

# AGENDA

## UPPER YAMPA WATER CONSERVANCY DISTRICT

### SPECIAL BOARD OF DIRECTORS MEETING

MONDAY, DECEMBER 4, 2023 (1:00 PM)

VIRTUAL ONLY

ONLINE MEETING:

[HTTPS://US06WEB.ZOOM.US/J/83982047434?PWD=oASKQbDLN0UT8nOMHbUkTHF5ALCLOL.1](https://us06web.zoom.us/j/83982047434?pwd=oASkQbDLN0UT8nOMHbUkTHF5ALCLOL.1)

#### INSTRUCTIONS ON HOW TO JOIN A ZOOM MEETING FOLLOW THE AGENDA

A Board of Directors meeting packet is available for public review on our website at <https://upperyampawater.com/agendas-and-meeting-documents/> by the Friday before the meeting. Amendments to the Agenda and new documents that are generated or submitted after the original posting of the meeting materials will be posted under "Additional Documents" on the website for the relevant meeting.

**QUESTIONS ON AGENDA AND/OR BOARD MATERIALS:** Members of the public or Board of Directors with questions on the agenda or meeting materials, including the consent agenda, are welcome to contact the General Manager at the District offices prior to the meeting. You may reach the General Manager at: [arossi@upperyampawater.com](mailto:arossi@upperyampawater.com) or (970) 871-1035 Ext. 2.

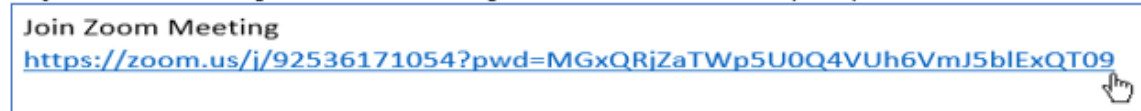
**MEETING PROCEDURE:** Comments from the Public are welcome at two different times during the course of the meeting: 1) Comments no longer than three (3) minutes on items **not** scheduled on the Agenda will be heard under Public Input and Comment; and 2) Comments no longer than three (3) minutes on all scheduled public hearing items will be heard following the presentation. Please wait until you are recognized by the President. With the exception of subjects brought up during Public Input and Comment, on which no action will be taken or a decision made, the Board may take action on, and may make a decision regarding, ANY item referred to in this agenda, including, without limitation, any item referenced for "review", "update", "report", or "discussion" whether or not listed as an "Action Item."

- (1) **1:00 PM** Establishment of Quorum and Call to Order
- (2) **1:00 PM** Approval of Agenda for Meeting **Action item**
- (3) **1:05 PM** Public Input and Comment  
The Board will make no decision nor take action, except to direct the General Manager. Those addressing the Board are requested to identify themselves by name, organization, if any, and address. Comments shall not exceed three (3) minutes.
- (4) **1:10 PM** Discuss Final Proposed Recommendations from the CO River Drought Task Force and Approve Letter of Public Comment. **Action item**
- (5) **2:00 PM** Adjournment.

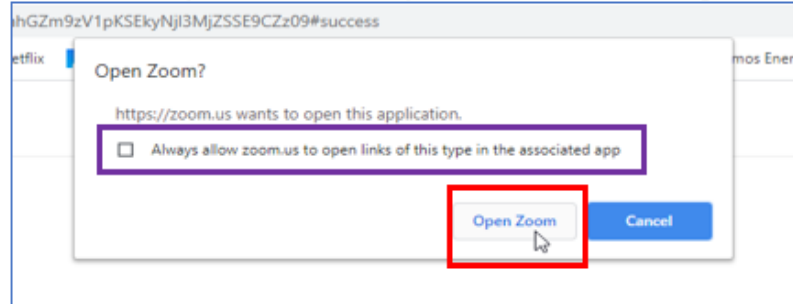
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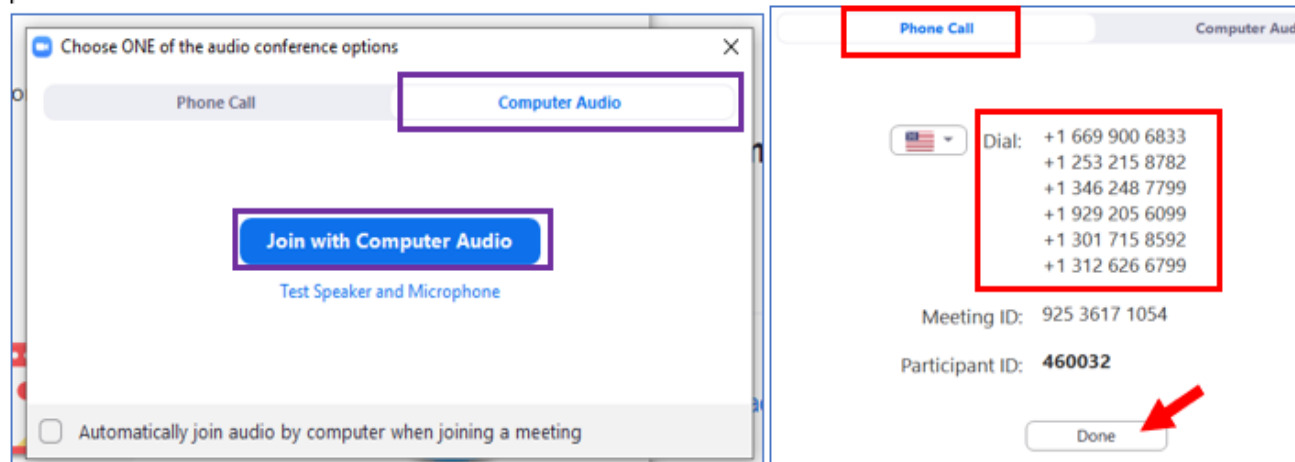


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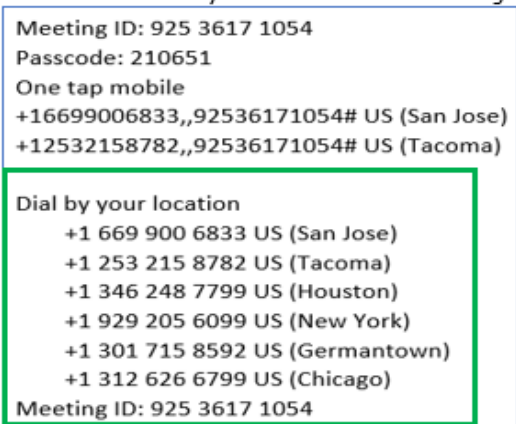
If you will be joining a Zoom meeting via your cell phone, click one of the "One tap mobile" links. Then click on "Call +1...". You will hear a request to "enter your Meeting ID followed by pound (#)". You **do not** need to enter the ID as the link will do this automatically for you.

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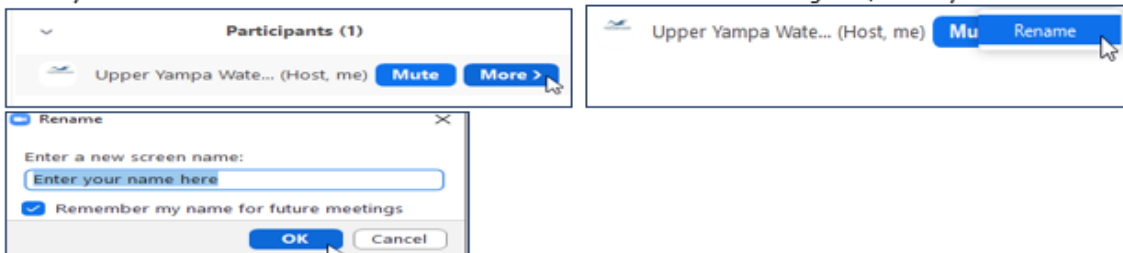
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Contact Deb Bastian for any questions  
- Email: [dbastian@upperyampawater.com](mailto:dbastian@upperyampawater.com)  
- Phone: 970-819-0189

# SHORT LIST of CONCEPTS for FURTHER CONSIDERATION by the COLORADO RIVER DROUGHT TASK FORCE

WORKING DOCUMENT

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RED = Task Force elected not to move these items forward.

Updated: 11/17 @ 3:29 pm by Kelsea

## A.CONTINUE COMMUNITY & TECHNICAL ASSISTANCE GRANTS (HB22-1379)

Added by Steve Wolff - 11/30/23

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Colorado Water Conservation Board provides grants to eligible entities to assist with capacity and resources in pursuit of federal funding opportunities that directly support the Colorado Water Plan objectives. This program is designed to help grantees identify, initiate, and improve projects in their jurisdiction, resulting in highly competitive federal aid applications. The allowable uses of this grant funding are broad in scope, to allow for the wide range of federal opportunities available. Funding can be used for preliminary project planning and design, preliminary permitting, development of estimated project costs, navigation of available federal opportunities, grant writing, and federal grant application submission. The ultimate goal of the program, and a required element of every funded project, is the submission of one or more applications seeking federal funding for further project work.

There are two types of grants available through the Federal Technical Assistance Grant Program:

- Local Capacity Grants: These are direct awards to grantees to secure the resources they need (contractors or otherwise) to develop projects and submit competitive federal grant applications.
- Technical Assistance Grants: These are awards to grantees who want to utilize a contractor hired by the Colorado Water Conservation Board. This contractor can provide a wide variety of water project services, including researching federal grant opportunities, project design, partial engineering, cost estimation, and federal application development/grant writing.

A total of \$5.0 million in federal American Rescue Plan Act (ARPA) funding is available for grants. A minimum of 25% matching funds is required. For Local Capacity grants, up to half of this match can be in-kind work provided by the applicant.

