
8. Interbasin Projects and Agreements

- Colorado's Water Plan promotes statewide cooperation for water supply planning through the following long-term goals:
- A. Protect Colorado's ability to fully develop compact entitlements, and continue to support agreements that strengthen Colorado's position in interstate negotiations while ensuring the long-term viability of Colorado's interstate compacts and relationships. Colorado will focus planning efforts on maintaining healthy systems and avoiding a Colorado River Compact deficit rather than on its response to compact curtailment.
 - B. Encourage multi-partner, multi-purpose, cooperative projects through financial incentives and technical support.
 - C. Consider using the draft conceptual framework as an integrated package of concepts to:
 - Encourage environmental resiliency;
 - Set high conservation standards;
 - Develop stakeholder support for interstate cooperative solutions; and
 - Establish conditions for a new multi-purpose and cooperative transmountain diversion (TMD) project if needed in the future.

Colorado is often referred to as “the Headwaters State” because it is the only state in which every major river system starts within the state and then exits to downstream states. Colorado stakeholders created intrastate agreements to help align key parties’ interests and understanding so that Colorado has a united voice when dealing with interstate and federal negotiations and litigation about water exiting the state. This chapter describes some recent examples of intrastate agreements, including the basin roundtable and the Interbasin Compact Committee (IBCC) process. This chapter also examines the next steps and path forward for these critical agreements.

Existing Stakeholder Agreements and Projects

Colorado has many intrastate agreements among diverse and disparate stakeholders. These agreements benefit the individual stakeholders, but also equip the state to effectively protect state interests in interstate matters. The following are recent examples of intrastate agreements that model a collaborative process for future agreements.

Arkansas River Voluntary Flow Agreement

A Voluntary Flow Management Program is a unique arrangement between state and federal agencies, nonprofits, water management organizations, and commercial rafting organizations. These agreements are voluntary: the parties are under minimal obligation to participate, but remain involved because the agreement is successful year after year. The Upper Arkansas River voluntary program, first established in 1990, is a partnership among Colorado Parks and Wildlife, Southeastern Colorado Water Conservancy District, Pueblo Board of Water Works, Trout Unlimited, the Arkansas River Outfitters Association, and the Bureau of Reclamation (BOR).

The Arkansas River voluntary flow agreement helps meet the environmental and recreational needs in the Upper Arkansas Basin by providing increased recreational flows on the river and beneficial flows for wildlife. The BORs Fryingpan-Arkansas Project facilities provide a flow of at least 700 cubic feet per

second at the Wellsville gage from July 1 to August 15, greatly benefiting recreation in the Arkansas River. In addition, during the spring and fall months, the facilities provide optimal conditions for a healthy brown trout fishery. These efforts bolster the recreational economy and bring tourists from all over the world.

Colorado River Cooperative Agreement (CRCA)

In the fall of 2013, 18 parties that are reliant on water from the Colorado River completed the CRCA. The CRCA represents the culmination of years of negotiation between Denver Water and several Western Slope entities. The goal of the CRCA is to protect Colorado River watersheds, while allowing Denver Water to develop future supplies. Over 40 stakeholders including water providers, county commissioners, local municipalities, ski resorts, and environmental groups participated in the process alongside the eighteen signatories.

On a river system as complicated as the Colorado, the CRCA represents a new way of looking at water management by considering the interests of as many parties as possible, while encouraging collaboration and innovation. This type of process helps the counties and municipalities more effectively manage environmental and recreational flows. A few examples of cooperative operations under the CRCA are the following Denver Water and Western Slope facilities: Dillon Reservoir, the Moffat Collection System, and the Shoshone power plant protocol. Many Basin Implementation Plans (BIPs) have concerns about local control and multi-purpose collaboration, and the CRCA shows an effective way to address these types of concerns.

Colorado River System Conservation Program

Facing declining levels in Lakes Mead and Powell, four of the largest water providers that depend on Colorado River Basin supplies have joined with the BOR to explore potential long-term solutions. Denver Water, the Southern Nevada Water Authority, the Central Arizona Water Conservation District, and the Metropolitan Water District of Southern California have all contributed \$2 million to a fund which will be used to finance pilot projects in the basin, with the BOR contributing \$3 million. These pilot projects will be geared towards municipalities, industries, and farmers, paying these entities to reduce their use of Colorado River water, thereby potentially increasing levels in the basin's two largest reservoirs.

The program is intended to test and demonstrate the concept of "demand management" in both the upper basin and the lower basin. These cooperative projects could use methods such as temporary fallowing of agricultural endeavors, upgrading to more efficient irrigation practices, reuse of self-supplied industrial water, recycling of municipal supplies to lessen consumptive use, and other possible methods to leave more water in the Colorado River.

The project supports the concepts that the upper basin states are exploring under the current contingency planning effort, described in Chapter 2.2. The contingency planning effort in the Upper Division States (Colorado, Wyoming, Utah and New Mexico) names demand management as a key strategy for keeping the Lake Powell reservoir level above critically low levels. While the Conservation Program is not specifically tied to the contingency planning effort, it may provide critically important information related to demand management concepts that are being explored under contingency planning.

The Program will provide funding for these pilot projects in 2015 and 2016. Considerations for choosing a pilot project include geographic diversity, the schedule for implementation, ease of administration, environmental benefits, and the potential to interface with water users between the project and Lake Powell, for Upper Basin projects. Program projects and management will be handled by the BOR in the Lower Basin, as the BOR serves as river master. In the Upper Basin, projects will be overseen by the Upper Division States, with assistance from the Upper Colorado River Commission. In addition, any project within an Upper Division State may be vetoed by that State's Commissioner for the Upper Colorado River Commission.

