STATE OF COLORADO

Colorado Water Conservation Board
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MEMORANDUM

TO: Colorado Water Conservation Board

FROM: Jennifer Gimbel
CWCB Staff

DATE: September 13-15, 2010

SUBJECT: **Agenda Item 5d**, September 2010 CWCB Board Meeting Director's Report

~FEDERAL AND INTERSTATE~

U.S.-MEXICO NEGOTIATIONS: The seven basin states continue to meet with the U.S. Bureau of Reclamation, the U.S. State Department, and Mexico's representatives to discuss opportunities for water projects and water management strategies that could benefit both the U.S. and Mexico. The Office of the Attorney General and CWCB Staff will brief the Board about the status of these negotiations. *(Ted Kowalski)*

~STATEWIDE~

GROUND WATER COMMISSION MEETING: The Ground Water Commission held its most recent meeting on August 20, 2010 in Castle Rock, Colorado and the next meeting is scheduled for November 19, 2010, also in Castle Rock. For more information visit: http://water.state.co.us/cgwc/ *(Ted Kowalski)*

WATER CONSERVATION TECHNICAL ADVISORY GROUP (WCTAG): The WCTAG last met on August 17th. The next meeting is tentatively scheduled for mid-September. Currently, the group is reviewing and submitting comments on the Water Conservation Strategy report that will comprise the water conservation chapter in SWSI 2010.

Purpose of the WCTAG:

- Advance the science of water conservation in Colorado;
- Create a forum in which to vet the water conservation related work and projects that the CWCB is undertaking; and
- Develop partnerships between water providers and the CWCB in order to determine future directions in water conservation projects and research.

The group consists of water conservation and water resource experts from municipal water providers, water conservancy districts, environmental groups, academia and private consulting. The group has met monthly since March to review and work on water conservation related issues and research. Most recently they have reviewed the Water Conservation Level Analysis report and have been engaged in the SWSI Conservation section update. *(Kevin Reidy)*

DITCH BILL UPDATE: The U.S. Forest Service recently issued four Ditch Bill Easements to Marvine Ranch, LLC for water conveyance facilities on the White River National Forest. *(Linda Bassi)*

COLORADO WATERWISE BEST PRACTICES GUIDEBOOK: The Best Practices (BP) Guidebook is a water efficiency grant project to develop a set of water conservation best practices specific to Colorado. The Guidebook will assist water providers with the selection and implementation of effective water conservation programs and measures. The BP Guidebook will inform the update to SWSI by supplying the necessary best practices to develop various conservation strategies. At present time, the BP Guidebook is being printed & will be distributed in the first week of September. The BP Guidebook can be downloaded in PDF form at www.coloradowaterwise.org. Additionally, the Guidebook will be presented across the state at three stakeholder workshops in Pueblo (Sept. 30), Glenwood Springs (Oct.14) and Westminster (Oct. 21). *(Kevin Reidy)*

COLORADO WATERWISE ANNUAL EVENT: On September 24, 2010, Colorado WaterWise, (CWW) with financial assistance from the CWCB's Water Efficiency Grant Program, will hold their annual event in Denver at the Police Protective Association Event Center. The theme is "From the Mountain Top to the Tap: Using Tools and Policy to Make Every Drop Count." The cost is $100 Members/$150 Non-Members. Ken Salazar has been invited (although not confirmed) to be the keynote speaker. More information about the agenda will be available soon and can be found on the CWW website, www.coloradowaterwise.org. *(Veva Deheza)*

FLOODPLAIN MAP MODERNIZATION/RISK MAP UPDATE:
FY11 Activities: CWCB is coordinating with FEMA to determine the next counties to be studied. As part of Risk Map, FEMA's funding for scoping projects is now under the designation of "discovery funds".

FY10 Activities: FEMA funding has been obligated for Chaffee, Logan and Pitkin Counties. Task orders and Scopes of work have been submitted for approval. Projects are set to begin in September and October 2010.

FY09 Activities: The South Platte approximate floodplain delineation has been completed and approved by FEMA. Morgan County Floodplain mapping task and DFIRM database tasks now behind schedule due to delays in the review process. In addition, CDOT, AECOM, FEMA, CWCB, Morgan County and the Town of Brush have been meeting to discuss the restudy of Beaver Creek through the Town of Brush. The effective model did not include a series of bridges along Beaver Creek. AECOM has been contracted by CDOT to remodel this reach with revised hydrology. The schedule of the study is being coordinated with FEMA and CWCB to be sure it can be incorporated into the new DFIRM in a timely manner.

Prowers County DFIRM has now been in progress for over a year. There are three levees to analyze in the county. Field survey and topographic data for Prowers County has been completed. Hydraulic analysis has begun for all communities in the County. This project is on schedule.

FY08 Activities: Work continues for Gunnison, Montrose, Elbert, and Rio Grande Counties. The floodplain mapping has been completed for Gunnison County. Montrose County draft preliminary maps have been submitted for review. Rio Grande County and Elbert Counties have entered the preliminary phase. Final meetings were conducted for both counties and were very successful. Additional FEMA funding in the amount of $247,150 was provided to address identified levee issues along the Arkansas River and Fountain Creek in Pueblo County. FEMA has completed its review of the hydrology for Fountain Creek. The results have been distributed and some discussions are taking place between FEMA and stakeholders in regards to the flow differences between the FEMA study and previous studies that were submitted. The hydraulic analysis and floodplain mapping have been put on hold until a resolution can be reached on the Fountain Creek hydrology.

FY07 Activities: La Plata County maps are now effective. Summit County DFIRM has been delayed due to Zone D delineations. These are areas that have undetermined flood hazards or where no flood hazard analyses have been conducted. It will not affect any property owners or existing flood hazard areas but the effective maps will be delayed by approximately 6 months due to the re-delineation of Zone D areas. Summit County effective maps are projected for April

2011. Park County became effective in December 2009. Delta County maps became effective in July 2010. Teller County and Archuleta County have been 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 and Severance. Due to these levees, additional work was needed. The projected preliminary date for Weld County has been pushed back to the beginning of November 2010. Fremont County preliminary maps were distributed in late March. The final meeting was held in late June and a public meeting is scheduled for early October 2010. Clear Creek County draft preliminary maps were submitted for review in March 2010. The preliminary maps will be distributed at the end of September 2010. The Pueblo County Arkansas River Levee floodplain study is in progress, finalization is still progressing. This project is delayed due to the Fountain Creek hydrology.

FY 05 Activities: Mesa County DFIRM became effective in June 2010. The Garfield County DFIRM is almost complete. The USGS study that has delayed the project was recently completed and approved. The schedule for Garfield County DFIRM has been revised now and work has continued. It is hopeful that the preliminary maps for Garfield will be ready at the beginning of October 2010. The Montezuma County DFIRM went effective September 28, 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 is scheduled for July 7, 2010 and a public meeting will be held after all comments have been addressed on the maps. (*Thuy Patton)*

~ARKANSAS RIVER BASIN~

ARKANSAS RIVER DECISION SUPPORT SYSTEM FEASIBILITY STUDY: 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 Division of Water Resources in considering whether to recommend the development of an ArkDSS to the General Assembly.

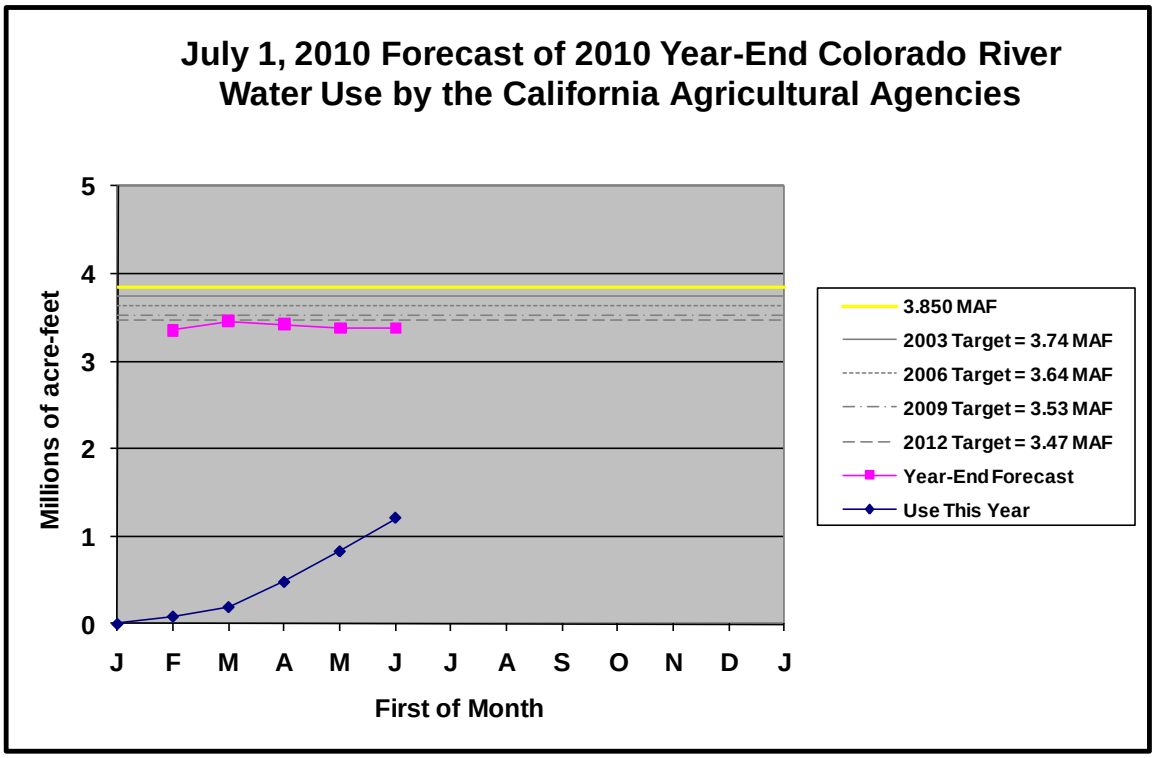
Interviews of Arkansas Basin water users have been conducted to assess the data and components needed for a decision support system. Numerous existing studies and data have been reviewed and a draft data collection report has been completed. Several DSS alternatives will be presented to the Advisory Committee and the Board in the next two months, with a proposed alternative identified in late 2010. The draft report will be available for review late in the year, with a final report completed in early 2011. *(Andy Moore)*

~COLORADO RIVER BASIN~

COLORADO RIVER WATER USE: As of June 30, 2010, storage in the four major Upper Basin reservoirs increased by 1,868,190 acre-feet and storage in the Lower Basin reservoirs decreased by 388,600 acre-feet during June 2010. Total system active storage as of July 5 was 34.639 million acre-feet (MAF), or 58 percent of capacity, which is 1.027 MAF less than one year

ago (Upper Basin reservoirs decreased by 0.536 MAF, and Lower Basin reservoirs decreased by 0.491 MAF).

The preliminary year-end estimate for 2010 is 3.381 MAF. The end-of-year measure for 2008 California agricultural consumptive use of Colorado River water under the first three priorities and the sixth priority of the 1931 *California Seven Party Agreement* was reported as 3.604 MAF; the preliminary end-of-year measure for 2009 is 3.290 MAF. The target under the Interim Surplus Guidelines (ISG) for the end of 2006 was 3.640 MAF, the target for 2009 is 3.530 MAF, and the target for 2012 is 3.470 MAF, thus California is in compliance with the ISG. *(Andy Moore)*



GRAND VALLEY LAKE – CONCEPTUAL FEASIBILITY STUDY: Attached ***(Attachment 1)*** is the Grand Valley Lake Conceptual Feasibility Study - Executive Summary for review. The Study is the result of a joint request by the Redlands Water and Power Company and Orchard Mesa Irrigation District to study the feasibility of constructing Grand Valley Lake. This study is an expansion of the Clay Report, completed in 2007, that evaluated the feasibility of diverting approximately 300 cfs from the Gunnison River via 50 to 60 miles of canals and tunnels to an off stream reservoir site located just south of Palisade, Colorado, referred to as Grand Valley Lake.

This study examines two potential reservoir sizes and alignments and three conveyance alignments. Reservoir yield analyses were prepared for the two reservoir capacities and preliminary assessments of probable construction costs were prepared for each combination of the conveyance alternatives and dam alignments. The two reservoir sizes examined were 154,000 acre feet and 39,800 acre feet, with costs ranging from $338M to $792M to construct. The report concludes with a preliminary identification of potential environmental issues. *(Tim Feehan)*

COLORADO RIVER BASIN AGRICULTURAL/URBAN/ENVIRONMENTAL WATER SHARING WORKSHOP: Supported by a grant from the Walton Family Foundation, 35 individuals representing agricultural, urban and environmental water concerns convened on August 12th-13th in Castle Rock, Colorado, to develop recommendations for the western governors on various means to share water among these diverse interests.

The problem that brought the group together stems from the awareness that agriculture has been targeted as the default reservoir to meet projected water shortfalls. Finding alternatives to the permanent transfers of water from agriculture was the group's objective. The participants focused on how we could meet urban and environmental needs while protecting water for agriculture.

Participants focused on, and made targeted recommendations regarding:

- Creative ways to cooperatively share and agree on infrastructure to meet multiple objectives;
- Means to clear the way for fast and flexible non-permanent transfers to meet drought and other needs by changing law and policy;
- A new paradigm for grassroots, stakeholder-driven development of programs to meet multiple needs;
- A governor appointed liaison approach to speed multi-benefit, multi-support programs and projects through a one-stop regulatory process; and
- Viewing watersheds holistically instead of piecemeal to take advantage of opportunities for a more optimized use of a scarce resource.

The organizing group began work 18 months ago, facilitated by MaryLou Smith from the Colorado Water Institute at CSU. Original members of the group came from Western States Water Council, The Nature Conservancy, Environmental Defense Fund, Western Urban Water Coalition and the Family Farm Alliance and Todd Doherty of the CWCB.

The larger participant group was gleaned from more than 50 interviews conducted with those deemed to be doing innovative work on this subject across the West, as well as with those who had practical experience with water transfers. The full group participating in the workshop is attached.

The conference was held at a ranch above Castle Rock and the participants agreed on about a dozen recommendations which will be made available to the Western Governors, the Bureau of Reclamation, and others. A report and documentary will be forthcoming. A list of the organizers and participants is provided below. *(Todd Doherty)*

Ag/Urban/Environmental Water Sharing Workshop Participants:

Curt Aikens—Yuba County Water Agency—CA
Beth Bardwell—Audubon New Mexico—NM
Brian Betcher—Maricopa/Stanfield Irrigation District—AZ
Peter Binney—Black and Veatch—CO
Reeves Brown—3R Ranches—CO
Bonnie Colby—University of Arizona—AZ
John Eckhardt—Imperial Irrigation District—CA
Larry Hicks—Lower Snake Water Conservancy District—WY

Ron Jacobsma—Friant Irrigation District—CA
Andy Jones—Lind, Lawrence & Ottenhoff Law Firm—CO
Jack Keller—Keller-Bleisner Engineering—UT
Larry Macdonnell—University of Wyoming—WY
Peter Nichols—Trout, Raley, Montano, Witwer & Freeman Law Firm—CO
David Pilz—Freshwater Trust—OR
Halla Razak—San Diego County Water Authority—CA
Adam Schempp—Environmental Law Institute—Washington DC
Loretta Singletary—University of Nevada Extension Service—NV
Dick Wolfe—Colorado State Engineers Office—CO

Work Group Members:
Nathan Bracken—Western States Water Council—UT
Todd Doherty—Colorado Water Conservation Board—CO
Bill Hasencamp—Metropolitan Water District—CA
Taylor Hawes—The Nature Conservancy—CO
Jonne Hower—Western Federal Agency Support Team (WestFAST)—UT
Tom Iseman—Western Governors' Association—CO
Dan Keppen—Family Farm Alliance—OR
Pat O'Toole—Family Farm Alliance—WY
Mark Pifher--Western Urban Water Coalition and Aurora Water—CO
Jennifer Pitt—Environmental Defense Fund—CO
James Pritchett—Colorado State University—CO
Ron Rayner—Tumbling T Ranches—AZ
MaryLou Smith—Colorado Water Institute, Colorado State University—CO
Reagan Waskom—Colorado Water Institute, Colorado State University—CO

Other:
Morgan Snyder—Walton Family Foundation—Washington DC
Vince Roos—Facilitator—CA
John Foster—Facilitator—CO
Tara Steckley—Facilitator—CO

REPORT ON ECONOMIC BENEFITS OF INSTREAM FLOWS AND THE RECOVERY PROGRAM: The CWCB staff, in coordination with the Environmental Defense Fund ("EDF"), co-sponsored a report produced by Prof. John Loomis and Jeff Ballweber of the Department of Agricultural and Resource Economics, Colorado State University, entitled "Cost Savings Associated with the Upper Colorado River Basin Endangered Fish Recovery Program, Instream Flows, and Prospects for the Future." Staff gave a presentation to the Board on the report at the July 2010 CWCB meeting, and then posted the report on the CWCB website for public review and comment, with comments due on August 20, 2010.

Comments were submitted by CWCB staff and by the U.S. Fish and Wildlife Service, specifically staff of the Upper Colorado River Basin Endangered Fish Recovery Program. CWCB staff will work with Prof. Loomis to incorporate the comments into the report and intends to provide the Board with the final report in November. *(Linda Bassi)*

SECOND MEETING OF THE COLORADO RIVER ANNUAL OPERATING PLAN – The U.S. Bureau of Reclamation held its second meeting regarding the Annual Operating Plan on August 26, 2010 in Las Vegas, Nevada. The Staff raised specific concerns about the second draft of the AOP, and we will discuss specific concerns regarding the AOP at the Board meeting. *(Ted Kowalski)*

GLEN CANYON DAM ADAPTIVE MANAGEMENT WORKGROUP – The AMWG met on August 24-25, 2010 in Phoenix, Arizona and approved a budget, a proposed hydrograph, and a Desired Future Conditions report, among other actions. The AMWG's actions will be discussed in further detail at the Board meeting. *(Ted Kowalski)*

~PLATTE RIVER BASIN~

PLATTE RIVER RECOVERY PROGRAM: The Platte River Recovery Implementation Program ("Program") Governance Committee will hold its next meeting in Kearney, Nebraska on September 14-15, 2010—during the CWCB's Board meeting. The Program participants continue to make progress on the land acquisitions, adaptive management work, and on the water projects. For more information, please visit: http://www.platteriverprogram.org/Pages/default.aspx *(Ted Kowalski)*

CHATFIELD DOWNSTREAM CHANNEL IMPROVEMENT PROJECT: Staff from the CWCB Watershed & Flood Protection Section are partnering with the Urban Drainage & Flood Control District and the South Suburban Parks & Recreation District to address maintenance needs along the South Platte River. An annual project inspection report from the U.S. Army Corps of Engineers, outlining required maintenance activities and vegetation removal, is expected this month. The FY 10/11 maintenance plan will likely involve removal of non-native trees growing within the riprap along the banks of the river, safety upgrades to the Union Avenue Boat chute, and typical repairs/debris removal at outlet structures and drop structures. Staff also hopes to work with project partners to plant new trees along the river outside of the flood conveyance zone. *(Tom Browning)*

~SOUTHWEST RIVER BASINS~

TACOMA POWER PLANT RELICENSING UPDATE: The Federal Energy Regulatory Commission ("FERC") issued Public Service Company of Colorado d/b/a Xcel Energy a new license for its Tacoma Hydroelectric Project on January 29, 2010 with an effective date of July 1, 2010. The Tacoma Project is located on Cascade Creek and the Animas River just north of Durango. Xcel owns the water rights to divert the flows of Cascade Creek into a conduit that delivers those flows to the Little Cascade Creek watershed and then into Electra Lake. From Electra Lake, the water is diverted into a penstock to the Tacoma Powerhouse in the Animas River canyon. Condition 17 of the U.S. Forest Service ("USFS") Section 4(e) conditions requires Public Service to provide year-round minimum flows in the bypassed reach in Cascade Creek within six months of the effective date of the license. Condition 18 requires Public Service to construct, operate and maintain a "guaranteed priority stream flow device," approved by the USFS, to ensure compliance with Condition 17. On June 18, 2010, Public Service filed a request for extension of time to July 1 2012 to meet these conditions. The intent of the request was to facilitate the finalization of current ongoing efforts to complete alternative mitigation and enhancement measures with respect to Conditions 17 and 18. By letter dated July 6, 2010, the

USFS indicated its support for an extension of the compliance date to July 1, 2011. On July 19, 2010, FERC issued an order extending the time for compliance with Conditions 17 and 18 to July 1, 2011. *(Linda Bassi)*

SAN JUAN RIVER RECOVERY PROGRAM COORDINATION COMMITTEE MEETING: The San Juan River Recovery Implementation Program will hold its annual fall meeting on September 23, 2010, in Durango, Colorado. For more information, please see the Program's link: http://www.fws.gov/southwest/sjrip/. *(Ted Kowalski)*

RIVER PROTECTION WORGROUP: The River Protection Workgroup ("RPW"), has continued to conduct work on the San Juan River basin, and has begun work on the Vallecito Creek/Pine River basin. Both basin groups held a joint meeting and panel on wild and scenic rivers alternatives on August 26, 2010, in Pagosa Springs, Colorado. Senator Whitehead, Meghan Maloney, and Ted Kowalski all served on the panel and the workshop was well attended. The next meeting of the San Juan RPW will be held on September 23, 2010. For more information, see the following link: http://ocs.fortlewis.edu/riverprotection/. *(Ted Kowalski)*

~AGENCY UPDATES~

2010 IRRIGATED LANDS REFRESH PROJECT: This year CWCB is partnering with DWR to complete an irrigated lands refresh project for most of the state. Crop data has been collected by water commissioners over the course of the summer which will be used by CWCB and DWR GIS staff to complete satellite imagery analysis of irrigation status and crop types for the state's irrigated lands. Completion of the project, which will include new GIS files, is anticipated in 2012. *(Carolyn Fritz)*

GOVERNOR'S WATER AVAILABILITY TASK FORCE: The next WATF meeting is scheduled for September 27, 2010 at the Colorado Division of Wildlife Headquarters. Please check the website (http://cwcb.state.co.us/public-information/flood-water-availability-task-forces/Pages/main.aspx) for additional information. *(Ben Wade)*

CWCB WATER EFFICIENCY GRANT FUND PROGRAM UPDATE: The OWCDP has awarded four additional grants through the Water Efficiency Grant Fund to the following water providers:

- City of Westminster: $38,130 to develop a Water Conservation Plan
- East Larimer County Water District: $9,790 to fund a leak detection program
- Town of Frederick: $15,000 to develop a Water Conservation Plan
- Town of Firestone: $41,455 to develop a high efficiency toilet and washing machine rebate program

(Ben Wade)

WATER SUPPLY RESERVE ACCOUNT BALANCE SUMMARY AND PROJECT STATUS LISTS: To provide an update on the current balances and project status of the Water Supply Reserve Account program, the following tables are attached. *(Greg Johnson)*

- List of Completed WSRA Projects ***(Attachment 2)***
- List of WSRA Projects in Progress ***(Attachment 3)***
- List of WSRA Projects in the Contracting and Procurement Process ***(Attachment 4)***

FEASIBILITY OF PERMANENCY AND PENETRATION OF WATER CONSERVATION SAVINGS: The OWCDP is undertaking a study with Colorado State University to assess what barriers and opportunities exist at the provider level in order to carry out future conservation savings potential and penetration rates research. Working with a subset of the partner utilities, such as Denver Water, Aurora Water, Colorado Springs Utilities, this project would also include a demonstration of the statistical analysis that can be done with existing information, including illustrating areas of need. Ultimately this future research will help define what the water conservation potential is out to 2050. Initial interviews with Denver Water, Colorado Springs and Aurora Water have been completed along with data gathering and analysis. This project has a finish date of November 2010 with subsequent phase beginning in July 2011. *(Kevin Reidy)*

DRAFT BOARD POLICY 20 – CONSIDERATION AND APPROVAL OF FISH AND WILDLIFE RESOURCES FUND GRANT APPLICATIONS PURSUANT TO SUB-SECTIONS 2-4 OF SECTION 37-20-122.2, C.R.S.: Staff is working on a new Board Finance Policy to address Sub-sections 2-4 of the Fish and Wildlife Resources Statute, 37-20-122.2. These paragraphs discuss CWCB funding for Mitigation Grants, Enhancement Grants, and Species Recovery Grants. The purpose of the new policy is to establish an approval process for grants from the Fish and Wildlife Resources Fund that do not relate to Sub-section 5 of the statute, which is addressed in Board Policy 15. Staff is currently reviewing the proposed policy in-house. Staff will seek Division of Wildlife comments before presenting it to the Board in November 2010. *(Chris Sturm)*

VAIL/BEAVER CREEK CLOUD SEEDING PERMIT: CWCB Staff, with support from the Colorado Attorney General's Office, will hold a public hearing regarding a Western Weather Consults application to renew its Vail/Beaver Creek wintertime ground-based cloud seeding permit. This program was Colorado's first permitted program in 1972 and a catalyst for the State statutes for a statewide permitting program. The Vail and Beaver Creek ski areas have contracted with Western Weather Consultants of Durango Colorado for 34 of the last 38 years. WWC operates 21 generators along the I-70 corridor to target the two ski areas from November 1st through January 31st each year, but can operate longer in some years. Complete details of the operations are available from: Western Weather Consultants at P.O. Box 58, Durango, Colorado, 81302 or by emailing larry@westernweather.com.

