



September 30, 2022

Colorado Water Conservation Board

1313 Sherman Street Room 718

Denver, Colorado 80203

RE: Colorado Water Plan Recreation Community Comments

Dear Governor Polis, Director Mitchell and CWCBC Staff,

American Whitewater and the Theodore Roosevelt Conservation Partnership write to express our appreciation for your efforts in undertaking the 2022 Colorado Water Plan Update process. We also applaud the Colorado Water Conservation Board (CWCBC) staff, board members, and others at the Department of Natural Resources (DNR) for their work in conducting meaningful outreach with stakeholders to inform the initial draft. We're also appreciative of steps taken by CWCBC to ensure that this Update is more accessible for a broader audience, including offering a Spanish language translation. This letter is in response to the CWCBC's request for public comment on the 2022 Colorado Water Plan Update ("Update") and includes our recommendations for consideration in the final draft.

Colorado provides its residents and visitors with boundless outdoor recreation opportunities, including a wide range of paddlesports and fishing opportunities in addition to walking, biking, and passive recreation that takes place on the banks of the state's rivers. These water-related outdoor recreation opportunities in Colorado play a major role in our economy. According to Business for Water Stewardship, nearly \$19 billion is generated every year from the economic impact of people recreating on or near the state's rivers, lakes, and streams.¹ The same study found that, in 2019, 6.7 million people participate in water-related outdoor recreation activities in Colorado and that the industry helps support over 131,00 jobs that provide \$6.3 billion in household income and generate an estimated \$2.7 billion in tax revenues. As a result of the COVID-19 pandemic, participation in outdoor recreation is at an all-time high.

Outdoor recreation is not only a robust sector, but a growing one. Particularly, water-related outdoor recreation is becoming an important economic diversification strategy for rural and historically underserved communities. For example, Craig, Colorado recently received a \$3.3 million Economic Development Administration Assistance to Coal Communities Grant for construction of the Yampa River Corridor Project², that will upgrade the city's outdoor recreation infrastructure including new river access and improving the existing municipal diversion dam to enhance boating passage and create recreational amenities. Overall, the goal of the project is to stabilize and diversify the economy in Craig and Moffat County after the closure

¹ <https://businessforwater.org/co-rivers-key-to-economy>

²

https://www.outtherecolorado.com/news/3-3-million-federal-grant-awarded-to-colorado-white-water-park/article_c173e898-1b44-11ed-a761-e76cd595dc50.html?utm_source=Master&utm_campaign=b3025b0d72-Daily+Newsletter_COPY_01&utm_medium=email&utm_term=0_b88b5f678d-b3025b0d72-174762310

of the coal mines and power plant. Other communities, like Salida or Durango, have experienced the transformational change such investments in outdoor recreation can provide.

Investments in water-related outdoor recreation also provide other community and public benefits. Initiatives designed to sustain flows to support recreation, such as the Voluntary Flow Management Program on the Arkansas River, also helps sustain environmental benefits by providing infusions of cold, clean water to maintain water quality, flush sediment and reinvigorate habitat for cold-water fisheries. Improvements to irrigation diversion structures, such as the proposed Maybell Headgate on the Yampa River³, can provide enhanced boating and fish passage, while also improving irrigation efficiency and deliveries to sustain agricultural production. Finally, water-related recreation provides essential public health benefits. Studies have described that access and time spent around water bodies has measurable benefits to mental and physical wellbeing such as enhanced physical activity and better social relationships.⁴

The 2022 Colorado Water Plan Update (“Update”) process presents an exciting opportunity for the state and water community to commit to broad partner and agency actions that increase support for public policies and investments in water-related outdoor recreation that will help sustain recreational opportunities in light of existing and growing risks due to climate change and natural hazards such as drought and wildfire.

In 2015, the Colorado Water Plan identified support for a robust skiing, recreation, and tourism industry as a core value in aligning Colorado water policy, programming, and funding. In particular, the plan calls to protect and enhance river-based environments and recreational opportunities that support local and statewide economies. We are encouraged that the Update builds on these values by highlighting the important socio-economic role water-related outdoor recreation plays in Colorado and underscoring the impacts to recreation associated with climate change. We are further encouraged that the Update calls for public investments in multi-benefit water projects that enhance recreational and environmental opportunities while sustaining other important water values such as agriculture and an increased focus on climate adaptation.

