STATE OF COLORADO

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TO: Colorado Water Conservation Board

FROM: Jennifer Gimbel
Dan McAuliffe
Christian Lyons

DATE: May 19-20, 2009

SUBJECT: Agenda Item 18d, May 2009 CWCB Board Meeting
CWCB Director's Report

Page 31 – ATTACHMENTS

- **18d-01 Loan Forecast & Prospect Report**
- **18d-02 Loan Financial Activity Report**
- **18d-03 De Minimis Cases**
- **18d-04 Summary of Resolved Cases**
- **18d-05 H.R. 2288**
- **18d-06 Animas –La Plata Project Letter to Leach**
- **18d-07 Executive Summary of the Strategic Plan for the Fountain Creek Watershed**
- **18d-08 April 2009 Drought Update**
- **18d-09 CODOS Update**
- **18d-10 Design and Construction Status Report**

~FEDERAL AND INTERSTATE~

REPRESENTATIVE SALAZAR INTRODUCES H.R. 2288 – Representative Salazar introduced H.R. 2288 on May 6, 2009 that maintains the annual base funding for the Upper Colorado River and San Juan River Endangered Fish Recovery Programs. I would like to express my thanks to Rep. Salazar for his leadership on this important legislation. This legislation has bi-partisan and diverse support from environmental organizations, water providers, and the various states. A copy of the legislation is attached to this Director's report. (Attachment 18d-05) *(Ted Kowalski)*

OBAMA SIGNS OMNIBUS PUBLIC LAND MANAGEMENT ACT – President Obama signed the Omnibus Public Land Management Act of 2009 into law on March 30, 2009. This legislation included a number of provisions important to Colorado (such as provisions relating to the Rocky Mountain National Park wilderness areas and how that designation relates to the Grand Ditch and the Colorado Big Thompson Project, the San Juan River Recovery Program and the Upper Colorado River Endangered Fish Recovery Program, the Navajo-Gallup Water Supply Project, the Jackson Valley Conduit, the Arkansas Valley Conduit, and the Dominguez Canyon wilderness provisions that rely on the CWCB's instream flow program for protection of water dependant resources within this area, among many others). *(Ted Kowalski)*

S. 601 WEATHER MODIFICATION RESEARCH OFFICE BILL INTRODUCED – The Senate Commerce, Science and Transportation Committee is planning a May hearing on S. 601, the Weather Mitigation Research and Development Policy Authorization Act of 2009, introduced by Senator Kay Bailey Hutchison on March 16. Senator Hutchison introduced similar legislation in the last Congress as did Congressman Mark Udall, which the CWCB supported through resolutions and letters to Colorado's congressional delegation.

The new bill calls for the development and implementation of a comprehensive and coordinated national weather mitigation policy and national cooperative federal and state program of weather mitigation research and development.

The bill explicitly mentions research in the arenas of: cloud and precipitation physics, cloud dynamics and cloud modeling, improving could seeding-related technologies, severe weather and storm research, and the "potential adverse affects of weather mitigation."
It promotes improved forecasting and decision-making technologies, including tailored computer workstations and software and new observation systems with remote sensors, as well as assessments of the efficacy of weather mitigation. Further, it encourages the development of federal/state agency and academic partnerships, as well as scholarship and educational opportunities.

The bill authorizes $25M/year for FY2010-2014, with 66% going to NSF, and 34% split between NASA and NOAA, with half that amount set aside for competitive grants to state agencies, institutions of higher education, and non-profit organizations. *(Joe Busto)*

MILLION PROJECT – The Army Corps of Engineers has scheduled two more public meetings in Colorado on a businessman's plan to pipe water from southwest Wyoming to Colorado's populous Front Range.

The meetings June 10 in Craig and June 11 in Grand Junction will take public comments on what an environmental study of the proposal should address. Six similar meetings were held last month in Wyoming, Utah and Colorado.

The period to comment on the scope of the environmental study of the project has been extended to July 27.

Aaron Million and Million Conservation Resource Group have proposed a 560-mile pipeline system to deliver 250,000 acre-feet of water from the Green River basin to water users in southeast Wyoming and the Front Range of Colorado. *(Source: Denver Post, May 8, 2009)(Ted Kowalski)*

GRAND MESA WEATHER STATION PRESENTATION – Arlen Huggins of the Desert Research Institute presented data from the new weather station on top of the Grand Mesa at the annual Weather Modification Association meeting in Anaheim, CA in April. This work was sponsored by the CWCB and the Colorado River Basin States.

His weather station analysis showed that 29% of the hours in 5-month winter period the Grand Mesa had measureable Super-cooled liquid water (SLW) present. SLW is the fuel needed for successful cloud seeding.

Huggins's presentation also showed that locating the cloud seeding generator and weather station near the web cam for the Grand Junction radar made it very simple to determine when icing periods were starting and ending and when cloud base was lower or higher. It is believed by staff that these tools available over the internet to all interested parties will assist with the credibility and confidence of cloud seeding operations in Colorado. *(Joe Busto)*

SALAZAR ANNOUNCES $9M IN GRANT AWARDS – Secretary of the Interior Ken Salazar announced the award of nearly $9 million to 12 state wildlife agencies to help conserve and recover imperiled fish and wildlife species through the State Wildlife Grants (SWG) Competitive Program. The federal funding will be matched by more than $7 million in non-Federal funds provided by states and their partners for projects helping imperiled fish, wildlife and plant species.

To view a full list of recipients and further details, go to: http://www.fws.gov/news/NewsReleases/showNews.cfm?newsId=C4E7314A-C66E-78F7-DEA6B00D9663D5CC

All 56 states and territorial wildlife agencies have approved State Comprehensive Wildlife Conservation Plans which collectively provide a nationwide blueprint for actions to conserve imperiled species. The plans were created through a collaborative effort among state and federal agencies, biologists, conservationists, landowners, sportsmen and the general public. Each plan was then reviewed and approved by a national team that included members from the Fish and Wildlife Service as well as directors from state wildlife agencies.

The mission of the U.S. Fish and Wildlife Service is working with others to conserve, protect and enhance fish, wildlife, plants and their habitats for the continuing benefit of the American people. We are both a leader and trusted partner in fish and wildlife conservation, known for our scientific excellence, stewardship of lands and natural resources, dedicated professionals and commitment to public service. For more information on our work and the people who make it happen, visit www.fws.gov. *(Source: US Fish and Wildlife Service)*

ENDANGERED PALLID STURGEON CAPTURED IN PLATTE RIVER – A pallid sturgeon recently captured by biologists in the Platte River may result in researchers rethinking what they know about the endangered fish.

University of Nebraska-Lincoln researchers were sampling fish on March 31, as part of a study of shovelnose sturgeon, when they captured a pallid sturgeon near Leshara, about 50 miles upstream from the confluence with the Missouri River. It was the first time biologists have captured a pallid sturgeon upstream from the confluence of the Elkhorn River.

The UNL researchers have captured four other pallid sturgeon this spring while sampling, but they were captured within two miles of the confluence with the Missouri River.
The captured sturgeon, which measured about 30 inches in length and weighed about 5 pounds, was stocked in the Missouri on April 11, 2002, near Boonville, Mo. The fish moved more than 475 miles upstream from its stocking location to where it was captured.

UNL fisheries biologists have been evaluating shovelnose sturgeon in the Platte within Nebraska. Shovelnose sturgeon, a common game fish species, are found in portions of the Platte and Missouri rivers.

The shovelnose is important because it provides insight into the biology and ecology of its close relative, the pallid sturgeon.

Pallid sturgeon are found in the Mississippi River drainage, including the Missouri. Numerous federal and state agencies are working diligently on pallid sturgeon recovery efforts. Stocking is a critical component of those efforts; about 79,000 pallid sturgeon have been stocked in the Missouri over the past 15 years.

UNL faculty, students and research associates initiated a five-year study on shovelnose sturgeon population dynamics in the Platte in 2008. While the focus of the study is on shovelnose sturgeon, researchers hope to gain valuable information as to the importance of the Platte for both sturgeon species. *(Ted Kowalski)*

US BUREAU OF RECLAMATION – WATER FOR AMERICA – BASIN STUDIES PROGRAM – The Basin Studies Program is designed to identify water supply issues that potentially may be resolved with changes to the operation of water supply systems, modifications to existing facilities, development of new facilities or non-structural changes. The studies will incorporate the latest science, engineering technology, climate models and innovation. Through the Basin Study Program, the Bureau of Reclamation will partner with basin stakeholders to conduct comprehensive studies to define options for meeting future demand in targeted river

basins in the west. Part of the 7-State Agreement signed on April 23, 2007 was to cooperate in the development of Colorado River System augmentation projects and programs.

The 7-States applied for a basin study to review and further evaluate the current and projected water supply and demand throughout the Colorado River basin and its service areas. The information would be used to refine options and develop strategies for augmentation opportunities to meet future demands. All of the letters of interest submitted have now been reviewed by Reclamation and the 7-State proposal was one of several selected for further development as a joint study proposal to be evaluated and ranked by a Reclamation-wide review committee.

The Federal fiscal year 2009 budget requests $4.0 million in funding for the Basin Studies Program. The Basin Studies will be cost-shared on a 50/50 basis with willing state, tribal and local partners, and will generally be two years in duration. Because this is not a financial assistance program, Reclamation's share of the study costs may only be used to support work done by Reclamation or its contractors. The 7-state technical committee, Randy Seaholm is Colorado's representative, will be working with Reclamation between now and June 26th to develop the joint study proposal. *(Randy Seaholm)*

~STATEWIDE~

STATEWIDE DROUGHT MITIGATION & RESPONSE PLAN UPDATE – The Colorado State Drought Mitigation & Response Plan is required to be updated every three years. The last comprehensive plan was completed in 2002, with an update in 2007. For the 2010 update, the Office of Water Conservation & Drought Planning, working with the Governor's Water Availability Task Force, will do a comprehensive update and revision of the 2002 plan that integrates the 2007 update as well as climate change and other drought related components. Staff has scoped out a portion of the drought plan and we hope to have this RFP's out for proposals in late May or June. *(Taryn Hutchins-Cabibi)*

2009 WATER CONSERVATION LEGISLATION – HB 09-1017, the legislation that amends the Water Efficiency Grant Program Fund (WEGF) by providing authority to the CWCB to expend appropriated monies in the Fund, has been passed by the Colorado General Assembly and is awaiting Governor Ritter's signature. The WEGF has been on hold since a recent interpretation of Colorado's statutes authorizing and appropriating money for water conservation and drought mitigation planning and implementation grants (37-60-126 (12) C.R.S.), has resulted in a determination that despite WEGF unspent funds rolling- over from a prior fiscal year, there is currently no authority for the CWCB to expend these rolled-over funds.

As a result of the legislation, the remaining funds in the WEGF (well over $1 million) can now be utilized. The WEGF will be reviewing applications and rewarding grants based on merits of the project beginning on July 1, 2009. The bill assists covered entities in complying with state law and remaining eligible to receive water project financing. The bill has no fiscal impact and seeks no new appropriations. *(Taryn Hutchins-Cabibi)*

WATER CONSERVATION PLANS APPROVED – The Office of Water Conservation & Drought Planning (OWCDP) has ***approved*** additional Water Conservation Plans from water providers. They include:

- Left Hand Water District
- City of Fountain
- City of Greeley Water and Wastewater
- Centennial Water and Sanitation District
- Fort Collins-Loveland Water District

The OWCDP has determined the Plans to be in accordance with §37-60-126 C.R.S. and the CWCB's Guidelines for the Office to Review Water Conservation Plans Submitted by Covered Entities. Water providers may proceed with implementation of their Plans.

The OWCDP has received and is evaluating and working with providers on the following Water Conservation Plans:

- Parker Water and Sanitation District
- Consolidated Mutual Water Company
- City of Salida
- Widefield Water and Sanitation District
- Town of Lamar
- City of Steamboat and Mount Werner Water District

(Taryn Hutchins-Cabibi)

JOINT FRONT RANGE CLIMATE CHANGE VULNERABILITY STUDY – CWCB is participating in this study, along with several Front Range water providers (City of Aurora, City of Boulder, Colorado Springs Utilities, Denver Water, City of Fort Collins, and Northern Colorado Water Conservancy District) to determine the education, tools, and methodology necessary to examine the possible effects of climate change on several common watersheds. Through collaboration with the Water Research Foundation, this JFRCCVS project will enable group members, which obtain their water supplies from the upper Colorado, South Platte, Arkansas, Cache la Poudre, St. Vrain, Boulder Creek, Big Thompson, and other similar river basins, to examine potential effects climate change may have on those supplies. *(Taryn Hutchins- Cabibi)*

COLORADO WATERWISE COUNCIL: The CWCB partnered with the Council as they hosted a statewide conference on "Measuring Success in Water Conservation". This 2-day event was held April 2 & 3, 2009 in Denver. Director Sherman and Mayor Hickenlooper were keynote speakers on April 2nd and 3rd and John Fielder gave a slide show on his upcoming book "Ranches of Colorado." 130 water professionals attended the conference and feedback was extremely positive.

The Council has also had a change in Leadership with former Executive Director Paul Lander stepping down in March. The Council will continue to move forward with the BMP project, likely utilizing outside consultants. *(Taryn Hutchins-Cabibi)*

BUREAU OF RECLAMATION REQUESTS FEEDBACK – The BOR has contacted CWCB and requested feedback on the role that water conservation plays in mitigation for the Windy Gap permitting process. CWCB provided the BOR with documents on conservation planning requirements for Covered Entities, also available on the website. CWCB acknowledged that requiring participants to comply with State and Local laws is good policy and will help encourage covered entities to comply with existing regulation, including the Water Metering Act and the Water Conservation Act. CWCB feels that Covered Entities should have an approved conservation plan that has fully considered all of the elements defined in §37-60-126(4) C.R.S. *(Taryn Hutchins-Cabibi)*

LEVEE UPDATE – The Colorado Water Conservation Board is continuing to work with Colorado communities on an as-needed basis regarding levee issues and technical support. The focus to this point has been working with communities involved in the Corps of Engineers (Corps) Inspection of Completed Works (ICW) program, in which Corps-built and designed levees are turned over to local governments for ongoing maintenance.

The Corps recently completed the most recent round of inspections, and all participating Colorado communities except one received Minimally Acceptable ratings, which allow them to stay in the program as long as deficiencies are addressed. Those communities rated Minimally Acceptable include Colorado Springs, Pueblo, Holly, Las Animas, and Granada. Alamosa received a rating of Unacceptable due to serious deficiencies. It should be noted that Alamosa has protested this rating on the grounds of design flaws in the initial project, and the review of this protest is currently up in the air. While CWCB staff has repeatedly offered assistance to Alamosa, the City has, to this point, addressed these issues on their own. Technical and financial assistance has been provided to the Town of Granada, and upcoming assistance will also be provided to the City of Las Animas. Colorado Springs, Pueblo, and Holly have not requested assistance from the CWCB.

Future assistance to Colorado communities is anticipated to include technical assistance for non-Corps levees. The CWCB has already been consulted for issues regarding levees in Boulder, Kiowa, and other communities. It is anticipated that requests such as these will continue into the future.

A relatively new issue regarding levees is the treatment of transportation systems, such as highways and railroads, acting as de facto levees, and which have historically been portrayed as physical barriers on floodplain maps. Federal guidance to this point has been inconsistent and the extent to which communities need to address these "levees" is still being determined. The CWCB is in active communication with FEMA regarding this issue. *(Kevin Houck)*

FLAMING GORGE PIPELINE PROJECT (MILLION RESOURCE GROUP – REGIONAL WATER SUPPLY PROJECT) – Staff attended the project scoping meeting held in Denver on April 21st. This was one of the six scoping meetings on the project held in communities along the 560-mile pipeline route through Utah, Wyoming and into Colorado. Based on comments received during those meeting two more scoping meetings have been scheduled. Attached is a news article staff says fairly represents the substance of the Denver meeting (not the right project or the right time) with the only exception being a couple of comments from the public suggesting that it was time to take a close look at the project given the

need for additional water supplies along the front range and the uncertain impacts of climate change. Generally speaking strong opposition to the proposed project was expressed during the public scoping meetings. *(Randy Seaholm)*

~ARKANSAS RIVER BASIN~

ARKANSAS BASIN STUDIES – We are winding up one study and initiating two more in the Arkansas Basin. The Purgatoire Channel Capacity Study will soon release a draft report showing that modeled flows up to 5000 cfs can be routed below Trinidad Reservoir without major damage to property or risk to life. USGS will begin Phase 2 of the Water Quality Baseline study, in which we will look salinity loading on Fountain Cr. and the river below Pueblo Reservoir. In cooperation with the Colorado Geologic Survey we will be looking at groundwater impacts of coal bed methane production in Las Animas County. *(Randy Seaholm)*

FOUNTAIN CREEK VISION TASK FORCE – Attached to this report (Attachment 18d-07) is a copy of the Executive Summary of the Task Force's Strategic Plan. A WSRA grant helped fund the Task Force. The Strategic Plan will be implemented by the newly created Greenway and Flood Control District authorized by legislation recently signed by Gov. Ritter. Additional discussion of this process and its relationship to other basin activities will occur at agenda items 13 and 14. *(Steve Miller)*

ARKANSAS RIVER DECISION SUPPORT SYSTEM (ArkDSS) - Work on posting for request for proposal (RFP) for the Arkansas DSS Feasibility Study is still being completed. It is still anticipated that a contractor will be selected before the July Board meeting.

This section is also working with Dr. Gates at Colorado State University (CSU) on refining his approved WSRA work. His application was approved for $600,000 and we are working with CSU on refining the application scope into a contractual scope. *(Ray Alvarado)*

~COLORADO RIVER BASIN~

SALAZAR RECOGNIZES COLORADO'S EFFORTS ON COLORADO RIVER NEGOTIATIONS - Interior Secretary Ken Salazar has recognized the Colorado Water Conservation Board for the state's efforts in helping to develop a strategy for dealing with long-term drought in the Colorado River Basin.

Salazar awarded Colorado, along with the six other Colorado Basin states and other partners in the talks, with a "Partners in Conservation Award" for finalizing an agreement known as the Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations for Lakes Powell and Mead.

The Colorado River provides water for 30 million people in seven states and two countries. It is often called the most regulated and litigated river in the United States.

The guidelines were developed during a period of severe drought, declining reservoir levels and continued growth in demand for water. The agreement, also known as the Interim Guidelines,

has been hailed as the most significant change in river management since the Colorado River Compact was signed in 1922.

"We all recognize the benefits of collaboration over litigation," said Jennifer Gimbel, Director of the CWCB. "But saying it is one thing and doing it is another – especially when it comes to water. We're pleased that the entire Colorado River basin has begun to focus their attention on river augmentation and increased water efficiency."

Randy Seaholm, Chief of the Water Supply Protection Section, accepted the award on behalf of the Ritter administration at a ceremony in Washington D.C.

The Department of the Interior's Cooperative Conservation Award program recognizes conservation achievements resulting from the cooperation and participation of individual landowners, citizen groups, private sector, nongovernmental organizations, and federal, state, local, and/or tribal governments.

These Guidelines, and the associated Record of Decision ("ROD"), represent the culmination of talks between the seven basin states and the Interior Department on how to manage the lower Colorado River during times of shortage, and how to coordinate the operations between the two largest reservoirs on the Colorado River. The agreement will be in effect until 2026.

"This award demonstrates the benefits of cooperation between the seven basin states, our federal partners, and other interested parties," Seaholm said. "I am pleased that Secretary Salazar recognizes how important these Guidelines are, and I hope that we are able to continue to work together as we implement these Guidelines, and as we pursue other mutually beneficial projects." *(Ted Kowalski)*

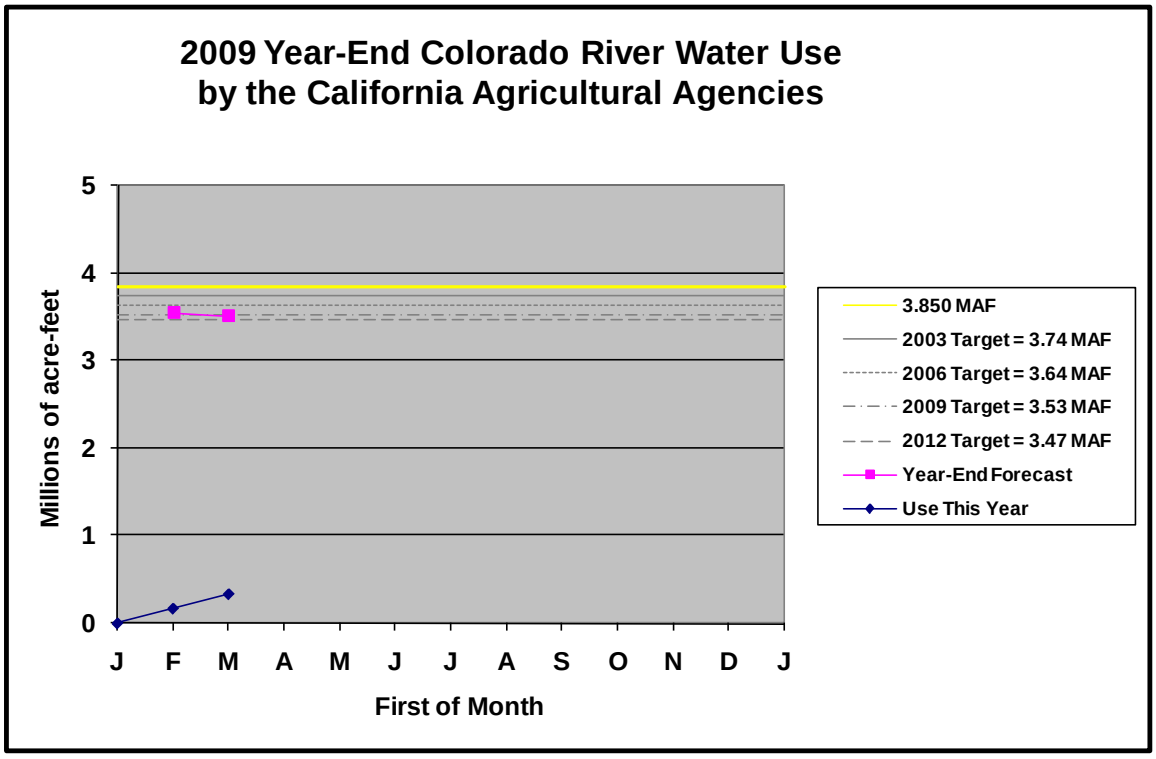
BOB MUTH LEAVING – Bob Muth will be leaving his position as Director of the Upper Colorado River Endangered Fish Recovery Program for the US Fish and Wildlife Service. Bob has accepted a new position with the Service as Director of the Bozeman (Montana) Fish Technology Center. He will start his new job July 5. Bob is not saying farewell just yet because he still intends to be at his desk working on Recovery Program issues to ensure a smooth transition. *(Randy Seaholm)*

UPPER COLORADO RIVER COMMISSION – The Upper Colorado River Commission will meet in Santa Fe, New Mexico on June 10-11. The Commission will receive reports from Reclamation, Fish and Wildlife Sevice, Western Area Power Administration and others. The Commission will also discuss further the need to upgrade the Lees Ferry gage, climate change, curtailment efforts and budget. *(Randy Seaholm)*

COLORADO RIVER WATER USE - As of March 8, 2009, storage in Lake Powell was 12.898 million acre-feet (MAF), or 53 percent of capacity. The water surface elevation was 3,611.7 feet. The storage in Lake Mead was 12.476 MAF, or 48 percent of capacity. Total system storage was 32.607 MAF, or 55 percent of capacity, which is 1.634 MAF more than one year ago.

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. Tracking of use in 2009 is shown in the graph below, and the preliminary year-end estimate for 2008 is 3.509 MAF. The target under the Interim Surplus Guidelines (ISG) for the end of 2006 was 3.640 MAF, and the target for 2009 is 3.530 MAF, thus California was in compliance with the ISG through 2008. *(Andy Moore)*



GLEN CANYON ADAPTIVE MANAGEMENT WORKGROUP – The Adaptive Management Workgroup (AMWG) met in Phoenix on April 29th and 30th. It was noted that the Humpback Chub population continues to increase. The Strategic Science Plan and Monitor and Research Plan updates were approved. Significant time was spent providing guidance to GCMRC and TWG on budget priorities for the next two years given that there are more needs than funds available. Also, there was a motion from the Grand Canyon Wildlands Council seeking to begin discussions on the potential for reintroduction of extirpated species to the Canyon. The AMWG determined this action to be outside the scope of the Glen Canyon Adaptive Management Program in 2003, however there seems to be some sentiment within the AMWG for revisiting this matter. Staff is concerned that this effort will distract from the primary monitoring and research focus of the Glen Canyon Adaptive Management Program on dam operations and on the budget available to meet these primary program objectives. More information about the meeting can be found on Program website: http://www.usbr.gov/uc/rm/amp/amwg/mtgs/09apr29/index.html *(Randy Seaholm)*

COLORADO RIVER ANNUAL OPERATING PLAN – The Colorado River Technical Work met in Las Vegas on April 8th the review the reservoir operations. This meeting was very timely as critical determinations for reservoir operations for the balance of water year are made on April 1st. This year the lack of precipitation during Mach caused the runoff forecast to drop the equalization line while Mead remained just above elevation 1105. As a result the release from Glen Canyon Dam was reduced to an 8.23 million acre-foot release. The March 24-month study

project a Lake Powell release of 8.98 million acre-feet. This was the reverse of last year when Powell went just above the equalization line and released 9.46 million acre-feet.

In addition to review of the April 24-month study the technical workgroup continued to work on understanding more of the nuances of system operations in efforts to work out some of the minor issues with the 24-month study.

