

# COLORADO WATER CONSERVATION BOARD

## Department of Natural Resources

John W. Hickenlooper, Governor  
Mike King, DNR Executive Director  
Jennifer L. Gimbel, CWCB Director

---

# SENATE BILL 11-XXXX

# THE 2011 WATER PROJECTS BILL

---

## Background

The General Assembly annually authorizes water project grants and loans from the Construction Fund and loans from the Perpetual Base Account of the State Severance Tax Trust Fund.

The CWCB Statewide Water Supply Initiative has determined that 200K to 600K acre-feet of additional M&I water will be needed by water providers by 2050.

The **Construction Fund** was created in 1971 to provide low-interest loans for water projects. The fund has financed up to 90% of engineering and construction costs for more than 400 locally sponsored water projects. The fund may also provide non-reimbursable investments.

The Construction Fund is a revolving loan fund that allows the CWCB to be self-supporting and operate without money from the General Fund. Revenues come from interest earned on outstanding loans and on the fund's cash balance in the state treasury, and royalty distributions from federal mineral leases (FML).

The Construction Fund's ability to support CWCB's operations and programmatic activities was significantly impacted by a \$10 million general fund transfer in FY08/09. Any future transfers could severely impact CWCB overall operations, non-reimbursable program, and its ability to provide loan funds.

The **Severance Tax Trust Fund Perpetual Base Account** was established by the General Assembly in 1997. Principal funding comes from the taxes paid by the producers of gas, oil, coal and other minerals.

This fund is also used for water supply project loans. The CWCB's ability to provide low interest loans for water projects was significantly impacted by a \$110 million General Fund transfer in FY08/09, FY09/10, and FY 10/11. Any future transfers could severely impact the overall CWCB water loan program.

FY 10/11, loan rates for both funds are:

- 2.75% for agricultural loans; to,
- 4.0% to 5.25% for municipal loans; to,
- 6.25% for commercial loans.

These rates are adjusted each fiscal year by the CWCB.

The CWCB is adjusting weekly to manage its available cash flow for new loans, non-reimbursable projects, and other projects at its bi-monthly Board meetings



## 2011 Water Projects Bill Highlights

*Provides over \$2.9 million for watershed protection, flood control programs, satellite monitoring of stream gauge systems, and other projects.*

For more information, contact  
Tim Feehan at CWCB  
(303) 866-3441 x3211.

CWCB  
1313 Sherman Street, Room 721,  
Denver, CO, 80203  
Phone: (303) 866-3441  
FAX: (303) 866-4474  
Internet: [www.cwcb.state.co.us](http://www.cwcb.state.co.us)

## Recommended Non-reimbursable Investments

The CWCB accepts applications for non-reimbursable projects from the Construction Fund until August first of each year. Applications for non-reimbursable projects are accepted for:

1. Projects or studies of statewide impact or importance.
2. Feasibility studies and projects designed to address statewide, region-wide, or basin-wide issues. The Board examines whether such studies will result in new loans.

<b>Division of Water Resources (Sec.1)</b> Satellite Monitoring	Appropriates funds to install, maintain, and operate satellite monitored stream gauges for water rights administration as statutorily authorized.	Statewide	\$300,000
<b>CWCB (Sec.2)</b> Continuation of the Weather Modification Program	Assist water conservation and conservancy districts with the development of cloud seeding programs to provide benefits to recreation, streams, and reservoirs through snowpack enhancement. This Program leverages \$200,000 in local funds annually.	Statewide	\$175,000
<b>Local Communities (Sec.3)</b> Continuation of the Floodplain Map Modernization Program	Assist communities to revise and improve floodplain studies and maps. Provides the required non-federal matching dollars that are further leveraged by local cost share and in-kind services. This Program leverages four million dollars in local and federal funds annually.	Statewide	\$500,000
<b>CWCB (Sec. 4)</b> Continuation of the Watershed Restoration Program	Continue to provide planning and engineering studies, including implementation measures, to address technical needs for watershed restoration and flood mitigation projects throughout the State. In FY08/09 this program leveraged one million of local funds.	Statewide	\$250,000
<b>CWCB (Sec. 5)</b> Restoration of Flood Response Fund Balance	Refresh fund created to respond to flood events by documentation, forecasting, post flood mapping and flood mitigation.	Statewide	\$300,000
<b>CWCB (Sec. 6)</b> Water Conservation Data Tracking Project	To create a comprehensive database tool (s) to track demands, to include identification of conservation potential, and the identification of costs and benefits of water conservation, allowing water use and water conservation datasets and forecasting models to be preserved over time	Statewide	\$200,000
<b>CWCB (Sec. 7)</b> Arkansas River Decision Support System (ArkDSS)	To begin the implementation of the ArkDSS as identified in the ArkDSS Feasibility Study. Initial implementation of the ArkDSS will include irrigated acreage mapping, parcel delineation, surface groundwater data collection and additional modeling	Statewide	\$500,000
<b>CWCB (Sec. 8)</b> Restoration of Litigation Fund Cash Balance	Restore funds to the CWCB Litigation Fund to assist in addressing legal issue associate compact compliance or any other litigation activities created under section 37-60-121, Colorado Revised Statutes.	Statewide	\$700,000
<b>CWCB (Sec. 9)</b> Purchase of Colorado's Allotment of A-LP Project Water	Allows for the appropriations of \$12 million towards the purchase of all or a portion of the State's A-LP project water. This would be the second \$12 million installment of the \$36 million authorized under HB 10-1250.	Statewide	\$12,000,000
		<b>Total</b>	<b>14,925,000</b>

