

Interbasin Compact Committee

DRAFT Conceptual Agreement

The *IBCC Conceptual Agreement* sets the framework for future detailed negotiations on a potential new transmountain diversion (TMD). It reflects major statewide areas of concern that should be discussed and negotiated between project proponent(s) and affected communities. The *IBCC Conceptual Agreement* was generated by the diverse stakeholders that make up the IBCC and represents a thorough exploration of the difficult issues that often surround a new TMD. As such, this framework may be helpful in accelerating future negotiations. However, the agreement is not meant to take the place of any specific negotiations and agreements that will surround any future transmountain project.

The IBCC acknowledges that overdevelopment of limited Colorado River System water is a serious risk that could result in a Compact deficit, and all planning has to recognize that risk. The purpose of this document is to provide an initial conceptual agreement about how a future increment of Colorado River water could be developed under the right circumstances.

IBCC Summary Points

- 1) The East Slope is not looking for firm yield from a new TMD project and would accept hydrologic risk for that project.
- 2) A new TMD project would be used conjunctively with East Slope interruptible supply agreements, Denver Basin Aquifer resources, carry-over storage, terminal storage, drought restriction savings, and other non-West Slope water sources.
- 3) In order to manage when a new TMD will be able to divert, triggers are needed.
- 4) An insurance policy that protects against involuntary curtailment is needed for existing uses and some reasonable increment of future development in the Colorado River system, but it will not cover a new TMD.
- 5) Future West Slope needs should be accommodated as part of a new TMD project.
- 6) Colorado will continue its commitment to improve conservation and reuse.
- 7) Environmental resiliency and recreational needs must be addressed both before and conjunctively with a new TMD.

6

process, which establishes a stakeholder group and process for environmental improvements, utilizing funding from Denver Water and others.

The IBCC and roundtable process outlined in HB 1177 also provides several provisions by which these institutions may participate in voluntary negotiations. As delineated in the bill, the roundtables and IBCC would be a natural venue for working together for mutual benefits, under the terms of an interbasin compact charter.

6) Colorado will continue its commitment to improve conservation and reuse.

Part A. Municipal & Industrial Conservation and Reuse

Conservation actions defined in the No and Low Regrets Action Plan should be substantively completed prior to implementation of a new TMD project. Such actions include development of conservation standards for communities planning to use agricultural transfers or new supplies for future water needs, focusing as much as possible on incentives, legislative options and support for indoor water use, and legislative options and support for outdoor water efficiency standards.

Reuse actions defined in the No and Low Regrets Action Plan should also be substantively completed prior to the implementation of a new TMD project. Such actions include improved tracking and quantification, development of a statewide reuse goal, development of new incentives for reuse, and education and outreach efforts.

All proponents of new M&I water projects should meet high conservation standards. Water providers participating in a new TMD project should have active conservation plans and activities approved by the CWCBC in place prior to implementation of the project. Additionally, water providers participating in a new TMD project who utilize other fully consumable water supplies should have a reuse program to recycle as much water as is technically and economically possible.

The active water conservation plans of providers participating in a new TMD should demonstrate a commitment to working toward enhanced conservation goals. These goals should have measurable outcomes. The IBCC discussed, but did not resolve, whether entities using water from a new TMD project should be held to a higher conservation standard than other water entities in the state. This topic requires further IBCC discussion, including refinement of the terms “high” or “higher” related to this issue, including how to measure and track progress. The resolution of this issue should recognize that opportunities for conservation may vary from one community to another.

Examples of measurable conservation goals include establishing target indoor/outdoor water use ratios, target gallons per capita per day, and best management practices (BMP) targets. Developing implementation targets for BMPs may be the simplest approach to a measurable outcome in the short term, as per capita targets and indoor/outdoor water use ratios may be more challenging or controversial in some communities than others and there is currently insufficient baseline data. However, new data on per capita use data is emerging through HB 1051 in June 2014 and could provide a baseline for a future per capita or indoor/outdoor ratio target. Additionally, the BIPs are due in July 2014 and are expected to include plans for implementation of BMPs. The BIPs could provide helpful insight into how many BMPs are likely to be implemented and by how many providers. This information should inform a future IBCC discussion about what the right BMP implementation targets are and what progression of desired implementation would push providers to do more over time without overwhelming them.

