

**Biology Committee Summary
March 15-16, 2022**

BC Members: Pete Cavalli, Harry Crockett, Dale Ryden, Dave Speas, Melissa Trammell, AJ Keith, Tom Pitts, Derek Fryer

Participants: Julie Stahli, Tildon Jones, Kevin Bestgen, Katie Creighton, Ryan Christianson, Chris Smith, Chris Michaud, Darek Elverud, Ed Kluender, David Graf, Colleen Cunningham, Kevin McAbee, Paul Badame, Brian Sheer, Mike Gross, Russ Franklin, Melissa Mata

CONVENE Day 1: 8:30 a.m., Tuesday, March 15th

1. **Review/modify agenda** – Agenda modified as reads below
2. **BC Chair Discussion** – Paul suggested changing the Utah and Wyoming slots for BC chairmanship to allow Utah to refill the Program position. The BC agreed with Paul’s suggestion and Pete Cavalli assumed the duty of Chair for the remainder of 2022.
3. **15-MR PBO Update** – David Graf reviewed the recent assessment of the 15-Mile Reach PBO, noting the importance of the 15-Mile Reach to endangered species, specifically adult pikeminnow. A PBO review was required in 2015 but was delayed while depletions were calculated. The depletion analysis suggested that depletions in the basin declined vs the baseline condition. The PBO review noted that the flow recommendations were often not met, especially in years with drier hydrologic conditions. New depletions were not the driver for unmet flow targets in the 15-MR, but rather lack of water supply was the constraining factor. Voluntary CROS operations enhanced peak flows in many years between 1997-2020. In 2020, 1500-1700 cfs was added to the peak. Base flow targets are also often not met in dry hydrology years, such as 2020 and 2021. Voluntary water releases and coordination do support increased flow in the 15-MR, which would be much lower without stakeholder support. David provided an example of what flows would have looked like without Program efforts (including drying the river in 2021). The assessment report provides a review of the activities across all recovery elements that have been accomplished to support the fish in the 15-MR and concluded that re-initiation was not necessary based on the activities completed. Ecological Services supported the recommendation and requested an evaluation of the flow targets by 2028 before the next re-initiation checkpoint in 2030, including assessing climate change and the consequences on water supplies.
4. **RIPRAP Review – Colorado, Gunnison, and Dolores River** – Julie lead the group through the RIPRAP table and edits were made within the specific tabs. Significant discussions and questions are noted below.
 - a. **Colorado** – Project 127 razorback vs pikeminnow to be further discussed, reevaluating Aspinall unit flows along with the 15 MR PBO, the Highline replacement net has been

acquired and will be installed later this year, Northern pike have been eradicated at Mamm Creek ponds, effort will be reallocated to new locations such as East Rifle municipal pond

- b. **Gunnison** – Tildon explained that the Gunnison River has been removed from the state of Colorado’s impaired waters 303 (d) list for selenium. Melissa asked about the details of that “delisting.” <Tildon followed up with Jojo La and reported back at the next day’s meeting. The removal was based on data showing that water concentrations for selenium have consistently been below the TMDL (Total Maximum Daily Load) set by the state and approved by the EPA.
5. **Discussion about in-person meetings** – Tildon Jones presented the BC members’ Menti-poll responses regarding resuming in-person meetings versus continued virtual meetings. He noted that for many people, returning to an in-person option will depend on a variety of factors like COVID numbers in a particular area or COVID regulations related to meeting size. Things we could do include paying for larger conference spaces than we have previously used, offer virtual options for all meetings, limit attendance to certain groups (if needed), follow DOI (or other agency) and local protocols for masking at the meeting space. As a federal agency, we cannot track vaccination status or collect any individual health information. We can each enforce existing agency policies for our own personnel. It is unclear the extent to which the PDO can enforce agency policy on participants from other groups. The BC can establish rules for itself and who is invited to participate in meetings held in person. Melissa asked whether the travel aspect (coming from other locations to the meeting) impacted committee members’ perspective. Julie asked whether we should limit attendance to the BC. Pete suggested having presenters come in person by invitation, if they choose. Melissa supported the idea of inviting specific people. Dave thought limiting attendance might make finding suitable space more feasible. Harry asked if there would be a hybrid option. Julie reiterated there would still be virtual options, and the PDO would work to find workable solutions to support them. Pete recommended testing out virtual options for the meeting beforehand. Julie indicated we will plan on having a hybrid BC meeting in July. Julie thought she heard the BC state that we would try limiting the attendance to the BC members, the PDO and invited speakers, with an option for virtual attendance by interested parties. The BC agreed with this for their upcoming July meeting.
6. **2022 Green River flow request letter and FGTWG update** – Tildon Jones reviewed the process of the flow request letter to date. The FGTWG reviewed the flow request letter and incorporated the LTSP peak flows, spike flows, and base flows in their proposal, consistent with the Program’s experimental priorities. Timing, duration and execution will rely on real time conditions as they have in the past, pending hydrology. DROA is affecting these conversations. Flaming Gorge Working Group meetings are upcoming later this week and then again in April. Tildon reiterated that it looks possible we could implement all three experiments in a single year. Melissa asked if the three experiments could occur within existing hydrology or are being implemented with DROA flows. Tildon deferred that question to FGTWG members as he was not sure at this point. Dave said best-case scenario was anticipated to be in the moderately-dry hydrologic condition for the Green River. Derek asked whether it was a good year to fill the wetlands based on wetland condition. Concern has been expressed about the ability to sustain flow levels in Stewart for the entire summer.