## **Notes**

Provisions included in the Statutes allow the CWCB to approve loans up to \$10 million without legislative authorization. A small project loan report detailing the 11 new loans and 2 loan increases made in 2010, valued at over \$20 million, will be presented to the House and Senate Agriculture Committees. Additional copies of the report are available upon request or at [www.cwcb.state.co.us](http://www.cwcb.state.co.us)

In FY10/11 the CWCB will continue to monitor its cash available for new loans at its bi-monthly Board meetings.

SENATE BILL 11-XXXX (Draft)

BY \_\_\_\_\_

AN ACT

Concerning the funding of Colorado water conservation board projects and making appropriations in connection therewith.

Be it enacted by the General Assembly of the State of Colorado:

SECTION 1. Continuation of the Satellite monitoring system maintenance – appropriation. (1) In addition to any other appropriation, there is hereby appropriated, out of any moneys in the Colorado water conservation board construction fund not otherwise appropriated, to the department of natural resources, for allocation to the division of water resources, for the fiscal year beginning July 1, 2011, the sum of three hundred thousand dollars (\$300,000), or so much thereof as may be necessary, for renovation of existing gauging stations, replacement of outdated collection platforms and upgrading of transmission components of the satellite monitoring system established and operated pursuant to section 37-80-102 (10), Colorado Revised Statutes, stream gauge flood hardening projects and data collection efforts related to flood forecasting and warning.

(2) The moneys appropriated in subsection (1) of this section shall remain available for the designated purposes until they are fully expended.

SECTION 2. Continuation of the weather modification program – appropriation. (1) In addition to any other appropriation, there is hereby appropriated, out of any moneys in the Colorado water conservation board construction fund not otherwise appropriated, to the department of natural resources, for allocation to the Colorado water conservation board, for the fiscal year beginning July 1, 2011, the sum of one hundred seventy five thousand dollars (\$175,000), or so much thereof as may be necessary, for the board to continue to assist water conservation districts, water conservancy districts, and other water providers with the development of cloud seeding programs that provide benefits to recreation, streams, and reservoirs through snowpack enhancement.

(2) The moneys appropriated in subsection (1) of this section shall remain available for the designated purposes until they are fully expended.

SECTION 3. Continuation of the Colorado floodplain map modernization program – appropriation. (1) In addition to any other appropriation, there is hereby appropriated, out of any moneys in the Colorado water conservation board construction fund not otherwise appropriated, to the department of natural resources, for allocation to the Colorado water conservation board, for the fiscal year beginning July 1, 2011, the sum of five hundred thousand dollars (\$500,000), or so much thereof as may be necessary in order to restore the unencumbered balance to five hundred thousand dollars (\$500,000), for the board to continue to assist with the preparation of revised and

1 improved floodplain studies and maps for communities throughout Colorado and participate in  
2 federally sponsored floodplain map modernization activities.

3  
4 (2) The moneys appropriated in subsection (1) of this section shall remain available for the  
5 designated purposes until the project is completed.