The CWCB encourages oral and written comments at the Public Hearing for the Record of Decision. Please contact Joe Busto, CWCB, 1313 Sherman Street # 721, Denver, Colorado, 80203, or call (303) 866 3441 ext. 3209, or email joe.busto@state.co.us to submit comments on the permit renewal application. Interested parties should also attend the public hearing at the Vail Public Library conference room at 292 West Meadow Drive, Vail CO., held on September 21st, 2010 from 1:00PM to 3:00 PM. The public hearing will be noticed in the following papers for the two weeks prior to the hearing: Eagle Valley Enterprise, Glenwood Post Independent, Granby Ski Hi News, Leadville Herald, Aspen Times, Steamboat Pilot, Summit County Journal. Interested parties can also request a copy of the WWC Operational Report from winter 2009-10 from the CWCB in preparation for the public hearing. *(Joe Busto)*

DESIGN AND CONSTRUCTION STATUS REPORT: The CWCB Finance Section has not substantially completed any projects in FY 10/11. For FY 10/11 we have 30 projects under construction and 21 projects in the design phase, involving over $237,000,000 in loan funds.

The attached spreadsheet ***(Attachment 5)*** summarizes project status, including budget, construction schedule, and progress to-date. The attached progress report briefly outlines all active project design and construction information and progress to date. *(Kirk Russell)*

CONSTRUCTION FUND, SPECIAL FUNDS AND SEVERANCE TAX TRUST FUND ACCOUNTS – NON-REIMBURSABLE INVESTMENTS STATUS REPORT – FISCAL YEAR 2009-2010: The Colorado Water Conservation Board (CWCB) Non-Reimbursable Investments Status Report has two sections. The first section includes the non-reimbursable investment projects from the Construction Fund, Special Funds and Severance Tax Accounts. The attached table **(*Attachment 6*)** summarizes the non-reimbursable investment projects in progress from July 2009 thru June 2010. 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 ***(Attachment 7)*** status for the same period. *(Steve Biondo)*

STREAM & 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. *(Rob Viehl)*

Case No.	Applicant	Stream/ Case Number	ISF Amount	Percent Injury	Cumulative % Injury	Previous Cases
2-94CW005	Game Trails	Cottonwood Creek/ 2-79CW115	20 cfs (summer) 20 cfs (winter)	0.0839% 0.0000%	0.6228% 0.2986%	141
7-10CW041	Newell Right & Betty Church	Florida River / 7-77W1763	7 cfs (summer) 14 cfs (winter)	0.0924% 0.0016%	0.8460% 0.4364%	21
7-10CW041	Newell Right & Betty Church	Florida River / 7-77W1764	12 cfs (summer) 20 cfs (winter)	0.0539% 0.0011%	0.1745% 0.0652%	8

RECENTLY DECREED ISF WATER RIGHTS: On May 3, 2010, the Division 4 Water Court decreed an instream flow water right to the CWCB on Schafer Gulch in Case No. 09CW074 for 1.30 cfs (April 1 – October 31), with an appropriation date of January 27, 2009. This right is an increase to an existing ISF flow right decreed in case 4-84CW383 for 1.0 cfs (January 1 – December 31) with an appropriation date of May 4, 1984. The upstream terminus is the headwaters and the lower terminus is the confluence with Henson Creek. This ISF reach is approximately 1.7 miles long and flows through Hinsdale County.

On May 3, 2010, the Division 4 Water Court decreed an instream flow water right to the CWCB on Bent Creek in Case No. 09CW076 for 1.55 cfs (April 1 – October 31), with an appropriation date of January 27, 2009. This right is an increase to an existing ISF flow right decreed in case 4-80CW101 for 2.0 cfs (January 1 – December 31) with an appropriation date of March 17, 1980. The upstream terminus is the headwaters and the lower terminus is the confluence with

the Lake Fork Gunnison River. This ISF reach is approximately 3.0 miles long and flows through Hinsdale County. *(Rob Viehl)*

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 rights:

(1) Case No. 4-07CW155 - Application of LeValley Ranch, T. Michael Clarke

The Board ratified the statement of opposition filed in this case at its January 2008 meeting. The Board's main objective in filing the statement of opposition was to ensure that the Applicant's proposed change of use and alternate points of diversion would not injure the Board's instream flow water right on Cochetopa 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 Board holds the following instream flow water right that could have been injured by this application:

CWCB Case No.	***Stream/Lake***	**Amount (cfs)**	**Approp Date**	**Watershed**	**County**
4-84CW375	Cochetopa Creek	8.5	5/4/84	Tomichi Creek	Saguache & Gunnison

The CWCB and the Applicants have agreed to the entry of a decree that will prevent injury to the Board's ISF water rights on Cochetopa Creek. The Applicants have agreed to the following terms and conditions:

- Applicant withdrew its claim for an alternate point of diversion for the Rausis No. 2 Ditch because of expansion of use concerns.
- The approval of an alternate point of diversion between the Vader Rausis Ditch and the Jennings Elsen Ditch is limited to the physical availability of water in priority at the original point of diversion.
- The Court shall retain jurisdiction in this matter on the question of injury to the vested water rights of others for five (5) years after the decree is entered.

(2) Case No. 5-07CW241 -- Application of Stella Polare, LLC

The Board ratified the statement of opposition filed in this case at its March 2008 meeting. The Board's main objective in filing the statement of opposition was to ensure that the Applicant's proposed augmentation plan and exchange would not injure the Board's instream flow water rights on the Roaring Fork River by not replacing depletions in time, place and amount. 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 Board holds the following instream flow water rights that could have been injured by this application:

CWCB Case No.	*Stream/Lake*	Amount (cfs)	Approp. Date	Watershed	County
5-76W2948	Roaring Fork River	32	1/14/76	Roaring Fork River	Pitkin
5-85CW646	Roaring Fork River	55/30	11/8/85	Roaring Fork River	Pitkin, Eagle
5-85CW639	Roaring Fork River	145/75	11/8/85	Roaring Fork River	Pitkin, Eagle, Garfield

The CWCB and the Applicants have agreed to the entry of a decree that will prevent injury to the Board's ISF water rights on the Roaring Fork River. The Applicants have agreed to the following terms and conditions:

- Pursuant to §37-92-102(3)(b), C.R.S. (2009), CWCB and the Applicant recognize that the First Priority of the Stella Polare Well has been used, at the rate of 15 g.p.m., for domestic use in one single family residence and for the irrigation of not more than 1,000 square feet of lawns and gardens (up to a cumulative total of 2.95AF annually) since December 31, 1966. These uses were being made pursuant to appropriation or practices existing at the time of the CWCB's appropriations of instream flow rights on the Roaring Fork River in Case Nos. 76W2948, 85CW646 and 85CW639.
- The limited subordination of the instream flow water rights to the Applicant's pre-existing water use decreed herein shall not interfere with the administration of the Stella Polare Well priority as against other water rights, and shall not result in a general subordination of the CWCB's instream flow rights on the Roaring Fork River to any other junior water rights.
- At times when the instream flow water rights decreed to the CWCB in Case Nos. 76W2948, 85CW646 and/or 85CW639 are not being met and the CWCB has placed a call for said water right(s), the Applicant shall immediately dedicate all available augmentation supplies to full replacement in time, location and amount of the out-of-priority depletions associated with Second Priority of the Stella Polare Well and pond evaporation uses.
- Pursuant to C.R.S. §37-92-305(8), the plan for augmentation is sufficient to permit the continuation of diversions when curtailment would otherwise be required to meet a valid senior call for water, because the Applicant will provide adequate replacement water necessary to meet the lawful requirements of a senior diverter at the time and location and to the extent that the senior would be deprived of his or her lawful entitlement by the Applicant's diversion. During periods of a valid call when there is insufficient on-site storage for augmentation and when there is no exchange potential of BWCD water, or when there is insufficient on-site storage to meet a valid call originating from a water right at or above the confluence of the Roaring Fork and Frying Pan Rivers, Applicant shall discontinue irrigation from all out-of-priority sources and shall cease all out-of-priority diversions from the First Enlargement of the Lewis Creek Ditch No. 1into the Stella Polare Pond Nos. 1 through 4.
- The Court shall retain jurisdiction in this matter on the question of injury to the vested water rights of others for a period beginning on the date this decree is entered and extending until five years after the Applicant provides written notice to all parties, the Division Engineer and the Court that the annual out-of-priority depletions replaced under the plan equal or exceed 75% of those listed in Table 3, column 5 of the Decree.

(3) Case No. 5-08CW036 -- Application of Douglas Zook

The Board ratified the statement of opposition filed in this case at its July 2008 meeting. The Board's main objective in filing the statement of opposition was to ensure that the Applicant's proposed plan for augmentation would have replaced depletions in the same amount, timing or location at which they occur.

The CWCB holds the following instream flow water rights that could have been injured by this application:

CWCB Case No.	*Stream/Lake*	Amount (cfs)	Approp. Date	Watershed	County
5-90CW308B	Fraser River	30/19	11/27/90	Upper Colorado River	Grand
5-80CW447	Colorado River	90	7/8/80	Colorado River	Grand
5-80CW446	Colorado River	135	7/8/80	Colorado River	Grand
5-80CW448	Colorado River	150	7/8/80	Colorado River	Grand

- On July 15, 2010, the Applicant filed an Uncontested Motion to Withdraw and Dismiss the Amended Application. It stated that " In light of the status of Applicant's overall real estate activities in Colorado, coupled with the economic downturn that has affected the pace of all of Applicant's real estate projects, Applicant has determined not to pursue adjudication of the plan for augmentation set forth in the Amended Application".
- By Order of the Court on July 16, 2010, the Amended Application was withdrawn and the claims for conditional water rights were dismissed with prejudice as to the claims of appropriation set forth in the Amended Application and as to any priorities based on the dates of those claimed appropriations.

(4) Case No. 5-08CW158 -- Application of Berlaimont Estates, LLC

The Board ratified the statement of opposition filed in this case at its March 2009 meeting. The Board's main objective in filing the statement of opposition was to ensure that the Applicant's plan for augmentation would not replace depletions in time, location and amount to prevent injury to the Board's instream flow water rights on the Eagle River. 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 Board holds the following instream flow water rights that could have been injured by this application:

CWCB Case No.	*Stream/Lake*	Amount (cfs)	Approp. Date	Watershed	County
5-80CW134	Eagle River	85 (05/1 – 9/30) 35 (10/1 - 4/40)	3/17/80	Eagle River	Eagle
5-80CW126	Eagle River	110 (5/1-9/30) 45 (10/1 - 4/40)	3/17/80	Eagle River	Eagle
5-80CW124	Eagle River	130 (5/1-9/30) 50 (10/1 - 4/40)	3/17/80	Eagle River	Eagle

The CWCB and the Applicants have agreed to the entry of a decree that will prevent injury to the Board's ISF water rights on the Eagle River. The Applicants have agreed to the following terms and conditions:

- Applicant acknowledges that the CWCB has adjudicated the instream flow water rights above (80CW134 and 80CW126, Division 5) to preserve the natural environment to a reasonable degree, which rights were decreed prior to the filing of the application in this proceeding, Case No. 08CW158.
- Applicant acknowledges that the Colorado Water Conservation Board's instream flow water right on the Eagle River decreed in Case Nos. 80CW134 and 80CW126 are senior to the Applicant's water rights decreed in this action.
- Subject to the requirements of the decrees in Case Nos. 80CW134 and 80CW126, diversions of Applicant's water rights are subject to curtailment at times when the flow of the Eagle River is below the CWCB's decreed instream flow rates or when Applicant's diversions would reduce the flows in the Eagle River below the CWCB 's decreed instream flow rates.
- When Applicant's Berlaimont Estates Ditch, Spring, or Pond rights are out-of–priority because of a valid legal call on the Eagle River and there is not a valid call on Beard Creek, diversion into the Berlaimont Estates Ponds No. 1 and 2 may continue, but releases shall be made from Berlaimont Estates Ponds No. 1 and 2 pursuant to Table 1 to replace all of the inflow together with the out-of-priority depletions associated with irrigation, domestic, and livestock uses, and the evaporation from the Berlaimont Estates Ponds No. 1 and 2. During this call period, although diversions into the Berlaimont Estates Ponds No. 1 and 2 may continue, no new water will be stored in said ponds. Nonetheless, water may be brought into the ponds for immediate use through the ditch and spring rights described above. This water will either be bypassed immediately or flowed through the ponds, for application to beneficial use. In this call scenario, applicant will make releases from the pond to drop the ponds commensurate with inflow, all depletions, and the evaporation rate. Applicant shall modify Table 1 pursuant to Paragraph 14(a)(2) above to reflect the percentage of lots and homes depletive to Beard Creek prior to making any of the conditional rights described above absolute. The releases shall be made from the outfall of the lower pond, which is located at a point located in the NE1/4 SE1/4 of Section 29, Township 4S, Range 82, West 6th P.M. approximately 2,160 feet from the South section line and 360 feet from the East section line. Water from either pond may be transferred to the other pond during this call period.
- Adequacy of Augmentation Supply. The water to be provided for augmentation shall be of a quality and quantity so as to meet the requirements for which the water has been used by senior downstream appropriators and therefore meet the requirements of C.R.S. § 37-92-305(5). As determined in paragraph 12 above, the augmentation supply from the Berlaimont Estates Ponds No. 1 and 2 will be available in drought years under the engineering analysis submitted to the Court.
- State Engineer shall curtail all out-of-priority diversions, the depletions from which are not so replaced under the terms and conditions of this decree as to prevent injury to vested water rights. The transit losses associated with replacement releases in this decree are only for the purposes of establishing that the plan can operate and may be sufficient to prevent injury.

Actual transit losses will be determined and assessed at the time releases are made and may be modified per CRS 37-80-102(7) and CRS 37-83-104 as determined necessary by the Division Engineer.

- The Applicant shall install measuring devices, provide accounting and supply calculations regarding the timing of depletions as required by the Division Engineer for the operation of the plan of augmentation.
- The Court shall retain jurisdiction over this plan for augmentation pursuant to C.R.S. § 37-92-304(6) on the question of injury to the vested water rights of others from the date of this decree seven years after Applicant provides written notice to the Opposers, the Division Engineer, and the Court of certain build out conditions.

(5-11) Applications of the Upper Eagle Regional Water Authority, Case Nos. 5-98CW205, 5-98CW270, 5-03CW78, 5-02CW403, 5-06CW96, 5-06CW97, and 5-09CW192; and DWR/CWCB v. UERWA, Case No. 5-08CW145.

- The Authority had been using a table of depletions factors to calculate its out-of-priority depletions in connection with the "Original Decrees" and the decrees in Case Nos. 98CW205, 98CW270, and 03CW78. The State challenged those depletion factors on the basis that they did not match the actual development within the Authority. Parties reached agreement on a method to determine out-of-priority depletions and replacement obligations within the Authority's service area.
- This settlement resolved the State's participation in all five Case Nos. 98CW205, 98CW270, 03CW78, 02CW403, and 06CW97. The settlement also included a partial settlement regarding a new application filed by the Authority in Case No. 09CW192.
- Case No. 5-02CW403 and 5-09CW192 - CWCB stipulated to entry of a decree in 5-02CW403 that will fully protect its water rights on the Eagle River. For Case Nos. 5-02CW403 and 5-09CW192, the parties agreed that the depletion rate for in-building use treated by central wastewater treatment plant will be 5% of the amount diverted for such use, and the irrigation depletion rate will be 80% of the amount diverted for such use. The stipulation constituted only a partial stipulation for Case No. 5-09CW192, fully resolving the depletion factor issue, and is not a stipulation to a final decree in that case.
- Case No. 5-06CW96 & 97 - All parties stipulated to a withdrawal of these cases and to move forward with related Case Nos. 5-09CW191 & 192 instead. The cases were dismissed in August, 2010.
- Case No. 5-08CW145 – This case involved a dispute over the proper interpretation of the Authority's decree in Case No. 5-00CW83 entered on April 23, 2001. The Court ordered and decreed that the 5-00CW83 ruling did not decree a change in the places of use for the water rights. *(Kaylea White)*

~ATTACHMENTS~

- **01 Grand Valley Lake Executive Summary**
- **02 WSRA Completed Projects**
- **03 WSRA In Progress**
- **04 WSRA Pending Projects**
- **05 Design Construction Status Report**
- **06 Non-Reimbursable Project Summaries**
- **07 Severance Tax Trust Fund Operational Account Project Summaries**

Grand Valley Lake - Conceptual Feasibility Study

Prepared for the Colorado Water Conservation Board
February 2010

AECOM
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Executive Summary

A presentation of a potential "Grand Valley Lake" (GVL) project was made to the Colorado Water Conservation Board (CWCB) in September 2007. Subsequent to that presentation, the Redlands Water and Power Company (Redlands) and the Orchard Mesa Irrigation District (OMID) made a joint request to the CWCB for a comprehensive study of the feasibility of the project. Project information, including letters of support for the study from the two study sponsors, was provided to the CWCB in a document titled "Potential Grand Valley Lake Study" that was compiled by Donald E. Clay Professional Engineers and Associates [Clay, 2007]. This supporting information is referred to below as the "Clay Report". It contains preliminary information for a new dam and reservoir south of the Colorado River, between the towns of Grand Junction and Palisade, Colorado described as follows:

> "This plan would divert about 300 cfs of water from the Gunnison River via 50 – 60 miles of canal and tunnels. The aqueduct would provide an average annual water supply of 178,000 acre-feet to the potential Grand Valley Lake (Reservoir) for use in the Grand Valley and surrounding areas. The off stream lake would [have] a surface area of about 1,500 – 2,000 acres."

Information presented in the Clay Report at varying levels of detail includes:

- Preliminary Cost Estimates and Layouts
- Site Geology
- Hydrology
- Water
- Quality
- Water Rights
- Economics

This report examines two reservoir sizes (with corresponding variations in dam alignments) and three conveyance alignments. Reservoir yield analyses were prepared for the two reservoir capacities. Preliminary assessments of probable construction costs were prepared for each combination of conveyance alternatives and dam alignments. The report concludes with a preliminary identification of potential environmental issues.

Conveyance

As presented in the Clay Report, water supply for the Grand Valley Lake would be conveyed from a gravity diversion on the main stem of the Gunnison River, downstream of the confluence with the North Fork of the Gunnison. Both gravity-fed and pumped conveyance systems are presented below. Based on the reservoir yield analysis presented in Section IV, two capacities; the 300 cfs capacity used in the

Clay Report and a 115 cfs capacity were considered for the two alternative reservoir sizes presented in the next section. Three conveyance alignments were considered for both capacities, resulting in six conveyance system configurations.

Two gravity-flow systems and one pumped-flow system were considered in this study. Both of the gravity flow alignments divert water from the Gunnison River just east of Orchard City to provide sufficient head to convey flows from the diversion to the proposed reservoir. A diversion structure in the Gunnison River will be required for both of the gravity flow conveyance systems. The concept (location and height) presented in the Clay Report was used in this study. Geologic conditions along the proposed conveyance alignments from the diversions on the Gunnison River to the proposed Grand Valley Dam and Reservoir site have been reviewed and are characterized below in Appendix B based on review of published and web-accessible data and a site reconnaissance conducted on April 30 and May 1, 2009. Potential geologic hazards are identified and described in Appendix B. Geotechnical considerations related to design and construction of the proposed conveyance facilities are discussed in Section II.B.

Based on available information reviewed for this study, site reconnaissance, and experience with other sites in similar geologic settings, it does not appear that there are any fatal flaws to construction of the conveyance facilities proposed to supply the Grand Valley Dam and Reservoir. Information in the Clay Report was used herein to facilitate apple-to-apples comparisons to the extent possible

Dam Alignments and Appurtenant Structures

Two dam alignments at the reservoir site identified in the Clay Report were investigated to bracket a range of reservoir sizes. The normal maximum reservoir water surface elevation for both alignments was set at 4990 MSL. The capacities of appurtenant structures (spillway and outlet works) were based on Colorado Office of the State Engineer (SEO) regulations. Table E.1 summarizes the two dam configurations.

Table E1. Summary of Dam Configurations

Alignment	Approximate Dam Height, ft	Reservoir Storage Volume, Acre-ft	Embankment Volume, yd^3
1	200	154,000	14,100,000
2	145	39,800	6,680,000

Based on available information reviewed for this study, site reconnaissance, and experience with other dam sites in similar geologic settings, it does not appear that there are any fatal flaws to the construction of an earth dam at the proposed Grand Valley Dam and Reservoir site.

Reservoir Yield Analysis

The annual yield of Grand Valley Lake that could be delivered every year was estimated using a reservoir operations model developed in Excel for a study period of 1975 through 2005. This period contains at least one short intensely dry year (1977) as well as a more sustained drought (2001 through 2004). In general, reservoir yield is a result of the interplay among the water supply (inflow) time series, the demand or release (outflow) time series, and the capacity of the reservoir. Two reservoirs of different capacity were analyzed: a 154,500-af reservoir (Alignment 1), and a 39,800-af reservoir (Alignment 2). The inflow and outflow time series for the analyses are described below.

According to the model, annual (1975 – 2005) physical flow at the Lazear gage averages 1.14 maf, of which 1.02 maf is available to a junior right. Water is least available from January through March, and is also unavailable in late summer of dry years (1977, 1990, and 2002 through 2004). May and June available flows often exceed 100,000 af and can range over 600,000 af, greatly exceeding the range of likely diversion capacities (200 – 400 cfs, or approximately 12,000 – 24,000 af/month) for the canal.

An example composite demand on the large reservoir (Alignment 1), assuming releases of 150,000 af/yr, is shown in Figure E1. In wet and above average years, the Fish Release (salmon color) is not made. The shape of the composite demand pattern and the proportion assigned to each use in a given month vary with the annualized demand, because irrigation use is always preserved, regardless of the yield being tested.

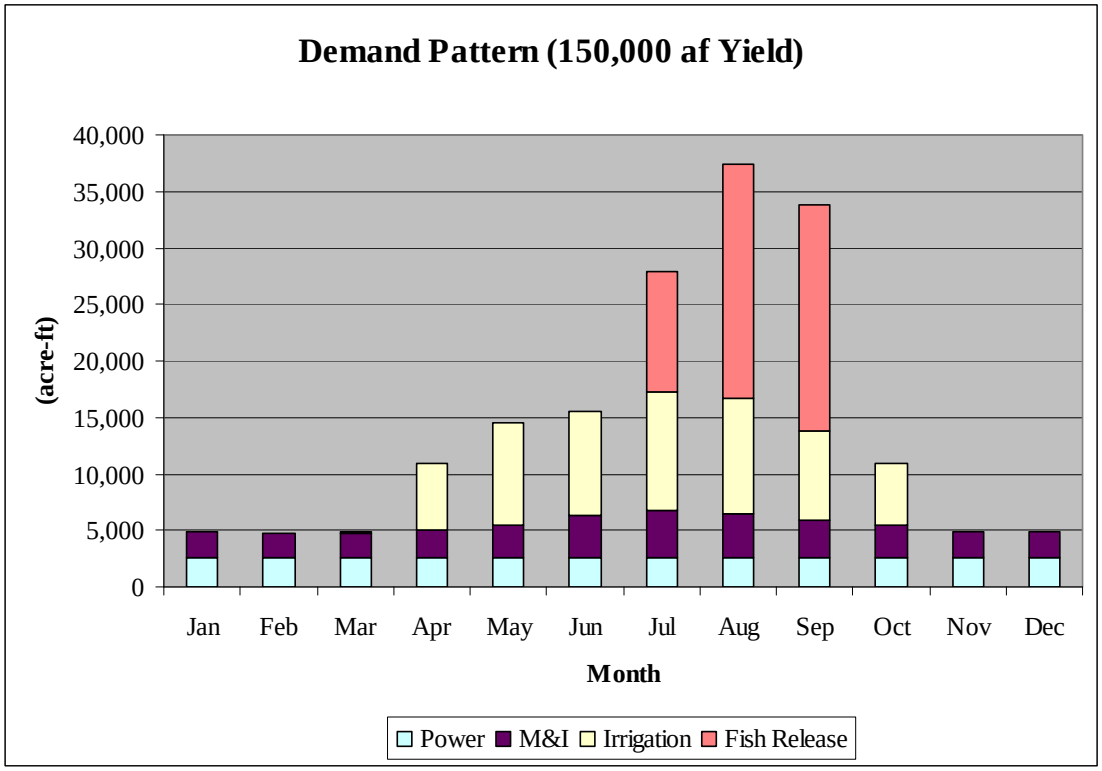

Figure E1. Modeled Demand for Grand Valley Lake (Large Reservoir) Operations Analysis

Firm yield for the smaller reservoir impounded by dam Alignment 2 was shown to be 54,500 af, and there was no benefit to increasing diversion capacity above 115 cfs. Smaller diversion capacities and firm yields were not explored because meeting the OMID demand (58,300 af/yr) seems to be a reasonable threshold for viability of the project. When annual demand is set to 58,300 af/yr, it can be met in every year of the 31-year modeling period, except for 1977, when it delivers approximately 51,000 af. Whether this represents an acceptable level of risk to OMID is not known.