**TASK FORCE RECOMMENDATION:** Many task force members felt these grants have provided the additional capacity local entities need to compete for federal grant funds and have proven to be a useful resource for Colorado water users. Currently, the program is funded using one-time federal American Rescue Plan Act dollars and is limited to work on federally funded programs. The recommendation from the task force is to:

1. Request the Colorado General Assembly to continue funding this program using state funds at a level recommended by the Colorado Water Conservation Board to be consistent with demand.
2. Allow funds to be used to expand capacity for all grant needs and not limited to federal grant dollars.
3. Ensure that an appropriate percentage of these funds are granted to entities working in the Colorado River Basin of Colorado.

\*\*\*\*\*

Comment from the Tribal Sub-Task Force: The Sub-Task Force supports the concept; funding should be available to Tribal Nations. Added 11/30/23.

## B.AGING INFRASTRUCTURE

### Provide Increased Funding throughout state programs for Aging Infrastructure

#### INTRODUCTION/PREAMBLE

Increase funding for aging water related infrastructure. Repairs to aging infrastructure are extremely costly due to the sheer numbers of delivery systems and miles of canals and ditches involved in water delivery to agriculture, rural and tribal systems. Colorado has many unique delivery systems that are very old, some dating to the late 1880's and costly due to the challenging topography inherent in a headwater state. Lining and replacing older ditches would be investments that improve our existing infrastructure and can provide the largest water savings possible by strategically funding improvements to avoid losses in transit and leakage.

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examples, a 30% decrease in precipitation equates to a 30% reduction in farming and a resultant reduction in income. Colorado funding for infrastructure investments and or loan payments have been depleted and local match necessary for grants and loan programs is beyond the ability of many rural entities.

Colorado has competing imperatives when it comes to taking care of our precious water resources. The demand for funding has grown exponentially across many programs including:

~The Colorado Water Plan funding, the(increasing)

~Water Supply Reserve Fund (WSRS) Grants (falling)

~CWCB Revolving loan funds

~Colorado Water and Power Development Authority loans and State revolving base funding

The Drought Task Force identified increased funding for this area as a high priority. There was recognition that some funding has been increasing (Gaming funds) and there are additional Congressional directed spending grants. The concern is that the need for funding is much greater than appreciated in the current Colorado program budgets. If there is truly "once in a generation" federal funding available, then a path for funding more aging infrastructure needs to be identified.

Further, forwarding this concept to the CWCB to further evaluate funding mechanisms would be advised.

Likewise addressing cash match requirements is important as well and perhaps tweaking policy to require lower or no interest rate loans for aging infrastructure. While multiple benefit projects are admirable, basic infrastructure is the foundation for many rural agriculture and municipal projects and deserves stronger consideration.

### RELEVANT/USEFUL SOURCES for context

To-date eight environmental projects have received \$13 million in Congressional Directed Spending for increasing water availability via the Bureau of Reclamation. These include:

[https://www.gjsentinel.com/news/western\\_colorado/eight-colorado-environmental-projects-to-increase-water-availability/article\\_3be822a6-83e0-11ee-854c-1fee0cc4ed1b.html](https://www.gjsentinel.com/news/western_colorado/eight-colorado-environmental-projects-to-increase-water-availability/article_3be822a6-83e0-11ee-854c-1fee0cc4ed1b.html)

~American Rivers Inc, Uncompahgre River Multi-Benefit Project (partner with Ward Water Group) - \$1,198,376

~Middle Colorado Watershed Council, Roan Creek Fish Barrier, and Diversion Infrastructure Upgrade (partner with Trout Unlimited- \$746,423

~Western Slope Conservation Center, Farmer's Ditch Improvement Project (North Fork) - \$1,594,799

~ Colorado Rio Grande Restoration Foundation, Farmers Union Multi-Benefit Diversion Infrastructure Project- \$1,274,625

~ Mancos Conservation District, Riparian Restoration and Infrastructure Improvements to Better the Ecological Processes of the Mancos Watershed - \$2,482,686

~Purgatory Watershed Partnership, Purgatory River Fish Passage (Trinidad) - \$2,403,748

(Program to Improve stream morphology, increase instream flows, and benefit irrigators by increasing the operational capabilities of the diversions and reducing transit losses of vital irrigation water.)

All the above "collaborative projects that focus on water conservation, water management and restoration efforts that will result in significant benefits to ecosystem or watershed health."

Millions of federal dollars have been dedicated to Endangered Fish Recovery programs in Colorado.

Billions of dollars from the Inflation Reduction Act are headed to lower basin states for stability and sustainability of the Colorado River Basin.

<https://www.doi.gov/pressreleases/biden-harris-administration-continues-commitment-protect-stability-sustainability>

Narrative from Kelly Romero-Heaney:

Water Plan Grants are already allowed for aging infrastructure projects. So are Water Supply Reserve Funds and CWCB Low-Interest Loan Programs.

See Water Plan Grant Statute: [https://urldefense.proofpoint.com/v2/url?u=https-3A\\_docs.google.com\\_document\\_d\\_123TwqRHZEasi5pLn2gkyZi4SwJHqAxVs4yv58svQW9Y\\_edit-3Fusp-3Dsharing&d=DwMFaQ&c=sdnEM9SRGFuMt5z5w3AhsPNahmNicq64TqF1JwNR0cs&r=qM1PnwPrijwVJy0HQ42TRNa9je8EH-0&m=5MY3hqprtlYYFUhAVqhyRxx6YccrfE\\_iAVz\\_SNpHSwKKkg9KLnLVS52lg6ZgkP6&s=Nfj01a0sMC57gOUfDEjxWx18](https://urldefense.proofpoint.com/v2/url?u=https-3A_docs.google.com_document_d_123TwqRHZEasi5pLn2gkyZi4SwJHqAxVs4yv58svQW9Y_edit-3Fusp-3Dsharing&d=DwMFaQ&c=sdnEM9SRGFuMt5z5w3AhsPNahmNicq64TqF1JwNR0cs&r=qM1PnwPrijwVJy0HQ42TRNa9je8EH-0&m=5MY3hqprtlYYFUhAVqhyRxx6YccrfE_iAVz_SNpHSwKKkg9KLnLVS52lg6ZgkP6&s=Nfj01a0sMC57gOUfDEjxWx18)

And Water Plan Grant guidelines:

<https://dnrweblink.state.co.us/CWCB/0/edoc/220214/WaterPlanGrantCriteriaGuidelinesFeb2023Update>

### Provide increased funding levels throughout state programs for aging infrastructure projects

(Posted on behalf of Daris Jutten 11/06) The CWCB prioritizes water plan grant applications that clearly have multiple benefits and that is consistent with the statutory guidance. So projects that are purely ag infrastructure improvement projects are not prioritized for the available Water Plan Grant funds which means the proponents need to pursue Water Supply Reserve (WSRF)dollars. You can see from the Governor's budget proposal that he is seeking \$3 million for WSRF and those dollars will be spread out over all the basins, I think the amount each basin will receive would be \$300,000. Meanwhile the WPIF (Water Plan Grant fund) is projected to receive \$35 million from gaming revenues. \$300,000 does not go very far to address the existing needs we have in the municipal and/or ag sectors.

Water Plan grant funds may be technically available for ag infrastructure projects, but in practice, both staff guidance and history show it does not work that way. As usual, per the budget information, the WSRF is the orphan child."

- a. Provide increased state funding levels throughout state programs for aging infrastructure projects.
- b. This is not intended to override funds to the exclusion of environmental, recreational or municipal benefits (See page 2 comments on survey poll results).
- c. Aging infrastructure is extremely costly and yet "can provide the largest water savings we can realize by maintaining and improving our existing water infrastructure and avoiding losses in that capacity." (Direct quote Gunnison River Basin Roundtable GRBR).
- d. Mr. Broderick asked which priority can actually 'save' or maybe just allow better adaptation during times of drought. Many ag irrigation projects can give data on this fact. The tribal presentation was clear that infrastructure stability and repair must happen prior to their ability to innovate.

- f. Infrastructure improvements could include replacing and upgrading diversion structures, headgate and conveyance efficiency improvements.

Comment from the Tribal Sub-Task Force: The Sub-Task Force supports the concept; funding should be available to Tribal Nations (and is needed for projects like the Pine River Indian Irrigation Project). Added 11/30/23.

## STORAGE

Narrative from Daris Jutten:

- Storage is a key and seems to be a solid top priority in task force discussions and priority process. It didn't appear in WRAR Talking points.
  - The talking points memo had good points, but only two points out of the six mentioned could get our vote to approve (aging infrastructure and technical assistance). Unintended consequences are important and care must be taken to avoid causing harm.
  - Aquifers are not a factor in our system.

### 1. C. Create Additional Storage

(Brought forward by Daris Jutten)

- a. New storage in strategic locations
- b. Storage to protect and enhance existing agricultural uses under future uncertainty
  - i. Ag water contributes to stream health, stream volume, and the resulting benefits to stream temperatures, flows for fish habitat, flows for hydro, flows for recreation
- c. Strategic and small storage facilities that meet multiple needs (see above)
  - i. In years with low hydrology, added volume from system *re-regulating* reservoirs allows for improved efficiency and maximizing beneficial use.
  - ii. Small reservoirs may capture early run-off to add water during summer hotter, drier periods of low rainfall. In climate change scenarios some years they would be dry
  - iii. Need water to push water is a reality for many ag irrigation systems
  - iv. Prioritizing in-stream flows over building new reservoirs can marginalize the benefits ag water lends to healthy rivers.
  - v. Small reservoirs could be in the 2,000 to 5,000 A/F scale

Comment from the Tribal Sub-Task Force: The Sub-Task Force supports the concept of strategic and small storage; funding should be available to Tribal Nations (and is needed for projects like the Ute Farm & Ranch small storage project). Added 11/30/23.