6  
7 **SECTION 4. Continuation of the watershed restoration program – appropriation.** (1)

8 In addition to any other appropriation, there is hereby appropriated, out of any moneys in the  
9 Colorado water conservation board construction fund not otherwise appropriated, to the department  
10 of natural resources, for allocation to the Colorado water conservation board, for the fiscal year  
11 beginning July 1, 2011, the sum of two hundred fifty thousand dollars (\$250,000), or so much  
12 thereof as may be necessary, for the board to continue to provide planning and engineering studies,  
13 including implementation measures, to address technical needs for watershed restoration and flood  
14 mitigation projects throughout the state.

15  
16 (2) The moneys appropriated in subsection (1) of this section shall remain available for the  
17 designated purposes until they are fully expended.

18  
19 **SECTION 5. Restoration of the flood response fund balance.** (1) The state treasurer

20 shall transfer a total of three hundred thousand dollars (\$300,000), or so much thereof as may be  
21 necessary, from the unreserved cash in the Colorado water conservation board construction fund to  
22 the flood response fund created in section 37-60-123.2, Colorado Revised Statutes, in order to  
23 restore the unencumbered balance in the flood response fund to three hundred thousand dollars  
24 (\$300,000).

25  
26 (2) The moneys appropriated in subsection (1) of this section shall remain available for the  
27 designated purposes until they are fully expended.

28  
29 **SECTION 6. Water conservation data tracking project – appropriation.** (1) In

30 addition to any other appropriation, there is hereby appropriated, out of any moneys in the  
31 Colorado water conservation board construction fund not otherwise appropriated, to the department  
32 of natural resources, for allocation to the Colorado water conservation board, for the fiscal year  
33 beginning July 1, 2011, the sum of two hundred thousand dollars (\$200,000), or so much thereof as  
34 may be necessary, for the board to create a comprehensive database tool(s) to track demands, to  
35 include identification of conservation potential, and the identification of costs and benefits of water  
36 conservation, allowing water use and water conservation datasets and forecasting models to be  
37 preserved over time.

38  
39 (2) The moneys appropriated in subsection (1) of this section shall remain available for the  
40 designated purposes until they are fully expended.

41  
42 **SECTION 7. Arkansas river decision support system - appropriation.** (1) In addition to

43 any other appropriation, there is hereby appropriated, out of any moneys in the Colorado water  
44 conservation board construction fund not otherwise appropriated, to the department of natural  
45 resources, for allocation to the Colorado water conservation board, for the fiscal year beginning  
46 July 1, 2011, the sum of five hundred thousand dollars (\$500,000), or so much thereof as may be  
47 necessary, for the board to begin implementation of the Arkansas River Decision Support System

1 (ArkDSS) as identified in the ArkDSS Feasibility Study, which is part of the overall Colorado  
2 Decision Support System. Initial implementation of the ArkDSS will include irrigated acreage  
3 mapping, parcel delineation, surface and groundwater data collection, and additional modeling.  
4

5 (2) The moneys appropriated in subsection (1) of this section shall remain available for the  
6 designated purposes until they are fully expended.  
7

8 **SECTION 8. Restoration of litigation fund cash balance.** (1) The state treasurer shall  
9 transfer a total of seven hundred thousand dollars (\$700,000) or so much thereof as may be  
10 necessary, from the unreserved cash in the Colorado water conservation board construction fund to  
11 the litigation fund created in section 37-60-121 (2.5), Colorado Revised Statutes.  
12

13 (2) The moneys appropriated in subsection (1) of this section shall remain available for the  
14 designated purposes until they are fully expended.  
15

16 **SECTION 9. Purchase of Colorado's allotment of Animas-La Plata project water -**  
17 **appropriation.** (1) In addition to any other appropriation, there is hereby appropriated, out of any  
18 moneys in the Colorado water conservation board construction fund not otherwise appropriated, to  
19 the department of natural resources, for allocation to the Colorado water conservation board, for the  
20 fiscal year beginning July 1, 2011, the sum of twelve million dollars (\$12,000,000), or so much  
21 thereof as may be necessary, for the purchase of all or a portion of Colorado's allotment of  
22 Animas-La Plata project water, pursuant to section 39-29-109 (2) (a) (VIII) (B), Colorado Revised  
23 Statutes. This would be the second \$12,000,000 installment of the \$36,000,000 authorized under  
24 House Bill 10-1250 for the purchase of all or a portion of Colorado's allotment of Animas-La Plata  
25 project water.  
26

27 (2) The moneys appropriated in subsection (1) of this section shall remain available for the  
28 designated purposes until they are fully expended or until June 30, 2015, whichever comes first.  
29

30 **SECTION 10. Safety clause.** The general assembly hereby finds, determines, and declares  
31 that this act is necessary for the immediate preservation of the public peace, health, and safety.

