# South Platte Roundtable and Metro Roundtable
# Basin Implementation Plan
# Integrated Scope of Work – Phase I
# CWCB and Technical Team Component

**Color Legend:**

- **Black:** Adapted from the Basin Implementation Plan Guidelines
- **Red:** BRT Responsibilities. These are aimed at meeting the minimum guidance outlined in the Basin Implementation Plan Guidance document

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## Section 1: South Platte and Metro Basin Goals and Measurable Outcomes

The Plan will identify actions, programs and projects that will provide a comprehensive strategy to optimize the use of the South Platte River Basin water supplies and meet 2050 demands.

Specific Nonconsumptive Goals and Measureable Outcomes (additional goals and measurable outcomes will be provided during the course of the SOW):

- Continue to comply with the SP recovery program's three states agreement
- Nonconsumptive goals will be based on the SWSI 2010 reports for each Roundtable and existing goals and measurable outcomes.

Specific M&I Goals and Measureable Outcomes (outcomes to be provided during the course of the SOW)

**Goals -** Meet the South Platte/Metro municipal supply gap:

- Reach enhanced levels of municipal conservation and reuse
- Successful permitting and development of planned municipal supply projects
- Continued research, testing, and use of agricultural and municipal water sharing partnerships
- New water storage on the east slope using environmentally beneficial methods
- Preserve the ability to develop Colorado's allocation of Colorado River water
- Development of state water project(s) using Colorado River water for municipal uses on the east and west slopes
- Develop projects and methods within the basin that meet as much of the future M&I gap as possible.
- Identify and reach concurrence on agreements to share infrastructure, reuse projects, conjunctive use projects and alternative agricultural water transfer methods (ATM) projects.

Specific Agricultural Goals and Measurable Outcomes (outcomes will be provided later)

- Minimize the permanent dry up of irrigated agricultural lands in the basin except for those being urbanized or are already planned in IPPs.

Assure compliance with the South Platte River Compact

**BRT Responsibilities**

The BRT will provide initial input to CWCB prior to the completing of an initial draft of basin goals and measurable outcomes and work jointly with staff through a subcommittee and the roundtables as a whole to finalize the basin's goals and measurable outcomes.

**CWCB Responsibilities**

Based on initial BRT guidance and the information developed by the Metro and South Platte Roundtables as part of their 2013 "Filling the East Slope Municipal Water Supply Gap" whitepaper, the 2011 Basin Reports, SWSI 2010, SWSI 1, the IBCC efforts and the Basin Roundtable Summits, CWCB will develop an initial draft of basin goals and measurable objectives for the Basin Roundtables to review, revise, add, and subtract from.

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## Section 2: Evaluate Consumptive and Nonconsumptive Needs

This section will summarize existing reports and information that may be relevant to the Basin Implementation Plans (e.g. SWSI 2010 demands, IPPs, vulnerabilities from the drought plan). The information summarized for this portion of each Basin Implementation Plan will help BRTs measure how well they are currently meeting their goals and objectives as well as identify methods to meet those needs.

**BRTs Responsibilities**

The BRTs will conduct an inventory of existing water planning information that may be relevant to the Basin Implementation Plan for their basin (e.g. descriptions of basin operations, planning documents identifying water management solutions, and environmental and recreation water-related studies/plans).

The BRTs will review the data summary after CWCB incorporates the information into the report section.

**CWCB Responsibilities**

CWCB can summarize the information noted as important by the BRTs. CWCB can compare the list of information sources developed by the BRTs with the Water Supply Reserve Account (WSRA) grants, drought planning efforts and other relevant documents for each basin to see if there are relevant WSRA studies or projects that might be incorporated.

### 2.1 Nonconsumptive Needs

This section will review nonconsumptive needs and assess how much of the needs are being met in relation to the goals and measurable outcomes. It will utilize the work of the BRTs and SWSI 2010 by reassessing this data in the context of the BRTs' goals and measurable outcomes. Using the nonconsumptive project and methods database, the BRTs can work to understand how much of their nonconsumptive needs are being met through existing projects and methods. For instance, data could indicate that 80% of cutthroat trout currently enjoy protection in the basin/identified reaches, leaving a remaining target of 10% to meet the BRT's goal. This effort is further described in the Nonconsumptive Toolbox.

