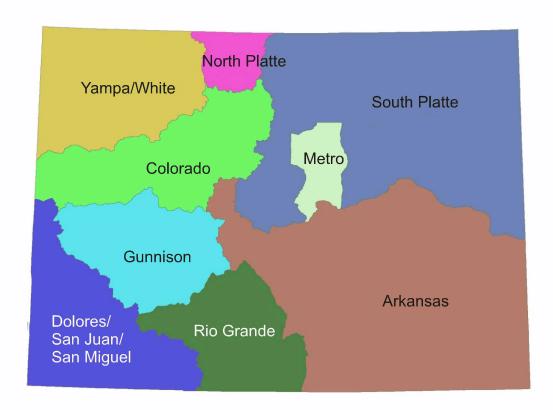


# Interbasin Compact Committee Annual Report



To the House of Representatives Committee on Agriculture, Livestock, and Natural Resources and the Senate Committee on Agriculture, Natural Resources, and Energy

October 31, 2007





## Interbasin Compact Committee Annual Report

#### Foreword

#### Section 1 Newsletters

This section contains the following documents that were developed since last year's legislative report. They include:

- Interbasin Compact Process Fact Sheet—This fact sheet provides an overview of the Interbasin Compact Process and describes the roles of the Basin Roundtables, Interbasin Compact Committee, and the Colorado Water Conservation Board.
- Interbasin Compact Process 1st Quarter 2007 Newsletter—This is the first quarterly newsletter
  created with the purpose of providing an update on activities occurring related to the Interbasin
  Compact Process. It describes Basin Roundtable activities with their Task Orders and the Water
  Supply Reserve Account applications that were initially submitted to the Colorado Water Conservation
  Board.
- Interbasin Compact Process 2nd Quarter 2007 Newsletter—The second quarterly newsletter
  focused on the Consumptive Work Group, the Nonconsumptive Work Group, and the Water Availability
  Study of the Colorado River and Tributaries. It also provides a status update on the Water Supply
  Reserve Account Applications and the HB1400 Task Orders.
- Interbasin Compact Process 3rd Quarter 2007 Newsletter—The third quarterly newsletter describes
  the Interbasin Compact Process activities undertaken throughout the year with an emphasis on the
  public education and outreach efforts completed by the Interbasin Compact Committee. It also
  provides a status update on the Consumptive Work Group, Nonconsumptive Work Group, Water
  Supply Reserve Account Applications, and HB1400 Task Orders.

#### Section 2 IBCC and BRT Members

This section contains a list of the Interbasin Compact Committee members and Basin Roundtable members.

#### Section 3 Basin Roundtable Major Water Issues

This section summarizes the major water issues for each of the Basin Roundtables. This information is also available on the IBCC website—www.ibcc.state.co.us

#### Section 4 Consumptive Work Group Members

This section contains a list of those individuals participating in the Consumptive Work Group

#### Section 5 Non-consumptive Needs Assessment Work Group

This section contains a list of those individuals participating in the Nonconsumptive Work Group



## STATE OF COLORADO

# **Department of Natural Resources Colorado Water Conservation Board**

1313 Sherman Street, Room 721 Denver, Colorado 80203



Bill Ritter, Jr. Governor

Harris D. Sherman Executive Director Department of Natural Resources

#### **FOREWORD**

October 31, 2007

Fellow Coloradans:

In 2005, the Colorado General Assembly created a new collaborative process for addressing our state's water needs when it passed HB 05-1177, The *Colorado Water for the 21st Century Act*. This process, embodied by the Interstate Basin Compact Committee (IBCC) and nine Basin Roundtables (BRTs), marked the continuation of the state's water planning efforts that began with the Statewide Water Supply Initiative (SWSI)—the most comprehensive statewide analysis of water supply and demand ever undertaken by Colorado. The intent of the Interbasin Compact Process is to take the knowledge gained through SWSI and, through a grassroots approach, foster inter-basin and intra-basin dialogue and agreements that lead to a more secure water future for Colorado.

This report documents the progress and milestones achieved by this process in 2007 and fulfills the requirement of C.R.S. 37-75-105(4) to report to the House of Representatives Committee on Agriculture, Livestock, and Natural Resources and the Senate Committee on Agriculture, Natural Resources, and Energy on the status of compact negotiations by October 31st of each year.

The initial focus of the IBCC and BRTs was to lay the foundation for the process. This included identifying members and creating bylaws and ground rules upon which to operate, and it included the fundamental task of using the information gained in SWSI to educate each BRT and IBCC member on the challenges and needs of their basins.

The strong foundation that was established in the early stages of this process enabled us to make progress on some important substantive issues in 2007. During the past year, the Interbasin Compact Process focused on four key areas:

- 1. Developing a deeper and more comprehensive understanding of the water needs in each basin.
- 2. Utilizing the funds made available by SB06-179 that created the Water Supply Reserve Account to fund water activities that help each basin address its water needs.
- 3. Fostering greater dialogue and understanding between basins.
- 4. Engaging the public more actively in this important dialogue on our water future.

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Following is a brief outline of activities in those four areas. Detailed summaries of each of these activities are provided in the attached newsletters and additional sections of this report.

#### **Basin-Wide Water Needs Assessments**

Developing a deeper understanding of the water needs of each basin is a complex task. To do this, the Interbasin Compact Process created a multi-pronged framework designed to answer four questions.

- 1. What are each basin's consumptive water needs (municipal, industrial, and agricultural)?
- 2. What are each basin's non-consumptive water needs (environmental and recreational)?
- 3. What are our available water supplies (surface and groundwater) and how much water is unappropriated?
- 4. What projects or methods are available to meet our identified water needs?

Several efforts are underway to help each BRT answer these questions. Each basin is using the information learned through SWSI as the starting point and core of their needs assessment. They are adding to this information by incorporating other appropriate sources of information. For example the Colorado Roundtable is using the UPCO Study and the Arkansas Roundtable is using the documents supporting the Cooperative Flow Agreement.

BRTs also have the opportunity to identify additional information needs and submit "task orders" to our technical assistance team. For example, the Metro and South Platte BRTs are examining the impact of reusable water not being available to downstream users. The Yampa and Colorado BRTs are taking a closer look at the water needs associated with energy development. The Gunnison BRT is refining the water demand estimates for their smaller water providers and rural communities. Many of the BRTs have requested assistance with their nonconsumptive needs assessments. An outline and status of each BRT's task orders can be found in the attached newsletters.

These efforts of the BRTs are being supplemented by several additional activities.

- Consumptive Workgroup: A group of BRT members and water leaders from across the state is examining our consumptive needs. The goal of this group is to assist the BRTs in their consumptive use needs assessments through the development of a common technical platform and water supply alternatives on a statewide basis.
- Nonconsumptive Workgroup: Similarly, a non-consumptive work group is helping the BRTs with their non-consumptive needs assessments. With the assistance of this group, each BRT is identifying important environmental and recreational attributes within their basin and pursuing ways to meet their nonconsumptive needs.
- Colorado River Supply Availability Study: The Colorado Water Conservation Board (CWCB) in consultation and cooperation with the BRTs is studying how much water is available in the Colorado River system.

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When complete, these processes will come together and give us a much greater understanding of the water needs, challenges, and opportunities facing our state. They will enable better planning and decisionmaking at the local and state level and help ensure a secure water future for all Coloradans.

#### Water Supply Reserve Account

As each BRT goes through this process, they are identifying projects that can help meet their water needs, but for which additional financial support is needed. That is the purpose of the Water Supply Reserve Account (WSRA). Through state severance tax dollars, the General Assembly is making available grants and loans to implement water activities. Requests for funds from the WSRA must be approved by the local BRTs and are then forwarded to the CWCB for evaluation and approval.

Throughout 2007, WSRA funds were used to support a variety of critical programs. For example:

- The Colorado River Water Conservation District and several Front Range water providers are using \$200,000 to identify a long-term source of 10,825 acre-feet of water to meet flow recommendations under the Endangered Fish Recovery Program for the "15-mile Reach."
- The South Platte BRT approved \$176,000 for a Comprehensive Feasibility Study of Ovid Reservoir.
- The Gunnison BRT approved \$540,000 to assist the Orchard City Reservoir Project.

A complete list of the approved WSRA applications are included in the attached newsletters.

#### Fostering Interbasin Dialogue

A fundamental objective in creating the Interbasin Compact Process is the desire for basins to share information and develop a greater understanding of not just their own needs, but the needs and pressures of other basins as well. Only when the state has a collective and deeper understanding of all the needs in all of Colorado's river basins will we be able to take the necessary steps to a secure water future.

To that end, there have been some exciting developments over the past year.

- The leadership South Platte and Yampa/White/Green Roundtables met to share perspectives on the major water issues in each basin and to discuss a proposed Yampa Project.
- The Colorado Basin and the Yampa/White Roundtables have been working together in a joint effort to better understand the impact of energy development on water supply needs on both basins.
- The four roundtables who comprise the Colorado River system have been meeting to discuss issues on the Colorado River.
- The Arkansas, South Platte, and Metro Roundtables have been meeting to share their water needs and discuss potential solutions to their challenges.
- Each Roundtable has the opportunity to present their major water issues and challenges to the IBCC. These presentations provide an informational foundation for cross-basin dialogue.

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These are just the beginning, and a major focus of our efforts going forward will be to increase this dialogue between basins as this is critical to ensuring a secure water future.

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

Colorado's water future is central to the quality of life and future of our state. It is essential, therefore, that the public be informed of and engaged in the dialogue that is shaping our water supply future. Much has taken place in the last year to achieve this objective, under the guidance of the Public Education, Participation and Outreach work group within the IBCC. Through the leadership of these volunteers, the IBCC website (www.ibcc.state.co.us) has been re-designed for greater clarity and ease of navigation. A wide range of materials have been created to better communicate the activities of the IBCC and BRTs, including presentations, fact sheets, and quarterly newsletters. And finally, a comprehensive communications plan has been developed to further engage the public. Hundreds of stakeholders have been involved in this process but more can be done. Increasing the outreach to the public will be a major focus in the coming year and we will keep you apprised of our efforts.

#### The Path Forward

Our progress will continue over the coming months. Our objectives in 2008 are to complete the basin needs assessments, create more inter-basin dialogue, move forward on the Colorado River supply availability study, and increase public engagement. Together, these activities will help further the fundamental premise upon which *The Colorado Water for the 21st Century Act* was based—that Coloradans must work together to address our state's water needs. Our future calls for nothing less, and through your continued leadership, this is a goal that we will help you achieve.

Harris D. Sherman

Executive Director of DNR and Director of Compact Negotiations

Colorado Department of Natural Resources



# **Colorado's Water Supply Future**



Bill Ritter, Jr. - Governor Harris D. Sherman - DNR Executive Director

# **Interbasin Compact Process**

#### **Background**

Colorado's growth and development as a state is intertwined with water. Development and management of water is complex, controversial, and at times contentious. Decisions regarding water have become increasingly complex as

Colorado has experienced both unprecedented population growth and a greater emphasis on multiple uses of this precious resource.



Water users, water managers, governmental and non-governmental organizations, and citizens have worked

hard to help ensure that their interests are addressed when making water-related

decisions. This dynamic has challenged us all to identify new approaches and collaborative solutions.

This is the backdrop behind the collaborative Colorado Water for the 21st Century Act. This Interbasin Compact process is based upon the premise that Coloradans must work together to address the water needs within our entire state. The Colorado Water for the 21st Century Act creates a framework to encourage dialogue on water, broaden the range of stakeholders actively participating in the state's water decisions, and creates a locally driven process where the decisionmaking power rests with those living in the state's river basins.

Since 2003, four additional pieces of enabling legislation have provided the necessary tools for the Water for the 21st Century Act to succeed. The interrelationships of these tools are described throughout the remainder of this fact sheet.

#### **Implementation**

The Colorado Water for the 21st Century Act sets up a framework that provides a permanent forum for broad-based water discussions. It creates two new structures: 1) The Interbasin Compact Committee (IBCC), a state-wide committee that will address issues between basins; and 2) The Basin Roundtables.

Nine separate roundtables are established for each of the state's major river basins, and a "Metro Roundtable" for the Denver metropolitan area (see map below).

These Basin Roundtables facilitate discussions on water issues and encourage locally driven collaborative solutions. The broad-based, collaborative nature of this process is reflected in the roundtable membership.

