

Draft Framework

Colorado's Water Plan framework continues to evolve. Below is the updated framework based on CWCB Board feedback received during the January 2014 meeting and subsequent public comment. Items that have been changed due to additional input since the November Board meeting are in red. Dates for when the initial draft of each section are *grey*, and the items for consideration in January are *bolded*.

Executive Summary

- 1. Introduction and Background (draft January, 2014)
 - 1.1. Summary of Colorado water and summary of plan
 - 1.2. Description of State, local, and Federal entities that are involved in water administration, study, planning and project permitting
 - 1.3. Description of Colorado Water Law & Administration
- 2. Overview of Each Basin (draft March, 2014)
- 3. Water Demand by Sector (draft September, 2014)
- 4. Water Supply, Including Description of Historical and Projected Supply (draft September, 2014)
- 5. Water Management
 - 5.1. Scenario planning and adaptive management and no and low regrets (*draft January*, 2014)
 - 5.2. Natural disaster management (*draft January*, 2014)
 - 5.3. Watershed health/management (draft September, 2014)
 - 5.4. Water quality (*draft May, 2014*)
 - 5.5. Meeting the consumptive and nonconsumptive gaps (draft September, 2014)
 - 5.6. Conservation and reuse (draft May, 2014)
 - 5.6.1. M&I conservation, reuse, and land use
 - 5.6.2. Agricultural conservation
 - 5.6.3. Self-supplied industrial (e.g. conservation of mining and energy water use)
 - 5.6.4. State agency conservation (e.g. Parks and Wildlife, Corrections, State Land Board, etc.)
 - 5.7. Alternative Agricultural to Urban Transfers (draft May, 2014)
 - 5.8. Municipal, industrial, and agricultural infrastructure projects and methods (draft September, 2014)
 - 5.8.1. Water supply projects and methods
 - 5.8.2. Existing water supply operation and maintenance
 - 5.9. Environmental and recreational projects and methods (draft September, 2014)
 - 5.10. Framework on more efficient water project permitting processes (draft May, 2014)
 - 5.11. Cross-basin conceptual agreements and points of consensus (draft September, 2014)
- 6. Alignment of State Resources and Policies (draft September, 2014)
 - 6.1. Funding/financing
 - 6.1.1. Analysis of the cost to fully implement the CWP
 - 6.1.2. Economic benefit of implementing the plan
 - 6.1.3. Alignment of state funding resources and analysis of other funding opportunities
 - 6.2. State water rights and alignment
 - 6.3. Alignment of other State policies and resources
- 7. Outreach and Public Engagement (draft September, 2014)
- 8. Legislative Recommendations to Assist Fully Implementing the CWP (TBD based on plan's content)
- **9. Process for Plan Update** (draft December, 2014)

INITIAL DRAFT - Colorado's Water Plan Annotated Framework

Colorado's Water Plan Purpose: The Colorado's Water Plan (CWP) will leverage and integrate nine years of work accomplished by Colorado's Basin Roundtables, the Interbasin Compact Committee (IBCC), and Colorado Water Conservation Board (CWCB) to determine how to implement water supply planning solutions that meet Colorado's future water needs while supporting healthy watersheds and environment, robust recreation and tourism economies, vibrant and sustainable cities, and viable and productive agriculture.

Schedule: A draft water plan will be submitted by CWCB to Governor Hickenlooper by Dec. 10, 2014.

Executive Summary

1. Introduction and Background

1.1. Summary of Colorado Water and Summary of Plan

Objective: Introduce and outline the framework and structure of the CWP.

Potential Approach: Section 1.1 will discuss why the time is right for the CWP and what the CWP aims to accomplish. The section will also build upon Colorado's water values described in the executive order. As stated in the executive order, "Colorado's water policy must reflect its water values. The basin Roundtables have discussed and developed statewide and basin-specific water values and the Colorado Water Plan must incorporate the following:

- "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."