Land use practices that help reduce water consumption should be supported and encouraged, focusing as much as possible on incentives. Land use is an important component in water conservation; however, further work is needed to determine strategies and partners to tackle this issue. Additional discussions on this issue should be initiated by the IBCC and should include municipalities, counties, local planning agencies, and elected officials at all levels.

Background: The Arkansas, Metro, and South Platte Basins have put significant efforts into conservation, reuse, and cooperative infrastructure. Some water providers, like Aurora, have reduced their per capita water use by 30% since 2002. Many other areas in the state have also seen declines in per capita water use.

M&I Conservation: SWSI 2010 takes what are essentially current water usage numbers and determines low, medium, and high conservation levels. The No and Low Regrets Action Plan determined that a minimum of 165,000 acre-feet of active conservation would need to be applied to meet future demands. This is equivalent to 100% of low conservation levels or 50% of medium conservation levels being applied to the gap. In addition, about 150,000 acre feet of passive conservation is factored into the overall demands. Passive savings are those realized by the natural replacement of more efficient fixtures and appliances in homes and businesses. There has been some concern that the replacement rates and starting points in SWSI 2010 may not reflect the latest data. SWSI 2016 will reexamine passive conservation. Recently the Fixtures Bill (SB14-103) passed through the Colorado Legislature and is awaiting the Governor's signature. This bill will help yield passive conservation savings from shower heads, toilets, faucets, and other fixtures.

The Metro Basin Roundtable Conservation White Paper determined that achieving somewhere between low and medium conservation was reasonable under current conditions, but any additional levels would need statewide action. The East Slope White Paper in general agreed that enhanced levels of conservation are needed, and the Colorado Basin Roundtable White Paper, several other West Slope basin roundtable portfolios, and the *Filling the Gap* report indicated that Colorado should strive for high levels of conservation. More recently, the Southwest Basin Roundtable has put together a conservation goal and measurable outcome that links the percentage of outdoor conservation use to indoor conservation use, with new transmountain (and agricultural dry-up) diverters needing to use less outdoor irrigation.

Resources for Item 6:

- [Colorado Basin Roundtable White Paper](#)
- [Filling the East Slope Municipal Water Supply Gap](#)
- [Metro Roundtable Selection of a Reuse Factor for the Portfolio Tool Planning Exercise](#)
- [Metro Roundtable Updated Conservation Strategy](#)
- [Metro Roundtable Water Supply Paper \(2012\)](#)
- [Basin Implementation Plans](#)
- [Southwest Basin Roundtable Municipal Water Conservation Goal and Measurable Outcome](#)
- [Guidebook of Best Practices for Municipal Water Conservation in Colorado](#)
- [Statewide Water Supply Initiative](#)
- [SWSI M&I Water Conservation Strategies](#)
- [Fixtures Legislation](#)
- [Filling the Gap Report Series](#)
- [Currier Memo on SWSI 2010](#)
- [CWCB Response to Currier Memo](#)
- [IBCC Letter to the Governors](#)
- [No and Low Regrets](#)
- [Green River Studies in Wyoming](#)
- [Senate Bill 23](#)
- [Colorado Demonstration Zero Liquid Discharge Processes](#)
- [Rotary Sprinkler Nozzle Retrofit](#)
- [Colorado Review: Water Management and Land Use Planning Integration](#)
- [Calculating Per Capita Water Demand Savings from Density Increases to Residential Housing for Portfolio and Trade-off Tool](#)
- [Colorado River Cooperative Agreement](#)
- [Windy Gap Farming – Reuse](#)
- [CAWA](#)
- [WISE](#)

The IBCC's No and Low Regrets Action Plan lists several possible options for how to move forward with enhanced levels of conservation. These items and other concepts were organized into four conceptual bullets related to demand management for the IBCC's polling exercise in October 2013 in order to explore the intersection of conservation, reuse, and land use with TMDs.

