

Biology Committee Meeting Summary**July 12 8:30 am – 4:30 pm (MST)****July 13, 8:30 am – 12:30 pm (MST)**

BC Members: Dale Ryden (chair), Pete Cavalli, Jenn Logan, AJ Keith, Tom Pitts (Day 2), Derek Fryer, Sarah Seegert, Dave Speas, Melissa Trammell, Harry Crockett

Participants: Russ Franklin, Kara Scheel, Darek Elverud, Katie Creighton, Jared Smith, Travis Francis, Cat Adams, Alden Vanden Brink, Brendon Langenhuizen, Mike Gross, Ed Kluender, Kerri Pedersen, Brian Hines, Mike Partlow

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

DAY 1 - CONVENED 12:30 pm MST

Introductions & requests to modify agenda – The agenda was not modified.

Review Committee assignments list from March 28-29

1. **Assigned Mar 28: Tildon Jones** will reach out to Audubon and Ducks Unlimited to figure out if the dirt work to shore up berms is included in the current designs for the Audubon fish pond.
2. **Assigned Mar 28: Koreen Zelasko** will reach out to those who volunteered to participate in the propagation work group and coordinate the timing and purpose of their first meeting.
Seven people are currently interested in serving on the work group including four hatchery managers; first meeting will be virtually in August.
3. **Assigned Mar 28: UDWR/PDO** will talk to Starvation managers during the April 13 IBAT meeting to find out if the timing and expected magnitude of spill from Starvation Reservoir this year. *Spill was large and the screen operated as anticipated (laying down under high water conditions).*
4. **Assigned Mar 28: Kevin McAbee** will reconvene the humpback chub workgroup to discuss the possible effects of brood collections on the population in Desolation/Gray Canyons.
Meeting was held on June 6th and will be reported out later during this meeting.
5. **Assigned Mar 28: Julie Stahli** will ask Ecological Services if there are opportunities for the Program to review or weigh in on the NEPA for the Uinta Basin Railway Project. *USFWS is in active litigation on this issue which makes responding complicated.*
6. **Assigned Mar 28: David Graf** will create a list of each hydrologic subbasin flow recommendations and document when they were originally developed and when they were last reviewed. He will also provide a proposed schedule for future flow recommendation reviews. *David presented a few options for assessment at the WAC and will continue to revise this tool and will present it back to the BC once the WAC approves.*

Approve March 28-29 meeting summary (Cavalli's comments and edits from 6/29 incorporated)

Hydrology Update for 2023 – David Graf gave a review of hydrology for this spring. Conditions were generally wet around the upper basin. While snow water equivalent (SWE) for the entire basin was at one point near record high, it melted quickly and early. All the subbasins of interest were above average this year. The upper Colorado mainstem, above the Gunnison, was lower than other basins the Program tracks. There was 10.8M Acre/Feet (AF) of inflow to Lake Powell, which was very helpful in addressing storage there. David then went into detail summarizing each subbasin (see slides). The upper Colorado River (15MR) did not reach the recommended peak flow for a ‘wet’ or ‘ave-wet’ hydrologic year (April – July runoff forecast to be a ‘wet’ year-type in the top 20% relative to the historic record). The Gunnison had high flows, which made requesting additional peak flows difficult due to flooding concerns downstream. The Yampa had an early, high peak flow. The spring melt in the Yampa basin came off more slowly and at a lower peak flow than originally forecast. David will be coordinating Yampa base flow calls starting at the end of July. The Gunnison River had a lot of ungaged flow that contributed to meeting the flow targets at Whitewater. There was also a second peak in late June-early July from releases to meet the Black Canyon of the Gunnison National Park Service flow targets. The lower Duchesne River also experienced good peak flows compared to recent years, but only accumulated 2,070 ‘cfs-days’, which is the peak flow and channel maintenance flow metric for the Duchesne. The Green River also had good peak flows, with an LTSP release after the Yampa peak. David then summarized the water pools available for Program use to meet base flow recommendations.

Flaming Gorge release updates – Tildon Jones reviewed flows to date.

LTSP – LTSP flows were triggered and delivered from June 9-12 and the managed wetlands were able to adjust water levels to allow for larvae laden water to fill the wetlands. Early sampling showed promising larvae captures at Stewart Lake following LTSP flows.

Bass flow spike – It was determined to forego the bass flow spike because of the overlap in timing for the probable spike and the hatching and drift of pikeminnow larvae. The potential negative impacts on pikeminnow outweighed the potential benefits of suppressing smallmouth bass spawning this year.

LTSP Plan update – Tildon noted that the Larval Trigger Study Plan is more than 10 years old and many of the wetland connection flows are different than they were when it was written. Tildon asked if the Committee supported revising that plan to incorporate new information from LaGory et al. 2019. Derek advocated for documenting the successes we’ve had over the last few years in an update. Dave advocated including a data summary as well, either as an appended report or as part of the plan. The Committee agreed to revise the document. >**Tildon** will set up meetings with a subcommittee. Melissa, Derek, Dave, and Kevin Bestgen offered to help.