To help the Basin Roundtables accomplish their major responsibility of developing a basin-wide needs assessment, they have relied on groundwork completed during the Statewide Water Supply Initiative (SWSI). To further develop their needs assessments and to support water activities in each of the basins, SB06-179, HB06-1385 and HB06-1400 were passed by the legislature during 2006. This legislation is summarized in Figure 1.



Colorado's Nine Basin Roundtables





**SB03-110** authorized the Statewide Water Supply Initiative (SWSI), which implemented a collaborative approach to water resources issues by establishing SWSI roundtables. The SWSI focused on using a common technical basis for identifying and quantifying water needs and issues.

**HB05-1177** or The Colorado Water for the 21st Century Act provides a permanent forum for broad-based water discussions. It creates two new structures: 1) the Interbasin Compact Committee (IBCC), and 2) the Basin Roundtables. There are nine Basin Roundtables based on Colorado's eight major river basins and the Denver metro area.

**SB06-179** created the Water Supply Reserve Account. Throughout SWSI and Colorado Water for the 21st Century Act processes, there has been a clear recognition that financial assistance is needed to address the water challenges in our state. This legislation funds the Water Supply Reserve Account (Account), which directs the State Treasurer to annually transfer \$10 million from the Operational Account of the Severance Tax Trust Fund to the Account. These monies are available to the Basin Roundtables to fund water activities.

**HB06-1385** created the Colorado Water Conservation Board's Intrastate Water Management and Development Section, which implements SWSI, the Water Supply Reserve Account, develops reconnaissance level water supply alternatives, and tracks and supports water supply projects and planning processes.

Figure 1 - Enabling Legislation Addressing Colorado's Water Challenges

#### **Basin Roundtable Responsibilities**

The responsibilities of the basin roundtables can be grouped into three categories: procedural, substantive, and public involvement.

#### **Procedural**

Each roundtable has adopted bylaws that include the roundtable's goals, objectives, and operating procedures. These bylaws reflect the specific needs of the roundtable and reflect the uniqueness of each basin.

The basin roundtables have developed procedures and each roundtable has selected two members of the IBCC.

#### **Substantive**

The most extensive substantive responsibility assigned to each basin roundtable is to develop a basin-wide water needs assessment. This is to be performed in cooperation with local governments, area water providers, and other stakeholders. The Colorado Water for the 21st Century Act states "Using data from the Statewide Water Supply Initiative and other appropriate sources and in cooperation with the ongoing Statewide Water Supply Initiative, develop a:"

• Basin-wide consumptive and nonconsumptive needs assessment

- Analyze the availability of water supplies including unappropriated waters within the basin
- Propose projects or non-structural methods for meeting water supply needs and utilizing unappropriated waters where appropriate

#### **Public Involvement**

Equally important to selecting members of the IBCC and developing a basin-wide water needs assessment, the roundtables serve as a forum for public involvement. The roundtable activities are required by law to be open, public meetings. The roundtable process creates an expanded foundation for public involvement.

#### **Interbasin Compact Committee**

The other structure created by the Colorado Water for the 21st Century Act is the IBCC. This is a 27-member committee established to facilitate conversations between basins and to address statewide issues. The IBCC brings the issues of each roundtable to a statewide forum.

#### **IBCC** Responsibilities

The Colorado Water for the 21st Century Act gives the IBCC a series of responsibilities. These include establishing bylaws, developing a charter, and creating a Public Education and Outreach Working Group:

- **By-Laws** The IBCC established by-laws to govern its operations and actions.
- Charter The IBCC developed a Charter to "govern and guide compact negotiations between roundtables." The Charter includes:
  - A framework and principles to guide negotiations between roundtables, including policies to ensure that individual compacts do not conflict with one another.
  - Procedures for ratification of compacts, including a mandatory provision that every affected roundtable must approve the draft compact.
  - Authorities and procedures to ensure that approved compacts are legally binding and enforceable.
  - Procedures for integrating the Interbasin Compact processes with other water planning and development processes, except that no provision may supersede, impair, or modify any local government's "authority, jurisdiction, or permitting powers."
- Public Education and Outreach The IBCC established a Public Education and Outreach Working Group to ensure public education and participation concerning both the activities of the Interbasin Compact Committee and compact negotiations between roundtables.

#### **Colorado Water Conservation Board**

Colorado Revised Statute, Title 37, Article 60 requires the CWCB to conduct the following activities in relation to utilizing the state's waters:

- Formulate methods, means, and plans
- · Gather data and information
- Foster conservation
- Recommend water infrastructure projects
- Make mitigation recommendation to balance between development and the state's water resources
- Protect the state's fish and wildlife resources

The CWCB implements this statutory authority through projects associated with the findings and recommendations of SWSI.

# **CWCB's Intrastate Water Management and Development Section Responsibilities**

The responsibilities of the CWCB Intrastate Water Management and Development Section include:

• Implement the SWSI - by helping ensure an adequate water supply for Colorado's citizens

- and the environment through a collaborative, cooperative, consensus approach to water resource issues resolution by focusing on strong local stakeholder involvement.
- Coordinate Efforts to Encourage Cooperation help avoid harmful competition for water and
  competing uses for water between municipal,
  industrial, agricultural, environmental, and
  recreational users.
- Develop Reconnaissance Level Water Supply Alternatives - coordinate, manage, and conduct river basin technical roundtables to examine and develop structural and non-structural water supply alternatives.
- Track and Support Water Supply Projects and Planning Processes - identify and track the status of individual projects and planning processes and identify legal, financial, or political issues that are impeding the resolution of these issues.
- Grant and Loan Program Development and Implementation - review and obtain approval of grant and loan application requests based on the Criteria and Guidelines developed jointly with the IBCC from the Water Supply Reserve Account.
- Provide Technical Support to the Interbasin Compact Process - participate in contract scoping, provide roundtable updates on water use data, inform and assist basin roundtables in improving their understanding of existing and future water supply needs and issues.
- Statewide Outreach and Education participate in public awareness ad program advocacy activities to increase public and organizational understanding of CWCB.
- Water Information and Education make information accessible to CWCB's customers and the public regarding the Intrastate Water Management and Development Section.











#### **Path Forward**

The Basin Roundtables have been in place since late 2005 and because of the funding tools enacted during 2006 have the means to realize their mission. The path forward for the basin roundtables will include:

- A plan for the future based on a grassroots process of understanding of each basin needs.
- Funding of projects to meet local needs through the Water Supply Reserve Account and HB1400 technical support to the roundtables.
- Developing a common technical platform for the roundtables.
- Educating the public on the process and the roundtables needs.
- Utilizing partnerships developed through the process for collaboration in moving the state forward to address its water supply challenges in the future.

Further information regarding the Interbasin Compact Process accomplishments and support provided to the basin roundtables to further their basin-wide needs assessments can be found at:

http://dnr.state.co.us/Home/ColoradoWaterfo
rthe21stCentury/IbccHome.htm.

Information on the Water Supply Reserve Account and continuing SWSI activities is located on CWCB's webpage:

http://cwcb.state.co.us/IWMD/.

A summary of the types of applications submitted for Water Supply Reserve Account funding are listed below.

#### **Examples of Water Supply Reserve Account Applications**

#### Arkansas Basin

Arkansas Valley Conduit
Tamarisk
Upper Black Squirrel Creek Aquifer Recharge
Investigation
Water Needs Matrix

#### **Colorado Basin**

Acquisition of Vail Ditch by Grand County Interests Energy Development Water Needs Assessment Enlargement of Eagle Park Reservoir Upper Colorado Endangered Fish Recovery Alternatives Analysis Grand County Streamflow Management Plan Roaring Fork Watershed Assessment

#### Dolores/San Juan/San Miguel Basin

Dry Creek Reservoir/San Juan Reservoir Land Acquisition Goodman Point Water Association Pipeline Environmental Assessment

#### **Metro Basin**

Chatfield Reallocation EIS/FR

#### **Rio Grande Basin**

Alamosa River Instream Flow Project 100 Years of San Luis Reservoirs Celebration Preliminary Design Multi-use Rio Grande Reservoir Rehabilitation and Enlargement

#### **South Platte Basin**

Chatfield Reallocation EIS/FR

#### Yampa/White/Green Basin

**Energy Development Water Needs Assessment** 

For more information, please contact:

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# **Colorado's Water Supply Future**



Bill Ritter, Jr. - Governor Harris D. Sherman - DNR Executive Director

# Interbasin Compact Process Quarterly Newsletter



## From Harris Sherman

Executive Director of DNR and Director of Compact Negotiations

Thanks to all of you for being patient as the Ritter Administration becomes better acquainted with the ongoing

progress and structure surrounding the Interbasin Compact Process. Since the February 2 Interbasin Compact Committee (IBCC) meeting, I have been meeting with members of the IBCC, Roundtables, and my staff regarding the Interbasin Compact Process.

My conclusion is that we are off to a great start yet we have much work ahead of us. Over the past few months, the Basin Roundtables, the IBCC, and the Colorado Water Conservation Board (CWCB) have made significant progress in the development of basinwide water needs assessments and the utilization of the Water Supply Reserve Account (WSRA). This newsletter provides an update on these important achievements.

In the coming year I feel that we should focus on certain programmatic elements that will give us a broader understanding of the water needs of each basin and potential ways of meeting those needs. Included within these efforts should be a focus on:

- Further development of each roundtable's needs assessment
- · Continued implementation of the WSRA
- Identifying multiple objective collaborative solutions
- Establishing goals and milestones for the Interbasin Compact Process
- · Public education and outreach

My hope is that by the end of 2009 we will have developed basinwide water needs assessments for each roundtable, and we will be utilizing the WSRA to help implement solutions to our identified needs. This work of the Interbasin Compact Process is a critical step in meeting Colorado's future water supply needs, and I want to thank the Roundtable and IBCC members for volunteering so much of their time, energy, and creative thought to this process.



#### **Basin Roundtable Activities**

#### **Basinwide Water Needs Assessments**

Over the past few months, each Basin Roundtable has actively reviewed the data from the Statewide Water Supply Initiative (SWSI) and assessed other appropriate sources of information for their basinwide water needs assessments. Based upon a review of these documents, each Roundtable has identified areas where they need more information. The State's technical assistance team (headed by CDM) is now working with each Roundtable to meet these information needs.





#### **Arkansas Basin Roundtable**

To further its needs assessment, the Arkansas Basin Roundtable has requested assistance identifying, collecting, and screening reports and studies related to water in the Arkansas Basin. The State's technical assistance team is working with the Roundtable's needs assessment subcommittee to gather this information from the Water Resources Research Institute, the CWCB, the Colorado Geological Survey, water entities within the Arkansas Basin, and other appropriate institutions. Bibliographic and summary information on relevant studies and reports will be provided for Roundtable review and possible incorporation into a GIS relational database.

#### Colorado Basin Roundtable

To further its needs assessment, the Colorado Basin Roundtable is developing a work plan to address non-consumptive needs and energy needs. The State's technical assistance team will undertake the following activities to develop the Roundtable's non-consumptive needs assessment:

- Hold a workshop with environmental and recreational representatives and interests to coordinate non-consumptive needs assessments statewide.
- 2) Based on the results of the workshop, assist the Colorado Basin Roundtable develop a work plan. The work plan will contain:
  - a. Definition and preliminary mapping of nonconsumptive values in the Colorado Basin.
  - b. Identification of critical/prioritized stream reaches and associated value.
  - c. Identification of methods for the quantification of needs.
  - Identification of potential projects or methods for meeting the identified nonconsumptive needs.
  - e. Preliminary cost estimates for implementation of the work plan.

In addition to working on their non-consumptive needs, the Colorado Basin Roundtable will work with the Yampa/White Roundtable on water supply needs for energy development. The Colorado and Yampa/White Roundtables approved a WSRA application by the Colorado River Water Conservation District (River District) to study consumptive water needs associated with energy development in the Colorado, White, and Yampa River Basins. To jump start that study, the State's technical assistance team will assist subcommittees from the two roundtables in gathering existing information and data and identifying data gaps.

