Project Compliance	Browning / Houck	\$125,000
14	Lake Fork of the Gunnison River	Browning / Sturm	\$ 50,000
15	NRCS SNOTEL Site Installations	Browning / Busto	\$ 30,000
16	Community Collaborative Rain, Hail & Snow Network	Browning / Busto	\$ 15,000
17	FEMA Coordinator Matching Program	Browning / Prochno	\$ 24,100
Water Information			
18	South Platte Decision Support System	Alvarado	\$ 24,472
Intrastate Water Management Program			
19	Assessing the Relative Costs of New Water Supplies	Hecox	<u>\$ 35,000</u>
Total Severance Tax Expended for FY 11			<u>\$1,256,402</u>

Projects:

- | | |
|---|---|
| 1. <u>Statewide Planning and Local Water Planning Grants</u>
Authorization: Long Bill
Water Source: Various
Location: Statewide
Sponsor: CWCB | Grant Amount: \$100,100
Project Type: Water Planning Study
Project Manager: Various
Beneficiary: Various |
|---|---|

In this fiscal year, CWCB staff have performed the following projects:

A. CWCB Strategic Plan

Grant Amount: \$17,250

Project Manager: Tom Browning

Conservation Impact, an organizational consultant, was selected by CWCB staff to act as a facilitator for the agency's Strategic Plan update. They performed an agency analysis through interviews with the board and staff, and a thorough review of the CWCB's website and existing strategic plan. Phone interviews with key stakeholders were also conducted to obtain meaningful feedback on water issues, agency functions, and industry trends. Conservation Impact then facilitated a decision-making session with CWCB leadership to address strategic issues and to confirm directions and roles. At that session, Conservation Impact and CWCB staff discussed and documented agency-wide strategies and outcomes, and addressed organizational implications in terms of workload capacity and public expectations. Efficiencies and program priorities were a central part of the facilitated sessions in order to respond to an overall State goal of streamlining government services. Conservation Impact produced a Strategic Plan document as a final deliverable for use by the agency, along with meeting summaries, intermediate memos, and relevant backup information. This project was completed, invoiced, and closed out during Fiscal Year 2010-2011.

B. 1998 Rio Grande Decision Support Revision

Grant Amount: \$25,000

Project Manager: Ray Alvarado

Work involved Phase 6 of the recalibration of the RGDSS groundwater model. Recalibration was needed with the 2009 irrigated acreage update and with the availability of pumping records by well.

C. Dust on Snow

Grant Amount: \$15,000

Project Manager: Joe Busto

CWCB issued this Purchase Order to the Center for Snow (Center) and Avalanche Studies to partner the Center and several water districts that are funding the continued field research to monitor and report the dust on snow events in eleven sites throughout the State. The funding was used for dust on snow updates and alerts to CWCB staff and a final year-end report that is available from the staff of the Center. At the request of CWCB, other state entities like DWR, DOW, and the Colorado Avalanche Information Center are now also getting the updates. Chris Landry presented the findings at the Governor's Flood and Water Availability Task force meeting on May 11, 2011.

D. CoAgMet Network

Grant Amount: \$5,000

Project Manager: Andy Moore

Funding was provided to the Upper Arkansas Water Conservancy District to assist in establishing four CoAgMet weather stations in the Upper Arkansas Basin. Previous to this, there had been no CoAgMet stations in the upper part of the Arkansas Basin. These stations will provide needed weather data for this part of the State. Matching funds were contributed by several entities.

E. Investigate White Water Parks Aquatic Resources

Grant Amount: \$25,000

Project Manager: Suzanne Sellers

These funds were used by Colorado State University to study the effects whitewater parks (WWPs) are having on Colorado's aquatic resources. The study contained four tasks: 1) selection of sites for field data collection, 2) data collection, 3) preliminary data analysis and review and 4) preparation of a letter report detailing the preliminary results. All four tasks have been completed and a letter report prepared by Colorado State University was provided to the CWCB.

F. Feasibility Study to Assess the Potential of Urban Water Conservation to Meet Colorado's Future Water Supply Needs to 2050

Grant Amount: \$6,250

Project Manager: Kevin Reidy

This project assessed the feasibility of future research into the permanency and penetration rates of water conservation savings and measures. Through this reconnaissance level study, the CWCB assessed the barriers and opportunities that exist at the provider level in order to carry out future conservation savings potential and penetration rates research. Working with a subset of partner utilities, this project demonstrated the statistical analysis that could be done with existing information, including areas of need. The study was completed and it was determined at this time that more information and data is needed at the local level to ascertain the permanency of water conservation savings and the penetration levels of existing measures.

G. Water Planning Education

Grant Amount: \$7,500

Managers: Kowalski / Miller

Funding was used for the promotion of statewide planning efforts through supporting educational and informative conferences and interactive workshops. Some of the work supported includes conferences and workshops as follows:

- CWCB continued its practice of covering a portion of the expenses in conducting the 2011 Arkansas River Forum, this year held in Colorado Springs and emphasizing riparian restoration implementation. The Forum has proved to be an excellent vehicle for promoting basinwide cooperative efforts and sharing information on water management issues of broad interest to both water users and the general public.
- CWCB assisted the Colorado River Water Conservation District in a project they are doing with the USGS to enhance monitoring of selenium levels in the Gunnison and Colorado Basins. The specific use of the CWCB funds was to develop algorithms that will correlate selenium to specific conductance measurements, allowing real time estimation of selenium levels in areas of critical habitat to support the recently adopted Gunnison selenium Management Plan.

2. Recreational Support

Authorization: Long Bill

Water Source: N/A

Location: Statewide

Sponsor: CWCB

Contract No. 11000000006 *

Grant Amount: \$60,730

Project Type: Support Services

Project Manager: Ted Kowalski

Beneficiary: Statewide

These funds were used for recreational studies related to the Upper Colorado River segments that are being considered for wild and scenic designation to assure that recreational boating and recreational fishing information is thorough and accurate. This work was used, in part, to establish the biological basis for the CWCB recent appropriation of an instream flow water right for the Colorado River from Kremmling to Dotsero.

3. Adaptive Management Model of Zebra Mussels Containment Study

Authorization: Long Bill

Grant Amount: \$50,000

Water Source: N/A

Project Type: Study

Location: N/A

Project Manager: Linda Bassi

Sponsor: CSU

Beneficiary: Local Water Users

Contract No. 11000000036

These funds were used to build an adaptive management model that will provide insight into optimal management policies relating to zebra and quagga mussels in the State of Colorado, explicitly incorporating the uncertainties (including invasive spread, habitat suitability, and/or damage costs) inherent in the problem. Deliverables include a white paper documenting model results that will serve as the basis for future journal articles, fact sheets for lay audiences, and web-based outreach materials.

4. Tamarisk Bio-Control and Vegetative Response Monitoring

Authorization: Long Bill

Grant Amount: \$90,000

Water Source: Colorado River

Project Type: Planning

Location: Colorado River Basin

Project Manager: Steve Miller

Sponsor: CWCB

Beneficiary: Tamarisk Coalition

Contract No. C154151

In Fiscal Year 2010-2011, funds were used to support tamarisk control activities that were beyond the scope of the Board's existing TRO grant program as follows:

- An agreement with the Tamarisk Coalition provided for extensive monitoring of the spread and effectiveness of the tamarisk leaf beetle in Colorado as a control mechanism. Additional funding from other sources allowed this field monitoring to be conducted in other areas of the Colorado River Basin as well. The result is a set of web-based maps showing the extent of beetle infestation and tamarisk defoliation in the western US. While federal agencies control the release and interstate importation of the beetle, there is no federal funding to monitor the after effects of the introduction of the beetle beyond the narrow area of actual releases. The Tamarisk Coalition research is producing results showing the beetle may well become the primary means of tamarisk control and maintenance in the future.
- Funding was provided toward the cost of the Seven Colorado River Basin States' study of joint tamarisk control efforts as a potential means of augmenting basin water supplies. Colorado got additional in-kind credit toward this project based on the inventory and planning work that had previously been done here through the CWCB and local agency efforts. The study concludes that water can be salvaged and may result in enhanced surface supplies, but this needs to be proven at a specific site through a closely monitored demonstration project. The demonstration project is being developed at the Cibola NWR in the Lower Basin.

5. Streamflow Forecast Improvement Study

Authorization: Long Bill

Grant Amount: \$99,800

Water Source: Various

Project Type: Planning

Location: Colorado

Managers: Michelle Garrison/ Joe Busto

Sponsor: CWCB

Beneficiary: Local Water Users

Contract No. 11000000108

Riverside Technology, Inc. (RTi) worked with streamflow forecasters from the National Resource Conservation Service (NRCS) and Colorado Basin River Forecast Center (CBRFC) to explore options for analyzing and combining snow-covered area information from several different data sources into one data set that could be used in future streamflow forecasting efforts.

6. Water Development Impacts on Yampa River Streamflow and Sediment Budgets
 Authorization: Long Bill Grant Amount: \$75,000
 Water Source: Yampa River Project Type: Study
 Location: Deerlodge Park Project Manager: Jeff Baessler
 Sponsor: CWCB Beneficiary: Local Water Users
 Contract No. 110000000090

This study was the first phase of a two phase USGS / CWCB project to evaluate the effects of altered streamflows and sediment budgets on the hydraulics, sediment transport, geomorphology, and aquatic habitat of the Yampa River. USGS has completed this study and has provided staff with a draft report entitled "Characterization of channel and sediment-transport conditions in the lower Yampa River at Deerlodge Park, 2011, by topographic surveying and sediment data collection." In Phase two of this study, the USGS MD_SWMS two-dimensional computational streamflow-hydraulics and sediment-transport model will be used to quantify channel hydraulics, sediment transport, and streambed evolution throughout Deerlodge Park associated with a range of streamflow scenarios. USGS anticipates funding 40% of the cost of Phase II and has requested additional severance tax funding for Fiscal Year 2012-2013. USGS is also looking at other potential cooperators and funding sources in the event that future severance tax funds are unavailable.

