

**Biology Committee Webinar Summary  
November 29<sup>th</sup>, 9:00 am – 1:00 pm (MST)**

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

**Participants:** Kevin Bestgen, Katie Creighton, Darek Elverud, Andrew Schultz, Travis Francis, Matt Breen, Chris Holmquist-Johnson, Ed Kluender, Gene Seagle, Russ Franklin, Mike Gross, Kate Lawry, Cat Adams, Tyler Swarr, Jared Smith, Jenn Logan, Don Tuttle, Kara Scheel, Colleen Cunningham, Lee Traynham, Brian Hines

**Program Director's Office:** Julie Stahli, Tildon Jones, Kevin McAbee, Paul Badame, Koreen Zelasko, David Graf, Shannon Nelson, Chris Michaud

**CONVENE: October 11 – 9:00 am (MST)**

**Introductions & requests to modify agenda** – The agenda was revised prior to the meeting to add the introduction of Tyler Swarr by Harry Crockett. Dave Speas and Paul Badame noted an error in the agenda attributing the capital projects discussion to Dave, the discussion lead was changed to Paul Badame. The times allotted for the work plan and BIL projects were adjusted as well. Harry Crockett asked if there would be time to review some new fieldwork results and Pete Cavalli suggested waiting until the end of the agenda to see how much time is available.

**Flaming Gorge flow request discussion** – Tildon Jones reviewed that the Recovery Program develops flow recommendations every year and starting in 2021, the PDO had conversations with the BC and MC to prioritize experiments under various flow conditions. Drought operations have added another layer of complexity. Tildon presented the decision that the BC recommended in 2021 (for 2022 flows). He noted that the priorities reflect the priorities outlined in LaGory et al. (2019) and reviewed the general concepts as to why the experiments were prioritized as they are. Melissa noted that DROA flows are likely in 2023 again, which may allow us to implement more experiments than we otherwise would be able to accomplish. Tildon agreed and noted that DROA flows allowed for all three experiments to be implemented and noted that we were at the high end of the range suggested in those experiments. Committee members expressed support for using the framework as presented. Derek asked about how successful the smallmouth bass flow spike was in 2022. Kevin Bestgen said that preliminary information indicated that young of year fish were hard to come by, but more concrete results are forthcoming. He expected to see similar results to what was seen in 2021. Melissa said NPS has seen additional vegetative encroachment, but the annual report does not recommend changing priorities based on those results. Sarah asked how the priorities were determined in 2021. Tildon said the LaGory et al. 2019 report (aka GREAT report) provided the foundation for these discussions. He noted that smallmouth bass flow spikes are not recommended in wet hydrologic categories because bass reproduction is less successful in those years. Larval trigger becomes increasingly difficult in drier hydrologic categories because there isn't sufficient water to fill the wetlands to withstand summer temperatures. Kevin Bestgen noted that the flow spike also requires relatively little water in contrast to pikeminnow baseflows. **>Tildon will distribute the flow experiment priority matrix to the Committee.**

**Floodplain results** – Tildon Jones reported on the retention, growth, and release of wild-spawned razorback suckers from floodplains in both the Green and Colorado rivers. These results were also shared via the Colorado Program list server. The flow year started with a moderately dry hydrologic condition which dictated our 2022 flow request. Tildon reviewed the timing of the natural hydrology and experimental releases requested with a detailed focus on the LTSP releases. Tildon next discussed the capture details for all the Green River wetlands.

Stewart Lake released 3,294 young of year razorback sucker, with new records set for mean and maximum length and in number for that site. Johnson Bottom released 117 young of year razorback sucker. Old Charley released 615 young of year razorback sucker, another new record. Stirrup released 551 young of year razorback sucker. This is a newly managed wetland, so there is no record for numbers yet, however the fish released from this wetland are the largest average length (250 mm) ever observed in a single growing season for any natural wetland in the upper basin! Matheson Wetland, no razorbacks were captured in Matheson, which could have been caused by strong green sunfish numbers.

In one year, we have essentially doubled all the wild razorback sucker that have been released from Green River wetlands in the last 10 years combined. He noted that all the wetlands were dry in 2021, so no nonnatives were present. The timing and implementation worked well. As another example of how habitat improvement work from the previous two years have changed some wetlands; Matt Breen said Stewart Lake has increased in size from 5 acres of open water to about 100 acres after the burn and drying reset. The question was asked if increased larval production in the river could be the cause of increased wetland successes in 2022. Kevin Bestgen said preliminary larval captures indicate normal larval production, meaning the reset conditions, screening to exclude large nonnatives, and timing of the flows were the likely drivers of razorback success this year.

