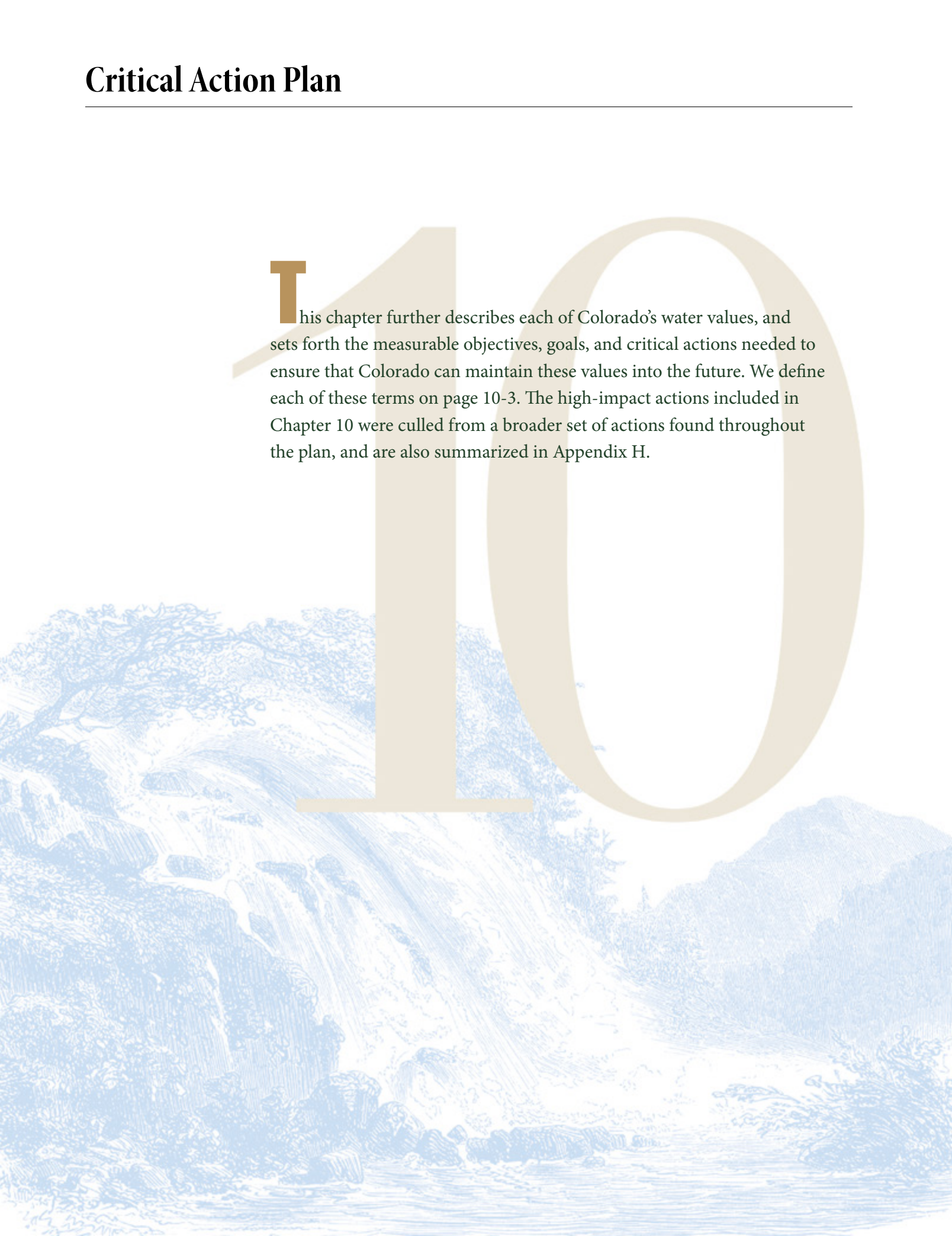


# Critical Action Plan

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**T**his chapter further describes each of Colorado’s water values, and sets forth the measurable objectives, goals, and critical actions needed to ensure that Colorado can maintain these values into the future. We define each of these terms on page 10-3. The high-impact actions included in Chapter 10 were culled from a broader set of actions found throughout the plan, and are also summarized in Appendix H.