Desolation Canyon humpback chub collections – Kevin McAbee circled back with the Committee on annual report recommendations from the humpback chub (HBC) collections report (Project 129). In 2022, three trips collected 25 HBC that are housed at the Randlett Hatchery. Of those, 21 have survived, in addition to 9 from previous collections over 10 years ago. There are currently 30 adults in captivity. The first report recommendation questioned the feasibility of meeting the Valdez et al. report's goal to collect up to 100 fish per year and a total of 500 HBC to create a brood. Kevin said that the goal was based on maintaining genetic

diversity and not tied to the reality of a low-density population located in a very remote location. In short, the annual goal cannot be met. Given that constraint, is this effort still worthwhile? The second report recommendation asked whether collections would cause a long-term impact on the population. Thus far, all fish collected have been adults collected from the long-term monitoring sites. A PVA model suggested collections at this level should not negatively impact abundance. Kevin introduced some action items from the conversations held a month ago specific to these questions.

- Are we negatively impacting the Desolation population? UDWR will be monitoring that population in 2023/2024, so we hope to learn about the population's stability. There will be no collections in those years, so the Program has time to consider the question further.
- The other question is the feasibility of collections and reaching targets. There is currently a recovery team working on revisions to the HBC Recovery Plan. That team is working on both the need for a population in Dinosaur National Monument and abundance levels for Desolation needed for recovery. The team will determine the need for repatriating HBC into Dinosaur and the strategy for accomplishing that. The HBC brood collection group agreed that we need to evaluate the size of broodstock required to maintain the Desolation lineage. >**Koreen and Zane** will be looking into this question. Koreen added that we are not looking to circumvent the 500 fish number from the Valdez report. Dave Speas suggested we talk to SNARRC to see if a genetically viable brood could consist of less than 500 fish. Kevin McAbee pointed out that UDWR made a significant effort to collect juvenile fish, but success has been minimal. Sarah Seegert asked where the 100 fish/year goal came from. Kevin said it was based on collecting more juveniles and based on reducing the length of time needed. The 100 fish/year was a maximum to minimize negative effects to the wild population, not a goal. Dale added that having 9 fish out of the 20 collected in 2009 is probably good luck given all that could go wrong. He recommended thinking about whether holding the current fish is worthwhile. Dale also said the Grand Valley unit had issues with volunteer spawning, so the Program needs to think about that possibility and what to do with those volunteer spawned fish.

White River Management Plan – Julie introduced the topic. The White River Management Plan (WRMP) team has been working on the drafting the plan since 2021, which has been finalized by the White River Planning Team (WRPT) and approved by the WAC. Today's task is for the BC to review this plan, which if approved, would next go to the MC. David Graf gave an overview of the WRMP. The plan includes anticipated 'Phase 1' depletions for the White River and includes management activities to offset the impacts of those depletions. Example management activities include the possibility of flow spikes from Taylor Draw Dam to reduce SMB and dam operations to enhance base flows to reduce diurnal impacts during very dry years. The plan also includes activities related to sediment and streamflow protection. Dave Speas said we have been considering what to do in the White River for quite a while now. He added that he had problems with the approach in the document. He did not understand how the current and projected depletions would impact streamflows, since the report includes only measurements in acre-feet, whereas the flow recommendations are in cfs. David Graf pointed Speas toward Chapter 4 and 5 and the phased approach document. He added that irrigation uses would be the largest influence on streamflows. At times, irrigation use could translate to a 10% impact on flow at Watson during a dry year. David also pointed out that a more detailed impact analysis (biological assessment (BA)) would occur if a Programmatic Biologic Opinion (PBO) is

pursued. The next steps are to approve the management plan as a document for implementation, and the WRPT would decide whether to pursue a PBO. Melissa asked whether the impacts would be more likely to occur at baseflow. David confirmed that impacts during the peak flow would not likely be detectable, but base flows are when depletions would be most noticeable. Julie clarified that the decision as to whether management actions offset impacts would be made by the FWS Ecological Services offices.

The task for the BC is to determine whether the document is technically sound and whether the list of actions is appropriate for implementation. AJ thought the list of actions was appropriate and had no issue with the list. AJ pointed out action #12 and said there were uncertainties with the flow recommendations for base flows. AJ thought some of the base flow targets were from older data. Given the potential impacts at low flows, AJ thought an evaluation of the targets is a high priority and should be done before the Biological Assessment is written or perhaps as part of it. David said Don Anderson in the 2019 flow recommendations assumed that the current suite of flow conditions is working well given the diverse native fish community and relatively stable numbers.

Dave Speas had a suggestion for action #9 to include the BLM as a partner. Melissa Trammell said the list of potential partners had a lot of overlap. David said the White River Partnership was doing a great job of coordinating among the different partners.