## Water Project Construction Program – Project Data

**Applicant:** Division of Water Resources and Colorado Water Conservation Board

**Project Name:** Satellite-linked Monitoring System and Stream Gage Refurbishment program

**Project Type:** DWR Stream Gaging

**County:** Statewide    **Drainage Basin:** Statewide Drainage Basins

**Water Source:** N/A

**Total Study Cost:** \$300,000

**Funding Sources:** CWCB

**CWCB Investment:** \$300,000    **Interest Rate:** N/A

**Term:** N/A

This project entails the continued, long-term operational viability of the State Satellite Linked Monitoring System and Stream Gage Refurbishment Program, which is administered by the Division of Water Resources (DWR). This program encompasses over 500 satellite stream gaging stations which require continued replacement of outdated data collection platforms, upgrades to transmission components, and refurbishment of the associated infrastructure. In addition, many existing gaging stations need to be modified to provide critical stream flow data for flood warning and low flow monitoring. Changes in technology, which will ultimately

increase reliability and real time data transmission rates, will require the DWR to continue to upgrade the system in the future. The costs associated with the continued refurbishment and operational viability of the system is approximately \$300,000 per year.



Crystal River DWR/CWCB Satellite Gage

## Water Project Construction Program - Project Data Non-Reimbursable Investment

**Grantee:** Colorado Water Conservation Board

**County:** Statewide

**Project Name:** Weather Modification - Water User Cost Share Assistance

**Project Type:** Grants for operations, grants and technical assistance to optimize wintertime cloud seeding programs

**Drainage Basin:** San Juan, Gunnison, Colorado

**Water Source:** Colorado River Basin

**Total Project Cost:** \$650,000 (Annual Total Avg.)

**Funding Source:** CWCB Const. Fund

**Type of Grantee:** State to Local Governments

**CWCB Non-Reimbursable Inv.:** \$175,000

### SUMMARY

The CWCB has authority to permit and regulate weather modification operations in Colorado (C.R.S 36-20-101 through 36-20-127). The CWCB also has authorities to aide in the water development. In section 36-20-108(4)(b) it states that “The director may represent the State and assist counties, municipalities, and public agencies in contracting with commercial operators for the performance of weather modification or cloud seeding operations.” This request is to cost-share in the development of wintertime cloud seeding programs. Statutes also state there is a State role in technological advancements. The Grand Mesa, Gunnison Basin, Upper Roaring Fork River Basin, main-stem of the Colorado River and Southwest River Basins all benefit from cloud seeding for additional snowpack. Water augmentation agreements between the CWCB, the State of New Mexico, and three Colorado River Basin Water Users were developed in 2007 to support Colorado’s cloud seeding programs. Similar agreements are in place in Utah and Wyoming. To help with technological advancements the CWCB has been partnering with the Desert Research Institute in Reno, Nevada. DRI went to remote operated (cellular communication) generators in 1975 in order to reliably release the silver iodide seeding material near clouds. Research has shown that the 700Mili bar level or near the 10,000 foot elevation level is preferable to site cloud seeding generators to get in the low level steering winds and reliably get silver iodide into winter storm systems. At right is Colorado’s first remote operated generator at the Grand Mesa program. In the picture the old manual operated generator is tan (right), a propane tank (middle), and Colorado’s first remote operated generator (green) are shown. This picture illustrates a thirty five year advancement in technology. Staff believes equipment like this will help build confidence in our programs and their effectiveness. This has become an issue of statewide and regional significance.



Approximately \$3.3 million has been spent on wintertime cloud seeding in the last five years with 60% of the funding from ski areas, local water users, and local governments. The other 20% is from the CWCB and the other 20% is from the Southern Nevada Water Authority, Central Arizona Water Conservation District, California Six Agency Committee, and the New Mexico Interstate Stream Commission. Each year the out-of-state agencies are very interested in the CWCB and local expenditures before they sign agreements and give donations to the CWCB to dispense to local project sponsors of cloud seeding programs.