Birds take flight over  
the Yampa River near  
Steamboat Springs, on the  
Daughenbaugh Ranch.  
Photo: M. Nager.



# 10.1

## COLORADO'S WATER VALUES

### Colorado's water values drive Colorado's Water Plan toward:

- ❖ 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; and
- ❖ A strong environment that includes healthy watersheds, rivers, streams, and wildlife.<sup>1</sup>

These values shape the measurable objectives, goals, and actions of each section in the plan.

1. **Colorado's Water Plan values a productive economy that supports vibrant and sustainable cities; viable and productive agriculture; and a robust skiing, recreation, and tourism industry:**

Colorado will continue to face natural stressors such as deep droughts, destructive wildfires, and catastrophic floods. The best science available indicates that these conditions will only get worse with climate change. Past events in Colorado, as well as recent droughts in California and Texas, serve as important warnings that these challenges harm Colorado's economy and way of life. As Colorado's economy continues to grow with the influx of new residents and industry, water planning for the future must reflect careful deliberation and a balance of the many municipal, industrial, recreational, environmental, and agricultural uses throughout the state. Critical actions must recognize the value of water to Colorado's economy, and identify options for maintaining a viable agricultural industry. Coloradans at all levels—individually, locally, regionally, and statewide—must prepare to respond to these inevitable natural pressures so that Colorado can continue to flourish.

2. **Colorado's Water Plan values efficient and effective water infrastructure:** As Colorado prepares for the uncertainties of hydrology, Coloradans must also contend with the growing and changing needs of our communities, farms, and ranches. Colorado is one of the fastest growing states in the country, and the growth of cities could result in the significant loss of agriculture if we continue on our current path. Innovative solutions and additional conservation and efficiency measures are needed to stretch Colorado's water supplies and maintain aging reservoirs, canals, and distribution systems. Updated water systems will need to address multiple needs, partners, and benefits. Colorado's Water Plan uses a grassroots approach to formulate projects and methods to close water gaps with more agile, informed, and responsible water management.

**TABLE 10.1-1**

**TERMS AND DEFINITIONS**

Terms	Definitions
Value	An overarching tenet that guides how Colorado's Water Plan will work to shape Colorado's water future.
Measurable objective	A result or benchmark expected to be achieved from the implementation of Colorado's Water Plan.
Goal	A purpose toward which Colorado's Water Plan is directed.
Action	A necessary step to achieve the measurable objectives and goals, and ultimately to maintain Colorado's water values.



By doing so, Colorado will achieve its long-term goal of meeting municipal, industrial, agricultural, environmental, and recreational needs in a balanced manner.

3. **Colorado's Water Plan values a strong environment that includes healthy watersheds, rivers, streams, and wildlife:** Colorado's identity includes our grand snowy mountains, sweeping rivers, majestic valleys—and access to all of this raw beauty. Underlying Colorado's natural splendor are populations and communities of fish, birds, amphibians, and wetland plants. Colorado is home to

endangered and imperiled species along with exemplary pristine ecosystems. Our brand requires that we protect and restore Colorado's natural environment with the most effective tools available. A resilient natural environment is the long-term goal of the critical actions that address this value and our overall brand.



# 10.2

## MEASURABLE OBJECTIVES AND ADAPTIVE MANAGEMENT

Colorado's Water Plan is a living document. The plan and the supporting work of the BIPs and the SWSI will be updated periodically to respond to our State's changing conditions and improved information. Part of this work will require measuring success for each action and adapting over time. Future iterations of Colorado's Water Plan will evaluate progress made, and identify or refine future actions.

Colorado's Water Plan and its measurable objectives will be updated as values, conditions, or data warrant. The CWCB proposes a cyclical planning schedule that recognizes the dynamic nature of Colorado's Water Plan, as described in Chapter 11.