Building on these ideals, the signatories of this letter provide the following recommendations on key areas of the Update that should be improved upon before adoption:

Reaffirm that Water-Based Recreation Values are Not in Conflict with Other Water Uses and are a Cross-Cutting Issue: Throughout the Update, there are references that increasing demands and declining supply may lead to conflicts between continuing to meet municipal, industrial, and agricultural water needs while maintaining or enhancing

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<https://www.nature.org/en-us/about-us/where-we-work/united-states/colorado/stories-in-colorado/maybell-water-diversion-project/>

4

<https://www.weforum.org/agenda/2021/03/blue-spaces-water-improve-mental-health-says-study/#:~:text=Mental%20health%20connection&text=This%20showed%20that%20living%20closer,people's%20mood%20and%20psychological%20wellbeing.>

environmental and recreational resources. While the Update does include a commitment to work towards reducing these conflicts between water uses, we believe that this framing in general sets a tone that consumptive and non-consumptive water needs must be in competition with each other or that addressing recreational and environmental water needs must be at the expense of other water uses.

We challenge these narratives and assumptions and would encourage the Update to reflect the numerous examples of where there's mutual benefit for recreation and other water users in working together. More prominent examples include the Colorado Water Trust's purchase of water out of Stagecoach Reservoir to support instream flows that have additional benefits for both recreational use on the Yampa River in Steamboat Springs and downstream agricultural water users. Recreational reaches on the Upper Colorado River can benefit from senior downstream water rights such as the Shoshone Hydropower project and Cameo call in the late summer when flows would otherwise be too low for boating. The increase in streamflow benefits the robust whitewater boating economy of communities throughout that river corridor. Similarly, operations on the Cache La Poudre River have shown increased boatable days from reservoir operations and deliveries to downstream users.

While coordinated reservoir operations are an important tool for mitigation and restoring flows to impacted reaches of the river, flow management for the benefit of the environment and recreation should not be categorized as a reason to develop new water projects. There are ample opportunities to utilize existing facilities to benefit instream values while still providing much needed water for agricultural, municipal, and industrial uses.

Recommended edit to Update:

- Page 3-24: Similar to how the risk to agricultural operations for diminishing water supplies is tied directly to impacts on rural community economies on the previous page (3-22), recreational opportunities should be identified for the significant economic benefit to many Colorado communities. In the introductory paragraph on this page add:
 - *The outdoor recreation industry provides the backbone of a sustainable economy in many communities across Colorado especially on the western slope. As some communities transition from extractive industries, water-based recreation is being invested in to provide economic diversification.*
- Page 5-27: Coordinate reservoir releases with attention to recreation and aquatic needs and health. Add this to the bullet titled Cooperative reservoir release programs:
 - *Water managers and reservoir operators can obtain input from environmental and recreation stakeholders regarding the timing and ramping-up and ramping-down rates of reservoir releases so that releases enhance or at least minimize adverse impact to rivers, aquatic species, and recreational flows. Through learning by doing, regular communication, and by maintaining a historic database of releases, they can refine practices and continually improve the impact that reservoir releases have on aquatic health.*
- Chapter 6: We would like to see recreation included as an important value in Vibrant Communities. We feel that including recreational water uses as a part of this action area,

in addition to its appropriate inclusion in Thriving Watersheds, would encourage actions that quantify non-consumptive water uses, support multi beneficial water sharing projects, and coordinate with other state agencies such as the outdoor recreation industry office. There needs to be actions that identify the overlap between the health of natural resources and the recreation economy.