### 2. D. More Flexible Sharing of Stored Water

Daris Jutten: Provide tools to facilitate flexibility in the use of water rights in storage

Alex Davis: Already stored water is water whose absence from the system has already been felt. With the appropriate safeguards to prevent expansion of use or double dipping, water users and the SEO should be given the ability to either share already stored water with other users -including the environment- more flexibly; For ex., without needing specific decreed beneficial uses. (one of the existing safeguards is that for any given reservoir, there will be a limited number of types of additional beneficial uses that could be applied (due to geography, hydrology and physics).

### 3. E. Storage Rehabilitation and Repair

(Brought forward by Daris Jutten)

Storage rehabilitation and repair is also needed as seen on Grand Mesa after the past 20-year drought



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failure modes at existing reservoirs using new extreme precipitation and hydrologic methods. While these CDSEs are primarily undertaken to improve the management of risk to the public from dam structures, they can identify storage reservoirs with potential additional capacity due to spillways that were designed using probable maximum flood estimates much higher than produced with the new hydrologic methods. This can result in opportunities for increasing storage by simply raising a spillway crest. For example, at one structure a potential 151 ac-ft (21 percent) increase was identified that only required construction of a 4.5 ft concrete sill in the spillway. .

#### 4. F. Statewide Planning and Funding for Storage Reservoirs

(Brought forward by Randi Kim)

Colorado is a headwaters State, meaning every river, creek and stream delivers water out of our state. The Colorado River over the past 20+ years is experiencing the driest hydrology recorded in 1,200 years. In addition, ambient daily temperatures within the Colorado River basin are increasing, resulting in regional aridification that impacts snowpack runoff, low soil moisture, decreasing stream flows, and increased evaporation that leads to lower reservoir levels.

Reservoir storage has proven itself as the most effective year around tool at keeping rivers flowing for recreation, sustaining agriculture during the growing season, maintaining adequate stream flows to protect our fisheries and environment, and providing water users a sustainable supply of water during times of drought. It is critical that as a headwaters state, we actively continue to look for watersheds where additional storage can be developed and maintain existing storage infrastructure to fully utilize these facilities. Of course, there are environmental impacts to consider, and we will need to shift the focus from avoidance to mitigation, thereby creating new multi-benefit environments surrounding these projects that provide new and diverse opportunities for wildlife and recreation.

Drier dry periods and more frequent heavy rainfall precipitation events are predicted to be the new normal in our future weather patterns, these new normals are best managed by storage facilities upstream of communities that would provide a water storage mechanism for the back-to-back low snowpack years associated with prolonged drought when water is needed most.

The Colorado Water Plan Grant program should continue to fund Water Storage & Supply projects including development of additional storage, artificial recharge into aquifers, and dredging existing reservoirs to restore the reservoirs' full decreed storage capacity for multi-beneficial projects and projects identified in basin implementation plans to address the water supply and demand gap.

In addition, the legislature should consider funding a state-wide modeling and planning effort to identify locations for strategic placement of new or expanded reservoirs that would provide an intrastate tool to develop multi-benefits. With the identification of these strategic reservoir locations, CWCB could spearhead proactive coordination amongst potential stakeholders via the basin roundtables to develop these reservoirs and realize these multi-benefits.

[The CWCB voted to approve the following funding proposal for the 2024 Projects Bill, Drought Resilience Investment:](#)

Storage Analysis, Opportunities and Alternatives - Both drought and flood have implications for storage which need to be considered in future planning. This analysis will refine Colorado's understanding of storage potential, work to identify and outline storage options, differentiate surface and ground water storage opportunities, and provide a practical understanding of what challenges, opportunities, and alternatives to storage that must be considered alongside storage planning. This report will support Action 1.9 of the Colorado Water Plan. This will also serve to refine estimates outlined in the 2019 Analysis and Technical Update to the Colorado Water Plan. Funding may also support understanding new thinking on best practices for linking projects to local, state and federal funding opportunities (and ways creative funding models have built success). ◦ Estimated Project Time: 2024-2027 ◦ Estimated Project Cost: \$350,000

The Task Force supports this funding and recommends that the legislature prioritize funding opportunities and alternatives identified as a result of the storage analysis completed.

## 1. G. Natural Process protection to promote Drought and wildfire resiliency

(Brought forward by Alex Davis)

C.R.S. 37-92-502(7) states: The state engineer, division engineer, and their duly authorized assistants have the power and duty to issue orders so that the streams of the state may be kept clear of unnecessary dams or other obstructions which may restrict or impede the flow of water to the water users of the state.

Because natural processes that obstruct the flow of water to some degree recharge groundwater; create areas of greater biodiversity and saturate land, protecting it from wildfires and providing other benefits to people at no cost, such processes which include beavers inhabiting the landscapes should not be removed or interfered with, absent a showing of harm to property, infrastructure or other rights. Task Force recommends amending 502(7) by adding the following language (or something to the effect of)

Absent a specific request from a landowner or water user, the state engineer, division engineer, and their duly authorized assistants shall presume that naturally occurring obstructions such as beaver dams are not unduly restricting or impeding the flow of water to the water users of the state.

Or Naturally occurring obstructions, such as beaver dams are not included herein unless a landowner or water user specifically requests that the State Engineer, division engineer, and their duly authorized assistants act because the natural obstruction is causing property damage or preventing a water user from accessing their water when it would otherwise be physically and legally available..

## 2. H. Prioritize forest health and wildfire ready watersheds

(Brought forward by Daris Jutten)

1. Adding stronger criteria for state funding for Community Wildfire Protection Plans to meet the goals of CWP<sup>2</sup>.
2. Protecting storage from wildfire impacts is important
3. Per the CO Water Plan : "Stream and forest health improvements using nature-based solutions can support both the natural environment and existing water infrastructure and storage by building resiliency for drought, fire, and floods; reducing sedimentation; improving water quality; attenuating high flows; and enhancing groundwater recharge."

Comment from the Tribal Sub-Task Force: The Sub-Task Force supports the concept; funding should be available to Tribal Nations. Added 11/30/23.

## I. WATER BANKING

(Brought forward by Lee Miller)

Colorado law currently authorizes the formation of water banks within each water division. Among other limitations, however, such banks are restricted to leases of stored water. No provision is made for a water bank to facilitate leases or exchanges of direct flow water rights. This authorization is needed, however, in order to allow the types of transactions envisioned in the Colorado Water Plan to reduce the pressure to

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1. Actively facilitates voluntary transactions for temporary alternative uses of existing water rights
2. Use of the bank is risk-free to water right owner
3. Streamlined review process to determine available water and protect other water rights
4. Actively operated by CWCB or delegated public entity within each water division

The existing statute on water banking, Colo. Rev. Stat. § 37-80.5-104.5 should be expanded and revised to authorize a statewide bank that accommodates voluntary, temporary transactions, not only for stored water but for direct flow water rights as well by striking the word "stored" from section (1)(a).

Comment from the Tribal Sub-Task Force: The Sub-Task Force notes that statewide application can ensure Tribal ability to participate. Added 11/30/23.

## J. INDUSTRIAL WATER USERS Proposed Tool

(Brought forward by Jackie Brown) updated 11/30/2023 9:51pm **\*\*tables referenced will be sent to facilitators for distribution... can't get them to insert.**

DRAFT DATED 11/30/2023

### ***Proposed Drought Legislation Supporting Water Use Transition to Reduce Carbon Dioxide Emissions and Develop Clean Energy Resources by 2050***

A. Context: In 2019, the Colorado General Assembly passed carbon dioxide emissions reduction legislation. §40-2-125.5, C.R.S. (SB 19-236). That legislation mandated an 80% reduction to carbon dioxide emissions by the electric utility sector by 2030. §40-2-125.5(3)(a)(I). Similarly, the legislation requires generation using 100% clean energy resources by 2050. §40-2-125.5(3)(a)(II). ("Energy Transition Legislation").

B. Purpose: This proposed legislation seeks to ensure that (1) electric utilities providing fuel to those utilities that experience reduced water demand due to the Energy Transition Legislation, have mechanisms to maintain their portfolio of water rights through the energy transition planning period (2050) so that those water rights may be available to support development of clean energy generation; and (2) the portfolio of water rights located on the Yampa River can be used to relieve shortage for water users and the environment.

C. Temporary: Note, the timeline of 2050 supports an express objective of the State of Colorado, is shorter than the municipal planning period, and the proposed consideration for the transition would be temporary, sunseting in 2050.

#### D. Specific Modifications:

1. HCU Calculation. 37-92-305(3)(c) states that the judge shall not reduce HCU in a change of water rights case due to a number of circumstances, such as inclusion in a conservation program, land fallowing, or water banking program. Proposed legislation would include the following addition circumstance at §37-92-305(3)(c): In determining the amount of historical consumptive use for a water right in division 1, 2, 4, or 6, the water judge shall not consider any decrease in use resulting from the following. ... [proposed new language underlined in blue.]

