

Interbasin Compact Committee

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 new¹ 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 intent of the Conceptual Framework is to represent the evolving concepts that need to be addressed in the context of a new TMD as well as the progress made to date in addressing those concepts. The Conceptual Framework refers to several topics that are not exclusively linked to a new TMD, but are related to Colorado's water future. These include conservation, storage, agricultural transfers, alternative transfer methods, environmental resiliency, a collaborative program to address Colorado River system shortages, already identified projects and processes (IPPs), additional Western Slope uses, and other topics. The Conceptual Framework, like the rest of Colorado's Water Plan, is a living document and is an integrated component of the plan. Many of these topics are further discussed in more detail in other sections of Colorado's Water Plan.

The IBCC acknowledges that overdevelopment of Colorado River System water is a serious risk that could result in a Colorado River Compact deficit¹. 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 new² 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.

¹ 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.

² A "new" TMD means a transmountain diversion project that is not an identified project or process (IPP) in SWSI 2010.

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 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 M&I water providers that are covered entities should do integrated water resource planning that strives to meet the "conservation stretch goal" described in section 6.3.1 of Colorado's Water Plan. The stretch goal recognizes the need for flexibility by the local water provider to do what is technically, economically, and legally practical for their system as not every conservation practice is appropriate for every community.

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 tackle 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 Resiliency³: 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

³ Resilience of a stream or watershed can be measured as an ecosystem's ability to recover function after a disturbance, whether acute or chronic.

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.