**BRTs Responsibilities**

The BRTs will conduct an inventory of existing water planning information that may be relevant to the nonconsumptive needs for their basin.

Based on the information from this inventory and provided by CWCB, the BRTs should address the following questions:

- For each focus segment, are there projects or methods in place for the attributes?
- If they are in place, are they sufficient to maintain/sustain the attributes?
- How well do existing and planned projects and methods meet the need defined in the goals and measurable outcomes section?

BRTs may need to form committees to address these questions. BRTs will submit their answers to the CWCB to inform the Colorado Water Plan and for inclusion in SWSI.

**CWCB Responsibilities**

CWCB will provide the following information to the Metro and South Platte Roundtables:

- Nonconsumptive project and method database information
- Information on the protection that the projects and methods may provide across the basin.
- Focus area mapping
- Mapping that overlays the projects and methods and focus mapping (provided in the Nonconsumptive Toolbox)

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## 2.2 Consumptive Needs

This section will provide an update to the Consumptive Needs Assessments that were developed as part of SWSI 2010 and will include vulnerabilities from the State Drought Plan. This section includes municipal, industrial, and agricultural needs.

**BRTs Responsibilities**

The BRTs will conduct an inventory of existing water planning information that may be relevant to the consumptive needs for their basin (e.g. agricultural needs studies and other municipal, industrial, and agriculture water-related studies/plans).

The BRTs will review information and provide feedback on the draft information prior to incorporation into their respective Basin Implementation Plans.

**CWCB Responsibilities**

CWCB will summarize the existing information, data from H.B. 1051 surveys, and the inventory breaking it into both the Metro and South Platte Roundtables and localized areas within each such as regions or counties.

## Section 3: Evaluate Consumptive and Nonconsumptive Constraints and Opportunities

The purpose of this section is to help BRTs better understand the constraints and opportunities within their basins to meet their identified needs. The components of this section include:

- Consumptive and Nonconsumptive Constraints and Opportunities
    - 3.1 Analysis of Constraints and Opportunities Based on Existing Data
    - 3.2. Agricultural sharing constraints and opportunities
    - 3.3 Infrastructure and water sharing opportunities, including reuse
    - 3.4 Opportunities and constraints for East Slope Storage, including conjunctive use of surface and groundwater

### 3.1 Analysis of Constraints and Opportunities Based on Existing Data

The purpose of this task is to understand where there are opportunities for projects and methods to be implemented and where constraints exist that currently limit solutions. The task will utilize current water operations in the basin under dry, wet, and average hydrologic conditions and use existing data, tools, and methodologies. For example, a BRT could have a measurable outcome to "Protect 90% of Cutthroat Trout habitat with minimum instream flows." The nonconsumptive needs section could indicate that ten percent more habitat needed to be protected. Section 3.1 would then use existing data to determine which stream reaches have the best opportunities for additional protections and which are constrained. The same would be the case for finding opportunities and constraints for consumptive projects and methods. Within this task, constraints within the basin will be identified and described. Examples of these constraints include:

- Competing or conflicting objectives among local plans
- Conflicting means of achieving the objective among local plans, all portions of the region are not equally represented in local plans
- Jurisdictional conflicts
- Regulatory constraints
- Recreational opportunities, issues and impacts
- Environmental opportunities, issues and impacts

The impact of regulatory and jurisdictional constraints on water operations will be discussed.

**BRTs Responsibilities**

The BRTs will work with CWCB staff and consultants to identify the pinch points, other constraints, and opportunities. The BRTs will ensure that the information is accurate and useful once it is summarized and incorporated into the report.