Kevin Bestgen said he has been unclear on how a flow spike might be implemented at Taylor Draw Dam. David said Rio Blanco Water Conservancy District placed a call on the river and has been trying to increase hydropower production there. There are some outlet works that might be used, particularly for sediment movement out of the reservoir. Bestgen added that they attempted an algae-flush a few years ago, and something similar would need to be closely coordinated to try to impact smallmouth bass(SMB). Kevin thought it is an intriguing opportunity, especially with the addition of turbidity/sediment effects. AJ said he was supportive of looking into ways to disadvantage SMB in the White. He added that action 6 should include looking at effects of turbidity on SMB predation efficiency. [Follow up, Kevin Bestgen pointed to their study from 2006 looking at predation experiments on CPM. Bestgen, Byers, Rice, and Haines. TAFS DOI: 10.1577/T05-171.1] Melissa added that she was interested in a long-term sediment release (trickle) to observe impacts of that approach.

Tom Pitts pointed out that Water Users would like to see a PBO for the White River. Although he is not opposed to approving the plan as written, he would abstain from voting to ensure his ability to represent the Water Users' position. Dave Speas asked if we can implement the actions without a PBO. Julie thought the actions could end up in the RIPRAP and only the assessment of implementation and compliance might differ between that and a PBO. Melissa said that in her understanding, implementation of the activities would be *required* without a PBO. Melissa asked that a representative from the WRPT or Ecological Services be at the MC meeting in August to discuss the PBO process, concerns, and constraints. >**The PDO** will arrange to have someone available to discuss a PBO relative to the Program and the White River Management Plan.

MOTION Melissa Trammell moved to approve the report as written. Sarah Seegert seconded the motion. There was no further discussion, and the committee approved the motion, with Tom Pitts abstaining.

BIL Projects Update

PIT antennas – Dave Speas said an order has been placed with BioMark for 12 autonomous antennas and 44 wagon wheel submersible antennas. Each field office should be receiving seven submersible antennas and batteries (including spares) sometime late this year or in 2024. Planning for installation of several stationary autonomous antennas is in progress, primarily on the Green River. Most of the current work includes permitting and securing locations. The 15-Mile reach sites are hoped to be installed in 2024. There are several other Colorado River sites that are in the queue for 2024-25. Jenn Logan asked if Salt Creek is still under consideration. Dave said yes, but we need to be sure that our coverage in the 15-MR and 18-MR is sufficient to answer pending biological questions. He also noted that land ownership is a consideration for all sites. Jenn Logan noted that Salt Creek provides numerous bonytail detections, summer-long irrigation return water, and refuge from low flows in the mainstem.

Hatcheries – Dave summarized the various projects pursued at each facility. Funds are now available for the joint projects at ONFH-GV and Randlett: AC system at GV and temperature control, fencing, and water supply phase I and II (options and initial design) at Randlett. Additionally, the BOR design group (Provo, UT) recently made a site visit to Randlett and is making progress on the design phase of its raceways and settling basin projects. The Wahweap agreement is currently under review in Denver and DC and funds are expected by end of year.

Proposal: Data Collection App and Hardware – Chris Michaud opened the discussion with a presentation on data management which covered the process from field collection to presenting data to decision-makers. He laid out the problems of labor required, efficiency in processes, and time lag from data collection to analysis and reporting. We are also facing a challenge of equipment and software becoming increasingly difficult to interface and, in many cases, becoming obsolete. Our current level of complexity in data management requires some revisions. Chris proposed we contract out the development of a unified data collection system. A contractor would build applications tailored to our needs, which are then uploaded to field collection devices. Those devices can upload collected field data via WiFi to the cloud database when back in the office. The benefits would be that the contractor can deal with the intricacies of developing apps and devices so the field PIs do not have to spend time developing this. It would require an upfront financial commitment but would save time once implemented. Chris asked how we address this issue and find resources to implement it. Julie added that Chris submitted a SOW proposal to work with a contractor who has worked with a wide array of agencies and programs with very similar needs to ours. Budget constraints are currently preventing our Program from considering new starts for FY24. Melissa asked if there was a SOW. Paul Badame stated that there is a proposal which includes the development of the data collection app, ongoing maintenance of the apps on compatible field computers (tablets), and the creation of a cloud-based database to store, QA, and share all field data. The full cost of the proposal is approximately \$148,000, but it is possible to implement the project in phases over two or three years. Chris said that if we do not replace the existing field computers, we will need \$55k in the next year or two to replace obsolete or incompatible devices. Sarah asked whether the Program seeks out new funding. Julie said historically the Program tries to not compete with other programs/species that have less dedicated funding than us. Tildon, Kevin Bestgen, and Katie all confirmed that replacement needs are imminent, but all are waiting for guidance on a

standardized path forward. Dale asked about the upgrade options once something is developed and making sure this effort does not become obsolete. Chris said the annual contract would cover updates to the system to ensure future functionality.