Elkhead Reservoir

The 2006 enlargement of Elkhead Reservoir is another example of multiple interests collaborating on a project. The Elkhead Reservoir was originally owned by the city of Craig and was constructed to provide energy to the Craig Station Power Plant and to support recreational sport fishing and boating.

Multiple stakeholders gathered together to plan an extensive \$31 million multi-purpose expansion project that would enhance endangered fish and water flow management. As part of the project, the city of Craig, the Colorado River Water Conservation District (CRWCD), and Colorado Parks and Wildlife formed a joint management of the reservoir. The project was funded through a combination of state funds and stakeholder cost sharing. The Upper Colorado River Recovery Program contributed \$13.6 million to the project. The State of Colorado Species Conservation Trust Fund contributed \$6.5 million. The remainder of the funding came from the Colorado Water Conservation Board (CWCB) construction loan program and the CRWCD. All parties had an interest in the project because it has multiple purposes.

The multi-purpose project allocated 5000 acre-feet of storage for endangered fish management, which provided the Yampa Basin with water to enhance environmental flows. The stakeholders worked together to address the potential conflicts between sport fish and protecting endangered fish species, installing a fish screen. The CRWCD and the CWCB collaborated on an adjudicated water right in a critical habitat on the Yampa for "in-river fish habitat and river flow maintenance and enhancement uses, and uses in furtherance of the Recovery Program." In addition, the project updated existing facilities to meet new uses and needs.

Windy Gap Firming Project

The Windy Gap Firming Project is collaboration among thirteen northeastern Colorado providers to improve the reliability of water supplies from the Windy Gap Project. The original project began delivering water in 1985. It is operated by Northern Water's Municipal Subdistrict. The firming project proposes to build a new reservoir on the eastern slope, called Chimney Hollow. Chimney Hollow will provide dedicated storage that would supply a reliable 30,000 acre-feet of water each year. This water will be supplied via the Colorado-Big Thompson Project, so the BOR must approve a contract allowing use of federal facilities.

The 13 project participants are committed to addressing environmental effects caused by the firming project. The subdistrict, on behalf of project participants, spent several years negotiating measures to mitigate environmental effects. The subdistrict worked with state wildlife biologists to develop the fish and wildlife mitigation plan, which operates to mitigate higher stream temperatures, increase flushing flows to clean sediment in the stream, and provide nutrient removal to offset water quality effects in

Grand Lake and the Colorado River. Federal reviewers incorporated the plan into the Final Environmental Impact Statement.

The project participants agreed to voluntary enhancement measures to address concerns with the current condition of aquatic life in the Colorado River. The enhancements include a state-authorized plan to provide \$4 million to fund future stream restoration and habitat-related projects on the Colorado River and \$250,000 to study a stream bypass around Windy Gap Reservoir. As part of the 1041 permit approved by Grand County, the subdistrict has entered into several agreements with local governments and environmental nonprofits that provide ecological enhancements. The Windy Gap Bypass Funding Agreement provides \$2 million to construct a bypass around the reservoir, which is matched by \$2 million in funding from the state. An Intergovernmental Agreement among the subdistrict, Grand County, CRWCD, Middle Park Water Conservancy District, and Northwest Colorado Council of Governments provides a reliable water supply to Middle Park to meet their future water needs and provides additional water supplies that Grand County may use for environmental purposes.

The collaboration between eastern and western slope entities and state agencies will improve the conditions for aquatic life in the Colorado River and also help the Windy Gap Firming Project progress to meet water supply needs on the eastern slope.

Water, Infrastructure, and Supply Efficiency (WISE) Partnership

The WISE Partnership serves as an example of how to use infrastructure to meet increasing water demands. The project brings together water providers in the Denver metropolitan area to meet challenges jointly, rather than individually. The WISE Partnership explores how existing provider infrastructure can be used to the benefit of all cooperating partners.

In response to the drought of 2002, Aurora Water began construction on the Prairie Waters Project, an innovative supply and filtration system. The Prairie Waters Project stabilized Aurora's water supply and created a large system of treatment and water transport infrastructure. Aurora now partners with Denver Water and the members of the South Metro Water Supply Authority on a project that couples the Prairie Waters infrastructure capacity with Denver and Aurora's unused supply and reusable flows. The partnership steadies water supply in times of drought for these providers and administers the sale of water to South Metro as a new and sustainable supply.

The WISE Partnership creates flexibility in the face of hydrologic uncertainty and establishes triggers to modify yields based on available flows. In addition, South Metro Water Supply Authority members use back up water supplies when WISE water is not available.

State Funding for Collaborative Projects

Funding for opportunities will become more competitive as Colorado moves from the planning phase to the project implementation phase. The BIPs believe that the projects with multi-purpose functions should be prioritized.

When examining appropriate projects to fund, the state looks for multiple stakeholder involvement and multiple project purposes. A few examples of state-funded projects are the Chatfield Reallocation project, the Wild and Scenic Alternatives processes, the Animas-La Plata Project, and a collaborative process to assess the best approaches to secure water for the Upper Colorado River Basin Recovery

Implementation Program. In addition to providing funding, the state served as a partner in the planning, permitting, and development of operational procedures for the Chatfield Reallocation and Animas La-Plata projects.