Tildon said Stewart Lake does have a share of Red Fleet water to help sustain the wetland, but the amount available will depend on the final snowpack. Derek reiterated the importance of having those adaptive management conversations as conditions develop in the basin. Tildon noted that other wetlands are present in the system and conditions may depend on the Yampa and how flows develop in that basin. Kevin asked if the smallmouth bass flow-spike would be limited to weekdays. Derek said Sundays were not optimal, but Saturdays could be on the table from a power perspective. High flows on weekdays are preferred from WAPAs perspective. Tildon reviewed how the experiment is set up. Kevin Bestgen noted that one of the surprises of the results from 2021 was the long-lasting effect of cold water on reproduction both in river extent (into Reach 2) and in duration. The extent of those results was likely assisted by low flows from the Yampa. The weeks of June 13th and 20th have been identified as potential weeks for the flow spike this year and Reclamation expressed an interest not to change flows dramatically on June 20th (federal Juneteenth holiday).

7. **Stirrup Wetland Update** – Tildon said the Stirrup is complete. The gate has been installed and can open in both directions, which has been a concern at other wetlands. SCADA equipment is present that allows for real-time monitoring of water levels in the river and in the wetland. Tildon is working on establishing remote connections. Stirrup is ready to receive larvae this year if supported by flows. Dave added that the agreement with the BLM to operate and maintain the wetland is near completion. This will be the first funded SOW and agreement with the BLM in our Program.

8. **Project 128 updates from meeting with PIs** – Tildon has held meetings with PIs to plan 128 logistics for spring 2022, the last three years have been off-years for this project. The PI meeting started with introductions because a lot of the people running this project are new. Tildon reviewed that we ask a lot of PIs during the pikeminnow estimates, specifically nonnative removal and razorback captures. To reduce the burden of these secondary activities, several changes were suggested and discussed with the PIs. One concept was to reduce the amount and type of data collected from individual nonnative fish; this includes recording numbers of smallmouth bass and white sucker by length bins and collecting only individual lengths for less common northern pike and walleye (no weights). Kevin McAbee reiterated the importance of collecting and removing nonnative fish but acknowledged that it is a lower priority of this project. Another request from previous years was to collect all razorback sucker encountered, scan them for tags, and tag any untagged fish. The PIs voiced that they are seeing far too many razorbacks to collect each one. Kevin Bestgen said that the razorback collection efforts have been oppressive and is interested in finding ways to extract as much information as possible in 2023 while not hindering the purpose of any specific project. He indicated the number of razorbacks collected increased by 50% between 2011-2013 and 2016-2018. A suggested solution is to identify strategic reaches where every razorback can be captured to support analyses. Several other options were discussed by the BC. The PDO will continue conversations about how best to monitor razorback populations moving forward. Finding untagged fish and fish from wetlands were identified as priorities. Tildon appreciated Chris Michaud’s work to streamline field data collection. He has worked with the offices to connect information across the offices and create collaborative data collection apps. Chris will be testing new methods for entering data into the database right after it is collected and removing some of that burden off field crews.