# Dolores/San Juan/San Miguel (Southwest) Basin Roundtable

The Southwest Basin Roundtable is creating a work plan to further develop its basinwide water needs assessment. The work plan will contain the following elements:

- Consumptive use assessment—a review of consumptive use needs from SWSI and an identification of where updates or refinements are needed. This section will also include an identification of methods for updating consumptive use needs and preliminary cost estimates.
- 2) Non-consumptive use assessment—build upon efforts from SWSI Phase 2 to identify non-consumptive needs for the basin.
- 3) Alternatives to permanent agriculture dry-up—identify opportunities within the basin for alternatives to permanent transfers from irrigated agriculture to municipal and industrial (M&I) uses.
- 4) Analysis and options for water conservation and efficiency—identify possibilities and methods for identifying yields from conservation and efficiency throughout the basin.

#### **Gunnison Basin Roundtable**

Over the next few months, the Gunnison Basin Roundtable, with assistance from the State's technical assistance team, will:

- Review, refine, and/or confirm the estimate of current and future water demands and supply for the smaller municipalities, water districts, and domestic water companies in the Gunnison Basin. This will involve investigating many of the smaller municipal areas of the Gunnison Basin with respect to present and future water use.
- 2) Begin to review and refine the estimate of current and future rural domestic demands and supply in the Gunnison Basin.
- 3) Identify vulnerabilities to water supply shortages for Gunnison Basin municipalities. Several municipalities in the Gunnison Basin may not have the drinking water security and level of system redundancy that is recommended to protect against unforeseen shortages. These vulnerabilities will be identified and described.
- Review, refine, and/or confirm the estimate of future snowmaking demands in the Upper Gunnison Basin.
- 5) Participate in the coordination of nonconsumptive needs assessments statewide.

#### **Metro Basin Roundtable**

The Metro Basin Roundtable is creating a work plan to further develop its basinwide water needs assessment. The work plan will contain the following elements:

- 1) An update of the status of identified projects and processes from SWSI.
- 2) A strategy to collaborate with the South Platte needs assessment.
- 3) Further articulation of what the Metro Basin water users are implementing regarding conservation and reuse.
- 4) Potential opportunities for rotational fallowing/leasing arrangements.

#### **North Platte Basin Roundtable**

The North Platte Basin Roundtable is creating a work plan to further develop its basinwide water needs assessment. The work plan will contain the following elements:

- 1) A strategy to quantify unappropriated water in the North Platte River Basin. This includes identifying unappropriated water for all beneficial uses and quantification by tributary at various locations and times of the year.
- 2) A plan to identify and quantify the nonconsumptive uses and needs in the basin.
- 3) A plan to address North Platte Basin high altitude crop consumptive use coefficients.

#### **Rio Grande Basin Roundtable**

The Rio Grande Basin Roundtable is working with the State's technical assistance team to conduct a San Luis Valley Groundwater Level Study. This study includes two areas located near the Rio Grande in the San Luis Valley and will help to characterize the hydrologic divide between the aquifer and the Rio Grande River.

#### **South Platte Basin Roundtable**

The South Platte Basin Roundtable is creating a work plan to further develop its basinwide water needs assessment. The work plan will identify strategies to:

- Determine where the various providers may be looking at the same water as a future supply including both M&I providers and agricultural providers.
- 2) Determine if there is any "unappropriated water" in the Basin.
- 3) Based on changes being made to the administration of the South Platte River by the State Engineer's Office and Water Court

- estimate the impact of changes on the availability of water from the South Platte River and its tributaries.
- 4) Evaluate the impact of increased use of wholly consumable reused water on downstream water users.
- 5) Conduct a detailed supply and demand study for the Republican River Basin.
- Conduct a more detailed supply and demand study for the Upper Mountain Counties in the South Platte Basin.
- 7) Complete a non-consumptive needs assessment for the South Platte Basin.

It is anticipated (but not yet approved by the full Roundtable) that the State's technical assistance team will address items 1-4. Separate WSRA applications would then be developed to execute the supply and demand studies for the Republican River Basin and the Upper Mountain Counties. The South Platte's non-consumptive needs assessment would be coordinated with other roundtable's non-consumptive needs assessments statewide.

#### Yampa/White Basin Roundtable

To further its needs assessment, the Yampa/White Basin Roundtable is developing a work plan to address non-consumptive needs and energy needs. The State's technical assistance team will undertake the following activities to develop the roundtable's non-consumptive needs assessment:

- 1) Hold a workshop with environmental and recreational representatives and interests to coordinate non-consumptive needs assessments statewide.
- 2) Based on the results of the workshop, assist the Yampa/White Roundtable develop a work plan. The work plan will contain:
  - a. Definition and preliminary mapping of nonconsumptive values in the Colorado Basin.











- b. Identification of critical/prioritized stream reaches and associated value.
- c. Identification of methods for the quantification of needs.
- d. Identification of potential projects or methods for meeting the identified nonconsumptive needs.
- e. Preliminary cost estimates for implementation of the work plan.

In addition to working on their non-consumptive needs, the Yampa/White Roundtable will work with the Colorado Roundtable on water supply needs for energy development. The Colorado and Yampa/White Roundtables approved a WSRA application by the River District to study consumptive water needs associated with energy development in the Colorado, White, and Yampa River Basins. To jump start that study, the State's technical assistance team will assist subcommittees from the two roundtables in gathering existing information and data and identifying data gaps.

#### Water Supply Reserve Account – Grant and Loan Program Water Activity Summary

On March 13, the CWCB Board approved over \$4 million in grants. Following is a summary of the approved grants.

#### **Arkansas Basin**

**Arkansas Valley Conduit** 

**Applicant:** Southeastern Colorado Water Activity

**Enterprise** 

**Amount Requested:** \$200,000 (Statewide Account)

Water Activity Purpose: This grant will assist in funding a required local match to a Federal Grant administered through the Environmental Protection Agency (EPA). The conduit is designed to bring a higher quality source of drinking water to communities east of Pueblo.

Upper Black Squirrel Creek Basin - Aquifer Recharge and Storage Evaluation

**Applicant:** El Paso County Water Authority (EPCWA)

Amount Requested: \$70,000 (Basin Account)

Water Activity Purpose: The objective of the project is to evaluate and refine the existing knowledge of the hydrogeology of the alluvial aquifer system in the Upper Black Squirrel Creek Basin for the purposes of assessing the potential for aquifer recharge and storage.

#### Long-term Management of Non-native Phreatophyte Trees and Mapping Project for the Arkansas Basin

**Applicant:** Southeastern Colorado Water Conservancy District

Amount Requested: \$50,000 (Statewide Account)

Water Activity Purpose: The Project is designed to complete the mapping of the Arkansas Basin to inventory the infestation level of certain invasive species, to assist in the development of a Strategic Plan for the long-term management of the invasive species, and to create a plan to reduce serious impacts upon limited water resources and increase water availability to meet municipal, agricultural, environmental, and recreational needs.

#### **Colorado Basin**

Vail Ditch Project

**Applicant:** Grand County

Amount Requested: \$1,500,000 (Statewide

Account)

Water Activity Purpose: This grant will assist in the purchase of the Vail Ditch to provide new water supplies for environmental and municipal needs in Grand County at the headwaters of the Fraser River near Winter Park.

#### Eagle Park Reservoir Enlargement

Applicant: Eagle Park Reservoir Company

Amount Requested: \$250,000 (Statewide Account)

Water Activity Purpose: The purpose of this grant is to cover up to 68 percent of the cost associated with final design engineering, environmental studies, permitting, construction, and mitigation of 0.27 acre of wetlands impacts for the enlargement of Eagle Park Reservoir. The proposed reservoir enlargement will provide additional water during late summer, fall, and winter months to meet growing water supply needs in Eagle County.



Colorado's Nine Basin Roundtables

#### Upper Colorado River Endangered Fish Recovery Program - Alternative Analysis

**Applicant:** Colorado River Water Conservation

District

Amount Requested: \$200,000 (Statewide Account)

Water Activity Purpose: The purpose of this study is to identify a long-term source of 10,825 acrefeet of water to help meet flow recommendations under the Endangered Fish Recovery Program for the "15-Mile Reach," which extends from the confluence of the Gunnison River upstream 15 miles to the Grand Valley Irrigation Company Diversion Dam near Palisade, Colorado.

#### Grand County Stream Management Plan (SMP)

**Applicant:** Board of County Commissioner, Grand County

Amount Requested: \$30,000 (Basin Account)

Water Activity Purpose: The purpose of this study is to develop a scientifically defensible methodology for a non-consumptive water needs stream management plan for Grand County in order to determine the critical stream reaches, flow times, and key flow needs. The SMP will also develop a framework to identify problematic stream reaches and recommend approaches to determine flow solutions to address instream flow and other aquatic habitat issues to protect important environmental and recreational values, while continuing to allow for development of water needed for human consumption on both the West Slope and the Front Range of Colorado.

#### Roaring Fork Watershed Plan

**Applicant:** Ruedi Water and Power Authority **Amount Requested:** \$40,000 (Basin Account)

Water Activity Purpose: The purpose of this study is to assess the entire Roaring Fork watershed and develop a comprehensive plan to determine the overall demand for consumptive and nonconsumptive water uses, to provide a mapping of local water resources, and to determine the connections between local land use decisions and local water resources.

#### Dolores/San Juan/San Miguel Basin

Dry Gulch AKA San Juan Reservoir

**Applicant:** San Juan Water Conservancy District

Amount Requested: \$1,000,000 (Statewide

Account)

Water Activity Purpose: The purpose of this project is to assist in the land acquisition of the reservoir site for the Dry Gulch Reservoir.

#### Goodman Point Water Association Environmental Report-Preliminary Engineering Report

**Applicant:** Goodman Point Water Association

**Amount Requested:** \$7,700 (Basin Account)

Water Activity Purpose: The purpose of this study is to assist the Goodman Point Water Association in completing an Environmental Report and Preliminary Engineering Report. These reports will describe and negate impacts to environmental and cultural resources and to perform general scoping of project engineering requirement and costs. These reports are required by the U.S. Department of Agriculture-Rural Development in order to qualify for grant/loan funding and will provide a preliminary "blueprint" of the proposed pipeline project to extend two domestic pipelines by Montezuma Water Company into the Goodman Point area.

#### **Metro Basin**

Chatfield Reservoir Reallocation Environmental Impact Statement and Feasibility Report

**Applicant:** The Greenway Foundation

Amount Requested: \$103,000 (Basin Account)

Water Activity Purpose: The purpose of this grant is to assist in finalizing the Chatfield Reservoir Reallocation Environmental Impact Statement and Feasibility Report. The goal of the study is to determine the feasibility of reallocating up to 20,600 acre-feet of storage water from the Chatfield Reservoir to other authorized purposes including M&I water supply, agriculture, and recreation and fishery habitat protection and enhancement.

#### **Rio Grande Basin**

Terrace Reservoir Hydrologic Modeling, Site Survey, and Mapping

**Applicant:** Alamosa Riverkeepers

Amount Requested: \$64,500 (Basin Account)

Water Activity Purpose: This study is a critical component of the Alamosa River Instream Flow Project. The Alamosa River Instream Flow Project will purchase one or more senior irrigation water rights and place them into storage-and-release plans at Terrace Reservoir. The water rights will be used to restore flows and improve the natural environment in the Alamosa River channel.









# Rio Grande Reservoir Multi-Use Enlargement and Rehabilitation Preliminary Design

**Applicant:** San Luis Valley Irrigation District

Amount Requested: \$288,000 (Statewide Account)

Water Activity Purpose: The purpose of this study is to provide further analysis of enlarging and rehabilitating the Reservoir to better meet Colorado's obligations under the Rio Grande Compact, to re-regulate flows to support instream and riparian needs, to increase critical water storage to meet growing domestic and commercial development in the Rio Grande Basin, and to develop a larger conservation pool within the Reservoir for fish habitat. The study will also analyze a re-design of the outlet works to provide consistent and safe water delivery, particularly during high flow periods.

#### **South Platte Basin**

Chatfield Reservoir Reallocation Environmental Impact Statement and Feasibility Report

Applicant: The Greenway Foundation

Amount Requested: \$27,000 (Basin Account)

Water Activity Purpose: The purpose of this grant is to assist in finalizing the Chatfield Reservoir Reallocation Environmental Impact Statement and Feasibility Report. The goal of the study is to determine the feasibility of reallocating up to 20,600 acre-feet of storage water from the Chatfield Reservoir to other authorized purposes including municipal and industrial water supply, agriculture, and recreation and fishery habitat protection and enhancement.