These projects and processes represent the type of collaboration necessary for future water supply planning in Colorado. Local involvement, stakeholder consultation, innovative practices, and multiple uses will be integral to future successful projects and processes. The BIP and Colorado's Water Plan processes have engaged communities, stakeholders, and basin roundtables in an unprecedented way. Continuing this engagement will be important for next steps–project implementation.

Conceptual Intrastate Agreements and Points of Consensus

The drought in 2002 illustrated that Colorado did not bring together the necessary stakeholders and technical information to adequately plan for Colorado's future. In response, Colorado initiated three important efforts: the Statewide Water Supply Initiative, the Colorado Water for the 21st Century Act, and the Water Supply Reserve Account Grant Program.

The Statewide Water Supply Initiative ([SB03-110](#)) established the technical backbone for statewide planning.

The Colorado Water for the 21st Century Act ([HB05-1177](#)) created the basin roundtables and the IBCC. The basin roundtables consist of nine stakeholder groups including the Metro area, Arkansas, Colorado, Gunnison, North Platte, Rio Grande, South Platte, Southwest, and Yampa/White/Green river basins. Members include representatives for the environment, recreation, domestic water suppliers, agriculture, and industry. These members are joined by representatives from each county, municipalities within each county, and conservancy and conservation districts. A basin roundtable may also vote in additional members, who may serve as voting or nonvoting members. The major charge of the basin roundtables is to determine their municipal, industrial, agricultural, environmental, and recreational needs, and identify projects and methods to meet those needs.

The IBCC is made up of two representatives from each basin roundtable, six governor appointees, two legislative appointees, and the Director of Compact Negotiations. The IBCC's main charge is to work with the basin roundtables to develop and ratify cross-basin agreements. A detailed list of the IBCC membership is available [here](#).

The basin roundtable and IBCC processes have evolved over the years, and several work products were developed to reach consensus across the state. These include:

- Statewide Basin Roundtable Summits and the roadmap documents.
- IBCC 2010 Letter to then outgoing Governor Ritter and then Governor-elect Hickenlooper.
- IBCC Draft No-and-Low-Regrets Action Plan.
- Draft IBCC Conceptual Agreement.

Statewide Basin Roundtable Summits

The three Statewide Basin Roundtable Summits held over the last several years have helped focus Colorado and the hundreds of stakeholders involved in water planning throughout the state. The summits provided an opportunity to learn across basins, make sure that statewide planning is heading in the right direction, and to set the course forward.

IBCC 2010 Letter

In December of 2010, the IBCC submitted a letter to the Governor. This letter synthesized the IBCC's ideas and laid the foundation for establishing the No-and-Low-Regrets Action Plan and Conceptual Agreement.

Much of this work is still relevant today and has helped guide the development of Colorado's Water Plan. The IBCC wrote, "The enormous challenge of meeting future water needs facing water users and the State requires the collective input of all stakeholders and a collaborative decision-making process that reaches common ground to plan a sustainable water future that meets our numerous and diverse needs... Our system of water allocation should be guided and supported by a comprehensive framework that will marshal ever-scarcer government resources in a manner that supports economic growth; protects our environment; provides for municipal, agricultural, and industrial needs; and supports rural, recreation, and ecotourism-based economies."

The general consensus was that the status quo scenario is not a desirable future for Colorado.

The IBCC highlighted that the current path was not sustainable for Colorado. The IBCC wrote, "status quo will likely lead to large transfers of water out of agriculture resulting in significant loss of agricultural lands, more dried-up streams threatening ecosystems and recreation-based economies, water-inefficient land use decisions, and continued paralysis on water supply projects. We have discussed status quo as the default position--the results that will likely occur if we, the water community, allow current trends to continue unchanged. Inaction is a decision itself, a decision with significant consequences. The general consensus was the status quo scenario is not a desirable future for Colorado."

The IBCC wrote about the path forward regarding water supply options: "It is clear that no one strategy can meet Colorado's growing water needs without harming values important to all Coloradans. Therefore, a mix of solutions is needed. At the IBCC's August 2010 meeting, it agreed that a future mix of water supply solutions should include all four sources to meet the water supply gap in Colorado: conservation, IPPs, agricultural transfers, and new supply development, while also protecting Colorado's significant water-dependent ecological and recreational resources."

No-and-Low-Regrets Action Plan

Based on the dialogue from the November 2012, March 2013, and June 2013 IBCC meetings, as well as numerous subcommittee meetings, a draft No-and-Low-Regrets Action Plan was developed. The draft document reflects 100 percent consensus by the IBCC members and provides a menu of options that the basin roundtables should consider for the BIPs, and by the CWCB as a component of Colorado's Water Plan and the Statewide Water Supply Initiative.

Scenario planning is a critical part of the No-and-Low-Regrets Action Plan. Full implementation will occur within the next 10 to 15 years. Without the full implementation of these foundational actions, the gap between water demand and supply will be much greater than originally projected. This means that even under a weak economy scenario, new water supplies would be needed. Under the scenarios in which demands for water are greater and supplies are lower, additional new supplies and agricultural transfers will be needed beyond what was envisioned by the basin roundtables.

The IBCC identified the following no-and-low regrets goals:

- Minimize statewide acres transferred (per basin goals) and implement agricultural sharing projects.
- Plan and preserve options for existing and new supply.
- Establish low to medium conservation strategies.
- Implement nonconsumptive projects.
- Have a high success rate for identified projects and processes.
- Implement storage and other infrastructure.
- Implement reuse strategies.

This Action Plan is incorporated throughout Colorado's Water Plan and is available [here](#).