7. Stream and Lake Protection Outreach and Education
 Authorization: Long Bill Grant Amount: \$10,200
 Water Source: N/A Project Type: Education
 Location: N/A Project Manager: Jeff Baessler
 Sponsor: CWCB Beneficiary: Statewide
 Contract No. Various

This project was directed at increasing public awareness of new instream flow appropriations and acquisitions. As the Interbasin Compacts Committee (IBCC) non-consumptive needs assessment recommendations are implemented, additional outreach and education activities are necessary as well as increased collaboration and coordination between various stakeholders with regard to the ISF program. This project involved the development and distribution of educational and marketing material in both electronic and paper form, funded the cost to provide advanced public notice of meetings in various communities throughout the state, and provided a funding mechanism to aid staff in the increase in travel activities that were necessary.

8. Case Management and Litigation Support
 Authorization: Long Bill Grant Amount: \$65,200
 Water Source: N/A Project Type: Technical Support
 Location: N/A Managers: Linda Bassi / Kaylea White
 Sponsor: CWCB Beneficiary: Statewide
 Contract No. Various

CWCB is a party in over 175 active water court cases. Stream and Lake Protection Section staff is responsible for protecting CWCB's water rights in these cases, or for obtaining a change of acquired water right to ISF use. This is accomplished by reviewing each court applicant's engineering and proposed rulings, and developing protective terms and conditions to be included in the resulting stipulation and decree. One staff member is responsible for (1) keeping track of and prioritizing review of all pending cases in coordination with the Section's engineer, (2) coordinating with the Attorney General's Office on meeting court deadlines and developing settlement and/or litigation strategies, (3) negotiating protective terms and conditions, (4) keeping case files organized and up to date, (5) maintaining the Section's electronic case database, (6) preparing various documents and presentations for Board meetings, and (6) numerous other substantive and clerical duties related to water court litigation.

The same staff member also is responsible for the ISF Water Acquisition Program. Due to the need to fulfill all of these responsibilities, staff frequently falls behind in responding to requests for comments on proposed court rulings, which can result in water court cases taking longer to be finalized and costing more for all parties involved.

The Section utilized this funding to retain a part-time paralegal to assist the Section with ISF case management, including organizing case files, tracking court deadlines, prioritizing case review, and drafting pleadings, memos, correspondence and other documents as appropriate. This project has enabled staff to focus on more substantive duties and resolve more cases in a timely manner.

9. Drought Planning and Water Adaptation

Authorization: Long Bill

Water Source: N/A

Location: N/A

Sponsor: CWCB

Contract No. 11000000018 *

Grant Amount: \$101,000

Project Type: Drought Planning

Project Manager: Veva Deheza

Beneficiary: Statewide

The 2010 Drought Mitigation and Response Plan laid out a number of implementation projects that would enhance drought mitigation, monitoring and response abilities throughout Colorado. This included: supplemental work on drought frequencies, the development of a sample municipal drought plan, municipal water provider workshops for drought planning, long term climate forecasting, additional work on drought vulnerability and the development of a revised water conservation planning guidance document.

The drought spell statistics study built off earlier work to provide information on how drought might look in the future, which can help in both drought planning and water adaptation at the state and local level. Also building on past efforts, CWCB completed a sample drought plan that follows directly the newly developed drought planning guidance document. This document can be used to help municipal water providers develop more comprehensive drought management plans. This document, as well as other elements of the Municipal Drought Planning Toolbox, was presented in a one day training workshop in five separate locations during the spring of 2011. Vulnerability to drought and weather forecasts with a longer term outlook were also identified in the drought plan as key information that will aid in all facets of drought preparedness. As a result CWCB worked with experts at NOAA to present long term forecast information at the WATF meeting throughout the year and worked with AMEC to complete a qualitative and quantitative drought vulnerability assessment, the first of its kind in the United States. Water conservation, identified in the Drought Mitigation and Response Plan as a critical mitigation effort, could be advanced through an updated and revised Municipal Water Conservation Plan Guidance Document. This effort would not only further water conservation planning efforts in the state, but also improve drought mitigation and water adaptation. The Water Conservation Guidance Document is done in draft form and will be completed this fall (with other funds).

10. Statewide Water Conservation Initiative Project

Authorization: Long Bill

Water Source: N/A

Location: N/A

Sponsor: CWCB

Contract No. 11000000031 *

Grant Amount: \$75,000

Project Type: Planning

Project Manager: Veva Deheza

Beneficiary: Statewide

This item was distributed across three separate projects; 1) Review work for "SWSI 2010 Water Conservation Strategies Report," 2) The creation of the "2011 Expanded SWSI Water Conservation Levels Analysis Report," 3) Development of reporting guidelines and definitions for HB10-1051.

As with the other outreach efforts of SWSI 2010, the water conservation strategies report was reviewed thoroughly by a group of water conservation experts, the Water Conservation Technical Advisory Group (WCTAG). This involved at least 6 meetings with multiple reviews and comment periods spanning from July 2010 until January 2011.

The Expanded SWSI Water Conservation Levels Analysis report builds off the first SWSI Levels report (2010) in that it correlates the Best Practices (BP) Guidebook for Municipal Water Conservation in Colorado to the SWSI Levels and assesses the current state of CWCB approved water conservation plans in relation to the SWSI Levels. This work is important due to the fact that the BPs are organized into a prioritization framework that will assist local providers assess and plan for conservation in a more effective manner.

Finally, HB10-1051 is a bill that focuses on the collection of water use and water conservation data annually from covered entities. CWCB was charged with developing guidelines and definitions through an outreach process. WCTAG was engaged and expanded to help develop the guidelines. This process required 6 meetings with numerous revisions and commenting periods. A draft version of the guidelines and definitions were generated with final versions coming after public comment period in Fall 2011.

11. Water Education

Authorization: Long Bill

Water Source: N/A

Location: Various

Sponsor: CWCB

Contract No. 11000000101 *

Grant Amount: \$50,000

Project Type: Educational Tools

Managers: Veva Deheza/Greg Johnson

Beneficiary: Statewide

These funds were distributed among two projects – A Communications Roadmap for Enhancing the Value of Water report developed by GBSM, Inc. and A Brief and Preliminary History of the CWCB's First Years, written by Tom Cech and William McDonald.

The Communications Roadmap was part of an initial effort by the CWCB to investigate the feasibility of developing a statewide communications plan about the value of water. The goal of the plan is to raise awareness among Coloradans of the value and importance of water. The Roadmap project provided key findings from research conducted by GBSM into other state and national campaigns with similar objectives and goals for relevance to this Colorado effort. It also conducted a small stakeholder survey. The Communications Plan provided options for the State to consider regarding its role in the larger Public Awareness Campaign. It established a strategic direction for moving into subsequent phases of the development of a Public Awareness Campaign. And finally, it provided direction on campaign implementation and tactics, including funding resources.

The history project was commissioned to commemorate CWCB's 75th anniversary in 2012 while documenting the agency's rich history since its creation during the 1937 Colorado General Assembly. The resulting written history report is based primarily on secondary source materials rather than research and analysis of original documents. CWCB will then evaluate, whether it desires to proceed with a Phase 2, which could, but need not, encompass further research into original documents if secondary source materials leave major gaps in knowledge and understanding; expansion and revision of the History Report to create a new, revised report based on such additional research; adding pictures, graphics, side bars, and other visuals to the History Report for final publication; and/or breaking the History Report into a series of shorter brochures or other formats for broad public distribution.

12. Multi-Objective Watershed Restoration Projects

Authorization: Long Bill

Grant Amount: \$175,800

Water Source: Various
 Location: Statewide
 Sponsor: CWCBC
 Contract No. 11000000019 *

Project Type: Restoration Project
 Project Manager: Chris Sturm
 Beneficiary: Local Water Users

The Multi-Objective Watershed Restoration Project exists to augment funding for the Colorado Watershed Restoration Program (see Construction Fund – Non-reimbursable #25) and the Colorado Healthy Rivers Fund (Tax Check-off Program). It also exists to fund multi-objective projects in watershed protection, flood mitigation, and water supply of special interest to the CWCBC, e.g. projects identified in the Non-Consumptive Needs Assessment. Projects funded in Fiscal Year 2010 – 2011 include a design for the reconstruction of the Relief Ditch & 75 Ditch on the Gunnison River, an assessment of channel stability for the North Fork South Platte River watershed, an Eagle River Watershed Plan update, tamarisk removal in the Dolores River watershed, riparian restoration on Rock & Boulder Creeks near Boulder, and support for the Sustaining Colorado Watersheds Conference. Staff strives to support qualifying Watershed Restoration Projects throughout the entire state.

13. Flood Mitigation and Project Compliance

Authorization: Long Bill
 Water Source: N/A
 Location: Various
 Sponsor: CWCBC
 Contract No. 11000000024 *

Grant Amount: \$125,000
 Project Type:
 Project Manager: Kevin Houck
 Beneficiary: CWCBC

Funds from this account were used for a variety of studies. Funds from this account were provided to Boulder County to leverage local funds to perform a study that modeled increased peak flows in the Fourmile Creek and Boulder Creek watersheds as a result of the Fourmile Canyon fire. Funds were also provided to the Urban Drainage and Flood Control District (UDFCD) to perform related studies and models to better understand the post-wildfire effects in the watershed. Funds were also provided to UDFCD for a stream restoration project on Marcy Gulch that resulted in increased channel conveyance and a new bridge upstream of the confluence with the South Platte River. Finally, funds were provided to the Town of Berthoud to leverage local funds to prepare a comprehensive stormwater and floodplain master plan for the community.