#### Yampa Basin

Colorado, White, and Yampa River Basins Energy Development Water Needs Assessment

**Applicant:** Colorado River Water Conservation District or other - pending resolution of Tabor Issues as discussed below.

**Amount Requested:** \$300,000 (Statewide Account)

Water Activity Purpose: The purpose of this study is to analyze consumptive water needs associated with energy development in the Colorado, White, and Yampa River Basins. The study will include an assessment of the regional hydrologic impacts of energy development, including an effort to quantify the direct use of water for extraction and development, an effort to quantify the additional municipal demand from direct/indirect worker populations and multiplier impacts from resultant growth, and an effort to quantify water demands from offsite electrical generation needed for industrial and municipal development.

Further information regarding the Interbasin Compact Process accomplishments and support provided to the basin roundtables to further their basinwide needs assessments can be found at:

http://dnr.state.co.us/Home/ColoradoWaterforthe21stCentury/IbccHome.htm.

Information on the Water Supply Reserve Account and continuing SWSI activities is located on CWCB's webpage:

http://cwcb.state.co.us/IWMD/.







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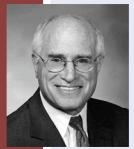


# **Colorado's Water Supply Future**



**Bill Ritter, Jr.** – Governor **Harris D. Sherman** – DNR Executive Director

# Interbasin Compact Process Quarterly Newsletter - 2nd Quarter 2007



# From Harris Sherman

Executive Director of DNR and Director of Compact Negotiations

My thanks to all of you for your support and dedication to the Basin Roundtable (BRT) and Interbasin Compact Process. As we enter the second quarter of 2007, we continue

to make progress toward our goal of completing basin-wide water needs assessments by the end of 2008. Additionally, water activities funded through the Water Supply Reserve Account (WSRA) are addressing specific needs for each basin. This work has allowed the program to build a foundation at the grassroots level and has been very effective increasing the understanding within each basin and addressing local water challenges.

Although the process has been helpful in solving water problems within each basin, it is also necessary to engage in cross-basin dialogue on key water issues that are of statewide importance. Understanding these issues across basins will be tantamount to our success.

In addition to the needs assessment and WSRA work occurring at the Basin Roundtable level, there are three other efforts that are integral to the Interbasin Compact Process addressing statewide issues on a common technical platform. These include: 1) technical work on consumptive water uses, 2) technical work on

non-consumptive water uses, and 3) water supply availability. The challenge ahead is to take on these issues of statewide importance while continuing to support a grass roots process.

This newsletter summarizes the basin-by-basin progress we have made on needs assessments and implementing water activities through the WSRA. It also summarizes an overall approach for developing consumptive and non-consumptive needs assessments and a supply availability study. The strategy builds on the Statewide Water Supply Initiative (SWSI) Phase 1 and 2, and the work of each BRT in developing their basinwide water needs assessments. The strategy also addresses issues of a common technical platform which the Interbasin Compact Committee (IBCC) and the Colorado Water Conservation Board (CWCB) have committed to help develop. Implementation of these efforts, in conjunction with the continued work on the basin-wide water needs assessments and the WSRA, will advance the overall goals of the Interbasin Compact Process.

The Interbasin Compact Process is a bold experiment and it is a uniquely Colorado experiment. It is bringing together people all over the state and asking them to work together on Colorado's water supply future. It is a risky process, but it has a real chance of succeeding in helping Colorado provide a sustainable water supply for its residents and environment.











## Roles of Basin Roundtables and Consumptive and Non-consumptive Needs Assessment Group

To address common technical platform and to maintain consistency between roundtables when completing their needs assessments, two statewide work groups will be formed – a nonconsumptive work group and a consumptive work group. In addition, the CWCB will be doing a Supply Availability Study. These three technical elements will serve to support the Basin Roundtables with their Basin Needs Assessments as depicted in this figure.

Basin Needs
Assessments

Colorado

Metro

Metro

Arkansas

Dolores/
San Juan/
San Miguel

Rio Grande

Consumptive Work Group

Supply Availability (CWCB / IBCC)

Non-Consumptive Work Group

Common Technical Platform

The issues of common technical platform are important in developing the Basin Needs Assessments for both consumptive and nonconsumptive uses. These issues are described in further detail below.

#### Strategy for Consumptive Needs Assessment

#### Goal

The goal of this group is to assist the Basin Roundtables in their consumptive use needs assessments through the development of a common technical platform and water supply alternatives on a statewide basis.

# Quantifying Municipal & Industrial (M&I) Demands to 2050

SWSI projected water demands to 2030. It was understood at the time of SWSI that demands will continue to grow beyond 2030. Since that time it has been the desire of several BRTs to take demands of their basins out to 2050. This has been the case particularly on the West Slope where the basins are not nearly as built out as on the Front

Range. In addition, several Environmental Impact Statements for Front Range water providers examine demands to 2050. An updated statewide analysis is needed to ensure wise water resource planning. This group would work to ensure that a consistent statewide methodology is used for this update to demands.

#### Status of IPPs

In SWSI the Identified Projects and Processes (IPPs) were identified. IPPs are projects or processes identified by water providers to meet new water demands. The IPPs accounted for 511,800 acre-feet (AF) of new supply to address the demands of 630,000 AF out to 2030. The Basin Roundtables have requested that this information be reviewed. Up-to-date information on IPPs will be gathered so that there is better understanding of where providers are in the process of completing their IPPs. In addition, CWCB is developing an IPPs database that will be used to track projects and processes into the future.

#### **Identify Conservation Opportunities**

The M&I Water Conservation TRT set out to "develop a deeper understanding and greater consensus on conservation and efficiency for municipal, industrial, and agricultural water uses." In the category of urban water demand, the TRT made significant advances that forward understanding of the important role of water conservation and efficiency in municipal water planning. Successes include:

- Consensus was reached on how conservation may affect system reliability under various scenarios
- Quantified potential long-term savings available from conservation measures
- Developed a range of potential water conservation savings from select measures that were in a comparable range to potential water conservation savings identified in the SWSI report
- Common understanding was reached on some issues

The conclusions and recommendations made by the CWCB and the TRT will serve as a starting point for the Consumptive Work Group to further quantify the role water conservation can play in meeting the demands of Colorado's water supply future.

#### Addressing Agricultural Needs

Agricultural irrigated acreage, diversions, consumptive use, and shortages were identified in the SWSI Report. There have been changes in irrigated acreage due to urbanization, water transfers, and impacts of well augmentation requirements. Irrigated acreage and updated estimates of consumptive use based on high altitude coefficients will be made.

Limited progress was made on agricultural water efficiency by the SWSI Phase 2 Conservation and Efficiency TRT and this remains a significant challenge. Based on initial work, there appears to be some opportunities to achieve additional efficiencies in agricultural water use. However, since agricultural return flows are used by downstream water users, at a watershed level there are significant limitations in the overall net potential savings that can be realized. Nevertheless, since agricultural water use accounts for over 85 percent of total water use in the state, follow-up efforts should include this group of water users. CWCB and Colorado State University are working with the agricultural community to further examine these issues and opportunities.

#### Alternative Agricultural Water Transfer Methods for Water Supply

SWSI Phase 2 provided an extensive look at all alternatives to a traditional transfer and concluded that fallowing has the most potential statewide, and may require state assistance. Interruptible supply strategies will also be assessed. There may be a role for the state, through the CWCB for example, to "level the playing field" through the use of incentives to encourage M&I providers and users to use alternatives to traditional agricultural transfers in order to foster the maximum utilization of the state's waters and to ensure that other non-market values (open space, wildlife habitat) are retained. Several roundtables have requested that this move forward.

#### Assessing the Effects of Climate Variability on Colorado's Consumptive Use Needs

Global warming is expected to alter the pattern of water supply and use in Colorado and should be factored into any long-range planning. Global warming-based changes to supply availability can be examined by comparing projected changes in streamflow to current hydrographs at locations throughout the State, and estimating evaporative loss to reservoirs. The change in consumptive water demands in Colorado will be evaluated using the

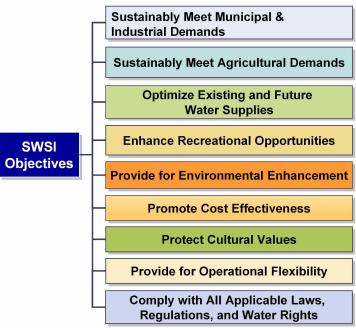
CWCB's consumptive use model StateCU. This will be looked at on both the demand side by this Consumptive Group and on the supply side in the Supply Availability Study.

# Non-tributary Groundwater and Water Use Sustainability

Several roundtables have identified that the increasing demand for Colorado's limited water supplies suggests the need to examine how our water resources can be used more efficiently. One method to maximize beneficial use is to use surface and groundwater resources in a more fully integrated manner through conjunctive use management. This is a proven strategy that recharges aquifers during wet periods and relies on them during dry periods. Studies conducted by the CWCB and Colorado Geological Survey have shown that considerable storage exists in both alluvial and bedrock aquifers throughout the State.

#### Recalculate the Gap

The current Gap identified in SWSI is 118,200 AF based on the ability of the IPPs to address new demands. An update to the IPPs and the new demand projections out to 2050 will be used to recalculate for each basin. Additional considerations of climate variability and groundwater sustainability will also be considered in recalculating the Gap. Climate variability will play a role in determining the revised Gap and is described in detail below. In the South Metro area it is also anticipated that aquifer production will decline by 40 to 80 percent by the year 2050, and that municipal well production will decline. Conjunctive use of available surface water supplies can reduce these costs and decrease the annual demand on the aquifers by 50 percent.











#### Delineate a Process for Decisionmaking

Through the SWSI process, a set of nine major "water management objectives" were developed, refined, and then used to evaluate options for addressing Colorado's future water needs. These objectives represent the overarching interests in water management - they define major goals of water users in clear, understandable terms. These objectives should be used in decisionmaking to move stakeholders towards common ground for developing future water supply alternatives.

#### Strategy for Non-consumptive Needs Assessment

Each Basin Roundtable will develop a non-consumptive needs assessment (NCNA) under the Interbasin Compact Process. Participants of this statewide work group will assist the roundtables and IBCC as this process moves forward. Following is the strategy proposed for moving forward.

#### Goals

The goals of this process with the Basin Roundtables and NCNA Work Group are to:

- Identify priority areas and reaches for environmental and recreational attributes based on existing data
- Identify the quantities of seasonal flows necessary to maintain priority areas and reaches, to the extent possible with existing data, based on agreed-upon methodologies
- Outreach to interested parties about the existence of the products of this effort so that parties can use the information developed in other water planning efforts

#### PRIORITIES **Build Upon Establish** MPLEMENT **Attributes Priorities** Site-Specific Where Do A T Quantification We Need (fine QUANTIFICATION Quantification 0 N characterization) **Templates** (Coarse Characterization)

#### **Methodology**

The methodology for completing the NCNA focuses on a two step process for evaluating non-consumptive needs – prioritization and quantification (illustrated in the figure below). Following provides information on the steps and their components.

#### Prioritization

Build Upon Attributes: Over the next several months, the NCNA Work Group will ask each Basin Roundtable to review and comment on the GIS coverages of environmental and recreational attributes compiled during SWSI Phase 2, as well as to suggest development of additional, important GIS coverages and data layers specifically for their basin.

Establishing Priorities: Once Basin Roundtables have identified the data layers that contain important non-consumptive attributes for their basins, they will establish priorities. A basin's priorities will be based on both local and state information. In addition, basin roundtable members will be able to consider whether and how to prioritize a reach or area.

#### Quantification

Where do we need quantification?: The work group will develop criteria to help evaluate the need for quantification in priority reaches. The "triage" process will begin with the prioritized reaches and areas. Roundtables will consider the condition of the reach or area as well as its existing status or land use protection. Based on this evaluation, the roundtable will decide if it would be appropriate to perform a quantification.

Templates (Coarse Characterization): The CDM
Technical Team will develop approximately 10
templates for Colorado stream and river types
(e.g., high mountain headwaters, ephemeral
desert washes, etc.) based on gross differences
in hydrology and function. The template would
provide a model hydrograph as well as specify
which components of the hydrograph are
important for specific ecological and recreational
attributes.

