

1. Introduction: Collaborating on Colorado's Water Future

Colorado's Water Plan

People love Colorado. Our population ballooned from 1 million in 1930 to more than 5 million today, and is projected to grow even faster in the future. So how do we ensure that this population growth doesn't change what we know and love about our state? When it comes to our water, this plan has answers.

This plan articulates collaborative, balanced water solutions to Colorado's water challenges. Equally important, it also establishes the method by which we will continue to find solutions into the future. This method is based in our grassroots basin roundtable structure and the geographic representation that forms the Colorado Water Conservation Board (CWCB).

The Colorado Water Conservation Board

The CWCB is Colorado's water planning and policy agency and is responsible for stream, watershed, and lake protection, water conservation, flood mitigation, stream restoration, drought planning, water supply planning and water project financing. The agency works to protect the state's water apportionments in collaboration with other western states and federal agencies¹

If we're smart and strategic, (and we are), Colorado has enough water to meet our needs well into the future. As is the case with other Western States, however, we do not have enough water for all of our needs all of the time. Therefore, our principal water challenge lies not in the amount of water we're given but in our management of what we have.

We have used the real and looming "gap" between water supply and demand to catalyze action on water in Colorado. The trade-offs in addressing this gap, if we do nothing or if we continue the status quo, are unacceptable to most of us:

- Continued rapid removal of water from farms and ranches to supply urban growth.
- A blind hope that basin economies, watersheds, and ecosystems can withstand more water diversions.
- Continued mining of groundwater aquifers to supply municipal growth.
- Populations striving to recreate the water-intensive landscapes of the Eastern U.S. instead of adopting a Western water ethic.
- Unchanged regulatory processes for critical water storage projects that require increasingly impracticable amounts of time and money.
- Diminished ability to resist federal government intervention in state water management decisions because we've weakened state management tools.

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- Transactional costs that prohibit efficient and effective water sharing.
- Water laws and administration that are out of touch with our changing needs.
- Dogmatic views of water law that position the State of Colorado as the sole obstacle to changes in water use.
- No plan to finance the daunting cost of water infrastructure projects (municipal, industrial, and environmental).

This is the de facto future we are handing down to our children and grandchildren if we do nothing. It is a future without a value-based strategy. Colorado's Water Plan offers an alternate path. Unfortunately, this path will not solve all our problems and it will not be easy. It will require the continued hard work and effort of Coloradans both inside and outside the water profession.

This strategic plan is the first of its kind for Colorado: a plan by Coloradans, for Coloradans. Colorado's Water Plan is designed to be dynamic so that it can evolve as Colorado grows and transforms. While the plan reflects the most current water data available, the CWCB will update the plan as data, needs, and projections change.

In May 2013, Governor John Hickenlooper issued Executive Order D 2013-05 that directed the CWCB to prepare a water plan for Colorado (see Appendix A). The order directed:

- A. Colorado's water policy must reflect its water values.
- B. The CWCB will work with the Governor's Office to complete the final plan no later than December 10, 2015.
- C. The CWCB is directed to align state support of projects, studies, funding, and other efforts as part of Colorado's Water Plan to the greatest extent possible.
- D. The CWCB is directed to align the state's role in water project permitting and review processes with the water values and to streamline the state role in the approval and regulatory processes regarding water projects.
- E. The CWCB is directed to utilize the Interbasin Compact Committee (IBCC) and the basin roundtables in drafting Colorado's Water Plan. The CWCB is also directed to review and build upon discussions and points of consensus that have emerged as part of the IBCC and basin roundtable processes to capitalize on the momentum generated by these grassroots efforts.
- F. The CWCB is directed to work with its sister agencies and other relevant state agencies as needed.
- G. Colorado's Water Plan will reaffirm the Colorado Constitution's recognition of priority of appropriation while offering recommendations to the Governor for legislation that will improve coordination, streamline processes, and align state efforts.

Colorado's Water Values

This plan acts as a foundation for Colorado to honor the state's core water values. These water values, set out in the Governor's executive order, were developed by assessing the grassroots work done by the IBCC and basin roundtables.

Our History of Collaboration

The year 2015 marks more than a decade of unprecedented efforts engaging diverse stakeholders and developing water planning information, which serves as the foundation of Colorado's Water Plan. During this past decade, Coloradans from all sectors identified the need for a focused plan for the future.³

Colorado's Water Values²

- A productive economy that supports vibrant and sustainable cities, viable and productive agriculture, and a robust skiing, recreation, and tourism industry;
- Efficient and effective water infrastructure promoting smart land use; and
- A strong environment that includes healthy watersheds, rivers and streams, and wildlife.