14. Lake Fork of the Gunnison River

Authorization: Long Bill
 Water Source: Lake Fork Gunnison River
 Location: Lake City
 Sponsor: CWCBC
 Contract No. 11000000007 *

Grant Amount: \$50,000
 Project Type: Restoration Study
 Project Manager: Chris Sturm
 Beneficiary: USGS

The purpose of this report is to quantify existing hydraulic and habitat conditions for a reach of the Lake Fork of the Gunnison River in Lake City, Colorado, to establish a baseline against which future conditions can be compared. The project objectives are: 1) quantify the existing geomorphic and hydrologic conditions in a 1,100 m reach of the Lake Fork at Lake City that has been proposed as a reach for future channel rehabilitation (Colorado Watershed Restoration Program grant, see non-reimbursable #25); and 2) evaluate existing hydraulic conditions with respect to habitat suitability for native and introduced aquatic fauna. Two species of trout, the cutthroat and brown, were chosen for the habitat suitability evaluations because they represent the two extremes of trout found within this type of hydrologic system.

15. NRCS SNOTEL Site Installations

Authorization: Long Bill
 Water Source: N/A

Grant Amount: \$30,000
 Project Type: Snow Measurements

Location: Various
 Sponsor: CWCB
 Contract No. 11000000030 *

Project Manager: Joe Busto
 Beneficiary: Statewide

CWCB has had a SNOTEL cost share program since 2004 and the funding is typically \$15,000 CWCB and \$10,000 local funding used to purchase the equipment needed to set up an NRCS automated SNOTEL site. SNOTEL sites are used to characterize snow depth and snow water equivalent in our watersheds that are in turn used in water supply and flash flood forecasts by the NWS River Basin Forecast Centers and the Portland NRCS offices. CWCB grants \$15,000 to the local agency and they match the funding and enter into an agreement with the NRCS. NRCS completes the environmental assessments and forest service site approval plans. The sites can take two to three years before installation based on NRCS and USFS workloads. In this year, an amount of \$15,000 (P.O. 10-94) was issued to Northern Colorado Water Conservancy District. The first choice was the East Inlet, an area of 55 inches of precipitation and a great forecast point for Colorado. However, the site was inside Rocky Mountain National Park and we were requested to not pursue an environmental assessment. The fall back site will likely be Ranch Creek, lower in elevation and further south on USFS land. The next \$15,000 (PO 10-93) was issued to the Upper Gunnison River WCD to install a site in the Lake Fork a tributary to the Gunnison River. The final \$25,000 (P.O. 10-104) was to Longmont Conservation District. In this P.O., \$10,000 was allocated to purchase six more soil moisture sensors for SNOTEL sites along the Front Range and \$15,000 for a new SNOTEL site in the St. Vrain River basin. The status as of July 2011 is that the NRCS is hoping to install the Gunnison site early this fall but are waiting on the permit. The applications for the site approval plans of the other two sites are submitted to the USFS. The NRCS has a signed USFS permit for the soil moisture sensors and is awaiting the federal fund availability to purchase the equipment.

16. Community Collaborative Rain, Hail and Snow Network

Authorization: Long Bill
 Water Source: N/A
 Location: Various
 Sponsor: CWCB
 Contract No. 11000000026

Grant Amount: \$15,000
 Project Type: Snow Measurements
 Project Manager: Joe Busto
 Beneficiary: Statewide

This project was to help lay the foundation for the Community Collaborative Rain, Hail and Snow Network's (CoCoRaHS) participation in "Water 2012," a state-wide water education campaign for 2012. CoCoRaHS is participating in this campaign through outreach to schools as new volunteers. With this funding, the CSU-Colorado Climate Center purchased 120 rain gauges (to measure precipitation) and five atmometers (to measure the rate of potential evaporation from plants). These instruments are being distributed to candidate weather volunteers in data sparse areas. CSU-CCC also prepared and printed new CoCoRaHS outreach brochures. CoCoRaHS has conducted training sessions for new and existing volunteers, including teachers, in the Denver/Front Range area to increase local participation and also offered training opportunities for volunteers in portions of Colorado where data availability is limited. Further training sessions are currently on the calendar. The atmometers were also used to promote ET measurement at water conservation district and CSU Extension meetings, with further promotions planned throughout the coming months.

17. FEMA Coordinator Matching Program

Authorization: Long Bill
 Water Source: N/A
 Location: Costilla County
 Sponsor: CWCB

Grant Amount: \$24,100
 Project Type: Matching Program
 Managers: Browning/Jamie Prochno
 Beneficiary: NFIP Interests

These funds are available to match the federal grant (75 federal / 25 non-federal) for the full-time position within the CWCB known as the Community Assistance Program (CAP) coordinator. This

position works closely with FEMA and carries out the missions and objectives of the National Flood Insurance Program (NFIP) for Colorado. The CAP position is fully operational at this time and several highly successful workshops have been conducted in addition to the regular programmatic responsibilities and regular coordination with FEMA and local governments.

18. South Platte Decision Support System

Authorization: Long Bill

Water Source: South Platte River

Location: South Platte Basin

Sponsor: CWCB

Contract No. C154127

Grant Amount: \$24,472

Project Type: Decision Support System

Project Manager: Ray Alvarado

Beneficiary: Statewide Water Users

These funds contributed to the lower South Platte surface water model which is in the midst of calibration. The calibration task was put on hold until several StateMod coding changes and enhancements were implemented and tested. The lower South Platte surface water model will be completed by the end of 2011.

19. Assessing the Relative Costs / Values of New Water Supply Options

Authorization: Long Bill

Water Source: N/A

Location: Various

Sponsor: CWI

Contract No. 11000000035

Grant Amount: \$35,000

Project Type: Research

Project Manager: Eric Hecox

Beneficiary: Statewide

This grant funded research at Colorado University's Natural Resources Law Center assessing the relative costs/values of new water supply options. The research was the second (and final) installment of a project examining the costs associated with meeting future M&I (municipal and industrial) water supply needs along Colorado's Front Range. As summarized in the recently updated SWSI (Statewide Water Supply Investigation) 2010 reports, M&I water demand in Colorado is expected to climb by 600,000 to 1 million acre-feet by 2050 (CWCB, 2010). Some mixture of three strategies will likely be necessary to meet this target: new water projects, water transfers (i.e., agricultural to urban reallocation), and conservation. Determining which option(s) is "best" is a complex matter that requires weighing highly case-specific opportunities, constraints, trade-offs, risks, uncertainties, and values. Presumably, among the most important considerations is economic cost. In this Phase 2 work, the Natural Resources Law Center examined what is known and unknown about the economic costs of meeting these future water demands. The Phase 2 Report was completed in June 2011.

COLORADO WATER CONSERVATION BOARD
Water Supply Reserve Account - Balance Summary
September 1, 2011

Fund Appropriation and Receipts				
Fiscal Year	Legislative Appropriation	Funds Received	Statewide Account	Basin Account
2006/2007	\$10,000,000	\$10,000,000	\$5,500,000	\$4,500,000
2007/2008	\$6,000,000	\$6,000,000	\$4,200,000	\$1,800,000
2008/2009	\$10,000,000	\$7,000,000	\$4,300,000	\$2,700,000
2009/2010	\$5,775,000	\$5,775,000	\$4,215,750	\$1,559,250
2010/2011	\$6,000,000	\$6,000,000	\$4,380,000	\$1,620,000
2011/2012	\$7,000,000	\$2,800,000	\$2,044,000	\$756,000
TOTAL	\$44,775,000	\$37,575,000	\$24,639,750	\$12,935,250

Note: The WSRA is a Severance Tax "Tier II" program with 40% of funds distributed on July 1, 30% on January 1, and the final 30% on April 1.
In FY 2008/2009 the final 30% installment of \$3,000,000 was not received due to the State's budgetary shortfall.

*For FY 2011/2012 the first installment of 40% was received on July 1, resulting in \$2,044,000 for the Statewide Account
and \$84,000 for each Basin Account.*

Fund Distribution				
Basin	Approved Basin Grants	Total Basin Funds	Basin Account Balance	Approved State Grants Statewide Account Balance
Arkansas	\$1,232,250	\$1,437,250	\$205,000	\$3,491,549
Colorado	\$993,656	\$1,437,250	\$443,594	\$2,402,900
Southwest	\$1,263,946	\$1,437,250	\$173,304	\$4,456,823
Gunnison	\$1,070,632	\$1,437,250	\$366,618	\$959,660
Metro	\$1,056,229	\$1,437,250	\$381,021	\$1,818,125
North Platte	\$919,755	\$1,437,250	\$517,495	\$311,027
Rio Grande	\$1,187,450	\$1,437,250	\$249,800	\$3,016,400
South Platte	\$1,113,857	\$1,437,250	\$323,393	\$2,413,423
Yampa/White	\$1,131,374	\$1,437,250	\$305,876	\$431,813
TOTAL	\$9,969,149	\$12,935,250	\$2,966,101	\$19,301,720
TOTAL APPROVED GRANTS				\$29,270,869