Finally, development of the Colorado River Annual Operating Plan (AOP) for the coming water year will begin with the first consultation scheduled for June 25th in Las Vegas. The 2nd consultation will be on August 26th and the final consultation on September 22nd. *(Randy Seaholm)*

COLORADO RIVER BASIN SALINITY CONTROL – The CRBSC Forum, Work Group, and Advisory Council met in Moab UT May 5-7, 2009. The WG confirmed its readiness to recommend $1.5 million of Basin States funds for use by the Uncompahgre Valley Water Users Association to continue with lateral piping projects near Olathe. The UVWUA is also seeking Reclamation funds made available under the stimulus legislation for this project. The Forum toured the Paradox deep well brine injection project and encouraged Reclamation to consider a solar evaporation option as it evaluates alternatives to prolong the life of the project. The Advisory Council created a "Drafting Committee" to develop policies and guidelines to implement the newly authorized Basin States Cost Share Program, which in Colorado will be managed in cooperation with the Colorado State Conservation Board. *(Randy Seaholm)*

U.S. – MEXICO UPDATE – U.S.-Mexico opportunities continue to be explored by the two countries and the seven basin states. As we have discussed previously, the workgroups and core group meetings have continued, except that the late-April meeting scheduled in Mexico was canceled due to swine flu concerns. In addition, the representatives of the Basin states have: 1) developed a presentation that more fully describes the basin states' roles in Colorado River matters and further describes the concepts mentioned in the letter from the basin states to Mexico; 2) begun to develop negotiation protocols; and 3) prepared for a meeting with Mexican counterparts that will likely occur in June. Staff will provide additional details on the current processes during the workshop before the May Board meeting. *(Ted Kowalski)*

UCRC ALTERNATIVES STAKEHOLDER GROUP – The Upper Colorado River Alternatives Stakeholder Group continues to meet regarding alternatives to wild and scenic designation. In early May, the Front Range water providers made a presentation on their mitigation options related to the Windy Gap firming project and the Moffat Tunnel Expansion project. In addition, we are continuing to discuss resource flow guides. Since the last Board meeting, the BLM has indicated that they are delaying their process by at least several months. As such, the Staff has not written to Secretary Salazar yet requesting a delay because such a request may not be necessary. *(Ted Kowalski)*

GRAND JUNCTION BLM FIELD OFFICE ISSUES ELIGIBILITY REPORT – The Grand Junction BLM Field Office issued its Eligibility Report on March 24, 2009, and found initially that several segments of the Colorado River, the Gunnison River, the Dolores River, Dominguez Creek, among others, are eligible for wild and scenic designation. The BLM has expressed some support for establishing an alternatives stakeholder group to discuss options for resource protection, similar to some of the other groups that are meeting on wild and scenic

issues within Colorado. Moreover, the Uncompahgre Field Office is working on their Eligibility Report and it is expected out within the next few months. These processes are extraordinarily resource intensive, and we may want to discuss with Roy Smith how to stage these various different processes around the State so that our resources are not completely overtaxed. The Grand Junction field office report is available at: http://www.blm.gov/pgdata/etc/medialib/blm/co/field_offices/grand_junction_field/PDF.Par.3668.File.dat/Final%20Wild%20and%20Scenic%20Eligibility%20Report%20original%20signature%20web.pdf *(Ted Kowalski)*

COLORADO RIVER DECISION SUPPORT SYSTEM (GENERAL) - The contract for the implementation of the FloodDSS has been awarded to Riverside Technology. The contract is awaiting signatures, with an official kick-off meeting occurring on May 21, 2009. *(Ray Alvarado)*

COLORADO RIVER DECISION SUPPORT SYSTEM (CRDSS) - Boyle/AECO Phase 1 work on the Colorado River Water Availability Study (CRWAS) continues with the completion of the meetings with the various West Slope Basin Roundtables. Compiling of comments and questions are being done now and the responses will be posted to the CWCB website once they have been completed. Modeling refinements are being started which include refinements suggested by the various roundtables. The paleo-hydrology and climate change hydrology are continuing to be developed. Scoping for Phase 2 will begin with an internal team meeting later this month. Once activities are undertaken and completed, newsletters will also be posted on the CWCB website, with email notification to interested parties throughout the Phase 1 process. *(Ray Alvarado)*

ASPINALL UNIT OPERATIONS – Pursuant to the newly decreed water right for the Black Canyon of the Gunnison National Park releases from the Aspinall Unit reservoirs will increase to 6,000 cfs by May 14th and remain there for 24-hours. The release will then be brought back down to around 1700 cfs over the next several days. This flow pattern more closely resembles a natural hydrograph and is expected to flush sediments from the river channel and remove box elder trees along the channel banks.

With respect to the Aspinall Unit Re-operations EIS being undertaken as part of the Upper Colorado River Endangered Fish Recovery Program public hearings concerning the DEIS were held in Gunnison and Delta on April 7 and 8 respectively. The meetings were lightly attended with most of the major parties electing to submit written comments. The public comment period on the DEIS closed on April 24th. Reclamation is currently evaluating the comments received. *(Randy Seaholm)*

CLOUD SEEDING STUDY AT VAIL – Dr. Bernie Silverman completed an independent target-control statistical evaluation of the Vail cloud seeding program over the period 1977-2005 using ratio statistics and the bias adjusted regression ratio method. The water year streamflow expressed in acre feet served as the response variable in the evaluations. The effect of seeding on eight closely spaced sub-basins in the Vail watershed was evaluated using the controls that five the most precise evaluation results possible with the available data.

Evidence for statistically significant seeding effects ranging from +6.3% to +29.8% was found for five of the eight seeding targets. The maximum seeding effect is centered on Bighorn Creek

and decreases for targets both northwest and southeast of Big Horn Creek. The CWCB provided the streamflow data and several local water users provided funding the publication of a journal article for this study. *(Joe Busto)*

STUDY: SHORTAGES LIKELY ON COLORADO RIVER BY 2050 - If the West continues to heat up and dry out, odds increase that the mighty Colorado River won't be able to deliver all the water that's been promised to millions who rely on it for their homes, farms and businesses, according to a new study.

Less runoff — the snow and rain that fortify the 1,400-mile river — caused by human-induced climate change could mean that by 2050 the Colorado won't be able to provide all of its allocated water 60 percent to 90 percent of the time, according to climate researchers at the Scripps Institution of Oceanography at the University of California at San Diego.

The more parched the landscape, the more difficult the choices will be for those with dibs on the Colorado's water and those in charge of divvying it up, the study claims.

The results were published Monday in the journal Proceedings of the National Academy of Sciences. Drought has already stressed the river. The problem is being compounded by growing populations demanding more water and the expected effects of climate change.

The Bureau of Reclamation has used a different set of calculations than the Scripps researchers to reach a similar — though less dire — prediction, according to Terry Fulp, the agency's Nevada-based deputy regional director for the Lower Colorado.

His agency's calculations predict the Colorado could run short of water 58 percent to 73 percent of the time by 2050. Decreases in runoff could short the Colorado River by about 400,000 acre feet of water 40 percent of the time by 2025. That's equivalent to the amount of water needed to supply 400,000 to 800,000 households.

Those figures double later in the century, according to the Scripps researchers.
The signs point toward tough decisions about who will get less water. Agricultural operations use about 80 percent of the water taken out of the Colorado.

Measures such as conservation and water exchanges, which can require upfront investments and flexibility, could play a key role in avoiding some of the biggest shortfalls.

In 2007, officials from the seven states that get water from the river — Arizona, California, Colorado, Nevada, New Mexico, Utah and Wyoming — and then-Interior Secretary Dirk Kempthorne signed a far-reaching agreement aimed at conserving and sharing the scarce resource. The 19-year plan formalized rules for cooperating during the ongoing drought. *(Source: Associated Press/Andy Moore)*

ENDANGERED SPECIES RECOVERY NEAR GRAND JUNCTION COULD BENEFIT OTHERS - The effort to recover endangered fish near Grand Junction could benefit Colorado River conditions closer to home.

East and West Slope water stakeholders are closing in on a plan that, if finalized, would direct

5,412 acre-feet of water stored in Granby Reservoir to flow uninterrupted to a critical 15 mile-reach of the Colorado River in the Grand Valley of western Colorado.
And as it's shepherded through, the water could improve Grand County Gold Medal waters below Windy Gap.

The plan is part of a much larger effort implemented two decades ago to save four warm-water fish species from extinction: the Colorado Pikeminnow, razorback sucker, humpback chub and bonytail chub.

In the early 1980s, the U.S. Fish and Wildlife Service proposed that any depletion of water in the Upper Colorado River Basin would need to be replenished for the health and continuation of these species.

From there, a complex multi-state, multifaceted arrangement was made involving water users, the U.S. Bureau of Reclamation and several Colorado River drainages. Partially funded by Congress each year, the program has included construction of new facilities and several re-negotiated reservoir operations.

As part of the federally initated Upper Colorado River Endangered Fish Recovery Program, East and West Slope diverters committed to supplying 10,825 acre-feet of water in late summer. Responsibility for that amount of water is evenly split between West and East slope water providers.

As a temporary solution, Denver Water has been releasing flows from Williams Fork Reservoir to comply, and The Colorado River Water Conservation District has been releasing from Wolford Mountain Reservoir for the West Slope's share.

But with a Dec 20, 2009, deadline looming to come up with a permanent 10,825 acre-feet solution, a coalition formed in 2007 to analyze how the water should be supplied annually.

Out of those negotiations, a "preferred" solution has emerged, one concerning the release of about half the water from Granby Reservoir, and the other half from Ruedi Reservoir near Basalt. The plan also includes using excess storage capacity in the Green Mountain Reservoir. A formal summary of this alternative released in January declares it the only solution on which water users reached a consensus, saying the alternative "will provide the most benefit to headwater streams in the Colorado River Basin, particularly in Grand County, while simultaneously meeting 10825 water obligations."

An added benefit, recognized by stakeholders, is the proposed solution uses facilities already in place.

In theory, Northern, which owns the greatest percentage of Redtop Valley Ditch (located from Grand Lake to near Granby) shares, has agreed with irrigators to forward 2,700 acre-feet of Ditch water, affecting the Northern-owned and leased Miller-Hereford Ranch. Meanwhile, owners of the C Lazy U Ranch have offered to supply the remainder of the acre-feet. Denver Water and other East Slope water users would compensate Northern and partnering irrigators for the released recovery water.

As far as when Grand County anglers, kayakers, rafters and fish would actually experience increased late-summer flows — poised to be escorted through under protections — Northern Project Manager Jeff Drager predicts not until 2012. The proposal still needs to pass federal environment protection reviews. *(Ted Kowalski)*

UPPER COLORADO RIVER ENDANGERED FISH RECOVERY IMPLEMENTATION PROGRAM IMAGING PROJECT – The CWCB has provided the Recovery Program with $11,000 in Severance Tax dollars to integrate their scientific reports into CWCB's Water Resource Information Center (via Laserfiche). The Recovery Program's files are currently being scanned and indexed. Once complete, researchers, biologists, Program partners and the general public will have quick access, via the web, to Recovery Program technical reports and documents. Project completion is anticipated to be June 2009. *(Susan Lesovsky)*

~PLATTE RIVER BASIN~

PLATTE RIVER RECOVERY IMPLEMENTATION PROGRAM – The Platte River Recovery Implementation Program ("Program") held its last Governance Committee meeting in Kearney, on April 7-8, 2009. in Kearney, Nebraska. The next meeting will be held in Cheyenne, Wyoming on June 2-3, 2009. In addition, the Program conducted its initial pulse flow release in mid-April. The results of the pulse flow release are not yet available, but we will present the pulse flow results to the Board at a future meeting. For more information on the Program, please visit: www.platteriverprogram.org. *(Ted Kowalski)*

SOUTH PLATTE DECISION SUPPORT SYSTEM (SPDSS) – North Park surface water model is near completion, with model documentation being completed. Alluvial groundwater modeling is moving forward into the calibration phase of that effort, with a final calibrated alluvial groundwater model being done in early 2010. With the groundwater modeling is in the calibration phase, the State DSS team will begin to finalize the surface water model scope of work and begin the advertising and selection process this summer. *(Ray Alvarado)*

CITY OF BOULDER 2008 REPORT ON BOULDER CREEK ISF PROGRAM – In April 2009, the City of Boulder provided its 2008 water year annual report to the CWCB, describing its operations under the July 20, 1990 Agreement between the City and CWCB under which the City donated various water rights to the CWCB for instream flow use on Boulder Creek. Water available to the CWCB for instream flow use under the Agreement supplemented the CWCB's instream flow water rights in various reaches of Boulder Creek from November 2007 through April 2008, in the latter part of July 2008, and from August through mid-October 2008. The CWCB used approximately 1,588 acre-feet of donated water from the City for instream flow use. Additionally, in July – October 2008, the City exercised its right to lease water generated by its operations under the Agreement to users downstream of the CWCB's instream flow reach. *(Linda Bassi)*

CHATFIELD RESERVOIR REALLOCATION UPDATE – The U.S. Army Corps of Engineers (Corps) will be conducting a key meeting, known as the Alternatives Formulation Briefing (AFB), on May 14th at its Tri-Lakes project office in Littleton. Corps personnel from the Headquarters (Washington, D.C.), Division (Portland, Oregon), and District (Omaha, Nebraska)

offices will participate to discuss both high level policy issues as well as more specific tasks needing attention prior to public release of a draft feasibility report and environmental impact statement (FR/EIS). A small cadre of non-federal representatives will attend as well to observe the meeting and to provide technical support as necessary. The Corps is awaiting a review letter from the U.S. Environmental Protection Agency regarding comments on the preliminary FR/EIS, which may require the two federal agencies to discuss and resolve any issues resulting from the review letter. In related news, the Corps recently awarded much needed stimulus funding in the amount of $160,000 to the Study, which will greatly assist with on-going tasks and continued progress on the FR/EIS chapters and appendices. *(Tom Browning)*

ANIMAS- LA PLATA PROJECT – Water began flowing into Ridges Basin Reservoir on April 20, 2009. This historic milestone marks the completion of several decades of effort to make this project a reality and complete the Ute Indian federal reserved water rights settlement. Attached is a copy of the press release. With the establishment of the Animas-La Plata Operations and Maintenance Association on March 4, 2009 negotiations with Reclamation transferring the long-term operation and maintenance responsibilities to the Association are underway and the first negotiating session was held on March 24-25. The next negotiating session will be on June 1-3. Also, good progress is being made on boat ramp construction and will be completed in time to avoid impacting the filling schedule.

I would also like to bring to your attention two requests for water from the State's allocation of 10,460 acre feet of water in the Project. The Board has received letters from Durango West for up to 1,000 acre-feet, and from the newly formed La Plata-Archuleta Water conservancy District for 500-1,000 acre-feet. Staff is considering these requests and will report to the Board at a future meeting.

The total cost of the ALP is currently estimated to be $571 Million (indexed through October 2008), the cost of water to non-tribal water users was capped at $43,000,000 in P.L 108-447 (the 2005 Consolidated Appropriations Act (section 207)) in addition to already sunk costs. P.L 108-447 essential forgave a $163 million in project costs, which helped keep the cost of water to the non-tribal entities reasonable.

The $43,000,000 capped cost will be indexed for the effects of inflation. With this indexing, the capped amount is now approximately $48,700,000 and any State contract would be based on this amount. If the State elects to buy the water allocated to them (10.99%) the capital cost is currently about $27,600,000 in 2008 dollars (10,420 AF of supply for $2649\AF or 5,230 AF of depletion for $5277\AF). Annual operation and maintenance costs will be based on the terms contained in the agreement establishing the Association. *(Randy Seaholm)*

~SOUTHWESTERN RIVER BASINS~

TACOMA PROJECT RELICENSING PROCESS – The Public Service Company of Colorado d/b/a Xcel Energy is in the process of relicensing its Tacoma Hydroelectric Project with FERC. 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.

The relicensing process, which started in July 2004, is scheduled for completion in February 2010. The trial-type hearing on factual issues related to preliminary conditions on the license, including the imposition of a bypass flow, was held March 31—April 3, 2009. On April 28, 2009, the Administrative Law Judge issued his decision, deciding in favor of the USFS in six of the seven issues. Each of the seven disputed issues related to two conditions imposed by the USFS. Condition Number 17 required that PSCo provide year round continuous minimum flows to the bypass reach in Cascade Creek of 9 cfs, of which 2 cfs would be directed to the Project flume. Where the flows upstream of the diversion are less than 9 cfs, the first 2 cfs would be directed to the flume, to prevent damage from freezing. Condition 18 required that PSCo construct, operate and maintain a device that would guarantee the stream flows required by Condition 17 and also construct means to measure and record compliance with the stream flow requirements. The ALJ's decision included the following findings:

- There is a direct relationship between Project operations and reduced ecosystem sustainability in Cascade Creek. PSCo's water diversion on Cascade Creek degrades aquatic habitats and has diminished the aquatic ecosystem from the Cascade Creek diversion dam to the Animas River.
- The mandatory condition requiring instream flows below Cascade Creek (USFS Condition #17) is consistent with the results of the Delphi Study. Further, that condition is required to comply with the USFS' quantitative "standard," set forth in the Forest-Wide Direction, Wildlife and Fish Resource Management, of maintaining habitat for each species on the forest at 40 percent or more of potential.
- The USFS requirement in Condition No. 18 that PSCo construct and operate a stream flow device to deliver the flows required by Condition No. 17 was not based on a collaborative determination with utility representatives. The economic viability of the project may be adversely affected by the imposition of Conditions 17 and 18.

Also on April 28, 2009, FERC issued its draft Environmental Assessment ("EA") that analyzes the probable environmental effects of relicensing the Tacoma Project. The draft EA concludes that relicensing the Project, with appropriate staff-recommended environmental measures, would not constitute a major federal action significantly affecting the quality of the human environment.

The draft EA does not recommend imposing the USFS Conditions 17 and 18 for the stated reason that the benefits to aquatic habitat and trout in the bypassed reach of Cascade Creek do not justify the high cost (estimated annualized cost of $602,760) of providing the bypass flow, which includes the need for significant modifications to the intake structure to reliably provide the flow. However, unless the USFS voluntarily modifies those conditions or enters into a settlement with PSCo, the Federal Power Act requires FERC to include all of the USFS recommended conditions, including Conditions 17 and 18, in any new license issued to the Project. Staff is working with the DNR to explore whether settlement negotiations can be resumed. *(Linda Bassi)*

RIVER PROTECTION WORKGROUP – The River Protection Workgroup ("RPW") formed a Drafting Committee to develop alternatives for consideration by the Workgroup and the Steering Committee. The RPW continues to meet on the first Tuesday of each month, and they

are hoping to develop a consensus approach for submission to the San Juan Public Lands Center within the next several months. *(Ted Kowalski)*

RIO GRANDE DECISION SUPPORT SYSTEM (RGDSS) – The Bureau of Reclamation has requested the Division of Water Resources help in using the RGDSS groundwater model in assisting them in their future planning effort relating to the Closed Basin Project. The 2005 irrigated mapping is near completion for the basin. *(Ray Alvarado)*

RENEWAL OF DNR/CWCB/USFS MEMORANDUM OF UNDERSTANDING – On April 16, 2004, the U.S. Forest Service, Department of Natural Resources and Colorado Water Conservation Board entered into a Memorandum of Understanding to establish a framework for the USFS and DNR to cooperate on issues related to the management of water and water uses on National Forest System ("NFS") lands in Colorado.

Among other things, the MOU provides that the CWCB and the USFS "will seek ways to achieve instream flow protection in high priority stream reaches through innovative measures consistent with state and federal law." In the MOU, the parties agree that "reauthorization of existing water facilities on NFS lands will be done in cooperation and collaboration with the holders of the permits and with other parties such as local governments, tribes, and state and federal agencies, as appropriate." (The Tacoma Project Relicensing settlement discussions were initiated in reference to this MOU). The term of the MOU was five years, expiring on April 16, 2009. USFS, DNR and CWCB staff have been working to update and renew the MOU to continue to foster a cooperative working relationship on water issues on NFS lands. *(Linda Bassi)*

DOLORES RIVER DIALOGUE / LOWER DOLORES RIVER MANAGEMENT PLAN UPDATE – The Dolores River Dialogue ("DRD") has started an 18-month process to develop alternatives to Wild and Scenic designation on the Dolores River below McPhee Dam. The proposed alternatives will be submitted to the San Juan Public Lands Center ("SJPLC"), which is comprised of both the Bureau of Land Management ("BLM") and U.S. Forest Service ("USFS"), as part of the San Juan Public Lands Land Management Plan Revision process.

While the January 2008 Draft Plan Revision contained a preliminary finding of suitability for the Dolores River from McPhee Dam to Bedrock, it also recognized the role of the DRD in finding alternatives to Wild and Scenic designation, stating that: "Should the DRD make substantial progress in identifying and securing needed protections of the ORVs, the recommendations of the group could be used to supplement or replace this preliminary finding of suitability." To that end, the DRD will work with the SJPLC to update the 1990 Dolores River Corridor Management Plan, and to develop alternative methods of protecting identified Outstanding and Remarkable Values ("ORVs") on the Dolores River. The updated Plan will be referred to as the Lower Dolores River Management Plan. The DRD held the first public meeting to form the Lower Dolores Management Plan Working Group ("Dolores Group") in Dolores on December 15, 2008.

Approximately 40 people attended the meeting, at which USFS/BLM staff explained the Wild and Scenic designation process, and DRD participants presented background information on the DRD's past work, including data collection and scientific research on the Dolores River, and outlined the process the Group will use to develop ways to protect the ORVs. The Dolores

Group includes diverse stakeholders with many perspectives and interests in the lower Dolores River Valley, including representatives from three surrounding counties (Dolores, Montezuma, and San Miguel); the Towns of Dove Creek and Dolores, the City of Cortez, water managers and water rights holders; grazing and property owner stakeholders; oil, gas, mineral and mining representatives; government agencies; recreationists; conservation groups; staff members from the USFS/BLM; and other interests. Topics addressed at the second and third meetings of the Dolores Group included recreation on the lower Dolores River, and fish, ecology and wildlife on the Lower Dolores River.

The Dolores Group met on April 20, 2009 to discuss various land and water protection mechanisms, and on May 11, 2009 to discuss issues related to grazing and minerals, oil and gas in the Lower Dolores area, and to review a list of issues, opportunities and concerns compiled from the previous meetings. The Dolores Group also is planning some site visits over the summer. The DRD Technical Committee has been meeting regularly to: (1) coordinate on strategy and meeting topics for the larger Dolores Group; (2) continue its field work efforts; and (3) discuss spill objectives for this year. For more information on the DRD and the Dolores Group, visit the website at: http://ocs.fortlewis.edu/drd/default.asp . *(Linda Bassi)*

~YAMPA/WHITE RIVER BASINS~

SHELL FRONTIER OIL & GAS, INC. YAMPA RIVER FILING UPDATE – At the March CWCB meeting, the Board ratified the statement of opposition filed on its behalf in Case No. 6-08CW090 by Shell Frontier Oil & Gas, Inc. ("Shell"). The Colorado Division of Wildlife ("CDOW") and the Division of Water Resources ("DWR") also filed statements of opposition to the application, which seeks: (1) a 375 cfs conditional water right from the Yampa River; and (2) a 45,000 AF conditional storage right with the right to fill and refill.

The proposed uses for the rights are industrial and mining purposes related to Shell's plans to develop oil shale resources in the Piceance Basin, and domestic and commercial uses. On April 23, 2009, CWCB, CDOW and DWR staff met with Shell representatives to discuss the application. Shell gave a presentation on the oil shale development process and an overview of how it would operate the proposed water rights.

Shell plans to divert water from the Yampa River when in priority, store it in the Cedar Springs Draw Reservoir, and pipe the water to a second reservoir in the Yellow Creek Basin, from which the water would be pumped for its decreed uses. Shell also plans to use water diverted from the White River under another pending water court application for its operations, and to store that water in the above-referenced Yellow Creek Basin reservoir.

After Shell's presentation, the parties discussed several issues, including compact issues, the Upper Colorado River Basin Endangered Fishes Recovery Program, the Management Plan for Endangered Fishes in the Yampa River Basin, the Yampa River Programmatic Biological Opinion, water rights administration and permitting issues. The parties agreed to exchange additional information and schedule a follow-up meeting with the goal of addressing the concerns of the state agencies. *(Linda Bassi)*

~AGENCY UPDATES~

CWCB BUDGET UPDATE - Due to the economic downturn and budget shortages within the state, the Colorado Legislature has approved the transfer of $107 million from the CWCB Construction Fund and the Severance Tax Perpetual Base Account to the General Fund to meet budget shortfalls. In addition, another $210 million may be transferred temporarily to keep the state out of debt if revenue projections and expenditures do not match at the end of the Fiscal Year, which is June 30, 2009. The next date for the revenue projections forecast is June 20, 2009. *(Tina Heltzel)*

PRESENTATIONS ON ISF PROGRAM – On April 22, 2009, the Stream and Lake Protection Section took part in an Earth Day event at Red Rocks Community College. Staff presented information and answered questions on a myriad of topics to interested students and faculty. Some of the other groups participating at this event were the US Environmental Protection Agency, The Colorado Trail Foundation and Rocky Mountain Animal Defense. *(Rob Viehl)*

COLORADO WATERSHED RESTORATION PROGRAM - 2009 PROGRAM UPDATE - APRIL 28, 2009 – The Colorado Watershed Restoration Program is a competitive grant program focused on preservation and restoration of watershed health. The Program objective is to provide planning, engineering, and construction services for watershed/stream restoration studies and projects.

The Program also provides support for flood mitigation. Special consideration is reserved for planning and project efforts that integrate multi-objectives in restoration and flood mitigation. This may include projects and studies designed to restore stream channels, provide habitat for aquatic and terrestrial species, restore riparian areas, reduce erosion, reduce flood hazards, and increase the capacity to utilize water. The Board approved the Program guidance and application at the September 2008 meeting in Alamosa. Grant applications were due on January 15th, 2009.

CWCB staff received 15 applications for project funding in January. The total request for funding was $739,333. The total proposed match funding was $2,363,220. Three CWCB staff members reviewed and scored the applications based on the criteria outlined in the guidance and criteria. All applications met the minimum qualifications for consideration. Many of the applications scored well, and the median score was associated with a tight standard deviation. Some very difficult funding decisions were made.

Eight Projects were chosen for grant funding based on scores, staff discussion, project location, and Program funding limitations. Table 1 includes a list of all applicants, a brief project description, funding request, total project cost, and amount awarded. The map below depicts project locations for those selected for funding.

Staff is presently working with the successful applicants to develop Scopes of Work to satisfy DNR purchasing requirements. Staff will also make slight changes to the guidance and application for the 2010 grant cycle. The changes will not be substantive; but rather, they will address comments to clarify the intent of some sections. *(Joe Busto)*

Table 1

Applicant/Project	Funding Request	Total Project Cost	CWCB Funding Award
Colorado Open Lands	$28,520	$69,520	$28,520
Bank Stabilization & Riparian Re-vegetation			
Eagle River Watershed Council	$75,000	$675,000	$50,000
Riparian Maintenance & Monitoring			
Trout Unlimited – Boulder Flycasters	$30,000	$234,000	$30,000
Bank Stabilization & Riparian Re-vegetation			
Kerber Creek Restoration Project	$12,000	$24,000	$12,000
Mine Mitigation, Bank Stabilization, & Riparian Re-vegetation			
Lake Fork Watershed Stakeholders	$106,794	$280,644	$95,000
Floodplain/Channel Design Planning			
Mancos Conservation District	$53,206	$130,509	$53,200
Diversion Structure Efficiency Assessment & Project Prioritization			
Westerly Creek Connection – Greenway Foundation	$37,500	$75,000	$37,500
Greenway Master Plan			
Coalition for the Upper South Platte	$50,000	$135,000	$50,000
Bank Stabilization & Riparian Re-vegetation			
North Fork River Improvement Association	$100,000	$513,725	$0
Bank Stabilization & Riparian Re-vegetation			
City of Boulder	$30,000	$217,000	$0
Diversion Structure Reconstruction – Fish Passage			
Uncompahgre Valley Waters Users Association	$52,338	$365,448	$0
Irrigation Ditch Lining			
Colorado Watershed Assembly - Uncompahgre Watershed Plan	$73,025	$197,950	$0

Boulder Creek Watershed Initiative E. coli Sampling & Analysis	$6,050	$14,430	$0
Rio Grande Headwaters Restoration Project Bank Stabilization & Riparian Re-vegetation	$75,000	$150,000	$0
Coal Creek Watershed Coalition Non-point Source Water Quality Improvements	$10,000	$20,237	$0
Total	**$739,333**	**$3,102,553**	**$356,220**

UPPER COLORADO RIVER COMMISSION – The Upper Colorado River Commission will meet in Santa Fe, New Mexico on June 10-11. The Commission will receive reports from Reclamation, Fish and Wildlife Sevice, Western Area Power Administration and others. The Commission will also discuss further the need to upgrade the Lees Ferry gage, climate change, curtailment efforts and budget. *(Randy Seaholm)*

RECENTLY DECREED ISF WATER RIGHTS – On April 10, 2009 the Division 2 Water Court decreed an instream flow water right increase to the CWCB on Badger Creek in Case No. 07CW117 for 2.5 cfs (April 1 – August 31), and 2.0 cfs (September 1 – October 31), with an appropriation date of January 24, 2007. The upstream terminus is a spring complex near Antelope Gulch and the lower terminus is the confluence with the Arkansas River. The ISF reach is approximately 16 miles long. The original ISF on Badger Creek was decreed in Case No. 74W4205 for 3 cfs (1/1-12/31) with an appropriation date of January 4, 1974.