Reuse: Colorado water law defines what water supplies can be reused, and to the extent each source can be reused. Currently there are a limited number of sources that can legally be reused in Colorado:

- **Nonnative water:** Water imported into a basin through a transbasin diversion can be reused to extinction. Transbasin diversions account for a substantial quantity of the total reusable supply in Colorado.
- **Agricultural-Municipal Water Transfers:** Agricultural transfers are generally available for reuse; however, reuse is limited to the historic consumptive use of the original agricultural water right decree. Reuse is applicable for water from traditional purchase of agricultural water rights and ATMs.
- **Nontributary groundwater:** Reuse of nontributary groundwater is allowable.
- **Other Diverted Water:** Any water right with a decreed reuse right may be reused to the extent described in the decreed reuse right.

There are two ways in which these different source types can be reclaimed for reuse:

1. **Direct Reuse:** This is the process in which the return flows from the various supplies are physically reclaimed either for potable or nonpotable uses. An example of this can be found in Aurora's Sand Creek Water Reuse Facility for potable water or Colorado Springs Utility's non-potable water system.
2. **Indirect Reuse:** This process entails the exchange or substitution of the return flows from a reusable source. The most common form of Indirect Reuse is through river exchanges, where a utility lets the reusable water flow downstream, and diverts an equal amount of water from an upstream source.

In addition, municipal wastewater is usually used by agricultural producers downstream. In some cases, this water is directly leased to agricultural producers. In other cases, the water becomes part of the stream flow and used downstream.

Further reuse recommendations and descriptions can be found in the No and Low Regrets Action Plan, Metro Reuse White Paper, and the East Slope White Paper. The CRCA and Windy Gap firming agreements specifically deal with reuse. West Slope basin roundtables have expressed concern that current and planned reuse on the East Slope does not sufficiently utilize fully consumable waters.

Other Demand Management Strategies: In addition to conservation and reuse, the IBCC recommends regional and cooperative strategies and land use measures as important factors in the efforts of Colorado's various regions to "up their games."

Regional cooperative projects, like WISE and the Chatfield Reallocation Project, are becoming more common. According to the Metro Reuse Paper, reuse by exchange has nearly been exhausted, and more and more direct reuse (both potable and nonpotable) is being planned. Grand Junction, Ute Water, Clifton, and Palisade have interconnected their systems to provide reliability in the face of drought and emergencies. The No and Low Regrets Action Plan makes the following recommendation:

Encourage cooperative projects through BIPs: CWCB should encourage Basin Roundtables to work with water providers and communities that anticipate having a water supply gap in the future (or that have one now) to partner with neighboring providers and communities to find creative solutions to

their water needs. In particular, water-short communities should work with their surrounding communities to examine whether they can be integrated into current systems or upcoming IPPs. Expanding the number of water users served by IPPs that are already planned or underway can help limit or delay the need for new supply or agricultural transfer projects.

Urban land use has also been a major discussion point. Both the 2009 Land Use and Water conference and associated report and the memo on water demand savings from density described several options, as did the No and Low Regrets Action Plan:

Support and encourage land use practices that help reduce water consumption, focusing as much as possible on incentives: In 2010, CWCB produced a report titled Colorado Review: Water Management and Land Use Planning Integration. Several local actions that could be used more broadly stemmed out of that report. These include:

Expedited permitting: Permitting for buildings and developments could be expedited if the project incorporates certain water efficiency measures or high levels of density.

Tax incentives: There could be tax breaks if the project incorporates certain water efficiency measures or high levels density.

Structure impact (tap) fees: Use impact fees to promote water-wise developments and in-fill. These fees could be structured to penalize water inefficient or sprawling developments and/or to reward sustainable/dense developments.

Regional collaborative planning: Localized solutions are often not effective, since water demand may be transferred from one jurisdiction to one or many others. Therefore, regional solutions are critical and should be further explored. Some opportunities exist, such as engaging Council of Governments in water/land use discussions, identification of related regional planning efforts that are underway and including water issues, and the use of intergovernmental agreements.

Integration: Many other efforts are currently underway that could reduce regional water demand, but are not specifically aimed at achieving that purpose. There are many opportunities for developing partnerships with other water conservation efforts, sustainable/walkable neighborhood developments, energy conservation and CO2 reduction programs, water quality programs, food security programs, transportation projects, market drivers, comprehensive plans, and many others.

Part B. Agricultural Conservation

When considering agricultural conservation strategies, it will be important to take a site-specific perspective and to consider the potentially negative consequences of altering the timing and amount of return flows. While some locations lend themselves well to agricultural conservation practices, others do not, and a clear understanding of the affected systems is necessary.