[New section] 305(3)(c) (III). "the non-use or reduced use of water under a water right by an electric utility, or coal mine operator that supplied coal to said electric utility[1], where (i) said non-use or reduction occurred between 2019 and 2050, and (ii) said water

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2. Exception to Abandonment Period. 37-92-103(2) provides the definition of abandonment of a water right: "Abandonment of a water right" means the termination of a water right in whole or in part as a result of the intent of the owner thereof to discontinue permanently the use of all or part of the water available thereunder. Any period of nonuse of any portion of a water right shall be tolled, and no intent to discontinue permanent use shall be found for purpose of determining abandonment of a water right for the duration that:

[new section] 103(2)(b) An electric utility, or coal mine operator that supplied coal to said electric utility<sup>1</sup>, experiences non-use or reduced use of a water right where: (i) said non-use or reduced use occurred between January 1, 2019 and the last day of 2050, and (ii) said water right may be needed to support development of future clean energy generation projects.

3. Exception to Abandonment of a conditional water right 37-92-103(1). "Abandonment of a conditional water right" means the termination of a conditional water right as a result of the failure to develop with reasonable diligence the proposed appropriation upon which such water right is to be based.

[new section] 103(1)(a) "Except that, to support the State's clean energy generation transition initiatives, failure of an electric utility to develop a conditional water right shall not result in abandonment of that conditional water right between January 1, 2019 and the last day of 2050, provided that said electric utility or coal mine operator:

- a. had an ownership interest in the subject water rights as of January 1, 2019;
- b. has previously obtained a water court decree(s) finding diligence in the development of such water right; and
- c. continues to file applications for reasonable diligence in accordance with sections 37-92-301(4)(a)(I) and 37-92-302(1)(a) that identify the efforts made to complete the appropriation in light of the State's clean energy transition, including investigation of the technical or commercial viability of suitable technologies, whether conducted by the conditional water right owner or others in the electric utility industry or supporting mining industry. Evidence of those efforts shall be considered as reasonable diligence in such proceedings.

4. Yampa River Multi-Benefit Flow Enhancement Pilot Program (Suggest this belongs in new paragraph (V) to § 37-83-105(2)(a)(IV)(A), C.R.S.)

Beginning January 1, 2030 through December 31, 2040, with one renewable 10-year period through 2050, a pilot program is proposed that utility water outlined above in the Yampa River and its tributaries be made available for the both the Upper Colorado River Endangered Fish Recovery Program (UCEFRP) critical reach habitat of the Yampa River and other beneficial uses of water below the point of diversions at Hayden and Craig Station. The designated critical habitat is currently defined from the Moffat County Road 394 bridge over the Yampa River to the confluence of the Green River in Dinosaur National Monument. The pilot program would commence with a first stakeholder user group meeting by December 31, 2025, and will set a timeline for the terms and conditions. Future stakeholding to create the terms and conditions will determine the appropriate amounts and timing of flows during the low flow season of the Yampa River, typically August – October. After the program begins in 2030, the stakeholder group would reconvene annually to review the success of the pilot and plan for the next season. The purpose of this pilot is to align with pertinent Yampa White Green Basin Roundtable's Basin Implementation Plan goals while supporting the goals of the UCEFRP, a program that supports the recovery of endangered fish in the Upper Colorado River Basin while water development proceeds in accordance with federal and state laws and interstate compacts.

The pilot program would closely follow the Instream Loan Program in C.R.S. § 37-83-105 and require the following elements:

- Allow for HCU associated with decreed absolute utility water rights (attached tables) to be utilized below the point of diversion to: (1) relieve shortages of existing agricultural water rights decreed on or before December 1, 2023 and; (2) improve the natural environment to a reasonable degree for a stream reach, including the UCEFRP designated critical habitat, even when the Colorado Water Conservation Board does not hold a decreed instream flow water right.
- The terms and conditions of the pilot program will be set through a stakeholder process and participation of the division 6 engineer. The final terms and conditions will go before the Colorado Water Conservation Board for approval by December 31, 2029.

Renewable loans from electric utilities and supporting industries of absolute water rights, approved to preserve or improve the natural environment to a reasonable degree are limited to a

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· *The initial pilot program period begins in 2030, after approval by the state engineer and the CWCB. An applicant may reapply for and the state engineer may approve a renewable loan for the pilot program for one additional ten-year period. The last potential date of authorization for the extended pilot period would be December 31, 2050.*

· *Renewable loans from electric utilities of absolute water rights may be used to preserve the natural environment to a reasonable degree even if there is not a decreed instream flow water right held by the board.*

· *Renewable loans from electric utilities of absolute water rights may be used to improve the natural environment to a reasonable degree for a stream reach even when the board does not hold a decreed instream flow water right.*

· *There is a determination that a temporary instream flow lease is in the normal course of business and is not subject to Public Utility Commission approval.*

· *The use of water rights for renewable loans during the transition period is permissive and will not limit the uses otherwise available to electric utilities or supporting industries during or after the transition period. Any determination of HCU for purposes of this pilot program shall not be binding in any future water court action.*

*Note: existing statute allows for re-use at end of instream flow reach: "water rights loaned pursuant to this section are not precluded from concurrent or subsequent inclusion in a water conservation, demand management, compact compliance, or water banking plan or program, as is or may be defined or described in statute." Section 105(2)(a)(III.5)*

*Savings Clause: Legislative drafter will include appropriate language to the effect of: if any part of the Bill is deemed illegal, remaining parts shall survive.*

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**Comment on Industrial Water Users Proposed Tool (Orla Bannan) 11/30/23**

Suggested amendment to bullet #8 above:

- A temporary instream flow lease of a utility's water rights shall be considered a transaction in the normal course of business, for purposes of section 40-5-105(1)(a). In the year that the utility executes a temporary instream flow lease, and annually thereafter for the duration of the lease, the electric utility shall file with the Public Utilities Commission a report and information on its proposed renewable loan of absolute water rights, including a copy of the lease, information identifying the water rights being leased, the total amount of water involved, and the payments received.

## STREAM & RIPARIAN AREA Management Tools

(Brought forward by Orla Bannan)

### 1. **K. Temporary Loan Program** [updated 11/30/23]

Title: Improving Flexibility of the Instream Flow Temporary Loan Program

Introduction: HB20-1157 expanded the Environmental Instream Flow Program's Temporary Loan Program. In its current form, the statute allows an owner of a decreed water right to loan water to the CWCB for instream flow use in 5 out of 10 years to preserve and improve the natural environment to a reasonable degree on reaches with a decreed instream flow water right, and expedited one-year loans to preserve (but not improve) the environment to a reasonable degree on reaches with a decreed instream flow water right. Allowing loans on stream reaches where there are no decreed instream flow water rights would increase the flexibility and applicability of the program. As an

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During the administrative proceedings where the CWCB would consider a temporary loan of stored water for instream flow use on a reach without an underlying decreed instream flow, the CWCB must establish the appropriate preserve or improve flow rate thresholds. Colorado Parks and Wildlife, or another experienced entity, would present an analysis of how much water may be used to preserve or improve the natural environment to a reasonable degree. The CWCB would then use this information to approve the appropriate preserve or improve flow rate thresholds.

All other notice and review requirements in the Instream Flow Rules would remain in effect. This is consistent with the existing process used for a permanent acquisition on a reach without an underlying decreed instream flow water right.

Useful Sources:

- Instream Flow Rules: <https://dnrweblink.state.co.us/CWCB/0/edoc/214232/2%20CCR%20408-2.pdf>
- Link to 2020 Bill: <https://leg.colorado.gov/bills/hb20-1157>
- Colorado Revised Statutes 37-83-105
- Item 8 on Water Sharing Tools Spreadsheet [https://docs.google.com/document/d/e/2PACX-1vQ-6iQi14m6lrsxNtb58RnuY4F2tHgRkd0VgjeJiOTExJZdWQnjPQI\\_x0GpPyOnjZBvz29sahRVJnSi/pub#h.cr193kn6gnio](https://docs.google.com/document/d/e/2PACX-1vQ-6iQi14m6lrsxNtb58RnuY4F2tHgRkd0VgjeJiOTExJZdWQnjPQI_x0GpPyOnjZBvz29sahRVJnSi/pub#h.cr193kn6gnio)

Further discussion is needed relative to the San Juan Recovery Program and specific stream reaches that may be under consideration. (Steve Wolff)

11.16.23 Comment: Kelly Romero-Heaney, DNR

For background, if there is a situation where the CWCB needs to consider a temporary loan of water rights without an underlying decreed instream flow (ISF), Colorado Parks and Wildlife would be asked to complete an analysis to determine how much water is needed to preserve or improve the natural environment to a reasonable degree. The Board would use this information to determine a minimum flow amount. All other notice and review requirements in the ISF Rules would remain in effect. This type of process is already used for permanent ISF acquisitions without an underlying decreed ISF.

See ISF Rules:

<https://dnrweblink.state.co.us/CWCB/0/edoc/214232/2%20CCR%20408-2.pdf>

## 2. L. Augmentation Plans

Colorado law was recently clarified at Colorado Revised Statutes 37-92-102 to reflect that the CWCB may obtain a water court approval for an augmentation plan intended to benefit a decreed ISF water right. It would be useful to further clarify that the CWCB may, like any other water user, obtain temporary approval of such a plan using the Substitute Water Supply Plans (SWSP) process set forth at 37-92-308(5).

- Colorado Revised Statutes 37-92-308(5)
- Items 10 & 15 on Water Sharing Tools Spreadsheet

# AG WATER PROTECTION

## 1. M. Agricultural Water Protection Water Rights

(Brought forward by Orla Bannan) (Updated 11/30/23)

Title: Expansion of Agricultural Water Protection Water Rights Beyond Divisions 1 & 2

Introduction: This water right allows a water court-approved consumptive use quantification of an agricultural water right, following which the water rights may be made available, temporarily, for other uses. Water may be used by a new use through

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to agricultural water rights holders in other divisions so the tool is available statewide.