On April 6, 2009 the Division 6 Water Court decreed an instream flow water right to the CWCB on Beaver Creek in Case No. 07CW120 for 1.1 cfs (November 1 – April 30), and 1.8 cfs (May 1 – October 31), with an appropriation date of December 31, 2007. The upstream terminus of the ISF reach is the State Land Board boundary and the lower terminus is the Colorado-Utah state line. The ISF reach is approximately 5.2 miles long. The CWCB agreed to terms and conditions with the Vermillion Ranch Ltd. Partnership to alleviate their concerns about this ISF segment

On April 5, 2009 the Division 6 Water Court decreed an instream flow water right to the CWCB on Willow Creek in Case No. 07CW096 for 2.6 cfs (April 1 – August 31), and 2.0 cfs (September 1 – March 31), with an appropriation date of July 12, 2007. The upstream terminus is the confluence with Spring Creek and the lower terminus is confluence with Willow Creek Ditch. The ISF reach is approximately 4.8 miles long. *(Rob Viehl)*

REVISIONS TO WATER COURT RULES – The Colorado Supreme Court has adopted revisions to: Colorado Rules of Civil Procedure (C.R.C.P.) 90; Water Court Rules 2, 3, 6, 8 and 11; and Colorado Revised Statutes (C.R.S.) 37-92-201(1), 302(1) and (4), which will be effective for all applications filed on or after July 1, 2009. Within the next few months, the Court will also adopt revised water court forms, training guidance for water court professionals and personnel, and a pro se user guide for water court applications.

A. In general, the new rules contain the following changes:
   1. The rules and forms require additional information to be submitted with applications, such as detailed topographic maps, and details about water rights to be changed or used for augmentation.

   2. The rules more clearly define the referee's role and the referee's case management procedures and requirements. For instance, a significant change is that the referee will be able to dismiss applications or statements of opposition of parties who do not adhere to a case management plan.

   3. The rules may cause more cases to be re-referred to the water judge to be placed on a "trial track." We anticipate this result because in order to extend the referee's ruling deadline beyond 1.5 years, the rules require the referee to make a specific finding that the case is likely to be resolved without trial. Most cases that take more than 1.5 years to resolve will likely be complicated enough that the referee can not make that finding and thus will be required to re-refer to the judge.

      a. Re-referral to the Water Judge will trigger C.R.C.P. Rule 26 disclosure and other litigation deadlines. Parties must strictly adhere to the expert disclosure and the new experts' consultation and joint reporting requirements. Case management deadlines in cases before the judge are critical; for instance any missed deadlines could cause evidence to be excluded from trial.

   4. In cases before the water judge, the rules require special conferences and reporting among the case experts, and even allow for an option to use a single expert for all parties.

B. The revisions will impact the CWCB Instream Flow Section's water court cases as follows:
   1. New ISF Appropriations - Water court applications will require detailed topographic maps to be submitted with each application. This is a new requirement. Also, because of the mandated referee case management goals, for unopposed cases the CWCB's proposed decree should be filed with the court within 60 days following the statement of opposition deadline. This requires a short timeframe for Staff and the Attorney General's Office to prepare the proposed decrees.

   2. Acquisitions – Water court applications for ISF change cases will require detailed topographic maps and may require fairly detailed engineering. This is a new requirement. Also, some of these cases might be re-referred to the water judge, because change cases can take several years to resolve and often involve more than one opposer.

   3. Legal Protection – On one positive note, resume review could be facilitated by applicants' inclusion of additional information as required for all water court applications. However, those water court cases in which CWCB has entered as an opposing party will require considerably more attention and shorter response times by Staff and the Attorney General's Office due to the new mandated referee's case management goals. Furthermore, more of these cases are likely to be re-referred to the water judge and set on a trial track. Re-referral could result in dismissal of some cases or withdrawal by the applicant, which could relieve some of CWCB Staff workload. But re-

referral of cases will likely result in a much more demanding workload on CWCB Staff and the Attorney General's Office.

a. CWCB ISF current case load - Of the approximately 200 active cases, only 8 have been re-referred and are currently pending before the water judge on a trial track (4%). Of CWCB ISF's remaining cases that are currently pending before the referee, more than 100 (approximately 50% of all the ISF cases) have been pending before the water referee for more than 1.5 years. We expect that under the new rule, many of those would have already been re-referred to the judge. Although the revised rules only apply to cases filed on or after July 1, 2009, Staff expects that the percentage of ISF cases to be re-referred to the judge in the future are likely to increase significantly.

4. Re-referral to the Water Judge - For any of the ISF water cases that are re-referred to the water judge and are not dismissed or withdrawn, C.R.C.P. Rule 26 disclosure and other litigation deadlines are triggered. CWCB must strictly adhere to the expert disclosure and the new expert consultation and joint reporting requirements. Case management deadlines in cases before the judge on a trial track are critical. Re-referral will escalate the time and effort required by Staff and the Attorney General's Office significantly (perhaps exponentially). *(Linda Bassi/Kaylea White)*

CWCB PARTICIPATES IN REGIONAL CHILDREN'S WATER FESTIVALS – The Office of Water Conservation & Drought Planning (OWCDP) is scheduled to participate in two Children's Water Festivals throughout the State of Colorado. OWCDP has put together an "EVERY DROP COUNTS: BE WATER SMART" presentation which will help students learn about various water sources on earth and understand where Colorado citizens get their water. The demonstration will incorporate visual aids such as maps and picture posters boards. The students will receive washable water droplet tattoos and educational bookmarks to help enforce the importance of water and how they *too* can be water smart and help conserve Colorado's water. Festival dates and locations are as follows:

- May 18 & 19 – Grand Junction, Mesa State College
- May 20 – Boulder, University of Colorado

(Ben Wade)

GOVERNOR'S WATER AVAILABILITY TASK FORCE (WATF) – The next meeting of the Governor's Water Availability Task Force will be held on May 27th at the Division of Wildlife from 9:30-12pm. Task Force members will review snowpack and precipitation outlooks, reservoir conditions and potential water supply impacts. In addition, the Task Force will discuss an outlined approach for the comprehensive revision of the State's Drought Plan. The agenda will be posted and available on the CWCB website. Please see Attachment 18d-08 regarding the April 22, 2009 WATF Executive Summary. *(Taryn Hutchins-Cabibi)*

GUIDELINE REVISIONS FOR CONSERVATION PLANNING – The OWCDP relies upon various sets of guidelines to review Water Efficiency Grant applications as well as conservation plans seeking approval. These guidelines, first developed in May 2005 have not been comprehensively revised since. Recently staff has received feedback from water providers and

consultants that the guidelines do not clearly state the required and recommended elements. Staff is in the process of drafting revised guidelines that will be brought to the board later this calendar year. Revisions will, at a minimum, address the following:

1. The ambiguity and lack of definition that exists within the current guidelines makes it difficult to interpret what measures are appropriate for each planning element. Staff will work to clarify expectations in each category.
2. Guidelines for prioritizing grant proposals given funding limitations.

(Taryn Hutchins-Cabibi)

STREAM AND LAKE PROTECTION SECTION PERSONNEL UPDATE – Bahman Hatami, the Section's water resources engineer, left CWCB effective March 20, 2009. On March 19, 2009, Staff filed a request for an exemption to the State hiring freeze to fill the vacancy, which was granted on May 1, 2009. To temporarily fill the vacancy since March 20, Staff has contracted with two consulting engineers to enable the Section to meet water court litigation deadlines, using Construction Fund money authorized for instream flow engineering support (use of these funds is exempt from the hiring freeze).

Staff will move forward promptly to fill this position, as a backlog of work on settlement negotiations is building without a full-time water resources engineer in-house. In March 2009, the Section also filed a second request for exemption to the State hiring freeze for the CWCB hydrographer position, which was denied. Staff is using Construction Fund money appropriated for stream gaging efforts to develop a hydrographic strategic plan that the hydrographer will implement once the hiring freeze is lifted. The plan includes identification of gaging needs and opportunities for cooperative efforts on the installation, operation and maintenance of stream gages with federal, state and local governments and other entities. *(Linda Bassi)*

BASIN ROUNDTABLE UPDATES AND STATUS OF NEEDS ASSESSMENT – The Basin Roundtables are progressing through their basin-wide water needs assessments, approving WSRA applications, and providing input on the evaluation of water supply strategies. Included is a summary of the highlights for each roundtable:

Arkansas Basin Roundtable

- Completed their consumptive needs assessment and identified priority areas for their non-consumptive needs assessment
- Are in the process of combining their consumptive and nonconsumptive needs assessments and identifying projects and methods for meeting their needs
- Approved a WSRA grant to help meet the nonconsumptive needs in one of their priority areas
- Have successfully completed work on Fountain Creek and through their Transfers Guidelines sub-committee
- Gary Barber, will provide the Board with an update through agenda item 13 and Colorado Springs Utilities will discuss the status of one of the basin's major IPPs (Southern Delivery System) during agenda item 14.

Colorado Basin Roundtable

- The Colorado and Yampa/White Energy Sub-Committee is kicking off Phase II of the Energy Needs Assessment. Phase II will look at projects/solutions for meeting the basins' energy needs.
- They have identified their priority areas for their non-consumptive needs assessment and are implementing a WSRA grant to further quantify their nonconsumptive needs.
- They are primarily relying on SWSI, Demands to 2050, the IPP Database, and their Energy Study for their consumptive needs assessment.
- The roundtable is in the middle of a "visioning exercise" to compliment the vision statement and goals developed by the IBCC.
- The roundtable is providing input into the evaluation of water supply strategies. They had a preliminary discussion at their April meeting and will have a special May meeting to provide input as a roundtable.

Gunnison Basin Roundtable

- They recently approved the maps of their nonconsumptive priority areas.
- Implementing a WSRA grant to further refine their agricultural needs.
- The roundtable is working with IWMD staff to finalize several task order which combines with SWSI and their ag study will complete their consumptive needs assessment.
- They recently provided input into the evaluation of water supply strategies. Attached is a summary of comments provided.

Metro Roundtable

- The Metro Roundtable is relying on SWSI, the update of Demands to 2050, and the IPP Database as their consumptive needs assessment.
- They are working with the South Platte Roundtable on a nonconsumptive needs assessment and hoping to approve their priority areas in June.
- They are interested in seeing the evaluation of strategies move forward with additional details on specific projects. They will provide input on the strategies through the joint roundtable meeting with the Arkansas, Metro, and South Platte roundtables.

North Platte Roundtable

- They recently approved the maps of their nonconsumptive priority areas.
- They relied on SWSI as their consumptive needs assessment, used a task order through CDM to identify potential projects and methods for meeting their future M&I needs, and are implementing a WSRA grant to increase the Town of Walden's water supply. Thus they are the first basin to use the roundtable process to officially close the M&I "gap" identified in SWSI.

Rio Grande Basin Roundtable

- They are making some final adjustments to the maps of their nonconsumptive priority areas and are expected to approve the maps in the near future.
- They have relied on SWSI as their consumptive needs assessment, but are in the process of updating their list of IPPs.
- They are implementing a number of WSRA grants to help meet the roundtable's primary objective which is promoting the sustainable use of their aquifers.

South Platte Basin Roundtable

- They are working with the Metro Roundtable on a nonconsumptive needs assessment and making some final adjustments to the maps of their nonconsumptive priority areas. They are expected to approve the maps in June.
- They are finalizing their consumptive needs assessment by updating the work performed under an earlier task order with M&I demands to 2050.
- They are interested in seeing the evaluation of strategies move forward with additional details on specific projects. They will provide input on the strategies through the joint roundtable meeting with the Arkansas, Metro, and South Platte roundtables.

Southwest Roundtable

- The Southwest Roundtable held a series of public meetings to receive feedback on their nonconsumptive needs assessment. They are in the process of incorporating those comments.
- They have established a process for using the roundtable members to update their list of IPPs. Their updated IPPs, SWSI, and Demands to 2050 will serve as their consumptive needs assessment.

Yampa/White Roundtable

- The Colorado and Yampa/White Energy Sub-Committee is kicking off Phase II of the Energy Needs Assessment. Phase II will look at projects/solutions for meeting the basins' energy needs.
- They have identified their priority areas for their non-consumptive needs assessment. A sub-committee including members of their executive committee have reviewed and approved a set of maps and they are holding a special roundtable meeting in June to seek final roundtable approval.
- They are primarily relying on SWSI, Demands to 2050, the IPP Database, and their Energy Study for their consumptive needs assessment.

Gunnison Basin Roundtable comments on Water Supply Strategies (summarized by Todd Doherty, CWCB and Hal Simpson, CDM).

Ag Water Transfer

- Ag water is the easiest to obtain and should be pursued first.
- This was followed by the question of how much land would have to be dried up to get 100,000 a-f and 250,000 a-f? Response: In round numbers, 50,000 acres and 125,000 acres.
- This was followed by how much land is irrigated in the South Platte and Arkansas basins? Response: It was around 700 to 800,000 acres in the Platte and 300,000 in the Arkansas basin.
- Why dry up some of the best farm land in America on the South Platte river?

New Supply Development

- For Green Mountain Pumpback, there were questions about the water right to be used and if the BOR 1935 water right was going to be exercised? Response: It would be a new water right or possibly the Denver Water conditional water rights. In addition, the Green

Mountain water right may have to be transferred to the Wolcott Reservoir to assure its yield.

- There were questions on how costs for the Flaming Gorge option would be determined and if we had Aaron Million's data and we said there was very little available on the Million project so we would have to generate our own estimates.
- Any phased development of large projects may not make sense since the EIS would look at the full sized project and it could be killed as was Two Forks Reservoir.

Conservation

- There was considerable discussion on why not focus on the major water user, i.e. Ag water for conservation savings and some of the Ag users, including Bill Trampe pointed out the problem with consuming return flows that should flow down to junior water rights dependent on them.
- There was a request to have more discussion on the alternative methods to permanent agricultural water transfers (e.g. rotational fallowing, water banks, deficit irrigation).

General Comments

- Again, the statement was made that growth needs to be controlled on the Front Range as a way to reduce water needs.
- Another person said we can only control growth if all families are limited to two children and no more.
- Blue Mesa Reservoir as an augmentation supply was criticized as a project that lacked credibility since it most likely could only be used in the first year of an extended period of compact call and would be out-of-priority with its 1957 water right in subsequent years. They felt that spending $14 million per year for a limited augmentation source was not very smart.
- We should look at all projects even the wacky ones.
- Development must pay for these various projects and not expect the state to pay for them as a whole. This question should be resolved before the alternatives are evaluated. *(Eric Hecox)*

OIT/DNR IT CONSOLIDATION – While the Office of Information Technology's (OIT) efforts to consolidate IT are moving at a moderate pace, DNR's initiatives are taking shape. The Support/Help Desk team is ramping up, with a central phone number, cross-training across divisions and coordination with the Infrastructure team. The IT Leadership team continues to monitor service levels and are working on budget planning for the next year. The CWCB welcomes Pat Chase to the team to help oversee IT activities at the agency. Pat serves as the IT manager for CWCB and DWR, and will be coordinating with both CWCB management & OIT to make sure that CWCB's technology needs are being met. *(Susan Lesovsky)*

~ATTACHMENTS~

- **18d-01 Loan Forecast & Prospect Report**
- **18d-02 Loan Financial Activity Report**
- **18d-03 De Minimis Cases**
- **18d-04 Summary of Resolved Cases**
- **18d-05 H.R. 2288**
- **18d-06 Animas-La Plata Letter to Leach**
- **18d-07 Executive Summary of the Strategic Plan for the Fountain Creek Watershed**
- **18d-08 April 2009 Drought Update**
- **18d-09 CODOS Update**
- **18d-10 Design and Construction Status Report**

STATE OF COLORADO

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CWCB Director

Dan McAuliffe
CWCB Deputy Director

TO: Colorado Water Conservation Board Members
Director's Report

FROM: Kirk Russell, PE
Mike Serlet, PE, Chief
Water Supply Planning & Finance Section

DATE: May 12, 2009

SUBJECT: **Director's Report Attachment – May 19-20, 2009**
Loan Forecast & Prospect Report

The Water Supply Planning and Finance Section compiles a list of potential borrowers/projects for the Water Project Loan Program. If the Board approves all loans recommended by staff on the May agenda the Loan Program will have roughly $10 million available for eligible raw water projects at the July meeting.

Below is a list of loans which may be presented at the July meeting (Loan Forecast). Page two is a listing of loans Prospects under $10 million, which have a strong chance of becoming future CWCB loans.

LOAN FORECAST

BORROWER	PROJECT NAME	PROJECT COST LOAN AMOUNT
July		
FRICO	Barr Lake Spillway	$1,000,000
FRICO	Milton Reservoir	$4,000,000
Bergen Ditch & Reservoir Co.	Reservoir Rehabilitation	$2,000,000
Boulder Left Hand Irrigation. Co	Ditch Piping	$300,000
	Total	$7,300,000

Information shown is based on current staff knowledge and will likely change as Loan Prospects develop

Recent Project Loan inquiries:

Headgate 25a – Four Farmers in So. Platte w/NRCS project
Deer Mountain Ranch – Augmentation Pipeline (Cripple Creek area)
Florida Canal Company – Canal Repair ($1M) applied Statewide WSRA funding
Catamount Reservoir Company – Reservoir Rehabilitation ($500K)
Stonewall Springs Quarry – New Reservoir (Morley Properties)
Yocum Ranch Reservoir – New Reservoir (Rod Guerrieri)
Timnath Reservoir – Don Magnuson

SMALL (<$10 million) LOAN PROSPECTS

Basin		BORROWER	PROJECT NAME	PROJECT COST	LOAN AMOUNT
South Platte					
		B.H. Eaton Ditch Co (Windsor)	Pipeline & Diversion Structure	$1,000,000	$1,000,000
		Ft Morgan, City of	NISP	$25,000,000	$25,000,000
		Wiggins, Town of	Wells & Pipeline	$3,000,000	$1,500,000
		New Consolidated Lower Boulder	Dual Water System	$16,000,000	$14,500,000
		Ft Morgan Reservoir & Irrigation Co	Two Way Recharge Pipeline & Well	$550,000	$550,000
		Louden Irrigation & Reservoir Co	Ditch Improvements	$500,000	$500,000
		Shamrock Irrigation Co	Pipeline Project	$200,000	$200,000
		Foothills Park & Recreation Dist.	Multiple Storage Projects	$2,000,000	$2,000,000
				TOTAL	**$44,000,000**
Arkansas					
		City of La Junta	Water Rights Purchase	$2,500,000	$2,500,000
		Fruitland Water Company	Pumphouse & Ditch	$200,000	$200,000
		Cherokee Metro District	Wells and Pipelines	$800,000	$800,000
		City of Trinidad	Reservoir/Rehabilitation	$1,600,000	$1,600,000
				TOTAL	**$5,000,000**
San Miguel/Juan					
		Farmers Water Development Co	Gurley Reservoir Enlargement	$5,000,000	$5,000,000
				TOTAL	**$5,000,000**
Colorado					
		Lateral MC070 Inc.	NRCS Ditch Rehabilitation	$200,000	$140,000
		Highland Ditch Co	Ditch Rehabilitation Project	$200,000	$200,000
		Ian Carney - Felix Tornare	Polaris Reservoir Rehabilitation	$500,000	$500,000
				TOTAL	**$800,000**
Gunnison					
		Fire Mountain Canal & Reservoir Co.	New Reservoir	?	$?
		Upper Gunnison River Conservancy Dist	Reservoir Project	$1,000,000	$?
				TOTAL	**$?**
Rio Grande					
				TOTAL	
Yampa					
		Upper Yampa Conservancy Dist	Morrison Creek Reservoir	$20,000,000	$20,000,000
				TOTAL	**$20,000,000**
Chatfield Reservoir Reallocation					
				Possible	**$60,000,000**

WATER PROJECT CONSTRUCTION LOAN PROGRAM
LOAN REPAYMENT DELINQUENCY REPORT
LOAN FINANCIAL ACTIVITY REPORT
MAY 2009

LOAN REPAYMENT DELINQUENCY

Loan Repayments received relative to the Water Project Construction Loan Program have been reviewed for the period covering July 2008 through April 2009. The effective due date of the payment is inclusive of the Board's current 30 day late policy. Hence, the date the payment was received was compared to the last day allowable prior to the payment being considered late.

Repayments due for the first ten months of Fiscal Year 2009 totaled 204. There were nine loan payments not received on time during this period. Two loan payments from the Excelsior Irrigating Company, the loan payments from the Appleton Northwest Lateral (ML369) and Drainage Company, the Spring Dale Ditch Company and the Shulz Farm, Inc. were less than 30 days late. The loan payments from the Ogilvy Irrigating and Land Company and the Hawkeye Lateral Ditch Company were less than 60 days late. The loan payment from the Lower Arkansas Water Management Association was over 90 days late. The loan payment from Rodney Preisser due October 2008 has not been received to date. Thus, the on-time performance for the total repayments due was 96% in compliance or 4% not in compliance.

As additional notes: (1) the payment from Rodney Preisser due October 2007 has not been received to date; (2) the Town of Starkville has not met its obligations since Fiscal Year 2006; and (3) the Pinon Mesa Ranches Community Association's loan is in default and has been referred to the State's Central Collections Services for disposition of the remaining balance.

LOAN FINANCIAL ACTIVITY

Loan Financial Activity relative to the Water Project Construction Loan Program for Fiscal Year 2009 is detailed on the following attachment. Funds received relative to loans in repayment totaled $18.7 M for this period. Funds disbursed relative to new project loans totaled $77.1 M for this period. Net activity resulted in $58.4 M disbursed from the CWCB Construction Fund and the Severance Tax Trust Fund Perpetual Base Account (STTFPBA) over the total received.

Further breakdown is summarized as follows: The Construction Fund portion consists of $12.2 M in receivables and $49.7 M in disbursements for a total net activity of $37.5 M disbursed over received. The STTFPBA consists of $6.5 M in receivables and $27.4 M in disbursements for a total net activity of $20.9 M disbursed over received.

COLORADO WATER CONSERVATION BOARD

FINANCIAL ACTIVITY REPORT

FOR FISCAL YEAR 2009

CONSTRUCTION FUND

Period	Principal	Interest	Total Received	Disbursements	Net Activity
July 2008	$ 925,827	$ 1,040,889	$ 1,966,716	$ 5,208	$ 1,961,508
August 2008	$ 203,741	$ 260,862	$ 464,603	$ 3,291,499	$ (2,826,895)
September 2008	$ 273,388	$ 267,948	$ 541,336	$ -	$ 541,336
October 2008	$ 427,288	$ 451,755	$ 879,043	$ 25,183	$ 853,860
November 2008	$ 196,503	$ 267,260	$ 463,763	$ 5,832,331	$ (5,368,568)
December 2008	$ 899,383	$ 1,199,862	$ 2,099,245	$ 9,219,364	$ (7,120,119)
January 2009	$ 157,730	$ 107,357	$ 265,088	$ 6,610,699	$ (6,345,611)
February 2009	$ 2,578,997	$ 247,731	$ 2,826,728	$ 9,114	$ 2,817,613
March 2009	$ 180,079	$ 829,673	$ 1,009,752	$ 18,282,129	$ (17,272,376)
April 2009	$ 975,395	$ 698,670	$ 1,674,065	$ 6,380,071	$ (4,706,006)
May 2009	$ -	$ -	$ -	$ -	$ -
June 2009	$ -	$ -	$ -	$ -	$ -
FY 2009 Totals	**$ 6,818,332**	**$ 5,372,007**	**$ 12,190,339**	**$ 49,655,597**	**$ (37,465,258)**

SEVERANCE TAX TRUST FUND PERPETUAL BASE ACCOUNT

Period	Principal	Interest	Total Received	Disbursements	Net Activity
July 2008	$ 227,786	$ 270,134	$ 497,920	$ 881,500	$ (383,580)
August 2008	$ 53,353	$ 697,384	$ 750,737	$ 92,865	$ 657,873
September 2008	$ 125,435	$ 222,007	$ 347,442	$ 285,556	$ 61,886
October 2008	$ 1,120,989	$ 417,414	$ 1,538,403	$ 1,462,860	$ 75,543
November 2008	$ -	$ -	$ -	$ 1,281,075	$ (1,281,075)
December 2008	$ 438,356	$ 1,047,672	$ 1,486,028	$ 20,412,980	$ (18,926,953)
January 2009	$ 28,953	$ 23,030	$ 51,982	$ 1,125,569	$ (1,073,587)
February 2009	$ 52,286	$ 42,863	$ 95,149	$ 645,711	$ (550,562)
March 2009	$ 641,032	$ 393,455	$ 1,034,487	$ 552,631	$ 481,856
April 2009	$ 334,071	$ 363,316	$ 697,388	$ 688,313	$ 9,074
May 2009	$ -	$ -	$ -	$ -	$ -
June 2009	$ -	$ -	$ -	$ -	$ -
FY 2009 Totals	**$ 3,022,262**	**$ 3,477,274**	**$ 6,499,536**	**$ 27,429,060**	**$ (20,929,524)**
GRAND TOTALS	**$ 9,840,594**	**$ 8,849,282**	**$ 18,689,875**	**$ 77,084,657**	**$ (58,394,782)**

Director's Report Attachment 18d-03 – May 19-20, 2009, Board Meeting
Stream and Lake Protection Section De Minimis Cases

The following table summarizes the applications that have the potential to injure the Board's instream flow water rights, but their impacts are considered de minimis. In each of these cases, the cumulative impact to the Board's rights is 1% or less. Pursuant to ISF Rule 8 (the de minimis rule), staff has not filed Statements of Opposition in these cases.

Case No.	Applicant	Stream/ Case Number	ISF Amount	Percent Injury	Cumulative % Injury	Pervious Cases
5-09CW011	Grandwood Investments LLC	North Fork Colorado River/ 87CW276	18 cfs (summer) 10 cfs (winter)	0.0018% 0.0034%	0.0617% 0.0808%	1
6-09CW002	* Entelco Corporation	Elk River / 77W1331	65 cfs (summer) 65 cfs (winter)	0.0127% 0.0021%	0.0127% 0.0021%	0
7-09CW004	Parelli International	Piedra River/ 79CW045	70 cfs (summer) 40 cfs (winter)	0.0040% 0.0000%	0.2528% 0.2500%	1

*Applicant has disputed de minimis designation and staff is working to resolve the issues.