Tildon noted that we have fin clips and mortalities that will be sent to the lab for genetic confirmation as pure razorback sucker. Pete asked about the status of Old Charley. Tildon said the gates have reached the end of their usable lifespan and he is looking at options and lease details to see what improvements can be made. He noted that Chris Smith and his team in Vernal went the extra mile in making a non-optimal site function. AJ asked if there were certain aspects of the releases as implemented that were essential for this successful year. Tildon said first, without DROA releases, we would not likely have been this successful. Tildon noted the importance of the duration of the hydrograph's increasing limb which helped push pulses of larvae into the wetlands and allowed for more complete filling. The peak flows at the Jensen gauge were generally average and many of the wetlands had water pumped into them to keep them at optimal elevations. Kevin Bestgen said the near absence of nonnative fishes in several wetlands also had to be an important factor, not only for larvae survival but the high growth and that the peak at Jensen that Tildon showed during filling was about half from Flaming Gorge and half from the Yampa. Dave Speas noted the importance of cattail management at Stewart as well. Tildon discussed the successful use of the new gate and SCADA set up at Stirrup wetlands. They noted the wetland performed as expected but required a little more pumping than expected to drain the site during fish collections.

**Razorback monitoring 2023 and beyond** – Koreen Zelasko noted that physical monitoring of adult razorback suckers is largely conducted by collection of data during sampling for other projects. In the Green River subbasin, that’s primarily project 128, Colorado pikeminnow abundance estimation. Some PIs of that project have relayed that processing all razorback suckers encountered is unmanageable. Discussions in fall of 2021 led to an experimental approach for the 2022 sampling season. Tildon Jones arranged a meeting on Nov 8<sup>th</sup> with PIs to review the season and provide guidance for 2023. Crews in the three Green River reaches accomplished some combination of processing all razorback suckers in designated samples (1 out of every 10 RM) and solely scanning razorback suckers elsewhere. Sampling in 2023 will continue to be experimental, to see what’s possible. Rather than abundance estimation of predominantly stocked fish, which has proven problematic, a priority identified by the PDO and PIs is to re-encounter some of the thousands of wild fish produced in 2022. That is most likely to occur in the middle Green reach, but that is the reach where crews have the most difficulty processing all razorback suckers. Options still under discussion include increasing personnel, increasing length of passes, and increasing portable antenna coverage—any of which would come at a cost, such as reallocation of effort, more funding, and/or less data collected in other reaches. The details of how to accomplish priorities for 2023 can be worked out with PIs. Koreen asked if the committee agrees that encountering wild-produced fish should be the priority.

Dave Speas started the discussion, stating that this year’s wetlands results (size and numbers) increase the likelihood of reencountering those fish. He asked if that would be the primary focus of RZ monitoring in the near future. Koreen said that we are still in the phase of examining what is possible. Julie clarified that our current question for the Program is if we are focusing on wild-produced fish or estimating survival and abundance of stocked fish. Koreen reminded the committee of the issues we have had producing reliable estimates of abundance and the level of effort that was required to collect the information to attempt those estimates. Matt Breen sampled randomly select 1-mile reaches as described by Koreen and said that the change in effort was manageable and could be replicated in future sampling. Matt also noted that large congregations of razorbacks can appear unexpectedly causing work to slow. Melissa asked if this would result in a new scope of work. Koreen said that razorback monitoring will still occur as part of pikeminnow estimation sampling and that we propose adjusting the focus of razorback collections within that project. Matt Breen suggested reinstating project 172 to increase detections in the middle Green River. Tildon noted that capturing razorback sucker in Desolation Canyon, the Yampa, White, and the lower Green Rivers is possible with current efforts. To boat all the fish in the Middle Green, additional resources may be needed. Kevin Bestgen said the focus on wild fish was appropriate, but that we also need to boat fish that might be untagged. Dave supported continued conversations about alternative recovery metrics for suckers.

**Colorado pikeminnow RIS revisions** – Tildon provided the BC with the draft RIS on September 13<sup>th</sup> requesting input on the Basinwide, Green River, and upper Colorado River subbasin activities. Tildon received comments from Tom Pitts, Dave Speas, AJ Keith, and Derek Fryer prior to the meeting. Most comments were incorporated into the RIS with a few exceptions which were explained. A common comment revolved around describing duration versus

frequency of recovery activities. Tildon recommended using frequency (i.e. 3-5 year rotation, ongoing, or periodic) to describe the occurrence of activities. Julie asked that any additional comments be submitted to Tildon by this Friday, for submission to the MC by the end of the week. Tildon confirmed that the RIS will not be distributed with the draft recovery plan during the public comment period.