Recent accomplishments with funding from these five states are: new specialized weather stations to guide decisions for the Grand Mesa, at Purgatory Ski Area, Winter Park Ski area, and Telluride Ski Area. New remote operated cloud seeding generators at: Cedaredge above the Water Treatment plant, on Mancos Mountain in the San Juan Mountains, and west and north of Winter Park Ski Area. Funding also extends the length of time of operations into February. A recent CWCB sponsored study by HDR Engineering managed by USBR showed that February is a crucial month for cloud seeding in Colorado. Finally, the CWCB has spearheaded an initiative to use a Liquid Propane Dispenser operationally on the Grand Mesa. A USBR randomized experiment in 2004 on the Wasatch Plateau in Utah showed that L.P. Dispensers are effective for cloud seeding and work at warmer temperatures than traditional ice nuclei generators that use silver iodide. If current climate change modeling predictions come to fruition this type of technology may be useful at ski areas and in southwestern Colorado where the forecasted warmer temperatures can shrink the window of opportunity for traditional cloud seeding. At right is the L.P. dispenser on the Grand Mesa operational since 2007.





**Water Project Construction Program – Project Data  
Non-Reimbursable Investment**

**Applicant:** Colorado Water Conservation Board

**County:** Statewide

**Project Name:** Colorado Floodplain Map Modernization Program

**Project Type:** Matching Funds for Federal Grants

**Drainage Basin:** All River Basins in Colorado

**Water Source:** N/A

**Total Project Cost (Annual):** \$1,900,000

**Funding Source:** CWCB Const. Fund

**Type of Grantee:** State Government

**CWCB Non-Reimbursable Inv.:** \$500,000 (up to)

Colorado has received over \$8.4 million in federal grant dollars for floodplain mapping activities as part of the floodplain Map Modernization Program (Program) initiated by FEMA in 2003. The FEMA funds are being matched by CWCB and local cost-share dollars to implement the map update work to create new digital countywide maps. The initial Program funds authorized in the 2003 and all subsequent Construction Fund Bills have provided the required non-federal matching dollars (80/20 cost share program). The State funds are further leveraged by local cost share dollars and in-kind services from many communities thus far. The total funding amounts have been instrumental in keeping Colorado as a lead state within FEMA Region 8 and will continue to benefit Colorado communities in the future. It is expected that significant FEMA funding will continue as long as the Program exists. Program deliverables will become part of the Flood DSS system to increase data capture and enhance Colorado’s decision support tools.

The Program will eventually impact the entire state, and the objective is to develop updated countywide floodplain maps using current base map information within a digital environment. The use of GIS technology will be employed for all new countywide studies for ease of distribution, updating and viewing. The table below summarizes funding provided by the CWCB and FEMA/Local governments for CWCB managed projects (in progress or completed).

<u>COUNTY</u>	<u>CWCB Funds</u>	<u>FEMA/Local Funds</u>	<u>COUNTY</u>	<u>CWCB Funds</u>	<u>FEMA/Local Funds</u>
Archuleta	\$71,000	\$228,760	Mesa	\$33,960	\$435,780
Boulder	\$17,807	\$524,709	Montrose	\$60,376	\$241,503
Clear Creek	\$2,950	\$158,605	Montezuma	\$53,000	\$452,735
Chaffee	\$44,000	\$399,290	Morgan	\$25,000	\$270,700
Delta	\$21,630	\$277,763	Park	\$18,800	\$165,200
El Paso	\$75,635	\$1,332,030	Pitkin	\$20,772	\$466,388
Elbert	\$141,548	\$301,982	Prowers	\$76,605	\$691,024
Fremont	\$23,294	\$146,240	Pueblo	\$71,768	\$945,902
Garfield	\$29,912	\$325,000	Rio Grande	\$58,300	\$152,810
Gunnison	\$79,250	\$272,422	Summit	\$21,098	\$189,876
La Plata	\$74,200	\$391,910	Teller	\$23,100	\$207,900
			Weld	\$112,419	\$658,530