- Page 6-3:
 - Thoughtful Storage: change to *“Increase efficiency of existing storage systems to support farms and communities and ensure multi-purpose benefits for recreation and the environment through thoughtful timing of water deliveries.”*
 - Meeting Future Water Need: change to *“Increase efficiency and reduce risk for all consumptive and non-consumptive uses.”*
- Page 6-4-5:
 - Vibrant community partner actions: add *“by focusing on reduction in demand”* onto the end of the sentence in meeting future water need.
 - Robust agriculture: add *“while providing improvements to Environment and Recreation values”* onto the end of the sentence in meeting future water need.
 - Thriving watersheds:
 - Thoughtful storage: *“Increase efficiency of existing storage systems to support farms and communities and ensure multi-purpose benefits for recreation and the environment through thoughtful timing of water deliveries.”*
 - Meeting future water need: Prioritize reducing demand and increasing efficiency of existing water infrastructure.
- Page 6-7: Add bullet to thoughtful storage:
 - *Conservation and optimization of management of current reservoirs - including development of new tools that provide for more flexible management - needs to be factored into planning on the development of new storage. All new and existing storage must provide for the ability to mitigate impacts to downstream environmental and recreational water uses. Mitigation and enhancement of recreation values is not a project purpose for storage.*
- Page 6-40: Action 3.6
 - Use the Colorado Conservation Easement Tax Credit and GOCO to enhance river camping on popular rafting rivers such as the Arkansas River, Yampa River, Eagle River, Roaring Fork River, and Colorado River. Add the following as the last sentence to the bottom of Agency Action 3.6: *The CWCB will identify locations on rivers used in multi-day raft trips that could serve as river access points or overnight campsites accessible only from the river, involve and educate landowners with river frontage about how the Colorado Conservation Easement Tax Credit can compensate them for providing campsites or river access, and enlist Great Outdoors Colorado to provide grants to pay for expenses related to conservation easements.*

Recreational Water Use is Distinct from Environmental Uses: As previously illustrated, streamflows that provide recreational opportunities also can create benefits to

aquatic ecosystems. These two non-consumptive uses are closely linked and interdependent. However, recreational use of water resources has different needs and factors that affect the experiences (i.e. magnitude of flow, accessibility, number of users, etc.). Additionally, recreational use of water is a widely cross-cutting issue. Throughout the Update, recreation is primarily identified, along with the environment, as at risk from declining streamflows. While this is very true, this fails to fully quantify and illustrate how recreational use of rivers and streams supports the Colorado economy and is dependent on resilient infrastructure and vibrant communities.

Recommended edit to Update:

- Page 1-9: In the Vibrant Communities paragraph edit the second sentence as follows: Colorado communities need resilient water supplies, water-conscious and attractive urban landscapes, planning that integrates land use and water solutions, *access to healthy, functioning rivers and waterways*, and citizens who understand the importance of water to their lives and economy.
- Page 2-7: Access to nature, especially blue spaces, or spaces containing water, are shown to provide benefits to public health, social values, and even a deeper care for the environment.⁵ Since 2015, water-based recreation in Colorado has increased dramatically as shown in data collected by the Colorado River Outfitters Association, state and federal agencies managing river access points, and anecdotal records from recreational businesses. This access and interaction with rivers helps galvanize social and environmental valuation of water resources. In SOCIAL/ENVIRONMENTAL VALUES driver description first paragraph, last sentence, rewrite it to say: “*Access to healthy rivers for recreation, education and broad and inclusive outreach* impact the degree of public awareness of water issues, which in turn can affect the public’s perception of the water supply solutions and environmental protections that are pursued.”
- Page 2-11: Polling about social/environmental values is collected by the Colorado College State of the Rockies project. Data has been collected about conservation in the west from a sample of bipartisan voters.⁶ This study should be included as a source of the specific data mentioned here.

Include the Colorado Outdoor Recreation Industry Office as a Collaborating

Agency: Overall, we’re encouraged to see a whole-of-government approach included in the Update, which is necessary to address the scale of water resource challenges facing Colorado. For the final draft we recommend including the Colorado Outdoor Recreation Industry Office (OREC) as a collaborating state agency given their role in supporting constituents, businesses, and communities that rely on the continued health of the outdoor recreation economy.

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https://www.google.com/url?q=https://www.huffpost.com/entry/environment-nature-activism-cities-conservation_n_5e57f1aac5b60102210d9d31&sa=D&source=docs&ust=1663349401357254&usg=AOvVaw0Hwa7mINRqqKuvzel-YCO

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<https://www.coloradocollege.edu/other/stateoftherockies/conservationinthewest/2022/2022-poll-results.html>

OREC engages the outdoor recreation industry in conservation for sustainable and inclusive access to lands, waters, and climate. OREC also supports regional coalitions working to preserve and enhance recreation while conserving public lands and waters. Specifically, we encourage more regular CWCB engagement with OREC to develop and evaluate multi-benefit recreation project proposals for CWCB funding, identify CWCB project proposals for OREC funding potential, assess recreational flow needs, and advocate for OREC to become an ex officio member of the CWCB.