Useful Sources:

- Colorado Revised Statutes 37-92-305(19) and 37-92-308(12)
- Item 13 on Water Sharing Tools
- Spreadsheet [https://docs.google.com/document/d/e/2PACX-1vQ-6lQj14m6lrsxNtb58RnuY4F2tHgRkd0VgjeJiOTExJzdWQnjPQI\\_x0GpPyOnjZBvz29sahRVJnSi/pub#h.cr193kn6gnio](https://docs.google.com/document/d/e/2PACX-1vQ-6lQj14m6lrsxNtb58RnuY4F2tHgRkd0VgjeJiOTExJzdWQnjPQI_x0GpPyOnjZBvz29sahRVJnSi/pub#h.cr193kn6gnio)
- Colorado Water Trust White Paper: see page 17 <https://coloradowatertrust.org/wp-content/uploads/2020/09/FINAL-WHITE-PAPER.pdf>

Comment from the Tribal Sub-Task Force: The Sub-Task Force notes that statewide application can ensure Tribal ability to participate. Added 11/30/23.

## 2. N. Incentivize Conservation Easements

(Brought forward by Alex Davis)

**Expand incentivize (Jordan Beezley) the use of conservation easements and other tools to prevent development on prime agricultural land.** The existence of agricultural land brings many benefits to the State, regional and local communities that have been identified in numerous forums. These benefits include maintenance of Colorado/western culture and history; maintenance of unique landscapes; when the food is sold locally, reduced carbon footprint, maintenance of habitat for birds, insects and other animals (particularly by organic and regenerative farming practices; and increased food security. Demand for the state's conservation easement tax credit continually exceeds the annual cap on available credits. **The legislature should examine ways to expand the amount of land - and water necessary to maintain the identified conservation values on that land (i.e. agricultural, wildlife habitat, etc.) - that can be protected annually under the state's conservation easement tax credit and other programs that offer payments or incentives for conservation easements. ~~If we want to preserve agricultural land long term, the Legislature should consider connecting investment of state funds in agriculture to conservation easements and other tools that ensure the land will not be sold for development.~~** (Jordan Beezley)

## WATER SHARING TOOLS

### 1. ~~0. Reversion of Present Perfected Water Rights Otherwise Subject to Abandonment.~~

(From AG Weiser, but put on this list by Alex Davis)

- a. ~~Under the Water Right Determination and Administration Act of 1969, the State and division engineers must prepare decennially an abandonment list comprising all the absolute water rights determined to have been abandoned in whole or in part and which previously have not been adjudicated as abandoned.~~
- b. ~~In an abandonment proceeding, the water court determines whether particular water rights do or do not exist.~~
- c. ~~Water rights are usufructuary in nature, and in an abandonment proceeding the use entitlement may be lost to the stream. When this occurs, the property rights adhering to the particular water right no longer exist.~~
- d. ~~Abandoning water rights that predate the Colorado River Compact could reduce the amount of water Colorado can use—especially under any potential compact administration for the Upper Division States—because those rights are not subject to curtailment under the Compact. The Compact recognizes that “present perfected rights to the beneficial use of water of the Colorado River system are unimpaired by this compact.”~~
- e. ~~Simply abandoning one of these water rights would mean that it no longer exists and would be unavailable for use under any future compact administration in Colorado. The General Assembly could avoid that outcome by declaring that if a present perfected right would otherwise be abandoned, it could instead revert to the State under a legal mechanism akin to escheat.~~
- f. ~~The General Assembly would also need to authorize the State to use any such water rights as part of a program to shepherd these rights to the state line in order to help the State maintain its compliance with the Colorado River compacts. When not needed for compact compliance, moreover, these water rights could be used by the CWGB for multi-benefit purposes, such as protecting local habitats, recharging aquifers, increasing storage or assisting water users. (Italics added by Alex Davis)~~

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New text as of 11/30/23

### Preamble:

Healthy rivers are necessary to a healthy water supply. When flows are too low, temperatures go up, water quality declines, algae blooms foul intakes, fish suffer, and transit losses increase. Coloradans value the natural environment and bustling recreational economy it supports. To ensure our water users and rivers themselves are resilient in the face of drought, the Task Force should consider opportunities to improve natural systems alongside other recommendations being considered.

### Background:

If the Upper Colorado River Commission makes a finding that additional water is needed to help avoid curtailment in the Upper Colorado River Basin and Colorado decides to participate in voluntary programs designed to help satisfy this finding, Colorado and its water users could leverage such efforts to also mitigate risks to their healthy streams and water supplies by concurrently working to address instream flow shortfalls and meet endangered fish recovery program flow targets. The Nature Conservancy proposes directing the State Engineer to adopt guidance that would guide administration of the storage, timing and shepherding of water releases and deliveries to help avoid curtailment of uses under the Colorado River Compact to also provide demonstrable stream health benefits without compromising the primary purpose of water conservation and drought resiliency for which the water is being provided. Instream flow and endangered fish recovery program targets would inform the viable reaches, quantified flow needs, and preferred hydrograph metrics to serve as the basis of the water administration guidance to be developed.

### Task Force Proposal:

- Allow the State Engineer to consider stream health, environmental and recreational benefits in the administration of water rights if the UCRC makes a finding that additional water is needed to avoid curtailment and Colorado decides to participate in a program for such purposes, without compromising the primary purpose for which the water is being administered.
- Direct the State Engineer to develop and adopt guidance to avoid injury to water users, ensure that the secondary environmental benefits are achieved in a way that doesn't compromise the primary drought mitigation purposes, and identify the appropriate circumstances for such environmental shepherding to be implemented.
- Direct the State Engineer to collaborate with the CWCB and CPW to evaluate, develop, and otherwise provide flow needs, metrics, and preferred hydrograph information that may be necessary to support decision making intended to meet stream flow needs in the shepherding of water for drought mitigation purposes.

### Old language and comments below:

Healthy rivers are necessary to a healthy water supply. When flows are too low, temperatures go up, water quality declines, algae blooms foul intakes, fish suffer, and transit losses increase. Coloradans value the natural environment and bustling recreational economy it supports. To ensure our water users and rivers themselves are resilient in the face of drought, the Task Force should consider opportunities to improve natural systems alongside other recommendations being considered.

If Colorado decides to take actions to voluntarily reduce risks related to interstate commitments on the Colorado River, such efforts could be leveraged to address instream flow shortfalls and to help meet endangered fish recovery program flow targets. The Nature Conservancy proposes directing the State Engineer to adopt guidelines that would govern administration of water under these circumstances such that releases and delivery of water would be timed and shepherded through specific stream reaches to provide demonstrable stream health benefits without appreciable increases to transit loss. Instream flow and recovery program targets would provide the defined reach, quantified flow needs, and hydrograph that could be met through administrative decisions and reservoir releases.



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(1)(iii). IN ADDITION TO THE STATE ENGINEER'S OTHER RESPONSIBILITIES AND AUTHORITIES TO ADMINISTER DELIVERIES OF WATER, THE ADMINISTRATION OF DELIVERIES OF WATER TO THE STATE LINE AND TO AND THROUGH STREAM REACHES WITHIN THE STATE, INCLUDING FOR STORAGE IN RESERVOIRS, OR BY EXCHANGE. THE STATE ENGINEER SHALL, PURSUANT TO C.R.S. § 37-92-501 ADOPT WRITTEN GUIDELINES, ORDERS AND INSTRUCTIONS GOVERNING THE CIRCUMSTANCES UNDER WHICH THE RELEASE AND DELIVERY OF WATER TO REDUCE OR MITIGATE INTERSTATE COMMITMENTS SHALL BE SHEPHERDED THROUGH SPECIFIC STREAM REACHES TO PROVIDE DEMONSTRABLE STREAM HEALTH AND RECREATIONAL BENEFITS WITHOUT APPRECIABLE TRANSIT LOSS.

Should the stream reaches be specified? Jackie Brown

For the State Engineer to administer water to reduce or mitigate "interstate commitments," as referenced in SB23-295, by delivery to storage either in Colorado or in Lake Powell, "drought security" or a similar concept may first need to be defined as a beneficial use in statute. The Task Force should discuss the relative merits and potential downfalls of such legislation, including how and when water rights might be changed to that use.

**Comments on Aaron Citron's proposal from SWCD (Steve Wolff)**

While we are not opposed to the State Engineer considering whether it is possible to shepherd water in a manner that also provides stream health and recreational benefits, we do have the following questions and concerns with this specific legislative proposal:

- Requiring the State Engineer to begin promulgating these guidelines, orders, and instructions is premature and skips over a key question, which is whether the State Engineer's authority includes, or ought to include, the release and delivery of water to "reduce or mitigate interstate commitments." At this point, it is not even clear that there is a universal agreement on what this phrase means. As we understand it, the State Engineer currently has the authority to shepherd water to the state line for the limited purpose of satisfying obligations of the State of Colorado imposed by compact or judicial order, including but not limited to within the Colorado River Basin. While this action may fall within "reducing or mitigating interstate commitments", it is unclear to us whether this legislative proposal seeks to expand the State Engineer's authority such that he or she may shepherd water for additional purposes that may have a more attenuated link to compact compliance. It would be helpful to discuss what would, and conversely would not, qualify as reducing or mitigating interstate commitments.
- Is this legislative proposal intended to apply statewide?
- We generally support the State Engineer attempting to administer water rights to provide incidental in-channel benefits, so long as it does not undermine the primary purpose for which the water is being administered passed other water users. We suggest adding to the end of the last sentence: " or without compromising the primary purpose for which the water is being provided."

