

State Water Policy

This document outlines the major features of Colorado's water policy landscape including its water law, state water agencies, recent legislative initiatives to address Colorado's growing water demands, and state funding sources for water supply projects.

Colorado's Natural Water Supply Challenges

Limited and irregular precipitation. Colorado is a semi-arid state that receives a statewide average annual precipitation of 15 inches, with large areas receiving less than 10 inches annually. It periodically experiences extended droughts. In an average year, approximately 16 million acre feet (MAF) of water flows in Colorado's rivers. One acre foot of water is the amount of water needed to flood an acre of land to a depth of one foot, or 325,851 gallons.

Reliance upon snow melt and water storage. The majority of water in the state comes from snow in the mountains. Consequently, most of the annual stream flow occurs during the three-month spring run off, from May through July. To manage the state's inconsistent water supply, over 2,000 dams and reservoirs have been constructed throughout the state. Combined, these reservoirs can hold over 6 MAF of water. As of October 1, 2010, statewide water storage was 102 percent of average. During the drought of 2002, it was 48 percent of average. The Continental Divide also runs through the state and separates much of Colorado's water supply from its population centers. Approximately 80 percent of the rain and snow falls in the state west of the divide; however, most of the state's population lives on the eastern side. Colorado is a headwaters state, meaning its waters flow out to many states, but very little water flows in. The state is the source for several major river systems including the Arkansas, Platte, Colorado, and the Rio Grande that provide water to a number of neighboring states.

Water Law for Streams and Groundwater that is Connected to Streams

Colorado's water law, called the **doctrine of prior appropriation**, was developed to address the water supply challenges of a semi-arid state. According to this law, a water right is a property interest that is separate from the land. This allows water to be moved across the state from where it occurs naturally to where it can be used. The law also allocates water during droughts and seasonal shortages based on the seniority of a water right. Eight other western states have adopted a similar water law including Alaska, Arizona, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming. The remaining western states have adopted a modified version of this law.

Water rights. A water right is a right to use water. In general, people who take water from a stream must allow the unconsumed water to return to the stream for use by others. For example, an acre of corn consumes approximately 40 percent of the water applied to it. The law requires that the remaining 60 percent of the water taken from the stream be allowed to return to the stream for use by others. Water users may lose all or part of their rights if a water court determines that the water has not been put to a beneficial use within legal deadlines or the user has abandoned his or her right.

Water rights may be obtained for a number of beneficial uses. Agricultural, domestic, and mining are the oldest types of legally recognized uses. Others include power generation, snow making, stock watering, fire protection, and dust suppression. More recently, Colorado recognized the preservation of natural habitat (instream flows) and water-based recreation as beneficial uses of water.

A water right is created by using water for a legally recognized use, such as irrigation. In general, a potential water user first goes to water court to determine if water may be removed from the stream without injuring existing water rights. If approved, a water judge sets a priority for the right to use a specific amount of water, the location of the diversion, the purpose, and if necessary, any conditions to protect senior water rights. The earlier the date of the appropriation, the more "senior" the water right and the more valuable it is. Some of Colorado's most senior water rights date to the 1860s. Court recognition of a water right enables the owner to make an enforceable "call" during water shortages. Once a valid call has been made, water use by junior water rights must be curtailed until the senior water right has been satisfied. A water right is a property interest that may be sold or transferred, provided that no other water right is injured and the transfer is approved by the division water court. Water rights have been granted for most of the stream flows in the state or obligated to downstream states by interstate compacts.

Tributary ground water. Use of ground water that is connected to surface streams, called tributary ground water, is regulated according to the doctrine of prior appropriation. This policy helps maximize the use of Colorado's large tributary aquifers while protecting senior surface water rights. Over 500,000 AF are pumped annually from wells near the South Platte and Arkansas rivers, primarily for agricultural purposes. Most of these wells are administered in priority, with most wells being junior to surface water users.