Recommended edit to Update:

- Page 3-39: The Colorado Outdoor Recreation Industry Office recently opened a grant opportunity as a result of the American Rescue Plan Act to support projects related to economic development and recovery in the outdoor recreation sector.
 - Add the Outdoor Recreation Industry office as another source of funding outside CWCB.
- Page 3-44: The Colorado Outdoor Recreation Industry Office should be added to the list of state partners.

Add a CWCB Recreation Liaison: The CWCB, despite the widespread use and socio-economic importance of water-related outdoor recreation to Colorado, currently lacks a dedicated program or staff focusing on water-related outdoor recreation issues. This lack of capacity has been cited as a significant barrier to supporting more recreation-focused water project development for CWCB funding, ensuring recreational values and priorities are included in state and local planning efforts, and providing communities with assistance in evaluating tools and approaches to enhance recreational flows and infrastructure.

The staffer could serve as CWCB's liaison to Regional Partnership meetings, assist communities and stakeholders in evaluating strategies to enhance recreational flows, support new cooperative reservoir release programs which are currently limited to specific geographies, and support public land and water conservation initiatives such as the Colorado Outdoor Partnership.

We request that CWCB include a commitment in the Update to bring on a dedicated recreation liaison/expert or work with DNR, CPW and/or OREC to evaluate opportunities for a cross-agency position. This position could support the development of environmental and recreational projects and provide a commitment to align funding and technical assistance across agencies to implement these plans.

Recommended edit to Update:

- Page 6-40: Action 3.6
 - The CWCB should create a staff position dedicated to recreation: *The CWCB will coordinate with the Department of Natural Resources to hire a full-time staff member dedicated to identifying demand for river recreation, and to identify water supplies that can support or enhance recreation.*
 - Replace the word "user" with "boatable" days.
 - Replace "recreational in-channel diversions" in the last sentence to say "protecting and enhancing flows for recreation".

Address Recreation Flows and Temperatures: Adequate flows to sustain recreation and environmental water needs must be a top priority for CWCB. As the Update notes on page 5-4, climate change and aridification will contribute to significant temperature-driven river flow declines, which will disproportionately impact recreation and river health. Already, declining flows and increasing water temperatures are prompting an increase in the frequency and duration of mandatory and voluntary recreational river closures on many river stretches. While these closures are an important tool for wildlife management agencies to protect fisheries and the environment, they also have a detrimental impact on tourism and regional economies, force recreationists into increasingly smaller areas, and without strict compliance, often still result in damaging impacts to aquatic habitat.

Recreation flows in particular are at risk given the lack of secure water rights absent the creation of a whitewater park and subsequent Recreational In-Channel Diversion (RICD). RICDs may not be suitable for all rivers and aren't appropriate for all communities. As such, we recommend that the final update include specific actions CWCB will take to address recreational flows, including mitigating summer recreation closures. Specific actions may include initiating a study to investigate alternatives to RICDs as a mechanism to provide more secure recreational flows for all communities; developing collaborative policy and programmatic recommendations that define gaps in environmental and recreational water supply; provide for discussion around needs for new mechanisms to enhance flows for the environment and recreation; and prioritizing and addressing recreational flow and infrastructure priorities.

Recommended edit to Update:

- Page 5-5: Colorado Parks and Wildlife “may authorize emergency closure of fishing waters in the state when it is determined that environmental conditions in these waters are such that fishing could result in unacceptable levels of fish mortality”.⁷ Add the following to the Water Quality paragraph:
 - *Low streamflows, dissolved oxygen levels, and high stream temperatures are some of the criteria used by Colorado Parks and Wildlife to make decisions about mandatory or voluntary fishing closures on rivers and streams. In just the past few years (2018, 2021, and 2022) there have been extensive closures across the state, pushing recreational users into areas still open and affecting the outdoor recreation economy of those areas with closed sections.*
- Page 6-41: Action 3.7 Add the following sentence at the end of the first paragraph:

The Colorado Division of Natural Resources must hold a water court hearing whenever an instream flow is proposed for a river, an expensive undertaking that serves as a barrier and limits the effectiveness of the program. The Division of Natural Resources could facilitate this by accepting donations of instream flows without having to participate in a water court hearing to determine the minimum flow needed for reasonable stream health, or whether accepting an instream flow will impact return flows to the river.