The reservoir capacity which is equal to the water in storage at the beginning of the critical period, is too small for the total volume of the deficit with respect to demand over the critical period. Therefore, increasing the diversion capacity from 115 cfs provides no benefit because during the critical period, legally available water does not exceed this amount.

Environmental Issues

The environmental permitting process would be rigorous for Grand Valley Lake Reservoir. Some of the steps in this process are briefly discussed below.

Compliance with the National Environmental Policy Act (NEPA) would be required for all of the alternatives considered in this study since the reservoir site and the conveyance alignments are located on federal land. One of the primary intentions of the NEPA process is to avoid, minimize and mitigate adverse environmental consequences of federal actions. NEPA requires analysis and documentation of potential adverse and beneficial effects of a proposed action and alternatives and an open public involvement process. This would likely be a very large effort in the permitting of Grand Valley Lake project.

A very significant environmental permit to be secured is a Clean Water Act - Section 404 Dredge and Fill permit from the U.S. Army Corps of Engineers (COE). Even when the impacts of a project are anticipated to be modest, the process of obtaining a Section 404 permit for new storage projects may take several years from initiation of the NEPA process. The primary guidance in embarking on the permitting process for a new dam and reservoir storage project is the development of a defensible Purpose and Need for the project. The 404 permitting process requires that the 'least environmentally damaging practicable alternative that addresses the purpose and need be pursued. The Grand Valley Lake project will need to have sponsors with demonstrative current or future water supply needs to support a federally-endorsed "purpose and need statement" and the project must be selected as the least environmentally damaging practicable alternative among all the sponsors other potential supply and demand management options to meet their future needs. It is recommended that these permitting considerations and several others not mentioned in this report should be closely considered prior to any additional technical or economic analyses of the project in the future.

Opinion of Probable Cost

Table E2 summarizes preliminary opinions of probable construction and operating costs for six alternative project configurations. The unit costs of storage range from approximately $4,300/af to more $14,000/af.. Unit costs for yield range from $5,200/af to more than $10,000/af, however, as discussed above, much of the yield is assigned to help accomplish the goals of the Coloardo River Endangered Species Recovery Program and this program currently anticipates other sources of water to accomplish its purposes. Therefore, it currently appears unlikely that funding from the program would be available to support the Grand Valley Lake projects. As the table shows, the unit costs for both storage and yield demonstrate the economies of scale for the larger project size.

Table E2. Opinion of Probable Cost Summary

Cost Summary for Combinations of Dam Configurations and Conveyance Options								
Option	**Reservoir Size (AF)**	**Annual Yield (AF/yr)**	**Dam Cost**	**Conveyance Cost**	**O&M Cost[1]**	**Total Cost (Dam + Conveyance)**	**Unit Cost - Storage ($/AF)**	**Unit Cost - Yeild ($/AF/yr)**
1A	154,000	132,000	$278,000,000	$514,000,000		$792,000,000	$5,100	$6,000
1B	154,000	132,000	$278,000,000	$406,000,000		$684,000,000	$4,400	$5,200
1C	154,000	132,000	$278,000,000	$51,000,000	$336,000,000	$665,000,000	$4,300	$5,000
2A	39,800	54,500	$148,000,000	$410,000,000		$558,000,000	$14,000	$10,200
2B	39,800	54,500	$148,000,000	$206,000,000		$354,000,000	$8,900	$6,500
2C	39,800	54,500	$148,000,000	$30,100,000	$159,500,000	$337,600,000	$8,500	$6,200

[1]Annual O&M Cost for Options 1C and 2C include present value costs for power usage, pump station maintenance (estimated as a percentage of capital cost) and pipeline maintenance

Alternative 1A is comparable to the configuration in the Clay Report. With an estimated total construction cost of approximately $790 million, this opinion of probable construction cost is approximately $300 million higher than the $494 million estimate in the earlier report (and this is without additional water delivery infrastructure from the reservoir to the end water users that were included in the Clay Report).

The economic and financial feasibility of hydroelectric power generation using releases from Grand Valley Lake were not quantified in this study. Potential revenues may be sufficient to offset additional costs for a turbine, generator, transmission lines, distribution system interconnection, controls and reservoir outlet modifications if a relatively long repayment period is acceptable and/or sufficient renewable energy credits could be obtained. Based on experience with the development of many other hydroelectric facilities in Colorado and the Western U.S., the Study team is not optimistic that a hydropower installation at Grand Valley Lake would be economically attractive and any quantitative analysis should be deferred until more is known about Project operational scenarios, in particular, whether reservoir releases would be relatively uniform month-to-month and year-to-year or whether they would vary significantly. The greater degree to which the reservoir may be used for long-term drought protection (versus base flows for environmental or other purpose), the less feasibility it would be to add hydropower to the project.

Conclusions

The following preliminary conclusions are provided on the feasibility of the Grand Valley Lake Project:

1. The Grand Valley Lake concept is feasible from an engineering and construction standpoint, however, the Project faces significant inter-related environmental and financial challenges. As concurrently configured, (generally consistent with the Clay Report) much of the water supply developed by the Project is allocated to environmental uses. An inherent assumption with this configuration is that project's capital and operating costs would be born by beneficiaries of the Project in proportion to the volumes of water allocated to their uses. Since the Upper Colorado River Endangered Fish Recovery Program is currently proceeding with other sources of water, it seems unlikely that environmental funding would be available for the project.

2. Based on available information reviewed for this study, site reconnaissance, and experience with other dam sites in similar geologic settings, there are no apparent physical conditions that would be fatal flaws to construction of a river diversion, conveyance system or earth dam at the site proposed in the Clay Report for the Grand Valley Dam and Reservoir. However, there are a number of conditions and issues that will require thorough investigation, specialized design, and close attention to quality control during construction. These conditions will result in higher costs during both design and construction to mitigate them than would be the case if they were not present.

3. The ratios of the reservoir storage volume-to–reservoir yield (storage-to-yield ratios) for both the large reservoir and the smaller reservoir (dam Alignments 1 and 2, respectively) are extremely good for a a project that would develop a new water supply with a junior water right. The yield ratio could change considerably from the conditions modeled if federal and state land management and endangered species programs significantly restrict the legal availability of water at the potential diversion locations.

4. The storage –to-yield ratio is based on demand patterns to enhance endangered fish recovery. Changes to the timing and/or magnitude of these environmental needs will affect the Project yield and, therefore, the cost per acre foot of yield.

5. From a cost perspective, Options 1B and 1C are the most attractive options.

6. Table E3 presents a qualitative comparison of the six alternatives:

Table E3. Comparison of Options

Option	Positive Aspects	Negative Aspects
1A	• Low unit storage cost • Gravity-fed conveyance does not require pumping	• High land acquisitions cost/issues • Potential constructability issues due to conveyance geology
1B	• Low unit storage cost • Gravity-fed conveyance does not require pumping	• High land acquisitions cost/issues • Potential constructability issues due to conveyance geology
1C	• Low unit storage cost (cost is slightly lower than Options 1A and 1B, but are considered equal based on this preliminary level of study) • Short conveyance distance (less land acquisition cost/issues) • No impacts to water quality or flow through Dominguez-Escalante National Recreation Area since diversion point is downstream	• Greenhouse gas emissions from pumping • Uncertainty of future operating costs due to potential escalation in the price of pumping energy.
2A	• Gravity-fed conveyance does not require pumping	• High unit storage cost • High land acquisitions cost/issues • Potential constructability issues due to conveyance geology
2B	• Gravity-fed conveyance does not require pumping	• High unit storage cost • High land acquisitions cost/issues • Potential constructability issues due to conveyance geology
2C	• Short conveyance distance (less land acquisition cost/issues) • No impacts to water quality or flow through Dominguez-Escalante National Recreation Area since diversion point is downstream	• High unit storage cost • Greenhouse gases from pumping • Uncertainty of future operating costs due to potential escalation in the price of pumping energy

Recommendations

Without strong indication of support for further analysis and demonstrative need for the project output, postpone further State investigation indefinitely it is recommended that no further action be taken. If the specific need and funding source for the project are identified, the following procedural steps are recommended for any potential future investigations of the Grand Valley Lake Project:

1. Meet informally with state and federal agency personnel familiar with the latest details of land management and environmental programs including Aspinall Unit operations and programs in the Gunnison and Colorado Rivers upstream of their confluence at Grand Junction to confirm the general accuracy and appropriateness of the preliminary information presented herein.

2. Consider revisions or additional scenarios as appropriate to alter the assumptions on project yield allocated to environmental purposes and clarify current understandings of the status of the endangered species programs on the Colorado and on the Gunnison Rivers.

3. Meet informally with Mr. Clay and other interested parties to review the primary conclusions of this report and compare key aspects of the two studies including conveyance alignments (lengths and costs), OMID operations and representation in the CDSS model, potential environmental constraints, and local water user needs.

Any future investigations into the Grand Valley Lake should more fully consider environmental and permitting factors prior to further technical and cost analysis of the project.

ATTACHMENT 2

WSRA COMPLETED PROJECTS

Last Update 08/31/10

Basin	County	Applicant	Name of Water Activity	CWCB Mtg Approved	Basin Account	Statewide Account	Total Request	Type of Water Activity	Number	Amount	Matching Funds Authorized	Matching Funds Paid	Project Expire Date	Final Date 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	8000000005	$50,000				06/30/09	Todd/ Steve M	Completed
Arkansas	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	8000000011						Andy	Completed
Arkansas	El Paso	El Paso County Water Authority	Ground Water Conference	Mar-07	$24,721	$0	$24,721	Study/analysis of nonstructural activity	8000000010				10/10/07	06/30/09	Andy	Completed
Arkansas	Pueblo, ElPaso, Teller	Pueblo and El Paso Counties	Fountain Creek Vision Task Force	May-07	$75,000	$0	$75,000	Facilitation and Analysis	8000000084	$75,000			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	$120,000			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	8000000100	$45,000					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	8000000135	$23,860					Eric	Completed
Arkansas	Lake, Chaffee, Fremont	Greater Arkansas River Nature Association	Arkansas Headwaters Diversion Structure Improvement Project Arkansas River Basin	Mar-08		$57,955	$57,955	Study/Analysis Consumptive and Non-Consumptive Project	9000000025	$57,955				Closed 8/31/09	Ted	Completed
Arkansas	Bent	City of Las Animas	City of Las Animas Water System Improvements	Mar-08	$100,000	$200,000	$300,000	Structural/Non-Structural Water Activity	C150424	$300,000	$2,022,000		12/31/09	09/23/09	Todd (Kirk?)	Completed
Arkansas	Pueblo, Otero, Crowley,Bent, Powers	Lower Arkansas Water Conservancy District	Rotational Land Fallowing-Water Leasing Program - Lower Arkansas Super Ditch Company	Jan-08	150,000		150,000	Study/analysis of nonstructural activity	C150425	$150,000	$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 and Non-Structural water project	C150416	$1,000,000	$3,000,000		06/30/09	06/30/10	Todd	Completed
Arkansas Basin Total Request					$583,781	$1,307,955	$1,891,736									
Number of Projects		11														
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	8000000039	$50,000	$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	Structural Project and Study-Technical Assistance	C150401	$180,580	$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	8000000012	$40,000					Chris	Completed
Colorado	Grand, Summit, Eagle	Upper Colorado Endangered						Study or analysis of non-								

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Colorado	Eagle	Company	Reservoir	Mar-07	$0	$250,000	$250,000	Assistance	C150401	$180,580	$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	8000000012	$40,000					Chris	Completed
Colorado		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	$200,000			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	$1,500,000			06/30/08	Closed	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	9000000052	$40,000			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	9000000026	$100,000	$49,360		06/30/09	Rolled	Kirk	Completed
Colorado Basin Total Request					$230,000	$1,950,000	$2,180,000									
Number of Projects		7														
Southwest		Goodman Point Water Association	Goodman Point Water Association Pipeline Environmental Assessment	Mar-07	$7,700	$0	$7,700	Study of structural water project	8000000075	$7,700				07/31/09	Eric	Completed
Southwest		Mancos Water Conservancy District	Jackson Gulch Reservoir Expansion Project	July-07	$61,735	$0	$61,735	Feasibility Study	8000000076	$80,000			06/30/09	06/30/09	Todd	Completed
Southwest		La Plata West Water Authority	La Plata West Rural Water Supply System	Mar-08	$100,000	$1,000,000	$1,100,000	All purposes	C150422				06/30/09		Todd (Kirk?)	Completed
Southwest	La Plata/Archuleta	La Plata Archuleta Water District	Water System Master Planning	Nov-08	$100,000	$0	$100,000	Environmental/Technical feasibility studies and studies or analysis of structural and/or non structural water project or activity	9000000112	$100,000	None		12/31/09	12/22/09	Eric	Completed
Southwest	Archuleta	Park Ditch Company	Park Ditch Improvements	Jul-09	$85,000	$0	$85,000	Structural water project or activity	10000000011	$85,000	$132,375		06/30/11	12/09/09	Greg	Completed
Southwest	La Plata	Happy Scenes	Water System Well, Treatment System and Distribution Upgrades	16-Sep-08	$39,760	$50,000	$0	Structural Project	9000000127	$50,000	$87,100		06/30/10	11/17/09	Greg	Completed
Southwest		Town of Sawpit	Town of Sawpit – Engineering/Planning for Domestic Water System; Southwest Basin	Mar-08	25,000	$0	25,000	Study Structural Project	9000000006	$25,000	$6,700		06/30/09	06/07/10	Anna	Completed
Southwest		Lower Blanco Property Owners Association	Lower Blanco River Restoration Project	Mar-09	100,000	$0	100,000	Analysis and Construction of Structural Nonconsumptive Water Project	C150450		$284,000		06/30/10	06/30/10	Greg	Completed
Southwest Basin Total Request					$511,495	$1,050,000	$1,561,495									
Number of Projects		9														
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	8000000021	$35,000				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	8000000007	$60,000					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	$480,000			12/31/08	Closed	Todd	Completed

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Gunnison	Hinsdale	Hinsdale County	Outlet Structure	May-07	$35,000	$0	$35,000	compliance	8000000021	$35,000				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	8000000007	$60,000					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	$480,000			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	80000000059	$56,700				Closed	Todd	Completed
Gunnison	Gunnison	North Fork River Improvement Association	Paonia-Feldman Diversion 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	$110,700			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	9000000088	$97,000	$97,586	$66,914	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	9000000144	$22,100	$1,000		06/30/10	01/25/10	Greg	Completed
Gunnison Basin Total Request					$318,800	$442,700	$761,500									
Number of Projects		7														
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	$400,000				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	$150,000			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	9000000019	$16,019					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	$100,540	In-kind		12/31/09	12/31/10	Andy	Completed
Metro	Denver	Greenway Foundation	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	$150,000	$0			06/30/10	Chris	Completed
Metro Basin Total Request					$719,559	$200,000	$919,559									
Number of Projects		6														
North Platte		Silver Spur Operating CO.	New Pioneer Ditch Diversion Reconstruction Project	Mar-08	$116,000		$116,000	Structural/Non-Structural Water Activity	C150421	$116,000			12/31/09		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	$182,000	$10,000		06/30/10	06/30/10	Todd	Completed
N Platte Basin Total Request					$202,000	$96,000	$298,000									
Number of Projects		2														
			Alamosa River In-stream Flow					Study/Design for								

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Basin Total Request					$202,000	$96,000	$298,000										
Number of Projects		2															
Rio Grande		Alamosa Riverkeepers	Alamosa River In-stream Flow Project	Mar-07	$64,500	$0	$64,500	Study/Design for Structural Water Project	7000000076						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	8000000006	$36,750				Closed	Todd	Completed
Rio Grande		San Luis Valley Resource Conservation and Development Council	Alamosa River Watershed Restoration Project	Sept-07	$0	$104,000	$104,000	Non-structural water activity	C150419	$104,000				Closed	Chris	Completed
Rio Grande		Romero Irrigation Company	Romero-Guadalupe Channel Rectification Project	Sept-07	$83,700	$0	$83,700	Structural Water Project	8000000060	$83,700				Closed	Eric	Completed
Rio Grande		Rio Grande Headwaters Land Trust	Rio Grande Initiative	Mar-08	$200,000	$1,300,000	$1,500,000	Structural/Non-Structural Water Activity	C150420	$1,500,000				Closed	Todd	Completed
Rio Grande	Conejos	El Codo Ditch Company	San Antonio River - El Codo Ditch Diversion and Rehabilitation	May-09	$65,000	$0	$65,000	Structural and/or nonstructural water project or activity	1000000001	$64,820	$23,445		12/31/09	12/08/09	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	$383,700	$98,000			06/30/10	Chris S	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	$288,000	$0		06/30/10	06/30/10	Kirk	Completed
RGrande Basin Total Request					$499,950	$2,025,700	$2,525,650										
Number of Projects		8															
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		$27,000					Todd /Tom	Completed
South Platte		Clear Creek County	Clear Creek Water Banking/High Altitude Storage	May-07	$52,000	$0	$52,000	Environmental Compliance/Feasibility Study	8000000037	$52,000				Closed	Eric	Completed
South Platte		Colorado Foundation for Water Education	Solicitation of Stakeholder Input through a South Platte Edition of Headwaters	Jul-08	$16,019	$0	$16,019	Non-structural water project or activity	9000000019	$32,038					Todd	Completed
South Platte		Ducks Unlimited, Inc.	Lower South Platte Wetland Initiative Phase I South Platte River, CO	Sept-07	0	$278,476	278,476	Specifies all eligible activities	C150415	$278,476	$500,255				Todd	Completed
South Platte		City of Greeley	Halligan Seaman Water Mgmt project share vision planning model	Sep-08	25,435	$76,305	101,740	Environmental compliance/Technical Assistance/Studies or analysis of structural, nonstructural, consumptive, nonconsumptive water needs projects	C150436	$101,740	$271,109		06/30/10	06/30/10	Eric	Completed
South Platte Basin Total Request					$120,454	$354,781	$475,235										
Number of Projects		5															
Y/W/G		Upper Yampa Water Conservancy District	Morrison Creek Reservoir Feasibility Study	July-07	49,500	$0	49,500	Feasibility Study	8000000058	$49,500	$0		03/31/08	02/25/10	Todd	Completed
Y/W/G		Vermillion Ranch	Sparks Reservoir	Jul-08	16,000	$0	16,000	Study/Analysis of Consumptive Activity/Project	9000000039	$16,000	$3,000		12/31/08	02/25/10	Todd	Completed

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South Platte		Colorado Foundation for Water Education	Solicitation of Stakeholder Input through a South Platte Edition of Headwaters	Jul-08	$16,019	$0	$16,019	Non-structural water project or activity	9000000019	$32,038					Todd	**Completed**
South Platte		Ducks Unlimited, Inc.	Lower South Platte Wetland Initiative Phase I South Platte River, CO	Sept-07	0	$278,476	278,476	Specifies all eligible activities	C150415	$278,476	$500,255				Todd	**Completed**
South Platte		City of Greeley	Halligan Seaman Water Mgmt project share vision planning model	Sep-08	25,435	$76,305	101,740	Environmental compliance/Technical Assistance/Studies or analysis of structural, nonstructural, consumptive, nonconsumptive water needs projects	C150436	$101,740	$271,109		**06/30/10**	**06/30/10**	Eric	**Completed**
South Platte Basin Total Request					$120,454	$354,781	$475,235									
Number of Projects		5														
Y/W/G		Upper Yampa Water Conservancy District	Morrison Creek Reservoir Feasibility Study	July-07	49,500	$0	49,500	Feasibility Study	8000000058	$49,500	$0		**03/31/08**	**02/25/10**	Todd	**Completed**
Y/W/G		Vermillion Ranch	Sparks Reservoir	Jul-08	16,000	$0	16,000	Study/Analysis of Consumptive Activity/Project	9000000039	$16,000	$3,000		**12/31/08**	**02/25/10**	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	10000000050		$22,938		**06/30/10**	**05/17/10**	Jacob	**Completed**
Y/W/G Basin Total Request		3			85,500	$0	$85,500									
Water Supply Reserve Account Total Requests					$3,271,539	$7,427,136	$10,698,675									

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WSRA IN PROGRESS PROJECTS

UPDATED 08/31/10

Basin	County	Applicant	Name of Water Activity	CWCB Mtg Approved	Basin Account	Statewide Account	Total Request	Type of Water Activity	Number	Amount	Matching Funds Authorized	Matching Funds Paid	Project Expire Date	Final Date Closed	Complete/In Progress /Contracting Pending	Project Manager
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		06/30/11		In Progress	Todd
Arkansas	No information on Summary for counties	Colorado State Univ.	Geospatial decision support system for integrated water mgmt	Sep-08	100,000	$500,000	600,000	Studies/analysis structural/nonstructural, consumptive/non water needs projects	C150441	$599,931	Unknown		06/30/12		In Progress	Andy
Arkansas	Chaffee, Fremont, Custer	Upper Arkansas WCD	Telemetry data collection platforms at six reservoirs plus flow control equipment & gauging at six reservoir outlet channels & nine streams w/in the upper Ark River basin	Sep-08	75,000	$210,332	285,332	Structural and/or nonstructural water project or activity	C150439	$285,332	$529,884		12/31/11		In Progress	Andy
Arkansas	Bent, Kiowa	Lower Arkansas Valley Water Conservancy District	John Martin Wetlands & Neenoshe Reservoir Nonconsumptive Needs Quantification	May-09	148,975	$0	148,975	Study/analysis of nonconsumptive water needs	C150457		$43,250		06/30/11		In Progress	Jacob
Arkansas	Chaffee,Lake, Saguache	Upper Arkansas Water Conservancy District	UAWCD Hydrologic Water Balance Study	Sep-09	$0	$180,000	180,000	Study or analysis of non structural, consumptive, or nonconsumptive water needs and projects	C150460	$180,000			06/30/13		In Progress	Todd
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	11000000008	$ 20,000.00			06/30/11		In Progress	Jacob
Arkansas	Chaffee, Fremont, Pueblo	Southeastern CO WCD	Stakeholders Coop Mgmt Analysis for the UARB	Jul-10	$33,600.00	$0.00	$33,600.00	Studies or analysis of nonconsumptive water needs and project	11000000012	$33,600			06/30/11		In Progress	Jacob
Arkansas Basin Total Request					377,575	$1,090,332	1,467,907									
Number of Projects		7														
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	$150,000	$0		12/31/10		In Progress	Jacob
Colorado	Garfield, Eagle	Basalt Water Conservancy District	Missouri Heights	Sept-07	25,000	$0	25,000	Non-structural study--ground water monitoring, phase II	8000000049	$25,000	$25,000		01/31/13		In Progress	Jacob
Colorado	Grand, Pitkin, Eagle, Garfield, Summit,Mesa	Northwest Colorado Council of Governments	Colorado Basin Nonconsumptive Needs Quantification	Mar-09	315,171	$0	315,171	Nonstructural study of nonconsumptive needs	C150451	$315,171	$25,000		06/30/11		In Progress	Jacob
Colorado	Eagle/Pitkin/ Garfield	Ruedi Water and Power Authority	Roaring Fork Watershed Assessment - Phase 2	May-08	$40,000.00		$40,000.00	Study/Analysis Consumptive and Non-Consumptive Project	9000000049	$40,000.00					In Progress	Chris
Colorado		Grand County	Grand County Stream flow Management Plan	May-08	$100,000.00	$0.00	100,000	Study/Analysis of Non-consumptive needs/project	C150461	$100,000			06/30/11		In Progress	Jacob
Colorado	Grand County	Grand County	Fraser Sedimentation Basin	Mar-08	$60,000.00	$127,900.00	$187,900.00	Structural Water Project	C150449	$187,900			6/30/2012		In Progress	Greg
Colorado Basin Total Request					540,171	$277,900	818,071									
Number of Projects		6														
Southwest		San Juan Water Conservancy District	Dry Gulch Reservoir/San Juan Reservoir Land Acquisition	Mar-07	0	$1,000,000	1,000,000	Structural Water Project – Land Acquisition for Reservoir Site	C150408	$1,000,000	$8,100,000		12/31/25		In Progress	Rick
								Environmental/Technical feas.								