Interstate compacts. Approximately 10 MAF of river water flows across Colorado's borders annually. Almost all of this water is legally obligated to downstream states and Mexico by interstate compacts and federal court decisions. A compact is an agreement between two or more states that is approved by Congress. Compacts and court-ordered decrees are administered in the same manner as other water rights in the state. During times of shortage, certain in-state water users may be prohibited from diverting water until a compact obligation is satisfied.

Water Law for Ground Water that Is Separate from Streams

Some ground water in Colorado is unconnected to streams. The legislature has developed a different water law to promote the use of these resources while protecting other water users. The following section describes the water law for designated ground water and nontributary ground water.

Designated ground water. In eastern Colorado, there are few rivers, but there are large ground water resources that are important to agriculture. These waters include Colorado's portion of the Ogallala Aquifer that extends from South Dakota to Texas. This ground water is essentially nonrenewable and isolated from surface streams. Wells are the primary form of water access in this area. The law allows the formation of designated ground water basins that are regulated according to a modified doctrine of prior appropriation that seeks to protect older wells from impacts caused by newer wells. Over 1 MAF of water is pumped each year from Colorado's eight designated ground water basins in eastern Colorado. Ground water basins are designated by the

Ground Water Commission that is housed within the Colorado Department of Natural Resources. In general, designated basins may only include ground water that is not naturally available for decreed surface water rights. Such basins may also include ground water in areas not adjacent to continuously flowing natural streams where wells have been the principal source of water for at least 15 years.

Nontributary ground water. Colorado also has large ground water resources in deep underground rock aquifers, called nontributary ground water. Most of this water is found outside of designated basins. These waters include the Denver Basin Aquifer that underlies much of the Denver metro area and is primarily used by Parker, Highlands Ranch, and other southern metropolitan communities. Use of nontributary ground water is based on legislatively defined criteria that allows for the gradual depletion of this nonrenewable resource. Nontributary ground water is defined in statute as ground water that will not, within 100 years, deplete the flow of a stream at an annual rate greater than one-tenth of one percent of the annual pumping rate. Ownership of nontributary ground water is based on overlying landownership. Annual well pumping is also limited to one percent of the underlying nontributary ground water. A well permit from the State Engineer in the Department of Natural Resources must be obtained prior to drilling for nontributary ground water. Unlike water in streams, claims for nontributary ground water typically do not go through water court.

Primary State Water Agencies

Three state entities are primarily responsible for allocating water and water policy development in Colorado: water courts, the Division of Water Resources, and the Colorado Water Conservation Board. Twelve other state agencies also have water-related responsibilities. For example, the Division of Wildlife protects and enhances aquatic wildlife, the Division of Parks and Outdoor Recreation manages water-based recreation, and the Water Quality Control Commission regulates water pollution discharge into state waters.

Water courts. The Water Court, housed within the Judicial Department, is responsible for determining water rights. Specifically, water court judges have exclusive jurisdiction over determination of new water rights, changes of water rights, approval of plans to protect senior water rights, findings of reasonable progress on water construction projects, approval of exchanges, and approvals to use water outside the state. A water judge may also order a water user to obey a division engineer's order to cease injury to senior water rights or to cease diversions that are not being used beneficially. There are no juries in water court cases and judgments entered by water courts are subject to review by the Colorado Supreme Court. Seven water divisions are established in statute, corresponding to the state's seven major river basins including the Arkansas, Colorado, Rio Grande, Gunnison, San Juan-Dolores, South Platte, and Yampa-White river basins. Each water division has a water court. The Colorado Supreme Court appoints district judges from each water division to act as water judges.

Division of Water Resources (DWR). The DWR is directed by the State Engineer in the Department of Natural Resources. The State Engineer administers water rights, issues water well permits, monitors stream flows and water uses, inspects dams for safety, and represents Colorado in interstate water compact proceedings. The State Engineer and staff are allowed to enter private property and inspect the transportation, storage and uses of water, and to stop diversions that injure senior water rights or are not being used beneficially. For FY 2010-11, the General Assembly appropriated \$20.8 million and 252 FTE to the division from the following sources: \$18.8 million from the General Fund, \$1.8 million from fees, and \$135,000 from federal funds.