**Program Director's update** – Julie Stahli shared with the group that the federal partners and states have reached an agreement for the post-2023 reauthorization. She then shared an update on the 15-MR plan to begin reviewing the flow recommendations for that segment of river. Julie asked that interested BC members contact David Graf to express their interest in participating in that process. **BC members who have currently expressed interest include Dave Speas, Jenn Logan, AJ Keith (w/caveats), Dale Ryden, and Travis Francis.**

Julie introduced Shannon Nelson as the new outreach coordinator. She also drew attention to the public comment period for the CPM draft Recovery Plan. The HBC recovery planning process has started with invitation letters being signed to establish a formal Recovery Team for that planning process.

**Data management and reporting** – Chris Michaud shared progress made on the revamp of data management for the 2022 field season. He thanked all the PIs for their work in helping the PDO implement these changes. Chris said that currently all data management rests with the Principal Investigators which is an incredible amount of work. The goal of the process revamp is to streamline the data management to make more time for biologists to do science. Chris has worked to create a flexible standardized digital data collection system, create an automated post collection workflow, and use STReAMS as a data source for annual reporting. The next goal is to extend updated data collection to other projects. Pete thanked Chris for all his and the PIs work implementing these changes. Sarah agreed and asked if non-target species information also gets included in the analysis. Chris said all the data is integrated into STReAMS. He is focused mostly on either T&E or nonnative species, but three-species are not excluded from that process.

**Work planning post-2023** – Julie walked through a PowerPoint presentation which lays out proposed changes in the scoping phase of the annual work planning process. She reviewed the wheel of change model and focused on the “creating” and “eliminating” quadrants of the model and some proposed changes the PDO is considering. The goal is to make more comprehensive biological reports that can be used for strategic decision-making while eliminating redundant paper exercises. Julie then illustrated the current complexities in scopes of work and annual reporting. She presented a proposal to reorganize these work plan components into 3 parts: study plans, annual reports (by biologically relevant topic/area), and scopes of work (by office). It was highlighted that these changes in scoping only apply to offices that have multiple field projects; specifically, UDWR-Vernal, UDWR-Moab, CSU, CPW, FWS-Grand Junction, and FWS-Vernal. Dave Speas suggested project numbers may need to be retained for a few years, as well as agency agreement numbers and periods of performance. >**Paul Badame** will provide a copy of the presentation following the meeting.

**Capital/BIL projects update** – Paul Badame introduced the discussion of projects which received BIL funding for FY23.

**GVIC** – Lee Traynham provided an update. The proposed work is designed to improve the fish screens at that diversion. The goal is to rehab the screens to make them easier to clean while

providing their water delivery, hopefully resulting in keeping the screens in place for more of the season. The project has two components: raising the dam and rehabilitating the screens. GVIC will lead the dam raising component. Reclamation is assisting with engineering and design of the screen rehabilitation, which they hope to put out for bid in FY24. GVIC could start the dam raise construction in summer 2023. Pete asked how the dam raise would assist with the screens. Lee said it would help with providing head for the screens.

Randlett Hatchery – Andrew Schultz reported that the ONFH has 5 projects within this topic: 1) water value engineering study by FWS engineering to improve the water supply, 2) bringing temperature control to the indoor recirculating aquaculture system. Current system requires using ambient air temps. 3) a raceway project staging area between ponds and indoor tanks, 4) biosecurity upgrade to fencing, and 5) settling basin where recirculated water is discharged. All are being implemented with BIL funds. Andrew is very focused on where the water comes from and how to revamp the water system, which will also reduce energy expenses at the hatchery. Dave Speas noted that the new water supply will likely be expensive.

Grand Valley Hatchery – Dale Ryden noted that all the hatchery systems are very different and have unique constraints, advantages, and disadvantages. The GV hatchery buildings were built in 1996 and 1998. The HVAC systems have reached the end of their usable lives and need to be replaced. Current repair on one unit may last a year and a half. The total cost is about \$250,000. Dale has identified additional projects for FY24, including fixes and improvements to fish passages (power and electric slide gates), create an isolation unit, or adding a decontamination area that would allow for invasive species removal.