Field Updates (see individual reports from the field stations at end of summary)

- FWS-GJ – High cold water has led to a delayed start to the larval fish collection efforts on the Gunnison, not many encounters so far. Encounters of razorback suckers which were stocked in the San Juan River and spent time in Lake Powell continues to increase in frequency and many of those resighted individuals show greater than normal growth; these factors suggest that Lake Powell may be able to contribute to a sustainable population in the San Juan if those fish are transferred above the waterfall during their upstream migration. Transferred individuals have been documented to be contributing to spawning and reproduction. After an Asian tapeworm outbreak at the Randlett Hatchery, Dale recommends collecting some surrogate native fish from wild populations or pumping stomachs of listed fish to estimate the Asian tapeworm load in the wild relative to levels in hatcheries found during outbreaks. We may be putting too much time and effort into removing Asian tapeworm for hatchery fish if they are being stocked into waters with higher ambient loads.
- CPW
 - a. NPK removal in gravel pit ponds. Ice issues. Mostly age-2 and some age-1 from Rifle (?) pond. Only one sexually mature fish captured. No breach at Mamm.
 - b. Kenney-no NPK captured this year. Lots of 3 Species in the reservoir. Starting to see white/bluehead sucker hybrids in Kenney. This is concerning because white sucker have been rare there.
 - c. White R SMB removal—catch rates have been lower.
 - d. Yampa-22 days of effort. White sucker pop estimate below South Beach. Only 2 native fish in the entire catch. NPK catch rates slightly higher than last year. SMB and WS lower than last year.
 - e. Elkhead tournament—about the same number of anglers. Stocked tiger muskie in Elkhead last year.
 - f. Catamount and Stagecoach removal occurred again.
 - g. Ridgway tournament started July 8 and will go through August 6. Ridgway screen operated this year for the first time. The screen appeared to be working as intended.
 - h. Dolores—the river had water this year and CPW did some monitoring work. No SMB from Slickrock station.
 - i. CPW is looking to do genetics work with NPK to determine the source of any new introductions. Preliminary results show promise for the technique.
- CSU – Completed balloon tag study on the Green River Canal, survival rates were high and injury rates were modest. Yampa sampling hindered by snow and high water. No upper Yampa pike removal. Some backwaters were netted, 72 pike removed. CPM

estimates finished, 0 pikeminnow in the Yampa River over three passes. Little Yampa Canyon and Lily Park removal passes completed (some rates as high as 50 bass/hour). Spawn disruption sampling began July 8. Upper Green sampling completed around LTSP, few pike found, no pikeminnow found. Helped UDWR with CPM estimates to help net more razorback sucker. CSU provided the chase boat to make sampling easier – will need additional years of implementation. Drift net sampling began June 20, CPM detected on July 8, which is why the flow spike was abandoned.

- FWS-Vernal – started SMB removal in Yampa Canyon. Marking bass in Echo-Split to do a pop estimate. White River is about ½ done. Antennas at Echo Park and Razorback Bar are deployed.
- UDWR-Vernal – CPM estimates went well, total of 35 pikeminnow and 590 razorback sucker over 3 passes, they appreciated CSU’s support on that effort. One old pikeminnow with a 400khz tag was caught (800mm). Bonytail were stocked into Stewart with antenna because it filled early. Filled for 12 days with LTSP flows (6.9 ft). Some NNF removal work completed with nets in Stewart Lake drain and Brush Creek, White River passes, surge efforts, and middle Green passes. Starvation did spill. Green River crews should look for floy tagged walleye from UDWR study in Starvation.
- UDWR-Moab - low walleye catches which may be in response to low water temperatures, completed CPM estimates with 74 fish captured, 47 walleye, 818 razorback sucker. Light trapping for RBS occurs on CPM passes, presumptive larvae detected on passes 2 and 3. Seining will occur later this month. Matheson is a challenge, receiving water through Mill Creek which added nonnatives, but larvae were entrained.
- BLM-Vernal – Cal DeBerardsi is the biologist currently working on the Stirrup. The BLM went out of their way to pull the gate and still make Stirrup work. The Stirrup had a very shallow breach which may have let some carp in. The wetland is full after connecting during LTSP.

Melissa asked about the Starvation Screen. The Utah Division of Wildlife has completed the plan for the screen and is working to contract the fabrication of it. Prior to installation of the screen the BOR force account (BOR construction group) will install a concrete pad. Installation of the pad is expected to occur in spring or fall of 2024 and the install of the screen will be completed shortly after that depending on weather and water conditions.

Crayfish Importation – CPW is currently assessing whether they should allow importation of live red swamp crayfish which is a popular food species. CPW doesn’t allow for importation of any live crayfish to the western slope, this would be a regulation change. People are likely importing live crayfish all over the state (not released into state waters but consumed in restaurants). CPW was asked to evaluate the effects of importation. The species is considered invasive in many areas. The western states have very mixed results (some banning all importation, some allowing importation only for human consumption, Utah prohibits importation but may have an invasive population). For more information: [Crayfish Regulations | Engage](#)

[CPW](#). Melissa asked if it would be possible to increase regulation and permitting on the species if permitted.

FY 24 Funding Scenarios – Julie sent an email to the group to lay out the FY24 funding situation. The big question is: what will the budget be in FY24? We have heard that the debt ceiling agreements resulted in no increase in overall budget, which could translate to a flat budget for our Program (\$5.76 M). Reclamation has proposed funding the UCR Program at \$6.66 M for FY24, which is also reflected in the President’s Budget. It was noted that these amounts are both below the Program agreement for FY24 (\$7.64 M), which will be included in new Program authorizing legislation once it is passed. For FY24, there are two reasonably foreseeable funding scenarios that could play out, either \$5.67 M or \$6.66 M.