The roots of the water plan started with extreme drought in 2002 and 2003. When some municipalities were mere weeks away from running out of water, the need for a comprehensive analysis of Colorado's water needs was apparent and sparked the Statewide Water Supply Initiative (SWSI).⁴ The CWCB leads the SWSI, an ongoing analysis of Colorado's water resources that provides key technical data and information used to guide decision making. The SWSI also takes different climate variability scenarios into account. As a result of the SWSI and other technical work, Colorado has more information today than ever before about available water supplies and agricultural, environmental, recreational, and community water needs.

In 2005, Colorado leaders recognized the need to depoliticize water issues for the good of the entire state. The General Assembly passed and Governor Bill Owens signed House Bill 1177 that created 10 essential stakeholder engagement bodies: the IBCC and nine basin roundtables.⁵ The 27 members of the IBCC represent every basin and nearly every water perspective in Colorado. The IBCC agrees that steps must be taken in the near future to avoid the undesirable consequences that will result from a growing water gap.⁶

In 2014, each basin roundtable developed a draft Basin Implementation Plan (BIP) that examined their future water needs and provided strategies for addressing those needs. The basin roundtables brought together representatives from the business community, local government, water users, as well as stakeholders representing the environment, agriculture, recreation, and various industries. Providers from each of Colorado's major river basins and the Denver metro area began mapping out each basin's needs. The grassroots approach of the basin roundtables and the IBCC (which engaged hundreds of stakeholders across diverse sectors and regions) enabled citizens in each basin to share their vision for Colorado's water future, "produced informed discussions, provided a forum for building consensus, and generated momentum."⁷ The last decade has focused on actively engaging communities through concerted public involvement, and developing balanced, locally-driven, and collaborative water management solutions: the building blocks of this water plan.

Why Do We Need a Water Plan?

Colorado is widely regarded as one of the best locations in which to live, work, and play.⁸ As a result, more people and businesses are moving to Colorado and staying. Even with a robust conservation ethic, this growth will increase demand for water. At the same time, we have witnessed sustained and systemic drought on a scale never before recorded by humans. This gap between water supply and our increased demand for water results in the possibility of a significant shortfall within the next few decades, even with aggressive conservation and additional water projects.⁹ To complicate matters further, precipitation patterns and amounts have recently shown their ability to swing and vary wildly. For example, in 2013 Colorado suffered from systemic drought and deadly flooding simultaneously.¹⁰

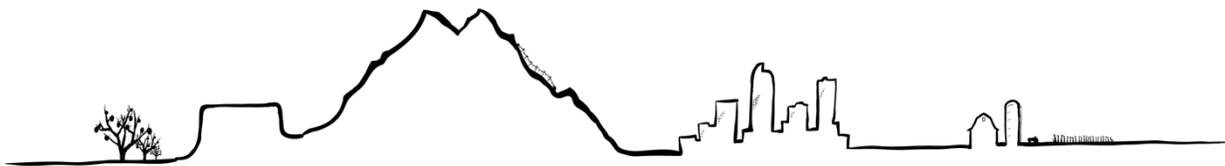
These are the big water challenges facing us:

- **Growing water supply gap:** The gap between municipal water supply and demand is growing, and conservation and the completion of proposed water projects are likely insufficient to address projected 2050 shortfalls that could total more than 500,000 acre-feet statewide.¹¹
- **Agricultural dry-up:** Irrigated agriculture is being lost by the purchase and permanent transfer of agricultural water rights. At the current rate of transfer, there will be a major reduction in Colorado's agricultural lands in the future. This could affect Colorado's economy and food security. In addition, rural communities could dry-up along with agriculture if enough agricultural business goes away.¹²
- **Critical environmental concerns:** A key component of Colorado's brand is its environment. We must address water quality, watershed health, and ecosystem resilience in light of water demands and a changing climate. An increasing number of fish species in Colorado are at risk of becoming endangered because of habitat loss. This risk has the potential to increase if agricultural, municipal, and industrial water needs are set up to clash with environmental and recreational water needs.¹³
- **Variable climatic conditions:** Climate change and associated impacts make it more difficult to meet Colorado's future water needs because of diminishing supplies, increased demand for water, and potential big swings in precipitation patterns and amounts in the future. This is discussed at length in Chapters 4 and 5.¹⁴
- **Inefficient regulatory process:** Colorado requires a more efficient regulatory process if we are to effectively respond to our water challenges. By encouraging up-front collaboration and resource-prioritization, Colorado can do its part to move multi-partner and multi-purpose projects forward more quickly.¹⁵
- **Increasing funding needs:** Colorado also faces a financial gap in addressing future environmental, recreational, agricultural, and communal needs. Without adequate investment, Colorado cannot effectively address the above-listed challenges.