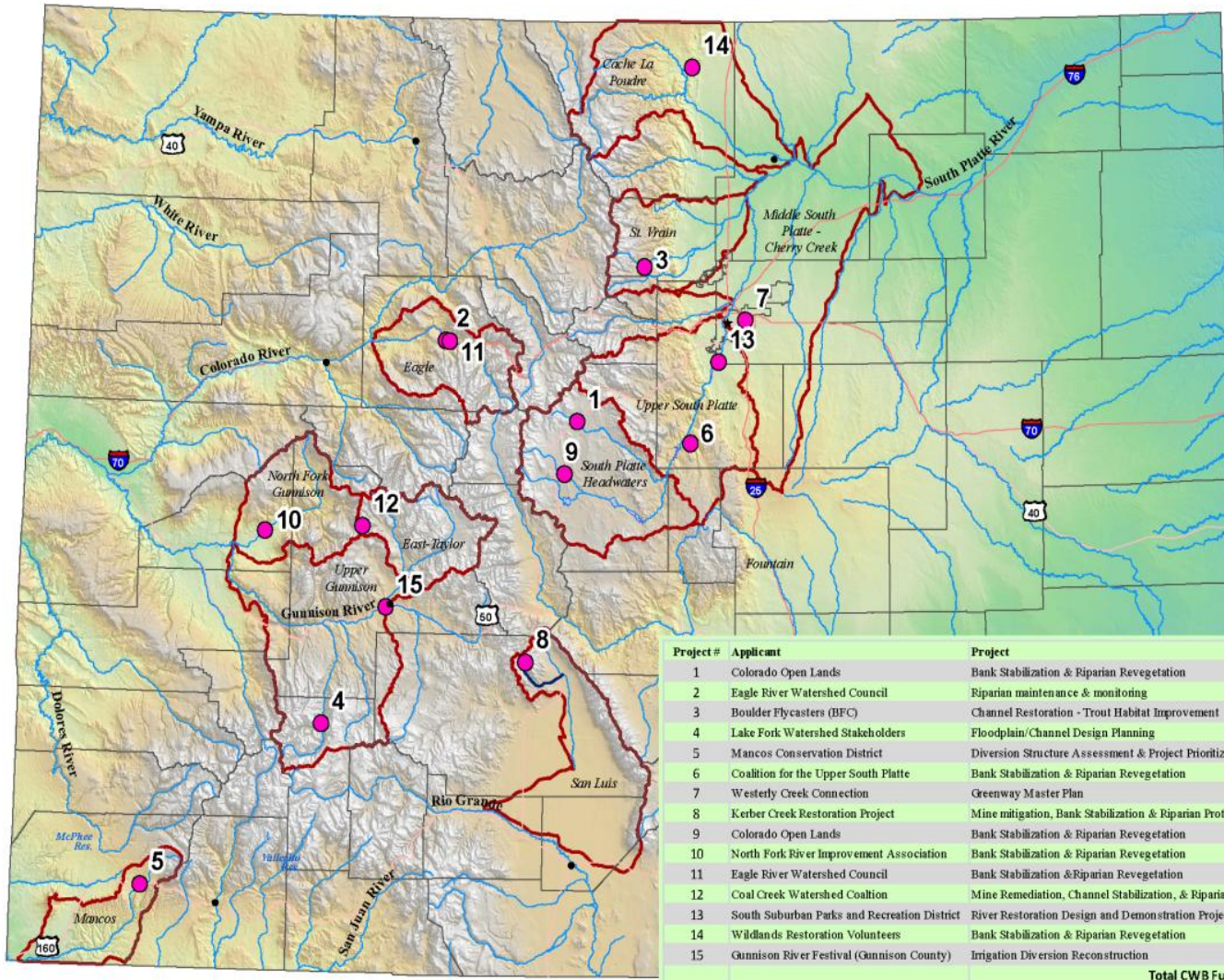
**Water Project Construction Program - Project Data  
Non-Reimbursable Investment**

**Grantee:** Colorado Water Conservation Board      **County:** Statewide  
**Project Name:** Colorado Watershed Restoration Program  
**Project Type:** Watershed Protection and Flood Mitigation  
**Drainage Basin:** All River Basins in Colorado      **Water Source:** N/A  
**Total Project Cost:** up to 50% cost share      **Funding Source:** CWCB Const. Fund  
**Type of Grantee:** State Government  
**CWCB Non-Reimbursable Inv.:** \$250,000

**SUMMARY**

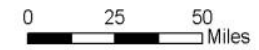
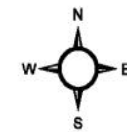
The Program objective is to provide funding for watershed restoration studies and projects. Special consideration is given to projects that reduce flood hazards, protect infrastructure, and increase benefits for water supply. Past projects successfully completed with aid from the Construction Fund include channel stabilization and restoration on Middle Boulder Creek, Tarryall Creek, and Squirrel Creek in the Rio Grande Basin. Program funding has also been used in conjunction with funding from the Water Quality Control Division to develop a Measureable Results Program (MRP). Studies and projects resulting from this program can have far reaching benefits for water supply (e.g. SWSI), flood protection, enhancement of aesthetic and environmental quality, recreation, and increased economic benefit. The CWCB has not had access to a regular and reliable source of funding for this Program in past years. Instead, special allocations on an annual basis from Severance Tax and Construction Fund investments have provided support for the Program. The Program has funded 15 projects since the first grant cycle in January 2009. Total funding exceeds \$560,000. The projects have leveraged \$5 for every \$1 contributed by the Program. Ten of the fifteen projects funded have been mapped with focus areas identified in the Non-Consumptive Needs Assessment. The Program is intended for statewide benefit. The map below displays projects funded since 2009.