9. **Razorback fin clips** – Chris Smith has been in contact with Steve Platania to collect fin rays from any untagged razorback sucker that are captured during 128. The FWS-Vernal office samples the entire White River and the Green between Snider Bottom and Green River State Park. The goal is to determine natal origin of untagged razorbacks. Untagged fish captured in the 400-500 mm range are often assumed to have been hatchery fish that have lost their tags, but Chris noted that many fish are not tagged coming out of wetlands because they do not tag any fish below 100mm. Spawning has also been documented on the White. The field crews will collect the fin rays and send them to ASIR. Steve Platania kindly offered to charge us only for equipment usage as they can combine them with other samples. The goal would be to isolate the signature from the Ouray-Randlett hatchery. The analysis looks at the microchemistry of the fin rays that allows for origin distinctions. Chris thought that manganese may be a potential indicator of hatchery fish. Pete asked if the signature changes through time. Dale said the signatures do change through time if they move and reside in new waters with different water chemistry signatures. Because the fin rays grow annuli like otoliths each signature is retained within the growth ring it was deposited in, so laser ablation can detect those changes through time all the way back to the natal origin layers found near the center of each fin ray.

10. RIPRAP Review – Green, Yampa, Duchesne and White River

- a. **Green:** TNC asked about line 30 “flow protection” and Julie suggested this could be addressed in the WAC meeting next week; text added to highlight this action needs further attention.
- b. **Yampa:** line 35 TNC asked about when the Yampa Management Plan is due for update (2026); NPS asked about firming water sources to provide flows based on the observation the river would have gone dry without augmentation efforts; there may be follow-up needed on tagging roundtail in the Yampa and HBC stocking/monitoring decisions (see Line 111). Other Yampa tab comments/ edits in Line 67 (Maybell Diversion Structure re: ‘multi-objective’ effort); Line 95 re: screening Lake Catamount (capital list for 2024).
- c. **Duchesne:** No comments
- d. **White:** Minor changes to NNF

11. **Website review** – Mike took the committee on a very brief tour of the new website, starting with the primary public entry page ([Welcome - Colorado River Recovery Programs](#)), and then on to the Upper Colorado Program page ([Upper Colorado Website | Working Together to Recover Rare Native Fishes in the Colorado River Basin](#)) which contains all of the familiar links to documents, reports, meeting summaries etc. Mike asked that as you review the site to please let the PDO know of missing or incorrect items. Melissa noted that many links contained within existing documents point back to the old site and no longer work. The PDO will consider ways to resolve this for the most current documents, but will not be able to address it for older documents since there are simply too many. There were several questions about where technical reports and the “library” are now found. Mike pointed out the “Science” tab which contains links to Program technical reports as well as the CWCB Laserfiche library. Melissa Mata provided the group an update on the progress of the San

Juan Program website as well as a sneak peek. They hope to have the SJ site live by the end of March.

ADJOURNED: 1:00 p.m.

CONVENE DAY 2: 8:30 a.m., Wednesday March 16th

BC Members: Pete Cavalli, Harry Crockett, Dale Ryden, Dave Speas, Melissa Trammell, AJ Keith, Tom Pitts, Derek Fryer

Participants: Julie Stahli, Travis Francis, Tildon Jones, Kevin Bestgen, Katie Creighton, Matt Breen, Ryan Christianson, Chris Michaud, Kate Lawry, Darek Elverud, Ed Kluender, Mike Partlow, David Graf, Tory Eyre, Tom Chart, Colleen Cunningham, Andrew Schultz, Kevin McAbee, Paul Badame, Brian Sheer, Mike Gross, Melissa Mata

12. Preliminary Hydrology Picture for 2022 – David Graf reviewed the hydrologic conditions for 2021 and presented an update on forecasts for 2022. The US drought monitor shows some improvement in drought conditions, but overall conditions are still dry. Current snow conditions are just below median throughout the upper basin, however water supply forecasts for runoff are lower than snowpack might suggest. This is a result of soil moisture deficits. The upper Colorado and Gunnison are closer to median, the Green above Flaming Gorge is at 55% of median. Lake Powell is also predicted to drop below 3525' any day (occurred 3/14). Long term forecasts indicate increased chances of below average precipitation and above average temperatures. David is anticipating a large effort this summer to coordinate flows and pools of water in critical reaches where the Program has flow recommendations.

