



# Colorado's Water Plan Implementation



**COLORADO**

Colorado Water  
Conservation Board

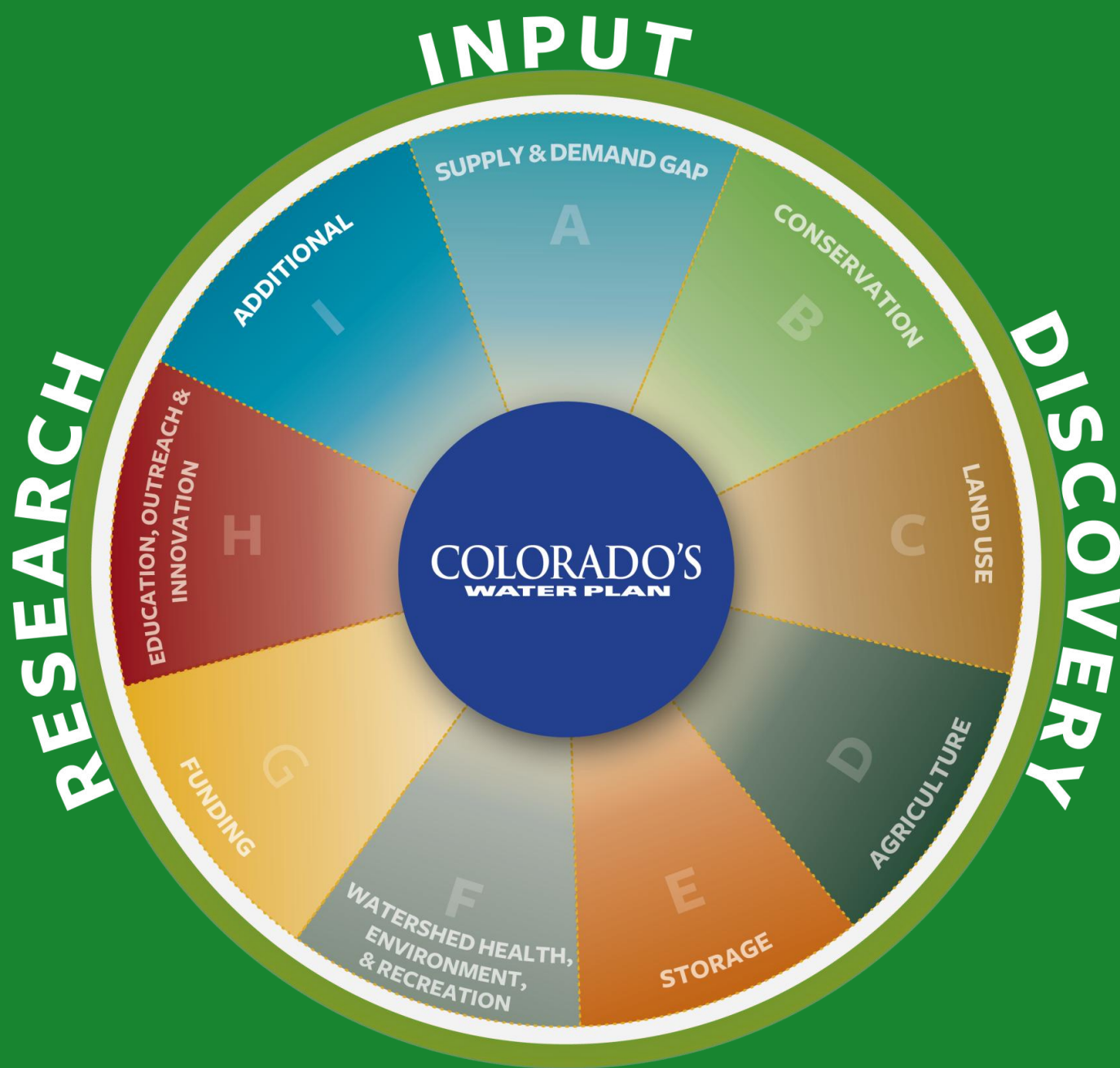
Department of Natural Resources

**COLORADO'S**  
**WATER PLAN**

# *Presentation Outline*

1. Supply-Demand Gap
2. Conservation
3. Land Use
4. Agriculture
5. Storage
6. Watershed Health, Environment, and Recreation
7. Funding
8. Education, Outreach, and Innovation
9. Additional Critical Goals and Actions





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**.



## 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

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





## 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

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**.





## 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



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**.

## 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





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.

## 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



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**.



## 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



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**.

## 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



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 CWCBC) that should be addressed by **2030**.



## 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	



RESEARCH

INPUT





# 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