In order to incorporate Colorado's water values and set forth the goals of the CWP, this section will:

- Provide historical context for the CWP and water planning efforts in the state, including the Basin Roundtable (BRT) and IBCC processes, and the Statewide Water Supply Initiative (SWSI).
- Illustrate how the CWP was developed from grass roots efforts.
- Discuss challenges with the status quo trajectory vs. opportunities in the water plan. The CWP will
 seek to address the identified gaps while maintaining healthy watersheds and environment, robust
 skiing, recreation and tourism industries, vibrant and sustainable cities, and viable and productive
 agriculture.
- Information regarding other state water plans, and the need to integrate management of water quality and water quantity.
- Establish how the CWP will utilize SWSI's technical platform.
- Integrate water products.
- Identify what the CWP aims to achieve, which includes:
 - Align state funding and the state's role in water supply and management with the plan's water values;
 - Streamline the state role in the approval and regulatory process regarding water supply and management;
 - Provide background to establish an understanding of the need for state support of water supply projects, along with providing a path to state support of those water supply and water management proposals that stress conservation, innovation, collaboration and other criteria such as promoting smart land use, healthy watersheds for Colorado's rivers and streams, and

smart water conservation practices that utilize demand-management. State support will also recognize that multipurpose projects will be preferred;

- Be constructed from the bottom-up, incorporating the work of the grassroots IBCC and BRTs;
- o Protect Colorado's ability to fully use its water within its interstate compacts and agreements and in light of increasing downstream water demands and changing federal requirements;
- Establish a foundation for common-sense changes to the way we manage and transfer our water;
 and
- Address our looming gap between supply and demand while minimizing the permanent buyand-dry of irrigated agriculture.

Supporting Information: Executive Order, Presentation, talking points, etc.

Staff Support: CWCB Staff

1.2. Description of State, Local, and Federal Entities that Are Involved in Water Administration, Study, Planning and Project Permitting

Objective: Demonstrate that the plan will make water supply project permitting more efficient and effective.

Potential Approach: Section 1.2 will be a brief section that will indicate the importance of aligning state resources and working collaboratively with federal and local permitting agencies. In addition, the section will specify that the CWP does not create an extra permitting hurdle for water providers; rather, it will establish a path to more efficient permitting for projects that meet the water values and criteria identified in the CWP, including impacts associated with the water project.

Supporting Information: Information from State and Federal entities, 122.2, CWA Section 401, NEPA, ACTS, ESA, local regulations and permit criteria (1041 regulations; see NWCCOG's list of headwaters' local regulation document)

Staff Support: CWCB Staff and Department of Natural Resources (DNR) Executive Director's Office (EDO) staff, Colorado Department of Public Health and Environment (CDPHE) staff, Colorado Parks and Wildlife (CPW) staff

1.3. Description of Colorado Water Law & Administration

Objective: Demonstrate how the CWP will work with Colorado water law and supports the doctrine of prior appropriation.

Potential Approach: Write a short section that describes how the plan works with Colorado water law to meet Colorado's future needs. This section will reaffirm the prior appropriation doctrine.

Supporting Information: Numerous sources, including C.R.S. 37-92-101 et. Seq., Colorado Constitution Article XVI, Sections 5 and 6, Interstate Compacts

Staff Support: CWCB Staff, Attorney General's Office, and Division of Water Resources (DWR)

2. Overview of Each Basin

Objective: Demonstrate the diversity of needs and interests throughout Colorado and to highlight each basin's importance in relation to Colorado's water values.

Potential Approach: Section 2 will include a brief summary of each basin, pulling content from SWSI where appropriate. In addition, this section will include information about how CWCB has supported each basin, such as with instream flows, flood assistance, drought assistance, compacts that are important to the basin, and major funding efforts that have occurred within the basin.

Supporting Information: SWSI 1 and 2, Basin Fact sheets

Staff Support: CWCB Staff

3. Water Demand by Sector

Objective: Illustrate Colorado's significant municipal, industrial, agricultural, environmental, and recreational water needs

Potential Approach: Section 3 will be a brief section summarizing Colorado's consumptive and

nonconsumptive needs.

Supporting Information: SWSI 2010, HB 1051, SWSI update, BRT work

Staff Support: CWCB Staff

Potential Stakeholder feedback: N/A Additional Questions or needs: HB 1051.

4. Water Supply, Including Description of Historical and Projected Supply

Objective: Describe Colorado's variable water supplies and highlight where there are critical limitations and opportunities.