Note: Only includes grants approved by CWCB

WSRA Open Grant Projects - Board Approved - Not Yet Contracted										Updated 08/18/11		
Basin	County	Applicant	Name of Water Activity	CWCB Meeting	Basin Account Approved	Statewide Account Approved	Total Request	Type of Water Activity	PM	Action/Comments/Notes		
2011 July Board Approvals												
Arkansas		Pikes Peak Regional Water Authority	Rotating Agricultural Following Public Policy Working Group	Jul-11	\$20,000.00	\$0.00	\$20,000	Study/Analysis of a consumptive and non consumptive project	Todd			
Southwest		Pagosa Lakes Property Owners Association	Pagosa Lake Area Village Lake Dam Outlet Pipe Repair Project	Jul-11	\$25,000.00	\$0.00	\$25,000	Structural water project or activity	Greg			
2011 May Board Approvals												
Arkansas	Various	Sangre de Cristo R&D Council Inc.	A Multi-Media Program for Reporting Crop and Turf Water Use Estimates	May-11	\$9,394.00	\$37,577.00	\$46,971	Structual & Non-structural water Activity	Todd	5/31 Congrats		
Southwest	La Plata	Lake Durango Water Authority	Source Water Infrastructure Project	May-11	\$0	\$450,000	\$450,000	Structural project or activity	Greg			
Colorado	Mesa	Orchard Mesa Irrigation District	Canal #1 Check Structure Pilot Project at Dalton, Kiefer & Springer Properties	May-11	\$25,212.00	\$0.00	\$25,212	Study of a structural project & a structural water project	Jacob	5/31 Congrats		
2011 March Board Approvals												
Arkansas/Gunnison		Southeastern Colorado Water Conservancy District	The use of excess storage capacity in Blue Mesa Reservoir to avoid or reduce the impact of a Co River Compact curtailment in Co	Mar-11	\$49,000	\$196,000	\$245,000	Nonstructural project or activity	Todd	5/10 Email from TD to Jean: SOW to Subcommittee...See 5/10 email to Jean VanPelt. No Proof of Ins. "G" Entity. Need SOW apprv'l from Todd. Have not seen one to date 4/6/11		
Arkansas	Chaffee	Arkansas Headwaters Recreation Area	Helena Diversion Structure/BV Boat Chute Improvement Project	Mar-11	\$35,000	\$290,000	\$325,000	Structural project or activity	Chris			
Arkansas		Lower Arkansas Valley Water Conservancy District	Super Ditch Delivery Engineering	Mar-11	\$0	\$225,837	\$225,837	Nonstructural project or activity	Todd			
Gunnison	Delta	Grand Mesa Water Conservancy District, Water Enterprise Fund	The Rehabilitation of Blanche Park Reservoir	Mar-11	\$75,000	\$0	\$75,000	Structural project or activity	Todd/Jacob			
Rio Grande	Alamosa	Rio Grande Headwaters Land Trust	Rio Grande Initiative: North Rio Grande Ranch Conservation Easement	Mar-11	\$15,000	\$55,000	\$70,000	Nonstructural project or activity	Chris	To Vaughn - Easement Requirement for contracting. E-mail to CS 4/5 re: ins. Requirements		
South Platte	Sedgwick Logan, Morgan, Washington	TBD	Alluvial Aquifer Accretion/Depletion Analysis Tool	Mar-11	\$0	\$200,000	\$200,000		Ray			
Southwest	La Plata	Lake Durango Water Authority	Source Water Infrastructure Project	Mar-11	\$0	\$450,000	\$450,000	Structural project or activity	Greg	See Anna.		
Yampa	Routt	The Upper Walker Ditch Company	Yampa River/Walker Ditch River Restoration Project	Mar-11	\$20,000	\$20,000	\$40,000	Structural project or activity	Chris			
2010 November Board Approvals												
Southwest	Montezuma, Dolores	San Juan Citizens Alliance	A Way Forward: The Dolores River Below McPhee Reservoir	Nov-10	\$25,000	\$0	\$25,000	Study or analysis of nonstructural, nonconsumptive water activity	Jacob	2/3/11 JB request revised budget. 11/30 email Req new Cert/Ltr Auto(WC/Add'l) Insured to Megan G.11/18/10 Recv'd Cert of Ins 11/18		
Southwest	La Plata	La Plata River and Cherry Creek Ditch Company	Diversion Improvement Project	Nov-10	\$25,000	\$0	\$25,000	Structural consumptive water project	Todd	11/18 sent congrats email		
Southwest	Archuleta	Aspen Springs Metro District	Aspen Springs Metro Water Filling Station	Nov-10	\$30,000	\$0	\$30,000	Structural consumptive water project	Greg	11/18 sent congrats email		
2010 Sept Board Approvals												
Arkansas	Pueblo	Fountain Creek Watershed Greenway and Flood Control District	Flathead chub movement associated with the Clear Springs Ranch diversion structure in Fountain Creek	Sep-10	\$7,000.00	\$28,000.00	\$35,000	Studies or analysis of structural, nonstructural, consumptive, nonconsumptive water needs, projects	Todd			

Colorado	Garfield	Town of Gypsum	L.E.D.E. Ditch and Reservoir Reconstruction	Sep-10	\$50,000	\$175,000	\$225,000	Structural project or activity	Todd	12/8 email fm DV to Todd check status of SOW app'l. 12/1/10 email fm Jeff Shroll to TD re SOW changes.
Rio Grande	Alamosa	The Colorado Rio Grande Restoration Foundation	2009 Rio Grande Riparian Stabilization Project - Phase 4	May-10	\$50,000 (Approved May 2010)	\$98,000	\$98,000	Structural and nonstructural project or activity. (Note: Statewide request to be considered at September board meeting)	Greg	Received W-9, Insurance 9/25/10
South Platte		Ducks Unlimited, Inc.	Development of a Decision Support Model for Identifying and Ranking Waterfowl and Wildlife Related Recharge Projects along the South Platte River	Sep-10	\$0	\$99,821	\$99,821	Structural project or activity	Todd	
2010 July Board Approvals										
South Platte	Weld, Denver	NCWCD	Data Logger & Telemetry Install Project	Jul-10	\$46,000.00	\$0.00	\$ 46,000.00	Structural project or activity	Todd	07/27 Congrats letter sent requesting insurance, w-9.
2010 May Board Approvals										
Gunnison Basin	Gunnison	Lake San Cristobal Water Activity Enterprise (LSCWAE)	Lake San Cristobal Outlet Structure	May-10	\$150,000	\$0	\$150,000	Structural project or activity	Todd	5/19/10 CWCB Board approved w/ conditions
Rio Grande	Alamosa	The Colorado Rio Grande Restoration Foundation	2009 Rio Grande Riparian Stabilization Project - Phase 4	May-10	\$50,000	\$98,000	\$148,000	Structural and nonstructural project or activity. (Note: Statewide request to be considered at September board meeting)	Chris S.	5/19/10 CWCB Board approved w/o conditions
2009 September Board Approvals										
Rio Grande		Mineral County Fairgrounds Association	Lower Willow Creek Restoration Project	Sep-09	\$50,000	\$200,000	\$250,000	Structural and/or nonstructural water project or activity	Greg	8/3 Greg to follow up with Applicant. Applicant has requested a change of fiscal agent to the City of Creede to be addressed at the July 2010 CWCB Board Meeting.
2009 July Board Approvals										
Southwest	San Miguel	Town of Sawpit	Domestic Water System Construction	Jul-09	\$25,000	\$0	\$25,000	Structural water project or activity	Greg	8/3 Still pending per G.J. 6/8/10 Corresp to Steve Johnson (8750law.com) fm Greg re: req for W-9, Ins and SOW have not been completed by the Town. Pending

Southwest	La Plata Water Conservancy District	La Plata River Water Resources Operations Model	Mar-11	\$0	\$148,823	\$148,823	C150477	Studies or analysis of nonstructural, nonconsumptive water project	\$148,823	In Progress	Greg
Southwest	Dolores	Town of Rico Supply Project - Well Drilling and Water Quality Testing	Mar-11	\$20,000	\$68,000	\$88,000	11000000122	Structural project or activity	\$88,000	In Progress	Greg
Southwest		Montezuma Valley Irrigation Company	Mar-11	\$35,000	\$0	\$35,000	121BC000003	Nonstructural project or activity	\$122,500	In Progress	Greg
Southwest	La Plata	Animas La Plata Water Conservancy District	Nov-10	\$25,000	\$0	\$25,000	121BC000005	Study or analysis of nonstructural water activity		In Progress	Jacob
Southwest Basin Total Request				305,000	\$2,391,823	2,696,823					
Number of Projects	12										
Gunnison	Delta	Leroux Creek Water Users Association (LCWUA)	May-07	60,000	\$0	60,000	8000000008	Study/Analysis	\$10,000	In Progress	Todd
Gunnison	Gunnison	North Fork Water Conserv District (NFWCD) and Fire Mountain Canal& Reservoir Company (FMCC)	Sept-07	79,000	\$230,000	309,000	C150414	Study/Analysis Feasibility Study and Environmental Permitting Assistance	\$10,000	In Progress	Todd
Gunnison	Delta	Overland Ditch and Reservoir Company	Sept-07	0	\$68,000	68,000	8000000038		\$0	In Progress	Todd
Gunnison	Hinsdale	Lake San Cristobal Outlet Structure Modification--Phase III	Sep-08	0	\$120,960	120,960	C150444	Studies or analysis of structural, nonstructural, consumptive, non consumptive water needs projects	\$0	In Progress	Todd
Gunnison	Delta	Hanson Reservoir Outlet Rehab	Jul-10	\$50,000.00	\$0.00	\$	11000000068	Structural project or activity	\$50,000	In Progress	Greg
Gunnison Basin	Gunnison	75 Ditch Diversion Improvements and Feature Enhancements	May-10	\$46,100	\$0	\$46,100	121BC000002	Structural project or activity		In Progress	Todd
Gunnison	Delta	Gunnison Gorge Anglers - Chapter of Trout Unlimited	May-11	\$20,650.00	\$0.00	\$20,650	121BC000004	Nonstructural consumptive water project	\$11,500	In Progress	Chris
Gunnison Basin Total Request				255,750	\$418,960	674,710					
Number of Projects	8										
Metro	Arapahoe/Adams Weld	Lost Creek Groundwater Management District	Jan-09	80,000	\$0	80,000	C150447	Studies or analysis of structural, consumptive water projects	\$13,000	In Progress	Greg
Metro		Douglas County Water Resource Authority	Sep-09	\$100,000	\$500,000	\$600,000	C150470	Technical assistance regarding permitting feasibility studies and environmental compliance; and study or analysis of structural project or activity	\$1,125,000	In Progress	Jacob
Metro	Douglas	Roanay Sprinkler Nozzle Retrofit	Sep-10	\$0	\$250,000	\$250,000	C150471	Structural project or activity	\$87,500	In Progress	Jacob
Metro	Douglas	Rural Douglas County groundwater-level monitoring network	Sep-10	\$28,263	\$84,792	\$113,055	C150473	Study or analysis of nonstructural project or activity	\$60,880	In Progress	Jacob
Metro		South Metro Water Supply Authority	Sep-10	\$0	\$125,000	\$125,000	C150474	Study or analysis of consumptive water project or activity	\$125,000		Jacob
Metro	Douglas, Arapahoe	Aquifer Recharge Pilot Study	Sep-09	\$0	\$425,000	\$425,000	C150474	Study or analysis of consumptive water project or activity	\$425,000		Jacob
Metro	Den,Douglas,Adams Arap,Jeffco, Broomfield	Educating Denver Metro elected officials and decision makers on solutions-oriented water supply planning	Jan-11	\$14,820	\$0	\$14,820	11000000083	Non-structural water activity	\$0	In Progress	Jacob
Metro	Adams,Otero	Demonstration of membrane zero liquid discharge process for drinking water systems	Sep-08	\$50,000	\$233,333	\$283,333	C150456	Technical assistance regarding permitting feasibility studies and environmental compliance	\$283,333	In Progress	Greg
Metro Basin Total Request				273,083	\$1,618,125	1,891,208					
Number of Projects	8										
North Platte	Town of Walden	Town of Walden Water Supply Improvement Project	Jul-08	385,000	\$0	385,000	C150431	Structural &/or Non-structural water project or activity	\$0	In Progress	Todd
North Platte	USFS	Effects of Mtn pine beetle & forest mgmt on water quantity, quality, & forest recovery N.P. and Upper CO River basins	Sep-08	212,306	\$164,618	376,923	C150440	Studies or analysis of nonstructural project or activity	\$376,923	In Progress	Greg
North Platte	Colorado Climate Center--CSU	Monitoring the effects of weather conditions on the evapotranspiration in N.P. Basin	Sep-08	50,409	\$50,409	100,818	C150438	Studies or analysis of consumptive water needs project or activity	\$100,818	In Progress	Greg

