

Upper Gunnison Drought Contingency Plan: Task Force Meeting

Minutes

May 22nd, 2024

Attendees:

Ashley Bembenek (Coal Creek Watershed Coalition)
Dustin Brown (Scenic River Tours)
Dan Brauch (CPW)
Jonathan Houck (Gunnison County Commissioner)
Jesse Kruthaupt (Trout Unlimited)
Susan Washko (WCU)
Mike Rogers
Dan Brauch (CPW)
Lisa Brown (Wilson Water Group)
Steve Moore (CCWC)
Lee Traynham (BOR)
Brinnen Carter (NPS)
Casey Smith (BOR)
Erik Knight (BOR)
Carolyn De Groot (Town of Crested Butte)

Staff/Consultants:

Carrie Padgett (Harris Water Engineering)
Stacy Beough (Strategic By Nature)
Sonja Chavez (UGRWCD)
Alana Nichols (UGRWCD)

I. Welcome and Introductions:

Carrie reviewed the meeting outcomes, which included gaining foundational knowledge on recreational water use needs in the Gunnison Basin, learning big-picture results from the stakeholder assessment, understanding the purpose of the vulnerability assessment, and reviewing stakeholder input to advance that task. The goal was to engage in a productive and motivating time that positions the UGRWCD and water users to maximize the Drought Contingency Planning effort. Currently, the DCP process is in the drought monitoring and vulnerability assessment stage, preparing to transition into mitigation and response actions. With UGRWCD celebrating its 65th anniversary this year, the June meeting has been switched from virtual to in-person to facilitate participation in the celebration. The June meeting is scheduled for Wednesday, the 26th.

II. Upper Gunnison Recreational Water Use: Impact of Drought on Rafting and Fishing Industry

Dustin Brown, owner of Scenic River Tours provided a comprehensive overview of the multifaceted impacts of drought on the rafting and fishing industry. Scenic River Tours offers rafting and fishing trips, and during low water years, they are forced to use lighter boats with fewer people, leading to decreased revenue. Guide fatigue is a significant issue during these times due to the increased physical effort required during low water levels. According to the Colorado River Outfitters Association, last year, rafting and fishing in the state had an economic impact of \$216 million, with 16,000 reported trips in the upper Gunnison region. Tourism is crucial for the economy of Gunnison Valley, which heavily relies on this industry. The operational season typically runs from Memorial Day through Labor Day, with potential extensions through October if conditions allow. Scenic River Tours employs approximately 50-60 people during the summer season.

Dustin also mentioned the competitive landscape, noting that Three Rivers Resort, another outfit, employs about double the number of people. Operational adjustments are sometimes necessary, such as stopping trips on certain sections (e.g., lower Taylor River in August) due to low water levels. The quality of the trip for guests is a primary concern, as it becomes challenging to market whitewater trips during low water years. While most bookings are made on short notice before the trip, Scenic River Tours has been receiving reservations since February, totaling 150 trips. Drought years in the Upper Gunnison Basin significantly impact the rafting and fishing industry, disrupting both operational efficiency and economic contributions. Scenic River Tours continuously adapts to these challenges, striving to uphold the quality of guest experiences and sustain business viability in a competitive environment.

III. Upper Gunnison Recreational Water Use: Impact of Drought on Fishing Industry

Dan Braugh, an aquatic biologist from Colorado Parks and Wildlife, presented on angler recreational use, utilizing boater counts and data sponsored by the Upper Gunnison River Water Conservancy District (UGRWCD). Dan discussed broader angler recreational use in the basin and spoke about drought impacts on some of those waters. Additionally, he provided more detail on a recreational use study completed on the Gunnison and Taylor Rivers, funded by the UGRWCD, Trout Unlimited, and CPW.

The study included an angler creel survey on both the Gunnison and the Taylor, as well as some voter accounts using cameras. Dan summarized the project, highlighting its significance in understanding angler recreational use in the area. Dan also discussed the stocking of high alpine lakes by air with cutthroat trout, providing angling recreation to lakes that don't have suitable natural reproduction. He gave an example of Costa Lake, which hosts both brook trout and stocked cutthroat, offering great recreational opportunities.

As the presentation moved down the basin to larger reservoirs, Dan highlighted the significant angling recreation opportunities, with Blue Mesa supporting up to 450,000 angler hours per year. He emphasized Blue Mesa as a destination fishery for various species, including kokanee salmon, lake trout, rainbows, brown trout, and yellow perch.

