

# STATE OF COLORADO

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## Colorado Water Conservation Board Department of Natural Resources

1313 Sherman Street, Room 721  
Denver, Colorado 80203  
Phone: (303) 866-3441  
Fax: (303) 866-4474  
www.cwcb.state.co.us



TO: Colorado Water Conservation Board Members

FROM: Rebecca Mitchell, Water Supply Planning Section

DATE: May 2, 2013

SUBJECT: **Agenda Item 29, May 14-15, 2013 Board Meeting  
Colorado State Water Plan / Statewide Water Supply  
Initiative / Basin Implementation Discussion**

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John W. Hickenlooper  
Governor

Mike King  
DNR Executive Director

Jennifer L. Gimbel  
CWCB Director

**Staff Recommendation:** *This is an informational item only. No Board action is required.*

### Background:

In recent months the CWCB has focused its preparations for major statewide water supply planning updates. This includes efforts to update the Statewide Water Supply Initiative, which the board planned to update in 2016 per the recommendations of SWSI 2010. CWCB staff and the basin roundtables have also begun efforts to create Basin Implementation Plans that will focus on projects and methods recommended by the roundtables to address their consumptive and nonconsumptive needs. These Basin Implementation Plans will serve as a critical foundation for the updates to SWSI. In addition, the Governor has requested that a Colorado State Water Plan (SWP) be completed by the end of 2015. It is envisioned that this SWP would build off the findings of SWSI, the Basin Implementation Plans, and the work of the IBCC. As such, it will seek to further focus the extensive grassroots efforts of SWSI and the HB-1177 process on addressing key water policy issues in Colorado.

Toward this end, at the January 2013 CWCB meeting the board had a presentation and discussion to further examine how other states approach statewide water planning. At the March 2013 CWCB meeting the board had a more detailed presentation by representatives from California and Texas to learn from their experiences with water planning. Most recently, on April 18, 2013 the Board held a special workshop with John Stulp and representatives from the Governor's Office to initiate the discussion on how work on the SWP, updates to SWSI, and other efforts should proceed.

### Discussion:

Attached materials provided to inform board discussion include a draft SWSI Update outline and a draft Basin Implementation Plan Guidance outline. Staff will lead a discussion on the development and structure of these efforts and how they fit with other ongoing efforts such as the SWP, Colorado River Water Availability Study Continuation, and the work of the IBCC. The discussion will focus on coordinating these various efforts, necessary timelines for development, and associated roles and responsibilities.

# Update to the Statewide Water Supply Initiative

## DRAFT Outline

**Background and Purpose:** The Colorado Water Conservation Board (CWCB) officially approved the Statewide Water Supply Initiative (SWSI) 2010 Report in January 2011. Like the original SWSI study completed in 2004, the purpose of SWSI 2010 was to provide a comprehensive statewide analysis of water supply, demand, and resulting gaps. In addition, SWSI 2010 continued the inventory of local solutions to meet water supply gaps. At the completion of SWSI 2010 the Board recommended a six year planning cycle for updating SWSI. These periodic updates are important so that SWSI can continue to provide the basis for tracking demands, supplies and other drivers that inform which future scenario Colorado is entering and therefore which water strategies should be implemented.

Since 2010 the Governor has requested that a State Water Plan (SWP) be completed by the end of 2015. This outline for the SWSI Update has been developed to accommodate this timeline and articulate how the each chapter of the SWSI Update will incorporate and inform the SWP, Basin Implementation Plans, Colorado River Water Availability Study Continuation (CRWAS Continuation), and other efforts. Each of the chapters outlined below will be submitted for Board review as they are completed.

In addition to incorporating the basin implementation plans and the CRWAS, new aspects of this SWSI update will include:

- Incorporation of scenario planning and adaptive management
- Incorporation of climate change into demand and supply analyses
- Hydrologic variability (examine droughts and floods in addition to average conditions)
- Agricultural gap
- Nonconsumptive gap

**Relation to Other Pieces:** It is envisioned that the SWSI Update will serve as the primary technical basis for the development of the SWP, which in turn will focus on addressing key policy issues. The update will build off information from the previous SWSI reports and other efforts completed in the interim, such as the adaptive management and scenario planning work of the IBCC and basin roundtables (BRT's).

In addition, the update will incorporate the forthcoming Basin Implementation Plans which will serve as primary inputs to a number of its chapters. The Basin Implementation Plans will focus on projects and methods recommended by the roundtables to address their consumptive and nonconsumptive needs. As such, they are intended to help basins proactively meet water needs, with currently planned projects, re-prioritized projects, and new projects, operational agreements, flow protections, or other methods. The Basin Implementation Plans will also likely include more detailed modeling analysis done via the CRWAS Continuation or WSRA-funded studies in basins outside of the CRWAS area. Other aspects of the CRWAS Continuation, such as its comprehensive review of similar ongoing water studies, will be referenced as well.

