

COLORADO WATER PLAN

UPDATE VISION



This information sheet highlights initial input and potential direction for the Colorado Water Plan update. The update will build upon and streamline the 2015 Water Plan. It will not lose sight of our longstanding water issues, but will focus on new innovations, emerging challenges and actions that help address Colorado's evolving water goals. Read more about how the Colorado Water Conservation Board (CWCBC) is thinking about the Water Plan update and provide your thoughts by visiting engagecwcb.org.

ACTION-FOCUSED

Colorado's water values – a productive economy, efficient and effective infrastructure, and a strong environment – drove the initial Colorado Water Plan. The Water Plan was organized around nine objectives that support those values. The objectives looked out as far as the year 2050, many focused on common cross-cutting themes that overlapped multiple water use sectors." (see "Cross-Cutting Themes"; right).

This update will keep the values of the original plan, but will be increasingly action-focused and will provide a vision that spans our long-term planning horizon while identifying near-term actions that help manage risk. The spirit of the original Water Plan objectives will be captured with implementable actions that promote the main action areas (listed below).

INCREASINGLY ACCESSIBLE

The vision for the update involves making the document increasingly accessible to the average reader. Rather than simply adding new content to the 540 pages that comprise the original document, the update is intended to use a two-volume format as was done with the 2019 Analysis and Technical Update to the Colorado Water Plan. Volume 1 will be actionable and concise, while Volume 2 materials might include deeper reading that reflects some of the overarching concepts explained thoroughly in the 2015 plan. Additionally, reflecting the changing way information is consumed, CWCBC will seek ways to logically lay out the Volume 1 and Volume 2 content online in ways that are engaging and digestible.

ORGANIZED BY ACTION AREA

To increase ease and accessibility for searching by sector for specific content and trends, as well as for engaging in specific areas, the updated Water Plan will be organized around major action areas, including cities, farms, streams, and people.

As with the original Water Plan, some stage-setting chapters are needed for context and to discuss major policy topics. The update will consider streamlining the plan layout by organizing the values into four key action areas. Those values seek to maintain the Colorado way of life and are encapsulated in the following action areas:

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|  Vibrant Communities |  Robust Agriculture |
|  Resilient Planning |  Thriving Watersheds |

► KEY CONCEPTS & DATES

Cross-Cutting Themes

The Water Plan will include cross-cutting themes that transcend different sectors like storage, alternative transfer methods, and land use planning, and which provide benefits to cities, farms, streams and people. Topics that emerge as cross-cutting themes include but are not limited to:

- | | |
|---------------------|-----------------|
| • Funding | • Storage |
| • Supply | • Efficiency |
| • Equity | • Education |
| • Climate Change | • Recreation |
| • Land Use Planning | • Forest Health |

Updates & Implementation

This seven-year update cycle began with the 2015 Water Plan and concludes with the 2022 update. Seven years is not only the average time other state's water plans are updated, but offers a helpful check-in point that is consistent with the scenario planning process, where regular updates help identify changing conditions and needs. During the next update cycle, actions will focus on work that can be implemented within the next 5-7 years starting in 2023 knowing the next Water Plan update is slated for 2029.

UPDATE DRAFT & TIMING

This update for the Colorado Water Plan is broken into three phases:

- Scoping Phase (10/20 - 6/21)
- Drafting Phase (7/21 - 3/22)
- Finalization Phase (4/22 - 12/22)

A draft of the update will be available for public comment before mid-year 2022.

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VIBRANT COMMUNITIES



Colorado communities have a range of municipal and industrial water needs. Communities face water supply and demand challenges which are likely to be exacerbated by uncertainties like population growth, water supplies, climate change and market conditions that impact operations and livelihoods. The Water Plan update will prepare for uncertainty by evaluating how drivers of future change may impact communities and focus on near-term opportunities that lessen those impacts.

EMERGING CHALLENGES & OPPORTUNITIES

- INFRASTRUCTURE ENHANCEMENTS** - To meet current and increased future water needs driven by projected population increases and climate change, enhancements to infrastructure need to be considered. This ranges from expanding existing storage, to adding new storage as well as reducing evaporative losses, addressing aging infrastructure, reducing water loss and establishing increasingly adaptive operations.
- URBAN GREEN SPACE** - Thriving cities value and need public green spaces, tree canopy and urban waterways that serve multiple purposes like mitigating heat, cleaning pollutants, reducing flood risks, enabling local food production, supporting nature, and physical and mental health.
- EFFICIENT & INNOVATIVE WATER USE** - Implementing climate resilient landscapes and efficient irrigation are critical to managing urban water demand. Continued investment is also needed for new indoor innovations in residences and businesses that allow for increased conservation. Creative use of alternative supplies from reuse, green infrastructure, alternative water transactions and One Water solutions (life-cycle water planning) are key to supporting these efforts.
- WATER CONSCIOUS GROWTH** - Synergistic planning can ensure urban growth prioritizes the wise use of water through a combination of land use policy, zoning, building codes, water reuse regulations and water rates. These approaches can help lower total water needs for cities, while also keeping water on farms to support local foods and in streams to promote healthy urban waterways.