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Southwest		San Juan Water Conservancy District	Dry Gulch Reservoir/San Juan Reservoir Land Acquisition	Mar-07	0	$1,000,000	1,000,000	Structural Water Project – Land Acquisition for Reservoir Site	C150408	$1,000,000	$8,100,000		12/31/25		In Progress	Rick
Southwest		Summit Reservoir and Irrigation Company	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	9000000085	$39,300	$0		08/31/10		In Progress	Kirk
Southwest		Town of Silverton	Molas Lake Ditch Rehabilitation and Diversion Structures	Jan-09	95,000	$0	95,000	Structural Project	9000000143		$1,100,000		06/30/10	Rolled	In Progress	Greg
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	9000000115		$300,000		06/30/11		In Progress	Greg
Southwest		Lower Blanco River Restoration	Lower Blanco River Restoration Project	Sep-09	0	$150,000	150,000	Structural and/or nonstructural water project or activity	C150468		$0		06/30/12		In Progress	Greg
Southwest	Montezuma	Bauer Lake Water Company	Bauer Lakes Water Co. Dam Outlet Structure Upgrade	Mar-08	40,000		40,000	Structural Project	1000000084	$40,000	$70,000		06/30/11		In Progress	Greg
Southwest	La Plata, Archuleta	La Plata Archuleta Water District	La Plata Archuleta Water District	Sep-09	$0	$400,000	400,000	Technical assistance regarding permitting feasibility studies and environmental compliance	C150459	$400,000	$150,000		06/30/13		In Progress	Greg
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		In Progress	Greg
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	1000000085	$58,458			06/30/11		In Progress	Greg
Southwest	Montezuma	Goodman Point Water Association	Goodman Point Phase 2	Sept-07	$20,000.00	$240,000	260,000	Structural Project	C150462	$260,000			06/30/12		In Progress	Greg
Southwest	Montezuma	Mancos Conservation District	Mancos River Diversion Project, Phase I	Nov-09	$24,753	$0	24,753	Study/analysis of structural nonconsumptive water project or activity	10000000111	$24,753			12/30/10		In Progress	Greg
Southwest	La Plata	Red Mesa Reservoir and Ditch Company	Red Mesa Dam & Reservoir - Incremental Damage Analysis (IDA) & Emergency Action Plan (EAP)	May-09	$29,000	$0	$29,000	Study or analysis of structural/nonstructural water needs, projects	1000000061	$29,000			12/31/11		In Progress	Greg
Southwest	All Counties in SW Basin	Mancos Valley Resources Inc.	Protecting Irrigated Agricultural Lands and Water Rights for Agricultural Production	Nov-09	$31,500	$0	$31,500	Study/analysis of nonstructural consumptive water project or activity	10000000125	$ 31,500.00			6/30/2011		In Progress	Todd
Southwest Basin Total Request					379,553	$2,073,458	2,453,011									
Number of Projects		13														
Gunnison	Delta	Leroux Creek Water Users Association (LCWUA)	Safety and Serviceability Needs Inventory for Reservoirs in the Leroux Creek Drainage Basin	May-07	60,000	$0	60,000	Study/Analysis	8000000008	$60,000	$10,000		06/30/08	Rolled	In Progress	Todd
Gunnison	Gunnison	North Fork Water Conserv District (NFWCD) and Fire Mountain Canal& Reservoir Company (FMCC)	Sedimentation Management Study For Paonia Reservoir - North Fork of the Gunnison	Sept-07	79,000	$230,000	309,000	Study/Analysis	C150414	$309,000	$10,000		12/31/10		In Progress	Todd
Gunnison	Delta	Overland Ditch and Reservoir Company	Overland Reservoir Dam Expansion/Restoration	Sept-07	0	$68,000	68,000	Feasibility Study and Environmental Permitting Assistance	8000000038	$68,000	$0		08/31/08	Rolled	In Progress	Todd
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	9000000041	$75,265	$0		01/31/09	Rolled	In Progress	Todd
Gunnison	Hinsdale	Upper Gunnison WCD	Lake San Cristobal Outlet Structure Modification--Phase III	Sep-08	0	$120,960	120,960	Studies or analysis of structural, nonstructural, consumptive, non consumptive water needs projects	C150444		$0		06/30/11		In Progress	Todd
								Technical Assistance								

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Gunnison	Hinsdale	Upper Gunnison WCD	Lake San Cristobal Outlet Structure Modification--Phase III	Sep-08	0	$120,960	120,960	Studies or analysis of structural, nonstructural, consumptive, non consumptive water needs projects	C150444		$0		06/30/11		In Progress	Todd
Gunnison	Ouray	Town of Ridgway	Ridgway Ditch and Lake Otonawanda Improvement Project	Mar-09	109,500	$0	109,500	Technical Assistance Regarding Permitting, Feasibility Studies, and Environmental Compliance; and Study or Analysis of a Structural Project	C150455	$109,500	$27,380		06/30/11		In Progress	Greg
Gunnison	Ouray	City of Ouray	Development of Augmentation Supplies	May-09	50,000	$0	50,000	Structural and/or nonstructural water project or activity	10000000041	$50,000	$87,129		06/30/11		In Progress	Jacob
Gunnison Basin Total Request					373,765	$418,960	792,725									
Number of Projects		7														
Metro	Park, Jeffco,CC, Gilpin	Clear Creek County on behalf of Upper Mountain Counties Water Needs Consortium	Upper Mountain Counties Water Needs Assessment	May 2008	43,587	$0	43,587	Study/Analysis	C150429		$8,070		12/31/10	Rolled/Modified 6/30/10	In Progress	Eric
Metro	Arapahoe,Adams Weld	Lost Creek Groundwater Management District	Lost Creek Aquifer Recharge and Storage Study	Jan-09	80,000	$0	80,000	Studies or analysis of structural, consumptive water projects	C150447	$160,000	$13,000		06/30/11		In Progress	Greg
Metro	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	OE11-08	$ 20,000.00			06/30/11		In Progress	Jacob
Metro Basin Total Request					143,587	$0	143,587									
Number of Projects		3														
North Platte		Town of Walden	Town of Walden Water Supply Improvement Project	Jul-08	385,000	$0	385,000	Structural &/or Non-structural water project or activity	C150431	$385,000	$0		06/30/10		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	Studies or analysis of nonstructural project or activity	C150440	$376,923	In-Kind		06/30/13		In Progress	Greg
North Platte		Colorado Climate Center--CSU	Monitoring the effects of weather conditions on the evaportranspiration in N.P.Basin	Sep-08	50,409	$50,409	100,818	Studies or analysis of consumptive water needs project or activity	C150438	$100,818	Volunteer				In Progress	Greg
North Platte	Jackson	Ducks Unlimited, Inc.	North Park Irrigated Meadow Conservation Program – Phase I	May-10	$20,000	$0	$20,000	Environmental compliance and feasibility study. Technical assistance regarding permitting, feasibility studies, and environmental compliance.	10000000126	$20,000	$ 41,338		6/30/2011		In Progress	Greg
North Platte Basin Total Request					667,715	$215,027	882,741									
Number of Projects		5														
Rio Grande		Santa Maria Reservoir Company	Santa Maria and Continental Reservoirs: Rehabilitation and Multiple Use Studies	Sep-08	50,000	$141,700	191,700	Studies or analysis of nonstructural project or activity. Structural and/or nonstructural water project or activity	C-150443		$18,300		06/30/11		In Progress	Kirk
Rio Grande		Colorado Rio Grande Restoration Foundation	2008 Rio Grande Riparian Stabilization Project	Sep-08	35,000	$250,000	285,000	Structural and/or nonstructural water project or activity	C150452		$356,000		12/31/12		In Progress	Chris S.
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	$250,000	$250,000		06/30/11		In Progress	Kirk
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	Structural and/or nonstructural water project or activity	C150437	$100,000	$0		06/30/10		In Progress	Kirk

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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	Structural and/or nonstructural water project or activity	C150437	$100,000	$0		06/30/10		In Progress	Kirk
Rio Grande		Colorado Rio Grande Restoration Foundation	Rio Grande Conservation Reserve Enhancement Program (CREP) Phase II - Implementation	Sep-09	31,500	$0	31,500	Environmental compliance & feasibility study, technical assist regarding feasibility studies & environmental compliance, analysis of consumptive & nonconsumptive water projects	10000000056		$0		06/30/11		In Progress	Greg
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	$254,000	$46,500		07/31/11		In Progress	Greg
Rio Grande Basin Total Requests					370,500	$741,700	1,112,200									
Number of Projects		6														
South Platte		District 64 Reservoir Company	Ovid Reservoir Comprehensive Feasibility Study	Sept-07	176,000	$0	176,000	Study/Analysis of Structural Water Project	C150417	$176,000	$1,000,000		06/31/11	Extended	In Progress	Todd/Kirk
South Platte		Northern Colorado Water Conservancy District	Stage Discharge Data Loggers and Telemetry	Jan-08	48,800	$0	48,800	Structural Activity	8000000120	$48,800			10/30/08	Rolled	In Progress	Todd
South Platte		Clear Creek County on behalf of Upper Mountain Counties Water Needs Consortium	Upper Mountain Counties Water Needs Assessment	May 2008	130,763	$0	130,763	Study/Analysis	C150429		See Metro		06/30/10	12/31/10	In Progress	Eric
South Platte		Ducks Unlimited, Inc.	Weld County School Dist RE1 Wetland Partnership	Jul-08	42,110	$0	42,110	Structural water project or activity	9000000063	$42,110	$160,000		07/31/11		In Progress	Todd
South Platte		Ducks Unlimited	S.P. Water protection and restoration	Sep-08	0	$825,552	825,552	Structural and/or nonstructural water project or activity	C150432	$825,552	$2,000,000		06/30/10		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	Studies or analysis of nonstructural project or activity. Structural and/or nonstructural water project or activity	09000000084	$99,920	$471,920		12/31/09	Rolled	In Progress	Randy/Todd
South Platte		Lost Creek Groundwater Management District	Lost Creek Aquifer Recharge and Storage Study	Jan-09	80,000	$0	80,000	Studies or analysis of structural, consumptive water projects	C150447		See Metro		06/30/11		In Progress	Greg
South Platte		Ducks Unlimited, Inc.	Central South Platte Wetland Partnership	Mar-09	150,000	$0	150,000	Environmental Compliance and Feasibility Study and Structural Water Project	C150454		$565,000				In Progress	Greg
South Platte		Fort Morgan Reservoir and Irrigation Company (FMRICo)	FMRICo Recharge & Wetlands Project	Sep-09	$250,000	$420,000	$670,000	Structural and/or nonstructural water project or activity	C150464	$670,000			06/30/12		In Progress	Todd
South Platte Basin Total Request					897,657	$1,325,488	2,223,145									
Number of Projects		9														
Y/W/G		City of Grand Junction	Energy Development Water Needs Assessment (300,000 Joint Application see Colorado)	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	$300,000	$0		12/31/10		In Progress	Eric
YWG		Moffat County	Agricultural Water Needs Assessment	Jan-08	201,410	$0	201,410	Study or analysis of structural/nonstructural and consumptive/ nonconsumptive needs	C150418	$201,410	$0		12/31/10		In Progress	Eric
YWG		City of Steamboat Springs and Routt County	Common Data Repository	Jan-08	106,600	$0	106,600	Study or analysis of consumptive/ nonconsumptive needs	C150423	$106,600	$50,000		6/31/10		In Progress	Todd
			Town of Yampa Water Facilities Plan					Studies or analysis of structural and consumptive water needs projects or activity. Structural and/or								

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South Platte		Ducks Unlimited, Inc.	Central South Platte Wetland Partnership	Mar-09	150,000	$0	150,000	Feasibility Study and Structural Water Project	C150454		$565,000			In Progress		Greg
South Platte		Fort Morgan Reservoir and Irrigation Company (FMRICo)	FMRICo Recharge & Wetlands Project	Sep-09	$250,000	$420,000	$670,000	Structural and/or nonstructural water project or activity	C150464	$670,000			06/30/12	In Progress		Todd
South Platte Basin Total Request					897,657	$1,325,488	2,223,145									
Number of Projects		9														
Y/W/G		City of Grand Junction	Energy Development Water Needs Assessment (300,000 Joint Application see Colorado)	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	$300,000	$0		12/31/10	In Progress		Eric
YWG		Moffat County	Agricultural Water Needs Assessment	Jan-08	201,410	$0	201,410	Study or analysis of structural/nonstructural and consumptive/ nonconsumptive needs	C150418	$201,410	$0		12/31/10	In Progress		Eric
YWG		City of Steamboat Springs and Routt County	Common Data Repository	Jan-08	106,600	$0	106,600	Study or analysis of consumptive/ nonconsumptive needs	C150423	$106,600	$50,000		6/31/10	In Progress		Todd
Y/W/G		Town of Yampa	Town of Yampa Water Facilities Plan and storage tank upgrades	Sep-08	61,062	$0	61,062	Studies or analysis of structural and consumptive water needs projects or activity. Structural and/or nonstructural water project or activity	9000000090		$15,626		06/30/10	In Progress		Todd
Y/W/G		Moffat County	Sandwash basin coalbed methane production depletive effects on water resources	Sep-08	20,000	$98,835	118,835	Studies or analysis of consumptive water needs project or activity	C150435		$2,000		06/30/11	In Progress		Eric
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	10000000046		$2,675		06/30/11	In Progress		Jacob
Y/W/G	Rio Blanco/Garfield/Moffat	The Nature Conservancy	Yampa White Basin Non consumptive Needs Assessment Watershed Flow Evaluation Tool	Jan-10	$169,002.35	$0.00	$169,002	Study/analysis of nonconsumptive water project or activity	C150466				06/30/12	In Progress		Jacob
Y/W/G	Garfield,Routt	Bear River Reservoir Company	Stillwater Reservoir Seepage Project	Sep-09	$189,000	$0	$189,000	Structural and/or nonstructural water project or activity	C150469				06/30/12	In Progress		Jacob
Y/W/G Basin Total Request					757,074	$248,835	1,005,909									
Number of Projects		8														
Water Supply Reserve Account Total Requests					4,507,597	6,391,700	10,899,297									

ATTACHMENT 4

WSRA Open Grant Projects - Approved by the Board - Not Yet Contracted

Updated 08/31/10

Basin	County	Applicant	Name of Water Activity	CWCB Meeting	Basin Account Approved	Statewide Account Approved	Total Request	Type of Water Activity	PM
2010 July Board Approvals									
Gunnison	Delta	Leroux Creek Wtr Users Association	Hanson Reservoir Outlet Rehab	Jul-10	$50,000.00	$0.00	$ 50,000.00	Structural project or activity	Greg
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
South Platte	Larmier, Weld, Logan, Sedgwick, Wash, Phillips, Yuma	Co Climate Center, CSU	Co Agricultural Meteorological Network (CoAgMet)	Jul-10	$20,000.00	$0.00	$ 20,000.00	Structural project or activity	Greg
2010 May Board Approvals									
Gunnison Basin	Gunnison	Gunnison River Festival	75 Ditch Diversion Improvements and Feature Enhancements	May-10	$46,100	$0	$46,100	Structural project or activity	Todd
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
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)	Greg
Rio Grande	Saguache, Rio Grande, Conejos, Archuleta, Alamosa, Hinsdale, Costilla	Rio Grande Watershed Conservation and Education Initiative	Educating Today to Balance Tomorrow's Water Supplies & Needs	May-10	$25,000	$0	$25,000	Nonstructural project or activity	Jacob
Rio Grande	Costilla	San Luis Peoples Ditch Company	San Luis Peoples Ditch Upgrade and Rehabilitation Project - Phase I	May-10	$40,000	$0	$40,000	Structural project or activity	Greg
2010 January Board Approvals									
Yampa/White/ Green	Rio Blanco/Garfield/ Moffat	Yellow Jacket Water Conservancy District	Water Storage Feasibility	Jan-10	$220,800	$0	$220,800	Technical assistance regarding permitting, feasibility studies, and environmental compliance. Study of Structural Project	Jacob
2009 September Board Approvals									
Arkansas	Pueblo	City of Pueblo	Bedload/Sediment Collection and Removal Technology - Fountain Creek	Sep-09	$75,000	$150,000	$225,000	Study or analysis of structural, non structural, nonconsumptive water needs, projects	Todd
Metro		South Metro	Aquifer Recharge Pilot Study	Sep-09	$0	$425,000	$425,000	Study or analysis of consumptive water project or activity	Jacob
								Technical assistance regarding permitting feasibility studies and	

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2010 January Board Approvals									
Yampa/White/ Green	Rio Blanco/Garfield/ Moffat	Yellow Jacket Water Conservancy District	Water Storage Feasibility	Jan-10	$220,800	$0	$220,800	Technical assistance regarding permitting, feasibility studies, and environmental compliance. Study of Structural Project	Jacob
2009 September Board Approvals									
Arkansas	Pueblo	City of Pueblo	Bedload/Sediment Collection and Removal Technology - Fountain Creek	Sep-09	$75,000	$150,000	$225,000	Study or analysis of structural, non structural, nonconsumptive water needs, projects	Todd
Metro		South Metro	Aquifer Recharge Pilot Study	Sep-09	$0	$425,000	$425,000	Study or analysis of consumptive water project or activity	Jacob
Metro		Douglas County Water Resource Authority	Feasibility Study for Bureau of Reclamation Funding from the National Rural Water Supply Act	Sep-09	$175,000	$500,000	$675,000	Technical assistance regarding permitting feasibility studies and environmental compliance; and study or analysis of structural project or activity	Jacob
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
Southwest	La Plata	San Juan Resource Conservation and Development - Animas Watershed Project	Animas River Needs Assessment	Sep-09	$57,000	$0	$57,000	Study or analysis of non structural, nonconsumptive water needs and projects	Greg
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
2008 September Board Approvals									
Colorado	Garfield	USFS	Battlement Reservoir #3 Dam reconstruction to enhance recreational & environmental opportunities	Sep-08	$80,000	$0	$80,000	Structural and/or non structural water project or activity	Eric
Metro/South Platte		Water Environment Research Foundation	Demonstration of membrane zero liquid discharge process for drinking water systems ($50,000 Metro Basin Fund Contribution)	Sep-08	$50,000	$233,333	$283,333	Technical assistance regarding permitting feasibility studies and environmental compliance	Greg

Colorado Water Conservation Board
Design and Construction Status Report

August 27, 2010

	Applicant/Borrower	Project	County	Loan/Grant Amount	Size	Annual Yield (AF)	New Storage (AF) Created	Design Percent Compl.	Construction Start	Construction End	Construction Percent Compl.
Projects Completed in FY 2010-2011											
			Total =		**Total =**	**0**					
Projects Under Construction											
1	Grand Mesa Reservoir Company	Grand Mesa Reservoir No. 1 & 9 Rehabilitation	Mesa	$ 200,000	1,000 AF	1,000	200	100%	Jul-03	Jun-10	75%
2	New Cache La Poudre Irrigation Company	Construct 2 New Reservoirs and Pipeline	Weld	$ 7,200,000	4,500 AF	4,500	4,500	100%	Jun-05	Jan-14	99%
3	Orphan Wells of Wiggin, LLC	Well Augmentation Project	Morgan	$ 1,037,700	6,000 AF	6,000		100%	Nov-03	On-hold	95%
4	Parker Water and Sanitation District	Rueter-Hess Reservoir Project	Douglas	$ 15,000,000	16,200 AF	16,200	16,200	100%	Jul-04	Oct-10	75%
5	Mancos Water Conservancy District	Inlet and Outlet Canal Rehabilitation	Montezuma	$ 5,486,531	15,840 LF	9,000		75%	Jan-04	Jan-14	70%
6	Upper Arkansas Water Conservancy District	Reservoir Rehabilitation	Chaffe/Custer	$ 3,520,000	500 AF	500	200	100%	Jun-05	Sep-10	99%
7	Union Ditch Company	Well Augmentation Project	Weld	$ 312,595	206 AF	206		75%	Sep-06	Sep-10	80%
8	Bijou Irrigation District	Empire Reservoir Rehabilitation - Dam Rehab.	Morgan/Weld	$ 2,408,850	19,900 AF	19,900	2,682	100%	Nov-07	Feb-11	85%
9	Lower Poudre Augmentation Company	Reservoir and Water Rights Purchase	Larimer/Weld	$ 3,104,053	657 AF	657		100%	Oct-07	Dec-10	65%
10	Bull Creek Reservoir Company	Reservoir Rehabilitation Project	Mesa	$ 1,212,000	900AF	900	900	100%	Jul-08	Oct-10	95%
11	Overland Ditch and Reservoir Company	Overland Reservoir Rehabilitation	Delta	$ 1,130,000	6,200 AF	17,000	971	95%	May-08	Fens	5%
12	Montezuma Valley Irrigation Company	May Lateral Pipeline	Montezuma	$ 5,292,400	5 Miles	128,000		100%	Nov-07	Jul-10	99%
13	Platte Valley Irrigation Company	Equalizer Reservoir Project	Weld	$ 2,388,650	431 AF	52,401	431	100%	Nov-10	May-11	5%
14	Greeley Irrigation Company	Greeley Canal No. 3 Rehabilitation	Wled	$ 2,233,867	18,000 AF	18,000		90%	Feb-08	Sep-10	90%
15	Henrylyn Irrigation District	Horse Creek & Prospect Reservoir Rehabilitation	Weld	$ 2,184,327	13,850 AF	13,850	3,000	100%	Nov-08	Sep-10	85%
16	New Salida Ditch Company	Dtich Rehabilitation	Chaffee	$ 365,620	300 L.F.	7,000		100%	Oct-09	Nov-10	95%
17	Farmers Pawnee Canal Company	Ditch Flow Control Structures	Logan	$ 227,250	27,260	27,260		100%	Oct-08	Aug-10	95%
18	North Sterling Irrigation District	North Sterling Reservoir Rehabilitation	Logan	$ 1,094,840	74,590 AF	82,207		100%	Sep-09	Jul-10	95%
19	Republican River Water Conservation District	Compact Compliance Pipeline	NE. Colo	$ 60,600,000	15,000 AF	15,000		90%	Nov-08	Nov-11	5%
20	Ogilvy Augmentation Company	Well Augmentation	Weld	$ 1,010,808	60 AF	60		60%	Dec-08	Sep-10	80%
21	Boulder White Rock Ditch and Reservoir Company	Panama Reservoir Outlet Rehabilitation	Boulder/Weld	$ 2,864,164	300 L.F.	12,000	2,600	100%	Oct-09	Aug-10	95%
22	Snowmass Water and Sanitation District	Zeigler Reservoir Water Management System	Pitkin	$ 1,952,805	1,800 AF	1,800		100%	Sep-09	Sep-10	90%
23	Farmers Reservoir and Irrigation Company	Milton Reservoir and Barr Lake Improvement Proj.	Adams/Weld	$ 3,535,000	64,900 AF	125,000		100%	Oct-09	Jan-11	35%
24	Raymond Dairy, Incorporated	Robert Raymond Concrete Ditch Rerconstruction	Mesa	$ 63,950	2,500 L.F.	386		100%	Nov-09	Aug-10	95%
25	Lower Latham Reservoir Company	Well Augmentation Project	Weld	$ 3,811,573	5,705 AF	5,705		100%	Nov-09	May-11	40%
26	Trinchera Reservoir Company	Smjth Reservoir Rehabilitation Project	Costilla	$ 606,000	5.000 AF	26,700	1,100	100%	Nov-09	Sep-10	95%
27	WRCC, Inc.	Cobb Lake Inlet Structure Rehabilitation	Larimer	$ 1,301,890	35,000 AF	35,000		90%	Sep-10	Dec-10	10%
28	Town of Gypsum	LEDE Ditch and Reservoir Rrehabilitation	Eagle	$ 2,689,731	685 AF	1,200	254	80%	Jun-10	Nov-11	2%
29	Lake Canal Reservoir Company	South Gray Reservoir Rehabilitation/Gray No. 3	Larimer	$ 393,300	1,120 AF	1,120	165	80%	Sep-10	Feb-11	0%
30	Pagosa Area Water and Sanitation District	Dry Gulch Reservoir Land Acquisition	Archuleta	$ 11,217,060	35,000 AF	35,000	35,000	n/a	Nov-08	Mar-20	n/a
			Total =	**$ 144,444,964**	**Total =**	**663,552**	**68,203**				
Projects Under Design											
1	Supply Irrigating Ditch Company	Knoth Reservoir Dam Rehabilitation	Boulder	$ 1,515,000	4,800 AF	4,800	400	95%	Jan-10	On-hold	0%
2	Owl Creek Reservoir Company	Owl Creek Reservoir Rehabilitation	Weld	$ 1,125,000	1200 AF	1,200	1,200	99%	Jul-10	On-hold	0%
3	Southeastern CO Water Conserv. District	Arkansas Valley Conduit	Crowley	$ 60,600,000	138 Miles	6,555		25%	Nov-10	May-12	0%
4	Penrose Water District	Water Rights Purchase and Pipeline Installation	Fremont	$ 8,844,570	30,624 LF	339		65%	Oct-10	Sep-11	0%
5	Seven Lakes Reservoir Company	Railroad Crossing	Weld	$ 772,842	7,796 AF	7,796		95%	Sep-10	May-11	0%
6	Duel and Snyder Improvement Company	Diversion Structure Rehabilitation	Morgan	$ 90,900	4,590 AF	4,590		25%	Sep-10	On-hold	0%
7	South Metro Water Supply Authority	Raw Water Delivery - Capacity Purchase	Adams/Denver	$ 5,090,400	10,750 AF	10,750		100%	Sep-10	May-11	0%
8	Louden Irrigating Canal and Reservoir Company, Inc.	Rist Benson Reservoir Rehabilitation	Larimer	$ 263,210	491 AF	2,000	150	50%	Sep-10	May-11	0%
9	Town o f Dillon	Old Dillon Reservoir Enlargement	Summit	$ 1,515,000	286 AF	321	140	99%	Sep-10	May-11	0%
10	Joseph W. Bowles Reservoir Company	Bowls No. 1 Dam Rehabilitation	Jefferson	$ 1,703,870	2,062 AF	900		99%	Aug-10	Feb-11	0%
11	Riverside Reservoir and Land Company	Riverside Reservoir Spillway Enlargement	Weld	$ 2,838,100	64,000 AF	105,000		50%	Sep-10	May-11	0%
12	Fort Morgan Reservoir and Irrigation Company	Pipeline Project - Augmentation Retiminig	Morgan	$ 1,494,800	15,840 L.F.	37,058		99%	Sep-10	May-11	0%
13	Riverside Ditch and Allen Extension Company	Ditch System Rehabilitation	Chaffee	$ 186,345	3,250 LF	3,260		80%	Jul-10	On-hold	0%
14	City of Monte Vista	Augmentation Water Rights Acquisition	Rio Grande	$ 1,693,770	321 AF	1,212		50%	Oct-10	May-11	0%
15	Parkville Water District	Canterbury Tunnel Repair	Lake	$ 1,838,200	250 LF	1,086		75%	Oct-10	May-11	0%
16	Las Animas Consolidated Canal Company	Diversion Structure Rehabilitation	Bent	$ 77,265	26,000 AF	26,000		75%	Oct-10	May-11	0%
17	Consolidated Extension Canal Company	Diversion Structure Rehabilitation	Bent	$ 180,285	26,000 AF	26,000		75%	Oct-10	May-11	0%
18	Huerfano-Cucharas Irrigation Company	Cucharas Reservoir Rehabilitation	Pueblo	$ 1,622,060	35,395 AF	3,000	7,500	0%	De-author.	De-author.	0%
19	Stagestop Owners Association	Water Augmentation Reservoirs Project	Park	$ 192,708	20	20	20	90%	Sep-10	Jan-11	0%
20	Grand river Ditch Company	Grand River Ditch Pipeline	Garfield	$ 543,380	14,500	14,500		90%	Sep-10	Jan-11	0%
21	Swans Nest	Water Acquisition Project	Summit	$ 151,500	10AF	10		100%	Oct-10	Nov-10	0%
			Total =	**$ 92,339,205**	**Total =**	**256,397**	**9,410**				

= Reservoir projects that created new storage, either by new construction, dredging or by the removal of a SEO restriction.