Potential Approach: Section 4 will be a brief section that includes content regarding Colorado's surface and groundwater water supplies and how it relates to other states. The section will refer to the BIPs and SWSI update and be consistent with the IBCC scenarios. In addition to climate change, one of the limitations and concerns for the future will be dust on snow. Conversely, one of the opportunities is weather modification. The section will not describe project specifics.

Supporting Information: Executive Order, Bureau of Reclamation (BOR) Colorado River Basin Supply and Demand Study, SWSI 2010, BRTs, Drought Plan and Task Force work, Colorado River Water Availability Study (CRWAS), Front Range Vulnerability Study, SWSI update Ch. 7 on Scenario Planning and Adaptive Management, IBCC and BRT work on scenarios, Drought Task Force, Climate Change Technical Advisory Group.

Staff Support: CWCB Staff

5. Water Management

5.1. Scenario Planning and Adaptive Management and No and Low Regrets

Objective: Ensure that the CWP prepares Colorado for a broad range of potential futures and to show how the CWP builds upon the work of the BRTs and IBCC and to identify initial strategies to meet Colorado's future water needs.

Potential Approach: Section 5.1 will include a brief and simplified narrative that indicates that the CWP is aimed at being successful regardless of what future Colorado faces. Summarize the no and low regrets. This section will frame how the other subsequent components fit into the CWP. This section will indicate where this information came from.

Supporting Information: BRT and IBCC Portfolio and scenario work, SWSI Update Ch. 7., IBCC No/Low

Regrets Action Plan **Staff Support:** CWCB Staff

5.2. Natural Disaster Management

Objective: To characterize and asses the impact that natural disasters such as drought, flood and wildfire have on the water systems and water availability for Colorado, both now and into the future. **Potential Approach:** Utilizing previously completed studies such as the CRWAS, Drought Plan & Flood Plan, as well as the latest CMIP 5 climate change data, CWCB will examine the role that natural disasters have on the water systems and water availability for Colorado under current conditions as well as under a changing climate.

Supporting Information: 2010 & 2013 Drought Mitigation & Response Plan, 2010 & 2013 Flood Mitigation & Response Plan, CRWAS, new analysis of CMIP 5 under CRWAS phase 2 and SWSI 2016

Staff Support: CWCB Staff

5.3. Watershed Health/Management

Objective: Show how Colorado can pull together the state's consumptive and nonconsumptive interests in order to protect critical watersheds from fire and other natural hazards, such as floods, beetle kill, and drought.

Potential Approach: Section 5.3 will synthesize the BIP watershed health sections, and indicate any existing support garnered from downstream states and/or federal agencies. Based on successful examples and lessons learned, the section will make specific recommendations for how a successful partnership between local stakeholder groups, the state and federal agencies can be formed to respond in emergency situations.

Supporting Information: BIP watershed health section and the Colorado State Forest Service watershed report. Information on fire impact to downstream states, existing plans, U.S. Forest Service information. This includes incorporating the request of some local staff at federal agencies to use stewardship opportunities and management tools.

Staff Support: CWCB Staff, Colorado State Forest Service staff

5.4. Water Quality

The contents of this section will be outlined by the State's interagency water quality and quantity group and contents will rely on stakeholders statewide.

5.5. Meeting the Consumptive and Nonconsumptive Gaps

Objective: Demonstrate how the CWP rests upon the foundation of BRT work and indicate that the CWP incorporates the BIPs, which should meet most of Colorado's future water needs while maintaining the state's water values.

Potential Approach: Synthesize and summarize the BIPs showing how they will measurably meet Colorado's future water needs. While a few projects may be highlighted, the section will primarily refer to the BIPs.

Supporting Information: BIPs, especially section 6.

Staff Support: CWCB and CPW Staff

5.6. Conservation and Reuse

- 5.6.1 Municipal & industrial (M&I) conservation, reuse, and land use
- 5.6.2 Agricultural conservation
- 5.6.3 Self-Supplied Industrial (e.g., conservation of mining and energy water use)
- 5.6.4 State agency conservation