**Comment on Shepherding with Environmental Co-benefits (Orla Bannan)**

Supportive of this proposal to shepherd water, released or delivered to reduce or mitigate interstate commitments, in a manner that provides stream health benefits. For the State Engineer to administer water to reduce or mitigate interstate commitments, as referenced in SB23-295, beneficial use will need to be defined. I agree with the comments above that it would be helpful for the Task Force to discuss.

**Q.MONITOR LONG-TERM OUTLOOK FOR 10-YEAR TOTAL FLOW at LEE FERRY**

(Brought forward by Randi Kim)

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a) Curtailment may be necessary, if the flow at Lee Ferry is depleted below Article III

b) UCRC sets "quantity" and "time" of curtailment for each state

c) The state (Colorado) determines how to meet compact compliance obligations

The 10-year aggregate flows at Lee Ferry have not fallen below 75,000,000 acre-feet for the years 2004-2022. The current projection by the U.S. Bureau of Reclamation for 2023 and 2024 is that the 10-year aggregate flows at Lee Ferry will not fall below 75,000,000 acre-feet.

The U.S. Bureau of Reclamation projects deficits at Lee Ferry under various scenarios ranging from about 3.5 maf at the 90th percentile, 2 maf at the 50th percentile, and 500 kaf at the 10th percentile.

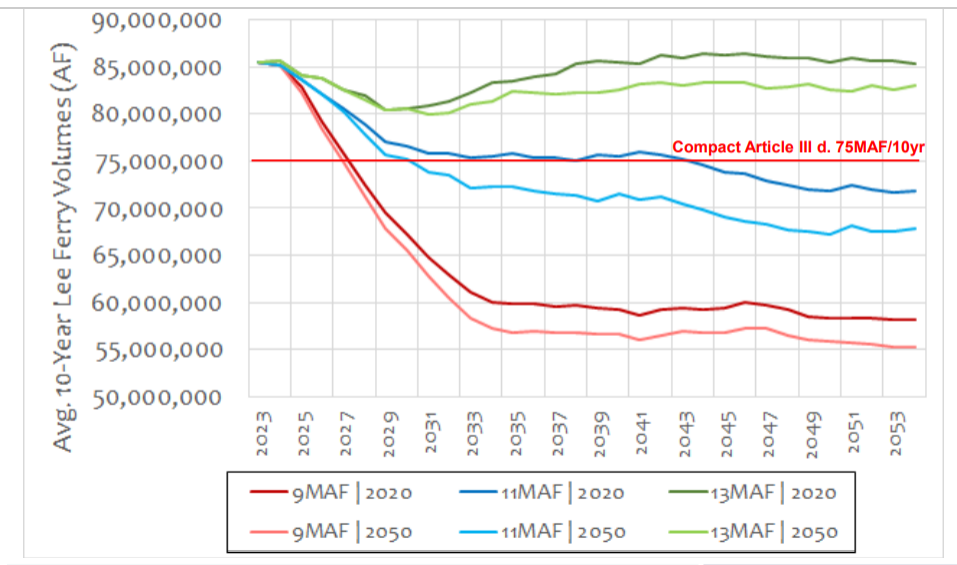
As stated by U.S. Bureau of Reclamation:

*All system projections are subject to multiple sources of uncertainty. One source is the model, which is a simplified representation of a complex system. Another component of uncertainty is the need to estimate physical processes such as reservoir evaporation and transpiration from plants. The most impactful source of uncertainty is the future itself- models rely on assumptions about how hydrology, water demand, and policy/operations will unfold. Reclamation works with stakeholders and scientists to develop the best modeling practices and most appropriate assumptions in light of the purpose of each model. It is important to understand the purpose, approach, and assumptions associated with each set of projections and their inherent uncertainty to properly interpret the information they provide.*

*Projections are most sensitive to assumptions about future hydrology, and future flows are highly uncertain. Assumptions about future hydrology based on different datasets can produce very different pictures of risk. For example, risks of reaching low reservoir elevations calculated when assuming the possibility of experiencing flows from the full observed natural flow record spanning 1906 to 2019 are much lower than if we consider only sequences from the observed natural flow record spanning 1988 to 2019 because this portion of the record is significantly drier. There are many other sources of hydrologic data, e.g., paleo records and climate projections, that provide yet different views of risk.*

*The further out projections look, the more uncertainty exists. This is apparent when comparing the different ranges of possible conditions in 2-Year and 5-Year Probabilistic projections. As time horizons extend and uncertainty increases, projections of statistics-based measures such as risks of certain system conditions become less reliable as representations of the true probabilities that specific events may occur. When it is impossible to confidently state probabilities or identify the best hydrology, demand, and policy assumptions, this context is called "deep uncertainty," and it requires special planning techniques. Reclamation has previously used, and is continuing to research, Decision Making under Deep Uncertainty (DMDU) methods. Refer to the [Colorado River Basin Water Supply and Demand Study - Technical Report G](#) and [Colorado River Basin Research-to-Operations Program](#) for more information.*

Phase IV of the Colorado River Risk Study commissioned by the Colorado River District, July 18, 2023 Update (Hydros Consulting) projected that the 10-year aggregate flows at Lee Ferry may fall below 75,000,000 acre-feet under diminishing natural flow conditions at Lee Ferry (11 and 9 million acre-feet) assuming both current (2020) and projected future (2050) demand projections for Upper Basins.



The Risk Study concluded that hydrology is still the primary indicator of system "health". If natural flows decline to 11 million acre-feet or worse, additional cuts in use will be necessary.

Due to uncertainties in system projections as discussed above, the legislature should monitor ongoing research and modeling and resulting long-term projections for 10-year total flow at Lee Ferry to support sound policy decisions.

## R-NUMERIC GOALS FOR DEMAND MANAGEMENT

(Brought forward by Randi Kim)

(DM6, MP3)

Develop numeric goals for Demand Management and include cost of maintaining soil health in compensation model.

Demand management are the reductions in consumptive use that are temporary, voluntary, and compensated to ensure ongoing compliance with the Colorado River Compact. Currently, Upper Division States are in full compliance with the Compact and using 3 to 4 million acre-feet less than our 7.5 million acre-foot annual apportionment.

A longer term outlook is needed to determine if, and when, curtailment may be necessary in the future (see CT-1). With a longer term outlook, numeric goals for demand management could be established for the Colorado River and its tributaries by basin. These goals could be used as the basis for discussions with water users for temporary, voluntary, and compensated demand management plans. At present, one barrier for water users to participate in a voluntary program is not knowing "how much" demand management may be needed for compact compliance.

Another hindrance to a demand management program is concerns about degrading soil health with temporary fallowing. As such, the compensation plan should include funding for alternate low water use crops or soil amendments (e.g., biochar) to maintain soil health during the temporary fallowing period.

The legislature should consider directing the State Engineer to develop planning level goals for demand management by basin.

(Brought forward by Randi Kim)

The adage, 'you can't manage what you don't measure' certainly applies to Colorado's water resources. The seven states in the Colorado River basin are being asked to negotiate operating guidelines that provide equitable and adequate water supplies throughout the basin. As Colorado develops intrastate tools to better understand their own water usage, this information will be equally as important in negotiating with downstream states. Being able to accurately meter and account for water usage amongst all sectors in the Colorado River basin, will assure our decision making will be based on sound data utilized to develop effective policy.

New technologies like airborne snow measurements using LiDAR and soil moisture monitoring are tools being developed to better understand, model, and calculate the relationship between snowpack accumulation, resulting stream flows, and the effect soil moisture, increased temperatures and aridification have in determining these critical predictive values. Accurate predictions of snowpack runoff into basin reservoirs will provide regulating entities the information they need in a timely manner to make operational decisions within the Colorado River basin. Measurement accuracy is critical in making sure regulating entities do not over allocate releases at Lee's Ferry and from CRSP reservoirs including Lake Powell.

The legislature should continue funding state-wide efforts to improve measurement of streams and expand snowpack measurements using LiDAR for larger scale basin-wide projects. For smaller localized projects, state funding mechanisms for these projects should include a requirement for measurement devices to demonstrate water efficiencies.

Comments: 11.16.23 Kelly Romero-Heaney, DNR: The CWCB voted to move forward the following and related funding proposals for the [2024 CWCB Projects Bill](#).

1. Water Forecasting Partnership Project: \$2 million
  - a. CASM/LiDAR provides high resolution, spatial snowpack data to stakeholders. Data collection is conducted using airplane mounted LiDAR and Spectrometer units, then processed and modeled by ASO staff to provide stakeholders a highly accurate picture of the snowpack in their basins. When combined with modeling efforts such as WRF-Hydro, this data can strengthen decision making through refining streamflow forecasts.
  - b. ASO snow surveys provide the most accurate estimate of the volume of water stored in the snowpack
  - c. Provides water managers with high resolution basin wide data of their snowpack
2. Colorado Mesonet Enhancements \$200k
  - a. Request from the Colorado Climate Center to improve high quality weather data targeted for use in water planning, management, conservation and education. The CoAgMET data are used for a broad range of applications, including irrigation planning, drought monitoring, water availability calculations, real-time weather monitoring, and much more.
3. Satellite Monitoring/Maintenance Program: \$380k
  - a. DWR annual request for maintenance and operation of monitoring and stream gauges. This program currently encompasses about 650 satellite stream gaging stations that require continued replacement of outdated data collection platforms, upgrades to transmission components, and refurbishment of the associated infrastructure. In addition, many existing gaging stations need to be modified to provide critical stream flow data for both flood and low flow monitoring.

would improve administration and transparency. This project will include partnering with water users and entities in streams throughout Colorado to install telemetry as the equipment will be owned by the water users and replacement will be their responsibility. .

