



## **ANNUAL REPORT 2004**

**Conservation and Drought Planning Section  
Colorado Water Conservation Board**

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**2004 Annual Report**

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## OVERVIEW

The Office of Water Conservation (OWC) was created by House Bill 91-1154, which was passed in 1991 as collaborative effort among members of the water, agricultural and environmental communities to address water efficiency needs of the state. The bill established the OWC within the Colorado Water Conservation Board (CWCB) to oversee a program which would act as a clearing house for water use efficiency information, provide technical assistance to and work with water providers, coordinate planning and implementation of state agency water use efficiency plans, administrative financial assistance from the CWCB Construction Fund in the amount of \$1,000,000 for demonstration and pilot projects concerning water use efficiency, and provide information to the legislature on the efficient use of the state's water supplies.

Water use efficiency can bring about permanent water use reductions, reduce demands during emergencies and help manage peak water use demands

The OWC witnessed change in 2004 from the passage of House Bill 04-1365, which established new duties for the section and significant improvements to statewide water conservation planning efforts. In addition, HB 1365 changed the name of the section to the Office of Water Conservation and Drought Planning (OWCDP).

### **Duties of the OWCDP include:**

- Acting as a repository for water use efficiency information.
- Providing technical and financial assistance to municipal and other urban water providers and state agencies concerning water conservation and drought planning.
- Coordinate planning in the implementation of water use efficiency plans for state agencies.
- Administration of financial assistance for water use efficiency programs.
- Participate with the Colorado Water Availability Task Force.

### **Highlights of the program include:**

- Establishment of an information clearinghouse.
- Administration of grants for municipal water efficiency demonstration projects (\$500,000 through HB 91-1154).
- Manage grant program to increase the quantity and quality of statewide water conservation and drought planning efforts.
- Completion of a first-of-its-kind statewide study to assess Colorado's ability to withstand long term droughts.
- Development of water use efficiency plans for construction and renovation of state facilities.
- Technical assistance to water providers and state agencies for initiation of water conservation measures.
- Administration of agricultural/multipurpose grant program (\$500,000)
- Water audit of Governor's mansion.

- Developed numerous public information and education efforts regarding efficient use of water resources.
- Developed numerous partnerships concerning water use efficiency and information.

## **LEGISLATION**

### **HB 04-1365**

Perhaps the most substantial change to the Conservation and Drought Planning Section occurred as a result of HB 04-1365. This was the most comprehensive change to Colorado's water conservation statutes since their inception in 1991. Section staff played a pivotal role in creating, amending, and completing HB 1365.

These statutory changes reflect the country's water conservation evolution in both technology and acceptance by its citizenry. HB 1365 also helps to fill the gap of those who said that the 1991 Water Conservation Act lacked "teeth" in terms of real water savings, in that entities who will producing new water conservation plans will be held to a higher goal oriented standard than previously under the old Water Conservation Act.

Lastly, HB 1365 renamed the Office of Water Conservation (OWC) to the Office of Water Conservation and Drought Planning (OWCDP).

### Key Provision of HB 04-1365

- Requires covered entities who are seeking state financing to develop water conservation plans using new criteria as indicated in HB 1365. Contains a two-year phase-in period to allow entities ample time to develop plans.
- Will establish water savings goals and provide a better indication to the overall effectiveness of the entities water conservation plan. The new planning provisions reflect common practices that are being used in other western states.
- Adds industrial and agricultural water users to the list of water users in which the Office can provide information and technical assistance relating to water conservation and drought.
- Allows the Office to review previously submitted water conservation plans to make comparisons with new water conservation guidelines and offer technical or financial assistance to improve deficiencies.
- Establishes drought mitigation activities within the Office.
- Requires the Office to work with local governments and other water entities to develop drought mitigation plans.
- Requires the Office to act as a statewide information repository for water conservation and drought information.

- Requires the Office to disseminate water conservation and drought mitigation information to water providers and the public.
- Amends the current public review and approval provision to allow more flexibility at the local level.
- Requires the CWCB to develop guidelines describing how plans will be reviewed, approved, and how grant funds will be distributed.
- Contains an emergency provision to allow a covered entity that does not have an approved water conservation plan to receive emergency financial assistance from the state.