Tom Pitts noted that there is a lot of historic hydrology in our flow recommendations, and we need to figure out how to deal with that if we are living in a new normal. Tom recommended being aware of the low flow conditions' effect on nonnative fish.

13. RIPRAP Review – General and Stocking

- a. **General** - Add a sediment discussion as it relates to fish habitat to future BC agenda; Dave Speas suggested a sediment workshop; Dave Topping's final technical report is expected this spring; Dave Speas asked that the Glossary be updated with new acronyms. Pete asked about the caret and asterisks in column A – Julie committed to reviewing the intent of those and adding to the glossary; (Tom Chart thought those markers were related to either Section 7 consultations or activities that predate the 2002 Recovery Goals and a previous BC agreed to drop those since they may not be relevant to the 2002 Goals) Pete found the explanation on pg. 47 of the RIPRAP text. >**Paul Badame** will update the table glossary and remove the icons in column A which are no longer relevant. Tildon summarized Colorado's response to Melissa's question regarding selenium in the Gunnison – it does appear Se concentrations in water have been reduced in the reach listed. Melissa recommended putting lines 51-53 in the Program Guidance since they are recommendations from the RIPRAP; Kevin McAbee highlighted some significant changes for HBC in propagation.

- b. **Stocking** – No changes or comments.
14. **Horsethief Pond Update** – Dale Ryden discussed a power outage occurred on the pumps that pull water from the infiltration gallery into the hatchery. The power outage identified that one of the two pumps burned out. Currently, only one pump is running in the infiltration galleries. The pump is underwater and needs heavy equipment to be replaced. Dale is working with USBR to solve the problem and may need capital funds to assist in the replacement. This is the first round of maintenance needed at this facility and is providing good information regarding routine maintenance. Expected costs are ~\$30,000-\$45,000. Dale is working on a backup plan as well. >**Ryan Christiansen** will bring this to the Management Committee via an email approval since time is crucial for the hatchery. Dave asked that the Program consider replacing both pumps. Dale agreed and recommended pulling both pumps out and then rebuilding them as backups to address future emergencies. Currently, there is no road that connects all the way to the site, so a track hoe is needed to bring in the new pumps. Ryan thought the money is available and highlighted the need to set aside funds for replacement costs at existing facilities.
15. **Humpback chub collections in Desolation** – UDWR will implement collection of fish from Desolation Canyon to provide a genetic refuge for this population and for possible repatriation into Dinosaur National Monument. The Project 129 SOW, as approved, provides funding for the in-river collection of these fish. However, rapid transport of these fish to the hatchery needs to occur to increase the likelihood of fish survival. The current proposal is for one helicopter transport trip from the canyon to the hatchery as part of each collection pass. We will use existing contracts between UDWR and helicopter providers, but do not yet have a specific cost. Katie said the helicopters may cost \$8,000 to \$20,000 per run. Melissa noted this would be a perfect use of the NPS funds if they are part of the approved budget. >**Kevin and Katie** will be bringing back a funding request to the MC later in the year.
16. **Post-2023 update** – Julie provided an update. Partners have been offering proposals and responses over the last few months. Julie highlighted components from the proposal currently being considered by the partners. There is general agreement on the capital budget for the future program. The partners are still discussing annual funding contributions and amounts from each entity. There also appears to be majority support for a 15-year reauthorization. The current proposals agree that the Programs should continue at their current levels of funding or greater, recognizing the importance of what these programs are doing. Kevin McAbee asked about whether inflation was included in the proposals. Julie confirmed that the proposals have all included inflationary increases. She also reviewed the task list for the funding group. Julie anticipated having the Report to Congress ready to send out to the MC for formal approval at their April meeting, and thanked Melissa Mata and Scott Durst for their work in addressing comments. The report does not currently include funding details, but those will be included if they are available in time.
17. **RIPRAP Text Review** – Julie continued by acknowledging the partners' suggestion for the programs to become more efficient. She then reviewed how the PDO has been thinking about efficiencies in reporting and data analysis. She also brought up the RIPRAP process and whether revisions to the process are desired or warranted. Pete indicated the RIPRAP text has been an afterthought from his perspective, but thought it is probably easier than the tables for