Dan explained that drought years have created challenges in managing kokanee and maintaining habitat at Blue Mesa, resulting in low storage levels and significant algae blooms. He stressed the importance of a better water supply for meeting fisheries goals, as drought has led to degrading habitat and shrinking the available habitat for Kokanee and trout even further. Transitioning to small streams, Dan noted opportunities for cutthroat trout and brook trout in higher elevation streams, with a transition to brown trout around 9,000 feet. He mentioned the potential impact of drought on habitat shrinkage and fish populations in these waters.

Dan proceeded to discuss the Gunnison and Taylor Rivers, focusing on access and angler use. He highlighted that while there is significant private property in the mid-elevation waters, there are public access points available for fishing. Specifically, on the Taylor River, approximately 11 miles of public bank fishing access on Forest Service land is available. On the Gunnison River, there are about six miles of public access, much of which is made possible through easements purchased by the Bureau of Reclamation as part of the mitigation for the Aspinall Unit. These access points, such as on the Lake Fork of the Gunnison, Tomichi Creek, and the Gunnison River, provide opportunities for recreational use by anglers.

Regarding boat access on the Gunnison and Taylor Rivers, Dan mentioned that there are boat ramps on the lower Taylor and five locations on the Gunnison River where boaters can put rafts and drift boats in for fishing purposes. While there are other boat access sites upstream, they may not be as frequently used for angler access. These access points facilitate significant recreational use by fishermen, particularly on the Gunnison River.

Dan further discussed the angler creel surveys conducted on the Gunnison River in 2021. These surveys involved interviewing boaters as they exited the river at five access points, assessing their fishing trips, catches, and duration. The surveys also included counts of non-fishing boats to estimate overall boating use. Charts were presented depicting the estimated number of boaters using the Gunnison River based on the creel survey data. The data showed varying levels of angler and boater activity throughout the year, with peak usage during the summer months. Dan also discussed fishing catch rates on the Gunnison River, indicating an improvement in catch rates over time, with brown trout comprising most catches.

Dan also discussed the level of guided use on the Gunnison River, noting a high proportion of out-of-state trips. Over 90% of non-resident trips were commercial trips, whereas Colorado residents engaged more in private trips, with only 30% of guided trips in 2021. Over time, the number of guided trips and the proportion of use related to guided angling on the Gunnison has increased. He also shared data on anglers' perceptions of

crowding while fishing on the Gunnison River, indicating that while there is substantial use of the river, many anglers did not feel significantly crowded.

Additionally, Dan discussed the methodology and results of trail camera counts conducted at various sites along the river. These counts provided valuable insights into the types and numbers of boats passing through different locations, further informing management strategies for recreational use. The cameras operated from June through September, capturing a picture every six seconds from dawn to dusk, resulting in over 3.7 million photos. The team spent a significant amount of time classifying boaters from these photos, which allowed them to track boat movements accurately. The results of the trail camera estimates were presented, showing the number of boaters passing by each site, including shady island, Gunnison River, State Wildlife Area, the Lower Whitewater Park, McCabe's, and Blue Mesa. The data indicated that rafts and catarafts were the most used, followed by drift boats, kayaks, and paddle boards.

Dan highlighted that the angler survey on the Taylor River primarily targeted shore anglers, given the significant public access available along the river. Dan mentioned that similar surveys had been conducted in 1982 and 1999, facilitating comparisons across different periods. The survey distinguished between special red water areas and standard regulation areas. There has been a notable shift away from fish harvest, particularly in the standard regulation reaches below the tailwater. While some harvest still occurs, it has decreased compared to earlier surveys, with brown trout being the predominant catch.

Dan presented a bar chart illustrating catch per hour, with the red line indicating overall use below Taylor Park Reservoir and in the standard regulation reach downstream. Despite increased use, catch rates remained favorable, with good numbers of both brown trout and rainbow trout caught at the tailwater. Below Taylor Park Reservoir, anglers felt more crowded, which Dan attributed to the area's limited length and significant interest due to its large trout population. Surprisingly, fewer anglers felt crowded in other sections of the Taylor or the Gunnison.

The standard regulation water downstream of the tailwater experienced a similar low level of crowding as observed in the Gunnison. Dan emphasized Taylor's significance in providing excellent size structure for rainbow trout. He followed with a picture of a brown trout, underscoring the exceptional fisheries in both the Gunnison and Taylor Rivers, both of which are designated as gold medal waters. Dan summarized how these waters compare with other gold medal waters in the state, highlighting the Taylor's high numbers of quality trout and its ranking third in terms of pounds of trout per acre among all gold medal waters statewide.

IV. Educational Presentation Discussion:

Jonathan Houck asked Dan Brauch about the value of comparing angler creel data to states with different accessibility laws, noting differences in opportunities, the quality and health of rivers, and species. He asked whether the impact is concentrated based on usage.