Colorado Water Conservation Board (CWCB). The CWCB in the Department of Natural Resources is the state's primary water policy and planning agency. Its major programs include water supply protection, flood protection, conservation and drought planning, stream and lake protection (instream flow program), and water supply planning and finance. The CWCB is governed by a 15-member board that is charged with conserving the state's waters to promote utilization and to prevent floods. For FY 2010-11, the General Assembly appropriated \$8.6 million and 45.7 FTE to the board primarily from the following sources: \$7 million from the CWCB Construction Fund, \$1.3 million from the Operational Account of the Severance Tax Trust Fund (funded by a tax on the extraction of nonrenewable natural resources), and \$0.1 from federal funds. No General Fund moneys have been appropriated for the CWCB since FY 2000-01, when the legislature replaced these moneys with moneys from the CWCB Construction Fund.

Recent Legislative Initiatives to Address Colorado's Growing Water Demand

In 2002, Colorado experienced one of the worst droughts in its history. This drought, and Colorado's rapid population growth, led the water community to reexamine Colorado's water policies. Since 2002, the General Assembly has commissioned several major water supply studies and enacted major new laws. The following section describes two of these developments: the Statewide Water Supply Initiative and the Interbasin Compact Committee.

Statewide Water Supply Initiative. In 2003, the General Assembly commissioned the *Statewide Water Supply Initiative (SWSI)* to explore water supply and demand issues in each of the state's eight major river basin. This study, completed by the CWCB in 2004, estimated that Colorado will need an additional 630,000 AF annually to meet demand in 2030, primarily for municipal and industrial purposes. It further determined that as much as 80 percent of this demand may be satisfied from existing and planned water projects. Depending on a community's geography, financial resources, and other factors, these projects may include transferring agricultural water rights, storing additional water, increasing water use efficiency, and using nonrenewable groundwater. This study was updated in 2007 to reflect additional information developed by technical roundtables concerning water conservation and efficiency, alternatives to agricultural water transfers, environmental and recreational resource needs, and alternatives to address the gap between current supply and future water needs.

Interbasin Compact Committee. In 2005, the General Assembly enacted the Colorado Water for the 21st Century Act which established a process to address the state's growing water demand. This law created nine basin roundtables covering the:

- Denver metropolitan area;
- South Platte River Basin;
- Arkansas River Basin;
- Rio Grande River Basin;
- Gunnison River Basin;
- Colorado River Basin;
- Yampa-White River Basin;
- Dolores-San Miguel-San Juan River Basins; and the
- North Platte River Basin.

These roundtables are charged with identifying water needs within each basin and conducting discussions with other basins to address interbasin water issues. The law also created a 27-member Interbasin Compact Committee (IBCC) to facilitate negotiations between the

roundtables. In 2006, the General Assembly approved the IBCC's charter that includes principles to guide negotiations between roundtables and defines the process for ratifying interbasin compacts. It also defines the process for integrating the interbasin compact process with other water planning and development processes such as the SWSI. Each basin roundtable is charged with developing a basin-wide water needs assessment. A basin report was prepared for each roundtable based on information from the CWCB's Statewide Water Supply Initiative. The basin roundtables have also conducted additional studies to supplement the CWCB report.

State Funding Sources for Water Studies and Projects

Most of Colorado's largest water projects were constructed with federal moneys, local property taxes, and user fees. The state funds several smaller programs for the planning, construction, and rehabilitation of private and public water supply projects. The following section describes the CWCB Construction Fund and several loan and grant programs funded by severance tax revenue.