non0Program participants to understand. Melissa thought the text has been helpful as a running narrative of what has been done to date. She thought the text would be helpful for the MC and decision makers interested in what has been accomplished. Tom Pitts agreed it was a useful summary of what is in the tables and why the Program is doing certain things especially as a foundation for Sufficient Progress. He described it as “unfocused” and suggested we should eliminate redundancies within the text and between the tables, text, and Sufficient Progress. He reiterated how important the Sufficient Progress is to everyone. AJ offered his perspective as a new participant. He thought the text was helpful in giving context for the information in the tables and thought the text is a good summary for audiences that don’t need finer details. Dave Speas agreed. Melissa asked whether Tom Pitts thought the RIPRAP text could be replaced by the Sufficient Progress memo. Tom didn’t recommend that path and suggested the Program’s achievements from a technical assessment should be summarized somewhere separate from the Sufficient Progress memo (which is a decision document). Melissa thought this was a question for the MC. Julie expressed the desire to reduce the RIPRAP text to a more condensed version and requested input for the group. Melissa expressed a desire to retain the running summary of what the Program has accomplished. Dave thought some basic summary information should be retained to orient readers. Dale expressed a need for more clarity as to the intent for how this document is to be used.

>**Julie** will work towards a revised draft of the RIPRAP text for the MC that could offer an alternative, cleaning up some redundancy. The document needs formatting clean up; Tom Pitts asked if the RIPRAP was the venue for background info >**Julie** will consider this in her revised draft for the MC; Tom recommended condensing the recovery element actions based on determining the purpose of this document. He recommended making it available as a reference. Tom also asked the same of the program elements. Dave suggested an abstract to contain the background information. Chris Michaud talked about ways to link background information directly into the RIPRAP text to keep the information directly available if need but hidden for review of updates and progress. Melissa asked how we are going to handle questions and comments from the PDO that show up within the tables. Julie said they are all resolved and will be cleaned up. Harry Crockett brought up a few review details - why was Clifton Nature Pond called out and needs more context within the text, McAbee suggested removing the specific reference for brevity's sake. Crockett suggested that wording regarding the expansion of walleye in the Colorado River should be changed from “raised concerns”. Dave Speas asked for clarification on why Humpback are being collected, is it for refuge or propagation and future stocking, and more clarification for primary purpose. The semantics and timing were discussed, and Julie provided editorial changes in the table. Dave Speas asked about the Maybell canal efficiency work and redesign of the headgate, David Graf noted that the headgates have a 60% design complete and an initial budget estimate. Dave Speas asked about the use of the annual report “recommendations summary” document. How will those be wrapped into future scopes and guidance and is there a process in place? >**The PDO** will add this to a future BC agenda for discussion.

18. Administrative tasks

- a. Next meeting is scheduled for May 26th from 9-3 MST and will be all virtual.
- b. Reminder: **Our summer BC meeting is in-person with a virtual option – July 11-12 in GJ.** The specific location is still TBD and >the PDO will work with folks in Junction to determine available options.
- c. Dates and hosting for Researcher’s Meeting 2023 – PDO suggested pushing to the end of the January to accommodate changes in reporting and data management. **Meeting set for Jan 31- Feb 1** with the **BC meeting on Feb 2** (Groundhog Day). CPW has tentatively agreed to host the meeting in Grand Junction. *Note - GCMRC/TWG/AMWG will be January 24-26.
- d. The January 27 meeting summary was not available for final approval at this meeting It will have Dave Speas comments incorporated and be provided to the committee along with the final draft summary for this meeting (March 15-16) and >the PDO will ask for final approval of both meeting summaries at the May meeting.

ADJOURNED at 12:00 p.m.