Draft IBCC Conceptual Framework

A long-standing controversial issue in Colorado is the development of water supply from the Colorado River Basin for use on the eastern slope. It is controversial because of issues such as supply gaps, environmental health, and compact compliance. Table 8-1 shows the opposing viewpoints of the basin roundtables and the BIPs. Generally, eastern slope roundtables identify the need for a balanced program to preserve the option of future development of Colorado River System water, while western slope roundtables express concern regarding the potential for future development on the western slope, as well as the potential for overdevelopment related to both a Colorado River Compact deficit and critical levels for system reservoir storage, such as the minimum storage level necessary to produce hydroelectric power reliably at Glen Canyon Dam (minimum power pool).

The two BIPs with the greatest divergence are the Colorado and South Platte/Metro BIPs. The Colorado BIP points out the variability in hydrology, stating that TMDs “should be the last ‘tool’ considered as a water supply solution, once the many and complex questions are addressed over hydrology.”¹ The South Platte/Metro BIP advocates to “simultaneously advance the consideration and preservation of new Colorado River supply options.”² Both viewpoints recognize the constraints of water availability and Colorado water law, but differ in how they believe such a project fits into water supply planning. The IBCC's draft conceptual framework seeks to find a path forward that considers the option of developing a new TMD, while addressing the concerns of roundtables statewide, stakeholders, as well as environmental concerns.

In 2013, the IBCC focused its discussion on a conceptual framework for future detailed negotiations on a potential new TMD. As expressed in the draft framework, there may be years where additional development is available from the Colorado River system, and some years where this water is not physically available. This discussion stemmed from the No-and-Low-Regrets Action Plan, as the IBCC decided that additional discussion and consideration on this particular issue was necessary. Consensus on the draft conceptual framework was reached in June of 2014, and was submitted to the CWCB for inclusion in Colorado's Water Plan. The conceptual framework sets out seven principles to guide future negotiations between proponents of a new TMD and those communities who may be affected were it built. The framework reflects areas of statewide concern. In generating it, the IBCC's diverse stakeholders thoroughly explored the difficult issues that would surround a new TMD. The principles provide a way to think about how entities in Colorado might develop a future increment of Colorado River System water. The framework states the realities and issues proponents for a new TMD should expect to address.

After publication of the first draft of Colorado's Water Plan in December 2014, basin roundtables discussed the conceptual framework, identifying points of consensus and points of concern. Roundtable members recognized that the conceptual framework represented a new and holistic way to discuss the controversial issue of a TMD, though there were concerns about terms used within the conceptual framework, and how those terms might be interpreted by a project proponent or affected parties.

Informed by basin roundtable discussion, public input, stakeholder feedback, and CWCB discussion, the IBCC defined a process to revise the framework. It started by first renaming the document the "conceptual framework." As stated, the framework explores the issues surrounding a new TMD, but does not take the place of an agreement among any identified parties, ready for implementation. The IBCC then tasked a subcommittee with addressing these concerns.

The subcommittee included representatives from every western slope basin, both eastern slope basins, and the metro area. This included IBCC members representing agricultural interests, municipal and industrial water providers, conservancy districts, and environmental concerns. CWCB members also participated in the subcommittee's work. Informed by the discussion to this point, the subcommittee sought to clarify the conceptual framework based on roundtable and stakeholder feedback. Specifically, terminology addressing "firm yield" from a TMD, the triggers under which a new TMD would be managed, "environmental resiliency," and further explanation of the "insurance policy" in Principle 4 were further defined. The draft also aims to be more concise and direct in its language. The CWCB voted to include the revised conceptual framework into the second draft of Colorado's Water Plan at the July 2015 meeting, and it is seeking one more round of comments before incorporation into the final.

Twenty out of the twenty-three IBCC voting members in attendance at the July 2015 IBCC meeting voted to support that the second draft of the conceptual framework be incorporated into the second draft of Colorado's Water Plan as 1) a guidance document for future negotiations, stating the realities and issues proponents for a new TMD should expect to address; and 2) a document that includes certain actions that need to be moved forward with or without a new TMD.

One Metro Basin Roundtable member abstained, and the two Colorado Basin Roundtable members did not support the statement. All three stated that they were not comfortable voting in favor of the motion without support first from their basin roundtables.

Members from the Colorado Basin Roundtable stated that the new conceptual framework is largely consistent with the definitions crafted by the roundtable. The Metro Basin Roundtable member expressed that there may be some continued concern regarding the levels of water conservation needed for all proponents of new M&I water projects and methods. These levels are linked to the "stretch goal" previously approved unanimously by the IBCC and incorporated into the second draft of Colorado's Water Plan.

The Yampa/White Green Basin Roundtable voted to support the new draft document and to focus on implementing key aspects, such as the collaborative program. Similarly, the Gunnison Basin Roundtable reviewed a previous draft and expressed support for the document. Other basin

roundtables, stakeholders, and interested public have not yet had a chance to discuss the document as a complete package, integrated with Colorado's Water Plan.

The second draft of the conceptual framework reads as follows:

Interbasin Compact Committee DRAFT Conceptual Framework

In preparation for *Colorado's Water Plan*, the Basin Roundtables drafted Basin Implementation Plans. Front Range Roundtables declared a need for a balanced program to preserve options for future development of Colorado River System water, while West Slope Roundtables expressed great concern regarding additional development of Colorado System water involving a new^a transmountain diversion project (TMD). This document represents an IBCC consensus to address both Front Range and West Slope concerns about a new TMD.