Objective: Indicate the amount of conservation that can be utilized to meet Colorado's future water needs. **Potential Approach:** Section 5.6 will pull from various resources and will highlight recent BRT or legislative progress on the topic. Section 5.6.1 M&I conservation, reuse, and land use will synthesize BIP action on conservation, reuse, and land use and any legislative movements forward and summarize the pros and cons of M&I conservation. It will recognize demand hardening as a concern and will describe land use efforts related to the No and Low Regrets Action Plan. The subsection will also highlight reuse efforts, including graywater, potable reuse, and reuse for irrigation purposes. Section 5.6.2 Agricultural conservation will summarize the work of Colorado Agricultural Water Alliance. It will also recognize Colorado's unique issues with agricultural conservation related to the fact that 1) Colorado is a headwaters state and must consider interstate concerns, 2) there are limitations due to the protection of return flows for downstream users, and 3) nonconsumptive needs could be positively or negatively impacted. For section 5.6.3 Self-Supplied Industrial, summarize efforts to partner with industry, including the water savings associated with utilization of natural gas and renewable energy sources. This section could be focused on the energy/water nexus more generally and describe recent energy/water nexus

efforts. For Section 5.6.4., State agency conservation, the section should indicate how state agencies are leading conservation efforts.

Supporting Information: SWSI 2010, Best Practices manual, Ag conservation paper, state agency water/energy conservation paper, Colorado & Yampa/White BRT energy study, nonprofit reports and memos on water/energy nexus, Letter to the Governors, information from water/energy workshops, SWSI Update (especially on industrial needs), BIPs, Colorado River Basin Supply and Demand Study and associated Next Steps Processes, and examples of local conservation plans

Staff Support: CWCB Staff, relevant staff from other state agencies

5.7. Alternative Agricultural to Urban Transfers

Objective: Showcase recent and ongoing efforts allowing for water sharing between agricultural and municipal water users.

Potential Approach: The current path Colorado is on is the continued long term permanent dry up of Colorado's irrigated agriculture. Section 5.7 will lay a path for agricultural producers and municipalities to have a greater suite of options, while not rewriting property rights. The section will discuss recent legislative efforts to allow for alternative transfer method pilots, and will further the technical information, which indicates that approximately 50,000 acre-feet of agricultural water will be needed in the Front Range. Relevant aspects of the East Slope Basin Implementation Plans and the No and Low Regrets Action Plan will be incorporated. Examples, such as conservation easements which tie water to agricultural lands while allowing for temporary leasing on fallowed lands, will be highlighted. The section will also include an identification of some of the legal constraints.

Supporting Information: H.B. 1248 and associated Guidance and lessons learned from any pilots, Colorado Agricultural Water Alliance, Ag Policy Dialogue, Alternative Transfer Method grants and report, existing law concerning water banks, interruptible supply agreements, etc., information from discussions with the Colorado Water Bar

Staff Support: CWCB Staff, DWR Staff, Colorado Department of Agriculture Staff

5.8. Municipal, Industrial, and Agricultural Infrastructure Projects and Methods

- 5.8.1. Water supply projects and methods
- 5.8.2. Existing water supply operation and maintenance

Objective: Summarize the type and amount of infrastructure projects and methods needed to meet our current and future water supply needs, to indicate how much this infrastructure will cost, and to highlight multi-purpose and regional projects and methods from the BIPs. In addition this section will draft incentive-based criteria, which can be used upon the request of a project proponent, to help a new project that may be lacking become a project that is worthy of state support. It will also include an evaluation process and actions that take place when criteria are met. Similarly, for existing water supply operation and maintenance, criteria and a rubric for CWCB financing will be included. These efforts will be utilized in the permitting and funding section of the plan.

Potential Approach: Informed by the BIPs, Section 5.8 will summarize the amount of additional infrastructure Colorado will need to meet our future consumptive needs while striving to uphold Colorado's water values. This will include measures to keep agriculture in production in the state and support environmental and recreational needs as part of multi-purpose projects. Operation and maintenance will be impacted by the flooding on the South Platte and Arkansas, and the assessments sent to FEMA will be summarized. In addition, the section will estimate how much the infrastructure will cost. **Supporting Information:** Cost estimates from SWSI 2010, BIPs, SWSI Update (e.g., section 8), CWCB

Strategic Framework, flood assessments

Staff Support: CWCB Staff, Colorado Department of Agriculture Staff

5.9. Environmental and Recreational Projects and Methods

Objective: Summarize the environmental and recreational projects and methods needed for protecting Colorado's environmental legacy and recreational opportunities, and to highlight important regional projects and methods.