ATTACHMENT 5

Projects under Construction

1. Grand Mesa Reservoir Company – Rehabilitation of Reservoir No. 1 and No. 9

Authorization: Construction Fund
Water Source: Gunnison
Terms of Loan: $200,000@ 2.4% for 20-years
County: Mesa
Project Yield: 1,000 Acre-Feet
Project Type: Reservoir Rehabilitation

The Grand Mesa Reservoir Company operates 6 reservoirs on the Grand Mesa to supply water to 16 shareholders for the irrigation of 500 acres. This project involves the replacement of the outlet structures at each reservoir and also addresses seepage problems at each facility. The project was designed by the City of Grand Junction, one of the major shareholders, and is currently being constructed by the City of Grand Junction. The outlet structures have been installed and the seepage problem corrected at both reservoir locations. The City of Grand Junction is draining the two reservoirs to install the new outlet gates. The project has been on hold pending resolution of construction and water rights issues between the City and the Company. These issues have recently been resolved, with the final phase of the project scheduled to commence construction during the summer of 2010.

2. New Cache La Poudre Irrigation Company – Reservoir Construction

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

The New Cache La Poudre Irrigation Company currently provides irrigation water to a 35,000-acre service area. The purpose of this project is to provide water storage to equalize ditch flows, to improve efficiency and the reliability of the Company's system, and for providing additional storage to meet future demands. The project will involve the construction of 3 separate reservoirs near the Town of Barnesville, Colorado, totaling 4,500 acre-feet of storage. Additionally, 8,200 linear feet of pipeline will be installed in construction with the reservoirs. Smith Geotechnical, Fort Collins, Colorado is the project designer. The Barnesville Reservoir project was awarded to Barker Construction, Fort Collins, Colorado and has been completed. The pump station from Barnesville Reservoir to Cornish Reservoir has been completed as well. The design for Cornish Reservoir has been completed and has been awarded to Barker Construction, Fort Collins, Colorado for construction. The Contractor has completed the work and is waiting on final SEO approval. The Company requested that CWCB's cost participation be changed from 75% to 89% to allow the full $7,200,000 of loan funds to be released, which was approved at the September 2007 Board Meeting. The project will remain open until the land purchased to construct Cornish Reservoir is paid off in 2021.

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 it case in court last year, 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. Hopefully by the September 2010 Board Meeting staff will have something concrete to report.

4. Parker Water and Sanitation District – New Reservoir Construction

Authorization: Construction Fund
Water Source: Cherry Creek
Terms of Loan: $15,000,000 @4.75% for 20-years
County: Douglas
Project Yield: 16,200 acre-feet
Project Type: Reservoir Construction

The Parker Water and Sanitation District is currently in the design phase to construct the Rueter Hess Project for the storage of municipal water for its 7,924 customers. The new reservoir will provide terminal storage for use within the District's existing 8,596-acre service area. The reservoir will be located 3 miles southwest of Parker on Newline Gulch. The proposed reservoir will be a Class I structure, 135 feet high, impounding approximately 16,200 acre-feet of water. GEI Consultants, Denver, Colorado, will be putting together the final design and construction documents. Major land purchases have been completed and the Rueter Hess Reservoir and other related project activities are currently under construction. The entire project is anticipated to be completed by the fall/winter of 2008. Parker Water has approved the expansion of the reservoir to accommodate the requested needs of other water users in the area (Castle Rock and Castle Pine North). The foundation work on the reservoir was expanded to accommodate this potential enlargement. The District is currently constructing the reservoir expansion. The final storage capacity of the reservoir will be approximately 72,000 acre-feet. There has not been a disbursement on this loan since 2004. To-date Parker Water has received $2,800,250 in disbursements on its $15M loan, and has recently requested their remaining loan balance.

5. Mancos Water Conservancy District - Canal Rehabilitation

Authorization: Severance Tax Perpetual Account
Water Source: West Mancos River
Terms of Loan: $5,486,531 @2.80% for 30-years
County: Montezuma
Project Yield: 9,000 acre-feet
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. The District is currently working on securing the funds by the end of 2009. They are anticipating a $2,600,000 appropriation for 2010. If the grant funds are secured 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 last summer, involving the construction of retaining walls and access road along the ditch. For this summer the District is currently in the bid process for another critical section of the ditch. Construction is anticipated to commence in August of 2009. Approximately $1.6M in federal dollars was appropriated for the project in September of 2009, which will be available in 2010.

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

Authorization: Severance Tax Fund
Water Source: N. Fork of S. Arkansas
Terms of Loan: $3,520,000 @ 3.50% for 30 yrs.
County: Chaffee/Custer/Fremont
Project Yield: 500 acre-feet
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. The overall project is anticipated to be completed by July of 2010.

7. Union Ditch Company – Well Augmentation Project

Authorization: Severance Tax Trust Fund
Water Source: South Platte River
Terms of Loan: $312,595 @2.50% for320-years
County: Weld
Project Yield: 206 acre-feet
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. The overall augmentation efforts are anticipated to be completed by September of 2010, which has required a time extension to their loan contract.

8. 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 is a statutory Irrigation District (1905) and 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 water storage at gage height (GH) 30.0 is 36,142 AF. The reservoir has been re-restricted to a GH 29.0 by the SEO due to wind erosion problems along the east embankment. The proposed 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 one-foot increase in storage height will result in 2,682 AF of recovered storage. The District has completed the 1st phase of the East Dike, which involved the reconstruction of approximately 8,500 feet of dam embankment. The remaining 4,000 feet of dike improvement will be completed during the fall/winter of 2009/2010. Given the increased cost of fuel and materials the loan contract was increased from $2,408,500 to $4,454,100 at the November 2008 Board Meeting. The District is approximately 85% complete with the 2nd phase of the East Dike.

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

Authorization: Severance Tax Fund
Water Source: South Platte
Terms of Loan: $3,104,053@2.50% for 30 yrs.
County: Larimer/Weld
Project Yield: 657 acre-feet
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. The Company has purchased the reservoir and water rights and is currently completing the design for the reservoir structural improvements.

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

Authorization: Severance Tax Fund
Water Source: Colorado River
Terms of Loan: $1,212,000@ 2.5% for 30 yrs.
County: Mesa
Project Yield: 900 acre-feet
Project Type: Reservoir Rehabilitation

The Bull Creek Reservoir, Canal and Power Company are located in Mesa, Colorado, and have a service area of approximately 800 acres. The Company operates the Bull Creek Reservoirs that provide irrigation water to shareholders. The Company plans to repair and enlarge Reservoir No.

4. This will remove the current restriction on the reservoir 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 and will require special mobilization techniques. This project was previously approved by the Board in 2006, but has been re-scoped to address SEO concerns and higher then previously anticipated construction costs. The Company received SEO approval in August of 2008. The contractor, Geer-up-Construction, has completed the outlet works, seepage control, and is 75% completed with the reconstruction of the dam embankment. 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 current engineering firm and has negotiated a new contract with Vista Engineer, Grand Junction, Colorado to finish the project. Geer-up-Construction mobilized on-site in July of 2009 and was forced to shut down in late October due to winter conditions. The contractor was not able to complete the project. The remaining items to be finished are: 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. The SEO will allow the dam to fill in the spring, with the remaining construction items to be completed in the summer of 2010. The total dollar amount of work left to be finished is estimated at $100,000. The Board approved a loan increase of approximately $250,000 to the Company at the September 2009 Board Meeting. The project is 95% complete. The Company is currently addressing a claim/complaint from the Contractor and a lien from a supplier. Much more to follow.

11. Overland Ditch and Reservoir Company – Reservoir Rehabilitation

Authorization: Severance Tax Fund
Water Source: Cow Creek
Terms of Loan: $1,130,000@ 2.5% for 30 yrs.
County: Delta
Project Yield: 17,000 AF
Project Type: Reservoir Rehabilitation

The Overland Ditch and Reservoir 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.

12. Montezuma Valley Irrigation Company – May Lateral Pipeline

Authorization: Severance Tax Fund
Water Source: Dolores River
Terms of Loan: $5,292,400@2.25% for 30 yrs.
County: Montezuma
Project Yield: 128,000 acre-feet
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. Over the next several months the Company will be reclaiming the area (i..e final grading, slash removal, fencing, seeding etc.). Project completion is tentatively scheduled for July 2010.

13. Platte Valley Irrigation Company – New Equalizer Reservoir Project

Authorization: Severance Tax Fund
Water Source: South Platte River
Terms of Loan: $2,388,650@2.25% for 20 yrs.
County: Weld
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 feet 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, Colorado, with construction anticipated to commence in July/August 2010.

14. 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 overall

project is 85% and the Company has just recently completed the replacement of their diversion structure on the Poudre River. The Company is currently working on their SCADA system and the realignment and reshaping of various sections of existing channel. The overall project is anticipated to be completed by September 2010.

15. Henrylyn 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 HID was formed in 1907 Irrigation District Law of 1905, and consists of 32,745 acres of irrigated farm land in Weld County. The HID 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, Class 1 earth fill dam, with a dam height of 64 feet, a length of 4800 lineal feet, and a crest width of 16 feet. There is a 200 foot wide earth-lined spillway. The decreed storage right is 19,515 AF, but normal storage is 18,747 acre feet. The outlet works consist of 3 x 48" diameter steel conduits. The proposed project will provide a lining for the 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, Class 2 earth dam, with a dam height of 43.5 feet, a length of 5,301 lineal feet, and a crest width of 20 feet. There is a 250 wide concrete and riprap spillway. The decreed storage right if for 7,660 AF, but the normal storage is 6,368 acre feet. The outlet works consist of a 48" concrete pipe that narrows to about 30" downstream of the control gate, due to previous re-lining projects. The reservoir is currently restricted to 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 regarded the dam crest on Horse Creek Reservoir. On Prospect reservoir the outlet pipe has been lined with regarding of the dam crest yet to be completed. The Company is also evaluating the possible need to replace the existing gates at Prospect Reservoir and regarding of the dam face.

16. 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 as 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 should be completed by November of 2010.

17. Farmers Pawnee Canal Company – Ditch Flow Control Structures

Authorization: Severance Tax Fund
Water Source: South Platte River
Terms of Loan: $227,250@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 have tentatively scheduled a substantial completion date for August of 2010.

18. 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 (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 North Sterling Reservoir approximately 15 miles northwest of Sterling, Colorado and extends east to just northeast of Crook, Colorado. The Reservoir faces the possibility of a storage restriction from the State Engineer's Office without the construction improvements to the current spillway and the dam. In order to retain full storage capacity, the District intends to enlarge the existing spillway, raise the dam crest, and install a seepage collection system at the Reservoir. Construction commenced is September of 2009 and should be completed by July 2010.

19. Republican River Water Conservation District – Compact Compliance Pipeline

Authorization: Severance Tax Fund
Water Source: Republican River
Terms of Loan: $60,600,000@2.0% for 20 yrs.
County: N. E. Colorado
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 is requesting a loan from the CWCB in the amount of

$60 million to finance the 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. Final design is expected to start in the spring of 2008 and construction is scheduled for 2009 & 2010. The District has completed the design and bid packet for the project. Prior to construction and the disbursement of any additional CWCB loan funds, however, the District will 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 Republican River WCD did recently 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. The District has completed the design plans and construction documents for the project. On June 19, 2009, utilizing CWCB loan funds, the District successfully closed the $49,000,000 Cure water purchase, which was a critical piece to the overall success of the compliance project. The State is currently in arbitration with Kansas on and Nebraska over its compact compliance, which will dictate the future of the compliance pipeline project.

20. 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 subsitute 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 Companhy is waiting on approval of their augmentation plan before proceeding with the construction of the reservoir.

21. 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 meets 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 Project is currently under construction and is approximately 15% complete. The Company was approved for a loan increase in the amount of $434,000 for a new loan amount of $2,864,164. The project commenced construction in December of 2009 and is approximately 95% complete.

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

Authorization: Construction Fund
Water Source: Snowmass Creek
Terms of Loan: $1,952,805@4.25% for 20 yrs.
County: Pitkin
Project Yield: 1,800 acre-feet
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. This Project will help the District to deliver water to utilize Ziegler reservoir as well as serve for the planned expansion of the reservoir. Final design is complete and the District is approximately 90% complete with the overall project.

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

Authorization: Construction Fund
Water Source: Beebe Seep Canal/Platte Valley Canal
Terms of Loan: $3,535,000@3.7% for 30 yrs.
County: Adams/Weld
Project Yield: 125,000 AF
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 have been submitted to the SEO for review and have been approved. The Company commenced improvements on Milton Reservoir in October of 2009, which are approximately 95% complete. Barr Lake improvements are anticipated to commence in the fall of 2010.

24. 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

The Raymond Dairy, Inc. 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 approximately 125 acres of field crops for dairy cattle. This Project involves replacing 2,400 feet of the ditch, and installing new head gates and punch plates. This Project will decrease ditch seepage; thereby improving the environment by reducing salt leaching into the Colorado River. NRCS has provided planning and design engineering services for this work. The total project cost is $95,000. The Borrower has been approved for a grant from NRCS that will cover approximately 33% of the cost of the Project. Construction is scheduled for the fall of 2009. Proposed CWCB funding consists of an initial loan from CWCB for $95,950 that will be reduced by the NRCS grant. The remaining $63,950 will become a 20-year CWCB Loan. The project commenced construction in November of 2009 and has been completed. The borrower is waiting on reimbursement from NRCS to close out its loan with CWCB.

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

Authorization: Construction Fund
Water Source: South Platte River
Terms of Loan: $3,811,573@2.75% for 30 yrs.
County: Weld
Project Yield: 5,705 acre-feet
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 design for its augmentation ponds.

26. Trinchera Irrigation Company – Smith Reservoir Rehabilitation

Authorization: Construction Fund
Water Source: Trinchera Creek
Terms of Loan: $606,000@2.75% for 30 yrs.
County: Costilla
Project Yield: 26,700 acre-feet
Project Type: Reservoir Rehabilitation

The Trinchera Irrigation Company (Company) owns and operates Smith Reservoir, Mountain Home Reservoir, and approximately 26 miles of canals and 45 miles of laterals for the purpose of providing irrigation water for the benefit of its shareholders. The Company services approximately 14,100 acres of irrigated farm land. The Company is applying for a loan to repair Smith Reservoir, which the State Engineer's Office (SEO) placed under a storage restriction. The restriction was put in place on April 22, 2009 after a storm caused considerable erosion on the upstream slope of the dam. The repairs include: correcting the slope of the dam, repairing erosion damage on the upstream face of the dam, and replacing the upstream sluice valve. The SEO

approved the construction plans on November 2, 2009 and construction began immediately. The project has been completed. Project substantial completion is tentatively set for September 2010.

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

Authorization: Construction Fund
Water Source: Cach La Poudre
Terms of Loan: $1,301,890@2.85% for 30 yrs.
County: Larimer/Weld
Project Yield: 35,000 AF
Project Type: Reservoir Rehabilitation

WRCC, Inc. (Company) owns and operates six storage reservoirs in Larimer and Weld Counties including Cobb Lake (Reservoir). 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 this inlet failed, the Reservoir could not be filled. The Company intends to reconstruct the exising inlet structures ditch to address both the safety and possible failure issues. Construction is expected to take place in the fall of 2010

28. Town of Gypsum – LEDE Ditch and Reservoir Rehabilitation

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

The Town of Gypsum 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. Design and permitting is expected to occur in 2009/2010 with pipeline construction starting in late 2010 and dam construction starting in 2011.

29. 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 CWCB 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.

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

Authorization: Construction Fund
Water Source: San Juan River
Terms of Loan: $11,217,060@3.50% for 30 yrs.
County: Archuleta
Project Yield: 35,000 acre-feet
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 CWCB 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. CWCB has disbursed just under $10,000,000 in loan funds for land purchases to-date.

Projects under Design

1. Supply Irrigation Ditch Company – Knoth Reservoir Dam Rehabilitation

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

2. Owl Creek Reservoir Company - Reservoir Rehabilitation

Authorization: Construction Fund
Water Source: Owl Creek Basin
Terms of Loan: $1,125,000 @2.75% for 30-years
County: Weld
Project Yield: 1,200 acre-feet
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 ¾ 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.

3. Southeastern Colorado Water Conservancy District – Arkansas Valley Conduit

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 anticipating securing federal funding in 2009/2010, with design and construction to follow.

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

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

The PWD 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. PWD's water supply is obtained by 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 proposed Enterprise project includes the acquisition of $10/12^{th}$ of the Pleasant Valley Ditch water rights near Howard, with a change in use and change in point of diversion approximately 50 miles downstream to Sec. 13, T19S, R69W. Water will be obtained through the installation of 7 shallow alluvial wells immediately north of the Arkansas River, and then pumped approximately 5.8 miles through a 12-inch transmission line to Brush Hollow Reservoir. As part of the project, Brush Hollow Reservoir will be enlarged by raising the dam four feet. Water rights purchases occurred in 2005. Water court application was filed in 2006, with a late 2008 court date anticipated. Reservoir enlargement is scheduled late 2008 and early 2009. Pump and pipeline construction is scheduled to occur in 2010 and 2011, with total project completion anticipated in 2012. The District is currently working on obtaining an agreement between the District and Beaver Park Water to allow the District to utilize Brush Hollow Reservoir for additional storage. Additionally the District is looking a number of other potential distribution and storage alternatives to meet their needs. The loan contract will not be executed until a firm distribution and storage plan is in-place and approved by CWCB.

5. Seven Lakes Reservoir Company – Reservoir Rehabilitation

Authorization: Severance Tax Fund
Water Source: South Platte
Terms of Loan: $772,842@ 2.95% for 30 yrs.
County: Weld and Larimer
Project Yield: 7,796 acre-feet
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 will install 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. Bridge support pilings will be driven during the time intervals when trains are not near the site, and pile caps constructed. Rails, ties and ballast can then be removed and the prefabricated bridge installed. Work is anticipated to commence in the

winter/spring of 2010 and be completed by the winter 2011. The Company has experienced significant delays in getting contracts in-place to conduct the work with BNSF.

6. Duel 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 Deuel and Snyder Improvement Company (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 it options on how to address the foundation issue prior to commencing with any improvement above. The project costs could escalate considerable.

7. South Metro Water Supply Authority – Raw Water Delivery

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 (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 million gallons/day (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. It is expected that the purchase may take place in the fall of 2010.

8. Louden Irrigating Canal and Reservoir Company – 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 Louden Irrigating Canal and Reservoir Company (Borrower) owns and operates the Rist Benson Reservoir (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 is expected to begin in July of 2010 with completion by the fall of 2010.

9. Town of Dillon – Old Dillon Reservoir Enlargement

Authorization: Construction Fund
Water Source: Salt Lick Gulch
Terms of Loan: $1,515,000@4.0% for 30 yrs.
County: Summit
Project Yield: 286 acre-feet (140 new)
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 the project is scheduled for bids in July 2010, with construction to commence in August.

10. 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. The Company plans on submitting the final design to the SEO by February 2010 and beginning construction in August 2010 with completion by February 2011.

11. 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 (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, formed in 1902, delivers irrigation water to approximately 50,000 acres. The Company is applying for a loan to install a spillway at Riverside Reservoir (Reservoir). The Reservoir is not equipped with an emergency spillway, which is required by the DWR's *Rules and Regulations for Dam Safety and Dam Construction*. There is currently a nominal restriction of 0.05 feet (200 AF of storage loss) due to the lack of a spillway. In order to enhance the safety of the Reservoir and prevent further storage restrictions, the Company plans on constructing an emergency spillway. The final design is expected to be complete in January 2010 with construction occurring from July 2010 through March 2011.

12. 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 (with a surface area of approximately 95 acres) on Groves Farms' land. Project construction is tentatively scheduled for the fall of 2010.

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

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

The Riverside Ditch and Allen Extension Company (Company), located near Buena Vista, owns and operates the Riverside Ditch (canal) 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 aged and 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. These improvements will also benefit the Company through increased operator safety. Improvements are expected to be completed between the winter of 2009 and spring of 2012. The Company did receive approval to proceed ahead from a majority of its shareholders and are proceeding ahead with emergency design and repair to a section of their ditch, with final design and construction of their diversion structure this fall.

14. 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. Upon loan approval, the City plans on executing purchase agreements with the sellers of the Anderson Ditch rights and will then file in water court to enable the use of those rights to replace depletions as soon as possible.

15. Parkville Water District – Cantebury Tunnel Repair

Authorization: Construction Fund
Water Source: East Fork Arkansas
Terms of Loan: $1,838,200@4.0% for 30 yrs.
County: Lake
Project Yield: 1.086 AF
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 nearly complete and construction is projected for the fall/winter 2010.

16. Las Animas Consolidated Canal Company – Diversion Structure Rehabilitation

Authorization: Construction Fund
Water Source: Arkansas River
Terms of Loan: $77,265@2.75% for 30 yrs.
County: Bent
Project Yield: 26,000 AF
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 is expected to be bid in the fall of 2010. Construction will begin around November 15, 2010 and work should be completed by March 15, 2011.

17. Consolidated Extension Canal Company – Diversion Structure Rehabilitation

Authorization: Construction Fund
Water Source: Arkansas River
Terms of Loan: $180,285@2.75% for 30 yrs.
County: Bent
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 is expected to be bid in the fall of 2010. Construction will begin around November 15, 2010 and work should be completed by March 15, 2011.

18. Huefano-Cucharas Irrigation Company – Cucharas Reservoir Rehabilitation

Authorization: Severance Tax Fund
Water Source: Cucharas River
Terms of Loan: $1,622,060@2.5% for 30 yrs.
County: Peublo/Huerfano
Project Yield: 7,500 AF (New)
Project Type: Reservoir Rehabilitation

The Huerfano-Cucharas Irrigation Company (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. This change will require the project to be de-authorized and a new project presented to the Board, based on the new owner's financials and project plan.

19. Stagestop Owners Association – Water Augmentation Reservoirs Project

Authorization: Construction Fund
Water Source: Old House Creek/ Tarryall River
Terms of Loan: $192,708@2.25% for 20 yrs.
County: Park
Project Yield: 20AF
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 need outlet work repair. The Upper Reservoir is under a fill restriction by the Office of the State Engineer. Through this project the Association plans on replacing the existing outlet pipes at both reservoirs, installing new outlet structures and valves, and reconstructing the existing spillways. Currently the project is in the design phase. Construction is expected to occur in the fall of 2010.

20. 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 is expected to begin October 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. Applications for additional grants have been made to the local Basin Roundtable WSRA. CWCB loan funding will allow for

an initial loan for 100% of construction costs which will be reduced by the grant dollars received. The remaining balance will become a 30-year CWCB Loan.