Appropriated Reclamation funding for the Program has been flat at \$5.76 M since 2019. Beginning in 2020 the Program partners have reduced efforts for certain field projects and delayed equipment replacement to reduce the impending gap. During the last four years the remaining gap was filled with carryover the FWS (PDO and FWCOs) accumulated through vacancies and COVID savings. Those carryover funds are now mostly expended, and it is unclear if the FWS will have sufficient carryover in FY24 to cover the gap. Despite an increase funding level of \$6.66 M, both state and federal agencies have experienced significant increases in the cost of personnel and goods, resulting in budgets that continue to outstrip funding. The current proposed Program budget for FY24 includes the same projects as the last five year and accounts for the majority of the increased costs of personnel, but it does not account for the increased cost of goods and services or allow for the resumption of previous projects, replacement of equipment, or the addition of any new management or studies.

Sarah Seegert asked where the inflation rate for annual increases in the Program budget comes from. The rate of increase is based on the rate of change in the national CPI number for the two years prior to the current year ([FY23 Program Rates](#)). What is clear from developing the FY24 workplan is that the \$6.6M budget can only cover existing workloads. The rest of the document Julie sent out shares what we are currently doing, with a list of additional work that we cannot currently fund. Julie asked the committee if they have ideas for reducing budgets or places where we can cut effort, she welcomes the input.

FY 24-25 Work Plan Overview – Julie provided an overview of the FY24 workplan. She emphasized that today’s review/approval will only deal with FY24 since we hope to have an approved bill reauthorizing the Program for the following year. The missing budgets in the proposed FY24 column reflects the changes we made to work planning with combined office scopes. All the new start proposals have been deferred in this proposed workplan. We also recommend delaying Colorado pikeminnow sampling in the Colorado River to reduce the overlap with the GR sampling. This would move those projects to a 3-year-on 3-year-off rotation. The “*BOR Funded...*” tab in the FY24 work plan summarizes the Program budget for FY23, the proposed budget for FY24, as well as the gap between the proposed FY24 budget and a funding level of \$6.66 M. Paul added that we asked the field stations to see if they could keep budgets to FY23+7% funding levels, since the 7% increase is the relative amount of FY24 funding compared to FY23, with two caveats. One, the budgets should account for the actual

fixed costs of the station (FTE’s, leased equipment, etc.) and second, the budget should cover the same level of effort (i.e. projects) as the FY23 work plan. Melissa asked why some offices had increases more than 7%. Paul said that there were a number of factors, like meeting those two caveats limited the options for reducing budgets to things like delaying equipment replacement/repair or finding other efficiencies to reduce costs; or for offices like Moab-UDWR, who have monitoring projects that were not in rotation during FY23 that start in FY24. Sarah added that Utah is working to remedy the employee salary disparity with other agencies and have seen wage increases of more than 20% in the last two years.

Julie explained that the shift to the new combined office scopes was, in part, based on the need to assess the true budget effect of reducing effort or removing a project from the work plan.

Paul introduced the new combined SOW format to the committee. This is a work in progress and several items will need to be revised with the formatting and naming convention over the next two years of work planning. For example, the use of “Activities” to replace the use of project numbers is inconsistent across offices. To improve this, some sort of common naming needs to be agreed on and Paul suggested using the existing sub-elements from the work plan as a good starting point. For FY24 we should consider is how to allocate each office’s total budget to specific program elements/sub-elements or even to the old project numbers. Paul asked the committee what level of detail they thought was appropriate. Dave Speas noted that Reclamation will need a consistent way to tie the old project numbers to whatever grouping of tasks we decide on. The current combined scopes crosswalk project numbers and activities. From the example below (GRB-FWCO) you can see that SMB projects in the Yampa, Green and White have been categorized as a single Activity (F) for this scope. The specifics of this type of lumping and splitting is still open for revision.

Target species	Activity	Legacy Project(s)	Locations
All	B – Outreach	NA	All
CPM, RZ	C – CPM Estimates	128	GR Deso-Grey, White R
RZ	D – Larval Monitoring	22f	MGR
RZ	E– Wetland mgmt.	164	MGR
SM	F – Mechanical removal	110	Lwr-Yampa
SM	F – Mechanical removal	115	Lodore Dino
SM	F – Mechanical removal	123a	Dino
SM	F – Mechanical removal	125	Mid-Yampa
SM	F – Mechanical removal	167	White R
NP, SM, WS	G – Mechanical removal	98b	Upr-Yampa

CPM	H – Broodstock collection	158	MGR
RZ	I – Antenna monitoring	169	MGR, YA

<Paul will add the proposed new starts as a separate tab of the work plan and allocate the combined field office budgets to individual sub-elements (groupings of similar projects). Julie said we still had some cleanup to do with the budgets and committed to doing that prior to the MC meeting.

PDO Update – Julie thanked Kevin McAbee for his many years of service and presented him with a set of Tomelleri prints.

Reminder – Evening Social with honored guest Kevin McAbee – **The Ale House at 6 pm**

DAY 1 – ADJOURNED 4:19 p.m.