Current Agricultural Uses: Many of the BIPs are looking to find the explicit interconnections between agricultural and nonconsumptive uses. In addition, several are looking to decrease agricultural shortages. As part of this work, each basin should seek to reduce consumptive non-beneficial use by following the guidelines laid out in the Colorado Agricultural Water Alliance (CAWA) 2008 Agricultural Conservation Paper (e.g., reducing soil moisture loss where practical through drip irrigation or mulching). Lining of high-priority ditches is another important tool in reducing seepage losses in appropriate areas. Phreatophyte control presents one of the largest opportunities for reducing non-beneficial consumptive use and should be pursued aggressively, although balancing this with nonconsumptive needs can be challenging. Additional incentives should be developed to assist basins in implementing, where appropriate, agricultural efficiency and conservation practices, supporting the ecosystem services agriculture can provide, and changing crop types to lower water use crops.

Future Agricultural Uses: New irrigated agricultural lands (currently identified in the North Platte and Yampa basins) should be designed to either use best practices with regard to

agricultural conservation and efficiency, or, alternatively, be measurably and explicitly multi-purpose by meeting identified nonconsumptive needs.

Background: Communities around Colorado are working to improve the efficiency of water use in agricultural settings. Recent work in the Grand Valley serves as an excellent example of this. Many headgates have been modified, and orchards are now on drip irrigation. CWCB and others have supported many agricultural producers across the State who have put significant funds into decreasing ditch loss, diversion structures, and improving irrigation efficiencies. The Rio Grande and Republican River basins are working to maintain a sustainable agricultural community in the face of an imbalance between available water supplies and current levels of water use. The South Platte is still grappling with a Supreme Court decision that led to the shutdown of many agricultural producers who relied on wells. It is also important to take into consideration legal constraints such as the Arkansas River Compact or the decree in the North Platte Basin, under which greater efficiency measures can have complicated consequences for agricultural producers.

In addition, some irrigation practices, such as flood irrigation, often support riparian and wetland areas critical for migratory birds and other environmentally important species. Irrigation practices can also retime river flows, so that late summer and early fall flows are often better than they were under natural conditions. For instance, in high mountain meadows, high levels of irrigation early in the season benefit agricultural return flows and nonconsumptive values later in the year.

Agricultural conservation is aimed at reducing consumptive use and needs to be distinguished from agricultural efficiency. In some instances and for some crops, practices such as drip irrigation and mulching can reduce consumptive use. Agricultural efficiency measures, such as pivot sprinklers, may retime water, divert less, or otherwise modify operations to maximize the water delivery to the crop, but it is not aimed at reducing consumptive use. In fact, agricultural efficiencies often lead to increased consumptive use since most areas in the state already do not provide as much water as the crops could use under ideal conditions. When water is applied more efficiently to a crop, then it can more easily use and consume that water.

7) Environmental resiliency and recreational needs must be addressed both before and conjunctively with a new TMD.

Agriculture and Nonconsumptive Partnerships:

Agricultural water has a role to play with regard to adding flexibility and reliability to meet future water needs. Agricultural partnerships with environmental, recreational, and municipal groups should be supported to help sustain Colorado's economic future and healthy environment. In addition, development of all new water projects should consider important agricultural and nonconsumptive gaps identified by the basin roundtables.

Environmental Resiliency: Colorado's Water Plan, BIPs, and stakeholder groups across the state should identify, secure funding for, and implement projects that help recover imperiled species and enhance ecological resiliency whether or not a new TMD is built. This could create conditions under which future projects may be possible but would not be the responsibility of a new

Resources for Item 7:

- [CWCB Instream Flow Program](#)
- [Nonconsumptive Toolbox](#)
- [Programmatic Biological Opinions](#)
- [Colorado River Basin Water Supply and Demand Study](#)
- [Streamflow Evaluations for Whitewater Boating](#)
- [Watershed Flow Evaluation Tool: Yampa/White and Colorado Basins](#)
- [Colorado Parks and Wildlife Planning](#)
- [Wildlife Mitigation Agreements](#)
- [NEPA Documentation on Ongoing Processes](#)
- [Arkansas Voluntary Flow Management Program](#)