INSTREAM FLOW AND NATURAL LAKE LEVEL PROGRAM
SUMMARY OF RESOLVED CASES
DIRECTOR'S REPORT ATTACHMENT 18D-04

The Board's ISF Rule 8i. states:

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

Staff has resolved issues of potential injury in the following water court cases and authorized the Attorney General's Office to enter into stipulations that protect the CWCB's water right:

(1) 4-08CW041: Wolford, David & Ken

The Board ratified this statement of opposition at its July 2008 meeting. The Board's main objective in filing the statement of opposition in this case was to ensure that the Applicant's proposed change of water right (to an upstream point of diversion) does not injure the Board's instream flow water rights on Dallas Creek and the Uncompahgre River by expansion of use. Staff, in cooperation with the Attorney General's Office, has negotiated a settlement to ensure that the CWCB's instream flow water rights will not be injured.

The 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
4-98CW234	Dallas Creek	20/9	7/13/98	Uncompahgre	Ouray
4-98CW222	Uncompahgre River	65/20	7/13/98	Uncompahgre	Ouray

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

- The Applicants are GRANTED a change in the 0.25 c.f.s. of water decreed as priority 136 from the PRIVATE DITCH KETTLE to the headgate of the HOSNER ROWELL DITCH, located as above-described, for the same irrigation purposes as originally decreed.
- Pursuant to C.R.S. § 37-92-102(3)(b), the CWCB's Dallas Creek instream flow right is subject to the Applicants' diversion at the HOSNER ROWELL DITCH for the originally decreed irrigation use in the amount of 0.25 c.f.s. The change of water right decreed herein will be administered subject to the prior appropriation system in relation to all other water rights.
- The application of C.R.S. § 37-92-102(3)(b) in this case shall not interfere with the administration of the PRIVATE DITCH KETTLE right in priority as against other water rights, and shall not result in subordination of the CWCB's Dallas Creek instream flow right to any other junior water rights.
- The Court will retain jurisdiction of this case for five (5) years from date of entry of the decree for the consideration of injury to any person from the change granted in the decree.

(2) Case No. 5-04CW084: Colorow at Squaw Creek Homeowners Association, Inc.

The Board ratified this statement of opposition at its September 2004 meeting. The Board's main objective in filing the statement of opposition in this case was to ensure that the Applicant's proposed plan for augmentation does not injure the Board's instream flow water rights on the Eagle River by not replacing out-of-priority 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
5-80CW126	Eagle River	110/45	3/17/80	Eagle River	Eagle
5-80CW124	Eagle River	130/50	3/17/80	Eagle River	Eagle

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

- In order to replace depletions to the Eagle River within the affected reaches, the Applicant's proposed amended plan for augmentation now includes replacement water supplies which will accrue to the Eagle River system above the points of depletion to the Eagle River, including a water supply contract for storage in Eagle Park Reservoir, which can release water into the Eagle River headwaters.
- The water demands and depletions associated with existing decreed uses are summarized in Table 1, the proposed new uses are summarized in Table 2, and, for accounting purposes, total water usage and anticipated replacement schedules under all associated decrees are set forth on Table 3 and Table 4. (Although Table 4 contains a proposed replacement schedule which contemplates likely periods of Eagle River administration, it is intended that actual release schedules shall be more flexible, and that all reservoir supplies pursuant to this plan for augmentation shall be releasable in time and amount as the Division Engineer may determine necessary to meet a valid downstream water rights call, including any such call(s) issued by the CWCB to protect the instream flow water rights on the Eagle River that were decreed in Case Nos. 80CW126 and80CW124, Water Division No. 5).
- Replacement water will be provided from the sources identified in Paragraph 11, , as necessary to augment all out-of-priority depletions due to the new uses from the subdivision wells. Applicant has also appropriated exchanges (see below Third Claim) for affected reaches on Squaw Creek, Lake Creek and/or the Eagle or Colorado Rivers depending upon where the downstream call originates from (e.g., if the calling structure is in the Grand Junction area, releases may be made from Ruedi Reservoir which accrue to the Colorado River at its confluence with the Roaring Fork River in Glenwood Springs; on the other hand, if the calling structure is on the Eagle River, augmentation releases may be made pursuant to the Eagle River Supply, described above; any potential local call on Lake Creek during the irrigation season will be covered by Applicant's leasehold interest in the Lui Hopper Ditch, described above).
- The Applicant shall install and maintain measuring devices, provide accounting, and supply calculations regarding the timing of depletions as required by the Division Engineer for the operation of the plan for augmentation.
- With regard to the augmentation plan, any substituted water shall be of a quality and quantity so as to meet the requirements for which the water of senior appropriators has normally been used.

- The State Engineer shall curtail all out-of-priority diversions, the depletions from which are not so replaced as to prevent injury to vested water rights.
- The Court shall retain jurisdiction in this matter for a period of five (5) calendar years following 75% build-out of the development as measured by actual diversions for domestic use.

(3) Case No. 5-04CW180; Roaring Fork Preserve Home Owners Association

The Board ratified this statement of opposition at its March 2005 meeting. The Board's main objective in filing the statement of opposition in this case was to ensure that the Applicant's proposed plan for augmentation does not injure the Board's instream flow water right on the Roaring Fork River by not replacing out-of-priority 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 rights 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
5-85CW639	Roaring Fork River	145/75	11/8/1985	Roaring Fork River	Garfield

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

- At times when the CWCB has placed a call that is recognized and administered by the State and Division Engineers for its instream flow on the Roaring Fork River, as decreed in Case No. 85CW639 for 145 cfs from April 1st through September 30th , and 75 cfs from October 1st through March 31st with an appropriation date of 11/8/1985, Applicant shall either curtail diversions of the Slough Ditch and Banning Lateral RFP enlargement or replace out-of priority diversions at or above the headgate of the Lateral.
- The Applicant shall install and maintain measuring devices, provide accounting, and supply calculations regarding the timing of depletions as required by the Division Engineer for the operation of the plan for augmentation.
- The State Engineer shall curtail all out-of-priority diversions, the depletions from which are not so replaced as to prevent injury to vested water rights.
- The Court shall retain jurisdiction in this matter on the question of injury to the vested water rights of others for a period of five (5) calendar years following 75% build-out of the total surface area of the ponds as described the decree.

(4) 5-05CW087; Seven Castles Properties, Ltd.

The Board ratified this statement of opposition at its September 2005 meeting. The Board's main objective in filing the statement of opposition in this case was to ensure that the Applicant's proposed plan for augmentation and exchange does not injure the Board's instream flow water rights on the Fryingpan and Roaring Fork Rivers by not replacing out-of-priority 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 rights 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
5-85CW639	Roaring Fork River	145/75	11/8/85	Roaring Fork River	Garfield
5-73W1945	Fryingpan River	110/39	7/12/73	Roaring Fork River	Garfield

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

- At times when the CWCB has placed a call for its instream flow water rights on the Fryingpan River, as decreed in Case No. W-1945, and/or the Roaring Fork River, as decreed in Case No. 85CW639, the applicant shall replace its out-of-priority depletions with releases of augmentation water from Ruedi Reservoir.
- If the CWCB's instream flow rights in the Fryingpan River or the Roaring Fork River between the headgate of the Robinson Ditch and the confluence of the Roaring Fork and Frying Pan Rivers are calling for water, then the applicant shall not operate the Robinson Ditch Exchange.
- If the CWCB's instream flow rights in the Fryingpan River or the Roaring Fork River between the confluence of the Crystal and Roaring Fork Rivers to the confluence of the Roaring Fork and Fryingpan Rivers are calling for water, then the applicant shall not operate the Green Mountain Reservoir Exchange.
- 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 for augmentation.
- The Court shall retain jurisdiction on the question of injury to the vested water rights of others for a period of five (5) years after the date that the augmentation plan becomes fully operational.

(5) Case No. 5-06CW115; Charles Ogilby

The Board ratified this statement of opposition at its May 2007 meeting. The Board's main objective in filing the statement of opposition in this case was to ensure that the Applicant's proposed change of water right does not injure the Board's instream flow water rights on the Crystal River by expanding historic use of the Avalanche Ditch. Staff, in cooperation with the Attorney General's Office, has negotiated a settlement to ensure that the CWCB's instream flow water rights will not be injured.

The 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
5-75W2720	Crystal River	100/60	5-1-1975	Roaring Fork River	Garfield
5-75W2721	Crystal River	80/40	5-1-1975	Roaring Fork River	Garfield

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

- During such times when the CWCB's ISF right decreed in 5-75W2721 is not satisfied, Applicant agrees to curtail diversions made pursuant to the Avalanche Ditch right at the Ogilby diversion No. 1 without administration by the Division Engineer.
- Applicant agrees to monitor the USGS stream gage #09081600 -- Crystal River above Avalanche Creek near Redstone in the Hydrologic Unit 14010004 Roaring Fork. Applicant agrees to curtail its water right decreed herein at such times when the stream flow is less than the CWCB's instream flow right decreed in 75W2721 for 80 cfs from May 1st through September 30th , and 40 cfs from October 1st through April 30th. The gaging station real-time flow can be found at the USGS surface water web site, currently located at the following URL;

  http://waterdata.usgs.gov/co/nwis/rt
- Applicant agrees to submit an annual report to the CWCB summarizing curtailments, if any, of its diversions as a result of its self-administration based on readings at the afore-mentioned USGS gage. The report shall be submitted to the following address: Stream and Lake Protection Section, CWCB, 1313 Sherman Street, Room 721, Denver, CO 80203.
- The CWCB reserves the right to independently review the records for the subject USGS gage to determine whether curtailment occurred at times when the flows were less than the CWCB's ISF rights. If curtailment does not occur, CWCB may seek injunctive relief as well as damages.
- The provisions of [this stipulation] shall not prohibit applicant from diverting from the Ogilby Diversion No. 1 as an alternate point of diversion for the Kier Ditch as decreed in Case No. 5-02CW383 pursuant to the terms and conditions decreed therein.
- This [stipulation] shall not apply in the event of an inter-basin call pursuant to the Colorado River Compact.

(6) Case No. 5-07CW125; American Gypsum Company

The Board ratified this statement of opposition at its November 2007 meeting. The Board's main objective in filing the statement of opposition in this case was to ensure that the Applicant's proposed plan for augmentation does not injure the Board's instream flow water right on the Eagle River by not replacing out-of-priority 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 right that could have been injured by this application:

CWCB Case No.	Stream/Lake	Amount (cfs)	Approp. Date	Watershed	County
5-80CW124	Eagle River	130/50	03/17/1980	Eagle River	Eagle

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

- Applicant acknowledges the following instream flow water right held by the CWCB on the Eagle River: Case No. 80CW124 for 130 cfs from May 1 through September 30 and 50 cfs from October 1 through April 30, with an appropriation date of March 17, 1980.
- Any periods of time in which the flow in the Eagle River is below the instream flow right adjudicated by the CWCB in Case No. 80CW124 is called herein a "Shortage Period."

- With respect to those Augmented Rights that are not administered by the Division Engineer as surface diversions, Applicant will replace any depletions to the Eagle River resulting from the Additional Diversions occurring during the Shortage Period (whether as a result of previous pumping of Additional Diversions or pumping during the Shortage Period). If such replacements are not sufficient in time, place and amount, the Applicant shall immediately curtail its subsurface well diversions.
- With respect to those Augmented Rights that are administered by the Division Engineer as surface diversions, during any Shortage Period Applicant agrees to (i) cease any Additional Diversions, (ii) replace any Additional Diversions by releasing a like amount of water previously stored on site in the Eagle Gypsum Reservoir No. 1, (iii) release water from the Eagle Water supply in the amount of the Additional Diversions, or (iv) divert the Wolcott Water at such Augmented Rights and release Wolford and/or Green Mountain Water in the amount of the out of priority diversions as necessary to augment water rights downstream of the confluence of the Colorado River and Eagle River. The "Wolcott Water" is 1 cfs of the right decreed to the Wolcott Pump and Pipeline by decree in C.A. 1529 entered on July 9, 1979, by the Eagle County District Court, with an appropriation date of April 27, 1966, and allowed to be diverted at Well F, the American Gypsum Well Field, and the Eagle River intakes as alternate points of diversion by decree of this Court dated April 8, 2005 in Case No. 02CW391.

– The Applicant will apply for and obtain well permits pursuant to CRS 37-92-137(2) prior to the construction and/or operation of any wells involved in this plan, unless such wells already have existing valid permits in place. The cumulative amount diverted by the Initial Wells, Well F, and the wells in the American Gypsum Well Field shall not exceed 2 cfs at any given time and 336 acre feet in any given year.

– The Applicant shall continue its leases for Green Mountain Water, Wolford and Eagle Park Water for a term of at least two years or as long as required after cessation of operations at the Plant in order to replace delayed depletive effects from prior well pumping as required by the Division Engineer. The Applicant's Eagle Water is hereby dedicated to and shall be reserved exclusively for use in providing replacement water under Section 11(b) of the Decree in response to any calls made by the CWCB under its instream flow right described therein.

– The Applicant shall provide adequate notice to the Division Engineer for Water Division No. 5 prior to operation of the Exchange or the American Gypsum Exchange Enlargement.

– Applicant's augmentation plan is sufficient to permit the continuation of diversions when curtailment would otherwise be required to meet a valid senior call for water, to the extent that the Applicant shall provide replacement water necessary to meet the lawful requirements of a senior diverter at the time and location and to the extent the senior would be deprived of his or her lawful entitlement by the Applicant's diversion.

– The State Engineer shall curtail all out-of-priority diversions, the depletions from which are not so replaced as to prevent injury to vested water rights.

– The Court shall retain jurisdiction in this matter for a period of five (5) years after the 75% of the Additional Diversions have been diverted.

(7) Case No. 7-04CW97; David J. Brown and Koinonia, LLC

The Board ratified this statement of opposition at its March 2005 meeting. The Board's main objective in filing the statement of opposition in this case was to ensure that the Applicant's proposed plan for augmentation does not injure the Board's instream flow water rights on Wolf Creek, the West Fork San Juan

River, and the San Juan River. Staff, in cooperation with the Attorney General's Office, has negotiated a settlement to ensure that the CWCB's instream flow water rights will not be injured.

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

CWCB Case No.	Stream/Lake	Amount (AF)	Approp. Date	Watershed	County
7-80CW031	Wolf Creek	11 (03/1-08/31) 6 (09/1-02/29)	1/30/1980	Upper San Juan River	Mineral
7-80CW041	West Fork San Juan River	25 (04/1-08/31) 14 (09/1-03/31)	1/30/1980	Upper San Juan River	Mineral & Archuleta
7-80CW040	San Juan River	50/30	1/30/1980	San Juan River	Archuleta

The CWCB and the Applicant have agreed to the entry of a decree that will prevent injury to the Board's ISF water rights on Wolf Creek, the West Fork San Juan River, and the San Juan River. The Applicant has agreed to the following terms and conditions:

- **Operation of the Plan for Augmentation.**

- The senior rights most likely to call out the Applicants' junior rights are the Colorado Water Conservation Board's ("CWCB") in-stream flow rights for the West Fork and Wolf Creek that traverse the Ranch. See Table 3. If a valid senior call is placed on the West Fork or Wolf Creek, the Applicants will account for out-of-priority depletions attributable to those junior rights subject to this plan, and replace them by drying up 82 acres of historically irrigated lands under the C-H Ditch and by releases of augmentation water from DJ's Lake and Chipper's Lake, as necessary. All rights and structures described in this Decree are located on the Ranch.

- Protection of CWCB In-Stream Flow Rights. The CWCB holds water rights for in-stream flow ("ISF") purposes on the West Fork decreed in Case No. 80CW41. The CWCB ISFs on the West Fork are decreed for 25.0 c.f.s. during the summer months (April-August) and 14.0 c.f.s. during the winter months (September-March). The CWCB has sought protective terms to allow it to place a call to protect its ISF rights and trigger the application of this plan.

  - There is no current operable stream gauge on the Ranch, although a stream gauge on the Ranch was in operation and measured for many years. There is, however, an existing operable USGS stream gauge on the San Juan River at Pagosa Springs approximately 12.44 river miles downstream from the Ranch. In order to allow the CWCB to use the Pagosa Springs gauge to assess stream flow through the Ranch, the Applicants' water resource consultants performed a statistical correlation of 29 years of data from the Pagosa Springs gauge and from the West Fork San Juan River gauge that previously was located on the Ranch. The regression equation developed by these consultants, see Figure 3, has a high confidence value, meaning that the equation can be used to accurately calculate West Fork stream flow on the Ranch from the Pagosa Springs gauge data.

  - Accordingly, the regression equation, provided in Figures 3 and 4, may be used to determine when the Applicants' depletions must be replaced to help protect the CWCB's summer and winter ISFs on the West Fork and Wolf Creek. The CWCB may place a call against the Applicants' junior rights if the flows at the Pagosa Springs gauge fall below the trigger levels of 25 cfs and 14 cfs as shown on Figure 4. At that point, operation of this plan for augmentation must be initiated and/or Applicants' junior water rights on Wolf Creek curtailed, or within 24 hours, the West Fork and Wolf Creek stream flows on the Ranch must

be measured using reliable methods acceptable to the Division Engineer, to confirm whether actual stream flows on the West Fork and Wolf Creek have dropped below the applicable ISF. If the measured flows are below the applicable ISF in the West Fork, the Applicants shall operate the augmentation plan. If the measured flows in Wolf Creek are below the applicable ISF, Applicant shall curtail the exercise of its Wolf Creek water rights that are junior to the ISF. Applicant shall continue to operate the augmentation plan and/or curtail junior diversions on Wolf Creek until the West Fork and Wolf Creek stream flows meet the applicable ISF (as determined by the stream flow at the Pagosa Springs gauge equaling or exceeding the applicable trigger level, or based on actual measured stream flow in the West Fork and Wolf Creek). If the measured flow in the West Fork or Wolf Creek equals or exceeds the ISF, the Applicants shall so notify the water commissioner or Division Engineer and the CWCB by telephone, and follow up with a stream flow report describing the methodology by which the stream flow was measured and providing the measured rates of flow. Use of water on the Ranch shall not be curtailed nor shall operation of this augmentation plan be initiated if the flows in both streams are above the ISF amounts. No sooner than seven days after the date of the Ranch stream flow report, if the CWCB or water commissioner determine that the Pagosa Springs gauge is again reading below the appropriate trigger level shown in Figure 4, the Applicants shall either operate this augmentation plan with respect to the West Fork and curtail junior diversions with respect to Wolf Creek, or once again measure actual stream flow on the West Fork and Wolf Creek, and follow up with a stream flow report to the Division Engineer and the CWCB.

- The regression analysis assumes that there are no new diversions on the West Fork between the Ranch and the Pagosa Springs gauge. If such a diversion arises in the future, including, for example, the construction of the proposed Dry Gulch Reservoir, the Applicants may propose adjustments to the equation to account for the new diversions. In any case, at any time, the Applicants may install a stream gauge on the West Fork within the Ranch and it shall become the device by which the ISFs are measured.

- The CWCB also holds ISF rights for Wolf Creek decreed in Case No. 80CW31, for 11.0 c.f.s. in the summer months of (March-August) and 6.0 c.f.s. in the winter months (September-February). The Applicants do not propose any out of priority diversions under their water rights that are junior to these ISFs. If Wolf Creek stream flow drops below the applicable ISF, Applicants shall curtail diversions under junior rights for the Dermody Pump Use Enlargement, Wolf Creek Village Well No. 1, DJ's Lake and Chipper's Lake. At that point, the Dermody Pump water right, with a 1968 priority, shall be the sole source of supply for the Bootjack Lodge. It should be noted that operation of the plan for augmentation for the benefit of the West Fork also will increase Wolf Creek stream flows because of augmentation releases from Chipper's and DJ's Lakes to Wolf Creek to offset depletions on the West Fork.

– The State Engineer shall curtail all out-of-priority diversions, the depletions from which are not so replaced as to prevent injury to vested water rights.

– The Court shall retain jurisdiction in this matter for a period of five (5) years after the 75% of the plan of augmentation becomes operational.

(8) 6-07CW018: Robert Irvin

The Board ratified this statement of opposition at its March 2008 meeting. The Board's main objective in filing the statement of opposition in this case was to ensure that the Applicant’s proposed change of use does not injure the Board’s instream flow water rights on the Williams Fork 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
6-92CW076	Williams Fork River	30/14	9/16/92	Upper Yampa	Rout, Moffat

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

- The Applicant agrees to reduce its irrigated acreage under the Haggerty Ditch No. 2 Williams Fork Diversion and Haggerty Ditch No. 2 Williams Fork Diversion Alternate Point from 100 acres to 50 acres, as shown on the map attached to the Decree.
- In order to prevent an expansion of use, the Applicant agrees to limit its diversions of the changed water right at the Deakins Field Sprinkler Alternate Point Nos. 1 and 2 and the Haggerty Ditch No. 2 Williams Fork Diversion and Haggerty Ditch No. 2 Williams Fork Diversion Alternate Point to the amounts physically and legally available at the original points. Additionally, the Applicant agrees to limit the annual diversions as follows:

    - The total combined annual diversions for the Deakins Field Sprinkler No.1 and Alternate Points 1 and 2 shall not exceed a total of 140 acre-feet.
    - The total annual diversions for the Haggerty Ditch No. 2 William Forks Diversion and Haggerty Ditch No. 2 Williams Fork Diversion Alternate Point shall not exceed a total of 118 acre-feet.

- The CWCB has an instream flow water right on Williams Fork River decreed in Case No. 92CW76 that was adjudicated prior to the alternate and transfer points herein. In the event of a call placed by the CWCB the Applicant shall curtail its diversions at the Deakins Sprinkler Alternate Points No. 1 and 2 and the Haggerty Ditch No. 2 Williams Fork Diversion and Haggerty Ditch No. 2 Williams Fork Diversion Alternate Point.
- The Court shall retain jurisdiction in this matter on the question of injury to the vested rights of others for a period of five (5) years from the date of the decree.

(9) 1-06CW063: Continental Water Bank, Inc.

The Board ratified this statement of opposition at its May 2006 meeting. The Board's main objective in filing the statement of opposition in this case was to ensure that the Applicant's proposed plan for augmentation does not injure the Board's instream flow water rights on the Big Thompson 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
1-89CW200	Big Thompson River	40/15	11/14/89	Big Thompson River	Larimer
1-89CW205	Big Thompson River	50/20	11/14/89	Big Thompson River	Larimer
1-89CW206	Big Thompson River	50/20	11/14/89	Big Thompson River	Larimer

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

- Instream Flow Rights. The CWCB holds three instream water rights located on the Big Thompson River below Lake Estes. These rights include a 40 cfs summer/15 cfs winter right from the Dry Gulch/Big Thompson confluence to the North Fork/Big Thompson confluence decreed in Case No. 89CW200, a 50 cfs summer/20 cfs winter right from the North Fork/Big Thompson confluence to the Idylwild Pipeline diversion decreed in Case No. 89CW205, and a 50 cfs summer/20 cfs winter right from the Loveland powerplant outfall to the Dille Tunnel diversion decreed in Case No. 89CW206. To assure that the CWCB's instream flow water rights are protected, replacement water released to the river pursuant to this plan shall be from Lake Estes Outfall, the Augmentation Well and/or the UTSD outfall. Any additional or alternative source of augmentation water incorporated into this plan pursuant to Section 8.6 above, must be capable of being released to the river at or above the upper terminus of these instream flow reache(s) when said instream flow right or rights have a call on the river. Locations of replacements to the river will be made by Windy Gap or other fully consumable water released from the Lake Estes Outfall, by the Augmentation Well and/or other fully consumable water available to Applicant, including fully consumable water released to the river at the UTSD outfall. Therefore, so long as the terms and conditions of this decree are complied with, such replacements will be adequate to prevent injury to the CWCB's water rights.

- The Lease Agreement between the Applicant and the Town of Estes Park limits the use of water provided pursuant thereto to making replacements for depletions located above Drake, Colorado. The Applicant shall make replacements for depletions occurring below Drake by using the Sombrero Ranch Well, Permit No. 65880-F, as an augmentation well (the "Augmentation Well"), as described in Section 16.2, or by using fully consumable water available to Applicant at the UTSD outfall described in paragraph 8.3.1 above and/or other fully consumable water available to Applicant. Additionally, provided there is no injury to the CWCB's ISF water rights, the Applicant intends and has the right to supplement or replace such augmentation water with other leased or decreed water rights.

- 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 for augmentation.

- Replacement water, generally. The replacement and augmentation supplies that the Applicant will use for operation of the plan for augmentation shall be of a quantity, quality and continuity satisfactory to meet, in time, location and amount, the requirements for which the water of senior appropriators has normally been used.

- Replacement of depletions and curtailment. The out-of-priority depletions caused by operation of the Structures shall be replaced in time, location and amount as determined in accordance with the decree. In the event that out-of-priority depletions are not replaced, the State Engineer shall order full or partial curtailment of well pumping in accordance with §37-92-502(2)(a), C.R.S.

- The Applicant may remove structures from this plan for augmentation or may add structures to this plan for purposes of serving additional sites by providing written notice to the Water Court,

the Division Engineer, all objectors in this matter and the Town of Estes Park. A structure may be added to the plan, so long as the depletive impacts from the structure are to the Fall River or the Big Thompson River, the out-of-priority depletions are replaced upstream of the CWCB's instream flow rights, as described in Section 9 of the decree, and the structure is operated and used based on the terms and conditions consistent with those decreed for the plan for augmentation and set forth in the Lease Agreement with the Town of Estes Park. Further, the Applicant shall not add a new structure to the plan, unless and until the Applicant has water available to it to replace the out-of-priority depletions resulting from the use of the new structure.

- The Court shall retain jurisdiction on the question of injury to the vested water rights of others for a period of five (5) years from the date of entry of the decree. In addition, the Court shall retain perpetual jurisdiction to consider the addition and removal of structures from the plan for augmentation for the consideration of injury as a result of the added or removed structures.

(10) 7-05CW064: Rafter T Ranch, LLC

The Board ratified this statement of opposition at its March 2006 meeting. The Board's main objective in filing the statement of opposition in this case was to ensure that the Applicant's proposed changes of the water right, which may result in an expansion of use, does not injure the Board's instream flow water right on the Piedra 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 right that could have been injured by this application:

CWCB Case No.	Stream/Lake	Amount (cfs)	Approp. Date	Watershed	County
7-79CW045	Piedra River	70/40	3/14/1979	Piedra River	Archuleta

The CWCB and the Applicant have agreed to the entry of a decree that will prevent injury to the Board's ISF water right on the Piedra River. The Applicant has agreed to the following terms and conditions:

- The Applicant acknowledges that the CWCB's In Stream Flow on the Piedra River decreed in Case No. 70CW045 is senior to the surface water rights decreed in Case Nos. 84CW210 , 84CW211 and herein. The Applicant agrees that it will curtail diversions at APOD #1 and APOD #2 when the instream flow is not fully satisfied (70 c.f.s. from March 1 through August 31 and 40 c.f.s. from September 1 through April 30). During such time, the Applicant may choose to divert its decreed water right at the original point of diversion.

- In order to prevent an expansion of use, the Applicant agrees to limit diversions at the APOD #1 and APOD #2 of the Arnold Fredricks Ditch right and the Buckskin Nailor Ditch right to the amount physically and legally available at their original points of diversion. Additionally, diversions from each of the original and the APOD's are limited to a combined rate of 2.76 c.f.s. and 1.0 c.f.s. of the Arnold Fredricks Ditch right and the Buckskin Nailor Ditch right, respectively.