The CWCB Construction Fund. This revolving loan program funds projects that increase the consumption of Colorado's undeveloped river entitlements and that repair and rehabilitate existing water storage and delivery facilities. Moneys in the fund may also be used to pay for up to 50 percent of the cost of feasibility studies and water supply investigations. Loans may not be used for domestic water treatment and distribution systems. The fund receives revenue from the repayment of loans, interest on the fund in the state treasury, and federal mineral royalty distributions. As of June 30, 2010, the fund's value was \$324 million including \$238 million in outstanding loans, \$24 million in authorized projects under contract, \$39 million in authorized projects not yet under contract, and \$24 million available for new loans. The CWCB is authorized to adjust loan interest rates that currently range from 2.75 percent for agricultural loans to 6.25 percent for commercial loans. Loans for more than \$10 million must be approved annually by the General Assembly. To address revenue shortfalls, the General Assembly transferred \$10.25 million from the CWCB Construction Fund to the General Fund in the FY 2008-09 budget.

Severance Tax Trust Fund. State law provides that 50 percent of severance tax revenues are credited to the Severance Tax Trust Fund and 50 percent of the revenues are credited to the Department of Local Affairs for grants and distributions to local governments impacted by mining activities. Of the revenue credited to the Severance Tax Trust Fund, 50 percent is allocated to the Perpetual Base Account of the Severance Tax Trust Fund (or 25 percent of total severance tax revenues) for use by the CWCB to build water projects. The other 50 percent of Severance Tax Trust Fund revenues (or 25 percent of total severance tax revenues) are allocated to the Operational Account to fund programs that "promote and encourage sound natural resource planning, management, and development related to minerals, energy, geology, and water."

Perpetual Base Account. The CWCB issues loans for water projects from moneys in the Perpetual Base Account. As of June 30, 2010, the fund's value was \$297 million, including \$164 million in outstanding loans, \$51 million for projects under contract, \$78 million for projects not yet under contract, and \$5 million available for new loans. In 2008, the General Assembly appropriated \$60.6 million from the Perpetual Base account for a loan to build a pipeline that will deliver water to the Republican River and help Colorado comply with its water delivery obligations to downstream states under the Republican River Compact. Starting June 30, 2011, \$12 million will be transferred annually for three consecutive years to the CWCB from the Perpetual Base Account for the purchase of 10,460 acre-feet of water from the Animas-La Plata Project in southwest Colorado. To address revenue shortfalls in FY 2008-09 through FY 2010-11, the General Assembly transferred \$120 million from the Perpetual Base Account to the General Fund.

Operational Account. A law passed in 2008 divides programs funded from the Operational Account of the Severance Tax Trust Fund into two tiers. Tier 1 programs support the operations of the Colorado Department of Natural Resources, including employee salaries. Tier 2 programs support grants, loans, research, and construction projects. Tier 2 programs are subject to proportional reduction if mid-year revenue projections indicate there are insufficient funds. The distribution of funding for Tier 2 programs is staggered over the course of the fiscal year with 40 percent released July 1, 30 percent released January 4, and the final 30 percent released April 1. Several water related programs receive Tier 2 moneys. Following is a review of two of these programs: the Water Supply Reserve Account and the Water Efficiency Grant Program.

Water Supply Reserve Account. The Water Supply Reserve Account is part of the Operational Account. It was created in 2006, to help address Colorado's water needs and support the Interbasin Compact Committee process. From FY 2006-07 to FY 2009-10, the General Assembly has appropriated \$26 million from the Operational Account for water activities approved by CWCB including water diversion projects and nonstructural activities. Moneys in the account may be used for grants or loans. Spending from the Water Supply Reserve Account does not require legislative approval. Once a request for funding from the Water Supply Reserve Account is approved by a basin roundtable, the request is forwarded to the CWCB for funding evaluation and final authorization. Eligible activities include:

- competitive grants for environmental compliance and feasibility studies;
- technical assistance regarding permitting, feasibility studies, and environmental compliance;
- studies or analyses of structural and nonstructural water projects or activities; and
- structural and nonstructural water projects or activities.

In 2009, the legislature passed a law that transfers \$10 million annually, starting in FY 2010-11, from Tier 2 of the Operational Account of the Severance Tax Trust Fund to the Water Supply Reserve Account and continues these transfers indefinitely thereafter. This law also prohibits the CWCB from allocating moneys by grant or loan from the account to "covered entities" unless they have adopted a water conservation plan. Covered entities are defined as a municipality, agency, or utility with a legal obligation to provide retail water to a customer base with a total demand of at least 2,000 acre-feet. Repayments of principal and interest on loans from the account will be credited to the account.