### **HB 1365 Guidelines**

A key provision of HB 1365 requires the CWCB to develop guidelines to “*for the office to review water conservation plans... define the method for submitting plans...[and] how the office will prioritize the distribution of moneys, and the interest rate surcharge provided*” to those entities that do not have a water conservation plan but need immediate funding from the CWCB.

To accomplish this in the most efficient and effective way, OWCDP staff entered into a contract with Geomatrix Consultants, Inc., to assist the section to develop the guidelines and create a model conservation plan. The contract was completed on December 22, 2004. A final report and the completed guidelines will appear in the 2005 Annual Report.

## **SWSI IMPLEMENTATION**

The CWCB, as the agency leading the Statewide Water Supply Initiative (SWSI), plays a critical role in establishing water policy in Colorado. SWSI is a comprehensive study performed by the CWCB to analyze how Colorado will meet its future water needs. It is stated that the overall objective of SWSI is to help Colorado maintain an adequate water supply for its citizens and the environment.

Water conservation was identified during the SWSI process as an important tool to be utilized to meet future water demands. The OWCDP will play a significant role in achieving statewide water savings by continuing with the development and participation of SWSI.

### **SWSI Goals for the Section include the following:**

- Develop an active database of water providers who will utilize conservation as one of their main tools in meeting their 2030 water goals.
- Perform outreach to discover what needs are being met and what needs are not being met.

- Create a means to track progress of water conservation services provided by the State and goals achieved by water entities.
- Analyze the effectiveness and makeup of the section and make recommendations on any needed changes to better reflect the needs of our customers.

## **KEY PROJECTS**

### **Drought and Water Supply Assessment**

The CWCB began the Drought and Water Supply Assessment (DWSA) project in 2001 with the idea that state water planners and managers have reason to improve their understanding of drought and drought impacts on the Colorado water user community, given changing public perceptions, competing uses for water, and the impacts of the current drought. For these reasons the CWCB undertook this project. The project was developed to plan, develop and implement an assessment, the Drought & Water Supply Assessment, to engage Colorado water users to:

- Determine how prepared Colorado has been for drought, and
- Identify limitations, and related measures, to better prepare us for future droughts.

The CWCB will utilize this information to reinforce its statewide advocacy focus and role on water issues. Through technical, policy and financial support, the CWCB can aide local water users in planning for and mitigating the affects and impacts of drought. As facilitators of water issues at the state and regional level, the CWCB is also in position to help the water community answer the difficult water rights, water use and water supply questions that will drive future water management and planning in all business sectors and aspects of life.

### **Key Provisions:**

- Current Water Use and Carry-over Storage
- Limitations to Water Supply
- Drought Planning and Impacts
- Concerns in Future Water Supply Planning
- Structural and Non-Structural Project Needs

### **Needs Identification**

- Structural Needs (storage, infrastructure, rehabilitation, etc.)
- Non-Structural Needs (technical assistance, education, outreach, etc.)
- Funding Needs
- Support in/Types of Cooperative Agreements
- Drought and Conservation Planning Assistance

## **Outcomes**

- Need for Planning Models (Drought and Conservation)
- Justification for Funding of Technical Assistance and Support
- Structural and Non-Structural Project Identification
- Communication Process
- State Role Identification

To complete the DWSA, CWCB staff selected Bouvette Consulting to perform the survey and compile the survey data into a useable and distributable form.

The “survey” consisted of a 384 water related questions that were given to approximately 2000 Colorado water users. The answers captured the opinions of the majority of water users who ultimately represent the majority of Colorado’s water rights.

The opinion data collection focused on determining how prepared Colorado is for drought and identifying drought mitigation measures that may help the State and its citizenry and businesses to be better prepared for future droughts.

The intent of the assessment was to identify overall water user sentiment statewide, as well as by major river basin and water use type. Individual water use (defined by the amount diverted or stored) and storage data was collected from 55 to 67% survey participants (the percentage varies dependant on the water year as some entities did not have data available for all years); however, this information was used to determine the statistical significance of overall and regional responses, and to characterize the diversity of municipal and agricultural respondents. Individual water user responses will not be made available as a result of the Assessment.