- The Applicant shall install measuring devices and provide reports that are necessary for the administration of Arnold Fredricks Ditch Alternate Point of Diversion No. 2, as decreed herein, as may be required by the State or Division Engineer.

- The Court finds that a period of two years from the date the 97.08 acres are irrigated, is an adequate time period to determine if change of water rights described herein will result in injury

to the vested rights of others. Applicant will provide notice to the Division engineer when the alternate point adjudicated herein begins to be used. The Court shall retain jurisdiction over the change of water rights decreed herein for a period of two years after irrigation of the 97.08 acres using the point of diversion adjudicated in this Decree.

.....

(Original Signature of Member)

111TH CONGRESS
1ST SESSION

H. R. _____

To amend Public Law 106–392 to maintain annual base funding for the Upper Colorado and San Juan fish recovery programs through fiscal year 2023.

IN THE HOUSE OF REPRESENTATIVES

Mr. SALAZAR introduced the following bill; which was referred to the Committee on _____

A BILL

To amend Public Law 106–392 to maintain annual base funding for the Upper Colorado and San Juan fish recovery programs through fiscal year 2023.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the ''Endangered Fish Recovery Programs Improvement Act of 2009''.

SEC. 2. REAUTHORIZATION OF FISH RECOVERY PROGRAMS.

Section 3 of Public Law 106–392 (114 Stat. 1602) is amended in subsection (d)(2) in the fourth sentence, by striking ''2011'' and inserting ''2023''.

RECEIVED
APR 20 2009
Colorado Water Conservation Board

THE SOUTHWESTERN WATER CONSERVATION DISTRICT
A Municipal District Organized Under State Law For Development And Conservation Of The Waters in the
SAN JUAN AND DOLORES RIVERS AND THEIR TRIBUTARIES
IN SOUTHWESTERN COLORADO

West Building – 841 East Second Avenue
DURANGO, COLORADO 81301
(970) 247-1302 – Fax (970)259-8423

April 16, 2009

Rege Leach, Division Engineer
Water Division 7
Colorado Division of Water Resources
160 Rockpoint Drive, Suite E
Durango, CO 81301

RE: Animas-La Plata Project

Dear Mr. Leach:

Diversions for the Animas-La Plata Project (ALP) have been studied and anticipated for decades. The cooperative effort forged by long time partnerships among tribal and non-tribal entities, as well as the federal and state governments, will soon pay off. Many water court actions have taken place to protect and maintain the ALP water rights originally decreed to the Southwestern Water Conservation District in Civil Action No. B-1751 for the Animas River and Case No. C-807 on the La Plata River, with an appropriation date of September 2, 1938. The Ute Indian Final Water Rights Settlement of 1988 hinged on construction of the project. After a groundbreaking for the project in 1990's, a lawsuit was filed regarding environmental compliance, and construction of the project was put on hold. Unfortunately, the original project was downsized and the irrigation component was removed in a negotiated settlement, but the Colorado Ute Settlement Act of 2000 allowed the project to move forward with construction of the re-configured project beginning in 2001. Over 70 years have passed from the initial appropriation date for the water right in 1938, and the Colorado features of the Animas-La Plata Project are now nearly complete.

Therefore, it is with great pleasure that the Southwestern Water Conservation District, in cooperation with the United States Bureau of Reclamation, is providing official notification to your office of the intent to begin diversions from the Animas River for the filling of Lake Nighthorse, the primary ALP storage feature. The Bureau of Reclamation will oversee the initial filling of the reservoir and records of diversions and storage will be provided to your office as needed.

The Southwestern Water Conservation District would also like to acknowledge the unwavering efforts of the key individuals and numerous tribal and governmental entities that have contributed to this project becoming a reality. We look forward to working with the Colorado Division of Water Resources, the Bureau of Reclamation, and the newly formed ALP Project Sponsor Association on the use, storage, and administration of these water rights.

Sincerely,

Fred Kroeger, Secretary-Treasurer
Southwestern Water Conservation District

John Porter, President
Southwestern Water Conservation District

Bruce T. Whitehead, Executive Director
Southwestern Water Conservation District

Cc: Southwestern Water Conservation District Board
Animas-La Plata Water Conservancy District Board
Southern Ute Indian Tribe (Scott McElroy)
Ute Mountain Ute Indian Tribe (Dan Israel)
Navajo Nation (John Leeper)
San Juan Water Commission (Randy Kirkpatrick)
La Plata Conservancy District (Charlie Blassingame)
Colorado Water Conservation Board (Jennifer Gimbel, Randy Seaholm)
Colorado State Engineer (Dick Wolfe)
City of Durango (Ron LeBlanc, Jack Rogers)
Colorado Water Resources & Power Development Authority (Dan Law)
Bureau of Reclamation (Rick Ehat, Pat Page)
Maynes, Bradford, Shipps, & Sheftel (Barry Spear)
Hill & Robbins (David Robbins)

Executive Summary of the Strategic Plan for the *Fountain Creek Watershed*

PREFACE

The Fountain Creek Visioning Task Force, begun under the leadership of El Paso County Commissioner Sallie Clark and Pueblo County Commissioner Loretta Kennedy, created the framework for one of the most progressive and collaborative initiatives in the State of Colorado. Recognizing that issues on Fountain Creek had come to a critical point, leaders in both counties began a discussion that has led to the drafting and signing of an Intergovernmental Agreement between Pueblo and El Paso Counties and municipalities within both jurisdictions.

The Fountain Creek Visioning Task Force initially created three subcommittees devoted to remedying excessive water flows, improving water quality and exploring land use issues that contribute to these problems. Later, a subcommittee to develop ways to fund an entity dedicated to Fountain Creek, was established. Though the process took two and a half years to complete, it encompassed the hopes and dreams of citizens in both counties to make Fountain Creek an amenity that can be enjoyed by all.

Not only will the entity address the major issues of water quantity and quality, but also how to make this stretch of land between Colorado Springs and Pueblo a recreational and educational area that will sustain the Creek. Where the entity will take the vision in the future is in the hands of those appointed to the Board of Directors. But we are sure that it will continue to develop creative ways to keep Fountain Creek vital and an invaluable link between two great communities.

Sallie Clark
El Paso County Commissioner

Jeff Chostner
Pueblo County Commissioner

CONTENTS

INTRODUCTION

The Fountain Creek Vision Task Force was a collaborative effort of government officials, advocacy groups, and residents in three counties in southern Colorado working together to restore a neglected watershed, create a shared natural amenity, and bring their communities together. Task Force participants brought their respective aspirations, perspectives, experiences, and knowledge to bear on the many challenges facing the watershed. Managed by the 28-member Consensus Committee, participants in the Task Force came together in working groups to address issues of water quality, water quantity, and land use and environment. The working groups met monthly for more than two years, inviting expert speakers from local, state, and federal agencies and non-governmental organizations to provide data and other information as context to inform their discussions. When it became clear that the solutions for Fountain Creek would require additional funding and more dedicated management than what was currently available, the Consensus Committee created a working group to identity the best approach to address this issues as well. The Fountain Creek Vision Task Force Strategic Plan is the final work product of all these groups. It is a road map to improved conditions and enhanced opportunities throughout the watershed. This Executive Summary outlines the most salient components of the Strategic Plan, but the Fountain Creek Vision Task Force urges everyone who is interested in this important project to read the complete plan, which is available at www. fountain-crk.org.

I. MISSION AND VISION

MISSION

The members of the Fountain Creek Vision Task Force have come together to turn the Fountain Creek watershed into a regional asset that adds value to our communities. We are working to create a healthy waterway with appropriate erosion, sedimentation, and flooding that supports diverse economic, environmental, and recreational interests. We will cooperate to enhance and protect Fountain Creek, promoting sustainable use by members of our watershed community and by the visitors we know this wonderful natural amenity will attract.

VISION

Our vision for the Fountain Creek watershed is a strong, resilient, and sustainable ecosystem that supports a variety of interests and activities. Our vision includes a number of issues:

- In terms of water quality, we see a waterway that supports fish and other aquatic species, is safe for recreation, and protects public health.
- Regarding water quantity, we see successful stormwater management to better control flooding and erosion.
- For the larger natural environment, we see healthy, contiguous habitat for a diversity of wildlife species, including the threatened and endangered species that make their homes here. We envision migration corridors into and out of the watershed, allowing species safe and free movement from north to south and from east to west throughout the region.
- With respect to land use planning, we see great opportunities for recreation, including a state park and an integral part of the Front Range Trail. We expect residents and visitors alike to engage in biking, hunting, cycling, fishing, birding, cross-country skiing, camping, and other activities that foster healthy lifestyles and a greater quality of life. We

will continue to respect landowners' rights and envision ongoing opportunities for sustainable agriculture and ranching and responsible growth. We anticipate thoughtful and sustainable development that benefits local economies, supports Ft. Carson, encourages the creation of local jobs, builds neighborhoods and neighbors, promotes alternative transportation, and provides green infrastructure and ecosystem services. Throughout the watershed, we envision open space parks and other green areas that connect our residents but separate our cities, allowing each community to create and sustain its own visual and cultural identity.

- Our vision entails achieving all of these things for the entire Fountain Creek watershed. However, we acknowledge that doing so might not be possible or practical in every case and that some vision elements may be confined by necessity to Fountain Creek itself.
- Our vision for the work of the Task Force is to model successful collaboration in watershed clean-up and stewardship. We hope to demonstrate that by working together and striking a balance between short-term and long-term thinking, communities can create and realize a shared vision, turn problems into opportunities, and choose their own future. Solutions that benefit different communities, different species, and different land uses are possible, and working together to find and implement them empowers communities and creates lasting relationships. We know it is our responsibility to educate the public about our work and promote sound community stewardship of the watershed.

II. FUNDING AND LONG-TERM MANAGEMENT OF THE WATERSHED

In order to accomplish the many goals that are outlined in the strategic plan for Fountain Creek, the Fountain Creek Vision Task Force determined that a funding and management entity must be created to provide leadership and resources in the implementation process. For this reason, the Task Force is recommending that the Colorado State Legislature create the Fountain Creek Watershed Drainage, Flood Control, and Greenway District. The details of this district are outlined in the Inter-Governmental Agreement (IGA). Key elements of the district as envisioned by the Task Force are:

1. Creation of a 9-member Governing Board;
2. Possible creation of a new entity to receive and/or raise matching funds for projects and maintenance;
3. Creation of a Citizens Advisory Group (CAG) to bring the voices and ideas of residents of the watershed to the deliberations of the Governing Board; and
4. Creation of a Technical Advisory Committee (TAC) to ensure thoughtful and informed discussion on technically complex issues.

III. WATER QUALITY AND SEDIMENTATION

INTRODUCTION

Having good water quality is very important to human health, to fish, and to quality of life. It makes water usable for wildlife and habitat preservation, recreation, drinking water supply, crop irrigation, and industry. Water quality is affected by the activities of people, by wild and domestic animals, and by natural causes. According to the State of Colorado, the water quality in parts of Fountain Creek exceeds water quality standards overall but is "impaired" for E. coli and/or selenium in some places.

E. coli is a concern in several reaches of the creek, including Upper Fountain Creek and the mainstem of Fountain Creek from the confluence of Fountain and Monument Creeks to the Highway 47 bridge in Pueblo. Sources of bacteria could include raw sewage spills, storm runoff from urban areas, wildlife (deer, elk, geese), livestock (cattle, horses, pigs, poultry), and runoff from farms, ranches, and open areas. Monitoring conducted by the Pueblo City/County Health Department shows that bacteria frequently exceed water quality standards in Fountain Creek, especially in summer and after storms. As a result, it might be unsafe to swim or wade in Fountain Creek when levels of E. coli are high, although it is difficult to determine if high levels of bacteria directly cause an individual to become sick.

Colorado State University-Pueblo and the U.S. Geological Survey (USGS) are conducting studies using DNA from E. Coli bacteria in Fountain Creek to determine whether they come mostly from people or mostly from animals. Identifying the main sources of bacteria may make it possible to reduce bacteria levels in Fountain Creek so that standards are attained. In addition, a cooperative study between the USGS, Colorado Springs Utilities, the City of Colorado Springs, and the Colorado Department of Public Health and Environment is being conducted on Upper Fountain Creek from Green Mountain Falls to the confluence of Fountain Creek and Monument Creek to identify sources of E. Coli. This study will be completed by December 2009.

Selenium is a concern for parts of Upper Fountain Creek, parts of the mainstem of Fountain Creek in Pueblo, and Monument Creek. High concentrations of selenium are found in the bedrock and soils underlying Fountain Creek and its tributaries. Selenium is picked up by surface water and groundwater as it flows over or through the soils and bedrock, resulting in increased amounts of selenium in the water. Because of these factors, Fountain Creek between Pinõn Road and the Arkansas River consistently exceeds the water quality standard. No effects on fish health or on fish or insect populations caused by selenium were found to occur in the locations studied on Fountain Creek.

Sediment is a concern throughout the Fountain Creek Watershed. The State is evaluating data for several segments in the watershed to determine if they are impaired for sediment. Flow conditions combined with other factors (e.g. geology, stream modification, etc.) result in increased erosion and sediment transport. As the

creek is trying to re-establish equilibrium and adjust for these additional flows, it alters its meander pattern and promotes increased bank erosion and down-cutting of the creek bed, which are all evident processes currently taking place within Fountain Creek and its tributaries.

Specific factors leading to an increase in sediment transport include floodplain encroachment, construction and other ground disturbing activities, including higher frequency of channel forming flows (main stem and tributaries) and high flow events. The watershed has become increasingly urbanized which has lead to higher base flow and more frequent flood flows. As the flows are increasing in the streams, the sediment transport capacity has also increased. These additional sediment loads increase floodplain widths, impact water quality, and decrease channel capacities. Another parameter of the stream system is the meander belt, which can extend beyond the floodplain and is defined as the zone along the floor of a valley across which a meandering stream periodically shifts its channel. Encroachment into this area could prove critical and needs to be considered in future planning associated with land use and creek stability.

Several studies are underway to address water quality and erosion problems in the Fountain Creek Watershed. The U.S. Army Corps of Engineers (USACE) and the US Geological Survey (USGS) have completed engineering and scientific analyses on Fountain Creek and its tributaries. The Fountain Creek Corridor Master Plan is currently being developed for the mainstem of Fountain Creek from the southern Colorado Springs city limits to its confluence with the Arkansas River in Pueblo (approximately 44 miles of creek). The plan aims to address water quality and sedimentation concerns by changes to the creek's shape, diverting water into wetlands and side detention areas during flood flows, improving existing wetlands and adding additional wetlands in the floodplain, and installing a mechanical collector to remove sediment in the levee area in Pueblo.

FCVTF GOALS TO IMPROVE CURRENT CONDITIONS

1. Assess potential water quality problems in the watershed.
2. Mitigate adverse stream impacts.
3. Reduce selenium to levels that are at or below State water quality standards and/or background conditions or recommend that the Colorado Water Quality Control Commission (CWQCC) establish appropriate site-specific standards.
4. Reduce E. Coli to levels that are at or below State water quality standards or recommend that the CWQCC establish appropriate site-specific standards.
5. Improve watershed function to manage sediment transport patterns and reduce erosion and sedimentation.
6. Improve stormwater runoff conditions at the source to improve water quality.

FCVTF WATER QUALITY OBJECTIVES

1. By 2013, all organizations collecting water quality data in the watershed are contributing to a shared on-line water quality database accessible to the public (such as the Colorado Watershed Data Sharing Network).
2. By 2012, remove one parameter from one segment on the 303(d) list.
3. By 2015, remove two parameters from one or more segments on the 303(d) list.
4. By 2013, no additional stream segments will be added to the 303(d) list (based on existing stream standards).
5. By 2020 demonstrate a continuous water quality improvement from 2008 for parameters of concern (E. Coli, selenium) measured in each stream segment in order to reach State standards.

IV. FLOODING AND STORMWATER MANAGEMENT

INTRODUCTION

Fountain Creek drains a 930-square-mile watershed with an elevation ranging from 4,640 feet to 14,115 feet. The creek is currently not a stable system, exhibiting frequent changes in sediment loads, flows, vegetative conditions, and nearby land uses. Fountain Creek has historically exhibited highly fluctuating flows, particularly between April and September, in response to storm events. Since the early 1980s, land and water use changes within the watershed have resulted in formerly ephemeral streams located in urban areas becoming perennial and Fountain Creek downstream of the City of Fountain flowing year round. The increase in perennial streams is due in part to increased urbanization without the benefit of a comprehensive watershed management approach for the basin. Increased baseflow in Fountain Creek and its tributaries is attributable to imported water sources (i.e., transbasin diversions), increased amount of impervious surfaces, wastewater effluent discharges, and return flows from lawn watering and crop irrigation.

Three types of flows that impact the overall conditions of Fountain Creek include major flood events, channel forming flow, and baseflow. Channel forming flow is the representative discharge that shapes the channel with respect to the pattern, cross-section, and profile. This type of flow moves the largest percentage of sediment over time, because it occurs on a more frequent basis in response to daily climate and land use conditions. Baseflow is not a consistent factor in shaping the channel, as it does not typically have enough energy to consistently move sediment. While subtle, erosion caused by increased baseflow is a component of day-to-day channel erosion and sediment transport.

MAJOR FLOOD EVENTS

Flood events have occurred periodically on Fountain Creek, with the most recent occurring in 1999 with a flow of 20,000 cfs recorded at the USGS gauge in Pueblo. Embankment failures in May 2007 caused additional flooding in low-lying North Side neighborhoods in Pueblo. Flood events are documented with photos and news reports from many sources within the watershed. Significant flood events have caused damage to public infrastructure, utilities, adjacent farmlands, and residential communities. Flooding also compounds problems associated with increased sedimentation and erosion. As development continues within the watershed, with the associated increase in impervious area, runoff and flood events are expected to increase.

The USACE study indicates a reduction in flood peaks from prior assessments done by Federal Emergency Management Agency (FEMA). However, channel capacities have been reduced in the lower reaches of Fountain Creek due to sediment build-up and heavy vegetative growth restricting channel widths and reducing channel depths. Other studies done on tributaries to Fountain Creek indicate problems with sediment, flooding, and channel degradation ultimately threatening buildings and infrastructure. Flood attenuation occurs in downstream segments of Fountain

Creek due to off-line storage and channel storage. In 1989, levee systems were constructed through Pueblo to protect the East Side community and the downtown area from flooding caused by a 100-year flood event. Private properties were purchased by the City of Pueblo to remove development from the floodplain and provide additional capacity within the channel. Current efforts by federal and state agencies, railroads, cities, counties, and stormwater enterprises strive to maintain channel stability by constructing detention facilities and other channel improvements. Vegetation control and debris removal have been implemented on Fountain Creek to increase channel capacity and improve flow characteristics.

CHANNEL FORMING FLOW

Channel forming flows are not indicative of catastrophic flooding. Rather, these are smaller events ranging from a few hundred cfs to a few thousand cfs that occur one to two times per year along the Front Range. These flow conditions combined with other factors (e.g. geology, stream modification, infrastructure, etc.) result in increased erosion and sediment transport. As the creek is trying to re-establish equilibrium and adjust for these additional flows, it alters its meander pattern and promotes increased bank erosion and down-cutting of the creek bed, which are all evident processes currently taking place within Fountain Creek and its tributaries.

RUNOFF REDUCTION

Conventional stormwater management practices to date have emphasized the reduction of peak runoff rates from flood events with little attention being paid to the more frequent events or to volume reduction. Fundamental changes to the methods used for planning, designing, and constructing development projects are needed to address these issues.

As a result of projected changes within the watershed and documented changes in streamflows in Fountain Creek, the USACE has made some general recommendations regarding future development within the watershed. These general recommendations address policies and strategies to reduce flood risk, sedimentation, and erosion, including the rehabilitation of riparian areas, creation of off-channel diversion and storage, and the preservation of existing wetlands, as well as the creation of additional wetlands. The recommendations emphasize low-impact development as a means to mitigate existing conditions and wisely manage future impervious surface areas and increased runoff. The USACE study also identified potential projects and sites for flood risk reduction, eco-system restoration, and channel stability.

A FUTURE TO BE AVOIDED

As impervious areas increase in the watershed, Fountain Creek will experience more frequent flood events from storms of lesser magnitude. Without effective best management practices and regulations, future development within the watershed will continue to increase instabilities on Fountain Creek because of increased runoff, volumes, and peak flows.

FCVTF GOALS TO IMPROVE CURRENT CONDITIONS

1. Recognize that stormwater is a resource and manage it for the benefit of the watershed and entities downstream.
2. Preserve natural channel capacity through floodplain preservation and sedimentation controls.
3. Preserve the natural drainage way through conservation easements and streamside setbacks.
4. Improve channel stability and flow stability by formulating a watershed development policy that promotes matching the post-development hydrographs and the pre-development hydrographs for peak, volume, and timing to the extent practicable.
5. Promote efficient stormwater management so that runoff will not exceed downstream conveyance capacity in order to minimize adverse impacts downstream.
6. Promote stable base flows and stabilize the stream system by retrofitting, to the extent practicable and in accordance with applicable Municipal Stormwater Discharge Permits (MSDPs), existing drainage systems to provide runoff reduction, water quality treatment, and improved stormwater management practices.
7. Improve stormwater runoff conditions at the source, with respect to quality, quantity, and rate/duration of flow to better mitigate development impacts.

FCVTF FLOODING AND STORMWATER MANAGEMENT OBJECTIVES

1. By 2010, all entities in the watershed will have participated in a watershed workshop to evaluate watershed management policies based on benchmark principles developed by recognized authorities such as the Center for Watershed Protection.
2. By 2012, all entities in the watershed will have adopted stormwater management policies based on benchmark principles developed by the Center for Watershed Protection; conducted workshops for revising existing drainage and land use regulations; presented revised criteria to developers and policy makers; and adopted recommended criteria for uniform application in the watershed..
3. By 2014, 10% of all existing public systems (as determined by each jurisdiction) will be retrofitted for water quality treatment and volume and peak flow reduction.
4. By 2014, 50% of all new development and 100% of all new annexations will implement LID techniques to reduce peak flows and runoff volume and to stabilize channel-forming flows.

V. MUNICIPAL WATER SUPPLIES AND RETURN FLOWS

INTRODUCTION

Currently, approximately 80% of the water used for municipal purposes in the Fountain Creek Watershed is 'non-native,' originating from another watershed (mostly from the Colorado River Watershed), or from the Denver Basin aquifers which are located deep underground and do not hydraulically connect with surface waters. Regional water demand outgrew the relatively small and undependable supply of indigenous Fountain Creek Watershed water supply over 100 years ago. At that time, a cross-basin pipeline was constructed to import water from the south slope of Pikes Peak. Since then, additional pipelines have been built to bring water to this region from up to 200 miles away. By law, the portion of this "non-native" water that remains after the initial use can be 'reused to extinction,' enabling return flows to be reused either directly for non-potable uses, or exchanged for additional non-native water.

Of all the water used in the Arkansas River Basin (which includes the Fountain Creek Watershed):

- ~87% is used for agriculture
- ~4.3% goes to Colorado Springs
- ~1.7% goes to City of Pueblo and Pueblo West
  ~2.8% goes to Aurora

Municipal water entities in this watershed typically consume 40% of their water through beneficial uses, evaporation, and losses. Of the total approximately 105.4 thousand acre-feet per year (kaf/yr) of water that is used by water users in El Paso County, approximately 42.2 kaf/yr is consumed on an average year. Approximately half of the water used by municipal systems is for outdoor irrigation and the remaining half is used indoors. A portion of the water that is used for irrigation returns to the groundwater close to the ground surface and recharges this alluvium (adds water to it). The portion of this groundwater that flows underground to a nearby creek or is recovered by an alluvial well is not considered to have been consumed, since this water is available to be reused. Of the indoor use, the water split is approximately 29% for toilets, 22% for laundry, 22% for showers and baths, 15 % for faucets, 10% for leaks, and 2% for dishwashers.

Conservation efforts such as tiered water rates, education and outreach, regulations, rebates, and incentives have been successfully used to decrease the per capita water use. In fact, residential water use in Colorado Springs (largest population center in the watershed) is among the lowest in the West, and is 15-30% lower than the Boulder, Denver, and Pueblo per capita residential water use.

Conservation efforts have proven very effective in reducing water use. However, water providers must be prepared for the risks associated with this 'water hardening,' meaning that when conservation efforts reduce water consumption to meet only essential needs, there is no longer a water 'cushion' to curtail during an emergency or drought. Watering restrictions

and other drought measures are therefore not as effective in reducing water use during dry cycles when conservation has already reduced demands to essential needs only. Thus, water providers must be careful to increase storage capacities to assure that water supplies can meet essential water demands during times of drought.

THE FUTURE

The population in the Fountain Creek Watershed is increasing. Greater water demands accompany this growth and thus water projects are being planned to meet these demands. One major water project being planned to increase water supply to Colorado Springs, Fountain, Pueblo West, and Security is the Southern Delivery System (SDS). As a result of this project, non-native return flows will increase flow into Fountain Creek.[1]

Even with the planned future water projects, the Arkansas Basin Roundtable estimates that by 2030 El Paso County will have a 22,600 acre foot/year (AF) gross gap between water demand and water supply. This gap will be caused by:

- Increased demand in unincorporated El Paso (9,250 AF)
- Loss of groundwater supplies in unincorporated El Paso County and the Town of Monument (13,350 AF)

FCVTF GOALS TO IMPROVE CURRENT CONDITIONS

1. Develop and enhance region-wide conservation efforts
2. Develop and enhance region-wide reuse programs
3. Minimize region-wide water system losses
4. Initiate regional discussions for addressing the long-term water supply gap

FCVTF MUNICIPAL WATER OBJECTIVES

1. By 2009, issue a report identifying all the watershed stakeholders in water supply.
2. By 2009, perform a SWOT (strengths, weaknesses, opportunities, and threats) analysis on the water conservation for at least three water districts in the watershed. Prioritize the elements from this analysis into water conservation phases for water providers. Set water reduction targets for each phase.
3. By 2010, introduce water conservation phase concepts to all water providers serving 50 or more homes in the watershed.
4. By 2010 – 2015, help implement phased water conservation plans to all watershed water providers open to participating, with the goal of a 15% residential water use per household reduction for providers that do not currently have a conservation program. Monitor and verify programs impact water demands for each provider, fine-tuning programs as needed to meet goals.
5. By 2015, help establish watershed reuse programs with all feasible water districts that are open to participating.

VI. LAND USE PLANNING AND DEVELOPMENT

INTRODUCTION

Physical development is the greatest agent of change in the Fountain Creek Watershed. As municipalities and unincorporated counties approve developments within the watershed, the functionality of the physical environment changes. Colorado has one of the highest growth rates in the west. Expanding development increases the amount of impervious surfaces and increases demands on natural resources and physical infrastructure. Meeting these increased demands of development within the watershed affects water quality, water quantity, the natural environment, and patterns of land use within the watershed.

The table to the right shows the most recent population and projected growth for the eight municipalities and three counties within the Fountain Creek Watershed.