## **Table of Contents:**

### **Executive Summary**

#### **Chapter 1: Introduction**

- 1.1 Purpose of the Statewide Water Supply Initiative Update
- 1.2 History of the Statewide Water Supply Initiative
- 1.3 CWCB History and Mission
- 1.4 Overview of the Water for the 21st Century Act
- 1.5 Background on Colorado's Water Resources
- 1.6 State and Federal Water Institutions
- 1.7 Overview of Report
- 1.8 Acknowledgments

#### **Chapter 2: Progress to Date**

- 2.1 Perception and Involvement
- 2.2 Infrastructure Improvements and Deficits
- 2.3 Institutional Achievements

#### **Chapter 3: Basin Roundtable Implementation Plan Summaries**

- 3.1 Purpose and Composition of Basin Implementation Plans
- 3.2 How Basin Implementation Plans are Used in this SWSI Update
- 3.3 Basin Implementation Plan Summaries

#### **Chapter 4: Statewide Consumptive and Nonconsumptive Needs**

- 4.1 Consumptive Needs
- 4.2 Nonconsumptive Needs

#### **Chapter 5: Statewide Water Supplies**

- 5.1 Surface Water Analysis
- 5.2 Groundwater Analysis

#### **Chapter 6: Statewide Gap Analysis**

- 6.1 Municipal and Industrial Gap Analysis
- 6.2 Agricultural Gap Analysis
- 6.3 Nonconsumptive Gap Analysis

#### **Chapter 7: Adaptive Management Framework**

- 7.1 Challenges and Uncertainty
- 7.2 Scenario Planning
- 7.3 Adaptive Management

#### **Chapter 8: Recommendations for Implementation**

- 8.1 Statewide Water Management Strategies
- 8.2 Projects and Methods
- 8.3 Education, Participation, and Outreach
- 8.4 Incentives Programs
- 8.5 Economic Needs, Opportunities, and Costs of Inaction
- 8.6 Implementation Recommendations and Timeline

#### **Chapter 9: References**

# Basin Implementation Plan

## DRAFT Guidance Outline

**Purpose:** During the needs assessment work summarized in the State Water Supply Initiative (SWSI) 2010, it was determined that every basin has a gap. Therefore, the fundamental purpose of the Basin Implementation Plans is to develop projects and methods to meet municipal, industrial, agricultural, environmental, and recreational needs. This involves review of the Identified Projects and Processes (IPPs) and the development of new projects and methods that meet the roundtables' water supply gaps identified in SWSI 2010 and additional shortages outlined in section three. As part of this work, roundtables will develop goals and measurable outcomes, and needs, constraints and opportunities in the basin. In addition, the plan will identify specific implementation strategies that will be needed to fully realize the projects and methods described in section four and indicate how well the plan meets the basin roundtables' goals and measurable outcomes.

The Basin Implementation Plans will focus on projects and methods recommended by the roundtables to address their consumptive and nonconsumptive needs. As such, they are intended to help basins proactively meet water needs, with currently planned projects, re-prioritized projects, and new projects, operational agreements, flow protections, or other methods. The Basin Implementation Plans will also likely include more detailed modeling analyses done via the CRWAS Continuation or WSRA-funded studies in basins outside of the CRWAS area.

**Relation to Other Pieces:** The Basin Implementation Plans will be a fundamental component in SWSI as they will focus on strategies to meet roundtables' consumptive and nonconsumptive water supply needs. The Colorado Water for 21<sup>st</sup> Century Act established the Basin Roundtables and tasked them to develop a water supply needs assessment, conduct a water supply analysis and propose projects and methods to meet those needs. This work will provide a more detailed analysis and be geared towards implementing projects to meet those needs to address the gap in a meaningful way. This effort will be a foundational component of the update to SWSI and provide critical inputs into the State Water Plan.

**Outline:** Following is the table of contents for the Basin Implementation Plans. Each section presented below will include guidance on what the section should contain, information that the Colorado Water Conservation Board (CWCB) will provide to the Basin Roundtables (BRTs), and sections that are optional.

### Table of Contents

#### Executive Summary

Section 1	Basin Goals and Measurable Outcomes
Section 2	Evaluate Consumptive and Nonconsumptive Needs
	2.1 Nonconsumptive Needs
	2.2 Consumptive Needs
Section 3	Evaluate Consumptive & Nonconsumptive Constraints and Opportunities
	3.1 Current Basin Water Operations and Hydrology

- 3.2 Water Management and Water Administration (Optional)
- 3.3 Hydrologic Modeling (Optional)
- 3.4 Shortages Analysis
- Section 4 Projects and Methods
  - 4.1 Education, Participation & Outreach
  - 4.2 New Multi-Purpose, Cooperative, and Regional Projects and Methods
  - 4.3 M&I Projects and Methods (i.e. projects, conservation, reuse, drought planning)
  - 4.4 Agricultural Projects & Methods
  - 4.5 Non-consumptive Projects and Methods
  - 4.6 Interbasin Projects and Methods (optional)
- Section 5 Implementation Strategies for the Projects and Methods
- Section 6 How the plan meets the Roundtables' Goals and Measurable Outcomes