Dan Brauch mentioned despite the differences in access laws between Colorado and states like Montana, the amount of crowding in certain areas remains unchanged. No close comparison of data has been conducted yet, and a more detailed analysis needs to be identified to understand these impacts better.

Sonja Chavez inquired about the potential ramifications of declining water levels and the boating community's possible shift in river usage. Specifically, the impact on the fishery amidst drought-induced overuse in certain sections of the river.

Dan Brauch mentioned the exchange agreement at Taylor Reservoir has been crucial in creating better conditions and significantly reducing the duration of temperature concerns for fisheries. Without this management, the impact would be much larger. The flows out of the Taylor River are critical to the health of the fisheries on the Taylor and Gunnison Rivers, reducing the time when temperatures are a concern, especially closer to the Blue Mesa Reservoir.

Jesse Kruthaupt inquired about official river closures during times with high water temperatures.

Dan Brauch said regarding the Gunnison River, no official closure has been implemented yet, though it has been discussed. Areas without storage facilities have seen larger impacts. For Lake Fork and Tomichi Creek, voluntary closures have been issued. Tomichi Creek regularly sees temperatures exceeding 70 degrees, which is dangerous to fish, and experiences frequent closures during low flow periods. Colorado Parks and Wildlife (CPW) monitors these conditions and makes recommendations. While closures are typically voluntary, regulatory closures, which would be full day rather than just afternoon, are possible but require substantial effort. Temperature fluctuations are considered in decision-making, with a focus on maximum temperatures to determine the necessity of voluntary closures in affected areas.

Carrie Padgett asked Dan Brauch about the potential impacts of drought on fisheries and inquired about the fish cultivation process, specifically whether it occurs in-basin.

Dan explained that their hatcheries at Pitkin and Roaring Judy rely on spring and well water, which generally maintains stable temperatures, mitigating some drought effects. However, reduced water quantity during droughts can affect their production and stocking schedules may be adjusted to avoid adverse effects on fish during warmer seasons.

Sonja Chavez sought recommendations from Dan regarding coordinated communications within the drought contingency planning process and potential mitigation measures for fishery impacts.

Dan Brauch highlighted their examination of the state wildlife area east of town, emphasizing the significance of maintaining minimum flows during drought periods to support fish populations. He suggested collaborating with water users to ensure critical

flows, especially early in the year, and implementing habitat enhancement projects, such as riparian shading, to mitigate temperature impacts on streams, particularly on Tomichi Creek. He also mentioned it's crucial to identify conditions and establish partnerships early on. In 2018, CPW collaborated with the agricultural community to negotiate periods of water shut-off, setting up a three-year pilot program. They established clear criteria and secured funding to compensate producers for their cooperation. Furthermore, CPW's research on trout movement in Tomichi Creek revealed significant insights. By tagging 2600 trout with antennas across Quartz, Tomichi, and Cochetopa Creeks, we discovered that fish could migrate up to 34 miles. Notably, the findings indicated that fish tended to congregate closer to their tagging locations.

In terms of communications, Jesse emphasized the importance of obtaining stream temperature data during restoration and mitigation projects. This data is invaluable for informing our efforts to preserve and enhance fish habitats amidst changing environmental conditions.

These insights were noted for consideration within the broader drought contingency planning framework.

V. Drought Monitoring Element: Status and Next Steps:

Carrie provided an update on the drought monitoring progress. She acknowledged the collaborative effort in selecting classification thresholds and highlighted Ashley Bembenek's contributions in refining the monitoring worksheet for clarity. Carrie outlined the next steps, which involve making enhancements to the dashboard and tracker based on the group's feedback, addressing queries, and redistributing the finalized document to ensure clarity for all stakeholders.

Moving forward, the focus will shift towards drafting specific sections of the drought plan incrementally to avoid overwhelming participants. Carrie outlined the sections to be included, which encompass methodologies, data sources for monitoring drought, and descriptions of past drought events, particularly the work conducted by Wilson Water Group. Additionally, discussions will cover current and future improvements to the drought tracker, along with identifying data gaps such as soil moisture information and exploring potential enhancements in data integration.

Carrie Padgett provided insights into the current hydrological classifications based on percentile thresholds set in previous meetings, particularly focusing on snow water equivalents (SWE) from SNOTEL sites. She speculated on potential adjustments based on additional factors like soil moisture conditions and raised a question regarding the classification of the Cochetopa Pass SNOTEL site, noting its smaller drainage area and seeking clarification on whether its designation as "wet" aligns with its local conditions because six inches is a significant amount for that specific area.