Site-Specific Quantification (Fine Characterization): Based on the "triage" or where priority reaches warrant site-specific quantification, the CDM Technical Team will use the appropriate general template from the coarse characterization and apply it to the specific river reach (mainstem and significant tributaries) using existing data regarding flow and function.

#### **Implementation**

The Basin Roundtables will be critical to implementing recommendations produced by their non-consumptive needs assessments. The implementation objectives are summarized in the figure here.

#### Water Supply Reserve Account and Technical Assistance Task Orders Requested by Basin Roundtables

The tables on the following pages summarize Water Supply Reserve Account funding requests and the status of the 1400 Task Orders.

Encourage water suppliers to consider this information when planning their projects and processes

Identify projects and processes to meet these needs

Identify additions to other processes or projects developed to meet other needs that might also meet the nonconsumptive needs

Identify and assist in securing funding for such projects and processes

Ensure development and implementation of sufficient projects and processes to meet these nonconsumptive needs





# Water Availability Study of Colorado River and Tributaries Study Purpose

**Implementation** 

**Objectives** 

Over the last decade Colorado has seen rapidly increasing demands placed on our water supply by both traditional consumptive and more recent non-consumptive (recreational and environmental) uses. By the year 2030 Colorado's population is expected to grow to about 7.1 million people (current estimates are approximately 4.5 million people). This population growth coupled with concerns over both the recent severe drought and projections of greater climate variability raises significant concerns over the water supplies Colorado has available to meet the needs of our citizens and the environment.

The water availability study is intended to help Colorado make wise resource management decisions while acknowledging that there is a degree of uncertainty as Colorado moves into the future. The study is intended to answer what on the face seems an easy question:

"How much water from the Colorado River Basin System is available to meet Colorado's current and future water needs?"

The answer to that question will take into consideration the following factors.

- *Hydrology* varies in time, location and amount. Agreement on how to consider these factors in a water availability study will be important to gain greater understanding and acceptance of the study conclusion. As described later in this scope the initial study phase will focus on issues in a period of known hydrology and a period extended from known hydrology.
- Water Availability will include both legal and physical supply considerations. Initially legal availability will consider current demands.
- Water Use water use consideration (also referred to as demands) should include existing absolute water rights. Water use can be measured in terms of consumptive use, gross diversions or total deliveries. Categories of water use include municipal (domestic and commercial), industrial, agricultural, water rights for instream environmental flows and water rights for recreational in-channel diversions. The Study should examine: 1) how non-consumptive uses within the priority system may affect Colorado's ability to fully develop its consumptive use apportionment; and, 2) how much water would remain for non-consumptive uses if Colorado fully developed its apportionment.

At various locations within the state initial water availability will be evaluated using the following formula:

Water Availability = Physical Supply - Current Water Use (includes downstream demands)





## **Approved Water Supply Reserve Account Applications by the CWCB Board**

Name of Water Activity	Basin Account	Statewide Account	Total Request
Arkansas Basin Total Request	\$265,000	\$250,000	\$515,000
Arkansas Valley Conduit		\$200,000	
Tamarisk		\$50,000	
Upper Black Squirrel Creek Aquifer Recharge Investigation	\$70,000		
Round Mountain Water and Sanitation District Water Systems Improvements Project	\$120,000		
Fountain Creek Vision Task Force	\$75,000		
Colorado Basin Total Request	\$70,000	\$2,100,000	\$2,170,000
Acquisition of Vail Ditch by Grand County Interests		\$1,500,000	
Energy Development Water Needs Assessment		\$150,000	\$300,000 Joint App. (See Yampa)
Enlargement of Eagle Park Reservoir		\$250,000	
Upper Colorado Endangered Fish Recovery Alternatives Analysis		\$200,000 Joint App. With Colorado, S. Platte and Metro	
Grand County Streamflow Management Plan	\$30,000		
Roaring Fork Watershed Assessment	\$40,000		
Gunnison Basin Total Request	\$155,000	\$480,000	\$635,000
Lake San Cristobal Controlled Outlet Structure	\$35,000		
Safety and Serviceability Needs Inventory for Reservoirs in the Lerou Creek Drainage Basin	\$60,000		
Orchard City Water Reservoir Project	\$60,000	\$480,000	
Metro Basin Total Request	\$103,000		\$103,000
Chatfield Reallocation EIS/FR	\$103,000		
North Platte Basin – None Requested			
Rio Grande Basin Total Request	\$101,250	\$288,000	\$389,250
Alamosa River Instream Flow Project	\$64,500		
Preliminary Design Multi-use Rio Grande Reservoir Rehabilitation and Enlargement		\$288,000	
Rio Grande Conservation Reserve Enhancement Project	\$36,750		
South Platte Basin Total Request	\$79,000		\$79,000
Chatfield Reallocation EIS/FR	\$27,000		
Clear Creek Water Bank/High Altitude Storage	\$52,000		
Southwest Basin Total Request	\$87,700	\$1,000,000	\$1,087,700
Dry Gulch Reservoir/San Juan Reservoir Land Acquisition		\$1,000,000	
Goodman Point Water Association Pipeline Environmental Assessment	\$7,700		
Jackson Gulch Reservoir Expansion	\$80,000		
Yampa/White/Green Basin Total Request	\$49,500	\$150,000	\$199,500
Energy Development Water Needs Assessment		\$150,000	\$300,000 Joint App. (See Colorado)
Morrison Creek Reservoir Feasibility Study	\$49,500		

## **Status of Technical Assistance Task Orders**

Name of Water Activity	Status
Arkansas Basin	
<ul> <li>Update the status of identified projects and processes (IP&amp;Ps) from SWSI</li> <li>Articulate implementation status of conservation and reuse programs</li> <li>Evaluate potential opportunities for rotational fallowing and/or leasing agreements</li> <li>Evaluate groundwater sources that were not included in SWSI Phase I, especially designated basins.</li> <li>Examine the relationship between Colorado River Compact supplies, imports from the Colorado River Basin and exports of native water supplies from the basin.</li> </ul>	Consumptive tasks, as outlined, will begin summer 2007.
Non-consumptive Needs	Roundtable will utilize non-consumptive strategy as outlined above and are building on attributes.  The Non-consumptive Needs Assessment Work Group Kick-off meeting was attended by Arkansas BRT representatives.
Colorado Basin	moding was attoriated by Antanidae Bry Toprocontained.
Consumptive Use Needs Assessment	A task order for this work is slated for development during the summer 2007.
Energy Development Water Needs Assessment Scoping (Joint with Yampa Basin Roundtable)	A workplan is scheduled to be completed in the summer 2007.
Non-consumptive Needs Assessment	Roundtable will utilize non-consumptive strategy as outlined above and are building on attributes.
	The Non-consumptive Needs Assessment Work Group Kick-off meeting was attended by Colorado BRT representatives.
Gunnison Basin	
<ul> <li>Basinwide - Review, refine, and/or confirm the estimate of current and future water demands and supply for the smaller water providers</li> <li>Basinwide - Review and refine the estimate of current and future rural domestic demands and supply</li> <li>Basinwide - Identify vulnerabilities to water supply shortages for Gunnison Basin municipalities</li> <li>Sub-basin Specific: Upper Gunnison - Review, refine, and/or confirm the estimate of future snowmaking demands in the Upper Gunnison</li> </ul>	Technical work for this first task order will be completed in the summer 2007.
Non-consumptive Needs Assessment	Roundtable will utilize non-consumptive strategy as outlined above and are building on attributes.
	The Non-consumptive Needs Assessment Work Group Kick-off meeting was attended by Gunnison BRT representatives.
Metro Basin	
<ul> <li>Analysis of where providers are looking at the same water as a future supply</li> <li>Update of unappropriated water in the South Platte Basin</li> <li>Impact of water administration changes on the availability of water</li> <li>Impact of reusable water not being available to downstream users</li> <li>Status of Conservation</li> <li>Status of IPP's</li> </ul>	Technical work for this first task order will be completed in the summer 2007.
Non-consumptive Needs Assessment	Roundtable will utilize non-consumptive strategy as outlined above and are building on attributes.
	The Non-consumptive Needs Assessment Work Group Kick-off meeting was attended by Metro BRT representatives.
North Platte Basin	
Town of Walden Water Supply Evaluation	A task order for this work is slated for development during the summer 2007.
Water Supply Availability	The requested water supply availability task will be completed through Decision Support System modeling updates by CWCB.
Non-consumptive Needs Assessment	Roundtable will utilize non-consumptive strategy as outlined above and are building on attributes.  The Non-consumptive Needs Assessment Work Group Kick-off meeting was attended by North Platte BRT representatives.







#### **Status of Technical Assistance Task Orders**

Name of Water Activity	Status
Rio Grande Basin	
Implementation of well monitoring program south of the Rio Grande River and evaluation of the status of the hydraulic divide	Technical work for this first task order will be completed in the near term.
Non-consumptive Needs Assessment	Roundtable will utilize non-consumptive strategy as outlined above and are building on attributes.
	The Non-consumptive Needs Assessment Work Group Kick-off meeting was attended by Rio Grande BRT representatives.
South Platte Basin	
<ul> <li>Analysis of where providers are looking at the same water as a future supply</li> <li>Update of unappropriated water in the South Platte Basin</li> <li>Impact of water administration changes on the availability of water</li> <li>Impact of reusable water not being available to downstream users</li> <li>Status of Conservation</li> <li>Status of IPPs</li> </ul>	Technical work for this first task order will be completed in the summer 2007.
Non-consumptive Needs Assessment	Roundtable will utilize non-consumptive strategy as outlined above and are building on attributes.
	The Non-consumptive Needs Assessment Work Group Kick-off meeting was attended by South Platte BRT representatives.
Southwest Basin	
Consumptive Use Needs Assessment     Alternatives to permanent Ag dry-up     Analysis and options for Water Conservation and Efficiency	The Southwest Basin's Consumptive Use Needs Assessment update and associated task order is under consideration by a subcommittee.
Non-consumptive Needs Assessment	Roundtable will utilize non-consumptive strategy as outlined above and are building on attributes.
Yampa Basin	
Energy Development Water Needs Assessment Scoping (Joint with Colorado Basin Roundtable)	A workplan is scheduled to be completed in the summer 2007.
Evaluation of Agricultural Needs	A workplan for this evaluation has been drafted.
Non-consumptive Needs Assessment	Roundtable will utilize non-consumptive strategy as outlined above and are building on attributes.
	The Non-consumptive Needs Assessment Work Group Kick-off meeting was attended by Yampa BRT representatives.

Further information regarding the Interbasin Compact Process accomplishments and support provided to the basin roundtables to further their basinwide needs assessments can be found at:

http://dnr.state.co.us/Home/ColoradoWaterforthe21stCentury/IbccHome.htm.

Information on the Water Supply Reserve Account and continuing SWSI activities is located on CWCB's webpage:

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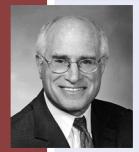


# **Colorado's Water Supply Future**



**Bill Ritter, Jr.** – Governor **Harris D. Sherman** – DNR Executive Director

# Interbasin Compact Process Quarterly Newsletter - 3rd Quarter 2007



## From Harris Sherman

Executive Director of DNR and Director of Compact Negotiations

In 2005, the Colorado General Assembly created a new collaborative process for addressing our state's water needs when it passed HB 05-1177, *The Colorado* 

Water for the 21st Century Act. This process, embodied by the Interstate Basin Compact Committee (IBCC) and nine Basin Roundtables (BRT's), marked the continuation of the state's water planning efforts that began with the Statewide Water Supply Initiative, the most comprehensive statewide analysis of water supply and demand ever undertaken by Colorado. The intent of the Interbasin Compact process is to take the knowledge gained through SWSI and, through a grassroots approach, foster inter-basin and intra-basin dialogue and agreements that lead to a more secure water future for Colorado.

This newsletter documents the progress and milestones achieved by this process in 2007 and provides an update on the following key activities.

The initial focus of the IBCC and BRT's was to lay the foundation for the process. This included identifying members and creating bylaws and ground rules upon which to operate, and it included the fundamental task of using the information gained in SWSI to educate each BRT

and IBCC member on the challenges and needs of their basins.