Wahweap Hatchery – Jared Smith from Wahweap said that they are working to get power to all the ponds, which will allow for the addition of oxygen. They currently rely on algal blooms to provide oxygen to the ponds. They also are purchasing a harvest crane, which will make the process safer and much less labor intensive. Wahweap also has very old ponds with drain, liner, concrete, and valve issues that impede draining and harvest. Dave Speas has the package for these items ready to submit.

Remote Monitoring Equipment – Dave Speas reviewed the process to date regarding PIT antennas around the basin. Chris Michaud, Dave, and others have been holding meetings to determine where autonomous units could be installed (20 ft antennas that operate on their own with manual downloads). They developed a list of 41 sites possible for installation. The next step is for the group to narrow it down. Funding may be available for 12-18 sites. Dave highlighted just a few of the significant steps that will need to be completed for installation, including working with landowners, developing permits, and installing the units, which will require effort from field offices and likely happen in subsequent years.

## **CPW Field Updates – Jenn Logan**

### Staff Updates

Tyler Swarr is the new NW Region Native Aquatic Species Biologist, replacing Jenn Logan. Jenn moved into the newly created Assistant Native Aquatic Species Coordinator position and will be working with Harry Crockett on West Slope native fish programs. Tyler will be conducting much of the work that Jenn previously did including the White River non-native fish control, Colorado River non-native fish control, bonytail stocking and portable submersible

antenna management. He will be based out of the Meeker. Ben Felt moved into Lori Martin's old position as the Senior NW Region Aquatic Biologist and is currently reviewing resumes to backfill his previous position, as the Grand Junction Area Aquatic Biologist.

### Canal Salvage

CPW crews lead by Tyler Swarr completed 4 days of canal salvage in cooperation with USFWS GJ-FWCO. Volunteers from CPW and CMU students along with Dr. Hansen also participated. One razorback sucker and 3 bonytail were captured. Overall numbers may have increased slightly from 2021 but are still down from other years. Work to eliminate a low spot in the GVWU/ Highline canal began during the same time period of the salvage and the area was pumped dry. This had previously been an area where entrained fish were frequently salvaged.

### Reservoir Escapement

Project was completed in mid-November and data has not yet been analyzed.

CPW completed work below Rifle Gap and Highline reservoirs. No warmwater sport fish were captured below the Rifle screen. It appears the screen is functioning as intended.

Mack Wash surveys below Highline did not produce any unexpected fish species and numbers were similar to previous years. Behind the net surveys at Highline produced a few gizzard shad, carp, largemouth bass and sunfish. However, the area behind the net was dry in fall of 2021 when the net was replaced. Fish captured in 2022 likely found their way around the net or moved through as larva. Most fish were small or juvenile fish. The net was inspected on multiple occasions and appears to be in good working order.

### Highline Zebra Mussels

Approximately 10 zebra mussels found in the reservoir on substrate plates deployed by CPW aquatic nuisance species crews, the park barge and the underside of the park boat dock. We are investigating treatment and/or control options. The lake is currently being lowered by 5 feet to look at a pump that connects to the Highline canal for inspection. CPW ANS crews did not find any mussels in the Highline Canal.

### East/West Ponds

Ben Felt investigated a report from Area 7 staff that someone had captured a 40" northern pike in the East/West Ponds near Corn Lake. Park staff also remember finding a dead northern pike on the shoreline about 5 years ago and rumors of occasional pike catches in the ponds. Ben set overnight gill nets and pulled them with the assistance of one of the USFWS- GJ FWCO technicians. No northern pike were captured. Additional surveys will be completed in spring 2023. This is a location visited by Ben and Kevin McAbee earlier this year and is on the list for potential screening.

### **Administrative Tasks – Badame**

- Elect a new BC Vice Chair – Dale Ryden (FWS) will serve as the Biology Committee Chair in 2023 and Sarah Seegert (UDWR) will serve as the Chair in 2024.
- Upcoming Meeting Reminders

- i. Dec 5 – WAC
  - ii. Dec 9 – MC
  - iii. Jan 4 – IC
  - iv. Jan 31-Feb 1: Researcher’s Meeting in Grand Junction
  - v. Feb 2: BC Meeting in Grand Junction
- Report review reminder – Walleye triploidy report reviews are due back to Kevin McAbee by December 19<sup>th</sup>.
  - Consent Agenda: Approve October 11 summary – *The summary was approved as final and will be posted on the website.*

**ADJOURN 1:00 PM MST**