The plan defends Colorado's compact entitlements, improves regulatory processes, and explores financial incentives—all while honoring Colorado's water values and ensuring that water, the State's most valuable natural resource, is protected and available for generations to come. To that end, the plan's success will be measured by whether the following measurable objectives are achieved through implementation of the following actions:

**A. Supply-Demand Gap:** Colorado's Water Plan sets a measurable objective of reducing the projected 2050 municipal and industrial gap from as much as 560,000 acre-feet to zero acre-feet by 2030.

The success of Colorado's Water Plan will ultimately be measured by whether or not the municipal water supply-and-demand gap is closed, and the choices we make to close it. With increased efforts on conservation, storage, land use, alternative transfer methods, and reuse, Colorado can close its gap, balance its water values, and address the effects of climate change on water resources.

**B. Conservation:** Colorado's Water Plan sets a measurable objective to achieve 400,000 acre-feet of municipal and industrial water conservation by 2050.

Colorado must address projected gaps between future water needs and available water provisions from both the supply side and the demand side. Every acre-foot of conserved water used to meet new demands is an acre-foot of water that does not need to come from existing uses.

**C. Land Use:** Colorado's Water Plan sets a measurable objective that by 2025, 75 percent of Coloradans will live in communities that have incorporated water-saving actions into land-use planning.

In order to reduce the amount of water needed for future generations of Coloradans and keep urban-adjacent agricultural lands in production, Colorado must support the growth of the next 5 million residents more strategically than the last 5 million. Colorado's Water Plan calls for a partnership among local water providers and Colorado's communities. This partnership aims to incorporate water-saving actions into local land-use planning. The CWCB will work with the Department of Local Affairs, local governments, water providers, Colorado Counties Inc., Colorado Municipal League, the Special District Association, councils of governments, and homebuilders (Colorado Association of Homebuilders) to examine and strengthen the tools they collectively possess to help Colorado reach this objective.

**D. Agriculture:** Colorado's Water Plan sets an objective that agricultural economic productivity will keep pace with growing state, national, and global needs, even if some acres go out of production. To achieve this objective, the State will work closely with the agricultural community, in the same collaborative manner that has produced agricultural transfer pilot projects, to share at least 50,000 acre-feet of agricultural water using voluntary alternative transfer methods by 2030.

Without a water plan, Colorado could lose up to 700,000 more acres of irrigated agricultural lands—that equals 20 percent of irrigated agricultural lands statewide and nearly 35 percent in Colorado's most productive basin, the South Platte. While the right to buy or sell water rights must not be infringed upon, Colorado's Water Plan describes market-competitive options to typical "buy-and-dry" transactions. Such alternative transfer methods can keep agriculturally dependent communities whole and continue agricultural production in most years, and if such arrangements can be made more permanent in nature, they will provide certainty to both municipal water providers and agricultural producers. Options include lease-fallowing agreements, deficit irrigation, water banking, interruptible supply agreements, rotational fallowing, water conservation programs, and water cooperatives. The State will encourage innovation and creativity by agricultural producers and research institutions to maximize the productivity of every drop of water.

**E. Storage:** Colorado's Water Plan sets a measurable objective of attaining 400,000 acre-feet of water storage in order to manage and share conserved water and the yield of IPPs by 2050. This objective equates to an 80 percent success rate for these planned projects.

As the State conserves, Colorado must also develop additional storage to meet growing needs and face the changing climate. Tomorrow's storage projects will increase the capacity of existing reservoirs, address a diverse set of needs, and involve more partners. New storage projects will be increasingly innovative, and will rely on technologies such

# VICKI PHELPS

## SOUTHWEST RIVER BASIN

**Vicki is the co-director of the Telluride Institute's Watershed Education Program, and her life and work are driven by her passion for the kids and future generations. Vicki and students are pictured in front of a pond off the San Miguel River near Placerville.**

I want to see communities take charge of their water use and make a committed effort to conserve this precious resource. Colorado's Water Plan addresses critical issues as to the future of healthy watersheds, intact ecosystems and adequate water for human needs.