The strong foundation that was established in the early stages of this process enabled us to make progress on some important substantive issues in 2007. During the past year, the Interbasin Compact Process focused on four key areas:

- Developing a deeper and more comprehensive understanding of the water needs in each basin;
- Utilizing the funds made available by SB06-179 that created the Water Supply Reserve Account to fund water activities that help each basin address its water needs;
- 3. Fostering greater dialogue and understanding between basins; and
- 4. Engaging the public more actively in this important dialogue on our water future.

This newsletter briefly outlines activities in these areas and provides an update on the following:

- Update on Consumptive Uses Needs Assessments
- Update on Nonconsumptive Use Needs Assessments
- Update on Water Availability Study of Colorado River and Tributaries
- Water Supply Reserve Account
- Technical Assistance Task Orders Requested by Basin Roundtables











## **Basin-Wide Water Needs Assessments**

Developing a deeper understanding of the water needs of each basin is a complex task. To do this, the Interbasin Compact process created a multipronged framework designed to answer four questions.

- 1. What are each basin's consumptive water needs (municipal, industrial, and agricultural)?
- 2. What are each basin's non-consumptive water needs (environmental and recreational)?
- 3. What are our available water supplies (surface and groundwater) and how much water is unappropriated?
- 4. What projects or methods are available to meet our identified water needs?

Several efforts are underway to help the BRT answer these questions. Each basin is using the information learned through SWSI as the starting point and core of their needs assessment. They are adding to this information by incorporating other appropriate sources of information. For example the Colorado Roundtable is using the UPCO Study and the Arkansas Roundtable is using the documents supporting the Cooperative Flow Agreement.

BRTs also have the opportunity to identify additional information needs and submit "task orders" to our technical assistance team. For example, the Metro and South Platte Basin Roundtables are examining the impact of reusable water not being available to downstream users. The Yampa and Colorado Roundtables are taking a closer look at the water needs associated with energy development. The Gunnison Basin Roundtable is refining the water demand estimates for their smaller water providers and rural communities. Many of the BRTs have requested assistance with their nonconsumptive needs assessments. An outline and status of each BRT's task orders can be found in the attached news letters.

These efforts of the BRT's are being supplemented by several additional activities.

- Consumptive Workgroup: A group of BRT members and water leaders from across the state is examining our consumptive needs. The goal of this group is to assist the Basin Roundtables in their consumptive use needs assessments through the development of a common technical platform and water supply alternatives on a statewide basis.
- Nonconsumptive Workgroup: Similarly, a nonconsumptive work group is helping the Basin Roundtables with their non-consumptive needs assessment. With the assistance of this group,

- each BRT is identifying important environmental and recreational attributes within their basin and pursuing ways to meet their nonconsumptive needs.
- Colorado River Supply Availability Study: The CWCB in consultation and cooperation with the BRTs is studying how much water is available in Colorado River system.

When complete, these processes will come together and give us a much greater understanding of the water needs, challenges and opportunities facing our state. They will enable better planning and decision-making at the local and state level and help ensure a secure water future for all Coloradans.

# Water Supply Reserve Account

As each BRT goes through this process, they are identifying projects that can help meet their water needs but for which additional financial support is needed. That is the purpose of the Water Supply Reserve Account. Through state severance tax dollars, the General Assembly is making available grants and loans to implement water activities. Requests for funds from the WSRA must be approved by the local Basin Roundtables and are then forwarded to the Colorado Water Conservation Board (CWCB) for evaluation and approval.

Throughout 2007, WSRA funds were used to support a variety of critical programs. For example:

- The Colorado River Water Conservation District and several front range water providers are using \$200,000 to identify a long-term source of 10,825 acre-feet of water to meet flow recommendations under the Endangered Fish Recovery Program for the "15-mile Reach."
- The South Platte Basin Roundtable approved \$176,000 for a Comprehensive Feasibility Study of Ovid Reservoir.



 The Gunnison Basin Roundtable approved \$540,000 to assist the Orchard City Reservoir Project.

A complete list of the approved WSRA applications is attached.

# Fostering Inter-basin Dialogue

A fundamental objective in creating the Interbasin Compact process is the desire for basins to share information and develop a greater understanding of not just their own needs, but the needs and pressures of other basins as well. Only when the state has a collective and deeper understanding of all the needs in all of Colorado's river basins will we be able to take the necessary steps to a secure water future.

To that end, there have been some exciting developments over the past year.

- The leadership of the South Platte and Yampa/ White/Green Roundtables met to share perspectives on the major water issues in each basin and to discuss a proposed Yampa Project.
- The Colorado Basin and the Yampa/White Roundtables have been working together in a joint effort to better understand the impact of energy

- development on water supply needs on both basins.
- The four roundtables who comprise the Colorado River system have been meeting to discuss issues on the Colorado River.
- The Arkansas, South Platte and Metro Roundtables have been meeting to share their water needs and discuss potential solutions to their challenges.
- Each Roundtable has the opportunity to present their major water issues and challenges to the IBCC. These presentations provide an informational foundation for cross-basin dialogue.

These are just the beginning, and a major focus of our efforts going forward will be to increase this dialogue between basins as this is critical to ensuring a secure water future.

#### The Path Forward

Our progress will continue over the coming months. Our objectives in 2008 are to complete the basin needs assessments, create more inter-basin dialogue, move forward on the Colorado River supply availability study and increase public engagement. Together, these activities will help further the fundamental premise upon which The Colorado Water for the 21st Century Act was based:

## **Public Education and Outreach**

Colorado's water future is central to the quality of life and future of our state. It is essential, therefore, that the public be informed of and engaged in the dialogue that is shaping our water future. Much has taken place in the last year to achieve this objective, under the guidance of the Public Education and Outreach work group within the IBCC. Through the leadership of these volunteers, the IBCC website (www.ibcc.state.co.us) has been re-designed for greater clarity and ease of navigation. A wide range of materials have been created to better communicate the activities of the IBCC and BRT's. including presentations, fact sheets, and quarterly news letters. And finally, a comprehensive communications plan has been developed to further engage the public. Hundreds of stakeholders have been involved in this process but more can be done. Increasing the outreach to the public will be a major focus in the coming year and we will keep you apprised of our efforts.











that Coloradans must work together to address our state's water needs. Our future calls for nothing less.

# **Update on Consumptive Uses Needs Assessments**

The Consumptive Work Group is tasked with assisting the Basin Roundtable in developing their needs assessments. The Work Group was asked to complete a survey to focus their efforts. This short survey was sent the Consumptive Use Work Group and Basin Roundtable Chairs on October 11, 2007. The survey will gather information on which technical elements should be the focus of the consumptive Work Group. The survey consisted of eleven questions focusing on the Work Group's potential tasks:These tasks include:

- Quantifying M&I Demands to 2050
- Status of Identified Projects and Processes
- Identify Conservation Opportunities
- Addressing Agricultural Needs
- Alternative agricultural water Transfer Methods for Water Supply
- Assessing the Effects of Climate Variability on Colorado's Consumptive Use Needs
- Non-tributary Groundwater and Water Use Sustainability
- · Recalculate the Gap

Participants were also asked how the Consumptive Work Group could best be utilized. Results of the survey will be communicated to the Basin Roundtables and the Consumptive Use Work Group and will be summarized in the next quarterly newsletter.

## Update on Nonconsumptive Use Needs Assessments

The methodology being utilized by the Basin Roundtables to complete their nonconsumptive needs assessments is focusing on three stepsbuilding upon existing attributes, prioritization, and quantification. Over the last 3 months, each Basin Roundtable has reviewed and commented on the GIS coverages of the environmental and recreational attributes compiled during SWSI Phase 2. Each of the Basin Roundtables has met at least once to provide input on additional attributes they would like mapped and have begun the process of considering priorities in each of their basins. It is anticipated that there will be a February meeting with the Nonconsumptive Work Group to review each Basins' additional GIS attributes and to discuss environmental and recreational priorities.

Several of the Roundtables have requested further information on the quantification methodologies that were covered in general at the May meeting. On Monday, December 17, 2007 at 10:00 a.m. in Glenwood Springs at the Community Center, we will have a presentation by the technical experts from the technical support team covering these methodologies. There will be a presentation on sitespecific quantification techniques as well as a flow evaluation tool that has been developed by The Nature Conservancy to evaluate environmental and recreation flow needs on a broader scale than the site-specific approaches. All work group members or basin roundtable members with an interest in learning more about these quantification techniques are encouraged to attend the December Meeting.



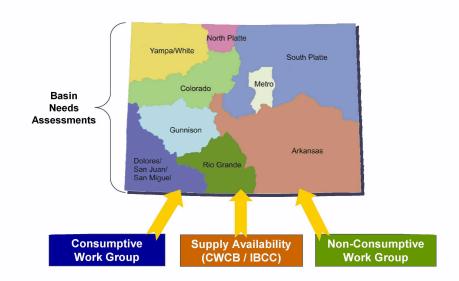
## Update on Water Availability Study of Colorado River and Tributaries

The scope of work for the Water Availability Study of the Colorado River and its tributaries was discussed at the September IBCC meeting. This scope was updated by CWCB and was finalized at the October 22, 2007 IBCC meeting.

#### Water Supply Reserve Account and Technical Assistance Task Orders Requested by Basin Roundtables

The following tables summarize Water Supply Reserve Account funding requests and the status of the 1400 Task Orders.





#### **Approved Water Supply Reserve Account Applications by the CWCB Board**

Name of Water Activity	Basin Account	Statewide Account	Total Request
Arkansas Basin Total Request	\$265,000	\$250,000	\$515,000
Arkansas Valley Conduit		\$200,000	
Tamarisk		\$50,000	
Upper Black Squirrel Creek Aquifer Recharge Investigation	\$70,000		
Round Mountain Water and Sanitation District Water Systems Improvements Project	\$120,000		
Fountain Creek Vision Task Force	\$75,000		
Colorado Basin Total Request	\$115,000	\$2,100,000	\$2,245,000
Bull Creek Reservoir No. 5 Spillway Adequacy Analysis	\$50,000		
Missouri Heights	\$25,000		
Acquisition of Vail Ditch by Grand County Interests		\$1,500,000	
Energy Development Water Needs Assessment		\$150,000	\$300,000 Joint App. (See Yampa)
Enlargement of Eagle Park Reservoir		\$250,000	
Upper Colorado Endangered Fish Recovery Alternatives Analysis		\$200,000 Joint App. With Colorado, S. Platte and Metro	
Grand County Streamflow Management Plan	\$30,000		
Roaring Fork Watershed Assessment	\$40,000		





## **Approved Water Supply Reserve Account Applications by the CWCB Board**

Name of Water Activity	Basin Account	Statewide Account	Total Request
Gunnison Basin Total Request	\$338,700	\$840,700	\$1,659,400
Off-System Raw Water Storage Project 7 Water Authority/Uncompangre Valley Water Users Association	\$56,700		
Paonia-Feldman Diversion Reconstruction; North Fork of the Gunnison River (Part 1)	\$48,000		
Paonia-Feldman Diversion Reconstruction; North Fork of the Gunnison River (Part 2)		\$62,700	
Sedimentation Management Study for Paonia Reservoir - North Fork of the Gunnison	\$79,000	\$230,000	
Overland Reservoir Dam Expansion/Restoration		\$68,000	
Lake San Cristobal Controlled Outlet Structure	\$35,000		
Safety and Serviceability Needs Inventory for Reservoirs in the Lerou Creek Drainage Basin	\$60,000		
Orchard City Water Reservoir Project	\$60,000	\$480,000	
Metro Basin Total Request	\$453,000	\$200,000	\$653,000
Parker Water and Sanitation and Colorado State University Joint Project on the Rural/Urban Farm Model	\$150,000		
Zero Liquid Discharge Pilot Study	\$200,000	\$200,000	
Chatfield Reallocation EIS/FR	\$103,000		
North Platte Basin – None Requested			
Rio Grande Basin Total Request	\$184,950	\$392,000	\$576,950
Alamosa River Watershed Restoration Project		\$104,000	
Romero-Guadalupe Channel Rectification Project	\$83,700		
Alamosa River Instream Flow Project	\$864,500		
Preliminary Design Multi-use Rio Grande Reservoir Rehabilitation and Enlargement		\$288,000	
Rio Grande Conservation Reserve Enhancement Project	\$36,750		
South Platte Basin Total Request	\$255,000	\$278,476	\$533,476
Lower South Platte Wetland Initiative Phase 1 South Platte River, CO		\$278,476	
Ovid Reservoir Feasibility Study	\$176,000		
Chatfield Reallocation EIS/FR	\$27,000		
Clear Creek Water Bank/High Altitude Storage	\$52,000		
Southwest Basin Total Request	\$107,700	\$1,260,000	\$1,367,700
Goodman Point Phase 2	\$20,000	\$240,000	
Jackson Gulch		\$20,000	
Dry Gulch Reservoir/San Juan Reservoir Land Acquisition		\$1,000,000	
Goodman Point Water Association Pipeline Environmental Assessment	\$7,700		
Jackson Gulch Reservoir Expansion	\$80,000		
Yampa/White/Green Basin Total Request	\$49,500	\$150,000	\$199,500
Energy Development Water Needs Assessment		\$150,000	\$300,000 Joint App. (See Colorado)
Morrison Creek Reservoir Feasibility Study	\$49,500		