# Colorado Watershed Restoration Program Grant Projects 2009 - 2010



Watershed Protection & Flood Mitigation Section

HUC-8 Sub-basin Boundary



Project #	Applicant	Project	Amount	Location	Year
1	Colorado Open Lands	Bank Stabilization & Riparian Revegetation	\$28,520	Tarryall Creek	2009
2	Eagle River Watershed Council	Riparian maintenance & monitoring	\$50,000	Eagle River-Edwards	2009
3	Boulder Flycasters (BFC)	Channel Restoration - Trout Habitat Improvement	\$30,000	Middle Boulder Creek	2009
4	Lake Fork Watershed Stakeholders	Floodplain/Channel Design Planning	\$95,000	Lake Fork Gunnison River	2009
5	Mancos Conservation District	Diversion Structure Assessment & Project Prioritization	\$30,500	Mancos River	2009
6	Coalition for the Upper South Platte	Bank Stabilization & Riparian Revegetation	\$50,000	Horse Creek Watershed	2009
7	Westerly Creek Connection	Greenway Master Plan	\$37,500	Westerly Creek	2009
8	Kerber Creek Restoration Project	Mine mitigation, Bank Stabilization & Riparian Protection	\$12,000	Kerber Creek	2009
9	Colorado Open Lands	Bank Stabilization & Riparian Revegetation	\$18,480	Fountain Creek	2010
10	North Fork River Improvement Association	Bank Stabilization & Riparian Revegetation	\$38,000	N. F. Gunnison River, Paonia	2010
11	Eagle River Watershed Council	Bank Stabilization & Riparian Revegetation	\$25,000	Eagle River - Edwards	2010
12	Coal Creek Watershed Coalition	Mine Remediation, Channel Stabilization, & Riparian Re-veg	\$19,150	Coal Creek, Crested Butte	2010
13	South Suburban Parks and Recreation District	River Restoration Design and Demonstration Projects	\$46,118	South Platte Below Chatfield	2010
14	Wildlands Restoration Volunteers	Bank Stabilization & Riparian Revegetation	\$57,331	Campbell Creek	2010
15	Gunnison River Festival (Gunnison County)	Irrigation Diversion Reconstruction	\$25,000	Gunnison River Park	2010
<b>Total CWB Funding</b>			<b>\$562,599</b>		

**Water Project Construction Program - Project Data**  
**Non-Reimbursable Investment**

**Grantee:** Colorado Water Conservation Board      **County:** Statewide

**Project Name:** Colorado Flood Response Program Fund

**Project Type:** Program Funds for post event floodplain mapping, flood forecasting, aerial photography, flood mitigation and flood documentation

**Drainage Basin:** All River Basins in Colorado

**Water Source:** N/A

**Total Project Cost:** \$300,000

**Funding Source:** CWCB Const. Fund

**Type of Grantee:** State Government

**Median Household income:** N/A

**CWCB Non-Reimbursable Inv.:** \$300,000 (refresh up to) **Interest Rate:** N/A    **Term:** N/A

The CWCB and General Assembly authorized \$150,000 for the Flood Response Program Fund (Fund) in the 2001 Construction Fund Bill. The Fund was created to give the CWCB the ability to quickly respond to events and have program funds for: flood documentation, flood forecasting and outlooks, post event floodplain mapping, aerial photography, and flood mitigation. This amount was increased in the 2007 Construction Fund Bill to \$300,000 to reflect the increased cost of performing existing functions plus the added services. Previous separate accounts for the added services were rolled into the Fund for the sake of efficiency and accountability.