IMPERVIOUSNESS OF THE FOUNTAIN CREEK WATERSHED

"The Fountain Creek Watershed Impervious Surface Area and Watershed Health Analysis Report" describes growth and development trends and health characteristics of the Fountain Creek Watershed. Results of the study indicate that changes in percent imperviousness will be most pronounced in the northern and eastern portion of the Fountain Creek Watershed and in the areas that have shared boundaries between the City of Colorado Springs (or other municipalities) and unincorporated portions of El Paso County. Increased growth in the unincorporated portions of El Paso County will continue to put more pressure on creeks within those areas and immediately downstream. This has already occurred in Cottonwood Creek, sections of Sand Creek, and Jimmy Camp Creek, which are also expected to see the largest increase in percent imperviousness in the future.

Strategies to address increasing imperviousness are being considered by the various counties and municipalities within the watershed. Changes to development techniques may allow post-development hydrographs to approximate pre-development hydrograph on a site-by-site basis. The implementation of low-impact development (LID) practices may be one means to accomplish this goal. Adopting Smart Growth principles and promoting Green Infrastructure, Energy Star Housing, and Leadership in Energy and Environmental Design (LEED) Criteria for non-residential structures will go a long way toward minimizing the negative impacts of development within the watershed. These strategies do not necessarily require changes in planned uses, only the manner in which sites are developed.

PROSPECTIVE DEVELOPMENTS IN THE FOUNTAIN CREEK WATERSHED

There are many infrastructure and other developments that have already been planned or are being explored in the Fountain Creek Watershed. These developments include:

PROJECTED POPULATION GROWTH WITHIN THE FOUNTAIN CREEK WATERSHED.

	2000	2005	2010	Percent Change 2000-2005	Percent Change 2005-2005
City of Colorado Springs	360,890	385,312	NA	6.8%	NA
Fountain	15,197	19,489	NA	28.2%	NA
Geen Mountain Falls	773	916	NA	18.5%	NA
Manitou Springs	4,980	5,329	NA	7.0%	NA
Monument	1,971	4,114	NA	108.7%	NA
Palmer Lake	2,179	2,399	NA	10.1%	NA
Pueblo	102,121	103,994	NA	1.8%	NA
Woodland Park	6,515	7,155	NA	9.8%	NA
El Paso County	520,571	568,436	622,858	9.2%	9.6%
Pueblo County	142,054	150,917	164,783	6.2%	9.2%
Teller County	21,147	22,260	24,096	5.3%	8.2%

Source: Colorado Department of Local Affairs Website (2/26/09)

- The Sundance Investments/Lafarge West Inc. Gravel Pit is a 745-acre property that will contain a 437-acre sand and gravel pit, along with a use variance request for possible asphalt and concrete batch plants. This proposed project would be located along two miles of the west bank of Fountain Creek just southeast of I-25, Exit 122.
- The Lower Fountain Metropolitan Sewage Disposal District (LFMSDD) is a wastewater treatment and biosolids stabilization and disposal plant is proposed to be located on Birdsall Road 4 miles south of Fountain (and 1.5 miles northeast of Exit 122). The site application is currently being reviewed by the Colorado Department of Public Health and Environment (CDPHE) Water Quality Control Division. A geotechnical study has been completed to determine soil conditions and develop suitable design criteria for pipelines and structures. Commencement of construction is anticipated to begin during the first quarter of 2009.
- Pueblo Springs is a proposed 24,000-acre residential development in Pueblo County just south of the Pueblo/El Paso County line and east of I-25. Technically, only a small part is within the Fountain Creek Watershed but that part is along Fountain Creek. The developer is in talks with the City of Pueblo on many things, including the need for a future wastewater treatment plant. [2]
- Several highway projects are underway or being considered, including improvements to US Highway 24 from Colorado Springs to Woodland Park, expansion of State Highway 16 which connects Mesa Ridge Parkway /South Powers Boulevard to US Highway 85 (at Fountain) to I-25 (at exit 132) and Fort Carson (at Gate 20), and several prospective toll roads.
- Several power line expansion are under consideration as well, such a 1,000-mile high-voltage transmission line throughout eastern Colorado and western Kansas (which would include new power lines that would cross Fountain Creek); a new power line from Xcel's Comanche power plant south of Pueblo to the Daniels plant south of Denver; and a proposal to build four to six 200- to 350-foot radio towers along Overton Road.

FCVTF GOAL TO IMPROVE CURRENT CONDITIONS

Establish and implement land use policies that preserve, maintain, and enhance ecosystem health (including flood control, wildlife habitat and water quality).

FCVTF LAND USE OBJECTIVE

By 2010, establish a process that Fountain Creek communities can use to work together to achieve the land use vision and goal.

VII. RECREATION

INTRODUCTION

One of the goals of the Fountain Creek Task Force is to create a recreational amenity of Fountain Creek. The Task Force hopes to increase recreational opportunities along Fountain Creek in order to benefit the region's residents, wildlife, and the stream itself. There are many parks, nature preserves, and trail amenities in the watershed, providing an excellent foundation upon which to build a more comprehensive recreational corridor. As is true for Colorado as a whole, residents of the watershed enjoy outdoor recreation opportunities and consistently respond favorably when asked if more opportunities for recreation are desired.

Although there are substantial recreational facilities in Colorado Springs and many in the City of Pueblo, south of the City of Fountain and north of the City of Pueblo there is little opportunity for recreation along Fountain Creek. The primary public recreational facility between the City of Fountain and Pueblo is a designated bird watching trail along Hanover Road in El Paso County. This area is sparsely populated, with ranching and farming the primary land use within the corridor.

Colorado State Parks has two facilities in the area: Lake Pueblo State Park (not in the Fountain Creek Watershed) and Cheyenne Mountain State Park. Lake Pueblo State Park is among the most heavily utilized parks in the state (with an estimated 1.5 million visitors each year) and is anticipated to connect to the Front Range Trail (see below for more on the Front Range Trail). Flat-water recreation, fishing, and camping are the main attractions to the Park. Cheyenne Mountain State Park is a scenic foothills-to-mountain park located just southwest of Colorado Springs and west of Ft. Carson with hiking, biking, and educational opportunities. State Parks and Colorado Springs are in the process of acquiring the top of Cheyenne Mountain and will provide increased trail and recreational opportunities once the entire area is purchased.

There are numerous local and regional parks in the watershed. In addition to parks and open space, there are trail systems throughout the area, some of which follow Fountain Creek and connect to parks such as Fountain Creek Regional Park. The majority of these parks and open space are used for passive recreation such as walking, bicycle riding, jogging, wildlife viewing, and, in the case of Whitewater Kayak Park in Pueblo, kayaking.

FUTURE RECREATIONAL OPPORTUNITIES

One upcoming recreational opportunity within Pueblo County is the Fountain Creek Stewardship Center. The Fountain Creek Stewardship Center will serve as the hub for the Fountain Creek system of parks, open space, natural areas, and research sites. It will be connected to the other facilities located along Fountain Creek with Internet and webcam technology, making it an educational amenity for those who visit in person or on-line. Each element of the system will promote natural resource management practices.

Another project that will encourage the public to become Fountain Creek stewards is the Fountain Creek Eco-Fit Education Park. The Fountain Creek Eco-Fit Education Park will also be connected to the other facilities located along Fountain Creek with Internet and webcam technology, making it an integral educational amenity for locals and tourists alike. Visitors will learn and explore through inviting interactive and hands-on play, and health will be promoted through active play.

In addition to these future recreational facilities are other upcoming and planned developments in the watershed. Colorado State Parks is spearheading an initiative to connect Wyoming to New Mexico via the Front Range Trail (FRT). The FRT will piggyback on existing trails systems through metropolitan areas and will work to build new sections of trail where there are none. An FRT plan, funded by a grant from Colorado State Parks, will be completed by December 2009 and distributed to all the recreation planners in the region. The Task Force has also brainstormed opportunities for loop trails off linear trails that would provide wetland and riparian habitat viewing for birders and general wildlife viewing nearer to the Creek, although no formal plans have yet been developed. The Task Force has also discussed the possibility of establishing one or more Colorado State Park facilities along Fountain Creek that would be linear in shape and provide camping, flat-water recreation, and ranching activities.

FCVTF GOALS FOR IMPROVING CURRENT CONDITIONS

1. Create a common vision for recreational uses within the Fountain Creek Corridor between the various municipalities/counties.
2. Expand the types of recreational opportunities within the Fountain Creek Watershed and Corridor.
3. Preserve, maintain, and enhance the Fountain Creek Watershed and Corridor through environmentally sensitive and sustainable recreational design. Restore ecological systems that have been lost or are struggling.

FCVTF RECREATION OBJECTIVES

1. Implement the recreation vision and strengthen existing master plans by jointly creating unique recreational opportunities.
2. By 2009, identify preferred trail alignment for the Front Range Trail
3. By 2009, begin removal of invasive plant and animal/inspect species from the Fountain Creek Watershed.
4. By 2009, create a coherent list of current recreation opportunities within the Fountain Creek Watershed and Corridor.
5. By 2010, work with the Outreach Committee on programming events.
6. By 2010, create a Fountain Creek Watershed Recreational Task Force Committee
7. By 2010, complete an inventory of existing conditions along the proposed trail routes
8. By 2011, develop a list of recreational maintenance needs and solicit the help of various businesses and corporations.
9. By 2011, acquire necessary trail easements for the Front Range Trail
10. By 2011, hire an engineering firm to begin construction drawings for the Front Range Trail
11. By 2015, start construction and establish an ongoing maintenance schedule of the Front Range Trail within the Fountain Creek watershed.

VIII. WETLANDS

INTRODUCTION

The Fountain Creek Watershed waterways are experiencing erosion, sedimentation, flooding, and degraded water quality in some reaches. Properly located and designed wetlands can help improve these deleterious conditions, as well as increase adjoining property values and tourism (through recreation and wildlife viewing opportunities) and provide opportunities for environmental education. There are many existing wetlands in the Fountain Creek Watershed, some of which have been created by increased local water flows. However, some are at risk due to floodway reduction, increased flood flows, and Tamarisk invasions.

Wetlands provide a number of important benefits to natural and human communities. Wetlands and riparian areas in the arid west become the foundations of the food pyramid for many upland wildlife species while also providing cover, vegetation, and access to water that is critical to their survival. They can help improve water quality by filtering water through vegetation and stabilizing the banks of streams as the roots hold soil in place. Because wetlands reduce the velocity of water traveling through them and hold excess water like sponges, they can reduce erosion and flooding. As waterway sediment loads increase exponentially with water velocity, the reduced creek velocities also result in significantly reduced sediment loads. Created wetlands can mimic many of these functions of natural ones, although they rarely mimic all of them. Additionally, wetlands can serve as an outdoor classroom for environmental education and are attractive for ecotourism.

Under natural hydrology, wetlands/riparian vegetation are maintained as shifting patches on the landscape (e.g. one patch of shrubs might get washed away, while a sandbar gets created that starts new wetland vegetation building). A naturally healthy system is always in flux; the number of acres of each wetland type changes constantly but the total acres is relatively stable at the watershed scale. The Fountain Creek Watershed has become so dynamic, however, that it is beyond the natural levels of fluctuation in water quantity and frequencies of flows that would have been expected from a stable system.

In the Fountain Creek watershed, typical wetlands are cattail and bulrush marshes, wet meadows of grasses and grass-like plants, and stands of willow shrubs. The composition of wetlands in the Watershed within El Paso County is open water and marshes (2.5 square miles), shrublands (2.5 square miles), wet meadows (5 square miles), and wetlands associated with streams (10 square miles). These wetlands make up approximately 2.5% of the total land area, a much greater percentage than the 1% Colorado statewide average. Wet meadows are found in the prairies in northern and northeastern El Paso County. Traveling south into Pueblo County, the land becomes more arid and there are fewer wet meadows. Willow shrublands and marshes are found throughout the Fountain Creek Watershed along streams. The

Fountain Creek Watershed has a large cottonwood forest and an understory of willow shrubs. The cottonwood forest is filled with pockets of small to large marshes.

Determining where the most stable areas of Fountain Creek are is an important first step in deciding where to create viable wetlands in and around Fountain Creek. This information is available in the Fountain Creek Watershed Study prepared by the USACE. Other factors in choosing wetland rehabilitation and development locations include land ownership, development costs, accessibility for maintenance and for the public, habitat quality, potential for flood attenuation, erosion prevention ability, and water availability.

Careful selection of wetland sites is imperative as wetland construction is quite costly, ranging from $50,000 to $110,000/acre (these costs include general land costs, structural facilities to assure an adequate water supply and grading, and vegetation to achieve the desired function).[3] Newly created wetlands will require a dedicated water supply (and therefore dedicated water rights, which may have to be purchased prior to wetland creation) to ensure proper functioning and survival of the wetlands. How much water and when the water is needed vary by specific location and wetland type. However, a reasonable range of water that may be required for a new one-acre wetland in this watershed is between 2 and 5 acre-feet per year.[4]

WETLAND BANKING

Wetland banking appears to have potential for implementation of wetland and related projects along Fountain Creek, but it is recognized that more consultation with wetland professionals is required. A mitigation bank is a wetland, stream, or other aquatic resource area that has been restored, established, enhanced, or (in certain circumstances) preserved for the purpose of providing compensation for unavoidable impacts to aquatic resources permitted under Section 404 of the Clean Water Act or a similar state or local wetland regulation.

GOALS TO IMPROVE CURRENT CONDITIONS

1. Mitigation banks are a form of "third-party" compensatory mitigation, in which a party other than a Clean Water Act permittee assumes the responsibility for compensatory mitigation implementation and success. This transfer of liability has been a very attractive feature for Section 404 permit holders, who would otherwise be responsible for the design, construction, monitoring, and ecological success of a compensatory mitigation site for a minimum of five years in addition to ensuring the site's long-term protection. water quality, water quantity, wildlife habitats, recreation and tourism, erosion and sedimentation, and public education.
2. Maintain and enhance the health and functionality of existing wetlands and riparian areas to accomplish the goals of the wetland and riparian management plan.
3. Create additional wetlands and riparian areas that help to accomplish the goals of the wetland and riparian management plan.
4. Practice adaptive management to improve wetland protection, enhancement, and creation.

OBJECTIVES

1. By 2010, prepare and release a comprehensive inventory and assessment of all wetland and riparian areas in the watershed.
2. By 2011, interpret one pilot project using an existing wetland to demonstrate wetlands' ability to filter pollutants and to demonstrate wetlands' ability to attenuate flooding.
3. By 2018, increase the number of wetland acres in the watershed by 100 to 300 acres, with an approximate increase of 2% of the existing wetlands.

Photo by: Bill Alt

IX. WILDLIFE

INTRODUCTION

The Fountain Creek Watershed encompasses mountains, foothills, and grasslands and transition zones between these habitat types. The watershed is a crossroads of sorts, straddling two major physiographic regions: the Southern Rocky Mountains and the grasslands of the Great Plains. It is a meeting place where eastern, western, and southwestern North American species come together to form a uniquely diverse collection of plants and animals. Snow-capped, ruggedly-alpine mountains rise majestically out of the Pikes Peak-San Isabel National Forest and provide a western backdrop for one of the most spectacularly beautiful landscapes in Colorado. At their base, rolling, pine-covered foothills give way to juniper and piñon-speckled shrublands. These then blend into vast expanses of short-grass prairie and fragrant sand sage ecosystems. Tying all of this variety together is a laced network of braided wetlands, reservoirs, lakes, mountain streams and riparian corridors that together form the numerous tributaries of the greater Arkansas River system.

Fountain and Monument Creeks, originating in the mountainous uplands, are the core of the watershed, carrying water from the mountains into more arid landscapes below. This unique landscape provides a setting for numerous species of birds and land animals. It shelters rare plants and animals that are found nowhere else in the world and provides critical habitat to a number of rare, threatened, and endangered species. This diversity of ecosystems provides a range of habitats for wildlife that are utilized year round and for purposes such as migration corridors, hunting ground, breeding, severe winter range, and water sources by regional species.

FACTORS IMPACTING HABITAT

According to Colorado Division of Wildlife biologists, the most important actions stewards of the watershed can take to enhance and maintain wildlife populations is to protect and preserve the habitats the species depend on for survival. Topping the list of priorities are noxious weed removal (particularly Tamarisk), reducing the instability of the creek systems to ensure the existence of predictable long-term habitat for wildlife, providing corridors for wildlife over or under transportation facilities such as I-25, maintaining suitable flows in riparian and wetland habitats, and protecting open space for food, foraging, and breeding.

Other factors impacting natural habitat associated with Fountain Creek degraded water quality, fragmentation, degradation, and loss of habitat and barriers to wildlife migration. Most species within the Fountain Creek watershed require access to riparian areas in order to survive. Many use Fountain Creek and its tributaries as natural corridors to move across the landscape. From multiple perspectives, the health and viability of the habitat along the creek is very important to the viability of wildlife populations in the region.

The quality of habitat varies by area of the watershed as it relates to development and agricultural use. The upper elevations of the watershed are least impacted by development. Major portions of the headwaters area remain undeveloped and include national forest lands and other preserves. Development intensifies at lower elevations of the watershed, particularly in the urbanized foothills and plains surrounding Colorado Springs, Pueblo, and the I-25 corridor. Fountain Creek downstream of Colorado Springs is impacted by increased total water flows and storm flow surges due to upstream development and the increase of impervious surfaces. As a result, the lower creek and banks are increasingly unstable. Increased flows in the main stems of the creek are changing and eliminating habitats important to a wide array of plants and animals. Without action to address these flows, the diversity of habitats critical to maintaining the variety of wildlife in the watershed will continue to be degraded or lost.

IMPERILED SPECIES

A number of rare, threatened, and endangered species of plants and animals coexist within the Fountain Creek Watershed. Some 500 vertebrate species consisting of residents and migrants inhabit the watershed, including federally- and state-listed species and numerous invertebrate, fish, amphibian, and bird species and plant communities of special concern. At greatest risk in the watershed are species directly associated with stream stems and adjacent wetland and riparian habitats. The primary risks to most imperiled species in the watershed are fragmentation and elimination of a variety of habitats due to increased urbanization. Some well-known species at risk in the watershed include federally threatened Preble's Meadow Jumping Mouse, the Flathead Chub, the Northern Leopard Frog, the Greenback Cutthroat Trout, the Golden Columbine, Swainson's Hawk, Lewis's Woodpecker, and the Red-headed Woodpecker.

FCVTF GOALS TO IMPROVE CURRENT CONDITIONS

1. Preserve, protect, and enhance the biodiversity, health, and long-term sustainability of wildlife within the Fountain Creek Watershed.
2. Preserve, protect, and enhance the functionality, biodiversity, health, and long-term sustainability of the habitats that local wildlife require, while maintaining access to the resources upon which wildlife depend, within the Fountain Creek Watershed.

FCVTF WILDLIFE OBJECTIVES

1. By 2009, complete a report identifying regional wildlife populations, their regional and crucial habitats, and their values.
2. By 2010, establish a watershed-wide wildlife health and population monitoring program that identifies indicator species of overall wildlife viability. This will include re-evaluations every 5 years.
3. By 2013, adopt a Wildlife Action Plan to maintain populations with the goal of reducing/eliminating declines in population for all federally-listed threatened and endangered species in the watershed, that coordinates with associated federal recovery plans for listed species.
4. By 2013, implement 10 habitat restoration projects in the watershed.
5. By 2018, identify areas in the watershed that would have the least negative impacts on wildlife and make recommendations for future development practices. Adopt watershed-wide, consistent regulations and standards for development within these areas.
6. By 2018, preserve a minimum of 75% of all identified crucial wildlife habitat in the watershed to protect it from the impacts of future development.

Photo By: Bill Alt

X. AGRICULTURE

INTRODUCTION

The present character of Colorado is rooted in the ranching and farming heritage of the State. Today, agricultural production contributes more than $16 billion annually to Colorado's economy.[5] The Fountain Creek Watershed has been used for the production of food and agricultural products since the first settlers came here over 150 years ago. Fountain Creek is one of the last significant waterways that contain no water storage facilities or flood diversion dams along the Front Range. There are many challenges to the health of Fountain Creek, including altered flow regime, flooding, erosion, water diversions, population growth, and demand for water are the greatest threats to agriculture in the watershed. These threats have the potential to reduce productive agricultural acreage in the region, transfer water resources from rural areas, and further alter natural hydrological processes.

Agricultural land use dominates the section of the Fountain Creek Watershed between Fountain and Pueblo. The land is held in relatively large parcels (250-3,000 acres) and is used for irrigated crop production (alfalfa, hay, and vegetables), seasonal livestock grazing, and hobby farms. In El Paso and Pueblo Counties, dry land livestock grazing is supplemented by irrigated hay and crop production. Ranching in the area is supported by adjacent Colorado State Land Board property that is leased to local ranchers, thereby increasing the availability of grazing land. Much of the short grass prairie is well suited to responsible grazing of its native grasses. The use of uplands for cattle production not only benefits agricultural producers, but also has positive impacts on groundwater recharge that maintains the regional water table. Land that is not surfaced with pavement or other impervious surfaces is critical to the long-term supply of groundwater by providing infiltration from rain and snow back into the water table.

AGRICULTURE AND DEVELOPMENT

The most direct threats to agricultural production in the Fountain Creek Watershed are population growth and development pressure. Farmers and ranchers face increasing economic pressure to sell their land and water as the state's urban centers continue to grow. From 1990 to 2006, there was a cumulative loss of over 2 million acres of agricultural land in Colorado.[6] It is anticipated that nearly another 1 million acres of agricultural land will be lost by 2030. The bulk of this conversion will be from undeveloped agricultural land to large-lot subdivisions or ranchettes.[7]

Along Fountain Creek these pressures are evident as development follows I-25 access ramps and annexation activities. In the past, the scarcity of water and other services impeded the active development of the region between Colorado Springs and Pueblo. Annexation and the creation of new facilities for water, electricity, and sewer could remove impediments to development. Strip development along the Interstate could

displace agricultural producers for a variety of reasons, including water availability, incompatible adjacent land use, and increased land values, making it harder for agricultural producers to remain. With increases in land values come increases in taxes, which compound problems by sometimes forcing the next generation to sell off a portion of the property to pay the inheritance tax. Since water rights are property rights, some choose to sell their water in order to keep their land.

AGRICULTURE AND WATER

With the increase in population in Colorado, there is a proportional strain on water resources and the potential for conflict between agricultural, commercial, industrial, and residential uses. The Colorado "Statewide Water Supply Initiative" has projected that municipal and industrial demand for water will increase by 53% statewide by 2030. Coloradans use about 208 gallons of water per day (gpd) per person. If agriculture is included, the per capita use increases to 3,690 gpd.[8] Agriculture, then, accounts for roughly 90% of Colorado's water demand and as such has been identified as the likely source for new municipal and industrial water sources in the future. [9]

The historic practice of permanently transferring water from agricultural uses to municipal or industrial uses comes in the form of selling/buying water rights and drying up the associated land. This form of water use conversion is not new to Colorado and causes the loss of arable land. This loss of land has tremendous economic and social impacts to the agricultural community in the Fountain Creek Watershed. A new alternative is being developed that would involve municipalities leasing rights to water from farmers but only using the leased water in years when it is necessary. This allows the farmer to stay in business and earn cash for the lean/dry years when the cities need the water most. Reportedly, this system is being considered by Colorado Springs Utilities and Arkansas River farmers.

GOALS TO IMPROVE CURRENT CONDITIONS

1. Preserve and protect agricultural land
2. Preserve agricultural water
3. Promote agricultural viability
4. Protect ecosystems

Note: Although the Fountain Creek Vision Task Force is deeply committed to maintaining agriculture in the watershed and to supporting activities that will help achieve the goals outlined above, the group decided not to pursue specific strategies to realize these goals, as only agricultural producers and landowners can determine what is best for their land and livelihood.

Courtesy of: Pueblo City County Health Dept.

XI. OUTREACH

Regional watershed outreach efforts are essential for:

- Establishing appreciation, understanding, and connecting with the waterway corridors in the Fountain Creek Watershed
- Creating public stewardship to increase watershed health/runoff water quality, to help assure waterway safety, to sustain healthy and functioning ecosystems/wildlife habitat, and to instill water conservation practices
- Facilitating enjoyment of healthy waterways that support diverse environmental, economic, wildlife, and recreational opportunities
- Preserving and protecting agricultural viability

There are multiple existing outreach programs in the region that educate a variety of people on diverse watershed topics. The region will benefit through greater cooperation and collaboration on pubic watershed outreach and educational programs that focus on common themes and messages. These include City and County efforts, projects and programs at local schools, environmental education and natural centers, among others.

FCVTF GOAL TO IMPROVE CURRENT CONDITIONS

Educate and engage the public (from elementary age through adult) on the Fountain Creek Watershed to:

1. Establish appreciation, understanding, and connection with the waterway corridors in the Fountain Creek Watershed
2. Create public stewardship to increase watershed health/runoff water quality, to help assure waterway safety, and to instill water conservation practices
3. Facilitate enjoyment of healthy waterways that support diverse environmental, economic, wildlife, and recreational opportunities
4. Preserve and protect agricultural viability

FCVTF OUTREACH OBJECTIVES

1. By mid 2009, create and implement a Fountain Creek Watershed website that includes a calendar for upcoming watershed related events.
2. By mid 2009, distribute Fountain Creek Watershed press packets to all television, radio, and newspaper outlets in the watershed.
3. By mid 2009, convene a roundtable of existing outreach and education program directors to develop short- and long-term program goals and implementation plans.
4. By the spring or fall of 2010, hold a Fountain Creek Watershed contest for K-12 school children throughout the watershed.
5. By 2010 and thereafter, hold at least 3 volunteer events annually focused on assessing and/or improving conditions in Watershed waterways.
6. Have a watershed educational curriculum in use in public schools throughout the watershed (5% of schools by 2011, 25% of schools by 2014).

GLOSSARY

100-year flood event: Refers to the calculated level of flood water expected to be equaled or exceeded every 100 years on average.

Alluvium: A general term for unconsolidated material deposited by a stream or other body of running water.

Base flow: That part of stream discharge that is not attributable to direct runoff from precipitation or melting snow. Primarily sustained by groundwater discharge into the stream.

Cfs = cubic feet per second

Channel forming flows: The representative discharge responsible for doing the majority of the work that shapes the channel (pattern, cross section, profile/slope).

Ephemeral streams: A stream that flows only a short time (days or weeks) in direct response to precipitation.

Floodplain: Flat areas bordering streams that are subject to flooding.

Hydrographs: The description and studies of bodies of water (e.g. lakes and rivers): as the measurement of flow and investigation of the behavior of streams and the charting or graphing of them.

Hydrology: The study of relationships between water and the geologic environment.

Impervious areas/surfaces: A hard surface area which either prevents or retards the entry of water into the soil. Examples include, but are not limited to, structures, walkways, patios, driveways, carports, parking lots or storage areas, concrete or asphalt paving, gravel roads, packed earthen materials, haul roads and soil surface areas compacted by construction operations.

Municipal Stormwater Discharge Permits (MSDPs): permits are required for storm water discharges to surface waters from construction and industrial activities and municipalities if stormwater from rain or snow melt leaves your site through a "point source" and reaches surface waters either directly or through storm drainage.

Non-Potable: Water that is unsafe or unpalatable to drink because in contains objectionable pollution, contamination, minerals, or infective agents.

Perennial: A stream with year-round channel flow .

Section 303(d): Section of the federal Clean Water Act that requires states to prepare and submit a list to the EPA listing waters that do not meet water quality standards. Any stream in which water quality standards are not attained must be placed on the state's 303(d) list. This is used to set priorities for pollution controls.