Comment from the Tribal Sub-Task Force: The Sub-Task Force supports the concept and funding for measurement tools. Added 11/30/23.

## T. INVASIVE PHREATOPHYTE & SPECIES REMOVAL

(Brought forward by Randi Kim)

Invasive phreatophytes (deep-rooted, water intensive vegetation like Russian Olive and Tamarisk) and other invasive plant species can fundamentally alter stream channels and systems by preventing floodplain connectivity, changing sediment deposition, altering the nutrient cycles of riparian areas, and impacting water quantity and quality.

Specific Impacts of Phreatophytes such as tamarisk:

- Accessing more water through deep taproots
  - Tamarisk roots reach further and deeper compared to native trees and shrubs.
  - This allows tamarisk to persist and thrive in prolonged drought.
- Using high rates of water
  - Tamarisk use water at a high rate for growth
  - This high water use in combination with the deep-reaching taproots has the effect of drying up the stream or floodplain.
- Crowding out native vegetation
  - Tamarisk reproduces by seed and by cuttings very quickly, which results in dense thickets.
  - Tamarisk thickets block the sun from native species that would otherwise be germinating and growing.
- Increasing fire frequency and severity
  - The dense tamarisk thickets are more fire-prone due to more continuous plant material as fuel.
  - Native trees and shrubs in riparian areas recover more slowly post-fire, so tamarisk re-sprouts and recolonizes in another dense monoculture stand.
  - Tamarisk leaves are more flammable compared to native tree and shrub leaves.
- Decreasing diversity and complexity in riparian systems
  - When tamarisk is the only species making up the vegetation in a river corridor, the habitat becomes one-dimensional and lacks diversity for all

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vegetation is also simplified, leading to a decrease in wildlife habitat quality.

- Channelizing banks
  - Tamarisk colonizes in tight thickets and armors riverbanks that would normally participate in erosion and deposition events.
  - Erosion occurs on the riverbed instead of the banks, which drops the river level and lowers the level of water in the floodplain (also referred to as incising). As a result, the surrounding vegetation changes from wetlands and meadows to dry shrublands.

Tamarisk is listed as an invasive species in at least nine western states and has established itself so readily that it is displacing native plant species.

#### Best Practices

The management of tamarisk and other invasive plant species requires a long-term commitment of time and resources. With proper management, in combination with restoration measures (e.g. revegetating with native plants), we can return riverside habitats to a more diverse and functional ecosystem.

Local removal efforts can complement stream or riparian improvements but large-scale efforts to remove these species require effective management across jurisdictions.

*Removal of Invasive Phreatophytes are Replaced with Native Vegetation:* When invasive plant species such as tamarisk and Russian Olive are removed, these areas should be prioritized for restoration of native plants species. This is a critical component to river restoration as well as reestablishing ecosystem functions for improved ecological, social, cultural, and recreational values.

*Established Watershed Partnerships with Established Restoration Plans:* Many of the rivers and streams in Colorado have Watershed Partnerships (public and private collaboratives) which have prioritized areas for removing invasive plant species and replacing them with native vegetation. Many of these groups are well-established watershed-based partnerships that are already collaborating on phreatophyte management and riparian restoration. These groups have infrastructure in place (e.g. restoration plans, priority areas for restoration, restoration best practices, governance systems, diverse stakeholders relationships), and have developed social capital within public/private partnerships, and currently work with local, state and federal agencies. Most notably these watershed partnerships have existing plans that are paramount for conducting large, reach-scale removal and restoration projects. These plans identify critical elements such as, enabling conditions for invasive plants and other stressors to native plant communities, actions to address stressors, project sites located and prioritized within a defined time frame, and control and revegetation strategies to be implemented. The following partnerships are working within the priority areas previously identified:

- Desert Rivers Collaborative (Colorado and Gunnison)
- Dolores River Restoration Partnership (Dolores)
- White River Partnership (White River)
- Middle Colorado Watershed Council (Colorado River)
- Uncompahgre Watershed Partnership and Uncompahgre Partners (Uncompahgre)
- Purgatoire Watershed Partnership (Purgatoire)
- Arkansas Partners (Arkansas)

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### Recommendations

The legislature should consider funding a state-wide assessment of changes in riparian plant communities, the state of riparian ecosystem function and those impacts to water resources associated with invasive phreatophytes. Ultimately, this would support the development of a state-wide program for controlling these invasive plant species on a larger scale. Further, the legislature should address increasing the Colorado Department of Agriculture's noxious weed removal enforcement program.

The establishment of a statewide effort should involve cooperation with established local/regional partnerships. Funding streams for removal and restoration should be developed in a manner that avoids unnecessary delays and provides accessible and flexible avenues for non-federal groups, non-profits, and private landowners to fund implementation of projects in an expedient manner.

#### Support for Ongoing Monitoring, Maintenance and Capacity

In addition to a statewide program that supports the removal phase of invasive plant species, we recommend this program support the additional planning, monitoring, maintenance, and capacity needs for these projects to be efficient and effective.

Restoration is a process that happens over time, almost always extending beyond the timelines of individual projects. To know if efforts are successful, on the right path or meeting objectives, monitoring is needed. When monitoring is conducted and the data are analyzed over time, we can measure how a site has changed and plan for future removal and restoration projects. All removal and restoration projects need to factor in maintenance for follow up treatments of invasive plants, reseeding, and replanting of native species. These projects are never one and done endeavors, and so resources for maintenance (treatment of invasives, revegetation of natives) will ensure public and private initial funding investment are protected.

Lastly, these projects could not be accomplished without the resources to support the capacity and the people to get them done. We encourage the program to invest in and support the agencies, organizations, and watershed groups capacity to oversee large scale restoration projects.

#### Funding Process & Mechanisms

Funding for removal and restoration should be placed in a grant type program, specifically a block grant model for partners working in Colorado watershed over multiple years. This block grant model will allow the funding to be allocated from a state or federal governments to recipients or established groups to be used specifically for its intended purpose of removing invasive plant species and restoring native habitat. The use of a block grant program would allow localized and/or regional "bundling" of projects which have similar objectives and characteristics, reducing administrative burdens and costs on both the grantee and grantor. We encourage this program to have a low match requirement for grantees, as this is many times an inhibiting factor to grant programs.

#### Resources:

Theoretical Water Savings Resulting from Grand Valley, CO Restoration Projects, Tamarisk Coalition, July 2015.

Independent Peer Review of Tamarisk & Russian Olive Evapotranspiration Colorado River Basin, Tamarisk Coalition, April 2009.

Assessing the Potential Impact of Invasive Species Water Use on the Lower Colorado River, Colorado River Basin States and Utah State University.

The Transformation of Dryland Rivers: The Future of Introduced Tamarisk in the U.S., U.S. Geological Survey, April 2021.

Comment from the Tribal Sub-Task Force: The Sub-Task Force supports the concept; Funding should be available to Tribal Nations. Added 11/30/23.

## CONSERVED CONSUMPTIVE USE PROGRAMS WITHIN THE STATE OF COLORADO

(Andy Mueller) Colorado River District Proposal.

### Preamble:

In order to avoid constraints on Colorado's interstate Colorado River negotiators, this proposal does not recommend or require the adoption of a specific interstate program or strategy. Instead, this proposal recommends that the General Assembly pass a resolution in support of certain standards applicable to implementation within Colorado of any program that would conserve existing consumptive use of the State's Colorado River allocation to send water out of the state (regardless of the specific name of any such program or strategy).

The Colorado River Drought Task Force has discussed several types of programs that could be utilized within the State of Colorado if and when the State implements a program to intentionally reduce its consumptive use of water to address interstate commitments. These programs are distinctly different than many of the programs discussed by the Task Force to promote drought resiliency within the State of Colorado. It is critical that any program designed and implemented to reduce consumption of Colorado River water for the primary purpose of sending that water across the Colorado state line follow the principles identified by this Task Force (i.e., Put Colorado First and Do No Harm).

The Task Force—and the General Assembly—should not be pre-occupied by a program name. Rather, we should focus on the impacts of any potential conserved consumptive use programs within our state and do our best to structure any such program for the maximum benefit of the State of Colorado while mitigating any potential harm. Whether an interstate-oriented conserved consumptive use program is called a System Conservation Program, Demand Management, Water Banking, Strategic Water Reserve or another name, they all have the common trait of reducing the consumption of existing Colorado River basin water uses in order to send water out of state. Such programs may help to address interstate commitments, but they also may have negative impacts within Colorado.

The General Assembly should not design the details of any program intended to achieve these interstate goals. Rather, the General Assembly can pass a resolution affirming the State of Colorado's intent to protect Colorado's unique values (those that have been identified in the Colorado Water Plan and our state's years-long discussions and investigations of Demand Management and System Conservation) by identifying standards that any such program should meet inside of our state. While the State of Colorado correctly retains the sole right to negotiate interstate agreements, the design and implementation of the Program(s) must be collaboratively developed by the state, operators of transmountain diversion projects (for projects involving transmountain supplies), and the West Slope water conservation districts.

Much of the work on these standards has already been done by the CWCB in its 2018 Demand Management Policy Statement and by the General Assembly itself in drafting SB23-295.