Colorado's Water Plan as a Roadmap

This plan is focused on achieving the right balance of water resource management strategies. It recognizes that water is important for all sectors and regions in Colorado and greatly affects livelihoods.¹⁶

Water connects Colorado. While the vast majority of our precipitation falls west of the continental divide, the vast majority of our people reside to the east. Through a vast network of infrastructure, we move water from the west to the east in large quantities every year. Western slope ranchers finish their cattle on the eastern slope and have them processed and distributed there. The eastern slope consumes western slope peaches and wine. The western slope offers world-class recreational opportunities, and Front Range families are the largest user of these recreational opportunities and own many of the second homes in western slope communities. The Front Range is the economic hub of Colorado, accounting for almost 75 percent of the state's gross domestic product.¹⁷ Water is one of our most critical, contentious, and shared resources, but because we are all connected, Colorado's success depends on the ability of all regions to work collaboratively to solve challenges.



This plan takes into account Colorado's history, legal system, policy structure (which includes local, state, and federal laws, institutions, and players), and institutional arrangements that influence decisions about Colorado's water resources. Colorado's Water Plan affirms the private ownership of water rights under the state's prior appropriation system. Further, this plan supports the authorities and responsibilities of local governments and water providers established by state law. It recognizes the limited statutory role of state agencies in decisions regarding the allocation and reallocation of water to various beneficial uses and the overlay of federal regulatory and permitting processes that pervade water resources management decisions in Colorado. Thus, the plan advocates for cooperation among parties so that no one governmental agency, water provider, or private party is compelled to go it alone and make unilateral decisions.

This plan is a framework to guide future decision-making and to address water challenges with a collaborative, balanced, and solutions-oriented approach. The innovative and creative work accomplished by Coloradans to date is recognized with the acknowledgement that there is still much work to do. Although moving beyond the status quo can be both difficult and complicated, it is our responsibility as Coloradans to come together to find compromises and opportunities to ensure that our state remains a vibrant place to live, work, and play for future generations.

The Goal

Colorado is composed of vibrant and sustainable cities, viable and productive agriculture, a robust recreation and tourism industry, and a thriving environment. The goals of the water plan are to

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defend Colorado's compact entitlements, improve the regulatory processes, and explore financial incentives all while honoring Colorado's water values and ensuring that the state's most valuable resource is protected and available for generations to come.

Chapters 2 through 5 focus on the foundational elements that guide Colorado's water management. These include descriptions of Colorado's legal structure and critical facts about supply and demand.

Chapters 6 through 11 establish action steps to help Colorado respond to future challenges. These sections show how Colorado can advance conservation, reuse, alternative agricultural transfers, and multi-purpose and collaborative projects while protecting the health of rivers, streams, and watersheds. Building on successful eastern slope—western slope agreements, Chapter 8 charts a collaborative path forward for any discussion regarding transmountain water from the western slope. Chapter 9 addresses increased funding opportunities, more efficient and effective permitting, and enhanced education for citizens. Because the various factors affecting forecasts, hydrology, the economy, and the fields of science and technology will continue to be dynamic, Chapter 11 suggests updating the plan moving forward.

¹ "About the CWCB," Colorado Water Conservation Board, accessed October 17, 2014.

<http://cwcb.state.co.us/about-us/about-the-cwcb/Pages/main.aspx>.

² Executive Order D2013-05 of May 14, 2013, Directing the Colorado Water Conservation Board to Commence Work on the Colorado Water Plan. 2013.

³ BBC Research & Consulting, *Public Opinions, Attitudes and Awareness Regarding Water in Colorado* (Denver, 2013) Section II, 14.

⁴ Colorado Water Conservation Board, *Statewide Water Supply Initiative 2010* (Denver, 2011).

⁵ C.R.S. §§ 37-75-104, 37-75-105.

⁶ Colorado Water Conservation Board, *SWSI* (2011) 7-2.

⁷ Executive Order D2013-005 (2013).

⁸ Colorado Office of Economic Development and International Trade, *Living in Colorado* (Denver: OEDIT, 2014).

⁹ Colorado Water Conservation Board, *Statewide Water Supply Initiative 2010*.

¹⁰ NOAA Climate.gov, *Despite Fall Floods, Drought Persists in Southeastern Colorado* (2014).

¹¹ Colorado Water Conservation Board, *Statewide Water Supply Initiative 2010*.

¹² Colorado Water Conservation Board, *Alternative Agricultural Water Transfer Methods Grant Program Summary and Status Update* (Denver: CWCB, 2012).

¹³ Colorado Water Conservation Board, *Nonconsumptive Needs Assessment Focus Mapping* (Denver: CWCB, 2010).

¹⁴ Jeff Lukas, Joseph Barsugli, Nolan Doesken, Imtiaz Rangwala, and Klaus Wolter, "Executive Summary," *Climate Change in Colorado: A Synthesis to Support Water Resources Management and Adaptation*, Second ed. (Boulder: University of Colorado, 2014).

¹⁵ Larry Eklund quoting John Wooden in *Be Quick—But Don't Hurry: Finding success in the teachings of a lifetime*, 2001.

¹⁶ Nick Penney, 2013.

¹⁷ Denver Metro Chamber of Commerce, *Water* (Denver: 2014).