Second, the opinion data represent Colorado’s water users and as such does not necessarily represent voter sentiment or the opinions of the public at large. Nonetheless, the opinions reflected in the assessment results are indicative of how water users and providers throughout the State of Colorado perceive and understand key water resources issues at this time.

The DWSA was completed in April 2004 and was made available to the public via the CWCB website. In addition, every survey participant received the final report on compact disc. **Status:** Project completed.

## **DWSA Basin Fact Sheets**

To better define the DWSA results and to make the information more user friendly CWCB prepared “Basin Fact Sheets.” The fact sheets give an executive summary of the most important results on a basin-by-basin basis. The fact sheets are available on the CWCB website. **Status:** Project completed.

### **Technical Assistance to Covered Entities**

The CWCB Board directed the OWCDP staff to work closer with Colorado's water entities to improve water conservation goals statewide. Under this project, it is the CWCB's goal to:

- Increase the number of covered entities with the CWCB-approved water conservation plans,
- Improve the nature and breadth of water conservation practices at the local level, and
- Increase the technical assistance the CWCB provides to local entities for water conservation planning.

The Board and the Colorado General Assembly authorized the use of \$350,000 from Construction Fund monies to assist the CWCB staff with this mission.

During 2003, the OWCDP staff utilized \$24,500 from the fund to perform perfunctory research as to the current status of water conservation on a statewide basis. As a result of this analysis, the need to update the Colorado Revised Statutes became clear. The organization and momentum of this effort at the end of 2003 led to the creation and passage of HB 04-1365. HB 1365 is considered the beginning step to completing the Technical Assistance to Covered Entities project.

**Status:** Project is ongoing.

### **Satellite Water Reuse System**

The OWCDP Section partnered with the Centennial Water and Sanitation District to assist in the financing of this project which involves developing a working decentralized satellite treatment system for reuse of non-tributary groundwater in Highlands Ranch (or other locations with similar or transmountain diversion water) that may be consumed by a public water utility or special district for use in a municipal setting. The demonstration project will be planned, constructed and operated to:

- Determine **technical feasibility** of constructing and operating the system in this and other similar locations in the Colorado Front Range. Technical feasibility will be assessed with regard to implementability (e.g., zoning and building code limitations, water rights issues, equipment availability, constructability, permitting, etc.) and reliability (e.g., regularity of system upsets, freezing issues, plant sensitivities, etc.). The project will also review system wide impacts of implementation (e.g., impact on sewer collection system flows, treatment plant operations, return flows, etc.).
- Determine **cost effectiveness** of the reuse system – capital cost and operational cost versus water savings, replacement water cost, convenience factors, etc.
- Determine achievable and sustainable **water savings** for the reuse system looking at reduced water use.

- Determine **scalability** of the reuse system as it relates to smaller and/or larger applications.

A grant award of \$50,000 from the SB 92-87 Agricultural and Multipurpose Water Use Efficiency demonstration projects fund was used to finance a share of this project.

**Status:** Project will continue into 2005.

### **HB 04-1365 Guidelines**

A key provision of HB 1365 requires the CWCB to develop guidelines to “*for the office to review water conservation plans... define the method for submitting plans...[and] how the office will prioritize the distribution of moneys, and the interest rate surcharge provided*” to those entities that do not have a water conservation plan but need immediate funding from the CWCB.

To accomplish this in the most efficient and effective way, OWCDP staff entered into a contract with Geomatrix Consultants, Inc., to assist the section to develop the guidelines and create a model conservation plan. The contract was completed on December 22, 2004. A final report and the completed guidelines will appear in the 2005 Annual Report. **Status:** Ongoing

### **Citizens Guide to Water Conservation**

The Section participated with the Colorado Foundation for Water Education (CFWE) to assist the Foundation to create the “Citizens Guide to Water Conservation.” The Guide is intended to provide sensible and non-biased information to the general public. The CWCB provided funding to publish and produce copies of the guide. **Status:** Project completed.

## **2004 APPROVED WATER CONSERVATION PLANS**

Under the requirements of the Water Conservation Act of 1991 (and continued through HB 04-1365) the Office of Water Conservation and Drought Planning is required to review and approve water conservation plans from “covered entities”-- those entities who supply over 2000 acre feet of water annually to their customers.