The *IBCC Conceptual Framework* (Framework) sets out seven principles to guide future negotiations between proponent(s) of a new TMD and those communities who may be affected were it built. The Framework reflects areas of statewide concern. In generating it, the IBCC's diverse stakeholders thoroughly explored the difficult issues that would surround a new TMD. As such, this framework may help accelerate future negotiations. However, the Framework cannot take the place of specific negotiations and agreements.

The IBCC acknowledges that overdevelopment of Colorado River System water is a serious risk that could result in a Colorado River Compact deficit^a. All of Colorado's water planning efforts must recognize that risk. The Framework provides a way to think about how entities in Colorado might develop a future increment of Colorado River System water. The Framework states the realities and issues proponents for a new TMD should expect to address.

Principle 1: East Slope water providers are not looking for firm yield from a new^b TMD and the project proponent would accept hydrologic risk for that project.

Water providers define firm yield differently, but the concept usually represents an estimate of the amount of water a system makes available during a representative hydrologic cycle. A proponent of a new TMD would not seek a firm yield from the Colorado River System, but instead would develop a project that could provide firm yield if operated in conjunction with East Slope sources of supply, as described in Principle 2.

Accepting hydrologic risk means that a new TMD would be administered under Colorado's priority system, diverting water only when it is physically and legally available in priority in the basin of origin, and in accordance with the triggers described in Principle 3. Thus, a new TMD would avoid

^a A Colorado River Compact deficit occurs when flows at Lee Ferry fall below the obligation of the Upper Division States contained in Article III of the Colorado River Compact.

^b A "new" TMD means a transmountain diversion project that is not an identified project or process (IPP) in SWSI 2010.

unacceptably increasing either the risk of a Compact deficit or the burden on existing uses in a demand management program, such as is described in Principle 4.

Principle 2: A new TMD would be used conjunctively with East Slope supplies, such as interruptible supply agreements, Denver Basin Aquifer resources, carry-over storage, terminal storage, drought restriction savings, and other non-West Slope water sources.

It is important for East Slope parties to demonstrate to the West Slope that structures, agreements and frameworks are or will be in place for East Slope backup water supplies during times when a new TMD would not be able to divert Colorado River System water. Interruptible supply agreements, Denver Basin Aquifer resources, carry-over and terminal storage, and drought restriction savings are options for backup water supplies that East Slope entities would use during years when a new TMD would not be able to divert Colorado River System water. Any entity interested in participating in a new TMD would prepare and share a detailed plan for firming the yield of a new TMD in dry years using some or all of these options. The firming plans should include steps to replace water not available from the new TMD, as well as sufficient supplies to meet the entity's demands, including those that could be met with reuse of a new TMD's water. Each entity would tailor its firming plan to its system's unique strengths and constraints. The tools listed above are options, not requirements.

Principle 3: In order to manage when a new TMD would be able to divert, triggers are needed.

Triggers are operating parameters that determine when and how much water a potential new TMD could divert, based upon predetermined conditions within the Colorado River System. Such parameters include, but are not limited to, specific storage elevation levels in one or more Colorado River System reservoirs, projected inflows at key Colorado River System locations, actual reservoir inflows over specific defined periods, snowpack levels, predictive models - or combinations of these – which would trigger certain actions and prevent others.

Triggers are needed to insure that diversions by a new TMD do not unacceptably increase the risk to the yield of existing uses of a Compact deficit, or increase the amount of water existing users would have to provide through a demand management program to maintain storage levels in Lake Powell.

Triggers would need to be adaptable as conditions within the Colorado River System change over time, and legally enforceable by appropriate authorities. Triggers may also need to be modified to reflect the outcome of continuing negotiations among Colorado, other Colorado River Basin States, the federal government, and Mexico regarding the continuation of the 2007 Interim Shortage Guidelines, 1944 Mexican Water Treaty and related Minutes, and other Colorado River System issues. Colorado would modify the triggers over time as these agreements will provide the ultimate parameters within which a new TMD would need to operate.

Principle 4: A collaborative program 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.

A collaborative program that protects existing uses and an increment of future development is a necessary element of Colorado's water planning, regardless of whether a new TMD is developed. The Framework includes this principle to make clear that a collaborative program would not protect a new TMD.

The collaborative program should provide a programmatic approach to managing Upper Division consumptive uses, thus avoiding a Compact deficit and insuring that system reservoir storage remains above critical levels, such as the minimum storage level necessary to produce hydroelectric power reliably at Glen Canyon Dam (minimum power pool). A goal of the collaborative program is that it would be voluntary and compensated, like a water bank, to protect Colorado River system water users, projects and flows. Such protection would NOT cover uses associated with a new TMD.

A second goal of the collaborative program should be that it protects the yield of the water supply systems in place in the Colorado River Basin from involuntary curtailment. To achieve this goal, the program would need to expand to accommodate future West Slope growth and growth of existing water supply systems, the pace of which is not now known. Protecting additional consumptive uses will increase the program's scope and challenges. Some basins, such as the less-developed Southwest and Yampa/White/Green, anticipate the need for future development and will seek terms to accommodate it in the collaborative program. Regardless of when a use develops, the program would strive to protect uses at the time of shortage, except a new TMD. By adapting to accommodate increased uses at any given time, the program should not lead to a rush to develop water rights. Section 9.1 of Colorado's Water Plan provides additional discussion of the collaborative program.

The collaborative program will develop in concert with intra- and interstate water policies. The IBCC and roundtables can provide an important forum for sharing the work of on-going interstate negotiations, scoping technical analyses, and identifying issues of concern at the stakeholder level, as well as providing input to the CWCB as it manages and conducts the technical, legal, economic, and other studies necessary for implementation.