► NEW TOOLS & INITIATIVES

Colorado Water Loss Initiative

A comprehensive program of training and technical assistance for urban water systems across Colorado to prevent systemic water loss through the use of the AWWA M36 auditing and training.

Colorado Growing Water Smart

A joint-program of the Sonoran Institute and Lincoln Institute of Land Policy, to train and assist communities to integrate land and water planning effectively as they grow and redevelop.

DPR Regulatory Framework

Proponents of Direct Potable Reuse (DPR) have been working to establish a clear regulatory framework that offers comprehensive, safe, flexible, and implementable rules. Presently, a Water Quality Control Division stakeholder process is beginning that will result in a Water Quality Control Commission DPR rulemaking proposal for changes to Colorado's Primary Drinking Water Regulations (Regulation 11).



Learn more and about the Water Plan update and provide your thoughts at engagecwcb.org.



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ROBUST AGRICULTURE

Colorado's agriculture sector and food supply value chain faces a variety of ongoing water resource challenges affecting its viability, which is defined as the ability to sustain profitable farm enterprises. These challenges include climate change, drought, extreme weather events, buy-and-dry pressure, and aging infrastructure. While the Water Plan creates pathways for addressing these challenges, the following represent key themes that the Water Plan update must consider.

EMERGING CHALLENGES & OPPORTUNITIES

- **ECONOMIC VIABILITY & RESILIENCY** - Water, as an important economic asset, will present challenges and opportunities as availability declines. Colorado will work alongside the agriculture and food sectors, and the communities that depend on them, in adaptive planning for a hotter and drier future. Through these efforts, opportunities such as connecting growing demand for local food with the transition to lower-water crops can develop new market pathways for agricultural operations and community infrastructure, while maximizing remaining water supplies.
- **INNOVATIVE SOLUTIONS & ON-FARM IMPROVEMENTS** - Developing supplemental irrigation or augmentation supplies, implementing soil health practices, reducing delivery losses and supporting innovative groundwater management solutions are critical to Colorado agriculture. Colorado must continue to invest in on-farm efficiency improvements where appropriate and practices that build adaptive capacity to drought and other water stressors.
- **HIGHLIGHT PRIMARY & SECONDARY AGRICULTURAL BENEFITS** - Agriculture uses the majority of water in the state but much of that water returns to aquifers and rivers to be used downstream. This provides several public benefits such as food production, return flows and wildlife habitat. Voluntary ecosystem market programs can help agricultural producers maintain or enhance these benefits while diversifying income.
- **INFRASTRUCTURE ENHANCEMENTS** - To meet future and existing needs, infrastructure enhancements need to be considered. This may include expanding existing storage, adding new storage, reducing water loss, infrastructure modernization, and establishing increasingly adaptive operations. Securing adequate funding to support all aspects of irrigation infrastructure development is critical.

► NEW TOOLS & INITIATIVES

ATM Status Update

A report called *Alternative Transfer Methods in Colorado, Status Update* was released in July 2020. This report acknowledges dry-up will likely continue due to various market drivers, but recommends continued investment in ATMs because they provide a flexible and creative approach to avoid permanent dry-up and support various Water Plan goals.

Engagement Workshops

In the first half of 2021, five workshops are planned to share developing ideas and gather input for the treatment of various agricultural initiatives in the Water Plan update.

State Financial Assistance

Various forms of financial assistance are available to support multi-benefit irrigation infrastructure and water conservation projects through Water Plan Grants administered by CWCB. The Colorado Department of Agriculture ACRE3 program, which promotes renewable energy and water/energy efficiency projects for Colorado's agricultural producers and processors is also a valuable resource.



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THRIVING WATERSHEDS

Watersheds face a number of pressures from competing water needs to climate-stressed hydrologies which have cascading impacts for, among other things, stream function, forest health, aquatic species, and wildlife. Coupled with growing threats from climate-related impacts and invasive species, increased recreational usage, continued risks from drought, fire and subsequent flooding further stress watersheds.