In 2004, the OWCDP staff reviewed and approved 2 water conservation plans. To date, OWCDP has on file a total of 63 approved water conservation plans.

The following entities were approved in 2004:

- 1) Town of Breckenridge;
- 2) Pagosa Springs Water and Sanitation District;

## **DROUGHT TASK FORCE**

The Section Chief currently sits as Chair of the Colorado Water Availability Task Force (WATF), commonly known at the “Drought Task Force.”

The WATF was created in 1981 under the Colorado Drought Mitigation and Response Plan (Plan) and in response to a particularly significant multi-year drought in Colorado. The main goals of both the Plan and the WATF are to Monitor, Assess, Respond, and Mitigate the effects of drought.

In response to the increasing effects of a multi-year drought, Governor Bill Owens activated the drought Plan and requested the WATF actively begin monitoring, assessing, and responding to current conditions. Although conditions have improved in most basins since 2002, at the end of calendar year 2004 Colorado remains in a statewide drought that most experts believe started at the end of 1999.

During 2004 the section staff organized eight meetings of the WATF to monitor drought conditions, make recommendations, and keep the public informed of the current status of the drought.

## **GRANTS**

Until the passage of HB 04-1365 and the creation of a new grant source, the Office of Water Conservation depended on two sources of funds to be distributed as grants for conservation based demonstration projects.

In 1991, as part of **HB 91-1154**, authorized the Office of Water Conservation to receive **\$500,000** (Construction Fund) for water efficiency pilot demonstration projects. The projects were to show the benefits of water efficiency. The grants, which were limited to \$50,000, were available to any Colorado public agency. The balance of this fund on December 31, 2004 was \$1,106.

**SB 92-87** authorized another **\$500,000** (Construction Fund), for Agricultural and Multipurpose Water Use Efficiency pilot demonstration projects. A maximum of \$100,000 (as a 50% match) was to be awarded for any individual project. The purpose for the grant program was twofold. One purpose is to provide seed money for agricultural or multipurpose water system managers and users throughout Colorado to demonstrate water use efficiency measures. The second purpose was to stimulate the development of creative and innovative approaches to water use efficiency in areas that will enhance management approaches in achieving savings in operational costs. The balance of this fund on December 31, 2004 was \$1,380.

**HB 04-1365** authorized the Office of Water Conservation and Drought Planning to request to use monies from the **unobligated balance of the five percent share of the operational account of the severance tax trust fund** for the purposes of assisting covered entities to develop water conservation plans and/or drought mitigation plans.

During 2004, the Office of Water Conservation and Drought Planning awarded the following grants:

Recipient	Amount	Purpose	Source
Center for ReSource Conservation	\$5,000	Create and implement irrigation audit demonstration project in Boulder County.	SB 92-87
Centennial Water & Sanitation District	\$50,000	Design and test a satellite water reuse system.	SB 92-87
CWCB OWCDP	\$1000	Purchase conservation education material for use by local governments.	91-1154

## **NEW PARTNERSHIPS**

During 2004, the staff of the OWCDP established or improved the relationships with the following organizations:

The Colorado Water Wise Council (CWWC)  
The Colorado Water Utility Council (CWUC)  
The Colorado Foundation for Water Education (CFWE)  
The National Oceanic Atmospheric Agency (NOAA)

## **FUTURE**

### **New FTE**

The Office of Water Conservation and Drought Planning will fill its 0.5 FTE position in January, 2005. The position will be responsible for assisting the section to track grant funds in relation to HB 04-1365.

### **SWSI**

The Section will continue to work with the Board, CWCB staff, Legislators, local entities, and the public to implement and continue SWSI.

### **Workshops**

In order to provide more information to the public concerning HB 04-1365 and water conservation in general, the Section is planning to hold a series of water conservation workshops in 2005. The Section will more than likely partner with the Colorado Water Wise Council to perform these workshops.

### **Increase Public Outreach and Education**

One of the main goals for the Section for 2005 is to increase its public outreach and education components. The Section will work with the Colorado Foundation for Water Education, the Colorado Water Wise Council, U.S. Bureau of Reclamation, and the American Water Works Association to help the section achieve its goals. The Section seeks to raise the awareness of water conservation, drought planning, and CWCB programs.