21. Swans Nest Metro District – Water Acquisition Project

Authorization: Construction Fund
Water Source: Snake River
Terms of Loan: $151,500@4.75% for 20 yrs.
County: Summit
Project Yield: 10AF
Project Type: Water Rights Purchase

The Swan's Nest Metropolitan District is located in Summit County between Breckenridge and Frisco, Colorado. It provides water service to 160 single family equivalent (SFE) customers in Swan River Ranch, The Villas at Swan's Nest, and the Upper Blue Sanitation District employee housing. In addition, it leases water to 100 SFEs in the Tiger Run RV Park. The District's water system is made up of two wells, a 240,000 gallon steel tank, and water mains throughout the area. The District uses 10 acre-feet of Vidler Tunnel water rights to augment its wells. The District currently owns the water system infrastructure but not the Vidler Tunnel water rights. The water rights are held by Breckenridge Meadows Development Co. LLC (Development Company), the original developer of the area. The Development Company acquired the water rights in the mid 1990s at the same time it acquired and developed the property in the District. The Vidler water rights have historically been used to serve the developed property without cost to the District. Through this loan, the District will finance the purchase of the Vidler Tunnel water rights so it can continue to augment the wells in the District and provide water to its customers.

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 2009 thru June 2010. 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.

No.	Manager	Project	July 1 Balance	June 30 Balance
1	Alvarado	Arkansas River Basin DSS Feasibility Study	$200,000	$136,316
2	Alvarado	Colorado DSS Irrigated Acreage Refresh Program	$70,953	$28,476
3	Alvarado	Co DSS Modeling and Engineering Support Services	$155,044	$76,114
4	Alvarado	Colorado Flood Decision Support System	$454,196	$199,876
5	Alvarado	Colorado Water Needs and Alternatives Analysis	$1,614,938	$864,459
6	Alvarado	Database Pilot Program	$5,398	$0
7	Alvarado	Denver Basin Pumping Optimization Model	$34,088	$34,088
8	Alvarado	Estimated 2005 Water Use in Colorado	$10,065	$600
9	Alvarado	Instream Flow Decision Support System	$102,113	$65,628
10	Alvarado	Modflow Enhancement for Co DSS	$50,000	$50,000
11	Alvarado	Project Imaging System	$267,554	$179,491
12	Alvarado	South Platte River Decision Support System	$2,462,489	$2,027,326
13	Bassi	Acquisitions of Water for Instream Flow	$1,000,000	$700,000
14	Bassi	CWCB Stream Gaging	$342,678	$302,014
15	Bassi	Instream Flow Engineering Support Services	$161,946	$91,007
16	Bassi	Satellite Monitoring System – State Eng Office	$350,000	$20,516
17	Bassi	Stream Gage Fund	$351,110	$264,353
18	Bassi	Water Education Foundation	$150,000	$40,950
19	Bassi	Water Planning Studies	$149,273	$128,626
20	Bassi	Water Resource Information Center & Data Harvesting	$550,000	$550,000
21	Browning	Ag Water Con Clearinghouse & Canal Efficiency	$25,500	$0
22	Browning	Cache La Poudre River Floodway Project	$150,000	$150,000
23	Browning	Chatfield Channel Improvement	$205,383	$160,834
24	Browning	Chatfield Reservoir Reallocation Project	$2,000,000	$2,000,000
25	Browning	Chatfield Reservoir Reallocation Study	$300,135	$158,926
26	Browning	Colorado Floodplain Map Modernization	$1,231,487	$917,611
27	Browning	Dust-on-snow Studies	$30,000	$1,966
28	Browning	Enhanced Snowpack Assessment Program	$20,140	$6,834
No.	**Manager**	**Project**	**July 1 Balance**	**June 30 Balance**
29	Browning	Fish and Wildlife Resources Fund	$3,624,429	$3,283,917
30	Browning	Flood Hazard Mitigation Program	$6,775	$301

31	Browning	Flood Response Fund	$429,273	$311,412
32	Browning	Floodplain Mapping Program	$7,480	$4,141
33	Browning	Floodplain Technical Services	$147,332	$118,160
34	Browning	National Oceanic & Atmospheric Admin	$300,000	$300,000
35	Browning	Watershed Restoration	$364,305	$306,483
36	Browning	Weather Modification Program	$665,112	$268,033
37	Deheza	Climate Change Effects on Co Water Resources Study	$61,384	$59,509
38	Deheza	Co Drought Mitigation & Response Plan Implement	$300,000	$171,691
39	Deheza	Drought Mitigation Planning Technical Assistance	$142,160	$58,505
40	Deheza	Water Adaptation Partnership Program	$500,000	$500,000
41	Deheza	Water Conservation Public Awareness Research Study	$150,000	$150,000
42	Feehan	Canal Modern & Radio Telemetry Demonstration	$75,583	$63,629
43	Feehan	CCC Ditch Diversion Rehab on the San Miguel River	$65,000	$53,575
44	Feehan	Closed Basin	$306,410	$175,388
45	Feehan	Rocky Mountain Fen Demonstration Project	$100,000	$100,000
46	Feehan	South Platte Lower River Group	$150,000	$150,000
47	Hecox	Ag Water Transfer Sustainability Program	$2,998,140	$2,486,672
48	Kowalski	Arkansas River Basin Water Quality Baseline Study	$25,000	$0
49	Kowalski	Ark River Surface Water Rules Tech & Financial Asst	$250,000	$162,020
50	Kowalski	Colorado River Augmentation Project Development	$150,000	$75,000
51	Kowalski	Co River Compact - State Water Right Administration	$500,000	$500,000
52	Kowalski	Colorado River Delta in Mexico Consultation	$155,855	$131,855
53	Kowalski	High Resolution Gridded Sublimation Estimate Study	$65,000	$25,144
54	Kowalski	Litigation Fund	$4,279,299	$3,723,700
55	Kowalski	Lower South Platte Water Mgmt & Storage Site Study	$500,000	$500,000
56	Kowalski	Purgatoire River Channel Capacity and Improvement	$25,000	$25,000
57	Kowalski	Wild and Scenic Rivers Fund	$400,000	$400,000
58	Kowalski	Wild and Scenic Rivers Study	$269,840	$110,122
	Total Balances for Non-Reimbursable Investments		$29,462,867	$23,422,820

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 — Grant Amount: $200,000
Contract No. C154156 — Current Disbursements: $ 63,684
Ending Balance: $136,316

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 will be completed in February 2011. Interviews with basin water users and planners were held and comment sheets were distributed. Draft report sections for the introduction, data assessment, and needs assessment were completed.

2. Colorado Decision Support System Irrigated Acreage Refresh Program

Authorization: HB 04-1221
Contract No. C154009 *

Grant Amount:	$150,000
Previous Disbursements:	$ 79,047
Available Balance:	$ 70,953
Current Disbursements:	$ 42,477
Ending Balance:	$ 28,476

Water Source: Statewide Streams
Location: Statewide
Sponsor: CWCB

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

During Fiscal Year 2009-2010, Agro Engineering, Inc. provided an update to the Rio Grande River Basin irrigated acreage program using 2005 satellite imagery. This effort included well information provided by Water Division 3 of the Division of Water Resources (DWR) before the update was finalized.

3. Colorado Decision Support System Modeling and Engineering Support Services

Authorization: SB 07-122
Contract No. C154103

Grant Amount:	$200,000
Previous Disbursements:	$ 44,956
Available Balance:	$170,520
Current Disbursements:	$ 78,930
Ending Balance:	$ 76,114

Water Source: Statewide Streams
Location: Statewide
Sponsor: CWCB

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

Fiscal Year 2009-2010 work continued modeling support for RGDSS and SPDSS efforts and consumptive use reporting. This effort has been completed.

4. Colorado Flood Decision Support System

Authorization: SB 07-122
HB 08-1346
Contract No. C154138

Grant Amount:	$250,000
	$250,000
Total:	$500,000
Previous Disbursements:	$ 45,804
Available Balance:	$454,196
Current Disbursements:	$254,320
Ending Balance:	$199,876

Water Source: Statewide Streams
Location: Statewide
Sponsor: CWCB

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

CWCB selected Riverside Technology, Inc. to perform this project. The data collection and initial design tasks are complete. Riverside is currently working on DNR systems to install and configure the web map services. Completion of the project is estimated for mid to late September 2010.

5. 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		$1,000,000
		Total:	$2,000,000
		Previous Disbursements:	$ 385,062
Contract No.	C154096 *	Available Balance:	$1,614,938
		Current Disbursements:	$ 750,479
		Ending Balance:	$ 864,459

Water Source: Colorado River and its Tributaries	Project Type: Water Availability Analysis
Location: Statewide	Project Manager: Ray Alvarado
Sponsor: CWCB	Beneficiary: Statewide Water Users

AECOM Inc., formerly known as Boyle Engineering, is under contract and has completed the work associated with scoped Phase 1 activities, including the draft study report. Comments, from a four-month review period, have been received and are being reviewed. Once comments have been reviewed and categorized, the draft report will be updated.

6. Database Pilot Program

Authorization:	SB 03-110	Grant Amount:	$75,000
		Previous Disbursements:	$69,602
Contract No.	05000000062 *	Available Balance:	$ 5,398
		Current Disbursements:	$ 5,398
		Ending Balance:	$ 0

Water Source: N/A	Project Type: Decision Support System
Location: Denver	Project Manager: Susan Lesovsky
Sponsor: CWCB	Beneficiary: CWCB Staff, and Statewide Water Users

The Database Pilot Program project was proposed during Fiscal Year 2003, with the intent of further developing the Stream and Lake Protection database and continuing integration efforts with the State Engineer's Office and Hydro Base. The appropriation is also being used to maintain and update other databases and web technologies used within the CWCB.

The accomplishments of the Database Pilot Program during Fiscal Year 2010 concentrated on the first phase of the website redevelopment, which included evaluation of both the CWCB and IBCC websites, and the initial design for the new, integrated site. The CWCB website serves as a portal to the agency's mission, programs and activities, and merging the IBCC and Basin Roundtable information into the site provides a more comprehensive water information resource for the State.

7. Denver Basin Pumping Optimization Model

Authorization:	HB 08-1346	Grant Amount:	$84,000
		Previous Disbursements:	$49,912
		Available Balance:	$34,088
		Current Disbursements:	$ 0
Contract No.	09000000055	Ending Balance:	$34,088

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.

8. Estimated 2005 Water Use in Colorado

Authorization: HB 08-1346

Grant Amount: $67,000
Previous Disbursements: $56,935
Available Balance: $10,065
Current Disbursements: $ 9,465
Ending Balance: $ 600

Contract No. 09000000004

Water Source: Statewide Streams
Location: Statewide
Sponsor: CWCB

Project Type: Model
Project Manager: Andy Moore
Beneficiary: CWCB Staff, and Statewide Water Users

As part of the USGS National Water Use Information Program, nation-wide water use data is collected every fifth year. However, a Colorado-specific report has not been published since 1989, for data collected in 1985. In this project, CWCB provided matching funds to the USGS to publish a report for 2005 Colorado water use data. The final report has been completed and is available on the CWCB Web.

9. Instream Flow Decision Support System

Authorization: SB 03-110

Grant Amount: $440,000
Previous Disbursements: $337,887
Available Balance: $102,113
Current Disbursements: $ 36,485
Ending Balance: $ 65,628

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

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. ArcGIS is the software used to run the ISFDSS.

10. Modflow Enhancement for Colorado Decision Support Systems

Authorization: SB 09-125

Grant Amount: $50,000
Current Disbursements: $ 0
Available Balance: $50,000

Contract No. 10000000043
Water Source: Statewide Streams
Location: Statewide
Sponsor: CWCB

Project Type: Decision Support System
Project Manager: Andy Moore
Beneficiary: CWCB Staff, and Statewide Water Users

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 during this fiscal year.

11. 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		$275,000
		Total	$990,000
Contract No.	PO100334 *	Previous Disbursements:	$722,446
		Available Balance:	$267,554
		Current Disbursements:	$ 88,063
		Ending Balance:	$179,491

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

Project Type: Imaging System
Project Manager: Susan Lesovsky
Beneficiary: CWCB

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 2010 concentrated on the second phase of the website redevelopment, which included building the new structure for the website, working with a content editor to streamline the content, migrating the new content and resources into the site's pages, integrating updated search technologies to access the CWCB Imaging System and conducting usability testing with representatives from the environmental, legal, engineering, hydrology and Basin Roundtable communities.

12. South Platte River Decision Support System

Authorization:	SB 99-173	Grant Amount:	$ 100,000
	SB 01-157		$ 2,000,000
	HB 02-1152		$ 2,000,000
	HB 04-1221		$ 2,500,000
	SB 05-084		$ 1,500,000
	HB 06-1313		$ 2,000,000
	HB 08-1346		$ 1,000,000
	SB 09-125		$ 150,000
		Total	$11,250,000
Contract No.	C153953 *	Previous Disbursements:	$ 8,787,511
		Available Balance:	$ 2,462,489
		Current Disbursements:	$ 435,163
		Ending Balance:	$ 2,027,326

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

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

The South Platte Decision Support System (SPDSS) completed its Phase 5. The alluvial groundwater model for the basin has been completed and will be presented to a peer review committee. The selection of contactors for the surface water modeling has not been done and will proceed once the implementation of the lower basin, Water District 64, originally started by DWR staff, is completed.

13. Acquisitions of Water for Instream Flow

Authorization: HB 08-1346	Grant Amount: $1,000,000
	Current Disbursements: $ 300,000
Contract No. C154170	Ending Balance: $ 700,000
Water Source: Statewide Streams	Project Type: Water Acquisitions
Location: Statewide	Project Manager: Linda Bassi
Sponsor: CWCB	Beneficiary: Statewide Water Users

In Fiscal Year 2009-2010, CWCB spent $300,000 from this funding source to purchase a conservation use right of up to 5.45 cfs of water under the Breem Ditch water right for instream flow use to preserve the natural environment of two highly visible water-short streams—Washington Gulch and the Slate River, and to improve the natural environment of Washington Gulch. This transaction will allow Washington Gulch to flow year-round, even during dry summers, and will help address flow shortages on the Slate River for a two-mile reach below the confluence with Washington Gulch. CWCB staff is coordinating with the Colorado Water Trust on some potential water rights purchases that may be completed in Fiscal Year 2010-2011.

14. CWCB Stream Gaging

Authorization: SB 01-157 to HB 06-1313	Grant Amount: $1,361,000
	Previous Disbursements: $1,018,322
Contract No. 07000000030 *	Available Balance: $ 342,678
	Current Disbursements: $ 40,664
	Ending Balance: $ 302,014
Water Source: Statewide Streams	Project Type: Stream Gaging
Location: Statewide	Project Manager: Jeff Baessler
Sponsor: CWCB	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.

Status of Projects / Programs

The following provides a summary on the status of each of the current gaging projects:

1. Flow Alert Monitoring Program
   This cooperative project with DWR enables staff and others to monitor specific stream gages throughout the state to monitor low flows for instream flow purposes and high flows for flood flow observations. Funding has been utilized for periodic system updates and for ongoing operation and maintenance, allowing staff to receive near real time alerts via cellular phones and e-mail.
2. Flood Hardening / Flood Warning Systems and Cableway Improvements.
   CWCB staff continues to work with DWR and USGS staff to harden specific gages that were initially ranked in order of priority in 2001. Quarterly coordination meetings between CWCB, DWR and USGS staff are held to evaluate, guide and monitor progress of this project. Staff is currently working with DWR to identify gages of interest to CWCB's Watershed and Flood Mitigation Section that also are candidates for cableway improvements. A new cableway on the Roaring Fork River near Basalt was delayed due to issues related to incorporation of the cableway design into the planned Water Park for the area. Staff anticipates that construction could begin in early 2011.
3. Update USGS / DWR gages of interest to CWCB with high data rate satellite telemetry equipment
   Staff is in the process of evaluating additional gages to be updated. This evaluation is proceeding but has been complicated by the prioritization of USGS co-op program gages and the loss of both NSIP and USGS co-op gages across the state. Staff is coordinating with the USGS to ensure that the telemetry equipment is placed on the highest priority gages that are of interest to CWCB programs. Staff continues to support the Colorado Water Science Center in its efforts to balance funding between the NSIP and Cooperative water programs. An update on the evaluation is expected at a fall 2010 coordination meeting with USGS, DWR and CWCB.
4. Installation of new gages and operation and maintenance costs at existing gages.
   Equipment for the Fraser River gage has been purchased and staff is working with DWR on obtaining the necessary easements. Installation of the equipment has been delayed as staff continues its attempts to find other stakeholders to share in ongoing operation and maintenance costs. In addition, CWCB has paid for installation of a gage on the Dolores River near Slick Rock, and for ongoing operation and maintenance of the Blue River wire weight gage and for the Cottonwood Creek Gage near Buena Vista. Additional CWCB gage sites continue to be evaluated based on staff discussions with each division engineer to determine appropriate locations that would help with ISF administration, data collection and/or flood monitoring. Additionally, gage installations may be required in connection with pending acquisitions of water for ISF use. Staff is currently investigating the possibility of installing a gage on the North Fork North Platte River in coordination with the Jackson County Water Conservancy District.
5. Temporary funding for operation and maintenance of vital USGS Stream Gages
   CWCB staff entered into a joint funding agreement with the USGS to provide for the operation and maintenance of USGS gage # 09172500 SAN MIGUEL RIVER NEAR PLACERVILLE, CO. The previous cooperator of the gage was unable to continue with a cost share agreement with the USGS due to increased program costs and requested that CWCB take over funding of O&M while additional cooperators could be solicited for on-going support. USGS would have dropped this historic gage (74 years of record) if a cooperator could not be found. USGS recently indicated that it might be able to fund this gage in 2010-2011 with National Streamflow Information Program (NSIP) funds. Staff expects an update on future funding of this gage at its fall coordination meeting with USGS, DWR and CWCB.

15. 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
		Total	$350,000
Contract No.	07000000005 *	Previous Disbursement:	$188,054
		Available Balance:	$161,946
		Current Disbursements:	$ 70,939
		Ending Balance:	$ 91,007

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

Project Type: Technical Services
Managers: Jeff Baessler
Beneficiary: Statewide

Funding was used to hire temporary state employees to help with technical support for ongoing instream flow (ISF) projects, for ISF recommendation investigations, and to image a backlog of ISF materials. In addition, funds were used to acquire as-needed engineering services for legal protection of ISF water rights.

16. Satellite Monitoring System – State Engineer's Office

Authorization:	HB 93-1273 to SB 09-125	Grant Amount:	$4,143,000
		Previous Disbursements:	$3,793,000
Contract No.	N/A	Available Balance:	$ 350,000
		Current Disbursements:	$ 329,484
		Ending Balance:	$ 20,516

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).

17. Stream Gage Fund

Authorization:	SB 07-122	Grant Amount:	$598,155
Contract No.	08000000131 *	Previous Disbursements:	$247,045
		Available Balance:	$351,110
		Current Disbursements:	$ 86,757
		Ending Balance:	$264,353

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 and to provide for equipment for the CWCB hydrographer who was hired in late 2009. More specifically, staff has purchased one Delorme GPS; one mini field laptop; 10 Global Water Data Logger / Pressure Transducers; 20 accubar constant flow bubblers; 10 Satlink high data rate data collection platforms and 20 stage discharge recorders; 4 radar water level sensors; 4 CR-200 data loggers; one WXT520 weather transmitter and the associated software, enclosures, batteries, solar panels and antennas. This equipment will be installed at sites around the state for both high and low flow monitoring purposes. The immediate goal is to provide the

hydrographer with the tools and equipment necessary to implement a robust stream gage monitoring network that will specifically address CWCB agency needs.

18. Water Education Foundation

Authorization: HB 02-1152	Grant Amount: $150,000
Contract No.: C154055	Project Type: Education
Location: Denver	Managers: Linda Bassi/Veva Deheza
Sponsor: Colorado Foundation for Water Education	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.

19. Water Planning Studies

Authorization: SB 99-173		Grant Amount:	$225,000
SB 09-125			$100,000
		Total	$325,000
		Previous Disbursements:	$175,727
Contract No. C153889 *		Available Balance:	$149,273
		Current Disbursements:	$ 20,647
		Ending Balance:	$128,626

Water Source: N/A	Project Type: Water Planning
Location: Statewide	Managers: Linda Bassi/Ted Kowalski
Sponsor: CWCB	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.

20. Water Resource Information Center and Data Harvesting Initiative

Authorization: SB 09-125		Grant Amount:	$550,000
		Current Disbursements:	$ 0
Contract No. None		Ending Balance:	$550,000

Water Source: N/A	Project Type: Water Information
Location: Statewide	Managers: Linda Bassi/Susan Lesovsky
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. CWCB staff is working with CSU to get a contract in place for the digitization project.

21. Agricultural Water Conservation Clearinghouse and Canal Efficiency Study

Authorization: HB 08-1346		Grant Amount:	$30,000
		Previous Disbursements:	$ 4,500
Contract No.	09000000037*	Available Balance:	$25,500
		Current Disbursements:	$25,500
		Ending Balance:	$ 0
Water Source: Statewide Streams		Project Type: Study	
Location: Statewide		Project Manager: Joe Busto	
Sponsor: CWCB / CSU		Beneficiary: Statewide Water Users	

The Colorado Water Institute successfully accomplished the second phase of the "Agricultural Water Conservation Clearinghouse" project. The following tasks have contributed to the depth and breadth of information about agricultural water conservation presented in this online repository: complete redesign of the website, reorganize the library by using subject categories, create parameters for documents and publications to maintain consistency, develop a wiki for the clearinghouse, develop new and more comprehensive FAQs, present to international AgNIC conference, and submit a proposal for CSREES to continue past relationships and develop new partnerships to address water security for the agricultural sector in the face of a changing climate. The Agricultural Water Conservation Clearinghouse can be viewed at: http://agwaterconservation.colostate.edu/**.**

For the canal efficiency project CWI continues to explore the possibility of controlling sago pondweed using pre-emergence herbicides applied in the spring to dry canals. In the spring of 2009, we established four dry canal application sites and treated 100 ft sections of canal with herbicides that have demonstrated excellent sago pondweed control in greenhouse tank studies. We evaluated sago pondweed response to these treatments in July of 2009. While several treatments appeared to reduce sago pondweed biomass, the biomass present was still sufficient to reduce flow rates and required additional treatments with Magnacide. At one site, we were able to examine the possibility of using mid-season draw down treatments to control sago pondweed, using three aquatic herbicides. One product was a contact herbicide (Reward), while the two other herbicides were systemic (Clearcast, Habitat). All three products controlled 90% to 100% of exposed sago biomass within a few days of application. This appears to be an application technique that could be useful for small ditches and laterals.

22. Cache La Poudre River Floodway Project

Authorization:	SB 03-110	Grant Amount:	$150,000
	HB 08-1346		$150,000
		Total	$300,000
		Previous Disbursements:	$150,000
Contract No.	C154042	Available Balance:	$150,000
		Current Disbursements:	$ 0
		Ending Balance;	$150,000
Water Source: Cache La Poudre River		Project Type: Feasibility Study	
Location: City of Greeley		Project Manager: Joe Busto	
Sponsor: City of Greeley, Corps of Engineers		Beneficiary: City of Greeley	

The City of Greeley (Greeley) is sponsoring this project which is under contract with CWCB. The Scope of Work is related to the deliverables developed by the U. S. Army Corps of Engineers (Corps) for their own milestones in their General Investigation Study (Study). As the Corps completes their milestones for the Study, funding will be provided to Greeley to reimburse the Corps. The Scope of Work was tied to completed studies in: biology, real estate, floodplain, hydrology, economics, plan

formulation and alternative plan formulation studies. Studies will stay in draft final format until public meetings and all public comments are incorporated and Corps agency approvals are received. Hence, funding will be disbursed in the near future.

23. Chatfield Channel Improvement

Authorization: SB 79-537 – SB 90-41	Grant Amount: $7,272,000
	Previous Disbursements: $7,066,617
Contract No. C153882 *	Available Balance: $ 205,383
	Current Disbursements: $ 44,549
	Ending Balance: $ 160,834
Water Source: South Platte River	Project Type: Flood Control
Location: Downstream of Chatfield Reservoir	Managers: Tom Browning / Joe Busto
Sponsor: CWCB	Beneficiary: CWCB – Metro Area

The Chatfield Downstream Channel Improvement Project (Project) is a flood control project constructed by the Corps of Engineers where a section of the South Platte River just downstream of the dam to Hampden Avenue was straightened and lined with rip rap in order to contain the 100-year flood flows. CWCB signed agreements and is responsible for maintenance and repair of the project. Annually in the spring the Flood Readiness Branch of the Omaha Corps of Engineers grades the Project. Several years of minimally acceptable (2003-2008) ratings given to the CWCB has led to vegetation removal inside the channel and on the banks to help with flood conveyance. Funding through easement agreements and the original authorization is used to match with the Urban Drainage and Flood Control District in a Trust Agency Account opened in 2007. The CWCB funding is dwindling and the Members should consider an appropriation for the Project. The state/federal agreements have no expiration date and funding generated through easement requests is sporadic. The last easement that generated funding was in 2007 for the Roxborough Metropolitan District waste water pipeline. Once staff gets the channel cleaned, a program of annual maintenance will be recommended by staff. UDFCD is willing to put $50,000 in as a match with CWCB to maintain the channel. UDFCD helps with vegetation removal on sandbars but philosophically doesn't agree with the removal of Willows on the banks. Work specific to this fiscal year is: staff issued $25,000 purchase orders to CTM and L&M in August 2008; another one in November 2008 to Arbor Force for vegetation removal on the banks of the South Platte River Channel; and through the 50/50 agreement with UDFCD completed $100,000 of culvert repair and vegetation removal on sandbars in the channel. Sedimentation is also an issue identified by the Corps of Engineers and staff has met with Carson nature center about a river restoration project upstream of this reach that could possibly peal back the deeply incised banks, restore a more nature floodplain, and lessen the sediment load on the downstream reach that the CWCB owns.