Principle 5: Future West Slope needs should be accommodated as part of a new TMD project.

If a new TMD were built, this Framework assumes that proponents and affected parties would agree to its development as part of a package of cooperative projects and processes that benefit both East and West Slopes. The focus should be on pairing the potential new TMD described above with one or more of the following:

- Compensatory projects and methods (protecting and providing for both consumptive and nonconsumptive needs),
- A socio-economic compensation fund (as described in the 2010 IBCC "Letter to the Governors"), and
- Other requirements stated in the Conservancy District Act (C.R.S. § 37-45-118).

The parties would develop a new TMD and compensatory West Slope project(s) and methods in concert to ensure sufficient funding and hydrology for the whole package. Such an arrangement would

provide the necessary mutual assurance that a new TMD would move forward only as a package that also accommodates both the East and the West Slopes.

The increment of additional development discussed in Principle 4 will meet some portion of future West Slope needs. The purpose of Principle 5 is to indicate that a new TMD may be part of a package of other consumptive or nonconsumptive projects and methods that may need both East Slope and West Slope financial or infrastructural support. Discussion of future West Slope needs in relation to a new TMD does not imply that West Slope entities would not move forward with additional projects and methods in the absence of a new TMD.

This principle does not imply that the new TMD project proponent would pay all costs associated with providing the basin of origin benefits to the basin of origin beyond those required to mitigate a new TMD's impacts identified in regulatory processes. Providing these benefits may require building coalitions and finding additional funding.

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

Part A. Municipal & Industrial Conservation and Reuse

M&I conservation: Conservation actions defined in the No and Low Regrets Action Plan should be substantively completed prior to implementation of a new TMD project.

All proponents of new M&I water projects should meet high conservation standards, consistent with the "conservation stretch goal," which is discussed in detail in section 6.3.1 of Colorado's Water Plan.

Water providers participating in a new TMD project should have active conservation plans and activities approved by the CWCB in place prior to implementation of the project, and high conservation levels, as defined in SWSI, should be reached for new growth relying on water that would be yielded from a new TMD. The active water conservation plans of providers participating in a new TMD should demonstrate a commitment to work toward achieving the conservation stretch goal. These plans should have measurable outcomes. Opportunities for conservation may vary from one community to another.

Reuse: 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, given technical and regulatory feasibility at the time of proposed implementation. Such actions include improved tracking and quantification, development of a statewide reuse goal, development of new incentives for reuse, and education and outreach efforts.

Additionally, water providers participating in a new TMD project and who utilize other fully consumable water supplies should have a reuse program to recycle as much water as is technically and economically practical. Existing regulations and policies may limit such reuse and the ability to make these changes may be beyond the control of the project proponent(s). The state should make every effort to allow for the reuse of these fully consumable water supplies in an appropriate and environmentally safe manner. Legislative and regulatory reform may be desirable to achieve these objectives. If such reform does not occur, key objectives of the water plan may not be realized. Reuse is further discussed in section 6.3.2 of Colorado's Water Plan.

Water & land use: 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 thattackle this issue. In partnership with the Department of Local Affairs, the CWCB will initiate additional discussions on this issue with municipalities, counties, local planning agencies, and elected officials at all levels. Trainings on this issue are forthcoming. Land use is further discussed in section 6.3.3 of Colorado's Water Plan

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 identified 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, Yampa/White/Green, and Southwest 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.

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

Agriculture and Nonconsumptive Partnerships: Agricultural water can add flexibility and reliability to meet future water needs. The Framework encourages agricultural partnerships with environmental, recreational, and municipal groups to help sustain Colorado's diverse economic future and healthy environment. In addition, development of all new water projects should consider important agricultural and nonconsumptive gaps that basin roundtables have identified.

Environmental Resiliency^c: 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. Doing so may create conditions that make a new TMD possible but building environmental resiliency is not the sole responsibility of a new TMD proponent, since environmental and recreational gaps exist now. The Framework encourages addressing these existing gaps meaningfully in the near term as well as in any new TMD-affected areas in advance of building a new TMD. Sources of funding will likely include federal, state, foundation, corporate, and private money but Colorado will likely need to develop additional funding sources. Colorado's Water Plan recommends actions that improve Colorado's environment, which will ultimately help Colorado achieve environmental resiliency.

Environmental and recreational needs in relation to a new TMD: In addition, a new, multipurpose TMD could potentially fill remaining environmental and recreational gaps as part of a package of compensatory projects. As discussed in Principle 5, a new TMD will be part of a package that also includes benefits or mitigation for environmental and recreational values. This principle encourages addressing environmental and recreational needs proactively and voluntarily up-front in project design. Proponents should include nonconsumptive partners to make the package of projects associated with the new TMD truly multipurpose. A new TMD proponent should avoid, minimize, or mitigate adverse environmental impacts where possible, and provide opportunities for environmental restoration and enhancement. Project proponents must mitigate impacts that result from a new TMD project, even if those impacts occur outside of Colorado. The financial burden of environmental and recreational enhancements, beyond the mitigation required to address the impacts of the new TMD project, will require funds in addition to those that the TMD proponent provides, and may require building coalitions and additional funding opportunities.

The complete First draft conceptual framework is included in full in [Appendix D](#). Once completed, these points of consensus may serve as the foundation for any new future TMD projects seeking state support. These considerations will act as a guide to move a project forward with state support.