I feel fortunate to have grown up with the outdoors as my playground. With experiences such as camping, hiking, backpacking, kayaking, climbing, gardening, studying nature, creating nature-inspired art and photography, I have become passionate about understanding and preserving natural environments.

CONTINUED AT END OF CHAPTER

## PROFILE



as aquifer storage and recharge. In addition, water managers will need to be more agile in responding to changing conditions, so that storage can be more rapidly added to Colorado's water portfolio. To do this, Colorado will address the broken permitting system.

**F. Watershed Health, Environment, and Recreation:**

Colorado's Water Plan sets a measurable objective to cover 80 percent of the locally prioritized lists of rivers with stream management plans, and 80 percent of critical watersheds with watershed protection plans, all by 2030.

The environment and recreation are too critical to Colorado's brand not to have robust objectives; a strong Colorado environment is critical to the economy and way of life. In addition, the WQCC identified a strategic water quality objective to have fully supported classified uses—which may include drinking water, agriculture, recreation, aquatic life, and wetlands—of all of Colorado's waters by 2050.

**G. Funding:** Colorado's Water Plan sets an objective to sustainably fund its implementation. In order to support this objective, the State will investigate options to raise additional revenue in the amount of \$100 million annually (\$3 billion by 2050) starting in 2020. Such funds could establish a repayment guarantee fund and green bond program focused on funding environmental and recreational projects. In addition, such funds could further support conservation, agricultural viability, alternative transfer methods, education and outreach, and other plan implementation priorities.

Colorado faces challenging fiscal conditions, not only for water infrastructure, but most other parts of the State budget. In order to address the water infrastructure fiscal need, the CWCB will explore creation of a repayment guarantee fund and green bond program with an initial investment of \$50 million from the Severance Tax Perpetual Fund. A repayment guarantee fund could assist water providers in securing financing for regional multi-partner and multi-purpose projects by backing bonds

so that all the partners can achieve financing. Issuance of green bonds could support large-scale environmental and recreational projects. These funds could be operated in a conjunctive manner. As water provider bonds were paid down, the guarantee fund could be reduced and could be used to pay green bonds. By doing so, an initial \$50 million investment could leverage half a billion dollars of regional projects. Under a well-planned, phased approach, an additional \$100 million per year might address all of the State-related funding needs described in Colorado's Water Plan, as further detailed in Section 9.2.

**H. Education, Outreach, and Innovation:**

Colorado's Water Plan sets a measurable objective to significantly improve the level of public awareness and engagement regarding water issues statewide by 2020, as determined by water awareness surveys. Colorado's Water Plan also sets a measurable objective to engage Coloradans statewide on at least five key water challenges (identified by CWCB) that should be addressed by 2030.

Colorado's Water Plan will expand outreach and education efforts that engage the public to promote well-informed community discourse and decision making regarding balanced water solutions. This work will be collaborative and include state, local, and federal partners. As one component of this overall strategy, the CWCB will work with Colorado's innovation community, education and outreach experts, research institutions, and the Governor's Colorado Innovation Network (COIN) to address Colorado's water challenges with innovation and "outside-the-box" creativity.

# 10.3

## CRITICAL GOALS AND ACTIONS

The State of Colorado will immediately undertake the following critical actions to make progress in achieving the measurable objectives and addressing additional important water challenges Colorado's Water Plan identifies. The referenced section further explains additional information and context for each of the critical actions. In addition, Chapters 6 through 9 include many more actions, and a summary of the complete list of actions is available in Appendix H. Each action is labeled as one of the following types:

- ❖ **Legislation:** Although most actions are intended to work within existing state and federal laws, some actions require state legislation. Legislative actions require the Colorado General Assembly to pass a bill changing language in or adding language to the Colorado Revised Statutes. Prior to developing legislative proposals necessary to implement Colorado's Water Plan, the DNR will conduct a thorough review of input provided by the WRRC, the CWCB, roundtables, and interested stakeholders. Any legislative recommendations in the action plan will be evaluated in light of administration priorities and the State budget. To the extent that legislation is necessary to execute Colorado's Water Plan, legislative recommendations will be offered in concert with the phased implementation of the plan over subsequent years.
- ❖ **Programmatic:** Programmatic actions can be accomplished within existing authority and existing state programs. Some of these actions may require additional staffing or funding, which will need to be addressed prior to implementation. To that end, legislation may be needed to appropriate adequate resources.
- ❖ **Board Policy:** Board policy actions can be accomplished through a rule-making or other formal approval CWCB process to give CWCB staff the authority to accomplish these actions. Other state agencies may also need to adopt policies, as noted below. Resources to develop and implement the policy changes will need to be identified.
- ❖ **Process:** Process actions indicate actions that will involve several parties or sub-committees that develop a plan or make recommendations to the CWCB or other appropriate authority. Process actions can be accomplished within existing statutory authority. Resources to address the process actions will need to be acquired prior to implementation.



## A. Supply-Demand Gap

- ❖ **Meet Colorado's Water Gaps:** Use a grassroots approach to formulate projects and methods that avoid some of the undesirable outcomes of the supply-demand gaps. The plan addresses the gap from multiple perspectives (e.g., water storage, reuse, recycling, integrated water management, restoration, and conservation).
- ❖ **Protect and Develop Compact Entitlements and Manage Risks:** Protect Colorado's ability to fully develop compact entitlements, and continue to support agreements that strengthen Colorado's position in interstate negotiations while ensuring the long-term viability of Colorado's interstate compacts and relationships. Focus planning efforts on maintaining healthy systems and avoiding a Colorado River Compact deficit rather than on responding to compact curtailment.

CRITICAL ACTIONS TO MEET WATER GAPS		SECTION	PARTNERS	TYPE
1	Support and assist the basin roundtables in moving forward priority municipal, industrial, environmental, and agricultural projects and methods identified in their BIPs through technical, financial and facilitation support when requested by a project proponent and the pertinent BRT.	6.5, 6.6	CWCB, BRTs	Programmatic
2	Develop a collaborative water management program for the Colorado River Basin, as described in the Conceptual Framework, to maximize the use of compact water while actively avoiding a Colorado River Compact deficit.	8, 9.1	CWCB, other Upper Division states, stakeholders	Programmatic, policy, and funding

## B. Conservation

- ❖ **Increase Municipal Conservation and Efficiency:** Implement long-term water efficiency strategies to meet local and statewide water needs that are cost-effective and promote a water efficiency ethic throughout Colorado.

CRITICAL CONSERVATION ACTIONS		SECTION	PARTNERS	TYPE
1	Consider comprehensive, integrated water resource planning, conducted by water providers, as one of the components to achieve state support of projects and financial assistance. These plans should use the water conservation best practices at the high customer participation levels where possible, as defined in SWSI.	6.3.1, 9.4	CWCB, other permitting agencies, stakeholders	Policy
2	Support legislation that would require retailers to sell only irrigation technologies that meet WaterSense specifications by providing technical details about the potential savings and hosting a stakeholder process.	6.3.1	CWCB, DNR, General Assembly, stakeholders	Process, possible legislation

## C. Land Use

- ❖ **Integrate Land Use and Water Planning:** Initiate the use of local land use tools, where appropriate, to reduce water demands for municipalities, and the need to urbanize agricultural lands.

CRITICAL LAND USE ACTION	SECTION	PARTNERS	TYPE
1 Through voluntary trainings for local governments, encourage the incorporation of best management practices in land use for water demand management, water efficiency, and water conservation.	6.3.3	CWCB, DOLA, stakeholders	Programmatic

## D. Agriculture

- ❖ **Maintain Agricultural Viability:** Maintain Colorado’s agricultural productivity, support of rural economies, and food security (through meaningful incentives and grassroots efforts).
- ❖ **Facilitate Alternative Transfer Methods:** Respect property rights and contributions of the agricultural industry by establishing alternative options that compete with, if not out-perform, traditional “buy-and-dry” transactions in the water market.
- ❖ **Support Agricultural Conservation and Efficiency:** Support Colorado’s agricultural industry to make it more efficient, resilient, and able to reduce water consumption without impacting agricultural productivity.