⁷ <https://cpw.state.co.us/thingstodo/Pages/StatewideFishingConditions.aspx>

Expand the Colorado Low Head Dam Inventory: We appreciate the Update's call to attention of the Colorado Department of Natural Resources Low Head Dam Inventory Program on page 6-34 and the public safety and environmental impacts of these ubiquitous structures, which include diversion dams and grade control structures. Statewide there are 1041 of these structures, which have contributed to 13 recorded fatalities.

The risk to human life from these structures is increasing with growing public participation in water-related recreation. Improvements to diversion structures can generate significant public, socio-economic, and environmental benefits. We support CWCB agency action 1.4 to coordinate funding opportunities for conservation, safety, and aging infrastructure. We specifically recommend that CWCB address low-head dams and utilize DNR's existing inventory to help prioritize public investments in infrastructure modernization.

American Whitewater⁸ and the Southeast Aquatic Resource Partnership⁹ are developing low-head dam/barrier prioritization tools that the state should utilize in directing public investments. Further, we recommend that the CWCB commit to work with other collaborating agencies to secure sufficient funding to scale the existing low-head dam program to ensure communities have adequate access to information, public safety equipment such as signage, and resources to rehabilitate structures.

Recommended edit to Update:

- Page 5-6: There are many opportunities to update aging infrastructure to reduce safety hazards and improve experience for recreationists. Add the following sentence to the aging infrastructure paragraph:
 - *Updates to aging infrastructure provide an opportunity to improve diversion efficiency while also mitigating hazards to the recreating public and restoring ecosystem health and connectivity. A low-head dam scoring tool can be used to identify where those multi-benefit projects can provide the greatest return on investment.¹⁰*
- Page 5-22: Have irrigation infrastructure reviewed regularly for adaptive management. Add the following to Conveyance Infrastructure as a new paragraph after the third paragraph:
 - *As plans are developed to upgrade aging diversion and conveyance infrastructure, they should address aquatic and riparian species and promote resiliency in the face of drought and climate change. Engineers and water infrastructure managers should engage environmental and recreation stakeholders early in the design phase to determine how to improve structures for fish passage and boat passage, and to enhance recreation access. Plans should be adaptive and follow the principles of learning by doing, and reviews*

⁸ https://lynkertech.shinyapps.io/aw_lhd_app/#section-ranking

⁹ <https://connectivity.sarpdata.com/>

¹⁰ https://lynkertech.shinyapps.io/aw_lhd_app/

should be scheduled every 5 or 10 years to help ensure they are working as intended.

- Page 6-13: Action 1.4 add the following:
 - *Diversion and conveyance structure retrofit and repair can provide an opportunity to mitigate dangerous hazards created by in-channel infrastructure that can benefit recreation as well as ecosystem connectivity.*
- Page 6-32: Promote recreation and fish friendly irrigation structures. Add to the bottom of the box titled “What is shared stewardship and how can it integrate planning across watersheds?” just after the reference to Hydrologic Unit Code HUC:
 - *These plans should identify irrigation structures that could be damaged by floods and proactively prepare boat and fish-friendly designs in advance that can be constructed in the aftermath of catastrophic blow-outs.*
- Page 6-37: Action 3.2: Add the following to the end of the last paragraph: *The guide should anticipate recreation use and ensure that projects will not create any hazard to the public, such as avoiding undercut banks or rocks placed in the river that could entrap someone fishing or kayaking.*
- Page 6-38: Action 3.3 Develop engineering plans now to replace low-head dams or irrigation diversion structures that need to be replaced following a catastrophic blow-out like the 2013 flood in Boulder and Larimer Counties.
 - Add to the bottom of Agency Action 3.3, Create a Wildfire Ready Watersheds framework: *The susceptibility analysis should include a GIS layer that indicates irrigation infrastructure at risk of blowout following wildfires, and pro-actively propose engineering designs that are fish-friendly and provide safe boater passage, and can be immediately pulled off the shelf to construct after extreme blow-out events.*

Include Recreation into Watershed Planning: We support the CWCB’s stated goal that at least 80% of the 94 subbasins in Colorado have active and integrated plans with a pipeline of projects that support environmental needs. We recommend that CWCB specifically include recreational-focused project studies in these comprehensive planning efforts. These recreation planning efforts may include evaluation of boatable days; analysis of impacts to boatable days under climate change scenarios; enhancing river access; identification of hazardous structures; and studying impacts from already diminished streamflow.