Actions

The following are next steps that will support the policies, conceptual agreements, and points of consensus:

1. The CWCB will monitor ongoing conceptual framework discussions and consider adopting the conceptual framework.
2. The CWCB, the Division of Water Resources, and the Attorney General's Office will protect the ability to fully develop Colorado's compact entitlements and continue to support intrastate agreements that strengthen Colorado's position in interstate negotiations. Colorado will focus planning efforts on maintaining healthy systems and avoiding a Colorado River compact deficit rather than on its response to compact curtailment.
3. The CWCB will help Colorado prepare for a future with scarcer water supplies (i.e. hope for the best, plan for the worst). Colorado will work with other states to evaluate options to achieve sustainable water solutions that balance development of Colorado's compact entitlements and

^c Resilience of a stream or watershed can be measured as an ecosystem's ability to recover function after a disturbance, whether acute or chronic.

risk of a compact deficit in the Colorado River System. This concept is further described in the IBCC's conceptual agreement ([Appendix D](#)), under Point 4 and Section 9.1. The CWCB will also support continued outreach to stakeholders regarding these interstate cooperative solutions.

Table 8-1: Colorado River Development - Discussion in BIPs		
Basin	Compact Discussion	TMDs
Arkansas	<p>“As an importing and exporting basin, the future of the State’s Colorado River Compact Entitlement directly affects all water uses in the Arkansas Basin;”</p> <p>“Policy Statement: The Arkansas Basin Roundtable supports the full development of Colorado’s entitlement under the Colorado River Compact, for use in Colorado.”³</p>	<p>“In particular, a future without New Supply, as that term is understood in the lexicon of the Statewide Water Supply Initiative 2010, is detrimental to the future of agriculture in the Arkansas Basin.”⁴</p>
Colorado	<p>“Recent studies show that continued development from the Colorado River toward full Compact entitlement is simply unsustainable.”⁵</p>	<p>“The core principle is that a TMD should be the last not the first tool out of the box to deal with water supply shortages statewide. This principle is equally applicable to any basin, including the Colorado Basin where the focus is on meeting the needs of the basin from resources within the basin.”⁶</p>
Gunnison	<p>“The ultimate risk from new development of Colorado River System water is over development of Colorado’s entitlement under the Colorado River Compact and Upper Colorado River Basin Compact, resulting in curtailment of water uses in Colorado. However, because Colorado River Storage Project reservoirs have provided drought protection for Upper Basin states, Compact curtailment is not a near term risk. Therefore, in preparing the 2015 Water Plan, new development planning should be focused on avoiding hydroelectric power disruption, a Colorado River Compact deficit, or development in excess of Colorado’s allocation under the Upper Colorado River Basin Compact. The Gunnison Basin Roundtable believes that evaluating new development using this standard will leave Colorado well positioned to respond to the ultimate risk of over development.”⁷</p>	<p>“1. Future supply of Colorado River water is highly variable and uncertain; therefore any proponent of a new supply project from the Colorado River System must accept the risk of a shortage of supply however the shortage occurs, strictly adhere to the prior appropriation doctrine, and protect existing water uses and communities from adverse impacts resulting from the new supply project.</p> <p>2. It must be explicitly recognized that a new supply development from any location in the Colorado River System affects the entire West Slope, as well as the Front Range diverters.</p> <p>3. Any new supply project from the Colorado River System must have specifically identified sponsors and beneficiaries, and meet certain minimum criteria”⁸</p>
North Platte	<p><i>Colorado Compact concerns not addressed within the BIP.</i></p>	<p><i>No position taken on TMDs.</i></p>
Rio Grande	<p><i>Colorado Compact concerns not addressed within the BIP.</i></p>	<p><i>No position taken on TMDs.</i></p>
South Platte/ Metro	<p>“The Metro and South Platte Roundtables encourage strong consideration and preservation of the ability to use Colorado’s entitlement under the Colorado River Compact as we pursue other strategies to meet our water</p>	<p>“The South Platte and Metro Basin Roundtables are supportive of the on-going IBCC discussions and believe that a wide range of water supply solutions should be carefully considered including continued and</p>