#### **Status of 1400 Task Orders**

Name of Water Activity	Status
Arkansas Basin	
<ul> <li>Update the status of identified projects and processes (IP&amp;Ps) from SWSI</li> <li>Articulate implementation status of conservation and reuse programs</li> <li>Evaluate potential opportunities for rotational fallowing and/or leasing agreements</li> <li>Evaluate groundwater sources that were not included in SWSI Phase I, especially designated basins.</li> <li>Examine the relationship between Colorado River Compact supplies, imports from the Colorado River Basin and exports of native water supplies from the basin.</li> </ul>	Consumptive tasks, as outlined, have been scoped and will be completed over the coming months.
Non-consumptive Needs	The Arkansas Roundtable Nonconsumptive Needs Assessment Committee has met three times to discuss additional attributes and will be focusing on priorities in the upcoming months.
Colorado Basin	
Consumptive Use Needs Assessment	A task order for this work is slated for development during the end of 2007 and beginning of 2008.
Energy Development Water Needs Assessment Scoping (Joint with Yampa Basin Roundtable)	A workplan was completed for this effort. The energy study is being implemented through at Water Supply Reserve Account Grant.
Non-consumptive Needs Assessment	The Colorado Roundtable Nonconsumptive Needs Assessment Committee has met several times to discuss the environmental and recreational priorities for the Colorado Basin.
Gunnison Basin	
<ul> <li>Basinwide - Review, refine, and/or confirm the estimate of current and future water demands and supply for the smaller water providers</li> <li>Basinwide - Review and refine the estimate of current and future rural domestic demands and supply</li> <li>Basinwide - Identify vulnerabilities to water supply shortages for Gunnison Basin municipalities</li> <li>Sub-basin Specific: Upper Gunnison - Review, refine, and/or confirm the estimate of future snowmaking demands in the Upper Gunnison</li> </ul>	Technical work for this first task order will be completed over the coming months.
Non-consumptive Needs Assessment	The Gunnison Needs Assessment Committee has met one time to discuss additional attributes and priorities. The Needs Assessment Committee has started identifying additional attributes.
Metro Basin	
<ul> <li>Analysis of where providers are looking at the same water as a future supply</li> <li>Update of unappropriated water in the South Platte Basin</li> <li>Impact of water administration changes on the availability of water</li> <li>Impact of reusable water not being available to downstream users</li> <li>Status of Conservation</li> <li>Status of IPPs</li> </ul>	Technical work for this first task order has been scoped and will be completed in the near term.
Non-consumptive Needs Assessment	The Metro/South Platte Nonconsumptive Needs Assessment Committee has met one time to discuss additional attributes and priorities. The committee has started identifying additional attributes.
North Platte Basin	
Town of Walden Water Supply Evaluation	Work on this task order is underway.
Water Supply Availability	The requested water supply availability task will be completed through Decision Support System modeling updates.
Non-consumptive Needs Assessment	The North Platte Nonconsumptive Needs Assessment Committee has met one time to discuss additional attributes and priorities. The committee has started identifying additional attributes.







#### **Status of Technical Assistance Task Orders**

Name of Water Activity	Status
Rio Grande Basin	
Implementation of well monitoring program south of the Rio Grande River and evaluation of the status of the hydraulic divide	Technical work for this first task order was completed. Stakeholders in the basin are reviewing the results.
Nonconsumptive Needs Assessment	The Rio Grande Wetland Committee has met one time to discuss additional attributes and priorities.
South Platte Basin	
<ul> <li>Analysis of where providers are looking at the same water as a future supply</li> <li>Update of unappropriated water in the South Platte Basin</li> <li>Impact of water administration changes on the availability of water</li> <li>Impact of reusable water not being available to downstream users</li> <li>Status of Conservation</li> <li>Status of IPPs</li> </ul>	Technical work for this first task order has been scoped and will be completed in the near term.
Nonconsumptive Needs Assessment	The Metro/South Platte Nonconsumptive Needs Assessment Committee has met one time to discuss additional attributes and priorities. The committee has started identifying additional attributes.
Southwest Basin	
<ul> <li>Consumptive Use Needs Assessment</li> <li>Alternatives to permanent Ag dry-up</li> <li>Analysis and options for Water Conservation and Efficiency</li> </ul>	The Southwest Basin's Consumptive Use Needs Assessment update and associated task order is under consideration by a subcommittee. The committee has started identifying additional attributes.
Nonconsumptive Needs Assessment	The Southwest Nonconsumptive Needs Assessment Committee has met one time to discuss additional attributes and priorities.
Yampa Basin	
Energy Development Water Needs Assessment Scoping (Joint with Colorado Basin Roundtable)	A workplan was completed for this effort. The energy study is being implemented through at Water Supply Reserve Account Grant.
Evaluation of Agricultural Needs	A workplan for this evaluation has been drafted. Moffat County is developing a Water Supply Reserve Account Application to implement this study.
Non-consumptive Needs Assessment	The Yampa Nonconsumptive Needs Assessment Committee has met one time to discuss additional GIS attributes and priorities. The committee has started identifying additional attributes.

Further information regarding the Interbasin Compact Process accomplishments and support provided to the basin roundtables to further their basinwide needs assessments can be found at:

http://ibcc.state.co.us.

Information on the Water Supply Reserve Account and continuing SWSI activities is located on CWCB's webpage:

http://cwcb.state.co.us/IWMD/.

#### For more information, please contact:

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# Section 2 IBCC and BRT Members

#### Arkansas Basin Representatives

Patricia Alderton, Chaffee Muni

Glen Ausmus, Baca County

Monte Baker, Cheyenne Muni

Gerald Barber, El Paso County

Charles Beard, Custer Muni

Gary Belew, Ft. Carson (Liaison)

Berry Cardon, Kiowa Muni

James Broderick, Southeastern Colorado Water

**Conservancy District** 

Reeves Brown, At-Large Representative

Rod Brown, Kiowa County

Tom Brubaker, At-Large Representative

Hank Corsentino, Huerfano County

Kurt Dahl, Teller County

Jeris Danielson, Purgatoire River Water Conservancy

District

Misty DeSalvo, Forest Service (Liaison)

Reed Dils, Recreational Representative

Bud Elliott, Lake Muni

Deb Entwistle, Forest Service (Liaison)

James Fernandez, Las Animas Muni

Thomas Florczak, Pueblo Muni

Jonathon Fox, Agricultural Representative

Tim Glenn, Chaffee County

Thomas Young, Saguache County

Alan Hamel, Legislative Appointment

Raymond Harriman, Huerfano County Water

Conservancy District

Dan Henrichs, At-Large Representative

Mary Henry, Fish and Wildlife Services (Liaison)

Keith Hood, Custer County

Kathy Justice, Teller Muni

Kevin Karney, Otero County

Joe Kelley, Otero Muni

Loretta Kennedy, Pueblo County

Leroy Mauch, Prowers County

Carl McClure, Crowley Muni

Toni McPherson, Prowers Muni

Harold Miskel, CWCB Member

SeEtta Moss, Environmental Representative

Tom Musgrove, Bureau of Reclamation (Liaison)

Phil Overeynder, Non-Voting At-Large Member

Mark Pifher, Non-Voting At-Large Member

Tom Piltingsrud, Fremont Muni

Lisa Pinello, Local Domestic Water Provider

Representative

John Proctor, At-Large Representative

Jane Rawlings, Industrial Representative

Larry Reeves, Elbert County

John Reid, Lincoln County

Kathleen Reilly, Colorado Water Quality Control

Division (Liaison)

Randal Ristau, Colorado Water Quality Control

Division (Liaison)

Terry Rusher, Crowley County

Ricky Kidd, Pueblo Conservancy District

Terry Scanga, Upper Arkansas Water Conservancy

District

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Lawrence Sena, Bent Muni

Jay Skinner, Division of Wildlife (Liaison)

Max Smith, Baca Muni

Dennis Smith, Lake County

Michael Stiehl, Fremont County

Dave Stone, Lincoln Muni

John Tonko, Division of Wildlife (Liaison)

Ralf Topper, Colorado Geological Survey (Liaison)

Jeff Tranel, CSU Extension Service (Liaison)

Paul Trentzsch, Bureau of Land Management (Liaison)

Van Truan, U.S. Army Corps of Engineers (Liaison)

Wayne Vanderschuere, El Paso Muni

Roy Vaughn, Bureau of Reclamation (Liaison)

Tom Verguer, Las Animas County

Frank Wallace, Bent County

Ed Warner, Bureau of Reclamation (Liaison)

Jay Winner, Lower Arkansas Valley Water

**Conservancy District** 

Steve Witte, Division of Water Resources (Liaison)

#### Colorado Basin Representatives

Kim Albertson, At-Large Representative

Clay Altenbern, Bluestone Water Conservancy District

Ken Baker, Non-Voting At-Large Member

Peter Barkmann, Colorado Geological Survey

(Liaison)

William Bates, Non-Voting At-Large Member

Eli Beeding, Gunnison County

Paula Belcher, Bureau of Land Management (Liaison)

Linda Bledsoe, Forest Service (Liaison)



# Section 2 IBCC and BRT Members

Art Bowles, Basalt Water Conservancy District Jim Broderick, Non-Voting At-Large Member Don Carlson, Non-Voting At-Large Member James Carter, Industrial Representative Stanley Cazier, Middle Park Water Conservancy District

Thomas Clark, At-Large Representative

Dan Crabtree, Bureau of Reclamation (Liaison)

Lurline Curran, Grand County

Carlyle Currier, Collbran Water Conservancy District

Scot Dodero, Silt Water Conservancy District

Mark Fuller, Legislative Appointment

Jaci Gould, Bureau of Reclamation (Liaison)

David Graf, Division of Wildlife (Liaison)

Karl Hanlon, Garfield Muni

Fish and Wildlife Services (Liaison)

Scott Hummer, Division of Water Resources (Liaison)

Bruce Hutchins, Grand Muni

Steve Ryken, Ute Water Conservancy District

Kirk Klancke, At-Large Representative

Tom Long, Summit County

Alan Martellaro, Division of Water Resources (Liaison)

Bonie Pate, Colorado Water Quality Control Division (Liaison)

Caroline Bradford, Eagle County

David Merritt, Colorado River Water Conservation
District

Louis Meyer, Garfield County

Ken Neubecker, Environmental Representative

Chuck Ogilby, Eagle Muni

Ed Olszewski, West Divide Water Conservancy District

Philip Overeynder, Pitkin Muni

Mark Pifher, Non-Voting At-Large Member

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Ken Ransford, Non-Voting At-Large Member

John Redifer, CWCB Member

Melvin Rettig, Agricultural Representative

Rick Sackbauer, Recreational Representative

Duane Scholl, At-Large Representative

Rod Sharp, CSU Extension Service (Liaison)

Wayne Shoemaker, Routt County

Jay Skinner, Division of Wildlife (Liaison)

Scott Stoddard, U.S. Army Corps of Engineers

Rose Ann Sullivan, Pitkin County

Dale Tooker, At-Large Representative

Greg Trainor, Mesa Muni

Brent Uilenberg, Bureau of Reclamation (Liaison)

Wayne Vanderschuere, Non-Voting At-Large Member

Michael Wageck, Local Domestic Water Provider Representative

Ed Warner, Bureau of Reclamation (Liaison)