CRITICAL AGRICULTURE ACTIONS	SECTION	PARTNERS	TYPE
1 Establish an education and assistance program for farmers and ranchers to help realize more market-competitive transactions that promote implementation of ATMs, and enable Coloradans to enter the agriculture industry.	6.5, 6.4, 6.3.4	CWCB, CDA	Programmatic
2 Encourage ditch-wide and regional planning to explore system-wide conservation and efficiency opportunities and tradeoffs, the potential for water sharing, and long-term infrastructure maintenance needs.	6.5, 6.3.4	CWCB, agricultural partners, BRTs	Programmatic
3 Provide grants, loans, and technical support to update and improve Colorado’s aging agricultural infrastructure, especially where improvements provide multiple benefits.	6.5, 6.3.4	CWCB, BRTs, agricultural partners, other stakeholders	Programmatic
4 Develop model voluntary flow agreement language, facilitation, and technical support to encourage the use of these agreements when paired with irrigation efficiency practices.	6.3.4	CWCB, DWR, agricultural partners, environmental groups, BRTs	Programmatic, state agency policies
5 Explore the development of administrative means to track and administer agricultural conserved water for the purposes of marketing these waters.	6.3.4, 6.4	DWR, CWCB	Process
6 Explore expanded grant funding that supports implementation of ATM projects, related infrastructure, or entities that would help facilitate alternative transfer methods.	6.4	CWCB, BRTs, DWR, stakeholders	Process

## E. Storage

- ❖ **Promote Additional Storage and Infrastructure:** Assess and promote opportunities for multipurpose and multi-partner storage projects that address strategic needs.
- ❖ **Improve Permitting Processes:** Advocate for more effective and efficient permitting in which state agencies work together to complete their work early in the permitting process. This will provide the opportunity for State support without being pre-decisional.

CRITICAL STORAGE AND PERMITTING ACTIONS		SECTION	PARTNERS	TYPE
1	Provide financial support to technical and practical storage innovations.	6.5	CWCB	Programmatic
2	Prioritize grants and loans to support the implementation of BIP-identified multipurpose projects and methods, taking into consideration locally identified geographic and seasonal gaps.	6.5, 6.6	CWCB, BRTs	Funding
3	Conduct a series of lean events with permitting agencies and stakeholders to determine ways to make permitting more efficient.	9.4	CWCB (host), local, state, federal, & partners	Process
4	Relevant state agencies will actively participate as cooperating agencies in federal NEPA permitting processes at the outset of the regulatory process to engage in scoping, developing alternatives, determining methodologies and data gaps, and developing mitigation and enhancement plans.	9.4	State agencies with permitting authority on a project, including DNR and CDPHE	Programmatic
5	Where more than one state agency has jurisdiction over a particular issue (e.g., fish health), a lead state agency will be identified, and a memorandum of understanding will be agreed to by all agencies to assist in the coordination.	9.4	State agencies with permitting authority, including DNR and CDPHE	Programmatic



## F. Watershed Health, Environment, and Recreation

- ❖ **Recover Imperiled Species:** Promote restoration, recovery, and resiliency of endangered, threatened, and imperiled aquatic and riparian dependent species and plant communities.
- ❖ **Enhance Environmental and Recreational Economic Values:** Protect and enhance river-based environments and recreational opportunities that support local and statewide economies and are important for the enjoyment of current and future generations of Coloradans.
- ❖ **Protect Healthy Environments:** Understand, protect, maintain, and improve conditions of streams, lakes, wetlands, and riparian areas to promote self-sustaining fisheries and functional riparian and wetland habitat to promote long-term resiliency.
- ❖ **Promote Protection and Restoration of Water Quality:** The protection and restoration of water quality should be a key objective when planning for Colorado's current and future consumptive, recreational, and environmental water needs.
- ❖ **Protect and Restore Critical Watersheds:** Protect and restore watersheds critical to water infrastructure, environmental or recreational areas.