Further, we ask that CWCB specifically prioritize and increase public investments in implementing the 26 existing approved stream management plans in Colorado as these plans contain collaboratively developed multi-benefit water projects that include enhancements to diversion structures and recreation infrastructure. According to a River Network report, 68% of recommended projects and strategies in these plans have yet to be initiated due to a lack of capacity and resources. We recommend that all plans include environmental and recreation flow target recommendations as the same report found that only 6% of plans include environmental flow targets and only 1% include recreation flow targets.

Finally, we encourage CWCB to work with CPW and OREC and the outdoor recreation community, to incorporate recreational values and opportunities into the development of the

Colorado River Health Assessment Framework. We recommend that priority regions be identified in management plans and the planned interagency watershed planning platform.

Recommended edit to Update:

- Page 3-25: Focus Area Maps, discussed on this page, are missing ample information developed through SMPs, IWMPs, and BIP updates with regards to recreational attributes, needs and risks. Make it clear on this page how those maps were developed, how they will be updated, and how the public can access them.
- Page 6-42: Action 3.9 Add the following sentence to the beginning of the second paragraph titled “Create a framework for prioritizing stream health with local stakeholders”:
 - *The CWCB will dedicate annual funding and staff support necessary to regularly update the SMPs and IWMPs and keep them current and relevant.*
- Page 6-42: Another stakeholder lead beneficial source of data for project prioritization is the Regional Partnership Initiative, funded jointly by GOCO and CPW. It is a statewide initiative working to ensure that Colorado’s land, water, and wildlife thrive while also providing for equitable access to quality outdoor recreation experiences.
- Page 6-49: Action 4.2 Support basin roundtables—update the Water for the 21st Century Act regularly. Add the following to the paragraph titled “Support the long-term stability and impact of Basin Roundtables”:
 - *The CWCB will support the roundtables to regularly update the Basin Implementation Plans they developed pursuant to the Water for the 21st Century Act. Roundtables can administer Water Supply Reserve Fund grants, and use roundtable funds subject to CWCB board approval to hire personnel to monitor grants and progress made on projects identified in the BIP plans.*

Identify the water supply gap for recreation: Colorado’s outdoor recreation industry depends upon healthy watersheds and rivers. Healthy, clean, and flowing rivers support quality recreational use. Climate change presents a significant threat to the long-term viability of Colorado’s water-based outdoor recreation economy.

Recent climate data¹¹ shows significant declines in flows for Colorado’s rivers, particularly rivers such as the San Juan (30% decline) and Dolores (21% decline). Enhancing the resilience of Colorado’s watersheds to climate change, through actions such as the use of nature-based solutions, can help mitigate impacts from natural disasters to Colorado’s recreation economy. Colorado’s public lands and waters are the outdoor industry’s infrastructure.

In Chapter 3 page 24, the Environmental Flow Tool is discussed as a tool to evaluate flow needs. As a part of many SMPs, IWMPs, and BIP updates flow needs for recreation were also defined with Flow Preference and Boatable Days studies as described in the NonConsumptive Needs Toolbox. These needs assessments need to be continued and implemented where there are existing data gaps.

¹¹ <https://aspenjournalism.org/streamflows-in-southern-half-of-upper-colorado-river-basin-declining-faster/>

In addition, due to the importance of our water resources and watersheds on local economies, the gap of water supply for recreation and the environment needs to be quantified. Other needs or uses of water - agriculture, municipal, industrial - describe the gap between current conditions/needs and future water supply projections. This gap analysis can and should be completed for recreational water use.