Dawn Wiedmeier, Bureau of Reclamation (Liaison) Lane Wyatt, Summit Muni

#### Dolores/San Juan/San Miguel Basin Representatives

Peter Barkmann, Colorado Geological Survey (Liaison)

Ken Beegles, Industrial Representative

Bonie Pate, Colorado Water Quality Control Division (Liaison)

Carrie Campbell, San Juan Conservancy District

Mary Helen de Koevend, Montrose Muni

Larry Deremo, Dolores County

Jim Siscoe, At-Large Representative

John Ey, Florida Water Conservancy District

Stephen Fearn, San Juan County

Daniel Fernandez, CSU Extension Service (Liaison)

James Fisher, Dolores Water Conservancy District

Mark Garcia, Archuleta Muni

David Graf, Division of Wildlife (Liaison)

Pat Greer, Animas-La Plata Water Conservancy
District

Vern Harrell, Bureau of Reclamation (Liaison)

Steven Harris, Legislative Appointment

Kay Hartman, San Miguel Water Conservancy District

Kara Hellige, U.S. Army Corps of Engineers (Liaison)

Tim Hunter, Recreational Representative

Raymond Keith, Local Domestic Water Provider Representative

Russell Kennedy, La Plata Water Conservancy District Gary Kennedy, Mancos Water Conservancy District

Gerald Koppenhafer, Montezuma County

Fred Kroeger, La Plata County

Leo Large, Montrose County

Charles Lawler, Southern Ute Indian Tribe DNR

Jerry McCaw, Agricultural Representative

Monte Naslund, At-Large Representative

Peter Ortego, Ute Mountain Ute Tribe

Pat Page, Bureau of Reclamation (Liaison)

Kelly Palmer, Bureau of Land Management (Liaison)

Hal Pierce, At-Large Representative

John Porter, Southwestern Water Conservation District

Michael Preston, At-Large Representative Mark Ragsdale, At-Large Representative



Jennifer Russell, San Miguel County and Municipalities

Robin Schiro, Archuleta County

Donald Schwindt, CWCB Member Ron Shaver, Non-Voting At-Large Member

Jay Skinner, Division of Wildlife (Liaison)

Bruce Smart, Montezuma Muni

John Taylor, Hinsdale County

Chuck Wanner, Environmental

Ed Warner, Bureau of Reclamation (Liaison)

Bruce Whitehead, Division of Water Resources

(Liaison)

Robert Wolff, La Plata Muni

#### Gunnison Basin Representatives

Mike Ahlberg, At-Large Representative

Steve Allen, Fruitland Mesa Water Conservancy District

Thomas Alvey, North Fork Water Conservancy District

Peter Barkmann, Colorado Geological Survey (Liaison)

David Baumgarten, At-Large Representative

Bonie Pate, Colorado Water Quality Control Division (Liaison)

Mike Berry, Tri-County Water Conservancy District

Thomas Brubaker, Non-Voting At-Large Member

Bud Burgess, Grand Mesa Water Conservancy District

Marc Catlin, At-Large Representative

Keith Catlin, CWCB Member

Greg Clifton, Ouray Muni

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Dan Crabtree, Bureau of Reclamation (Liaison)

Sharon Dunning (Paid Recorder)

David Graf, Division of Wildlife (Liaison)

Ralph Grover, Hinsdale County

Steve Harris, Non-Voting At-Large Member

Jim Hokit, Montrose County

Hank Hotze, Recreational Representative

Thomas Huerkamp, Delta Muni

David Kanzer, Non-Voting At-Large Member

Pete Kasper, Agricultural Representative

Wayne Shieldt, Division of Water Resources (Liaison)

Henry LeValley, Crawford Water Conservancy District

Harmon Lowman III, Ute Water Conservancy District

Dixie Luke, At-Large Representative

Olen Lund, Delta County

Flynn Mangum, Saguache County

Richard Margetts, Local Domestic Water Provider

Representative

Tyler Martineau, Gunnison Muni

Steve McCall, Bureau of Reclamation (Liaison)

John MClow, Legislative Appointment

Dennis Murphy, Bureau of Land Management

(Liaison)

Josh Penry, Mesa County

Michelle Pierce, Hinsdale Muni

Hugh Sanburg, Industrial Representative

Randy See, Montrose Muni

Ronald Shaver, At-Large Representative

Gary Shelhorn, Forest Service (Liaison)

Jay Skinner, Division of Wildlife (Liaison)

Kenny Smith, Non-Voting At-Large Member

Ken Spann, Upper Gunnison River Water

Conservancy District

Dennis Steckel, Gunnison County

Scott Stoddard, U.S. Army Corps of Engineers (Liaison)

Bill Trampe, Colorado River Water Conservation

District Danny Vanover, Mesa Muni

Ed Warner, Bureau of Reclamation (Liaison)

Jay Winner, Non-Voting At-Large Member

#### Metro Basin Representatives

Tom Acre, At-Large Representative

Chips Barry, Legislative Appointment

Mike Bartleson, Broomfield

Terry Benton, Weld Muni

Barbara Biggs, CWCB Member

Peter Binney, Local Domestic Water Provider

Representative

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Don Cook, Recreational Representative

Dan Craig, Routt Muni

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Jeris Danielson

#### Colorado Basin Representatives

Stan Cazier

Carlyle Currier

# Dolores/San Juan/San Miguel Basin Representatives

John Porter

Jenny Russell

#### **Gunnison Basin Representatives**

Bill Trampe

Marc Catlin

#### Metro Basin Representatives

Doug Scott

Chips Berry

#### North Platte Basin Representatives

Kent Crowder

Carl Trick

#### Rio Grande Basin Representatives

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#### South Platte Basin Representatives

Eric Wilkinson

Mike Shimmin

#### Yampa/White Basin Representatives

Darryl Steele

Dan Birch

#### Governor

Eric Kuhn

Melinda Kassen

Wayne Vanderschuere

Rita Crumpton

T. Wright Dickinson

Peter Binney

#### Senate Agriculture Committee

Jim Isgar

#### House Agriculture Committee

Dan Gibbs



# Section 3 Basin Roundtable Major Water Issues

#### **Arkansas**

- Arkansas River Compact requirements and existing uses and water rights result in little to no water availability for new uses.
- Growth in the headwaters region will present challenges in obtaining augmentation water for new demands.
- Concerns over agricultural transfers and its impact on rural economies are significant in the lower portion of the basin downstream of Pueblo Reservoir.
- Recreational In-channel Diversions or water rights for recreation will have an impact on the development of augmentation plans for agricultural transfers.
- Concern over water quality and suitable drinking water are key concerns in the lower basin.
- The success of two major projects is key to meeting future water needs.
- The urban landscape is very important to the economy and an important component to quality of life.

#### Colorado

- Recreation and the environment are key drivers in the basin and are important for economic health and quality of life; agriculture is especially important in the lower basin.
- Agriculture is important in the basin, especially in the lower basin (Grand Valley).
- The success of the Upper Colorado Recovery Implementation Program for Colorado River Endangered Fish is important. The Recovery Program is designed to address the recovery needs of the Colorado River endangered fish while protecting existing water uses and allowing for the future use of Colorado River water in compliance with Interstate Compacts, Treaties, and applicable federal and state law
- There is concern over a potential compact shortage during severe and sustained drought and potential impacts to in-basin supplies.
- The development of water rights associated with trans-basin projects are a concern and their effect on in-basin supplies must be considered.

#### Southwest

- This multiple basin area of the state is extremely diverse with changing demographics.
- The Pagosa Springs-Bayfield-Durango corridor is rapidly growing, has areas of localized water shortages, and is transitioning from mining/agricultural to tourism, recreation, and a retirement/second home area.
- The Cortez area remains strongly agricultural but is also seeing rapid growth with retirees moving to the area.
- The San Miguel area is a mix of recreation and tourism along with a strong desire to maintain agriculture.
- The Recovery Implementation Program is designed to address the recovery needs of the Colorado River endangered fish while protecting existing water uses and allowing for the future use of Colorado River water in compliance with Interstate Compacts, Treaties, and applicable federal and state law "the Law of the Colorado River."
- Overall water supply is available but getting sufficient infrastructure and water distribution will be a key challenge.
- The Colorado River Compact places pressure on uses of the San Juan River because New Mexico's primary source of the upper Colorado River Basin supplies is the San Juan River.

#### Gunnison

- Growth in the headwaters will require additional water management strategies;
- Addressing agricultural water shortages in the upper portion of the basin is an important goal of the community; lack of financial resources is an impediment.
- There is concern over possible future trans-basin diversions and the effect this might have on the basin's future.
- Resolving federal issues is a priority. These issues include: resolving the National Park Service claims for flows in the Black Canyon, completion of the Blue Mesa/Aspinall reoperations EIS, and addressing Endangered Species issues in the Gunnison River



- near the confluence with the Colorado River main stem.
- The area between Ouray and Montrose is rapidly growing. Tourism is important in the headwater areas but agriculture is dominant in the Uncompanding Valley. A rapid influx of retirees and growth in the Uncompanding Valley may dramatically change the agricultural uses and land use in the area.

#### Metro

- Competition for water is fierce and it is unclear how much competition there is for the same water supplies.
- The lack of any new major water storage in the last 20 years has led to reliance on non-renewable groundwater in Douglas, Arapahoe, and northern El Paso (El Paso County is in the Arkansas Basin) Counties. Explosive growth in these counties coupled with the lack of surface water supplies led to the creation of multiple small water districts and makes coordinated water development a challenge and less efficient especially in light of limited renewable surface water supplies.
- Water reuse and conservation are major components to meeting future water needs but this will put added pressure on agriculture as return flows diminish.
- Transfers of agricultural water rights to M&I use will continue to be a significant option for meeting future needs.

#### **North Platte**

- Storage, existing diversion structures and water right use classification for the Town of Walden, Jackson County's only incorporated municipality.
- Forest management in light of the extensive mountain pine beetle epidemic and the potential damage to watersheds and water supplies from catastrophic wildland fire.
- Quantification of available unappropriated waters within the basin.
- Potential impacts from coal-bed methane development.
- Consumptive uses and losses and high-altitude crop coefficients.
- Gaining knowledge and understanding of the South Platte Decision Support System as it may affect the basin and historical documentation of irrigated acreage.

#### **Rio Grande**

- The Compact and the effects of prolonged drought make the objective of sustainability difficult.
- Agricultural ground water use is currently at unsustainable levels.
- Economic impacts of reducing irrigation use of groundwater supplies will be difficult, but working on community based solutions offers the best hope of minimizing the impacts.
- Rapid residential growth, especially in the South Fork area, is creating a need for augmentation of water supplies.
- Groundwater is a key component of water use in the basin for both M&I and agriculture

#### **South Platte**

- Colorado's most diverse and industrialized basin.
   Agriculture is still a dominant water use but rapid changes are occurring and the impacts to rural communities are a key concern.
- Competition for water is fierce and it is unclear how much competition there is for the same water supplies.
- The success of the Upper Colorado Recovery Implementation Program for Colorado River Endangered Fish is important. The Recovery Program is designed to address the recovery needs of the Colorado River endangered fish while protecting existing water uses and allowing for the future use of Colorado River water in compliance with Interstate Compacts, Treaties, and applicable federal and state law "the Law of the Colorado River."
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- Water reuse and conservation are major components to meeting future water needs but this will put added pressure on agriculture as return flows diminish.
- The urban landscape is very important to the economy and an important component to quality of life.



 Transfers of agricultural water rights to M&I use will continue to be a significant option for meeting future needs.

#### Yampa/White/Green

- Emerging development of gas and oil shale resources is impacting water needs both for the direct production needs and the associated increase in municipal use.
- Agriculture, tourism, and recreation are vital components to this basin's economy.
- Industrial uses, especially power production, are a major water use. Future energy development is less certain.
- While rapidly growing in some areas (Yampa River/Steamboat area) the basin is not developing as rapidly as other portions of the state. This has led to concern that the basin will not get a "fair share" of water use afforded to Colorado under the Colorado River Compact.
- Implementation of a successful Endangered Species Program is vital to ensuring protection of existing and future water uses.



# Section 4 Consumptive Work Group Members

#### Arkansas Basin Work Group Members

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Alan Hamel, Pueblo Board of Water Works

Dan Henrichs, High Line Canal

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