North Platte	Jackson	Ducks Unlimited, Inc.	North Park Irrigated Meadow Conservation Program – Phase I	May-10	\$20,000	\$0	\$20,000	10000000126	\$20,000	\$41,338	6/30/12	In Progress	Greg
North Platte	Jackson	Walden Reservoir Company	Structure for Water Control	Jan-11	\$36,000	\$0	\$36,000	1100000087	\$7,900		11/30/11	In Progress	Greg
North Platte	Jackson	Colorado Foundation for Water Education	Solicitation of stakeholder input through production of a North Platte Basin Education Package	Jan-11	\$14,040	\$0	\$14,040	11000000084	\$14,040	\$0	6/30/11	In Progress	Jacob
6													
Number of Projects													
Rio Grande		Santa Maria Reservoir Company	Santa Maria and Continental Reservoirs: Rehabilitation and Multiple Use Studies	Sep-08	50,000	\$141,700	191,700	C-150443		\$18,300	6/30/12	In Progress	Kirk
Rio Grande		Colorado Rio Grande Restoration Foundation	2008 Rio Grande Riparian Stabilization Project	Sep-08	35,000	\$250,000	285,000	C150452		\$356,000	12/31/12	In Progress	Chris S.
Rio Grande		San Luis Valley Irrigation District	Rio Grande Reservoir Multi-Use Rehabilitation; Refinement and Enhancement of Reservoir Reoperation and Optimization Model	Nov-08	100,000	\$0	100,000	C150437		\$0	6/30/10	In Progress	Kirk
Rio Grande		Colorado Rio Grande Restoration Foundation Company	Rio Grande Conservation Reserve Enhancement Program (CREP) Phase II - Implementation	Sep-09	31,500	\$0	31,500	10000000056		\$0	12/31/11	In Progress	Greg
Rio Grande	Costilla	Rio Grande Watershed Grande, Conejos, Archuleta, Alamosa, Hinsdale, Costilla	San Luis Peoples Ditch Upgrade and Rehabilitation Project - Phase I	May-10	\$40,000	\$0	\$40,000	11000000053	\$40,000	\$102,000	6/30/11	In Progress	Greg
Rio Grande		The Colorado Rio Grande Restoration Foundation and McDonald Ditch Company	Educating Today to Balance Tomorrow's Water Supplies & Needs	May-10	\$25,000	\$0	\$25,000	11000000059	\$25,000	\$163,900	6/30/12	In Progress	Jacob
Rio Grande	Rio Grande	Manassas Land and Irrigation Company	The McDonald Ditch and Plaza Project – Phase I - Planning	Jan-11	\$40,000	\$0	\$40,000	110000000102	\$40,000	\$50,000	12/31/11	In Progress	Chris S.
Rio Grande	Conejos	Santa Maria Reservoir Company	Conejos North Branch Water Conservation and Management	Jan-11	\$75,000	\$0	\$75,000	110000000109	\$75,000		6/30/12	In Progress	Greg
Rio Grande	Hinsdale	District 64 Reservoir Company	Santa Maria & Continental Reservoirs: Priority Studies to Restore Capacity	May-11	\$22,000.00	\$0.00	\$22,000	C150443	\$22,000		6/30/12	In Progress	Kirk
11													
Rio Grande Basin Total Requests													
Number of Projects													
South Platte		Ducks Unlimited, Inc.	Ovid Reservoir Comprehensive Feasibility Study	Sept-07	176,000	\$0	176,000	C150417	\$176,000	\$1,000,000	12/31/11	In Progress	Todd
South Platte		Ducks Unlimited	Weld County School Dist RE1 Wetland Partnership	Jul-08	42,110	\$0	42,110	90000000063	\$42,110	\$160,000	8/31/12	In Progress	Todd
South Platte		Ducks Unlimited	S.P. Water protection and restoration	Sep-08	0	\$825,552	825,552	C150432	\$825,552	\$2,000,000	6/30/12	In Progress	Todd
South Platte		The Nature Conservancy of Colorado	Arickaree River Well retirement program, Republican River basin, CO.	Sep-08	19,984	\$79,936	99,920	090000000084	\$99,920	\$471,920	12/31/09	In Progress	Todd
South Platte		Lost Creek Groundwater Management District	Lost Creek Aquifer Recharge and Storage Study	Jan-09	80,000	\$0	80,000	C150447	See Metro		6/30/11	In Progress	Andy
South Platte		Ducks Unlimited, Inc.	Central South Platte Wetland Partnership	Mar-09	150,000	\$0	150,000	C150454		\$565,000	6/30/11	In Progress	Greg
South Platte	Lamier, Weld, Logan, Sedgwick, Wash, Phillips, Yuma	Fort Morgan Reservoir and Irrigation Company (FMIRCo)	FMIRCo Recharge & Wetlands Project	Sep-09	\$250,000	\$420,000	\$670,000	C150464	\$670,000		6/30/12	In Progress	Todd
South Platte		Co Climate Center, CSU	Co Agricultural Meteorological Network (CoAgMet)	Jul-10	\$20,000.00	\$0.00	\$20,000	110000000079	\$20,000		6/30/12	In Progress	Greg
South Platte	Morgan, Washington, Logan, Sedgwick	Lower South Platte Water Conservancy District	Lower South Platte Water Cooperative South Platte Basin Organizational Analysis	Sep-10	\$60,977.00	\$200,000.00	\$260,977.00	C150476	\$260,977	\$100,000	6/30/12	In Progress	Todd

South Platte	Adams,Otero	Water Enviro Research Foundation	Demonstration of membrane zero liquid discharge process for drinking water systems	Sep-08	\$25,000	\$233,333	\$258,333	C150456	\$258,333	6/30/13	In Progress	Greg
South Platte Basin Total Request					824,071	\$1,758,821	2,582,892					
Number of Projects					11							
Y/W/G		Town of Yampa	Town of Yampa Water Facilities Plan and storage tank upgrades	Sep-08	61,062	\$0	61,062			\$15,626	9/30/12	Todd
Y/W/G	Rio Blanco/Garfield/Moffat	The Nature Conservancy Bear River Reservoir	Yampa White Basin Non consumptive Needs Assessment Watershed Flow Evaluation Tool	Jan-10	\$169,002.35	\$0.00	\$169,002	C150466			6/30/12	Jacob
Y/W/G	Garfield,Routt		Stillwater Reservoir Seepage Project Improvement of lysimeter operations and consumptive use quantification in high-altitude, irrigated meadows in the Yampa /White Basin	Sep-09	\$189,000	\$0	\$189,000	C150469			6/30/12	Jacob
Y/W/G	Routt	Colorado Climate Center, Colorado Division of Water Resources		Sep-10	\$10,000	\$10,978	\$20,978	11000000058		\$20,978	6/30/15	Greg
Yampa/White/Gree	Rio Blanco/Garfield/Moffat	Colorado River WCD	Water Storage Feasibility	Jan-10	\$220,800	\$0	\$220,800	C150472	\$220,800	\$56,200	6/30/13	Jacob
Yampa		Moffat County Natural Resources Department	Yampa-White Basin Projects and Methods Analysis	Mar-11	\$38,000	\$152,000	\$190,000	C150481	\$190,000		12/31/12	Jacob
Y/W/G Basin Total Request					687,864	\$162,978	850,842					
Number of Projects					6							
Total WSRA Project In Progress					78	\$ 4,513,041.81	\$ 8,389,514.92	\$ 12,902,556.73				