DAY 2 - CONVENE: 8:30 a.m.

Program update – Julie outlined the steps needed to reauthorize the Program. There is a draft of the Blue Book that she will share soon with the partners. We also need a cooperative agreement. There are drafts of that document being developed, and Julie will share that with the Blue Book review. Julie and Melissa Mata developed a NEPA document, which is also being reviewed and will go out for public review.

Julie then gave updates with Section 4 documents. The Colorado pikeminnow final recovery plan is moving toward approval from the RD and with an outreach plan that goes with its release. Koreen has finished her draft of the downlisting rule for RZB which the PDO is currently reviewing. Julie acknowledged all of Koreen’s great work on that rule, especially since she just started with the PDO. Kevin McAbee is still working on the HBC recovery plan, and that process is ongoing.

15-MR Flow Target Study Plan Update – David shared that we have a draft study plan for the 15MR. FWS ES requested a review of the 15MR flow targets as part of their PBO review. The Program contracted Tom Chart and Don Anderson to work on this study plan. There is a group comprised of WAC and BC members who are familiar with the Colorado River and 15MR issues and details. David showed an outline of the study plan. The group agreed to review the current conditions on the 15MR given the 20+ years that have passed since the original PBO was written. The group identified 36 key questions for this study, and then those were arranged into topics related to hydrology, biology, etc. They then proposed studies to answer key questions, which are prioritized as essential, high priority, etc. David reviewed some examples of essential studies (modeling future hydrology, map habitat distributions at different key low flows, summarize fish community, improve our understanding of listed species use of the 15 MR under low flow conditions). David then shared the schedule for this review, which extends out past the ‘report due date’ in 2028 and the next formal PBO Review in 2030. Julie said the study plan will go through the BC and WAC before being implemented. She added that one thing that is important for the BC to understand is that this plan will set us up for a flow evaluation similar to

what was done for Flaming Gorge recently. This will allow us to make sure we apply all of the available water pools to the best uses for fish benefits, given it is difficult to reach all of the targets and purposes for the entire year. David added that we also need to consider how a given year's water operations might affect subsequent years' water availability. Dave Speas noted that some of the studies are proposed to start next year and asked how we plan to fund those. Paul asked whether some of the studies were modeling/conceptual versus field based. David answered that some of the field work may involve shifting work in GJ FWCO to prioritize answering some of the essential questions. Julie reminded the group that the study plan is currently an unapproved draft that still needs to go through partner reviews at the BC/WAC. She highlighted some work that might be addressed within the PDO, as well as some field work and pilot studies out of the GJ FWCO. She added there may be some outside funds available through an agency like CWCB. Melissa noted there may be some crossover with the IG2.0 process and modeling happening there. David said we might need finer resolution than some of the existing modeling can provide. Travis Francis noted that some of the BIL projects will help answer some of these questions with the antennas that have been proposed for installation in the 15MR.

Finalize FY24-25 Work Plan for MC Approval – Julie asked the BC members to provide their reactions, feedback, and recommendations based on the prior day's conversation and update. Dave Speas felt like there weren't many changes in the current workplan. He also thought the proposed changes to the scope of work format can be accommodated at Reclamation. He cautioned that planning for the \$6.6M budget might require some difficult decisions if the funding comes in at the same amount as previous years. Julie committed to planning for that situation in the background, but that scenario would likely require some draconian measures. Melissa asked if the new workplan would still look like a project level breakdown similar to past versions (each project listed by number). Julie proposed future workplan discussions should not focus on budgets but on the work being done and needed for the next year. She hopes that funding FTEs at offices will help focus on the work without considering whether it would affect personnel hours. She said that would likely start with the assumption that we only have the current staff levels in the budgets. Dave pointed out that the combined SOWs will require us reporting what work was not done due to hydrology, etc, so that we are accurately capturing completed activities for Performance Progress Reports. Paul expects the new scope format will allow for that flexibility. Dave thinks we need to maintain the individual projects in line item form and arranged by Program elements moving forward. Melissa agreed. Paul asked whether the sub-element categories were helpful. Dave felt like we should keep the old project numbers for a while to maintain continuity. Otherwise he thinks the SOWs contain the same information in a different form. Sarah likes the sub-elements, for those unfamiliar with every project number. Pete asked whether the new SOW format is a benefit given we will maintain the line item format. Paul and Julie thought we can handle it in the backend. Pete asked if the new format would be helpful to field offices if we make changes to their work. Dale thought that it was still helpful. Sarah asked about blank budget values in the line item list. Julie and Paul thought we can re-allocate those, but we need to maintain the line item view since those are the activities we are looking to accomplish each year.