Potential Approach: Informed by the BIPs, Section 5.9 will summarize the amount of additional projects and methods that will be needed to maintain and, in some cases, enhance Colorado's environmental and recreational attributes, while maintaining Colorado's water values, including the support of local economies. The section will describe how multi-purpose projects can benefit the environment and recreation and how agricultural uses can add value to these nonconsumptive uses as well. In addition, the section will estimate how much the projects and methods will cost. The section will indicate the total number of projects, amount of protected or restored habitat, amount of protected or restored stream miles, and the expected benefit to nonconsumptive attributes.

Supporting Information: SWSI 2010, SWSI Update, BIPs, nonconsumptive database and Identified Projects and Processes (IPPs), Nonconsumptive toolbox, <u>"Water and its Relationship to the Economies of the Headwaters Counties" study. December. 2011</u>

Staff Support: CWCB and CPW Staff

5.10. Framework on More Efficient Water Project Permitting Processes

Objective: Show how the CWP will help make the water supply project permitting processes more integrated, effective and efficient, especially for those projects that meet Colorado's water values and fit within the CWP framework.

Potential Approach: This section will summarize the work of local, state and federal permitting entities to accomplish the recommendations in the no and low regrets action plan that builds on the collaborative partnership that the State of Colorado already has with its federal partners. The draft indicates two main actions:

- Streamline state permitting processes for IPPs that meet values of the CWP: The Executive Order directs the CWP to help expedite permitting at the state level. The state should develop an approach to permitting IPPs that efficiently moves projects through the process and toward an outcome, whether positive or not, while ensuring sufficient protection of nonconsumptive and other values. Public engagement and community outreach regarding water supply needs and potential impacts of water supply projects may need to increase in affected communities and needs to occur as early as possible in the project planning process to facilitate an efficient permitting process.
- Improve state coordination with local and federal permitting entities: The state should continue to meet with federal agencies and local governments and look for opportunities, including entering into MOUs, to make NEPA and permitting processes more efficient and coordinated, especially for projects that meet the values of the CWP and are needed across multiple scenarios. Efficiency would not dictate whether the outcome is positive or not.

If there are pertinent aspects of the BIP's, those will be included as well. In addition, the CWP will consider any recommendations from the Quality and Quantity Workgroup recommendations on how quality and quantity policies should be linked, and seek to build off other successes, such as those in the endangered species recovery programs.

Supporting Information: CWCB Strategic Framework, No/Low Regrets Action Plan, any results from coordination meetings between state and federal permitting entities, ES white paper, Letter to the Governors, Mark Pifher Letter, nutrient rules, applicable law, Quality and Quantity Workgroup, information from local, state and federal permitting entities, information from project proponents, local governments, nonprofits, and other stakeholders on the permitting process, and information from the nutrients standards process, the work of CDPHE, list of land use plans and 1041 regulations from the

Northwest Colorado Council of Governments, the Colorado Water Quality Forum, nonconsumptive workshop comments at the 2013 Watersheds Conference, and the combined joint review process **Staff Support:** CWCB Staff, EDO Staff, CPW Staff

5.11. Cross-basin Conceptual Agreements and Points of Consensus

Objective: Highlight water management agreements achieved across basins and provide support to these agreements by virtue of incorporating them into the CWP.

Potential Approach: Section 5.11 will summarize existing agreements and discuss the importance of additional agreements. It will also detail any new agreements developed as part of the process and discuss any agreements that are underway. As part of this work, the section will explore criteria for a good new supply project or package of projects.

Supporting Information: Basin Roundtable Project Exploration Committee, No/Low Regrets Action Plan, Letter to the Governors, new supply subcommittee chairs letter, West Slope Caucus, East Slope white paper, existing agreements that may serve as models for potential conceptual agreements to resolve permitting issues, water rights disputes, or other issues in the basin of origin (e.g., Colorado River Cooperative Agreement, Windy Gap Firming Agreement), Basin Roundtable and IBCC discussions. **Staff Support:** CWCB Staff

6. Alignment of State Resources and Policies

6.1. Funding/Financing

- 6.1.1. Analysis of the cost to fully implement the CWP
- 6.1.2. Economic benefit of implementing the plan
- 6.1.3. Alignment of state funding resources and analysis of other funding opportunities

Objective: Indicate how the CWP can be implemented from a funding perspective and demonstrate that doing so would be beneficial for the vibrancy of the state. If additional funds beyond current resources are needed, it will demonstrate how such funds could be acquired.