EMERGING CHALLENGES & OPPORTUNITIES

- **EXPANDED WATERSHED MANAGEMENT PLANS**- Management plans like Stream Management Plans (SMPs), Integrated Water Management Plans (IWMPs), and other efforts (e.g. River Health Assessments) work to provide deeper levels of understanding that help shape basin priorities as they are developed. This includes sharing lessons, principles, and practices in ways that foster collaboration between basins and disciplines — encouraging effective project implementation and on the ground actions. By engaging local communities, expanding scientific analysis and bringing in additional considerations (e.g. burn area), basins can continue refining their needs and priorities. When completed, the resulting project lists will also need to be prioritized and funded to truly improve watershed function and health.
- **COMMON PLANNING ELEMENTS & SUCCESSES** - Common tools and best practices for evaluating stream health are emerging as the number of SMPs, IWMPs, and watershed assessments increase. The flexibility to use different tools has also proven beneficial, especially when considering different spatial and temporal scales. Regardless of the method used, core functions like hydrology, hydraulics, geomorphology, water quality, biology (e.g. aquatic species) and other measures like habitat and recreation are transferable - providing a common link across plans. Building best practices, supporting scientific analysis, and data sharing can maximize the impact of any single watershed planning effort. Finding commonalities, identifying successes and sharing these resources can help make planning efforts easier, more effective, streamlined, and inclusive. Additionally, promoting the value of watersheds (including recreational benefits and economic value) is a key part of showing the importance of increased watershed planning.
- **INTEGRATED FOREST HEALTH SCIENCE**- Integrated stream, watershed, and forest management planning can help identify high priority projects that protect water supplies, improve watershed resilience to climate change, and demonstrate how disturbances like fire impact hydrology/hydraulics. Ongoing identification of where modeling and fluvial hazard zone mapping can be leveraged for both watershed and forest health planning will help in the continued evaluation of how climate change and forest management could impact forest structure and watershed hydrology. Reviewing findings from recent forest health research, workgroup products and modeling will help better understand gaps in knowledge and opportunities for implementation.
- **CLIMATE IMPACTS TO WATERSHEDS** - Beyond the Flow Tool (developed during the Technical Update), which points to potential climate-related impacts to flow and environmental and recreational attributes in 2050, there are multiple challenges watersheds will face from climate change. Evaluating how forests, streams and watersheds will be impacted under future climate conditions can help identify mitigating actions. New studies and modeling may be needed to better understand how those impacts interplay with fires, floods and droughts to influence hydrology, aquatic life and other stream functions.

► NEW TOOLS & INITIATIVES

Fluvial Hazard Zone Program

In order to recognize and assess the hazards associated with erosion, sediment deposition, and other dynamic river processes, the CWCB has developed a technical protocol to help communities identify, map, and plan for these natural hazards. The State of Colorado's Fluvial Hazard Zone Program represents a significant and necessary step forward in adaptively managing stream corridors, preparing for and mitigating flood impacts, and making informed land use decisions based on an awareness of fluvial processes. Learn more at coloradofhz.com.

Forest Health "State of Science"

The CWCB is conducting an assessment of the state of the science around watershed and forest health related issues that impact water quality and quantity. A white paper will identify local challenges, activities and related opportunities around forest health to find synergies around what might be pursued and/or recommended for future action in the BIP and Water Plan updates.

Focus Area Maps

Work is underway to overlay GIS maps of roundtable-derived focus areas and boundaries of SMPs/IWMPs that have been conducted to date. CWCB staff will work with roundtables on this task to understand basin roundtable's thoughts on where watershed planning efforts should focus.



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RESILIENT PLANNING

Coloradans face increased risk to water that requires equity in awareness, engagement and support in order to achieve greater adaptive capacity. This requires a renewed commitment to being inclusive in water discussions with an aim to broaden outreach to ensure all Coloradans are aware of important water challenges and better understand how to address and adapt to them. Resilient planning also means developing supportive governmental policies and providing equitable funding opportunities.

EMERGING CHALLENGES & OPPORTUNITIES

- **AWARENESS OF WATER ISSUES** - It is increasingly important for all Coloradans to be aware of local and state water challenges. Encouraging active outreach to existing stakeholders and increasing communication and access to engage new communities across a diverse range of people including tribes, acequias, members of minority or lower income communities, and those traditionally under-represented in public processes will be a priority.
- **INCREASED ADAPTIVE PLANNING** - As the climate warms the impacts are being increasingly felt, especially as it relates to shifting hydrologies and more extreme weather events. These impacts are often disproportionately impacting the poorest communities. Understanding and supporting creative adaptation measures and projects that support all Coloradans is critical.
- **INCLUSIVE COLLABORATION & FUNDING** - Ensuring that collaboration continues to involve regional representatives across the state is a hallmark of Colorado water planning. However, the essence of a grassroots process is striving for ever greater levels of inclusion across different sectors, cultures and perspectives in ways that are truly representative of Colorado. This collaboration must be coupled with equitable access to water management dialogue, funding opportunities and grant support.
- **SUPPORTIVE GOVERNMENT** - Communities need government to work toward streamlined permitting and supportive regulatory change for emerging technologies. Laws and policies need to be flexible enough to accommodate creative solutions but strong enough to protect Colorado's water and people's beneficial use of it.

► NEW TOOLS & INITIATIVES

Evaluating EDI Challenges

Equity, diversity, and inclusion (EDI) are core values and top priorities for Colorado, elevated through an Executive Order launched in 2020. The CWCB will be exploring ways to express these values within the Water Plan update by convening an Equity Task Force on Water to help inform the Water Plan update.

FACE Hazards Tool

The Future Avoided Cost Explorer (FACE) Hazards tool was designed to help users understand potential future economic impacts of flood, drought, and wildfire on specific sectors of the Colorado economy. Future impacts are reported in terms of expected cost of annual damages. Learn more by visiting the website at: cwcb.colorado.gov/FACE.

Colorado Resiliency Framework

The 2020 update to the Colorado Resiliency Framework provides a continued path to address shocks and stresses, reduce vulnerability, improve adaptability, and build social capital in the face of hazards and changing conditions. Learn more about hazards and the resiliency framework at: cwcb.colorado.gov/focus-areas/hazards



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