24. 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 the Chatfield Reservoir Reallocation Project (Project). The seed money is intended to assist with finalization of FR/EIS study tasks but more importantly expenditures that lead to and assist with the implementation phase of the Project. Implementation, pending Project approval, will consist of contracting with the U.S. Army Corps of Engineers and 15 water providers for water supply storage space in the reservoir, completion of final design plans and specifications, recreation modification, environmental mitigation, and overall

stakeholder coordination. The $2M is purposely left untouched for the time being so as to utilize it in the most meaningful and efficient manner to further the goals of implementing the Project. In other words, the funds are still greatly needed and will be encumbered appropriately at the appropriate time.

25. Chatfield Reservoir Reallocation Study

Authorization:	SB 97-008	Grant Amount:	$ 300,000
	HB 98-1189		$ 200,000
	SB 07-122		$ 600,000
		Total	$1,100,000
Contract No.	C153882A*	Previous Disbursements:	$ 799,866
		Available Balance:	$ 300,134
		Current Disbursements:	$ 141,208
		Ending Balance:	$ 158,926

Water Source: South Platte River
Location: 10 miles South of Denver
Sponsor: CWCB, U.S. Army Corps of Engineers

Project Type: Reservoir Supply Study
Project Manager: Tom Browning
Beneficiary: Colorado Water Users

This project involves cooperating with the U. S. Army Corps of Engineers (Corps) and local water users to complete a Feasibility Report and Environmental Impact Study (FR/EIS) regarding the reallocation of up to 20,600 acre-feet existing flood control storage to water supply storage in Chatfield Reservoir. The reallocation study is looking at the viability of developing new storage space within the existing Chatfield Reservoir located in the South Platte River basin. The Corps has determined that 20,600 AF of storage space can be made available based on an approved Antecedent Flood Study. The local water users have cooperated with CWCB and the Corps to complete several key components of the FR/EIS, and work continues towards releasing a Draft FR/EIS for public review in late 2010.

The current water users 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.

This study has strong support due to collaborative partnerships and solid teamwork. This study also holds promise to develop new storage space in the urban setting of the South Platte Basin perceived as helpful in meeting current and future water demands.

26. Colorado Floodplain Map Modernization

Authorization:	SB 03-110 to SB 09-125	Grant Amount:	$2,284,938
		Previous Disbursements:	$1,053,451
Contract No.	C154013 *	Available Balance:	$1,231,487
		Donations:	$ 45,693
		Adjusted Balance:	$1,277,180
		Current Disbursements:	$ 313,876
		Ending Balance:	$ 963,304

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

Project Type: Floodplain Delineation
Project Manager: Thuy Patton
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: Denver, Broomfield, Douglas, Boulder, Adams, Arapahoe, Grand, Garfield, Jefferson, Larimer, Pitkin, Routt, Fremont, Clear Creek, Montezuma, Mesa, Eagle, Pueblo, Teller, La Plata, Weld, Archuleta, Summit, Delta, Elbert, El Paso, Rio Grande, Montrose, Park, Morgan, Prowers, and Gunnison Counties and the City of Boulder.

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 $603,000 that has been encumbered for projects currently in progress. The encumbered balance was transferred to Fiscal Year 2011 as these are multiple year projects.

27. Dust-on-Snow Studies

Authorization:	SB 09-125	Grant Amount:	$30,000
		Current Disbursements:	$28,034
Contract No.	10000000058	Ending Balance:	$ 1,966
Water Source:		Project Type:	Study
Location:		Project Manager:	Tom Browning
Sponsor:		Beneficiary:	

The Colorado Dust-on-Snow (CODOS) program seeks to develop a broad-based dust on snow program serving the full spectrum of Colorado's snowmelt stakeholders with useful information. The work funded by this appropriation includes: 1) enhancing the scope and frequency of dust on snow monitoring, 2) enhancing the advisories issued to stakeholders to address impacts on snowmelt timing and rates, with additional basin by basin detail, and 3) conducting research activities that enhance the CODOS program for future snowmelt forecasts. The CODOS program can assist with snowmelt forecasting efforts to benefit flood preparedness activities and water supply management.

For the past several years, dust from the Colorado Plateau has been widely observed within and on the snowpack surface at locations throughout Colorado. Yet, until Spring of 2007, snowmelt forecasting programs and Colorado water managers had neither received data regarding the presence/absence of dust in mountain snowpacks nor made any attempt to explicitly estimate the effects of dust-on-snow on snowmelt timing, intensity, or duration. Integrating the 'dust factor' into the Colorado water community's understanding of snowmelt processes is providing new insights into runoff patterns.

28. Enhanced Snowpack Assessment Program

Authorization:	SB 05-084	Grant Amount:	$100,000
	HB 06-1313		$100,000
		Total	$200,000

Contract No. C154044

Previous Disbursements: $179,860
Available Balance: $ 20,140
Current Disbursements: $ 13,306
Ending Balance: $ 6,834

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

Project Type: Assessment Study
Managers: Joe Busto/Michelle Garrison
Beneficiary: Colorado Water Users

The Enhanced Snowpack Assessment Project was developed by the CWCB in cooperation with the U.S. Bureau of Reclamation. The Project developed quantitative spatial snowpack information specific to Colorado using the NOAA experimental full energy mass balance snowpack model called SNODAS (Snow Data Assimilation System). Phase I developed a web-based archive of Colorado snowpack maps for SNODAS output including snowpack depth, snow water equivalent (SWE), snowpack temperature, and SWE change. Phase II included quantitative analysis of the SNODAS model and its usefulness in hydrologic modeling and streamflow forecasting.

Phase III was the final phase and is complete. The CWCB received a final report from the phase II and III from Riverside Technologies inc. (RTi). The Project concluded with the development of tools to automate use of SNODAS data for map creation and data analysis, compilation of past years' data into maps and spreadsheets for comparison with future years' snowpack data, and analysis of how to best use SNODAS data to improve streamflow forecasts.

The project focused on methods and models that could be used by the River Forecast Centers (RFCs) of the National Weather Service (NWS). Results from the study are already being incorporated into streamflow forecasting methods at the Colorado Basin River Forecasting Center (CBRFC). Ed Clark from the CBRFC provided a letter to the CWCB in March 2009 thanking them for their funding of this project and citing the following benefits to the CBRFC from the project:

- Provision of modeled SWE adjustment methods in snowmelt dominant basins.
- Development of proprietary software to aid in the implementation of the NWS Research Distributed Hydrologic Model (RDHM) across many basins in Colorado,
- Provision of a detailed methodology and software package to adjust snow states based within in situ observations,
- Calibration of the RDHM for four headwaters basins within Colorado, and
- Insight into the challenges of distributed modeling in complex mountainous basins.

Phase III completed all CWCB funding and effort in the "Enhanced Snowpack Assessment Project." RTi recommendations included developing statewide displays of SNODAS model output in the Flood Decisions Support System, and similar work in other river basins like the South Platte and Arkansas. The project was completed under budget, partially due to in-kind services provided by the NWS.

29. Fish and Wildlife Resources Fund

Authorization: SB 01-157, HB 02-1152

Grant Amount: $5,000,000
Previous Disbursements: $1,375,571
Available Balance: $3,624,429
Current Disbursements: $ 340,512
Ending Balance: $3,283,917

Contract No. C150219 *

Water Source: Various
Location: Statewide
Sponsor: CWCB

Project Type: Grant Program
Managers: Ted Kowalski / Chris Sturm
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 2010 were to the Platte River Cooperative Agreement. In addition, funds were allocated to several projects according to Board Policy No. 15. Those projects included Phase IV of the Rio Blanco River Restoration Project, sponsored by the Lower Blanco Property Owners Association; Fountain Creek Diversion Dam Fish Passage Construction, sponsored by Colorado Springs Utilities; and Hartland Dam Diversion Dam Reconstruction, sponsored by Painted Sky R C & D Council. Expenditures were made to the Rio Blanco and Fountain Creek projects.

30. Flood Response Fund

Authorization:	SB 01-157 to SB 09-125	Grant Amount:	$1,119,247
		Previous Disbursements:	$ 689,974
Contract No.	C154008 *	Available Balance:	$ 429,273
		Current Disbursements:	$ 117,861
		Ending Balance:	$ 311,412

Water Source: All Colorado streams
Location: Statewide
Sponsor: CWCB

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 2009 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.

31. Flood Hazard Mitigation Program

Authorization:	HB 04-1221	Grant Amount:	$ 75,000
	SB 05-084		$ 75,000
		Total	$150,000
Contract No.	06000000063 *	Previous Disbursements:	$143,225
		Available Balance:	$ 6,775
		Current Disbursements:	$ 6,474
		Ending Balance:	$ 301

Water Source: All Colorado Streams
Location: Statewide
Sponsor: CWCB

Project Type: Mitigation
Project Manager: Chris Sturm
Beneficiary: All Colorado Communities

Program funds have been successfully expended for studies and projects along Big Dry Creek (Weld County), Willow Creek (Creede), and stream reaches along the Peak to Peak Highway. This non-reimbursable account should be closed out by staff in the near future.

32. Floodplain Mapping Program

Authorization: SB01-157		Grant Amount:	$250,000
		Previous Disbursements:	$242,520
Contract No.	C154076 *	Available Balance:	$ 7,480
		Current Disbursements:	$ 3,339
		Ending Balance:	$ 4,141
Water Source: N/A		Project Type: Floodplain Delineation	
Location: Statewide		Project Manager: Thuy Patton	
Sponsor: CWCB		Beneficiary: Colorado Water Users	

This program provided state financial and technical support for local floodplain mapping initiatives. This funding supported efforts statewide. The floodplain mapping activities related to this program and the remaining funds will be completed in the current fiscal year.

33. Floodplain Technical Services

Authorization:	SB 05-084	Grant Amount:	$175,000
	HB 06-1313		$175,000
	SB 09-125		$125,000
		Total	$475,000
Contract No.	C154050 *	Previous Disbursements:	$327,668
		Available Balance:	$147,332
		Current Disbursements:	$ 29,172
		Ending Balance:	$118,160
Water Source: Various		Project Type: Technical Assistance	
Location: Statewide		Project Manager: Kevin Houck	
Sponsor: CWCB		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 board 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. Overall, the approximately $325,000 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.

34. 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. The project is underway for this group of states, but no federal request for reimbursement has been received to this point. The entire project for this group of seven states is anticipated to take about three years.

35. Watershed Restoration

Authorization:	HB 06-1313	Grant Amount:	$150,000
	SB 09-125		$250,000
		Total	$400,000
		Previous Disbursements:	$ 35,695
Contract No.	07000000077 *	Available Balance:	$364,305
		Current Disbursements:	$ 57,822
		Ending Balance:	$306,483
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 and 2010 competitive grant cycles. Active projects from the January 2009 grant cycle include Eagle River riparian re-vegetation maintenance/monitoring, Lake Fork Gunnison Floodplain/Channel Design, Hayman Burn Channel Stabilization, Mancos River Diversion Dam Assessment, and the Metro Area Westerly Creek Masterplan. New projects awarded funding in the 2010 grant cycle include bank stabilization and riparian zone re-vegetation on Fourmile Creek in South Park, North Fork Gunnison River near Paonia, Eagle River near Edwards, South Platte River below Chatfield, Coal Creek in Crested Butte, and Campbell Creek near Fort Collins. Staff also used Watershed Restoration grant funding to develop a Measurable Results Program (MRP). This is a collaborative effort with the Water Quality Control Division to monitor projects, measure objective successes, and develop information to better advise other projects throughout the state.

36. Weather Modification Program

Authorization:	HB 04-1221 to SB 09-125	Grant Amount:	$655,000
		Previous Disbursements:	$167,187
Contract No.	07000000053 *	Subtotal:	$487,813
		Donations:	$182,299
		Available Balance:	$670,112
		Current Disbursements:	$397,079
		Ending Balance:	$273,033

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

Project Type: Cost Share Grants
Manager: Joe Busto
Beneficiary: Statewide

In Fiscal Year 2010, CWCB allocated $175,000 and received donations through the Colorado River agreements of $152,300 and $25,000 from the New Mexico Interstate Stream Commission for a total of $352,300 to be used over winter 2009-2010 for grants to extend operational time and fund proposals for new equipment. It is difficult to report on a fiscal year basis as the CF appropriation houses all of the donations from the other four states and that funding often comes into the agency at the end of the state fiscal year right when it's time to report on the fiscal year. In addition, through the regional agreements, we work more on a water year basis from fall to fall. So even if there is funding in COFRS funding proposal to do high elevation installation work will happen in the summer and count towards reporting to all the states on what happened in the previous Water year. The best way to report on the fiscal year is state that the CWCB weather modification program spent $397,079 in this fiscal year with some of that funding being from previous agreements between the out of state agencies. For the $352,300 that was allocated from CWCB and out of state agreements for Water Year 2010, CWCB spent all of it but had to request that about $38,000 in Lower Basin funds be rolled over into the next Water Year 2011. All of the New Mexico and CWCB funding was spent. CWCB funded a Desert Research Institute (DRI) proposal to run two generators at Winter Park for Denver Water for $62,300. We funded a DRI proposal for $25,000 to operate two generators on the Grand Mesa. We funded a DRI proposal to operate a generator on Mancos Mountain in the San Juan Mountains. We funded a DRI $22,000 proposal to put a specialized weather station at Winter Park Ski Area. The rest of the funding was dispensed to local agencies to hire their cloud seeding contractors to extend their cloud seeding programs for Gunnison, Western San Juan Mountains, Eastern San Juan Mountains, and Telluride into the crucial month of February where studies have shown the conditions are the most favorable to cloud seeding with cold enough temperatures and high probabilities of storm events. Ironically, most of the funding generated each year is spent between the months of November through January in Colorado.

37. Climate Change Effects on Colorado Water Resources Study

Authorization: HB 08-1346
Contract No. C154126 *

Grant Amount: $100,000
Previous Disbursements: $ 38,616
Available Balance: $ 61,384
Current Disbursements: $ 1,875
Ending Balance: $ 59,509

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

Project Type: Study
Project Manager: Veva Deheza
Beneficiary: Statewide

Climate Change has the potential to greatly impact Colorado's natural resources, included 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. This report, the first of its kind in the west, provided an in depth look at the science of climate change and how it pertains directly to Colorado. 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. CWCB has also partnered with a number of Front Range utilities to examine how changes in climate can impact range municipal water resources. This study will be out in fall of 2010.

38. Colorado Drought Mitigation and Response Plan Implementation Program

Authorization: HB 08-1346

Grant Amount: $300,000
Current Disbursements: $128,309

Contract No. C154152 Ending Balance: $171,691

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

Project Type: Drought Plan
Project Manager: Veva Deheza
Beneficiary: Statewide

In compliance with the Federal Emergency Management Agency requirements, CWCB is in the process of a comprehensive revision to the State Drought Mitigation Response Plan. This plan will be a collaborative, statewide effort that will look at mechanisms for drought monitoring, mitigation and response. The plan will also incorporate climate change for the first time. CWCB has completed the plan and is working to incorporate comments from the public; the plan will be presented to the CWCB board in September 2010 for final approval. This funding will have significant expenditures as the project concludes.

39. Drought Mitigation Planning Technical Assistance

Authorization: SB 07-122
Contract No. 09000000020

Grant Amount: $150,000
Previous Disbursements: $ 7,840
Available Balance: $142,160
Current Disbursements: $ 83,655
Ending Balance: $ 58,505

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 & 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 the CWCB has developed a toolbox that can act as a "how to guide" for drought planning for municipal water providers. Also part of the revision was the development of a vulnerability tool that can aid in assessing vulnerability to drought. The development of these tools will make drought planning less resource intensive for local communities.

40. Water Adaptation Partnership Projects

Authorization: SB 09-125
Contract No. 10000000129

Grant Amount: $500,000
Current Disbursements: $ 0
Ending Balance: $500,000

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

Project Type: Planning
Managers: Veva Deheza / Ray Alvarado / Michelle Garrison / Joe Busto
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 is to set the stage for the next governor to continue to plan for climate variability and change by providing a catalog of climate vulnerabilities and current activities,

personnel, products, and projects from Colorado and other applicable entities along with policy relevant, but not prescriptive, suggestions for future actions.

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 consider 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). This project will accomplish its goals through: (1) a literature search, (2) structured interviews with key decision makers and other personnel, and (3) the creation of a database of climate response activities underway, planned and/or desired in Colorado (supplemented by selected materials from other locations). A final report, "Climate Preparedness in Colorado" summarizing all of these efforts will be prepared by the University of Colorado, with assistance from the State, by January 10, 2011. Expenditures on this project will occur in Fiscal Year 2011.

41. 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	Project Type: Research Study
Location: Statewide	Project Manager: Veva Deheza
Sponsor: CWCB	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 & 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.

42. Canal Modern and Radio Telemetry Demonstration Project

Authorization: HB 06-1313	Grant Amount: $100,000
	Previous Disbursements: $ 24,417
Contract No. C150227	Available Balance: $ 75,583
	Current Disbursements: $ 11,954
	Ending Balance: $ 63,629
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.

43. CCC Ditch Diversion Rehabilitation on the San Miguel River

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

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 $11,500 has been disbursed for planning and design and construction is tentatively scheduled for November of 2010 or early spring of 2011.

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

Authorization:	SB 79-537	Grant Amount:	$625,000
	HB 00-1419		$188,000
		Total	$813,000
		Previous Disbursements:	$506,590
		Available Balance:	$306,410
		Current Disbursements:	$131,022
Contract No.	PDANNC153421	Ending Balance:	$175,388
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 right-of-way (ROW) for the Closed Basin project in the San Luis Valley. The first phase of the project was completed several years ago, however, based on contractual agreement, the ROW needed to be acquired from the State Land Board by the CWCB and then assigned

to the Bureau of Reclamation (BOR) for their operation of the project. The BOR confirmed the legal descriptions for the ROW in 2008, and the Attorney General's Office and the Land Board prepared the land transfer documents in 2009. Purchase of the ROW was completed in September 2009, and the ROW was transferred to BOR in June 2010, thereby completing the project.

45. 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 City of Aurora, Pueblo Board of Water Works	Beneficiary:	Statewide

Funding was awarded to the Colorado Mountain College- Timberline Campus for a demonstration project designed to explore the extent to which the harvest and 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.

46. So Platte Lower River Group - State-Private Partnerships in Managed Groundwater Re-regulation

Authorization: SB 01-157		Grant Amount:	$150,000
		Previous Disbursements:	$ 0
Contract No.	N/A	Available Balance:	$150,000
		Current Disbursements:	$ 0
		Ending Balance:	$150,000
Water Source:	Platte River	Project Type:	Demonstration-Pilot
Location:	Sedgwick County	Project Manager:	Anna Mauss
Sponsor:	South Platte Lower River Group	Beneficiary:	Private Water Users and the State

The sponsor never executed a contract with CWCB for this grant that was approved in 2001. Since that time similar projects have successfully demonstrated private/public partnerships for managed groundwater recharge. The authorization will be presented to the Board in November 2010 for de-authorization.

47. 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
		Previous Disbursements:	$ 1,860
Contract No.	C154026 *	Available Balance:	$2,998,140
		Current Disbursements:	$ 509,608
		Ending Balance:	$2,488,532
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/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 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. At the September 2010 CWCB meeting, the Board will be requested to approve amended criteria and guidelines for another round of grant proposals to be considered by the Board at the January 2011 meeting. The projects and studies funded under the next round are expected to build upon the recent findings and develop solutions to the major hurdles.

48. Arkansas River Basin Water Quality Baseline Study

Authorization: HB 08-1346

Contract No. 09000000022 *

Grant Amount:	$100,000
Previous Disbursements:	$ 75,000
Available Balance:	$ 25,000
Current Disbursements:	$ 25,000
Ending Balance:	$ 0

Water Source: Arkansas River

Location: Arkansas River Basin

Sponsor: CWCB/USGS/SCWCD

Project Type: Study

Project Manager: Steve Miller

Beneficiary: Arkansas River Basin

This project, conducted by the U. S. Geologic Survey (USGS), in cooperation with the Pueblo Board of Water Works, the SECWCD, and the Lower Arkansas Valley Water Conservancy District (LAVWCD) has been completed. The USGS created a database of all existing Arkansas basin water quality data and related studies for further evaluation and prioritization based on stakeholders' water quality concerns. Based on those prioritizations, intensive water quality data collection to fill data gaps was conducted to provide an analysis of temporal trends over a short time period. The USGS database is

accessible to all participants and other state agencies. In July 2010 USGS released the final report on the project: "Occurrence and Distribution of Dissolved Solids, Selenium, and Uranium in Groundwater and Surface Water in the Arkansas River Basin from the Headwaters to Coolidge, Kansas, 1970–2009; By Lisa D. Miller, Kenneth R. Watts, Roderick F. Ortiz, and Tamara Ivahnenko. The report can be downloaded from: http://pubs.usgs.gov/sir/2010/5069/pdf/SIR10-5069.pdf. The report's findings shed new light on many assumptions about the locations where major water quality impairments originate and thus will force rethinking of the best control strategies and new evaluations of the impacts of water management operations.

49. Arkansas River Surface Water Rules Technical and Financial Assistance

Authorization:	SB 09-125	Grant Amount:	$250,000
		Current Disbursements:	$ 87,980
Contract No.	C154165	Ending Balance:	$162,020
Water Source:	Arkansas River	Project Type:	
Location:	Arkansas River Basin	Project Manager:	Steve Miller
Sponsor:	CWCB	Beneficiary:	

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 (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 SEO convened an advisory committee to help develop those rules and to provide advice on effective implementation and compliance measures. One of the advisory committee's recommendations was that the Lower Arkansas Valley Water Conservancy District (LAVWCD) had the best capacity and willingness to provide a basinwide compliance plan and therefore, 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 whether it wanted to move forward and offer a compliance plan to basin irrigators. Phase I included the preparation of several task memos, numerous meetings with local irrigators, State officials, major water provider entities and the LAVWCD Board. Phase I has been completed and the LAVWCD's consultants have been instructed to begin preparing the elements of a formal compliance plan which is the subject of the Phase II grant of approximately $150,000. The proposed rules are currently filed in the Division 2 Water Court, with a hearing set for November 2010 and a proposed effective date of January 1, 2011. The expected availability of this plan has been a key factor in local acceptance of the proposed rules and the low level of opposition in the Water Court. The LAVWCD compliance plan is on schedule to be available for irrigator signup and SEO review before the beginning of the 2011 irrigation season.

50. Colorado River Augmentation Project Development

Authorization:	HB 08-1346	Grant Amount:	$150,000
		Current Disbursements:	$ 75,000
Contract No.	10000000096	Ending Balance:	$ 75,000
Water Source:	Colorado River	Project Type:	Study
Location:	Colorado River Basin	Project Manager:	Ted Kowalski
Sponsor:	CWCB/ Seven Basin States	Beneficiary:	Colorado River Compact

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 February 2009 the States requested "Stimulus" funds for a study to continue this ongoing augmentation effort. 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. 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 is between $2 and $3 million depending on the final scope. The seven basin states and the U.S Bureau of Reclamation (Reclamation) will cost share in the study with each States proportionate share being $150,000 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 study was awarded federal funds for up to $1 million (with $1 million in cost share from the basin states). This work began in February 2010, and will continue until 2012. Colorado has spent $75,000 and the remaining funds will be used for travel and other costs associated with this study, or for a cash contribution to be used for consulting needs, if necessary.

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

Authorization:	HB 08-1346	Grant Amount:	$500,000
		Current Disbursements:	$ 0
Contract No.	None	Ending Balance:	$500,000
Water Source:	Colorado River	Project Type:	Study
Location:	Colorado River Basin	Project Manager:	Michelle Garrison
Sponsor:	CWCB	Beneficiary:	Colorado River Compact

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 of the CWCB and Mike Sullivan, Deputy State Engineer, serve as co-leads for the project along with James Eklund of the Attorney General's Office and Rebecca Mitchell of the Department of Natural Resources.

The project was delayed in Fiscal Year 2009-2010 due to budgetary concerns, but will resume in Fiscal Year 2010-2011.

52. Colorado River Delta in Mexico Consultation

Authorization:	HB 02-1152	Grant Amount:	$100,000
	HB 08-1346		$150,000
		Total	$250,000
		Previous Disbursements:	$ 94,145
Contract No.	07000000005 *	Available Balance:	$155,855
		Current Disbursements:	$ 24,000
		Ending Balance:	$131,855
Water Source:	Colorado River and Tributaries	Project Type:	Compact Consultation
Location:	Seven Colorado River Basin States and the Republic of Mexico	Project Manager:	Ted Kowalski

Sponsor: CWCB

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 this effort will proceed in a measured manner.