Potential Approach: Drawing from SWSI and other resources, this section will briefly discuss the costs and economic benefits of implementing the plan and then discuss in greater detail how the CWP could be funded. This will include existing funding options such as CWCB loan and grant programs, Water and Power Authority loans, water provider / customer oriented funding, as well as private and federal options. If additional funds are needed, it will recommend a funding approach. Section 6.1.3 will indicate how state funding can be aligned with meeting the priorities set forth in the CWP.

Supporting Information: No/Low Regrets Action Plan Appendix B, SWSI 2010. SWSI Update, information from various funders (e.g., Water and Power Authority, Bureau of Reclamation, private funding entities), information from the Water Infrastructure Finance and Innovation Authority (WIFIA) and the Water Infrastructure Network (WIN), CWCB Strategic Framework

Staff Support: CWCB and CPW Staff

6.2. State Water Rights and Alignment

Objective: Indicate how the State of Colorado is utilizing its water rights to the best benefit of the state, in accordance with the CWP water values and goals.

Potential Approach: Section 6.2 will summarize how Colorado's state agencies are aligning their water rights to meet the water values and goals of Colorado's Water Plan. This section will include recommendations on how to move forward any critical water projects and methods that have not been achieved by the time the water plan is published. Specifically, water rights should be aligned to have multiple benefits, for instance to agriculture and the environment. Water sharing agreements could also be explored. Water rights and potential water projects should be reviewed so that they can best meet the

nonconsumptive and consumptive measurable objectives in the BIPs. Model examples that, such as the Rio Grande Cooperative Projects, will be described.

Supporting Information: Instream flows, Colorado Parks and Wildlife water rights database, State Land Board water rights documents and recommendations, feedback from various state agencies that have water rights.

Staff Support: CWCB, EDO, and CPW Staff

6.3. Alignment of other State Policies and Resources

Objective: To ensure that state policies and procedures across agencies are aligned.

Potential Approach: This section allows state agencies to examine policies and resources related to water at a high level. The section will summarize how the State of Colorado has aligned its policies and resources to meet the water values and goals of the CWP based off interagency meetings and information. For instance, the instream flows have been used as a way to align CPW interests with CWCB's instream flow program.

Supporting Information: Relevant policies from state agencies, Feedback from state agencies with water related policies.

Staff Support: CWCB Staff, EDO Staff, Attorney General's office, DWR, Colorado Parks and Wildlife, Colorado Department of Health and Environment, etc.

7. Outreach and Public Engagement

Objective: To document outreach efforts statewide and at the basin level and explain how the public was engaged throughout the planning process.

Potential Approach: This section will pull from the Basin Implementation Plans Section 4.1 Education, Outreach, and Participation in order to summarize outreach and public engagement efforts at the local level. It will also summarize statewide efforts to increase broad participation and generate input. **Supporting Information:** Public Education, Participation, and Outreach (PEPO) Workgroup documentation, Basin Implementation Plans Section 4.1 Education, Outreach and Participation, CWCB Outreach and Communications Plan

Staff Support: CWCB Staff, PEPO Education Liaisons, CFWE Staff

8. Legislative Recommendations to Assist Fully Implementing the CWP

Objective: To highlight recent legislative accomplishments and show grassroots support for any additional legislative action that is needed.

Potential Approach: This section should pull from the No/Low Regrets Action Plan's legislative recommendations and summary. It will discuss recent legislation in support of CWP water values and goals. In addition, it will highlight the level of support for new legislative concepts and from where the concepts emerged. Every recommendation should come from BRT, IBCC, and stakeholder involvement. **Supporting Information:** No/Low Regrets Document, Basin Implementation Plans, BRT agriculture policy document, information from the Interim Water Committee, Colorado Water Congress, and the Colorado Water Bar

Staff Support: CWCB Staff, EDO Staff

9. Process for Plan Update

Objective: Indicate that the CWP is a living document that will need periodic updates.

Potential Approach: Write a brief section describing the process for and timing of future updates.

Supporting Information: Executive Order, CWP presentations