Table 8-1: Colorado River Development - Discussion in BIPs

Basin	Compact Discussion	TMDs
	<p>demands. Investigating, preserving, and developing Colorado's entitlement to Colorado River supplies is beneficial to the state's economic, social, political and environmental future. This may involve large state-level water projects, or small level projects, each with comprehensive West Slope water supply and environmental and recreational components. The Roundtables support the Conceptual Framework developed by the IBCC (and as outlined in Colorado's Water Plan) as the means whereby new Colorado River Basin supply options could be investigated and potentially developed."⁹</p> <p>"Additional amounts of Colorado River water supply may be developed within the State's Colorado River Compact entitlement, especially during wet years and wet cycles. Management techniques such as water banks and methods for temporarily reducing water use during dry conditions are available to manage a warmer and/or drier climate. However, artificially capping development due to a fear of a "compact call" merely shifts future risks to agriculture."¹⁰</p>	<p>expanded water conservation and reuse programs statewide. <i>All "four legs of the stool plus storage" need to be simultaneously considered as the development of Colorado's Water Plan continues.</i>"</p> <p>"Ideally, a Colorado River supply project(s) would be multi-purpose, with associated recreational and environmental benefits. Colorado River supply would be developed in a manner that does not exacerbate compact risks. East slope storage would come from enlarging existing reservoirs, building off-river storage, and using underground storage to minimize riparian impacts. Colorado River supply and east slope storage would form the base of the M&I supply. East slope Agricultural Transfers and conjunctive use of the Denver Basin Aquifer would be used primarily for droughts and drought recovery. Alternative agricultural transfer methods including land and water conservation easements could be used to help maintain agricultural production and the local economic benefits of agriculture."¹¹</p>
Southwest	<p>"The Roundtable is concerned about any new TMD. A new TMD would increase the risk of a Colorado River Compact call, as well as the risk of contingency measures to address serious conditions such as the inability to generate power from Lake Powell or levels of Lake Mead dropping below Las Vegas' intake. An increase in such risks jeopardizes the Southwest Basin's ability to develop water supplies to meet needs in the Southwest Basin and pits additional pressure on the basin's agriculture to meet downstream water needs for compact compliance and/or obligations. Therefore, the Roundtable agrees on eight factors to be addressed prior to considering a new TMD."¹²</p>	<p>"The Southwest Basin intends to continue its involvement in two current cross-basin cooperative efforts. One is the IBCC's effort to develop a conceptual agreement among roundtables regarding how to approach a potential future TMD from the west slope to the east, including the discussion of a possible future use allocation. The Southwest Basin is actively engaged in the West Slope Caucus discussions and supports further refinement of the seven points of framework (IBCC Draft Conceptual Agreement; July 2014). The Roundtable would like the opportunity to review and comment on any future refinements to said Framework.</p> <p>The Southwest Basin's cooperative effort is through the Southwestern Water Conservation District's participation as a member of the Water Bank Working Group to develop a Compact Water Bank."¹³</p>
Yampa/ White/ Green	<p>"How the Yampa/White/Green Basin fits into meeting Colorado's compact obligations within and beyond the state is a principal concern. The Yampa/White/Green Basin is part of Colorado River Basin, and is caught among the needs of the downstream states, the needs of the urbanized east slope of Colorado, and its own in-basin needs. The Yampa/White/Green Basin Roundtable must consider these competing</p>	<p>"The Yampa/White/Green Basin Roundtable's position is that a negotiated equitable native flow allocation for all basins tributary to the Colorado River should be the basis for such a rulemaking. The Yampa/White/Green Basin Roundtable recognizes that negotiations for allocations of Colorado River water should include all users including</p>

Table 8-1: Colorado River Development - Discussion in BIPs

Basin	Compact Discussion	TMDs
	<p>needs in its water planning effort. In this regard, the Yampa/White/Green Basin Roundtable also recognizes that the overdevelopment of water in the Colorado River and its tributaries poses a serious risk that would impact all users of Colorado River Basin water..”</p> <p>“The State of Colorado is party to the 1922 Colorado River Compact and the 1948 Upper Colorado River Compact. Currently, the state is discussing methods (e.g. contingency planning, demand management, water banking) to minimize the risk of a “call” under compact administration. The role of the Yampa/White/Green Basin flows in meeting the state’s compact obligations is a central issue in the Yampa/White/Green BRT’s planning efforts. In the event of a compact deficit, the State Engineer would have to develop rules by which to curtail Colorado River water users to remedy the condition. How the state administers a curtailment could greatly affect Colorado River water rights users across the state. If administration is based upon a statewide application of the prior appropriation system in the Colorado mainstem and tributary basins, the burden would likely fall disproportionately on the Yampa/White/Green Basin as its water rights are relatively junior to those of other Colorado River basins.”¹⁴</p>	<p>TMDs that have historically diverted from Colorado River tributaries.”¹⁵</p>

¹ SGM, *Colorado Basin Implementation Plan* (Glenwood Springs: SGM, 2014), 45.

² HDR, WestSage Water Consultants, *South Platte Basin Implementation Plan* (Denver: HDR, West Sage Water Consultants, 2014), 1-21.

³ WestWater Research, CDM Smith, CH2MHILL, Peak Facilitation, *Arkansas Basin Implementation Plan* (Colorado Springs: WestWater Research, 2014), 166.

⁴ WestWater Research, CDM Smith, CH2MHILL, Peak Facilitation, *Arkansas Basin Implementation Plan*, Section 4-8.

⁵ SGM, *Colorado Basin Implementation Plan* (Glenwood Springs: SGM, 2014) 136.

⁶ SGM, *Colorado Basin Implementation Plan* (Glenwood Springs: SGM, 2014) 14.

⁷ Wilson Water Group, *Gunnison Basin Implementation Plan*, 40.

⁸ Wilson Water Group, *Gunnison Basin Implementation Plan* (Denver: Wilson Water Group, 2014) 39-41.

⁹ HDR, WestSage Water Consultants, *South Platte Basin Implementation Plan* (Denver: HDR, West Sage Water Consultants, 2014) Section S-14.

¹⁰ HDR, WestSage Water Consultants, *South Platte Basin Implementation Plan* (Denver: HDR, West Sage Water Consultants, 2014) 4-116.

¹¹ HDR, WestSage Water Consultants, *South Platte Basin Implementation Plan* (Denver: HDR, West Sage Water Consultants, 2014) Section 4.8.2.

¹² Harris Water Engineering, *Southwest Basin Implementation Plan* (Durango: Harris Water Engineering, 2014), page 2.

¹³ Harris Water Engineering, *Southwest Basin Implementation Plan* (Durango: Harris Water Engineering, 2014) 106.

¹⁴ AMEC, *Yampa/White/Green Basin Implementation Plan* (Denver: AMEC, 2014) 1-2.

¹⁵ AMEC, *Yampa/White/Green Basin Implementation Plan*, 1-2.