WSRA COMPLETED PROJECTS

Updated 08/18/11

Basin	County	Applicant	Name of Water Activity	CWCB Mtg Approved	Basin Account	Statewide Account	Total Request	Type of Water Activity	Number	Match Funds Authorized	Match Funds Paid	Expire	Closed	PM	
Arkansas	Pueblo,Otero/ Crowley, Bent, Powers, Fremont, Chaffee, ElPaso, Kiowa	Southeastern Colorado Water Conservancy District	Tamarisk	Mar-07	\$0	\$50,000	\$50,000	Study/analysis of nonstructural water activity	80000000005			06/30/09	Todd		Completed
	El Paso	El Paso County Water Authority	Upper Black Squirrel Creek Aquifer Recharge Investigation	Mar-07	\$45,200	\$0	\$45,200	Study or Analysis of Structural Project	80000000011				Andy		Completed
	El Paso	El Paso County Water Authority	Ground Water Conference	Mar-07	\$24,721	\$0	\$24,721	Study/analysis of nonstructural activity	80000000010			10/10/07	06/30/09	Andy	Completed
	Pueblo, ElPaso, Teller	Pueblo and El Paso Counties Force	Fountain Creek Vision Task	May-07	\$75,000	\$0	\$75,000	Facilitation and Analysis	80000000084			06/30/09	06/30/09	Eric	Completed
Arkansas	Custer	Round Mountain Water and Sanitation District	Round Mountain Water & Sanitation District Water System Improvements Project	May-07	\$120,000	\$0	\$120,000	Structural Water Project	C150403			09/02/09	09/17/09	Todd	Completed
Arkansas	El Paso, Elbert, Lincoln	Upper Big Sandy Ground Water Management District	Upper Big Sandy Water Balance	Jan-08	\$45,000		\$45,000	Study/analysis of nonstructural activity	80000000100				Eric		Completed
Arkansas	Pueblo,Otero/ Crowley, Bent, Powers, Fremont, Chaffee, ElPaso, Kiowa	Southeastern Colorado Water Conservancy District	Model Transfers- Agriculture to Urban, Arkansas Basin	Jan-08	\$23,860		\$23,860	Study/analysis of structural/nonstructural project	80000000135				Eric		Completed
Arkansas	Lake, Chaffee, Fremont	Greater Arkansas River Nature Association	Arkansas Headwaters Diversion Structure Improvement Project	Mar-08	\$57,955	\$57,955	\$57,955	Study/Analysis Consumptive and Non-Consumptive Project	90000000025			Closed 8/31/09	Ted		Completed
Arkansas	Bent	City of Las Animas	Arkansas River Basin City of Las Animas Water System Improvements	Mar-08	\$100,000	\$200,000	\$300,000	Structural/Non-Structural Water Activity	C150424	\$2,022,000		12/31/09	09/23/09	Todd (Kirk?)	Completed
Arkansas	Pueblo, Otero, Crowley,Bent, Powers	Lower Arkansas Water Conservancy District	Arkansas Super Ditch Company	Jan-08	150,000		150,000	Study/analysis of nonstructural activity	C150425	\$68,735		06/30/10	05/15/10	Todd	Completed
Arkansas	Pueblo	Colorado State Parks	Colorado State Parks Zebra Mussel Response	Mar-08	0	\$1,000,000	1,000,000	Structural water project	C150416	\$3,000,000		06/30/09	06/30/10	Todd	Completed
Arkansas	Pueblo,Otero, Bent,Crowley, Powers,Fremont, Kiowa, Chaffee, El Paso	Southeastern Colorado Water Activity Enterprise	Arkansas Valley Conduit	Mar-07	0	\$200,000	200,000	Study/analysis of structural activity	C150406	\$200,000	\$352,000	6/30/11	11/24/10	Todd	Completed
Arkansas	El Paso	El Paso County Water Authority/The Keystone Center	Flaming Gorge Project Task Force Assessment	May-10	\$20,000	\$0	\$20,000	Studies or analysis of structural, nonstructural, consumptive, nonconsumptive water needs and project	110000000008	\$20,000		6/30/11	6/30/11	Jacob	Completed
Arkansas Basin Total Request															
Number of Projects	13														
Colorado	Mesa	Bull Creek Reservoir Canal and Power Co.	Bull Creek Reservoir No. 5 Spillway Adequacy Analysis	Sept-07	50,000	\$0	50,000	Structural water activity-- Spillway adequacy study/environmental permitting	80000000039	\$0		06/30/10	02/25/09	Eric	Completed
Colorado	Eagle	Eagle Park Reservoir Company	Enlargement of Eagle Park Reservoir	Mar-07	\$0	\$250,000	\$250,000	Study-Technical Assistance	C150401	\$118,707		12/31/09	12/17/09	Eric	Completed
Colorado	Garfield, Pitkin, Gunnison, Eagle	Ruedi Water and Power Authority	Roaring Fork Watershed Assessment	Mar-07	\$40,000	\$0	\$40,000	Study or Analysis of Non-Consumptive Needs	80000000012				Chris		Completed
Colorado	Colorado River Water Conservation District	Colorado River Water Conservation District	Upper Colorado Endangered Fish Recovery Alternatives Analysis (10,825)	Mar-07	\$0	\$200,000	\$200,000	Study or analysis of non-consumptive water activity	C150404			06/30/08	Closed	Todd	Completed
Colorado	Grand County	Grand County	Vail Ditch Project	Mar-07	\$0	\$1,500,000	\$1,500,000	Structural and Nonstructural water activity	C150409			06/30/08	Closed		Completed

Colorado	Garfield, Pitkin	West Divide WCD	Feasibility and design assessment of off-channel reservoir sites in the Crystal River water shed	Sep-08	\$40,000	\$0	\$40,000	Structural and/or non structural water project or activity	90000000052	08/31/09	09/02/09	Mike	Completed
Colorado	Summit	Summit County	Old Dillon Reservoir	Mar-08	\$100,000	\$0	100,000	Study/Analysis of consumptive project	90000000026	06/30/09	03/02/10	Kirk	Completed
Colorado		Grand County	Grand County Stream flow Management Plan	May-08	\$100,000	\$0.00	100,000	Study/Analysis of Non-consumptive needs/project	C150461	06/30/11	12/16/10	Todd	Completed
Colorado	No information on Summary for counties	City of Grand Junction	Energy Development Water Needs Assessment (300,000 Joint Application see Yampa)	Mar-07	0	\$150,000	150,000	Study of consumptive water needs assoc. w/energy develop. in the CO. White& Yampa river basins	C150407	03/31/11	03/31/11	Jacob	Completed
Colorado	Eagle/Pitkin/ Garfield	Ruedi Water and Power Authority	Roaring Fork Watershed Assessment -Phase 2	May-08	\$40,000.00		\$40,000.00	Consumptive and Non-Consumptive Project	90000000049	04/07/11	04/07/11	Chris	Completed
Colorado	Garfield	Grand River Ditch Company	Grand River Ditch Pipeline Solicitation of stakeholder input and advice through a Colorado River Basin edition of Headwaters Magazine	Sep-10	\$25,000	\$0	\$25,000	Structural project or activity	110000000097	06/30/11	06/01/11	Kirk	Completed
Colorado	Grand, Summit, Eagle, Pitkin, Garfield, Mesa	Colorado Foundation for Water Education	Headwaters Magazine Colorado	Sep-10	\$25,000	\$0	\$25,000	Nonstructural water project or activity	110000000039	06/30/11	06/28/11	Jacob	Completed

Southwest		12			\$420,000	\$2,100,000	\$2,520,000						
Southwest	Goodman Point Water Association	Goodman Point Water Association	Goodman Point Water Association Pipeline Environmental Assessment	Mar-07	\$7,700	\$0	\$7,700	Study of structural water project	80000000075	07/31/09	07/31/09	Eric	Completed
Southwest	Manco's Water Conservancy District	Jackson Gulch Reservoir Expansion Project	Jackson Gulch Reservoir Expansion Project	July-07	\$61,735	\$0	\$61,735	Feasibility Study	80000000076	06/30/09	06/30/09	Todd	Completed
Southwest	La Plata West Water Authority	La Plata West Rural Water Supply System	La Plata West Rural Water Supply System	Mar-08	\$100,000	\$1,000,000	\$1,100,000	All purposes Environmental/Technical feasibility studies and studies or analysis of structural and/or non structural water project or activity	C150422	06/30/09	06/30/09	Todd (Kirk?)	Completed
Southwest	La Plata/Archuleta District	Water System Master Planning	Water System Master Planning	Nov-08	\$100,000	\$0	\$100,000	Structural water project or activity	90000000112	12/31/09	12/22/09	Eric	Completed
Southwest	Archuleta	Park Ditch Company	Park Ditch Improvements Water System Well, Treatment System and Distribution Upgrades	Jul-09	\$85,000	\$0	\$85,000	Structural water project or activity	100000000011	06/30/11	12/09/09	Greg	Completed
Southwest	La Plata	Happy Scenes	Town of Sawpit – Engineering/Planning for Domestic Water System; Southwest Basin	16-Sep-08	\$39,760	\$50,000	\$0	Structural Project	90000000127	06/30/10	11/17/09	Greg	Completed
Southwest		Town of Sawpit		Mar-08	25,000	\$0	25,000	Study Structural Project	90000000006	06/30/09	06/07/10	Anna	Completed
Southwest	Lower Blanco Property Owners Association	Lower Blanco River Restoration Project	Lower Blanco River Restoration Project	Mar-09	100,000	\$0	100,000	Analysis and Construction of Structural Nonconsumptive Water Project	C150450	06/30/10	06/30/10	Greg	Completed
Southwest	Summit Reservoir and Irrigation Company	MVIC Summit Irrigation Company feasibility study	MVIC Summit Irrigation Company feasibility study	Sep-08	39,300	\$0	39,300	Environmental/Technical feas. studies & studies/analysis of structural &/or non structural wtr project or activity	90000000085	08/31/10	08/31/10	Kirk	Completed
Southwest	Lower Blanco River Restoration	Lower Blanco River Restoration Project	Lower Blanco River Restoration Project	Sep-09	0	\$150,000	150,000	Structural and/or nonstructural water project or activity	C150468	06/30/12	12/17/10	Greg	Completed
Southwest	Montezuma	Goodman Point Water Association	Goodman Point Phase 2	Sept-07	\$20,000.00	\$240,000	260,000	Structural Project Study or analysis of non structural, nonconsumptive water needs and projects	C150462	06/30/12	3/16/11	Greg	Completed
Southwest	La Plata	Animas River Needs Assessment	Animas River Needs Assessment	Sep-09	\$57,000	\$0	\$57,000	Study/analysis of structural nonconsumptive water project or activity	110000000028	9/30/2012	4/26/2011		Completed
Southwest	Montezuma	Manco's River Diversion Project, Phase I	Manco's River Diversion Project, Phase I	Nov-09	\$24,753	\$0	24,753	Study/analysis of structural nonconsumptive water project or activity	100000000111	12/30/10	06/06/11	Chris	Completed