END NOTES

[1] More details about this project and alternatives are available at www.sdseis.com.

[2] Munch, Jim. 2007. Personal communication.

[3] Glidden, Mark. 2008. Senior Project Manager, CH2MHill. Personal communication on January 3, 2008.

[4] Lusk, Kevin. 2008. Principal Engineer, Colorado Springs Utilities. Personal communication on January 3, 2008.

[5] Sherman, Harris 2007. Director of Colorado Department of Natural Resources, quoted in "Water roundtables tackle growth issues," in The Pueblo Chieftain, by Chris Woodka. November 17, 2007.

[6] "Colorado Agriculture: A profile of Colorado's agriculture and its contribution to the state's economy." Compiled by USDA, NASS, Colorado Field Office, 2007.

[7] "Colorado Conservation at a Crossroads." Page 2, Publication of Colorado Conservation Trust, 2005. Ibid. Page 1.

[8] "Water and growth subject of new CU report", CU-Boulder Natural Resources Law Center, Fact Sheet. November 15, 2001. Summary of "Water and Growth in Colorado".

[9] Sherman 2007.

Courtesy of: Pueblo City County Health Dept.

For more information about
the Fountain Creek Watershed please visit **fountain-crk.org**
then click on Fountain Creek Vision Task Force

APRIL 2009 DROUGHT UPDATE

Water Availability Task Force Co-Chairs

Veva Deheza, CWCB - 303-866-3441 ext. 3226
Email - veva.deheza@state.co.us

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Executive Summary

The last four weeks have produced above average precipitation to Colorado. The moisture has eased drought conditions along the Front Range and in parts of southeastern Colorado. Despite the recent moisture, Colorado is still experiencing a La Niña event, which produces above average temperatures and below average precipitation and La Niña conditions are predicted to linger through May and June.

- Statewide, the snowpack is 107% of average. Recent storms have helped to increase snowpack averages but as the temperatures increase, the snowpack will rapidly decrease. As of April 22, the lowest level of snowpack in the state is the San Miguel/Dolores basin at 92% of average. The Arkansas basin recorded the highest snowpack at 113% of average.

- The runoff forecast across the state ranges from 70%-129% of average. The South Platte basin is recording the lowest forecasted streamflow in the state ranging from 75-87%. The Colorado Basin has the highest overall runoff forecast ranging from 100-109%. The San Miguel/Dolores/San Juan River basin experienced the largest decrease in forecasted streamflow. In March, the basin recorded 102-106% of average and in April recorded 84-88% of average.

- Statewide, reservoir storage is 103% of average and 105% of last year's average. Overall, storage is at 58% of average capacity. Reservoir storage and the percentage of capacity have increased slightly from March totals.

- According to provisional Snow Telemetry (SNOTEL) data, precipitation levels for all seven basins during the month of April are higher than the levels of precipitation received in April 2002.

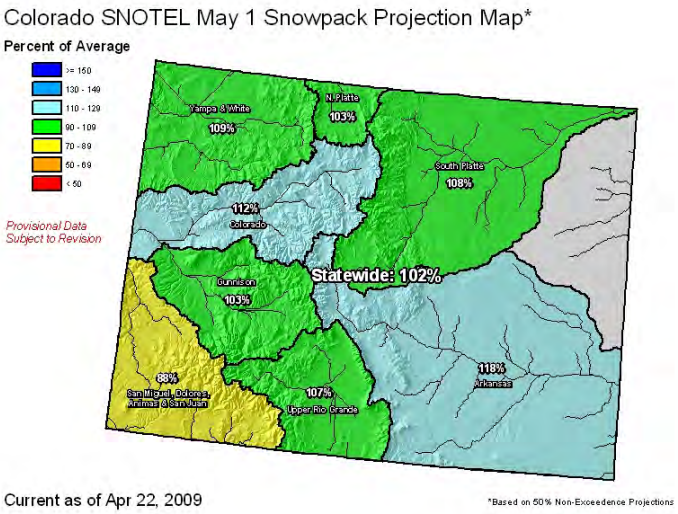
- Surface Water Supply Index (SWSI**) values for the seven basins range from -0.8 to +1.1. All seven basins experienced a loss from the previous month's values which is a result of rapidly decreasing snowpack amounts. From November to April, snowpack is given the most weight in determining SWSI values.

- Recent moisture in the South Platte basin has improved the prospects for the winter wheat crop; had dry conditions continued, the crop would have been damaged severely. The WATF will continue to monitor the condition of drought concerns along the Front Range and Southeast Colorado and the impact drought has on agriculture.

***** *Sea surface temperatures at the equator in the Pacific Ocean impact global climate patterns. Depending on these patterns, Colorado could be experiencing El Niño or La Niña conditions.*

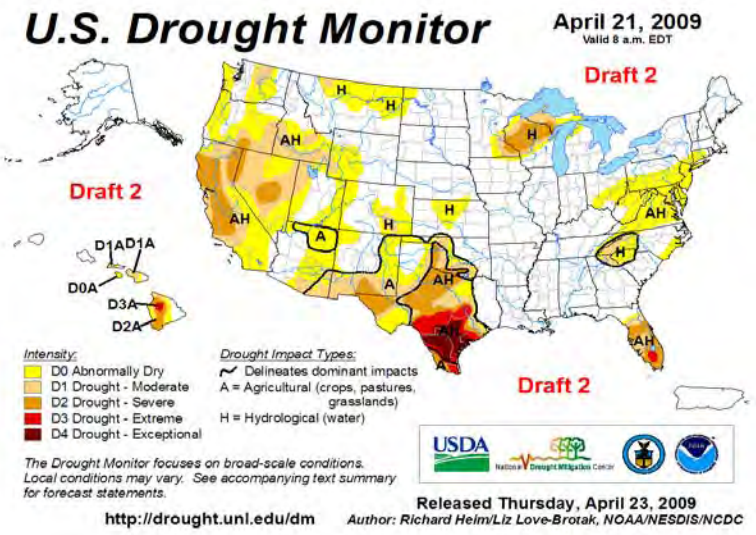
****** *SWSI values are based on snowpack, reservoir storage and precipitation for the winter period (Nov-April). The values range from a high of +4.0, which indicates an abundant supply to a low of -4.0, which indicates severe drought. A value of 0.0 indicates a near normal supply.*

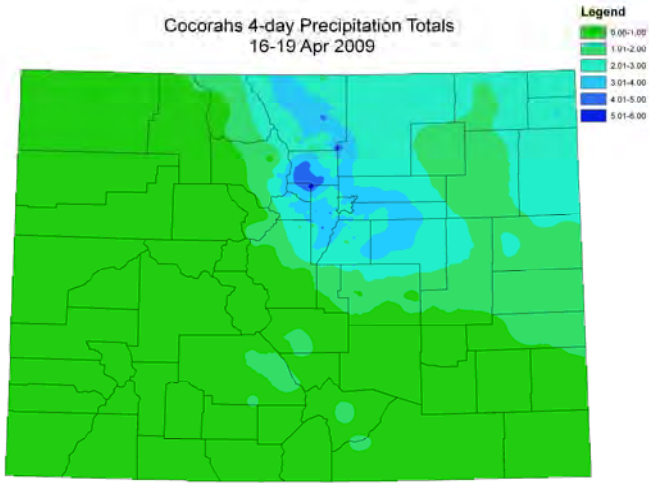
APRIL 2009 DROUGHT UPDATE



The Colorado SNOTEL May 1 Snowpack Projection Map shows the snowpack levels across the state should Colorado receive an average amount of precipitation. By May 1, with average precipitation, the statewide snowpack is predicted to be 102% of average. Should conditions be wetter than average by May 1, the projection is 114% of average. If conditions are drier than average by May 1, the projection statewide falls to 99% of average. In all projections, the San Miguel/Dolores/San Juan basin will have the lowest snowpack.

The adjacent map shows the U.S. Drought Monitor as of April 21, 2009. Drought conditions along the Front Range and southeastern parts of Colorado have shown improvement. At this time in March, the Front Range was in a moderate drought and now is categorized as being abnormally dry. A portion of southeastern Colorado continues to be experience moderate drought and the Drought Impact Type is hydrological.





The CoCoRaHS 4-day Precipitation Totals map shows the amount of moisture recorded from April 16-19, 2009. The dark blue areas recorded the most moisture, between 5-6 inches. CoCoRaHS is a Community Collaborative Rain, Hail, Snow network made up of volunteers who measure daily precipitation levels around the state.

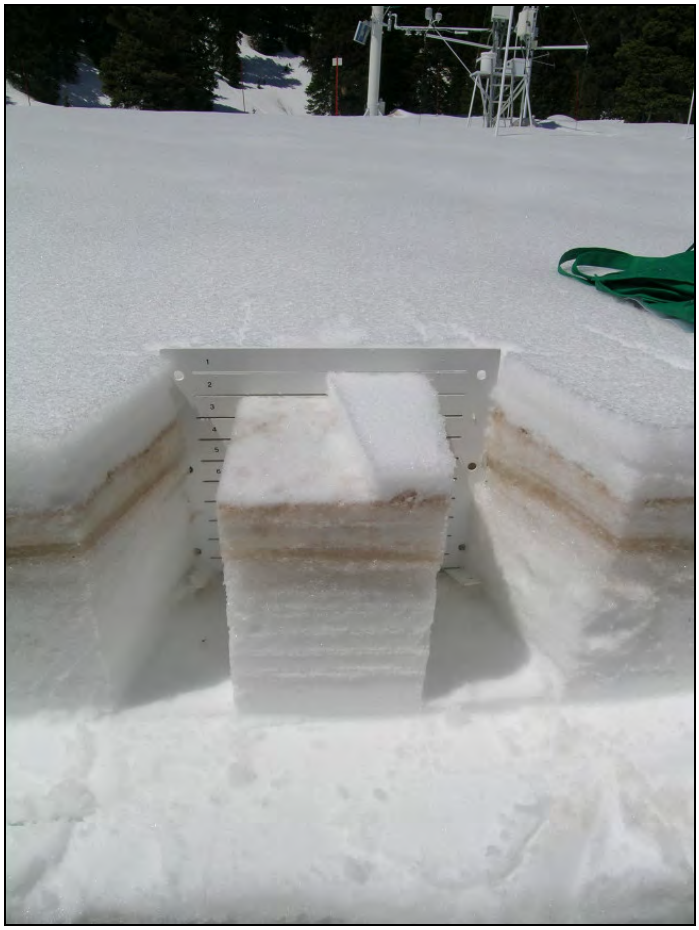
Long Term Forecast Summary

La Niña conditions are predicted to continue through June 2009, after which, climate forecasters predict there is a possibility of a return to near normal conditions or even El Niño conditions, which will bring more moisture for Colorado. Forecasters project a decent monsoon season but say the monsoon season will start later than usual.

NOTE: The maps and graphics depicted in this report were those presented at the April 22, 2009 meeting and may have been updated since the meeting.

CODOS – Colorado Dust-on-Snow – WY 2009

Update #9, Thursday, May 7, 2009

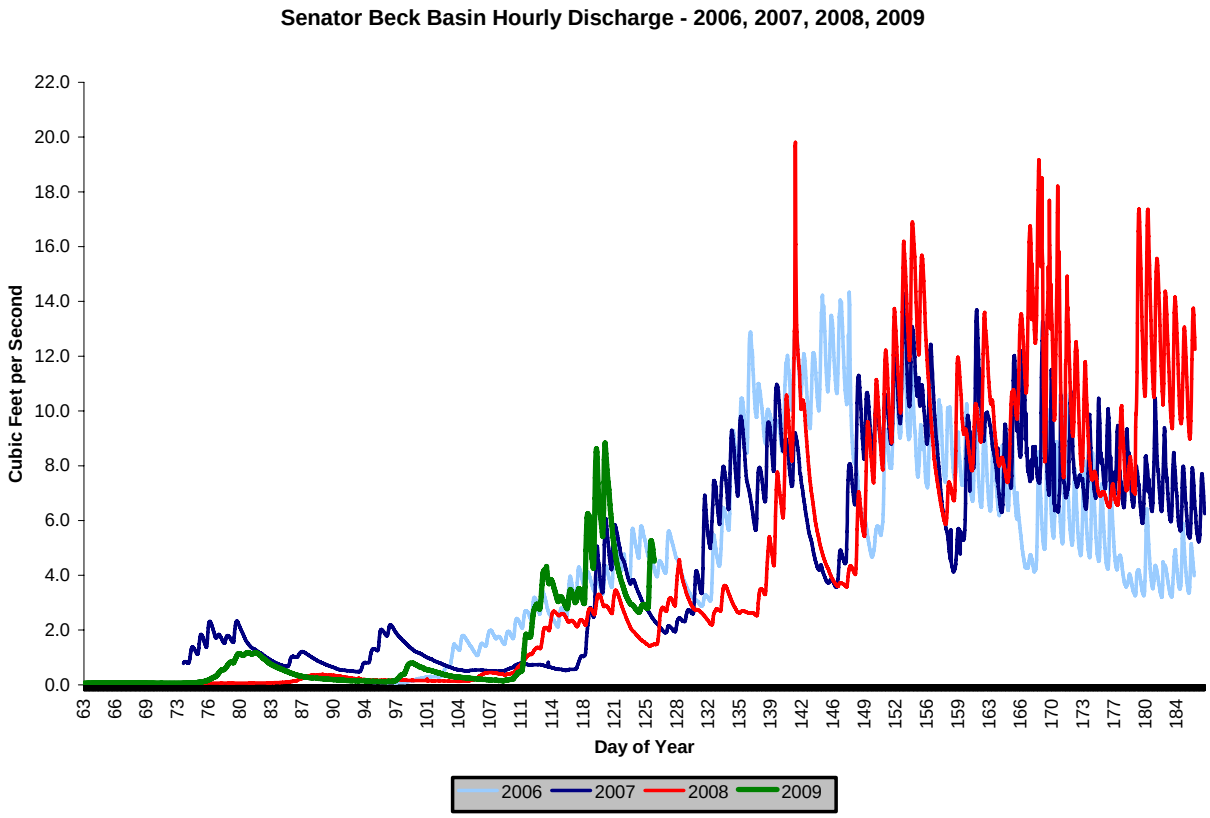


Dust Layers D12-0809 through D6-0809 merging at Swamp Angel Study Plot, Red Mountain Pass, May 6, 2009.

This snowmelt season continues to produce remarkable conditions – twelve dust-on-snow events (and counting), record-breaking snow-on-dust storms in the Front Range, and most recently several days of rain-on-dust here in the western San Juans (at least), with rain up to treeline elevations during the day. During that May 2-5 period we saw only one brief snow flurry here in Silverton, at 9,300'. Our snowpit and gravimetric sampling at the Swamp Angel Study Plot (11,050') on Wednesday, May 6th, found the snowpack thoroughly wetted by the rain water and all of our dust layers in the upper snowpack virtually merging underneath 4" of very wet new snow. No new dust layers have been deposited since D12-0809 on April 25th, but this intensely dirty, merged dust layer just beneath the surface at the Swamp Angel Study Plot will soon be exposed to direct sunlight, perhaps as early as Thursday afternoon. That rapid emergence is already underway on sunnier aspects around Red Mountain Pass, reaching all the way to ridgeline as of this writing, even on some N'ly slopes.

The same May 2-5 weather event produced widely varying amounts of rain and new snow elsewhere in the state as well. Our CSAS and CODOS field assistant, Andrew Temple, flew from Denver to Montrose at mid-day on Tuesday, May 5th, and observed the same abrupt transition from very dirty lower elevation snowcover to cleaner snow at higher elevations (with still-exposed patches of dirty snow on exposed ridges) in the Front, 10-Mile, and Collegiate ranges that was present here in the western San Juans, a reflection of the rain/snow line during the stormy weather.

Yesterday, Wednesday, May 6th was our first sunny day in the Senator Beck Basin Study Area since April 30th (day-of-year 120 on the chart below). Although the recent rainy and cloudy weather was comparatively mild, and cloud cover prevented overnight freezing, streamflows at our Senator Beck Stream Gauge steadily declined from May 1st until Tuesday, May 5th but then rose from almost 3 cfs at midnight Tuesday to 5.3 cfs by midnight on Wednesday.



Dry, westerly flow is now dominating Colorado weather and delivering much higher air temperatures and clear, sunny skies, and the National Weather Service expects this pattern to persist well into next week. Diurnal fluctuations in air temperatures are not providing freeze/thaw relief to the snowpack since, even under clear skies, the overnight low air temperatures above treeline at our Putney Study Plot (12,325') are now remaining well above 0° C. Radiant cooling of the snowpack surface under clear night skies can still produce superficial surface re-freezing, even when air temperatures are above freezing, but those thin, re-frozen crusts very rapidly thaw as soon as the sun rises, especially when they include dust. Remarkably, temperatures in the Arizona desert are expected to exceed 100° F for several days in a row this week and coming weekend.

Should this forecast for a prolonged period of dry, sunny, and very warm weather materialize as the National Weather Service currently anticipates, the albedo of the remaining Colorado mountain snowpack, as a whole, will drop to extremely low values as the very substantial D6, D7, and D8 (augmented by D9-12 in many areas) dust layers fully and rapidly emerge at progressively higher and higher elevations. Direct absorption of solar energy by that unprecedentedly dirty surface, reinforced by higher than average air temperatures, may result in a prolonged and early snowmelt surge comparable to that observed in the spring runoff of 2006 (light blue line in the graph), enhanced that year by the February 15, 2006 dust layer. As long as the current weather prevails, this snowmelt surge will be sustained and may continue accelerating for an extended period, or until a significant change in the weather brings new snow and a return to temporarily higher snow albedo values, and cooler temperatures.

In order to directly observe conditions in your watersheds, the CODOS team will begin our final 2009 tour of our dust-on-snow monitoring sites tomorrow, Friday, May 8th, traveling clockwise around the 1,000 mile circuit this trip. In addition to our usual observations of the dust layers on and within the snowpack, we will collect "full column" snow samples at each site, to estimate the total mass loading of dust deposited there this season, as well as make spectroscopic measurements of the snowpack surface and a snowpack profile at each site, to enable albedo analyses of remote sensing imagery of the Colorado snowpack.

We will provide another full update following that trip.

Chris Landry – Center for Snow and Avalanche Studies (970) 387-5080, clandry@snowstudies.org
Tom Painter – Snow Optics Laboratory, University of Utah (801) 581-8730, painter@geog.utah.edu
Andy Barrett – National Snow and Ice Data Center (303) 735-4148, apbarret@kryos.colorado.edu

M E M O R A N D U M

TO: Colorado Water Conservation Board Members

FROM: Tim Feehan, P.E., Water Supply Planning and Finance
Mike Serlet, P.E., Chief, Water Supply Planning and Finance

DATE: May 8, 2009

SUBJECT: **Director's Report Attachment 18d-10 – May 19-20, 2009 Board Meeting**
Water Supply Planning and Finance Section
Design and Construction Status Report

The CWCB Water Supply Planning and Finance Section have completed 14 projects in FY 08-09. Currently for FY 08-09 we have 34 projects under construction and 12 projects in the design phase, involving over $310,000,000 in loan funds

The attached spreadsheet summarizes project status, including budget, construction schedule, and progress to-date. During this period FY 08-09, 7 projects were completed.

The attached progress report briefly outlines all active project design and construction information and progress to-date.

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 2009.

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 2011.

3. Orphan Wells of Wiggins – Augmentation Project

Authorization: Construction Fund
Water Source: South Platte Basin
Terms of Loan: $1,037,700 @ 2.5% for 30-years
County: Morgan
Project Yield: 6,000 acre-feet
Project Type: Well Augmentation

The Orphan Wells of Wiggins is a new company comprised of 31 separate agricultural operators that own 45 wells which irrigated approximately 4,500 acres of farmland. This project involves the construction of 1 recharge well, 1 augmentation well, various pipeline, and 23 recharge ponds. The project will generate augmentation credits to cover the depletions for the 45 existing wells. The

project is currently 90% complete. The project has changed from its original scope to include additional piping and recharge sites. Additionally, the Company has purchased several Riverside Ditch shares that will improve augmentation efforts. The Company was approved for an increase of $200,000 at the November 2006 Board Meeting to complete the additional recharge sites and for the purchase of the Riverside Ditch shares. These funds have not been distributed. The Company elected to decline presenting 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. A meeting with the Company's Board of Directors has been scheduled in May to determine a plan of action in the selling of these assets.

4. Central Colorado Water Conservancy District - Water Rights Purchase and Gravel Pit Const.

Authorization: Construction Fund
Water Source: South Platte
Terms of Loan: $20,000,000 @2.75% for 30-years
Supply/Augmentation
County: Adams, Weld, Morgan
Project Yield: 12,300 acre-feet
Project Type: Water

The CCWCD, located in Adams, Weld, and Morgan Counties has a service area of 300 square miles. The Sub district has 650 members with 966 junior wells and has operated an augmentation plan for these members since 1973. On December 17, 2001, the Colorado Supreme Court issued a judgment that changed the manner of operation for substitute supply plans in Colorado. The ruling stated that the State Engineer did not have the legal authority to approve substitute supply plans. The Court also stated that substitute supply plans, such as the one operated by CCWCD would either have to file for a decree in Water Court or follow new Rules and Regulations to be issued by the State Engineer. This ruling has required CCWCD to acquire more senior water rights as well as build additional storage to augment out-of-priority diversions. CCWCD is in the process of acquiring additional senior water rights. To-date the District has been approved for 3-separate loans, $15,000,000, $5,000,000, and $20,000,000. The $20,000,000 loan was recently approved at the November 2004 Board Meeting, for a total project loan authorization of $40,000,000. The $15,000,000 and $5,000,000 were substantially completed in June of 2005. Central has completed efforts for the GMS Sub-district and are currently working on improvements to the WAS Sub-district. The WAS project is approximately 90% complete. The District has received a final ruling and were issued a decree. The District's decree is available for review for anyone interested in the final ruling. From the ruling the WAS Sub-district will not operate in 2008, but are hoping to operate at approximately 10% in 2009, contingent upon additional water being secured for post depletions in future years. The District is currently investigating existing wells in the Arapahoe Groundwater Basin to meet their future water needs as required by their decree, which stipulates a 7-year banked or available water source in future years. Furthermore, the District is working towards the completion of the Shores Project (Pond D and E) and is pursuing the issuance of Bonds to cover current and future water and infrastructures purchases that will improve their overall decree. CWCB staff has indicated that it will not grant parity if the District elects to pursue the issuance of a bond.

5. Dolores Water Conservancy District - WETPACK

Authorization: SB 01-157
Water Source: Dolores River
Terms of Loan: $5.4M @3.50% for 30-years
County: Montezuma
Project Yield: 6,000 acre-feet
Project Type: Distribution System

The District's WETPACK (Water for Everyone's Tomorrow Package) proposal is intended to better manage the available resources of the Dolores Project to provide an additional 3,300 acre-feet of water for the fishery below McPhee Dam, increase municipal water supplies, and to provide water of the irrigation of additional lands. This project involves a system of pipelines, pumps, and related facilities to deliver water to the District's Dove Creek Canal system for the irrigation of 4,000 acres of new lands that are presently dry land farmed. Water will be delivered to irrigators in pipes under pressure for sprinkler irrigation only. Harris Water Engineers, of Durango, Colorado, is the planning and design consultant for the project. The project involved the purchase of water shares and the construction of pressurized pipe systems at various locations within the valley. The original cost estimate to complete the project was $8M, which reduced to $6M with a final loan contract of $5.8M. In 2005 the District indicated that full build out of the project was probably not going to occur, given crop production cost versus the cost to supply pressurized water. Therefore in 2005, CWCB approved an amendment to the District's existing loan contract, allowing the $2.6M in completed work to be finalized under a separate contract and the remaining loan amount of $3.2M to be transferred over to a new contract for future work. The $2.6M loan contract that was finalized was collateralized by the original annuity that was setup for the full $5.8M loan contract. Given the current trends in the financial market the District's annuity bond rating was downgraded from AAA to AA. The new rating not only changed the collateral standing with CWCB, but it also reduced the District's annual investment return. Given these changes and the lack of progress with future pipeline projects, the District has elected to payoff the $2.6M loan, to eliminate the collateral concern with CWCB, and do de-authorize the $3.2M loan for future pipeline projects.

6. 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.

7. 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 appropriated by the end of 2009. 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.

8. 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 as historic levels. The overall project is anticipated to be completed by July of 2010.

9. Silt Water Conservancy District – System Rehabilitation

Authorization: Construction Fund
Water Source: Colorado River
Terms of Loan: $1,500,000 @2.75% for 30-years
County: Garfield
Project Yield: 18,000 acre-feet
Project Type: System Rehabilitation

The Silt Water Conservancy District operates a system consisting of reservoirs, canals, pump plants, and irrigation laterals varying in age from 50-100-years old. This project involves the rehabilitation of the Grass Valley Canal siphon, addressing seepage at the Harvey Gap Dam, sediment removal from the spillway chute at Rifle Gap Dam, and replacement of the pumps at the District's main Pump Plant. Soil investigation work has been completed at Harvey Gap Reservoir, with seepage to be monitored by the District over the next few years. The spillway chute at Rifle Gap has been completed. In regard to the siphon, the District has looked at a number of alternatives to address the deteriorating pipe, which included total replacement, lining, and partial repair. Given the difficult nature of the site, the District pursued a full pipe replacement option. Bids were received in September of 2008 to replace the siphon with a 42-inch steel pipe. The low bidder was High Country Pipeline from Penrose, Colorado for $975,000. At the November 2008 Board Meeting the District was approved for an additional $500,000 in loan funds for an amended loan contract amount of $1,500,000. The siphon was completed in April of 2009 and is currently being operated by the

District. The District is currently waiting on the final monitoring plan for Harvey Gap reservoir before the overall system improvement project is complete.

10. Debeque, Town of – Irrigation System Improvement Project

Authorization: Severance Tax Fund
Water Source: Mancos River
Terms of Loan: $427,700@ 2.5% for 30 yrs.
County: Montezuma
Project Yield: 1,781 acre-feet
Project Type: Ditch Rehabilitation

The Town of DeBeque is constructing a new collection structure in the Colorado River and pump/piping system as part of the Irrigation System Improvements Project. The Project is expected to cost $370,000 and provide an improvement to the Town's irrigation water delivery system. The improvements will increase delivery quantity and efficiency and will also reduce the demand on the Town's drinking water supply. The Town is located approximately 30 miles east of Grand Junction and serves 480 residents with sewer and water. The present irrigation system serves approximately half of the Towns residence however the system is often low on pressure and unreliable. In addition to increasing system reliability, this project will help utilize a recently acquired 3.5 cfs surface water right on the Colorado River. The project involves the construction of new diversion/control structure at the river, pump house, and 3,000 feet of pipeline to the town's existing storage tank. The pipeline and storage tank have been completed. The construction of the river diversion was recently completed in November of 2008. The Town has elected not to utilize CWCB loan funds for the project. The project is currently in the process of being de-authorized.

11. 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 May of 2010, which has required a time extension to their loan contract.

12. 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. 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.

13. 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.

14. 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 has negotiated a new contract with the Company to finish the remaining work in the summer of 2009.