53. <u>High Resolution Gridded Sublimation Estimate Study</u>

Authorization:	HB 08-1346	Grant Amount:	$65,000
		Current Disbursements:	$39,856
Contract No.	09000000124	Ending Balance:	$25,144
Water Source:	Colorado & So Platte Rivers	Project Type: Study	

Location: Co River Watershed & So Platte Basin
Sponsor: CWCB
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.

This project was delayed due to a lack of the necessary measurement equipment after the manufacturer sustained heavy facility damage in Hurricane Ike. Equipment was purchased in spring 2009 using matching funds from the United States Geological Survey (USGS).

The USGS installed and operated equipment through the winter and spring of 2009-2010. Sublimation and weather data was collected. These data will be combined with other available climate data to parameterize SNOWMODEL, which is a high-resolution snowpack accumulation/evolution model. SNOWMODEL will be used to estimate sublimation at 100 meter resolution for the Front Range for the 2010 snow season. Data will be analyzed during fall 2010, and a manuscript will be prepared for publication by the end of March 2011.

54. Litigation Fund

Authorization:	HB 95-1155, SB 01-157	Grant Amount:	$4,000,000
	SB 99-173	Reduction:	$1,000,000
			$3,000,000
		Interest Revenue	$ 480,713
	HB 06-1313, SB 09-125	Replenish	$3,366,214
		Total Authorized:	$6,846,927
Contract No.	C154005 *	Previous Disbursements:	$2,567,628
		Available Balance:	$4,279,299
		Current Disbursements:	$ 555,599
		Ending Balance:	$3,723,700

Water Source: N/A
Location: Statewide
Sponsor: CWCB
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. In 2009, the General Assembly restored the balance as of July 1, 2009 to $4 million.

To date funds have been used in the following manner:

- Kansas v Colorado litigation support;
- 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; and,

- work associated with the Platte River Recovery Implementation Program negotiations.

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.

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

Authorization:	HB 00-1419	Grant Amount:	$140,000
	SB 01-157		$500,000
		Total	$640,000
Contract No.	C153904	Previous Disbursements:	$140,000
		Available Balance:	$500,000
		Current Disbursements:	$ 0
		Ending Balance	$500,000

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.

56. Purgatoire River Channel Capacity and Improvement Study

Authorization:	HB 08-1346	Grant Amount:	$50,000
		Previous Disbursements:	$25,000
Contract No.	09000000010 *	Available Balance:	$25,000
		Current Disbursements:	$ 0
		Ending Balance:	$25,000

Water Source: Purgatoire River	Project Type: Study
Location: Trinidad Dam	Project Manager: Steve Miller
Sponsor: CWCB/US Army Corps of Engineers Purgatoire River WCD (PRWCD)	Beneficiary: PRWCD Water Users

This project is being done in two phases with the PRWCD as the lead sponsor. The ultimate 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. DWR Division 2 is providing significant in-kind assistance and is very interested in the results of this project. 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. Significant additional funding was provided by the USBR and the Corps. The hydraulic study was completed in the spring of 2009, and a final report entitled: "Hydraulic Modeling Results for the Purgatoire River and Trinidad Dam" (USBR Tech Report No. SRH_209-33, Oct. 2009) was distributed in November 2009. The Phase 1 analysis indicates that the channel is not as degraded as originally feared and flows as high as 5,000 cfs. can probably be routed through the district with minimal problems. Phase 2 funds were intended to be used to mitigate hydraulic problems identified in Phase 1, but with the low level of flood risk, the best ways to use those funds are still being discussed.

57. Wild and Scenic Rivers Fund

Authorization:	SB 09-125	Grant Amount:	$400,000
		Current Disbursements:	$ 0
Contract No.		Ending Balance:	$400,000

Water Source: Various	Project Type: Study
Location: Various	Project Manager: Ted Kowalski
Sponsor: CWCB	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 forming right now. This work will likely continue to use funds for the next several years. Prior to using the fund, the 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.

58. Wild and Scenic Rivers Study

Authorization: HB 08-1346

Contract No. 09000000023 *

Grant Amount:	$400,000
Previous Disbursements:	$130,160
Available Balance:	$269,840
Current Disbursements:	$159,718
Ending Balance:	$110,122

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 forming right now. This work will likely continue to use funds for the next several years. Prior to using the fund, the 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.

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.

No.	Project	Project Manager	FY10 Amount
	Water Supply Protection Program		
1	Statewide Planning and Local Planning Grants		$ 0
2	Recreational Support	Kowalski	$ 58,000
3	Elkhead Creek Transit Loss Project	Kowalski	$ 66,000
4	Water Resource Considerations of CBM Produced Water	Kowalski / Miller	$125,000
5	Uncompaghre Project Surface Water Irrigation System	Kowalski / Miller	$ 25,000
	Water Supply Planning and Finance Program		
6	Grand Mesa Regional General Permit	Feehan / Russell	$ 75,000
7	Animas La Plata Marketing Plan	Feehan	$ 25,000
	Stream and Lake Protection Program		
8	Meeting Nonconsumptive Needs	Bassi	$ 83,000
9	Dolores River Dialogue	Bassi	$ 99,000
10	ISF Legal Protection Support	Bassi	$ 40,000
	Water Conservation Planning Program		
11	Statewide Water Conservation Initiative Project	Deheza	$ 91,500
12	Water Education	Deheza	$ 16,000
13	Drought Project	Deheza	$ 75,000
	Flood Protection Program		
14	Multi-Objective Watershed Restoration Projects	Browning / Sturm	$ 139,500
15	Flood Mitigation and Project Compliance	Browning / Houck	$ 72,400
16	NRCS SNOTEL Site Installations	Browning / Busto	$ 55,000
17	Platte Boat Chute Improvement	Browning / Busto	$ 49,500
18	FEMA Coordinator Matching Program	Browning / Martinez	$ 43,600
	Water Information		
19	Colorado Water Needs and Alternatives Analysis	Alvarado	$ 36,000
20	Hydro Bio (need title)	Alvarado	$ 25,000
	Intrastate Water Management Program		
21	Basin Needs Decision Support System	Hecox / Johnson	$ 33,400
22	Interagency Overhead	N/A	$ 16,137
	Total Severance Tax Expended for FY 10		**$1,249,037**

Projects:

1. Statewide Planning and Local Water Planning Grants

Authorization: Long Bill
Water Source: Conjunctive use
Location: Statewide
Sponsor: CWCB
Grant Amount: N/A
Project Type: Water Planning Study
Project Manager: Various
Beneficiary: Various

In this fiscal year, CWCB staff opted to report the projects for the statewide and local water planning within the sections that implemented the studies. The original $72,900 in funding was distributed between a number of the following projects.

2. Recreational Support

Authorization: Long Bill
Water Source: N/A
Location: Statewide
Sponsor: CWCB
Contract No. C154161 *
Grant Amount: $58,000
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.

3. Elkhead Creek Transit Loss Project

Authorization: Long Bill
Water Source: Yampa River
Location: Yampa River Basin
Sponsor: CWCB
Contract No. 10000000015
Grant Amount: $66,000
Project Type: Study
Project Manager: Michelle Garrison
Beneficiary: Local Water Users

The USGS, in cooperation with the Division 6 office of the Colorado Department of Water Resources (DWR), studied the gain-loss characteristics of Elkhead Creek downstream from Elkhead Reservoir to its confluence with the Yampa River. Information on the gain-loss characteristics were needed to effectively manage the reservoir releases from Elkhead Reservoir requested by the Upper Colorado River Recovery Program during late summer and early fall for improving critical habitat for endangered fish downstream in the Yampa River.

The USGS determined the stream section in question is neither a gaining nor a losing reach. The draft report has been shared with the CWCB and other interested parties and is in peer review at the USGS.

Total cost of the project was $124,400. Funding was also provided by the USGS, city of Craig, Upper Colorado River Recovery Program (UCRRP)/Bureau of Reclamation, and Colorado River Water Conservation District (CRWCD). In-kind services were provided by DWR.

4. Water Resource Considerations of Raton Basin Coalbed Methane Produced Water

Authorization: Long Bill
Water Source: Groundwater
Location: City of Trinidad
Sponsor: CWCB
Contract No. C154151
Grant Amount: $125,000
Project Type: Planning
Project Manager: Steve Miller
Beneficiary: CWCB

This study by the Colorado Geological Survey (CGS) was intended to consolidate existing information about the groundwater systems potentially impacted by continued coalbed methane (cbm)

development in the Trinidad area. The Purgatoire River WCD was the local sponsor/coordinator. As originally conceived, the consolidated data and the results from several new monitoring wells would have been used to develop generalized aquifer maps with estimated aquifer properties that could be used in groundwater models [being developed by others] that could assess depletions and potential water quality changes to local water supplies from cbm extraction. Coincidently, and as required by recent statutory directives, the State Engineer had negotiated several stipulations with operators in the area as to whether cbm extracted groundwater was tributary or not. Due to concerns that the new data sets might create conflicts with those stipulations, the SEO asked that the study be curtailed and no formal study products were produced even though all of the grant funds were expended. The CGS is in the process of writing a concluding memo identifying all of the data and mapping that was accomplished so that this or a similar project can be restarted when new funds are available and a consensus as to study objectives between all interested State agencies can be reached.

5. Rapid Appraisal and Pre-Feasibility Study of Uncompahgre Project Surface Water Irrigation System

Authorization: Long Bill
Water Source: Colorado River
Location: Uncompaghre Valley
Sponsor: CWCB
Contract No. 10000000081

Grant Amount: $25,000
Project Type: Planning
Project Manager: Steve Miller
Beneficiary: Local Water Users

This project was conducted in cooperation with the Colorado River Water Conservation District ("CRWCD") to facilitate more effective use of federal salinity control investments being made in the Uncompahgre Valley Water Users Association ("UVWUA") service area. The CRWCD retained Dr. Charles Burt of the Irrigation Training and Research Center ("ITRC") at Cal Poly State University, San Luis Obispo, to analyze the existing irrigation system and suggest potential system reconfiguration options that could be achieved during future salinity control projects. The goal was to maximize the value of the salinity control work, provide better options for individual water users to improve the efficiency of their on-farm irrigation systems, and to modernize the UVWUA system at the same time. On June 30, 2010, ITRC provided a final report entitled: "Rapid Assessment of the Delivery System Improvement Program in the Uncompahgre Valley, Colorado." Subsequently, using funding provided by the US Bureau of Reclamation, ITRC has met with the UVWUA to begin discussion of concepts developed during the assessment and determine whether there is interest in moving forward with a full integration and optimization study of the UVWUA system. The ITRC study will be used as a scoping document to define the more detailed planning work and to seek funding from it. Already the Colorado River Basin Salinity Control Forum has expressed interest in funding a comprehensive planning study in the area to re-vitalize the existing salinity control efforts there.

6. Grand Mesa Regional General Permit – Fen and Wetland Project

Authorization: Long Bill
Water Source: N/A
Location: Grand Mesa
Sponsor: CWCB
Contract No. 10000000100

Grant Amount: $75,000
Project Type: Planning
Project Manager: Kirk Russell
Beneficiary: Local Water Users

The Grand Mesa supports over 350 natural lakes and reservoirs. These waters are protected under the Clean Water Act which is administered by the Corps of Engineers and many are located on U. S. Forest Service lands. Permits from both agencies (as well as others) are required for work within these water bodies. The permit process has become overwhelming and extremely costly. This study provides an evaluation of the use of a Regional General Permit (RGP) which can be more predictable and efficient permitting process for reservoir owners. An RGP contains provisions intended to protect the environment, natural and cultural resources, and provide a streamlined, expedited permit process to applicants due to agencies' pre-coordinated

evaluation. On June 30, 2010, the contractor delivered a final report outlining the need and benefits of an RGP. A small group of reservoir owners on the Grand Mesa and the COE agreed that an RGP is not currently necessary. The consideration of an RGP will continue in the future as permitting becomes more costly and more of a challenge.

7. Animas La Plata Marketing Plan

Authorization: Long Bill
Water Source: Dolores River
Location: SW Colorado
Sponsor: CWCB
Contract No. 10000000130

Grant Amount: $25,000
Project Type: Analysis
Project Manager: Tim Feehan
Beneficiary: State of Colorado

CWCB is currently working with Brown and Caldwell to examine in detail the short and long term benefits of the State purchasing its ALP pool allocation. Brown and Caldwell completed Phase I of that effort in February of 2010, which looked at the water supply, demand and marketability of ALP water in southwestern Colorado. Phase II will look at exchange potential, compact benefits, operation and maintenance costs, legal issues, funding options, etc., which will be presented to the CWCB Board Members for their review and input. CWCB is working jointly with the Southwestern Water Conservancy District on the Phase II Study, which is scheduled to be completed by November of 2010. It is staff's intent to present the findings of the Phase II Study at the November 2010 CWCB Board Meeting to obtain direction on how to proceed with the 2011 Projects Bill and the remaining $24M in ALP funds to be appropriated, as indicated above. The $25,000 grant amount for the CWCB's portion of Phase II has been disbursed.

8. Meeting Nonconsumptive Needs

Authorization: Long Bill
Water Source: N/A
Location: Statewide
Sponsor: CWCB
Contract No. C154162 *

Grant Amount: $83,000
Project Type: Studies
Project Manager: Linda Bassi
Beneficiary: Statewide

This funding was used for projects that assist in meeting Colorado's nonconsumptive needs, including: (1) reconnaissance-level studies by the Colorado Water Trust of two potential water rights acquisitions for ISF use ($15,000); (2) work performed by The Nature Conservancy and the Colorado Water Trust on Phase II of the Nonconsumptive Needs Assessment ($60,000); (3) development of a strategic plan for the Priorities Water Project ($5,000 cost-share amount); and (4) the completion of the final draft of Prof. John Loomis's report entitled: "Cost Savings Associated with the Upper Colorado River Basin Endangered Fish Recovery Program, Instream Flows, and Prospects for the Future."

9. Dolores River Dialogue

Authorization: Long Bill
Water Source: Dolores River
Location: McPhee Reservoir
Sponsor: CWCB
Contract No. 100000000031

Grant Amount: $99,000
Project Type: Study
Project Manager: Linda Bassi
Beneficiary: Local Water Users

This funding was used for a study entitled "Native Warm Water Fish in the Lower Dolores River: Laying the Foundation for a Comprehensive Adaptive Management & Conservation Strategy." The study is sponsored by the Dolores River Dialogue, a collaborative group of conservation, water management, land management, recreational and governmental representatives working since January 2004 to explore opportunities to manage McPhee Reservoir to improve downstream ecological conditions while honoring water rights, protecting agricultural and municipal water supplies and the continued enjoyment of rafting and fishing. The goal is to develop a comprehensive adaptive management and conservation strategy for

the native warm water fishery in the Lower Dolores River, with the three core components of the strategy consisting of: (1) a native fishery assessment of the Lower Dolores River; (2) a conservation strategy for native fish species specific to the Lower Dolores River; and (3) the development of strategy and protocols for non-native fish removal.

10. Instream Flow Legal Protection Support

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

Grant Amount: $40,000
Project Type: Study
Project Manager: Linda Bassi
Beneficiary: Various

The CWCB is a party in over 125 active water court cases. Stream and Lake Protection Section staff is responsible for protecting the CWCB's water rights in each case, which 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 court 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. The Section used this funding to retain a part-time paralegal to assist 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 enabled staff to focus on the more substantive duties and resolve more cases in a timely manner.

11. Statewide Water Conservation Initiative Project

Authorization: Long Bill
Water Source: N/A
Location: Statewide
Sponsor: CWCB
Contract No. C154164 *

Grant Amount: $91,500
Project Type: Study
Project Manager: Veva Deheza
Beneficiary: Statewide

The Statewide Water Conservation Initiative Project for Fiscal Year 2009-2010 consisted of 5 projects all generating new data and information for quantifying water conservation in Colorado. The projects were:

- Water Conservation in Colorado: Analyzing Level, Current Conservation and 1% per Year Scenarios;
- Criteria and Guidelines for the "Rainwater Harvesting" Pilot Project Program;
- SWSI Conservation Levels Analysis Report;
- SWSI 2010 Update: Chapter 3-M&I Conservation Strategies; and
- Feasibility study to assess the potential of urban water conservation to meet Colorado's future water supply needs to 2050.

12. Water Education Project

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

Grant Amount: $16,000
Project Type: Educational Tools
Managers: Veva Deheza
Beneficiary: Statewide

During Fiscal Year 2010, CWCB conducted a series of workshops on drought and climate change throughout the state. These workshops, *Dealing with Drought in a Changing Climate*, utilized the skills of world renowned scientists and local experts to educate the public, decision makers and others on the connections between drought and climate change and to gather data on drought response from 2002. Also as part of the CWCB's efforts to better understand how climate change may impact water resources, CWCB has created a Climate Change Technical Advisory Group (CCTAG) that provides guidance in scientific studies involving climate change to ensure that CWCB's approach is technically sound. This group meets multiple times a year and has played integral roles in the Colorado River Water Availability Study and the Drought Plan revision.

13. Drought Project

Authorization: Long Bill
Water Source: N/A
Location: N/A
Sponsor: CWCB
Contract No. C154152 *

Grant Amount: $75,000
Project Type: Water Planning
Project Manager: Veva McCaig
Beneficiary: Statewide

This project was provided with both Construction Fund and Severance Tax funding. See Paragraph 38 and 39 above in the Construction Fund – Non-Reimbursable Investments Section for details.

14. Multi-Objective Watershed Restoration Projects

Authorization: Long Bill
Water Source: Various
Location: Statewide
Sponsor: CWCB
Contract No. 10000000025 *

Grant Amount: $139,500
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 #35) 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 CWCB, e.g. projects identified in the Non-Consumptive Needs Assessment. Projects funded in the 2009 – 2010 fiscal year include a Riparian Assessment in the Crested Butte/Coal Creek Watershed, Statewide Water Rights Education Program sponsored by the Colorado Water Trust, Lightner Creek Watershed Sediment Supply Assessment near Durango, Squirrel Creek Restoration Project Monitoring, Gunnison River Diversion Dam Concept Design and Cost Estimate, Middle Boulder Creek Restoration Project Signage, North Fork Gunnison River Watershed Update, and River Watch sponsored Habitat and Macro-invertebrate Sampling Training Materials. Staff strives to support qualifying Watershed Restoration Projects throughout the entire state.

15. Flood Mitigation and Project Compliance

Authorization: Long Bill
Water Source: N/A
Location: Various
Sponsor: CWCB
Contract No. C154172 *

Grant Amount: $72,400
Project Type:
Project Manager: Kevin Houck
Beneficiary: CWCB

Funds from this account were used for a variety of studies. Funds were used to assist local governments in the preparation of local all-hazard mitigation plans, which are used to increase awareness of susceptibility to natural hazards and planning to mitigate the threat. Counties that participated in this process using these funds include Archuleta, Bent, Prowers, Baca, Kiowa, Otero, and Crowley. By completing and adopting these plans, these counties and their municipalities become eligible for federal

mitigation grants of up to $3 million each. Funds from this account were also used to assist the 5-2-1 Drainage Authority in Mesa County in the update to their Bosley Wash Final Design. Finally, funds from this account were used to partially fund a benefit/cost analysis of the proposed floodplain rules for the State which will be considered for implementation at a Rulemaking Hearing in November 2010.

16. NRCS SNOTEL Site Installations

Authorization: Long Bill
Water Source: N/A
Location: Various
Sponsor: CWCB
Contract No. 10000000093 *

Grant Amount: $55,000
Project Type: Snow Measurements
Project Manager: Joe Busto
Beneficiary: Statewide

CWCB has had a SNOTEL cost share program since 2004 and is responsible for seven new SNOTEL sites in Colorado bringing the total to 106. SNOTEL sites are also called snow pillows and are automated snowpack depth and water equivalent measurements in near real-time that are valuable for water supply forecasts. The total cost of equipment for a SNOTEL site is $25,000; CWCB provides up to $15,000 and local water agencies provide up to $10,000. This funding is provided to NRCS to purchase and install the site. NRCS orders and installs the equipment and works on a Forest Service on site approval plan. The Upper Gunnison River WCD was issued Purchase Order 10-93 for a SNOTEL site in the Lake Fork of the Gunnison. Purchase Order 10-94 was issued to the Northern Colorado Water Conservancy District for a site in or near Rocky Mountain National Park. Finally, P.O. 10-104 was issued to Longmont Conservation for $25,000 for the Sawtooth SNOTEL site in the St. Vrain River Basin. Approximately $10,000 of that purchase order was to purchase an additional six soil moisture sensors that are to be deployed at SNOTEL sites along the Front Range area during routine annual maintenance trips. The Severance Tax funding was dispensed to local agencies to initiate the process that typically takes one to two years before the installation is complete based on USFS workloads for site approval plans. Once completed the NRCS reports to the CWCB with pictures and summary report.

17. Platte Boat Chute Improvement and Vegetation Removal

Authorization: Long Bill
Water Source: South Platte River
Location: Just downstream of Chatfield Dam
Sponsor: CWCB

Grant Amount: $49,500
Project Type: O&M & Safety
Project Manager: Joe Busto
Beneficiary: CWCB, Arapaho County, Littleton, Englewood, and General Public

Contract No. 10000000113

This Severance Tax funding was added to other funding from the Chatfield Channel Improvement funding listed in the CF section of this report for a total of $100,000 that was transferred via annual contact between the Urban Drainage and Flood Control District. Approximately half of the funding will be used for culvert cleaning and vegetation removal work. For the $49,500 in ST funding the UDFCD used the CWCB funding and contracted with McLaughlin Water Engineers to work with local, state, and federal interests to develop recommendations, design improvements to Union Avenue Boat Chute #1, and work with the CWCB through the federal approval process. At Union # 1 the Englewood water intake is next to and attached to the drop structure and on the east bank of the river. This creates a hazard situation for boaters and swimmers to get caught in "keeper" currents. Union Avenue #1 was originally one 13 foot drop that was hazardous and was redesigned as a series of seven more gentle drop structures in the 1990s. As of August 2010 the team of CWCB, UDFCD, and McLaughlin have been through two rounds of design comments and approval comments with the U.S. Army Corps of Engineers and are awaiting final approval. The next steps will be to finalize a temporary access agreement with the Englewood Treatment Plant, hire contractors, seek a Corps nationwide permit, and construct the improvements during low flows at the end of Water Year 2010. Simply put large concrete walls on the

downstream end of this boat chute/intake structure will be cut down below channel bottom and allow boaters and swimmers use river energy to safety reach the river banks.

18. FEMA Coordinator Matching Program

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

Grant Amount: $43,600
Project Type: Matching Program
Managers: Browning/Christina Martinez
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.

19. Colorado Water Needs and Alternatives Analysis

Authorization: Long Bill
Water Source: N/A
Location: Statewide
Sponsor: CWCB
Contract No. C154096 *

Grant Amount: $36,000
Project Type: Study
Project Manager: Ray Alvarado
Beneficiary: Statewide

AECOM Inc., formerly known as Boyle Engineering, is under contract and has completed the work associated with scoped Phase 1 activities, including the draft study report. This money helped supplement the completion of the Phase 1 draft report. Comments, from a 4 month review period, have been received and are being reviewed. Once comments have been reviewed and categorized, the draft report will be updated.

20. A Remotely-Sensed Dual Coefficient Evaluation of Water Usage in the Arkansas River Rocky Ford Lysimeters

Authorization: Long Bill
Water Source: Arkansas River
Location: Arkansas River Basin
Sponsor: CWCB
Contract No. 10000000114

Grant Amount: $25,000
Project Type: Scientific Study
Project Manager: Ray Alvarado
Beneficiary: Statewide

A remote sensing estimation of crops at the Arkansas Basin lysimeter, using a method developed by HydroBio, using the remotely-sensed Dual Coefficient method (RDC) was being tested. Currently-accepted methods reconstructing energy balance physics are complex, potentially error prone for the novice, computationally expensive and require large amounts of data input. The effort was to determine if this new method would give a relatively simple to use, robust, and computationally inexpensive approach for estimating ET.

21. Basin Needs Decision Support System

Authorization: Long Bill
Water Source: N/A
Location: Statewide
Sponsor: CWCB
Contract No. C154163

Grant Amount: $33,400
Project Type: Planning
Managers: Eric Hecox / Greg Johnson
Beneficiary: CWCB & Statewide

CWCB is refining and expanding the Basin Needs Decision Support System (BNDSS). The current effort involves database enhancements and DSS integration to allow better tracking of identified

projects, and processes (IPPs). The BNDSS will track projects and processes indentified in SWSI and others identified by water providers since the SWSI report. The BNDSS will monitor their progress and identify where CWCB programs can help implementation. The BNDSS will also track conservation program data, water use and supply data (actual and projected), population data (actual and projected), and non-consumptive project data. The BNDSS refinements will enable this data to be directly used by TSTool to refine local and regional estimates of the projected water supply and demand, and the resulting water supply "gap". The BNDSS project will also enable automatic loading of data from self-completed water provider datasheets.