Jenn asked about filling in behind Kevin McAbee and how the office would cover his duties in the future, given funding concerns. Julie reminded everyone that we approached the committees and asked to add the propagation coordinator position a couple of years ago. We used carryover funds to cover the position, and those are now dwindling. She is not looking to fill the position until the new legislation is passed and we have an idea of what the new Program will look like. There is currently not sufficient funding in the PDO budget to hire a NNF coordinator permanently. She thinks NNF is in the best shape of all the elements and does not require as much oversight. Kevin added that the PIs have been really good at self-directing their work while checking in with the PDO. He asked Julie to update the BC on a new position being hired in ES. Julie explained that FWS received some funding for Colorado River issues. Julie and the CO, UT, and WY ES project leaders agreed we needed a position to look at common issues across the upper basin. They agreed to hire a 4-year term position to do all consultations in the upper basin for FWS ES. They can also cover depletion accounting and other ESA work that Kevin has been covering for the PDO. Kevin added that this position will handle PBO reviews, Flaming Gorge compliance via the FGTWG, and consultations in all three states. This will hopefully help relieve some PDO workload and provide some consistency across the field offices in the upper basin.

Julie summarized the next steps for the PDO:

1. Allocate the “Activity A” costs to the individual activities for each field office
2. If the BC is comfortable with rearranging the CPM schedule to 3on/3off and looking into CPW deobligation and the GJ FWCO cuts, we can move forward with the 6.6M budget
3. Finalize existing scopes and post online for review
4. Paul will compile all new start scopes for FY25 consideration and will share them via FileShare

AJ asked if the BC will have an opportunity to look at new starts. Julie said we will forego all of those in 2024, but we can look at them this autumn to consider for 2025 implementation. Melissa reiterated that we have agreed to this new process and we will see the six field office combined scopes in the new format (all other SOWs will be in the old format). Julie explained there will be 6 new combined SOWs. She then asked Kevin Bestgen for his thoughts on delaying CPM sampling to the 3on/3off schedule. He said it poses challenges for parameter estimation since we have to interpolate data across the off years. If there is a need in the future to have a better feel for how a population is doing, there are ways to add smaller effort like the old ISMP electrofishing sampling to fill in information in the off years. Melissa asked if the ISMP style sampling was one of LFL’s proposed new starts. Kevin said no. Kevin also thought there may be ways to use other sampling to inform CPM monitoring. LFL did have a new start proposed to further investigate the use of PIT detections in abundance and other parameter estimation. Dave Speas asked whether the BC is still approving the workplan given the tasks that the PDO still needs to complete. Julie said we are essentially asking the BC to approve the work done over the last year at the funding amounts identified. Dave asked if truncating the CPM effort is temporary. Melissa said we’ve done this in the past. Melissa would like to see the schedule for Colorado pikeminnow and humpback chub estimates. **>Action Item: The PDO will provide the Committee with an updated sampling schedule for Colorado pikeminnow and humpback**

chub assuming a single year delay as requested by the BC. Pete expressed the desire to return to a two-year sampling gap for Colorado pikeminnow following the current three-year gap. Melissa asked about funding amount differences between the file the committee received and the one being presented. Paul explained that was the result of a SOW which was updated this week. The BC approved the workplan.

New Annual Reporting Discussion – Kevin reviewed the intent behind revising the reporting format. We want to preserve collaboration and communication while making the reports easier to find information and more intuitive. We also want to make reports that inform decisions and free up PIs to do more in depth analyses. Kevin proposed that we move to 6 annual reports for nonnative fish work we currently perform. 1. NPK basinwide 2. SMB for the CO R 3. SMB in the Green 4. SMB in the Yampa 5. SMB in the White and 6. a basinwide walleye report. Six field offices are working on these nonnative fish projects. Kevin continued that we would like to maintain some of the previous data analysis formats for individual reaches to preserve continuity in tracking changes over time. He thinks the reports should be an annotated version of the NNF presentations we see at the Researchers Meeting which synthesize data across large scales. In addition to the 6 river reports, Kevin proposed 2 reports for reservoir NNF control work, one for each state (CO and UT). He envisions those containing all the flatwater NNF activities in these two reports, including screen O&M, removal, tournaments, and stocking of sportfish. Kevin outlined the responsibilities. The database coordinator will be a clearinghouse for data and assist in compiling and generating data summaries and analyses. PIs will submit the data early and throughout the season, rather than at the end of the field season. They will also perform analyses and make recommendations. The nonnative fish coordinator will ensure the completeness of the reports, in an effort to give researchers maximum flexibility in generating their own relevant reports. Kevin presented the proposed report assignments for each office and PI. He also included a couple of future proposed reports for consideration, such as fish community monitoring throughout the basin and non-target species compilation. Julie emphasized that this plan only applies to nonnative fish for now. Dave expressed concerns that this format might generate more work for PIs. There was some discussion whether the new reports would amount to the larger technical report format. The PDO did not see these becoming as large, detailed, or complex as the technical reports. Chris Michaud offered his experience that most of the work in writing collaborative reports was getting data from co-PIs. Jenn added that there is some of this work already happening for the Researchers Meeting presentations and the PIs were supportive of this approach. Kevin pointed out that some of this collaboration is already occurring with existing reports. Travis said we might need to adapt to not seeing all of the data collected in a calendar year, due to the schedule of when the removal happens relative to the report writing. Travis pointed out that there are some species that might be included in the identified reports but that has not been fully decided. Katie said we have not identified how this reporting relates to SOW and budgets. She is concerned that funding entire FTEs through the new SOWs may add more work to those FTEs' duties but does not allow us to track the assignments being given to those staff and associated costs. Chris M. said this is not something we can't revisit if it doesn't meet our needs. Jenn L. brought up the importance that lead authors coordinate with PIs so they have the opportunity to review and contribute to reports. Kevin B. thinks this might look like two