Southwest	La Plata	Florida Mesa Canal Companies	Canal Seepage Reduction Program	Sep-09	\$0	\$225,000	225,000	Technical assistance regarding permitting feasibility studies and environmental compliance; and study or analysis of structural project or activity	C150463	\$225,000	06/30/11	06/30/11	Greg	Completed
Southwest	San Miguel	Town of Norwood	Raw Water System Update and Future Needs Study	Jan-10	\$0	\$58,458	58,458	Study/analysis of consumptive water project or activity	10000000085	\$58,458	06/30/11	06/30/11	Greg	Completed
Southwest		Florida Mesa Canal Companies (Florida Canal, Florida Farmers Ditch, Florida Enlargement Ditch, and the Florida Co-operative Ditch Company)	Ditch Loss, Hydropower, and Monitoring Improvement Program	Mar-09	100,000	\$0	100,000	Technical Assistance for Feasibility Studies; Study & Implementation of a Structural, Consumptive Water Project	90000000115	\$300,000	06/30/11	06/30/11	Greg	Completed
Southwest Basin Total Request Number of Projects	16				\$760,248	\$1,723,458	\$2,483,706							
Gunnison	Hinsdale	Upper Gunnison Water Conservancy District and Hinsdale County	Lake San Cristobal Controlled Outlet Structure	May-07	\$35,000	\$0	\$35,000	Technical assistance regarding permitting, feasibility studies, and environmental compliance	80000000021		Closed		Todd	Completed
Gunnison	Delta	Town of Orchard City	Orchard City Water Reservoir Project (Task 1-3)	May-07	\$60,000	\$0	\$60,000	Study/Analysis	80000000007				Todd	Completed
Gunnison	Delta	Town of Orchard City	Orchard City Water Reservoir Project (Remaining Tasks)	Sept-07	\$0	\$380,000	\$380,000	Study/Analysis	C150410		12/31/08	Closed	Todd	Completed
Gunnison	Delta, Montrose, Ouray	Project 7 Water Authority and Uncompahgre Valley Water Users Association	Off-System Raw Water Storage Project 7 Water Authority/Uncompahgre Valley Water Users Association	Sept-07	\$56,700	\$0	\$56,700	Environmental Compliance and Feasibility Study	800000000059		Closed		Todd	Completed
Gunnison	Gunnison	North Fork River Improvement Association	Reconstruction; North Fork of the Gunnison River (Part 1 and 2)	Sept-07	\$48,000	\$62,700	\$110,700	Structural—development of construction plans and specifications for project	C150411		12/31/08	Closed	Todd	Completed
Gunnison	Mesa	City of Grand Junction Water Enterprise Fund	Juniata Reservoir Spillway Modification	Mar-09	\$97,000	\$0	\$97,000	Structural Water Project	90000000088	\$97,586	06/30/10	12/15/09	Jacob	Completed
Gunnison	Delta	Painted Sky Resource Conservation and Development Council, Inc.	Hartland Diversion Dam Fish Passage Feasibility Study	May-09	22,100	\$0	22,100	Study or analysis of a structural water project or activity	90000000144	\$1,000	06/30/10	01/25/10	Greg	Completed
Gunnison	Ouray	City of Ouray	Development of Augmentation Supplies	May-09	50,000	\$0	50,000	Structural and/or nonstructural water project or activity	100000000041	\$50,000	06/30/11	06/30/11	Todd	Completed
Gunnison	Ouray	Town of Ridgway	Ridgway Ditch and Lake Otonawanda Improvement Project	Mar-09	109,500	\$0	109,500	Tech Assist Regarding Permitting, Feas. Studies, & Enviro Compliance; & Study or Analysis of a Structural Project	C150455	\$109,500	6/30/11	6/30/11	Greg	Completed
Gunnison	Montrose	Valley View Irrigation Association	Valley View Irrigation Improvement Project	Mar-11	\$11,817	\$0	\$11,817	Structural project or activity	110000000127	\$11,817	12/31/11	7/26/11	Jacob	Completed
Gunnison	Hinsdale	Upper Gunnison WCD	Phase II Engineering for Lake San Cristobal Outlet Modification	July-08	75,265	\$0	75,265	Study of structural project/activity	90000000041	\$75,265	1/31/09	6/30/11	Todd	Completed
Gunnison Basin Total Request Number of Projects	11				\$565,382	\$442,700	\$1,008,082							
Metro	Denver, Multiple	The Greenway Foundation	Chatfield Reallocation EIS/FR (South Platte BRT contributing \$27,000)	Mar-07	\$103,000	\$0	\$103,000	Study/Analysis of Structural Water Project					Chris	Completed
Metro	Douglas	East Cherry Creek Valley Water and Sanitation District	Zero Liquid Discharge Pilot Study	Sept-07	\$200,000	\$200,000	\$400,000	Study/Analysis	C150412		01/08/09		Eric	Completed
Metro	Logan	Parker Water and Sanitation District	Parker Water and San. And Colo. State University Joint Project on the Rural/Urban Farm Model	Sept-07	\$150,000	\$0	\$150,000	Study/Analysis	C150413		12/31/09	10/02/09	Todd	Completed

Metro	Multiple	CFWE	Solicitation of Stakeholder Input through a South Platte Edition of Headwaters	Jul-08	\$16,019	\$0	\$16,019	Non-structural water project or activity	90000000019	Todd	Completed
Metro	Douglas, Arapahoe	South Metro Water Supply Authority	South Metro Water Supply Authority - Regional Aquifer Supply Assessment	Jul-08	100,540	\$0	100,540	Study/analysis of structural project & consumptive project/activity	C150430	Andy	Completed
Metro	Denver	Greenway Foundation Clear Creek County on behalf of Upper Mountain Counties Water Needs Consortium	South Platte River Recreation and Habitat Feasibility Study	Sep-08	150,000	\$0	150,000	Study/analysis of structural, non structural, nonconsumptive water needs, projects	C150442	Chris	Completed
Metro	Park, Jeffco,CC, Gilpin	Upper Mountain Counties Water Needs Assessment	May 2008	43,587	\$0	43,587	Study/Analysis Studies or analysis of structural, nonstructural, consumptive, nonconsumptive water needs and project	C150429	Eric	Completed	
Metro	El Paso	El Paso County Water Authority/The Keystone Center	Flaming Gorge Project Task Force Assessment	May-10	\$20,000	\$0	\$20,000	110000000008	6/30/11	6/30/11	Completed
Metro Basin Total Request Number of Projects	Jacob										
North Platte	8	Silver Spur Operating CO.	New Pioneer Ditch Diversion Reconstruction Project	Mar-08	\$116,000	\$0	\$116,000	Structural/Non-Structural Water Activity	C150421	Chris	Completed
North Platte	CSU	Identification and assessment of important wetlands in N.P. River watershed	Sep-08	86,000	\$96,000	182,000	Studies or analysis of nonconsumptive water needs project or activity	C150433	Todd	Completed	
N Platte Basin Total Request Number of Projects											
Rio Grande	2	Alamosa Riverkeepers	Alamosa River In-stream Flow Project	Mar-07	\$64,500	\$0	\$64,500	Study/Design for Structural Water Project	70000000076	Chris	Completed
Rio Grande	Colorado Rio Grande Restoration Foundation	Rio Grande Basin Conservation Reserve Enhancement Program	May-07	\$36,750	\$0	\$36,750	Non-structural water activity	80000000006	Todd	Closed	Completed
Rio Grande	Romero Irrigation Company	Romero-Guadalupe Channel Rectification Project	Sept-07	\$83,700	\$0	\$83,700	Structural Water Project	80000000060	Eric	Closed	Completed
Rio Grande	Rio Grande Headwaters Land Trust	Rio Grande Initiative San Antonio River - El Codo Ditch Diversion and Rehabilitation	Mar-08	\$200,000	\$1,300,000	\$1,500,000	Structural/Non-Structural Water Activity	C150420	Todd	Closed	Completed
Rio Grande	Conejos	El Codo Ditch Company	San Antonio River and North Branch Diversion and Stabilization	May-09	\$65,000	\$0	\$65,000	Structural and/or nonstructural water project or activity	10000000001	Greg	Completed
Rio Grande	Manassa Land and Irrigation Company	Conejos River and North Branch Diversion and Stabilization	Sep-08	50,000	\$333,700	383,700	Structural and/or nonstructural water project or activity	C150446	Chris S	06/30/10	Completed
Rio Grande	San Luis Valley Irrigation District	Preliminary Design Multi-use Rio Grande Reservoir Rehabilitation and Enlargement	Mar-07	0	\$288,000	288,000	Study/Design for Structural Water Project	C150402	Kirk	06/30/10	Completed
Rio Grande	Conejos Water Conservancy District	Platoro Reservoir Restoration	Sep-08	50,000	\$200,000	250,000	Structural and/or nonstructural water project or activity	C150448	Kirk	06/30/11	Completed
Rio Grande	Trinchera Irrigation Company	Sangre de Cristo Trinchera Diversion Canal Restoration	Sep-09	\$104,000	\$150,000	254,000	Structural and/or nonstructural water project or activity	C150458	Greg	10/22/10	Completed
R Grande Basin Total Request Number of Projects	underbudget										
South Platte		The Greenway Foundation	Chatfield Reallocation EIS/FR (Metro BRT contributing \$103,000)	Mar-07	\$27,000	\$0	\$27,000	Study/Analysis of Structural Water Project Environmental Compliance/Feasibility Study		Todd /Tom	Completed
South Platte	Clear Creek County	Clear Creek Water Banking/High Altitude Storage	May-07	\$52,000	\$0	\$52,000	80000000037		Eric	Closed	Completed