Water Efficiency Grant Program. The Water Efficiency Grant Program is administered by the CWCB's Office of Water Conservation and Drought Planning. The program provides financial assistance to communities, water providers, and eligible agencies for water conservation-related activities and projects. Eligible entities, state and local governments, and agencies can receive funding to develop water conservation and drought plans, to implement water conservation goals outlined in a water conservation plan, and for public education and outreach regarding water conservation. In 2010, the General Assembly extended the Water Efficiency Grant Program to 2020 and authorized annual appropriations of up to \$550,000 from the Water Efficiency Grant Program beginning on July 1, 2010. However, because of anticipated reductions of severance tax revenue available for Tier 2 programs, actual expenditures are expected to be below the authorized funding for at least the current fiscal year.

Other Funding Sources for Water Projects

Colorado Water Resources and Power Development Authority (CWRPDA). The CWRPDA is an independent public entity created by the General Assembly in 1981 to finance water supply and water quality projects. The CWRPDA may issue revenue bonds as an indebtedness of the authority which does not obligate the state or any political subdivision. The authority is governed by a nine-member board appointed by the Governor. The authority has provided \$1.3 billion in low-interest loans to governmental entities in Colorado for water pollution control and drinking water projects through the state revolving funds created under the Clean Water Act and the Safe Drinking Water Act. In 2001, the authority committed \$20 million for water resources development through the water revenue bond program. The authority's water revenue bond program helps investment grade borrowers finance projects by purchasing bond insurance, pooling borrowers, investing proceeds, and providing other cost-saving services. The authority is allowed to provide similar assistance for loans over \$500 million, provided the projects are determined to be feasible by the CWCB. The General Assembly must adopt a joint resolution authorizing the authority to consider the project, and the resolution must be signed by the Governor. Due to the streamlined approval process, projects under \$500 million may receive funds approximately three months after application. Due to the legislative cycle, the projects over \$500 million may require up to one year to complete the approval process. Nearly \$400 million has been issued for water supply project loans since 2001, and \$19.5 million is available in 2010 to subsidize the cost of borrowing money for water resource development projects.

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Key Provisions of Law

Article XVI, Section 5, Colorado Constitution. Guarantees the right to appropriate available water for a legally recognized use.

Article XVI, Section 6, Colorado Constitution. Establishes the doctrine of prior appropriation.

Article XVI, Section 7, Colorado Constitution. Allows for the construction of rights-of-ways for ditches, canals, or flumes.

Section 37-45-101, C.R.S., et seq. The Conservancy District Act provides a mechanism for local communities to form water conservancy districts to finance dams, tunnels, and other water works that provide water for irrigation, mining, domestic, and other beneficial uses.

Section 37-45.1-102 (1), C.R.S. Allows the formation of government-owned water activity enterprises and to clarify how the Taxpayer's Bill of Rights (TABOR) applies to these entities.

Section 37-60-101, C.R.S., et seq. Specifies membership and the powers and duties of the Colorado Water Conservation Board including administration of the CWCB Construction Fund.

Section 37-75-101, C.R.S., et seq. The Colorado Water for the 21st Century Act creates the Interbasin Compact Process.

Section 37-80-101, C.R.S., et seq. Section 37-92-301, C.R.S. et seq., and Section 37-92-501, C.R.S., et seq. Specifies the powers and duties of the State Engineer and the Division of Water Resources.

Section 37-90-101, C.R.S., et seq. The Colorado Ground Water Management Act regulates the use of designated ground water, including defining the powers and duties of the Ground Water Commission and Ground Water Management Districts.

Section 37-90-137, C.R.S. Regulates the use of the Denver Basin Aquifer and other nontributary ground water located outside of designated basins.