### Recommendation for Resolution of the General Assembly:

Any water conservation program implemented in Colorado with the goal of delivering conserved consumptive use in accordance with the provisions of any interstate agreements or commitments shall comply with the following criteria:

- a. Reductions in consumptive use shall be voluntary, temporary, and compensated.
- b. Programs shall prioritize the avoidance of disproportionate negative economic or environmental impacts to any single subbasin or region within Colorado while protecting the legal rights of water rights holders in the State. To that end, any conserved consumptive use program operated within the State of



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injury to other water rights holders. In order to assure the protection from injury, the program operators shall implement a notice and public input process, and a right of appeal or judicial review that is no less rigorous than that currently used by the State of Colorado for Substitute Water Supply Plans as set forth in CRS § 37-92-308(4)(c).

d. Programs shall consider and be fully informed by the input and considerations of water rights holders and stakeholders potentially impacted by the operation of Programs within Colorado, and institute a public review process for any such proposed Programs.

e. If a Program is operated within the jurisdictional boundaries of the Colorado River Water Conservation District or the Southwestern Water Conservation District for water diverted and used within the boundaries of those Districts, it shall be designed and implemented collaboratively between the Colorado Water Conservation Board and the applicable Water Conservation District.

f. If a Program is operated to reduce consumptive use of Colorado River water used outside of the natural Colorado River basin, such a program shall be designed and implemented collaboratively between the Colorado River Water Conservation Board and the applicable transmountain diversion operator(s).

g. Any program must be implemented consistent with the Colorado Water Plan's Conceptual Framework, including specifically its Principle Four.

h. Any Program(s) primary goal should be to assure compliance with the Colorado River Compact. Any Program shall provide the State Engineer with the appropriate legal authority and direction necessary to fulfill the purposes of the Program in a manner that, without minimizing the primary purpose of the Program, provides benefits to recreation and the environment.

## V. RECOMMENDATION FOR A RESOLUTION OF THE GENERAL ASSEMBLY REGARDING SYSTEMATIC WATER CONSERVATION AND LOWER BASIN OVERUSE

(Andy Mueller) Colorado River District Proposal.

### Preamble:

This resolution will provide legislative support to one of Commissioner Mitchell's "irrefutable truths." Systematic water conservation programs and reductions in conserved consumptive use are necessary currently in the Colorado River basin due to the failure of the Lower Basin to reduce its consumptive use during times of diminished hydrological supply.

The Lower Basin states have historically overused the Colorado River, and during the 23-year megadrought, this overuse led to the draining of the major system reservoirs and pressure on all water users to reduce their use. Therefore, the Lower Basin must commit to permanent reductions in consumptive use which will result in permanently bringing its collective annual water consumption, including properly accounted-for system losses, below 7.5 Million Acre Feet of mainstem Colorado River water. The Lower Basin's commitment must be secured before our state or the Upper Basin implements further systematic water conservation programs, whether called SCPP, Demand Management, or something else.

These Lower Basin reductions in use should include proper accounting of evaporation and transit losses within the Lower Basin (i.e., "system loss").

Recommendation for Resolution of the General Assembly:

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emergency actions within the Basin and resulted in calls for the reduction of consumptive use in the Upper Basin, including within the State of Colorado.

The General Assembly calls upon the Lower Basin states of California, Nevada, and Arizona to permanently bring their collective annual water consumption from the mainstem of the Colorado River equal to or below the allotment set forth in Article III (a) of the Colorado River Compact of 1922 of 7.5 Million Acre Feet. The calculation of annual water consumption should include all depletions to the Colorado River system caused by Lower Basin including evaporative and transit losses associated with the storage and delivery of water within the Lower Basin ("System Losses").

The General Assembly further strongly recommends that the State of Colorado should not engage in the operation of any water conservation program involving Colorado River water within the State of Colorado with the goal of delivering conserved consumptive use to the state line unless the Lower Basin states permanently bring their collective annual water consumption from the mainstem of the Colorado River (inclusive of System Losses) equal to or below 7.5 Million Acre Feet.

## MUNICIPAL

### 1. W. Turf removal program

(Brought forward by Randi Kim)

HB-1151 required CWCB to develop a turf replacement program that will provide incentives for replacing nonessential irrigated turf with more water-wise landscaping. HB-1151 allocated \$2 million to finance the program.

This funding level is inadequate to sustain an impactful state-wide turf replacement program. In comparison, Utah approved \$5 million in funding and Nevada provided funding of \$24 million for turf replacement.

The legislature should consider increasing funding levels to \$5 million per year. *(and increasing the amount one entity can access)*(Alex Davis)

From Daris Jutten: Increase state funding for the current turf removal program or other programs, and tie state funding to disincentives for new non-functional turf and/or codes disallowing new non-functional turf.

[Comment 11.16.23 Kelly Romero-Heaney: CWCB Board approved a recommendation to continue funding the HB22-1151 Turf Replacement Program with \\$2 million in the 2024 CWCB Projects Bill. Additionally, Resource Central received a \\$1.5 million Water Plan Grant for Turf Replacement.](#)

Comment from the Tribal Sub-Task Force: The Sub-Task Force supports the concept. Added 11/30/23.

### 2. X. Advanced Metering Infrastructure (AMI) for municipal water users (MU9)

(Brought forward by Randi Kim)

Advanced Metering Infrastructure (AMI) provides near to real time data of water usage that can be made available to customers through a portal. AMI customer portal educates customers on water use and provides an avenue to promote water conservation. AMI can also be used to identify potential sources of water loss in the distribution system.

The legislature should consider incentivizing large municipal water providers to develop an AMI implementation plan to install AMI within the next 5 to 10 years. This should be

Aurora and other cities are already pursuing implementation of Direct Potable Reuse (“DPR”) as one of the strategies to address projected water supply gaps. The Colorado Dept of Health & Environment has recently adopted rules guiding development and implementation of DPR. The legislature should consider how it can incentivize and support addition of DPR systems to municipalities.

## NARRATIVE SUGGESTIONS

(Brought forward by Daris Jutten)–

### NARRATIVE issues

1. Task Force discussed the importance of using the narrative to educate the legislature (and the public) on the complexity of solving some issues.
2. Explain the long DTF (Colorado First) discussion on ‘trigger’s required for **mandatory** new programs which should occur only in times of potential curtailment.
3. Narrative could outline the ‘unresolved issues’ and need to pay sources to help better define possible answers going forward.
4. Narrative should include context:
  - a. Language from the legislation that advocates for temporary, voluntary and compensated SB23-295 Section 2 (4)(b)(i)(ii)(iii)
    - i. NOTE hydrology already forces many users to use less than 100% of water rights due to snowpack, etc., and that reduction is not compensated nor recognized. UUVWA, Dolores River and tribes are good examples.
    - ii. Written description of the principle of no disproportionate negative impacts to any single subbasin or region.
  - b. Language that describes additional ‘principles’ such as preferring local and regional input vs state controlled tools (See CO River district tools)
  - c. Demand Management vs demand management per the request from Speaker McClusky.
    - i. Big-DM goes away in post 2026 guidelines, dm is a more local plan that is like drought contingency planning
  - d. Inform legislature that many groups everywhere in CO are already adapting and planning for local plans to improve resilience to drought.–
  - e. Explanations about how good ideas in one area may have unintended consequences in other areas—Importance of Do No Harm.
  - f. Need for long term analysis of unresolved issues that are beyond the scope of Drought Task Force.
    - i. Explain that some legislation (proactive, river health) not ready for today (good example on Electric utility discussion which fits for Craig CO and maybe not on Front Range per Kyle)
    - ii. JBCC appointees were not chosen for expertise in the specific arena of SB23-295 and a group with the subject area experts

## 1. IBCC

(Brought forward by Kelly Romero-Heaney)

*Optimize the use of the Interbasin Compact Committee (IBCC) and refer outstanding drought tool research, design, and recommendations to the IBCC.—See revised description below.*

As currently structured, I don't believe the IBCC is the right forum to continue any Drought Task Force discussions in. (Steve Wolff)

(From Kelly Romero-Heaney 11/30/23)

### DESCRIPTIVE TITLE

**Refer intrastate tools that require further research and development to the Interbasin Compact Committee (IBCC) and evaluate IBCC membership to determine if its current makeup represents the diverse interests included in the Drought Task Force and consider adjusting accordingly (i.e. environmental, industrial, and tribal interests.)**

### INTRODUCTION/PREAMBLE

Developing tools that build resilience against drought on the Colorado River system is a task that goes beyond what the Drought Task Force could accomplish in five months. And much of what is needed to mitigate and respond to drought falls outside of any need for legislation. The Drought Task Force identified the need for continued research and discussion on many of the tools that were identified but recognized that the term of their work is limited in SB23-295.

Fortunately, HB05-1177 “Water for the 21st Century Act” created the IBCC as a permanent forum for broad-based water discussions. With 27 appointed members representing the nine Basin Roundtables and diverse interests, the IBCC was set up to disseminate information, create a positive environment for a statewide perspective, and develop a framework that creates incentives for successful deliberations, agreements, and their implementation.

Therefore, the Drought Task Force recommends optimizing the use of the IBCC by referring outstanding intrastate drought tool research, design, and recommendations to the IBCC. Consideration should be given to the makeup of the IBCC to verify that it represents the diverse geographies and interests across Colorado.

### RELEVANT/USEFUL SOURCES

[IBCC Website](#)

[HB05-1177 Water for the 21st Century Act](#)

[IBCC Charter](#)

[IBCC Bylaws](#)

<https://cwcb.colorado.gov/about-us/interbasin-compact-committee>

Comment from the Tribal Sub-Task Force: The Sub-Task Force recommends creating appropriate Tribal representation on the IBCC. Added 11/30/23.

[1] Colowyo, New Horizon