**CWCB Responsibilities**

The CWCB will provide the following information:

- For major water users in the basin, diversions, storage, exchanges, reuse, and uses will be summarized on a monthly basis for the study period 1990 to 2012 using existing information.
- Hydrologic data for three selected years (dry, average, and wet hydrology) will be provided from various data sources including DWR's Hydrobase, the South Platte DSS, and the USGS databases. This data will include information at key location in the South Platte Basin.

- Instream flow water rights and flow information requirements from the Platte River Recovery Implementation Program.
- Mapping summarizing water uses and hydrology
- Mapping to show where there are opportunities to meet nonconsumptive goals and measurable outcomes.
- Summary of the constraints and opportunities in the basin

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## 3.2 Agricultural Sharing Constraints and Opportunities

Fifty thousand acre-feet of agricultural sharing water was identified as being needed as an IBCC no and low regret strategy, derived from basin roundtable Portfolio Tool submittals. This task will identify ATM implementation opportunities that could assist in limiting the permanent dry-up of irrigated lands in the South Platte River basin except for those lands being urbanized or those in IPPs. These opportunities would include those studied in recent ATM second round grants for 2011-2012. Basin Roundtable recommendations in Section 5 include continued state funding of practical research and pilot projects for water sharing partnerships between cities and agriculture, such as ATMs, as well as providing incentives to encourage the development of such projects and partnerships.

**CWCB Responsibilities**

The CWCB will summarize the results of the ATM studies funded by the CWCB including the following:

- Lower South Platte Water Conservancy District's ATM grant project for a proposed organizational structure and operational plan for a water organization in the Lower South Platte River that would facilitate more efficient use of water in the South Platte River basin.
- Colorado Corn Growers and partners ATM grant project to develop the framework for innovative partnerships aimed at sustainably securing water supplies.
- Evaluating the ability to couple conservation easements with interruptible water supply agreements (IWSA) to provide municipalities with drought water supplies while sustaining agriculture. This evaluation would include recommending any changes to the current statutes on IWSAs that may make them more appealing to municipal providers.

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## 3.3 Infrastructure and water sharing opportunities, including reuse

This task will identify existing and future infrastructure in the basin that may have the potential to be shared to maximize water use and reduce costs and would include pipelines and reservoir. This task will also identify existing water sharing agreements or potential water sharing agreements such as the WISE agreement under discussion now between Denver Water, Aurora and the South Metro Water Authority. The benefits of these water sharing agreements will be evaluated. Section 5 provides specific recommendations for water sharing agreements, including regional cooperation in the development of reusable supplies and providing incentives to encourage water sharing between municipalities and agriculture. Lastly, this task will identify current water reuse projects such as Prairie Waters or Denver Water's reuse program and determine if there is any potential to

share in the benefits of the project or share in the cost of expanding the project in the future to maximize efficiencies and reduce costs. See Section 5 recommendations for implementation related to municipal reuse and water sharing agreements with agriculture.

**BRT Responsibilities**

Capacities and any excess of usable capacity would be identified as well as project owners or possible participants.

**CWCB Responsibilities**

- The CWCB will provide publicly-available maps with existing and future infrastructure that may be useful for sharing by water providers.
- The CWCB will provide information on any existing water sharing agreement including the written agreement, terms and conditions, and maps with the infrastructure of the parties to the agreement. Any information on potential water sharing agreements under discussion or identified by the BRTs will be included.
- The CWCB will provide information on existing reuse projects and also any planned reuse projects. Maps of the infrastructure associated with a reuse project will be provided. The

## 3.4 Opportunities and constraints for East Slope Storage, including conjunctive use of surface and groundwater

This task will identify existing and potential storage and conjunctive use projects using renewable supplies in average and wet years and non-renewable supplies from the Denver Basin aquifers in dry years. Experiences from existing conjunctive use projects such as those by Centennial Water and Sanitation District (Highlands Ranch) will be reviewed and benefits identified.

**CWCB Responsibilities**

The CWCB will provide information on existing storage and conjunctive use projects and describe operations and limitations. The potential to add other conjunctive use projects will be evaluated and benefits presented.