Section 37-92-101, C.R.S., et seq. The Water Right Determination and Administration Act regulates the use of river water and ground water connected to rivers.

Section 37-92-102, C.R.S. Defines the basic tenets of Colorado water law.

Section 37-92-301 through 308, C.R.S. Establishes the water court's process and criteria for determining and administering water rights.

Section 37-95-101, C.R.S., et seq. Specifies membership and the power and duties of the Colorado Water Resources and Power Development Authority.

State Water Policy



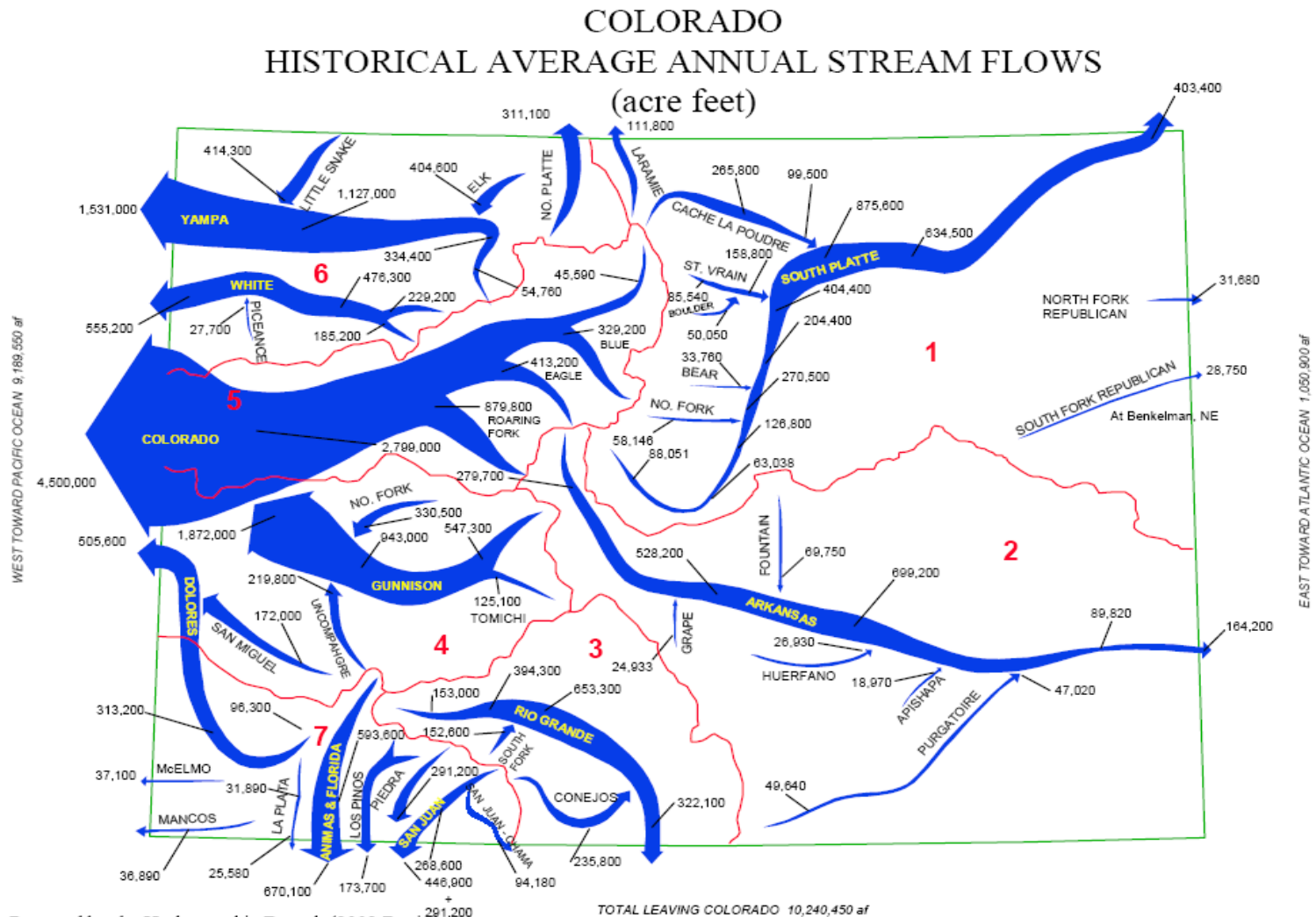
Presentation Topics

- Water supply challenges
- Water law for streams and ground water
- State water agencies
- State funding sources for water projects