The Company has elected to release the current engineering firm and is in the process of negotiating a new contract with Vista Engineer, Grand Junction, Colorado to finish the project. Geer-up-Construction is scheduled to commence construction in July of 2009, conditions permitting.

15. South Side Irrigation Company – South Side Reservoir Rehabilitation

Authorization: Construction Fund
Water Source: South Platte River
Terms of Loan: $360,000 @ 3.10% for 30 yrs.
County: Larimer – Near Loveland
Project Yield: 1,241 acre-feet
Project Type: Reservoir Rehabilitation

The South Side Reservoir Company operates the South Side Reservoir, which provides irrigation water within a 1,590-acre service area. The South Side Reservoir is located approximately 1 mile southwest of the City of Loveland. This $400,000 project involves rehabilitation of the outlet structure and spillway. These improvements will eliminate the current storage restrictions imposed by the State Engineers Office. The spillway construction was awarded to Zak Dirt, Longmont, Colorado, who completed the work in the spring of 2007. Additionally, the Company has completed the lining of the outlet pipe. Therefore, the overall project is complete with an anticipated substantial completion date of June 2009. The Company is currently resolving a performance issue with the lining company, which should be resolved by June of 2009.

16. South Side Irrigation Company – Ditch Rehabilitation

Authorization: Construction Fund
Water Source: South Platte River
Terms of Loan: $72,000 @ 3.10% for 30 yrs.
County: Larimer – Near - Loveland
Project Yield: 1,587 acre-feet
Project Type: Ditch Rehabilitation

This $80,000 project involves the rehabilitation of a number of hydraulic structures and various piping along the South Side Ditch. The overall ditch is approximately 11 miles long and its headgate is located on the South Platte River. The pipe section within the ditch was originally designed by Landmark Engineering, Loveland, Colorado and was bid out in November of 2005. Given the high costs of the bids received, the designed pipe section alternative to control seepage was changed to a liner. A 400-ft section of the ditch lining project was completed in February of 2005. The Company was approved by the Board at the March 2008 meeting for an additional $15,000 to complete the project. The Company completed the remaining 800 section of ditch lining during the fall of 2008. Project substantial completion is scheduled for June of 2009.

17. Aurora, City of – Raw Water Distribution Project

Authorization: Construction Fund
Water Source: South Platte
Terms of Loan: $75,750,000@ 3.75% for 30 yrs.
County: Adams. Arapahoe, & Douglas
Project Yield: 10,000 acre-feet
Project Type: Raw Water System

Aurora (population 300,000) is located in the eastern Denver metropolitan area. The population is expected to exceed 600,000 people by 2050. Aurora's water supply comes from three major river basins within Colorado and is sensitive to dry or drought conditions. During average and above average years, the water supplies are ample to meet the City's water demands. However, during dry conditions, water supplies are limited because the water rights owned by Aurora are relatively junior. The Prairie Waters Project is a key part of Aurora Water's comprehensive water resource

planning. To meet the demands of its existing customers in dry years, and to meet the increasing demands on the system in the future, the goal of the PWP is to supply 10,000 AF/yr by 2010 and 15,000 AF/yr by 2017. Aurora Water will accomplish these goals using reusable effluent from its existing portfolio of decreed reusable water rights, supplemented by lawn irrigation return flows and junior water rights. A key component of the PWP is the Conveyance System which includes three pumping stations and 33-miles of 60-inch diameter pipeline to convey raw water from near Brighton, Colorado to a purification facility near Aurora Reservoir. Total project cost is estimated at $800,000,000. Pipeline installation has commenced and is approximately 70% complete. The City is anticipating drawing all loan funds by the end of 2009.

18. 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.

19. 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.). The Company may be requesting additional loan funds.

20. 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 October of 2009.

21. 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 July 2010.

22. 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. Overall project is 70% complete.

23. WRCC, Inc. – Windsor Dam and Spillway Rehabilitation

Authorization: Severance Tax Fund
Water Source: South Platte River
Terms of Loan: $1,285,730@2.55% for 30 yrs.
County: Larimer
Project Yield: 35,000 acre-feet
Project Type: Reservoir Rehabilitation

WRCC, Inc. (Company) owns and operates six storage reservoirs in Larimer and Weld Counties including Big Windosr Reservoir (Reservoir). As a result of SEO safety requirements, the Reservoir is being rehabilitated with dam crest maintenance and a spillway extension. Currently, the embankment has low spots; therefore, the crest is being raised and leveled. In addition, the spillway discharges across farm land not owned by the Company. For that reason, the spillway is being reconstructed at a new location to divert flow away from private farm land back to the natural drainage. This improvement will better protect the land adjacent to the Reservoir. Construction began in August of 2008 and has been complete. Construction is complete, with project substantial completion scheduled for July of 2009.

24. Center of Colorado Water Conservancy District - Tingle

Authorization: Severance Tax Fund
Water Source: South Platte
Terms of Loan: $454,500@3.5% for 10 yrs.
County: Park
Project Yield: 400 acre-feet
Project Type: New Reservoir

The Center of Colorado Water Conservancy District was approved for a $450,000 loan as its participation cost in the construction of the James Tingle Reservoir. The District has partnered with the Centennial Water & Sanitation District to construct the Reservoir. The total Project cost estimate is $3,565,000 and the District is responsible for $1/7^{th}$ of the cost ($509,000). This loan request is for approximately 90% of the District's obligation. The construction of the Reservoir is necessary to maintain historical return flows to Michigan Creek (in part to meet the CWCB's instream flow rights on Michigan and Tarryall Creeks). The 400AF Reservoir is located adjacent to Michigan Creek in Park County near the town of Jefferson. Of the 400AF Reservoir capacity, 195AF is allocated to the District and 205AF is allocated to Centennial. 165AF of the District's 195AF is return flow obligation and 30AF is excess capacity for use by the District for storage of augmentation water in its service area. Cat Lake Construction, Denver, Colorado was awarded

the project in August of 2008 and has completed the project. The construction has been approved by the SEO and will fill during the spring of 2009. Project substantial completion is tentatively scheduled for July of 2009.

25. Wood Lake Irrigation Company – Angel Lake Dam Repair

Authorization: Severance Tax Fund
Water Source: South Platte
Terms of Loan: $212,706@2.50% for 30 yrs.
County: Weld
Project Yield: 848 acre-feet
Project Type: Reservoir Rehabilitation

The Wood Lake Irrigation Company (WLIC) irrigates about 2,150 acres in northern Colorado, in Weld County north of Greeley. WLIC facilities are located approximately 5 miles west of Eaton, and 2 miles east of Severance on Weld County Road 74, and consist of Wood Lake (3,235 AF), Angel Lake (424 ac-ft with refill), and Meyers Lake (600 ac-ft.), and approximately 5 miles of unlined ditch. WLIC's decreed water right for Angel Lake is for 424.7 acre-feet with a refill, for a total 848 acre-feet. The Angel Lake dam is approx. 2000 feet in length with a crest width of 50 feet (including roadway) and a max. height of about 16 feet. The dam is located on the south and east sides of the reservoir with the outlet located on the south side. Both the Angel Lake outlet conduit and spillway conduits are in poor condition, and need repair/replacement to avoid future SEO storage restriction. The outlet is an 18-inch clay pipe which has reached its usable life span, and the service spillway conduit is an 18-inch clay pipe that is in very poor condition. The proposed project will address deficiencies to meet the current standards and requirements of the SEO with full replacement of the outlet works and service spillway. Work will include breaching the dam embankment and removing the existing outlet works; replacing the existing outlet with 30-inch diameter concrete pipe; control structures including the intake structure with gate, gate tower with control gate, and energy dissipation outlet structure; installation of a toe drain to intercept seepage; construction of a service spillway incorporated into the outlet works to pass the 100-year storm; and placement of riprap and bedding on the upstream face of the dam in the breach area and at the energy dissipation structure. Construction is anticipated to commence in the fall of 2009.

26. Granby Ditch and Reservoir Company – Reservoir Rehabilitation

Authorization: Severance Tax Fund
Water Source: Dirty George Creek
Terms of Loan: $254,520@2.20% for 20 yrs.
County: Delta
Project Yield: 2,0 acre-feet
Project Type: Reservoir Rehabilitation

The Granby Ditch and Reservoir Company owns and operates the Granby Ditch and six reservoirs in the Grand Mesa National Forest. Currently its Reservoir #12 has been restricted by five feet due to a slump on the downstream face of the dam. The rehabilitation involves adding a toe drain collection to help with seepage along the dam and construction a buttress to improve stability. Repairing the dam will allow the Company to regain an additional 259 AF of storage. The Company received permission from the forest service to haul material during the fall of 2008. Bids were received on May 7, 2008 to complete the work, with Stone Fly Earthworks being the apparent low bidder at $103,224. Six bids were received, ranging from $103,224 to $206,125 in cost. The Company is currently evaluating all bids and will award the contract in May, with construction to follow in late June or early July, conditions permitting.

27. 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 is currently evaluating its options on the extent of the improvements needed on the river diversion. Improvements to the river diversion are currently scheduled for the fall of 2009.

28. Headgate 135 Lateral, Inc. – Ditch Rehabilitation - Pipeline

Authorization: Severance Tax Fund
Water Source: Grand Valley Canal
Terms of Loan: $136,600@3.5% for 30 yrs.
County: Mesa
Project Yield: 1,000 acre-feet
Project Type: Pipeline

The Headgate 135 Lateral, Inc. manages the 135 Lateral, which starts at the Grand Valley Irrigation Company's (GVIC) Headgate 135 and delivers irrigation water to the 100 shareholders in the Corporation. Members own shares of GVIC water which is conveyed to properties via the Lateral. The headgate is located east of Grand Junction near the intersection of E Road and 31 Rd. The Project is approximately 4800 feet new 15 to 6 inch PVC pipe that carries approximately 3.0 cfs. NRCS has provided planning and design engineering services. The total project cost is $260,000. The design is scheduled for this summer and construction is scheduled for the fall of 2008. Proposed CWCB funding consists of an initial loan from CWCB for $262,600 that will be reduced by an NRCS grant and several other project participants. M.A. Concrete was awarded the project at a contract price of $185,000. The contractor commenced construction in the November of 2008 and completed the project in February of 2009. The Company is currently waiting on final disbursement of NRCS funds towards the project from which the final CWCB loan will be calculated. Project substantial completion is scheduled for July of 2009.

29. Weldon Valley Ditch Company – Cottonwood Draw Flume Replacement

Authorization: Severance Tax Fund
Water Source: South Platte
Terms of Loan: $136,500@ 2.6% for 30 yrs.
County: Morgan
Project Yield: 36,000 AF
Project Type: Ditch Rehabilitation

The Weldon Valley Ditch Company (Company) owns and operates the Weldon Valley Ditch. It services approximately 6,400 acres ranging from two miles west of Orchard to three miles east of Weldona. The Company's major facilities include a bladder dam diversion at the South Platte River, a flume crossing at the Jackson Lake outlet, a flume crossing at the Cottonwood Draw, and a return flume at the terminus of the ditch. The Cottonwood Draw flume was built in 1965 and has severely deteriorated over time. This project involved the replacement of the existing

Cottonwood Draw Flume with a 54-inch RCP siphon. Ransome Boone Excavating, Fort Morgan, Colorado, was awarded the project and completed the work in May of 2009. Project substantial completion is scheduled for June 2009.

30. Water Supply and Storage Company – Ditch/Reservoir Rehabilitation

Authorization: Construction Fund
Water Source: South Platte River
Terms of Loan: $843,350@3.70% for 30 yrs.
County: Larimer/Weld
Project Yield: 55,000 acre-feet
Project Type: Res./Ditch Rehabilitation

The Company is applying for a loan for two repair projects within its delivery system. The Grand River Ditch Project is located is located in Rocky Mountain National Park near the Continental Divide at 10,200 feet near La Poudre Pass, and the Kluver Reservoir Outlet Project. The River Ditch Project is a collection ditch for transbasin water diverted into La Poudre Pass Creek. The water is diverted again into the Larimer County Canal which delivers about 18,000AF of the Company's 55,500AF annual delivery. In 2003, the Ditch failed and temporary pipes were installed to restore flows quickly. A long term repair was delayed pending a final settlement with the NPS's claim against the Company for damages caused by the breach. Design and construction are scheduled for summer/fall of 2009. The Kluver Reservoir Outlet Project is located in Larimer County between Kluver Lake and Reservoir #4. Travis Road is a County road which passes over the outlet ditch. The retaining walls have begun to fail and the road surface is partially undermined. The Company and the County are jointly funding project repair costs of the repair. The Kluver Project has commenced construction and is approximately 70% complete.

31. 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.

32. Hillrose, Town of – Water Rights Purchase

Authorization: Severance Tax Fund
Water Source: Denver/Hudson Canal
Terms of Loan: $49,995@3.0% for 30 yrs.
County: Morgan
Project Yield: 10 acre-feet
Project Type: Water Rights

The Town of Hillrose is located approximately 15 miles east of Fort Morgan, along SH 6. The current population is about 270 residents and the Town currently serves water 132 taps, with the potential to serve 9 additional taps, if existing annexed lots are developed. Typical water usage averages 40 AF per year. In 2003, with restricted outside watering, the usage was 26 AF. The Town currently has one tributary groundwater well (Permit # 018543-F) to supply all of the water required for the town, but this well and the existing distribution system will be converted to a secondary water system for outdoor irrigation, as the Town is in the process of connecting to Morgan County Quality Water District (MCQWD) for domestic water service. This change is anticipated to be complete in Fall 2007. The well is currently augmented under the Lower Platte and Beaver Canal Company (LP&B) plan of operations. The Town needs additional water in order to protect the well from curtailment under the LP& B plan, and they will continue to be covered under the LP& B plan. The Town will receive 12 AF annually from MCQWD for indoor use. In average years, 28 AF will be needed for outside watering, and 14 AF in drought years (with watering restrictions.) The Town currently owns 1 ½ shares of LP & B. With the proposed loan the Town is purchasing an additional 6 shares of LP & B that will provide a total of 9.675 AF of pumping allocation in dry years, and 19.35 AF in normal years. This will be a significant step toward covering the Town's dry-year (restricted outside watering) augmentation need scenario. Funds have been dispersed and project substantial completion is scheduled for July 2009.

33. 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.

34. East Mancos Highline Ditch Company – Ditch Rehabilitation

Authorization: Severance Tax Fund
Water Source: East Fork Mancos River
Terms of Loan: $904,000@ 2.5% for 30 yrs.
County: Montezuma
Project Yield: 869 AF
Project Type: Ditch Rehabilitation

The East Mancos Highline Ditch Company is comprised of 6 members that manage 5.75 miles of open ditch, with an annual diversion of approximately 870 cfs and a 700 acre service area. This project involves piping the 5.75 miles of ditch with 10-inch to 15-inch PVC Pipe to create a pressurized system for the users. The project is a joint effort with NRCS's Salinity Control Program. NRCS is contributing 75% of the cost towards the design and construction of the project. Construction has commenced with project completion anticipated by May of 2009. The project is approximately 90% complete. The only remaining construction item is the intake structure on the river.

Projects under Design

1. Supply Irrigation Ditch Company – Knoth Reservoir Dam Rehabilitation

Authorization: Severance Tax Fund
Water Source: St. Vrain Creek
Terms of Loan: $904,960@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. It is anticipated that the Company will be requesting additional loan funds at the July or September 2009 Board Meeting. Additional loans funds could be as much as $600,000.

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 is looking at bidding the project out for construction in the summer/fall of 2009.

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 10/12th 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 fall of 2009 and be completed by the summer of 2010. The Company has experienced significant delays in getting contracts in-place to conduct the work with BNSF.

6. 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 loan funds have been disbursed for the purchase of the land to construct the reservoir.

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

Authorization: Severance Tax Fund
Water Source: South Platte River
Terms of Loan: $2,430,060@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 design is expected to be complete in the spring of 2009 with construction occurring during the fall/winter of 2009/2010.

8. 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 is scheduled for the fall of 2009.

9. 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 has chosen to replace the existing board gates with a new radial gate. Construction is expected to occur in the fall of 2009.

10. 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 will take place in late summer/fall 2009.

11. Park Center Water District – Well Rehabilitation

Authorization: Severance Tax Fund
Water Source: Arkansas
Terms of Loan: $1,010,000@3.50% for 30 yrs.
County: Fremont
Project Yield: 400 acre-feet
Project Type: Well Rehabilitation

Park Center Water District (District) is located in Fremont County on the north side of Canon City. The District was formed in 1968 to supply drinking water to area residents. The primary source of this water is a well owned by the Bureau of Land Management (BLM) and leased by the District. The District has leased this well for forty years and has a first right of refusal to renew the lease when the current contract expires in 2021. In the spring of 2008, the 3,216 foot deep well developed a leak. The BLM and District had a contractor inspect the well and it was determined that leaks existed at 10 feet below the surface and at depths as great as 2,400 feet. The District decided the most cost effective solution is to re-drill the well. The District is working with the BLM in securing the necessary lease and permits to construct the well. The District, given their large capital investment in the new well, is working towards owning the well and water rights upon completion of the project.

12. 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 August of 2009 with completion by the end of the year.

Colorado Water Conservation Board
Design and Construction Status Report

May-09

	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 2008-2009											
1	Lower Latham Reservoir Company	Water Rights Purchase - Augmentation	We;ld	$ 670,640	8,472	8,472		95%	n/a	Nov-08	100%
2	Town of Bennet	Well Replacement	Adams	$ 252,500	60 AF	60		100%	Mar-08	Oct-08	100%
3	Orchard Mesa Irrigation District	Stokes Gulch Siphon Replacement	Mesa	$ 545,400	300 LF	58,323		100%	Oct-07	Oct-08	100%
4	Bijou Irrigation Company - C150256	Diversion Structure Rehabilitation	Morgan/Weld	$ 1,851,366	41,790 AF	41,790		100%	Sep-08	Feb-09	100%
5	Loveland Lake and Ditch Company	Parallel Pipe System	Larimer	$ 106,050	2,900 AF	2,900		100%	Feb-08	Sep-08	100%
6	Number Six Ditch Company	Ditch Rehabilitation Project - Pipeline	Montezuma	$ 688,942	29,040 LF	2,591		100%	Apr-06	Nov-08	100%
7	Dolores Water Conservancy District	Dove Creek Secondary Water Supply System	Dolores	$ 883,304	300 AF	300	5	100%	Nov-04	Jan-09	100%
8	Pinewood Springs Water District	Raw Water Supply System	Larimer	$ 2,033,850	5,500 LF	165	40	100%	May-06	May-09	100%
9	Arkansas Groundwater Users Association	Water Rights Purchase, Aug. Pond and Canal Const.	Pueblo	$ 970,448	703 AF	703		100%	Nov-03	Mar-09	100%
10	Tom Hill	McElroy Dam Rehabilittation Project	Grand	$ 854,000	240 AF	240	240	100%	Sep-06	May-09	100%
11	Hope Ditch Company	Well Replacement	Adams	$ 153,000	11.5 AF	12		100%	May-06	Apr-09	100%
12	Republican River Water Conservancy District	North Fork Water - Lease	Yuma/others	$ 4,545,000	N/A	2,500		100%	Dec-08	May-09	100%
13	Yuma County Water Authority PID	North Fork Water Purchase	Yuma	$ 9,595,000	N/A	2,500		100%	Dec-08	May-09	100%
14	San Luis Valley Water Conservancy District	Water Rights Purchase	Alamosa	$ 727,200	n/a	141		n/a	Nov-08	May-09	100%
			Total =	**$ 23,876,700**	**Total =**	**120,697**	**285**				
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	Nov-09	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	Central Colorado Water Conservancy District	Water Rights and Gravel Pit Construction	Adams/Weld	$ 20,000,000	12,300 AF	12,300		100%	Nov-03	May-10	90%
5	Dolores Water Conservancy District	WETPACK	Montezuma	$ 4,700,000	6,000 AF	6,000		100%	Oct-04	Payoff	50%
6	Parker Water and Sanitation District	Rueter-Hess Reservoir Project	Douglas	$ 15,000,000	16,200 AF	16,200	16,200	100%	Jul-04	Nov-09	75%
7	Mancos Water Conservancy District	Inlet and Outlet Canal Rehabilitation	Montezuma	$ 5,486,531	15,840 LF	9,000		60%	Jan-04	Jan-14	50%
8	Upper Arkansas Water Conservancy District	Reservoir Rehabilitation	Chaffe/Custer	$ 3,520,000	500 AF	500	200	100%	Jun-05	Jul-10	95%
9	Silt Water Conservancy District	System Rehabilitation Project	Garfield	$ 1,019,700	18,000 AF	18,000		100%	Nov-05	Sep-09	95%
10	Debeque, Town of	Raw Water Distribution System	Mesa	$ 252,500	3,000 LF	710		100%	Mar-07	De-author.	100%
11	Union Ditch Company	Well Augmentation Project	Weld	$ 312,595	206 AF	206		75%	Sep-06	May-10	75%
12	Bijou Irrigation District	Empire Reservoir Rehabilitation - Dam Rehab.	Morgan/Weld	$ 2,408,850	19,900 AF	19,900	2,682	100%	Nov-07	Jan-10	75%
13	Lower Poudre Augmentation Company	Reservoir and Water Rights Purchase	Larimer/Weld	$ 3,104,053	657 AF	657		100%	Oct-07	Nov-09	65%
14	Bull Creek Reservoir Company	Reservoir Rehabilitation Project	Mesa	$ 1,212,000	900AF	900	900	100%	Jul-08	Nov-09	75%
15	South Side Reservoir Company	South Side Reservoir Rehabilitation Project	Larimer	$ 360,000	1,241 AF	1,241	241	100%	Dec-06	Jun-09	95%
16	South Side Irrigation Company	Ditch Rehabilitation Project	Larimer	$ 72,000	1,200 LF	1,587		100%	Dec-04	Jun-09	99%
17	Aurora, City of	Raw Water Distribution System	Adams/Douglas	$ 75,750,000	33 miles	10,000		100%	Jan-08	Oct-10	75%
18	Overland Ditch and Reservoir Company	Overland Reservoir Rehabilitation	Delta	$ 1,130,000	6,200 AF	17,000	971	95%	May-08	Nov-10	5%
19	Montezuma Valley Irrigation Company	May Lateral Pipeline	Montezuma	$ 5,292,400	5 Miles	128,000		100%	Nov-07	Nov-09	95%
20	Platte Valley Irrigation Company	Equalizer Reservoir Project	Weld	$ 2,388,650	431 AF	52,401	431	100%	Sep-08	May-10	5%
21	Greeley Irrigation Company	Greeley Canal No. 3 Rehabilitation	Wled	$ 2,233,867	18,000 AF	18,000		90%	Feb-08	Jul-10	85%
22	Henrylyn Irrigation District	Horse Creek & Prospect Reservoir Rehabilitation	Weld	$ 2,184,327	13,850 AF	13,850	3,000	100%	Nov-08	Oct-09	85%
23	WRCC, Inc.	Windsor Dam and Spillway Rehabilitation	Larimer	$ 1,285,730	35,000 AF	35,000		100%	Jun-08	Jul-09	99%
24	Center of Colorado Water Conservancy District	Tingle Reservoir Construction	Park	$ 454,500	400 AF	400	400	100%	Nov-08	Jul-09	99%
25	Wood Lake Mutual Water and Irrigation Company	Angel Lake Outlet Repair	Weld	$ 212,706	424 AF	848	100	90%	Sep-08	Dec-09	5%
26	Granby Ditch and Reservoir Company	Granby No. 12 Dam Rehabilitation Project	Delta	$ 254,520	838 AF	2,000	250	65%	Jun-09	Nov-09	5%
27	Farmers Pawnee Canal Company	Ditch Flow Control Structures	Logan	$ 227,250	27,260	27,260		50%	Oct-08	Feb-10	50%
28	Headgate 135 Lateral, Inc.	Ditch Rehabilitation - Pipeline	Mesa	$ 262,200	4,800 LF	1,000		100%	Oct-08	Jul-09	95%
29	Weldon Valley Ditch Company	Cottonwood Draw Flume Replacement	Yuma	$ 136,500	300 L.F.	36,000		100%	Sep-08	Jun-09	95%
30	Water Supply and Storage Company	Ditch and Outlet Rehabilitation	Larimer/Weld	$ 843,500	100 L.F.	55,000		95%	May-09	May-10	30%
31	Republican River Water Conservation District	Compact Compliance Pipeline	NE. Colo	$ 60,600,000	15,000 AF	15,000		90%	Nov-08	Nov-09	5%
32	Hillrose - Town of	Water Rights Purchase/Well Augmentation	Morgan	$ 49,995	10 AF	10		n/a	Apr-09	Jul-09	95%
33	Ogilvy Augmentation Company	Well Augmentation	Weld	$ 1,010,808	60 AF	60		60%	Dec-08	Feb-10	45%
34	East Mancos Highline Ditch Company	Ditch Rehabilitation Project - Pipeline	Montezuma	$ 904,000	30,360 LF	869		100%	Nov-07	Jul-09	99%
			Total =	**$ 221,106,882**	**Total =**	**511,399**	**30,075**				
Projects Under Design											
1	Supply Irrigating Ditch Company	Knoth Reservoir Dam Rehabilitation	Boulder	$ 904,960	4,800 AF	4,800	400	90%	Oct-09	May-10	More $
2	Owl Creek Reservoir Company	Owl Creek Reservoir Rehabilitation	Weld	$ 1,125,000	1200 AF	1,200	1,200	95%	Oct-09	May-10	0%
3	Southeastern CO Water Conserv. District	Arkansas Valley Conduit	Crowley	$ 60,600,000	138 Miles	6,555		20%	May-10	May-12	0%
4	Penrose Water District	Water Rights Purchase and Pipeline Installation	Fremont	$ 8,844,570	30,624 LF	339		35%	Oct-09	Sep-10	On-hold
5	Seven Lakes Reservoir Company	Railroad Crossing	Weld	$ 772,842	7,796 AF	7,796		95%	Oct-09	May-10	0%
6	Pagosa Area Water and Sanitation District	Dry Gulch Reservoir Land Acquisition	Archuleta	$ 11,217,060	35,000 AF	35,000		5%	Nov-08	Mar-20	0%
7	Boulder White Rock Ditch and Reservoir Company	Panama Reservoir Outlet Rehabilitation	Boulder/Weld	$ 2,430,000	300 L.F.	12,000	2,600	75%	Oct-09	May-10	0%
8	New Salida Ditch Company	Dtich Rehabilitation	Chaffee	$ 365,620	300 L.F.	7,000		95%	Oct-09	Feb-10	0%
9	Duel and Snyder Improvement Company	Diversion Structure Rehabilitation	Morgan	$ 90,900	4,590 AF	4,590		95%	Oct-09	Feb-10	0%
10	South Metro Water Supply Authority	Raw Water Delivery - Capacity Purchase	Adams/Denver	$ 5,090,400	10,750 AF	10,750		100%	Oct-09	Dec-09	0%
11	Park Center Water District	Well Rehabilitation	Fremont	$ 1,010,000	3,200 L.F.	400		95%	May-09	Dec-09	0%
12	Louden Irrigating Canal and Reservoir Company, Inc.	Rist Benson Reservoir Rehabilitation	Larimer	$ 263,210	491 AF	2,000	150	30%	Sep-09	Feb-10	0%
			Total =	**$ 92,714,562**	**Total =**	**92,430**	**4,350**				

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