Recommended edit to Update:

- Page 2-5: It should be clarified in Chapter 2 that such an analysis is currently lacking statewide. In the RISK OF FUTURE WATER SHORTAGES first paragraph last sentence, rewrite to say:
 - *In a similar vein, potential future risks for environmental and recreational attributes based on projected future flow conditions were evaluated in the Technical Update, but further analysis is needed to fully quantify the existing and potential gap in environmental and recreational flow needs and supply.*
- Page 3-26: The second to last bullet on this page should be rewritten to say:
 - *Ecosystems and recreational boating opportunities are already being diminished due to temperature increases and variable precipitation and runoff conditions. A statewide quantification of recreational water supply gap needs to be fully quantified to understand exactly what the future risk holds.*
- Page 4-50: Rewrite the last bullet under the watershed category describing basin challenges to say:
 - *Flow needs for the environment and recreation need to be better quantified.*
- Page 4-58: American Whitewater has collected and analyzed data on recreational flow needs in all basins, including the southwest. That data should be used to quantify the water supply gap for recreation. The second bullet under the watershed category should be rewritten to say:
 - *A full understanding of environmental and recreational water supply needs should be quantified like it is in other sectors in the Southwest Basin.*
- Page 5-4: Throughout the plan it is indicated that reductions in streamflow put environmental and recreational attributes at risk. It needs to be clear that the risk to those water sectors can and should be quantified as a part of the ongoing Colorado Water Plan process. The second to last sentence in the Water Quantity paragraph should read:
 - *Reductions in streamflow can negatively affect environmental and recreational attributes. While lots of data has been collected on flow needs for non-consumptive water uses, that data should be used to quantify what the potential gap for those needs under potential future scenarios.*

Constructive Approaches to Storage and Water Development: The Update notes that new water development and storage will be necessary to provide a reliable source of supply to support Colorado's people and economy, including sustaining recreational flows. Further, the Update calls for investments in both new water development and conservation. While storage and water development certainly play an important role in supporting recreational flows through efforts such as cooperative reservoir release programs; storage and other water development projects such as transmountain diversions also have significant negative impacts

on recreation and river health. These impacts include reductions in flow and poor river connectivity.

As such, we recommend that the final update include a framework to guide public investments that prioritize and sequence public funding to support the rehabilitation of existing storage infrastructure and water conservation and efficiency before committing limited public resources to the development of new water storage and transmountain diversion projects. Impacts during runoff and fill season often hit environmental and recreational water uses the hardest. New storage projects should only be contemplated when water loss, conservation and demand reduction opportunities have been identified and exhausted.

As evidenced by the public opposition to the recent San Luis Valley export proposal, storage projects should receive much higher scrutiny before public funding is provided to them, particularly in light of projected river flow reductions due to climate change. Many river basins are overallocated, and new development will inevitably have significant socio-economic and environmental impacts.

We recommend that CWCB prioritize and sequence public investments in rehabilitating existing storage infrastructure and increasing water conservation and efficiency programming, which may delay the need for additional, costly and controversial new water development.

Recommended edit to Update:

- Page 3-14-15: Impacts and opportunities for enhancement to water-based recreation need to be identified as a part of drought resiliency and response. Loss of recreational opportunities should be identified as another result from drought's impacts to water supply. Under DROUGHT RESPONSE add:
 - *Protection and Preservation of healthy and free flowing rivers. To balance the existing and future planned development of river resources, the state's remaining free flowing streams should be protected for their environmental, recreational, and social values.*
- Page 6-19: Action 1.9 add the following:
 - *New storage projects should only be contemplated when water loss, conservation and demand reduction opportunities have been identified and exhausted.*
 - *New studies on storage must identify mitigation on the same waterway to reductions in streamflow throughout the hydrograph. Impacts during runoff and fill season often hit environmental and recreational water uses the hardest.*
- Page 6.19: Action 1.10 Add the following to paragraph 1.10, which is titled "Create a positive discussion space for tough conversations on analyzing transmountain diversion projects in the Technical Update":
 - *When planning for any new transmountain diversions or reservoir enlargements, water providers should model and make public the impact that additional diversions will have on stream flows, establish parameters such as stream temperature thresholds for determining when diversions should be cut back, incorporate adaptive management techniques into reservoir operations,*



and schedule regular reviews to ensure that the additional diversions meet the agreed-upon parameters.

We appreciate the work and leadership that has gone into the Update. We also appreciate your consideration of these comments and look forward to working with CWCB to advance these concepts upon the release of the final Update.

Sincerely,

A handwritten signature in cursive script that reads 'Hattie Johnson'.

Hattie Johnson
S. Rockies Stewardship Director, American
Whitewater

A handwritten signature in cursive script that reads 'Alex Funk'.

Alexander Funk
Sr. Counsel and Dir. of Water Resources,
Theodore Roosevelt Conservation
Partnership