CRITICAL WATERSHED HEALTH, ENVIRONMENT, AND RECREATION ACTIONS		SECTION	PARTNERS	TYPE
1	Continue to support and participate in collaborative approaches to prevent listings under the Endangered Species Act. Promote the sustainability of endangered, threatened, and imperiled aquatic- and riparian-dependent species and communities (e.g., recovery programs, cooperative agreements, and other efforts) by developing a plan that compiles and develops near-term projects and methods. At the same time, the CWCB will support the strategic implementation of currently identified projects with technical and financial assistance.	6.6	CWCB, CPW, federal partners, other agencies, BRTs, and stakeholders	Programmatic
2	Develop a plan that compiles and develops near-term projects and methods to support economically important water-based recreation.	6.6	CWCB, BRTs, interested stakeholders	Programmatic
3	Develop stream management plans for priority streams (identified in a BIP or otherwise) as having environmental or recreational value. As part of this work, the CWCB will provide guidelines and templates for developing stream management plans, and will conduct ongoing analyses through SWSI.	6.6, 7.1, 9.2	CWCB, BRTs, federal partners, other stakeholder groups	Programmatic
4	Develop common metrics for assessing the health and resiliency of watersheds, rivers, and streams.	6.6	CWCB, CPW, federal partners, other state agencies, BRTs, stakeholders	Programmatic
5	Advance policy initiatives that allow for creative, solution-oriented actions while maximizing water quality protection, ensuring consideration of the net environmental benefit of projects, and evaluating the water quality impacts of water quantity management approaches.	7.3, 7.2	CDPHE, CWCB, other state agencies	Programmatic
6	Provide technical and financial support to local stakeholder groups to develop watershed master plans for watersheds that are critical to consumptive or nonconsumptive water supply and quality.	6.6, 7.1, 7.3	CPW, CDPHE, CWCB	Programmatic
7	Prioritize and implement projects identified in master planning efforts.	6.6, 7.1	CPW, CDPHE, CWCB, local coalitions	Programmatic

## G. Funding

- ❖ **Explore New Funding Opportunities:** Develop near-term funding opportunities whereby the smallest amount of funding possible has the greatest benefit to implementing Colorado's Water Plan.

CRITICAL FUNDING ACTIONS	SECTION	PARTNERS	TYPE
1 Seek an amendment to expand the CWCB loan program's authority to fund treated water supply, reuse, conservation, environmental, and recreation projects and methods.	9.2, 6.3.2, 6.3.1	CWCB, DNR, CPW, CWPDA, CDPHE, General Assembly	Legislation
2 Explore a public-private partnership (P3) center of excellence that models how to develop P3 agreements and explores financial incentives for regionalization.	9.2	CWCB, Funding Committee, P3 experts in other sectors	Programmatic
3 Continue to encourage regional and multipurpose projects and methods that address water supply gaps by providing financial incentives, such as an interest rate reduction or extended loan repayment periods.	9.2	CWCB, Water & Power Authority	Board policy
4 Continue to provide \$1 million or more, if needed, on an annual basis to support stream management and watershed plans.	9.2	CWCB and General Assembly (Projects Bill)	Legislation
5 Develop a sustainable funding plan that integrates a guarantee repayment fund, green bonds, and additional support grants and loans for the WSRA, education, conservation, reuse, ATMs, and agricultural viability. This will include the dedication of \$50 million dollars of severance tax funds to kick-start the initiatives in the plan, and the identification of an approach to develop a new viable public source of funding.	9.2	CWCB, Funding Committee	Process

## H. Education, Outreach, and Innovation

- ❖ **Advance Education, Outreach, and Innovation:** Inform Coloradans about water issues to encourage engagement and innovation in determining Colorado's water future.