The current request is to once again refresh the Fund up to \$300,000 for FY 11/12 for: 1) preparation of flood documentation reports for actual events, 2) contract with consulting firms for flood forecasting and weather outlooks during the spring/summer flood season, plus a web-based daily flood threat bulletin, 3) ongoing work and increased demand for evaluating and producing 100-year flood and debris flow hazards in areas affected by natural disasters, 4) assist in flood mitigation activities in communities where flood loss reduction is needed, and 5) develop on-call services for digital/aerial imagery and mapping for post-flood documentation/flood hazard identification. Staff recently added capabilities to enhance the NWS products and to provide regional flood outlooks. There is a growing need to re-evaluate flood hydrology, hydraulics, and levees for use in floodplain studies across as well. **There have not been large flood disasters recently, so Staff has responsibly used the Fund to keep funds in reserve as needed and recognizes that the fully authorized amount would be used during major flood years.**

Recent Fund expenditures included tasks relating to flood research, flood forecasting, flood documentation, operating expenses for flood response activities, landslide related flood monitoring, flood mitigation and preparedness activities, and design for emergency flood preparations. The total expenditures since FY06 are \$700,000. The remaining funds were not used in order to leave funds in reserve in the event that a major flood took place, which didn't happen during this time.

**Water Project Construction Program – Project Data  
Non-Reimbursable Investment**

**Applicant:** Colorado Water Conservation Board

**County:** Statewide

**Project Name:** Water Conservation Data Tracking Infrastructure Project

**Project Type:** Mixed- Study, improved use of data, and development of tool and resources

**Drainage Basin:** All River Basins in Colorado

**Water Source:** N/A

**Total Project Cost (Annual):** \$200,000

**Funding Source:** CWCB Const. Fund

**Type of Grantee:** State Government

**CWCB Non-Reimbursable Inv.:**

To better understand Colorado’s future water supply needs and options, more local information must be incorporated into demand forecasts. At present time, a lack of coordinated data gathering and lack of knowledge of what types of data that need to be collected are obstacles to better water supply and demand planning. Two areas that fit within this data gap are economic evaluations of water conservation measures and savings as well as the potential of water conservation in water supply planning.

More information regarding the economics of water conservation, particularly as compared to other alternatives for developing new water supplies, would assist local, regional, and statewide planning efforts. Many economic evaluations of conservation neglect to include all of the potential benefits and costs associated with reducing future demand.

In order to fully integrate water conservation measures and savings into overall water resource planning, the costs and benefits of water conservation need to be evaluated. Investigating current costs of water conservation measures, the full range of benefits of reduced demands and how water conservation savings and costs operate over time will be crucial to future successful water conservation planning efforts.

The water conservation strategies and potential savings, outlined in the 2010 SWSI Update, can be further refined and adapted as new information and water use data becomes available. The BNDSS provides the framework for housing such data and making it easily accessible for future planning initiatives. However, the type of and the form of the data is critical to refining and improving the State’s understanding of the role of urban conservation in meeting Colorado’s future water supplies. This project is necessary for the creation of expanded and comprehensive database tools to track demands, evaluate supply needs, and identify conservation potential. Water use and water conservation datasets and forecasting models should be preserved over time so that future SWSI efforts need not “re-invent the wheel” once again. Additionally, Colorado’s new water data reporting rule (HB1051) presents a unique opportunity to improve on future planning efforts. As a pre-cursor to the full implementation of HB1051, new datasets, evaluation and forecasting tools can help define the data collection process. Through these efforts, a better understanding of Colorado’s water use and supply needs can be established.

**Water Project Construction Program – Project Data  
Non-Reimbursable Investment**

**Applicant:** Andy Moore for CWCB

**Project Name:** Arkansas River Decision Support System

**Project Type:** Water Resources Planning Study

**County:** Numerous                   **Drainage Basin:** Arkansas River

**Water Source:** Arkansas River and tributaries

**Total Study Cost:** ~\$5 million to \$10 million, requesting \$500,000 with this application

**Funding Sources:** CWCB Construction Fund

**Type of Applicant:** Grant

**Median Household Income:** N/A

**CWCB Investment:** Currently \$200,000. In SB 07-122 the General Assembly provided \$200,000 to conduct the feasibility study, which is underway and will be completed in February 2011.

**Past use of the Funds:** No existing funds have been expended. The feasibility study will identify a proposed alternative with costs for an ArkDSS. Based on needs identified early in the feasibility study, as well on experience with previous DSSs developed in Colorado, the total cost is anticipated to be from \$5 million to \$10 million.

**Current Request:** This request is for funding to begin the ArkDSS, with emphasis on data collection and other activities that will support further development. **For FY 2011/2012, an appropriation of \$500,000 is being sought from the Construction Fund to begin implementation of ArkDSS.**