Sonja Chavez mentioned the last update on the basin water supply, noting that the Cochetopa area had received a significant number of recent rains and precipitation.

These discussions will inform further refinements to the drought monitoring framework as the group progresses towards drafting the relevant sections of the plan.

VI. Vulnerability Element & Assessment:

Carrie Padgett explained the purpose of the Vulnerability Assessment, which is to evaluate risks and impacts. She highlighted that this element aligns with the requirements outlined by the Bureau of Reclamation (BOR). Carrie explained that the assessment involves identifying risks to resources, understanding underlying vulnerabilities, identifying drivers behind action development, and addressing climate change and future conditions' potential impacts. This comprehensive approach will ensure the effective evaluation and mitigation of risks associated with drought and other environmental challenges. She emphasized a two-step approach to vulnerability assessment. It's not merely recognizing the impact of drought but also examining what exacerbates these impacts or what measures can be implemented to mitigate them. It's about understanding the intricacies of why certain areas are more susceptible to drought and how to address these underlying risks. Carrie concluded by handing over the discussion to Stacy to delve deeper into the stakeholder assessment and tie these various elements together.

Stacy Beagh presented the results from the stakeholder outreach, which included interviews and drought response surveys. She focused on exploring the factors that make the Gunnison community more vulnerable to drought. Stacy highlighted various aspects contributing to vulnerability, starting with climatic factors such as changing climate patterns and global warming, along with the geographic location and hydrology of the Gunnison watershed. She also discussed the variability between basins and the dependency on snowpack, which poses a significant challenge during years of warmer temperatures and fast runoff. Water supply vulnerabilities were highlighted, including degraded streams, aging water delivery infrastructure, and limited storage options. Additionally, Stacy emphasized the lack of understanding of the water system, complexities of water administration and law, and challenges in community perception and communication.

She underscored the importance of bridging the gap in understanding between different water users and the need for a robust gauging and measurement network. Stacy addressed vulnerabilities in municipal water systems, ecological impacts such as habitat loss and degraded landscapes, and economic vulnerabilities stemming from reliance on forest and water resources, population growth, and development pressures.

In terms of agriculture, Stacy mentioned challenges related to grazing allotments on public lands, potential system inefficiencies, and threats of agricultural land and water loss. For recreation, vulnerabilities include concentrated recreation activities, dependency on limited reservoir storage, and reliance on seasonal tourism, as discussed in earlier meetings.

Furthermore, Stacy highlighted out-of-basin pressures, issues related to water administration and utilization of emerging tools, social and health vulnerabilities,

political will, and infrastructure challenges such as aging infrastructure, limited accessibility, and risks associated with minimal water infrastructure.

She concluded by acknowledging the comprehensive nature of the presentation and proposed to share the slide deck with all participants for further reference and discussion.

Stacy Beaugh suggested breaking into separate groups for further exploration of the presented vulnerabilities. Participants who were online would form one breakout group, while those present in the room would engage in discussions separately. The purpose of the breakout groups was to reflect on the vulnerabilities discussed and consider their relevance to each participant's community.

Breakout Group Questions:

1. How does this information resonate with you?
2. What would you add?
3. What unique vulnerability considerations would you describe across each subbasin?

Task Force Responses:

- The Town of Crested Butte completed a Source Water Protection Plan and considers a Wildfire Ready Action Plan for watershed management.
 - Goals include protecting watersheds, supporting agriculture, and ensuring water supply resilience.
 - Outcomes aim to safeguard watersheds from fire impacts and ensure water flows as intended.
- Population growth and domestic water use, including golf course demands, underscore the need for wise water management.
- Minimal administration in the Upper Gunnison, particularly in tributaries, creates complexities in water rights and agreements.
- Challenges arise with exchange agreements and measuring and managing water use.
- Understanding hydrograph changes and snow elevation differences is crucial.
- Stormwater modeling may reveal vulnerabilities in infrastructure.
- Disaster response planning is essential for addressing drought, fire, and flooding risks.
- Municipal vulnerabilities include challenges in operating wastewater treatment plants under dryer conditions.
- Task Force emphasized the importance of disseminating scientific data and improving communication.
- Unique vulnerability considerations across sub-basins were discussed:
- Taylor Basin benefits from reservoir protection.
- Lake City relies on its lake for seasonal support.
- Crested Butte area implements seasonal livestock movement and crop adjustments.
- Potential strategies include local insurance and drought-tolerant species.

- Task Force highlighted the need to address water-sharing timing and soil conditions affecting water absorption across sub-basins.

VII. Adjournment:

Next Meeting will be Wednesday, June 26th, 2024 in-person/hybrid

Stacy Beaugh adjourned this meeting at 11:00 a.m.