CRITICAL EDUCATION AND OUTREACH ACTIONS	SECTION	PARTNERS	TYPE
1 Create a new outreach, education, and public engagement grant program to fund basin roundtable education action plans and initiatives indicated in Colorado's Water Plan.	9.5, 9.2	CWCB, General Assembly	Possible legislation
2 Conduct a water education assessment to help develop a plan that addresses critical gaps in water education, advances efforts in Colorado's Water Plan, and supports basin roundtable work.	9.5	CWCB, BRTs, education partners	Programmatic
3 Identify five water challenges that Colorado's innovation community could help solve, develop an award program, and engage Coloradans in the challenge.	9.5	CWCB, COIN, research institutions, stakeholders	



# I. Additional Critical Goals and Actions

- ❖ **Plan for the Future:** Coordinate and sequence updates to SWSI, the BIPs, and future iterations of Colorado’s Water Plan to represent the most up-to-date technical, stakeholder, and policy information available.
- ❖ **Prepare for and Respond to Natural Disasters:** Colorado’s Water Plan promotes water resource resilience from natural disasters through strategic preparedness and response.
- ❖ **Prepare for Climate Change:** Respond to, monitor, and prepare for climate change.
- ❖ **Encourage Reuse:** Encourage the development of reuse solutions to maximize fully consumable water supplies.

ADDITIONAL CRITICAL ACTIONS	SECTION	PARTNERS	TYPE
1 Implement the actions identified in the Colorado Resiliency Framework to build communities that are more resilient to natural disasters.	7.2	Local communities, CWCB, Colorado Resiliency & Recovery Office	Programmatic
2 Evaluate and incorporate appropriate adaptation for the potential effects of climate change on municipal, industrial, environmental, and agricultural projects and methods that address the water supply gaps.	6.5, 6.6	CWCB, IBCC, water providers, researchers	Programmatic
3 Work on creating resilient watersheds to protect, restore, and enhance water quality in the face of climate change.	7.3	CDPHE	CDPHE policy
4 Support technical reviews of local and regional reuse options and provide grants to support on-site, local, and regional reuse plans and projects.	6.3.2, 7.3	CWCB, water providers, reuse experts	Programmatic
5 Evaluate regulations to foster reuse of water supplies while protecting public health and the environment.	6.3.2, 7.3, 9.4	CDPHE, CWCB, DWR, stakeholders	CDPHE policy, potential legislation



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**VICKI PHELPS, CONTINUED FROM PAGE 10-6**

My love of science and the outdoors led me to major in biology, environmental science, and art in college. I worked with the National Park Service, both as a fire lookout and nature interpreter. I was a botanist, landscaping supervisor, and outdoor educator for the Arizona Sonora Desert Museum. My family ranched and farmed in southwest Colorado. All of these experiences have emphasized the essential role of water for life and the health of the planet.

I became a teacher and spent 27 years teaching secondary science and math and elementary grades. I have facilitated many outdoor environmental education studies in my schools. I was also a River Watch teacher, where I supervised students in collecting and analyzing water samples from the San Miguel River for the Colorado Department of Wildlife. My goals have been to expose students (and adults) to the natural ecosystems around them, and to help them reflect on regional cultural history, develop a sense of their place in the picture, and inspire them to become better stewards of the land. It brings me great joy to see kids get their feet wet and their hands dirty, while making joyful discoveries of the wonders of the natural world. Watching my daughter Jamie become an avid nature-lover and go on to major in science in college was one of my greatest joys.

Currently, I am the co-director of the Telluride Institute's Watershed Education Program. With nature as my classroom, along with other experts in the field, I help lead outdoor experiential field trips with students from four different school districts along the San Miguel River Watershed. With hands-on activities, students develop a keen sense of where their water comes from and how essential it is for natural ecosystems and humans.

With the reality of climate change, I am committed to joining scientists and engineers, who are seeking solutions to reducing human impact on the Earth.

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<sup>1</sup> Governor John Hickenlooper, "Executive Order D 2013-05, Directing the Colorado Water Conservation Board to Commence Work on the Colorado Water Plan," May 14, 2013.



## A LOOK AT HISTORY

Mayor Benjamin Stapleton, surrounded by onlookers, digs a shovelful of dirt at the ground breaking ceremony for the Denver City and County Building, Denver, 1929.

Groundbreaking events don't always require a shovel.

SOURCE: Denver Public Library.