South Platte	Colorado Foundation for Water Education	Solicitation of Stakeholder Input through a South Platte Edition of Headwaters Lower South Platte Wetland Initiative Phase I	Jul-08	\$16,019	\$0	\$16,019	Non-structural water project or activity	9000000019	Todd	Completed
South Platte	Ducks Unlimited, Inc. Clear Creek County on behalf of Upper Mountain Counties Water Needs Consortium	South Platte River, CO	Sep-07	\$0	\$278,476	278,476	Specifies all eligible activities	C150415	Todd	Completed
South Platte		Upper Mountain Counties Water Needs Assessment	May 2008	130,763	\$0	130,763	Study/Analysis Environmental compliance/Tech. Assist./Studies or analysis of structural, nonstructural, nonconsumptive, nonconsumptive wtr needs projects	C150429	Eric	Completed
South Platte	City of Greeley	Halligan Seaman Water Mgmt project share vision planning model	Sep-08	25,435	\$76,305	101,740		C150436	Eric	Completed
South Platte	Northern Colorado Water Conservancy District	Stage Discharge Data Loggers and Telemetry	Jan-08	48,800	\$0	48,800	Structural Activity	80000000120	Todd	Completed
South Platte Basin Total Request				\$300,017	\$354,781	\$654,798				Completed
7										
Y/W/G	Upper Yampa Water Conservancy District	Morrison Creek Reservoir Feasibility Study	July-07	49,500	\$0	49,500	Feasibility Study	80000000058	Todd	Completed
Y/W/G	Vermillion Ranch	Sparks Reservoir	Jul-08	16,000	\$0	16,000	Study or analysis of structural, non structural, nonconsumptive water needs and projects	90000000039	Todd	Completed
Y/W/G	Colorado Foundation for Water Education	Headwaters Magazine - January 2010	Sep-09	20,000	\$0	20,000	Study or analysis of structural, non structural, consumptive, and nonconsumptive water needs and projects	100000000050	Jacob	Completed
Y/W/G	Community Agriculture Alliance, Inc.	Development and Implementation of Water Forums, Workshop, and/or Tours	Sep-09	10,000	\$0	10,000	Study or analysis of structural, non structural, consumptive, water needs and projects	100000000046	Jacob	Completed
YW/G	City of Steamboat Springs and Rout County	Common Data Repository	Jan-08	106,600	\$0	106,600	Study or analysis of structural/nonstructural and consumptive/ nonconsumptive needs	C150423	Todd	Completed
YW/G	Moffat County	Agricultural Water Needs Assessment	Jan-08	201,410	\$0	201,410	Study or analysis of structural/nonstructural and consumptive/ nonconsumptive needs	C150418	Eric	Completed
Y/W/G	City of Grand Junction	Energy Development Water Needs Assessment (300,000 Joint Application see Colorado Sandwash basin coalbed methane production depletive effects on water resources	Mar-07	0	\$150,000	150,000	Study of consumptive water needs associated with energy development in the Colorado, White and Yampa river basins	C150407	Jacob	Completed
Y/W/G	Moffat County		Sep-08	20,000	\$98,835	118,835	Studies or analysis of consumptive water needs project or activity	C150435	Jacob	Completed
Y/W/G Basin Total Request	8			423,510	\$248,835	\$672,345			02/14/11	Completed
Jacob										
Water Supply Reserve Account Total Requests				\$4,712,034	\$8,945,429	\$13,657,463				

**September 13-14, 2011 Board Meeting
Instream Flow and Natural Lake Level Program
Summary of Resolved Cases**

The Board's ISF Rule 8i. states that:

“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 and authorized the Attorney General's Office to enter into stipulations that protect the CWCB's water right:

(1) Case No. 5-05CW149 – Application of Young Life

The Board ratified this statement of opposition at its November 2005 meeting. The Board's main objective in filing the statement of opposition in this case was to ensure that the Applicant's proposed amendment to its plan for augmentation does not injure the Board's instream flow water right on Crooked Creek. Staff, in cooperation with the Attorney General's Office, has negotiated a settlement to ensure that the CWCB's instream flow water right will not be injured.

The CWCB has appropriated the following instream flow water right that could be injured by this application:

CWCB Case No.	Stream/Lake	Amount (cfs)	Approp. Date	Watershed	County
90CW301	Crooked Creek	6 (04/15-08/14) 1.5 (08/15-04/14)	11/27/90	Colorado Headwaters	Grand

The CWCB and the Applicant have agreed to the entry of a decree that will prevent injury to the Board's ISF water right on Crooked Creek. This case amends the plan for augmentation decreed in Case No. 90CW297. CWCB was a party in the previous case and secured a stipulation in that case. However, while reviewing this amended claims, CWCB Staff realized that the terms of the previous stipulation were not being followed. As part of this 2005 case, Staff worked extensively with the Applicant, the water commissioner, and the augmentation plan coordinator for Division 5 to develop accounting forms which would comply with the terms of CWCB's stipulation with the applicant in the previous case and in this case. Staff is now confident that the augmentation plan and accounting will properly prevent injury to CWCB's water rights.

The Applicant has agreed to the following terms and conditions:

- paragraph 8(a)(i) of the Judgment and Decree in Water Court Case No. 93CW298 should be, and hereby is amended to read as follows:
 - “Wastewater from in-house domestic and commercial diversions from the Young Life Wells and Infiltration Gallery described in paragraphs 4(a) and 4(b) above are treated on-site by a central wastewater treatment facility. Approximately 5% of such in-house domestic and commercial diversions will be consumed. Current projections are for total in-house domestic and commercial diversions of approximately 42.5 acre feet per year, of which 2.15 acre feet will be consumed.”

- Young Life agrees that at times when the flow in Crooked Creek is below the CWCB's instream flow water right decreed in Case No. 90CW297 at a point immediately downstream of the Young Life wells and/or Young Life Infiltration Gallery, Young Life will: (a) divert and directly use for indoor uses during the irrigation season its senior Sheep Mountain Ditch water right pursuant to the change of water right decreed in Case No. 93CW298, subject to the terms and conditions of that decree; and (b) fully augment diversions for indoor uses during the non-irrigation season at or above Young Life's points of diversion. In lieu of augmenting diversions during the non-irrigation season, Young Life may pump back all of its wastewater effluent to a point on Crooked Creek adjacent to the points of depletion of Young Life wells or Young Life Infiltration Gallery, and then augment only depletions. Young Life will notify the Division Engineer and CWCB prior to initiating such pumpback operations.

(2) Case No. 5-10CW222 - Application of Michael Bair

The Board ratified this statement of opposition at its January 2011 meeting. The Board's main objective in filing the statement of opposition in this case was to ensure that the Applicant's proposed change of water rights does not injure the Board's instream flow water right on Fryingpan River if diversions are routed out of the stream channel for power generation. Staff, in cooperation with the Attorney General's Office, has negotiated a settlement to ensure that the CWCB's instream flow water right will not be injured.

The CWCB has appropriated the following instream flow water right that could be injured by this application:

CWCB Case No.	Stream/Lake	Amount (cfs)	Approp. Date	Watershed	County
73W1945	Fryingpan River	110/39	7/12/1973	Roaring Fork	Pitkin Eagle

The CWCB and the Applicant have agreed to the entry of a decree that will prevent injury to the Board's ISF water right on the Fryingpan River.

The Applicant has agreed to the following terms and conditions:

- Applicant agrees that CWCB has adjudicated the following instream flow water right to preserve the environment to a reasonable degree, which right was decreed prior to the filing of this application:

Case Number	Stream	Amount	Appropriation Date
73CW1945	Fryingpan River	110 c.f.s. (May 1 – October 31), 39 c.f.s. (November 1 – April 30)	7/12/1973

- Applicant shall, at his own expense, install a proper measuring device at the point of diversion for the water right decreed herein as required by C.R.S. § 37-92-502(5)(a), to the satisfaction of the CWCB and the Division Engineer.
- Applicant shall curtail diversions made pursuant to the water right decreed herein at all times when the flow of the Fryingpan River, as measured at the above-referenced measuring device, drops below the flow requirement of the CWCB instream flow right described above.

- Applicant shall install a controllable, lockable headgate at the point of diversion, to the satisfaction of the CWCB and the Division Engineer. The headgate shall be capable of regulating all flows and allowing diversions only when in priority.
- The Referee GRANTS the Application and ORDERS that 25.0 c.f.s. be hereby awarded to Bair Hydro, conditional, for power generation purposes.
- The Applicant shall maintain the hydro-electric system to ensure that it remains non-consumptive.