Colorado's Water Challenges

- Colorado is semi-arid with statewide annual precipitation of 15 inches
- Irregular precipitation across the state and throughout the year
- Most of the water users and most of the natural supply are located on opposite sides of the continental divide or away from naturally flowing streams
- Subject to periodic droughts

Challenge 2 - Uneven Distribution of Streams and Populations



Prepared by the Hydrographic Branch (2003 Revision)
Historic averages obtained from USGS Water-Data Report CO-02

OFFICE OF THE STATE ENGINEER
COLORADO DIVISION OF WATER RESOURCES

Stream Water Law

- Doctrine of prior appropriation: “First in time, first in right”
- Applies to all water in rivers and any ground water connected to a stream
- Allocates most of the water used in the state
- Established in Colorado Constitution

Exceptions to the Rule

- Designated ground water– allocated according to a statutory criteria that seeks to protect older wells from impacts caused by newer wells
- Nontributary ground water - allocated according to a statutory system that seeks to manage the depletion of a nonrenewable resource

Primary State Water Agencies

- Water Courts
- Division of Water Resources
- Colorado Water Conservation Board

Water Courts

- Determines water rights claims
- One water court in each water division
- Water judges designated by State Supreme Court from district court judges
- Housed within the Judicial Department

Division of Water Resources

- Also known as the Office of State Engineer
- Responsibilities include:
 - Administering water rights
 - issuing well permits
 - monitoring stream flows and uses
 - Inspecting dams
 - representing the state in interstate water compact litigation
- Housed within Department of Natural Resources
- \$20.8 million budget appropriation in FY 2010-11, primarily from General Fund, and 252 employees

Colorado Water Conservation Board

- Colorado's primary water policy and planning agency
- Finances water projects
- Housed within Department of Natural Resources
- \$8.6 million budget appropriation in FY2010-11 and 46 employees

State Funding Sources for Water Projects

- CWCB Construction Fund
- Severance Tax Trust Fund Perpetual Base Account loans
- Colorado Water Resources and Power Development Authority loans

CWCB Construction Fund

- CWCB Construction Fund
 - \$324 million value as of June 30, 2010
 - In 2011, \$24 Million will be available for new loans and grants
 - Appropriated annually by General Assembly
- Moneys available for public and private projects including
 - New water projects
 - Repairs to existing facilities
 - Grants for project feasibility studies and water supply investigations
 - Water studies and resource planning tools

Severance Tax Trust Fund Perpetual Base Account

- Fund's value was \$297 million as of June 30, 2010
- \$5 million available for new loans in 2011
- Administered by CWCB
- Loans approved by General Assembly in annual bill
- In 2008, \$60 million loan approved to build a pipeline to help Colorado Comply with the Republican River Compact. In 2010, \$36 million allocated to purchase water from the Animas-La Plata Project
- Since 2008, \$110 million transferred to the General Fund

Operational Account

- Receives 25 percent of severance tax revenue
- Portion of operational account allocated to “Tier 2” programs for water projects and studies including
 - Water Supply Reserve Account
 - Water Efficiency Grant Program
- Moneys allocated to Tier 2 programs are subject to proportional reduction if revenue is insufficient to meet statutory allocations

Water Resources and Power Development Authority

- \$19.5 million available for water resources development
- Money primarily used to reduce the cost of borrowing by a project sponsor
 - Providing bond insurance
 - Pooling borrowers
 - Investing proceeds
- Available for state and local entities. Not available to private entities.
- General Assembly must authorize projects over \$500 million



Questions?