separate reports forced together, which might be needed for some period of time. But it also puts the information into a single location and generates synthesis for data across relevant scales. He also asked that we do not eliminate the synthesis reports because of these new annual reports. He also thinks there are studies that should not be pulled into this process for combined reporting. There were questions about methods sections in these reports. Kevin Mc said the idea was to include the methods in detail in the study plan. Dave said the current reports contain details for the biologists' observations that he is worried might be lost. Kevin Bestgen would like to see better executive summaries, guided by the PDO, that are flagged with key words searchable from the website. Melissa asked if this proposal changes the reporting deadline. Kevin Mc said we moved the reporting deadline back a month to accommodate this change, and the deadline will be the same this year (due in January). Shannon suggested developing overarching guidelines for authors using the new annual report model to capture the input and requests from the BC, for example the goals of not losing detail and developing a process for coordination and review by contributing PIs of synthesized annual reports for accuracy and completeness.

Check-in: 2022 Sufficient Progress MC/BC Review – Paul updated the committee that the Sufficient Progress memo is largely finished. Paul wanted to reset the schedule of review PBO actions for the 15-MR to occur in the same years as the Gunnison and Yampa. He discussed this with the Colorado FWS ES office and they agreed to the change. This means the PBO actions reviews for will all occur in years that we are not revising the Program 2-year work plan. Paul thinks the Sufficient Progress will come out for committee review in the next couple of weeks.

Administrative tasks –

Schedule next meeting—Julie proposed a longer, virtual meeting for the fall. October 25th 9am - 3pm via Teams.

Request for Program Support: Sarah Seegert mentioned that the UDWR Aquatics program has a funding process for internal research projects. Their staff and USU proposed a SMB diet study for the White River to identify areas with higher potential impacts to native fish from predation and competition. There is currently a pre-proposal under consideration. UDWR is looking for a letter of support from the Program that indicates it will consider the study's results and would give input in developing and assessing the study. Sarah has a draft pre-proposal and she is looking for feedback on it. She solicited review from the BC in developing this proposal. Julie explained that the PDO often signs letters of support on FWS letterhead. UDWR is seeking a more formal letter from the Program, which would need MC approval. Sarah explained the UDWR is seeking an acknowledgement from the Program that the project is worthwhile and addresses the Program's needs. They also would like some agreement that the Program will take the report recommendations into consideration in guiding future activities. Kevin McAbee said he had worked on the early draft with UDWR and wanted to understand how this project might impact field crews. Melissa wasn't sure a study of this nature would give us much additional information. < **Tildon** will get the USU researchers together with the Program field crews to work through logistics. The BC would like more details from that meeting and in reviewing the proposal. Julie asked if the BC wanted a meeting or to approve this via email. The BC will determine the need for another meeting once they get more information. > **Tildon** will also send

the proposal to the BC.

DAY 2 - ADJOURNED 12:03 p.m.

Assignments List as of July 12, 2023 – Previous tasks completed are described in the opening section of the meeting summary. Only remaining and new assignments are recorded below.

1. **Assigned July 12: Tildon** will assemble an LTSP revision group. Melissa Trammell, Derek Fryer, Dave Speas and Kevin Bestgen offered to be part of the group.
2. **Assigned July 12: Tildon** will send the USU research proposal to the BC for review and confer with the related field stations to determine if any of the proposed work or ancillary coordination will increase project costs or impact existing logistics in a significant way.
 - a. **Biology Committee** will consider providing a statement of Program support for the research project to the Utah Division of Wildlife for their use in determination of providing funding to Utah State University. The Committee has the option to vote by email or hold a short call to discuss this further after Tildon has conferred with Program PI's.
3. **Assigned July 12: Paul** will revise the work plan to cover only FY24, add the proposed new starts as a separate tab of the work plan, and allocate the combined field office budgets to Activities (sub-element groupings of related projects).
4. **Assigned July 12: The PDO** will provide the Committee with an updated sampling schedule for Colorado pikeminnow and humpback chub assuming that pikeminnow sampling on the Colorado river will return to a 3-on 2-off scheduled following the FY24 delay.
5. **Assigned July 12: The PDO** will arrange to have someone available at the August MC meeting to discuss how a PBO would work relative to the Program RIPRAP and the White River Management Plan.
6. **Assigned July 12: Koreen Zelasko and Zane Olsen** will confer and seek additional information to evaluate the size of humpback chub broodstock required to maintain the Desolation lineage.

USFWS GJ-FWCO July 2023 Field Updates

Project 163 – Larval sampling began later than normal due to the high spring and early summer flows and associated low water temperatures. A few passes have been complete. Larval and young-of-year samples will be given to the LFL in the future.

San Juan Arm of Lake Powell – In general, exciting reencounters with juvenile razorback sucker stocked in 2021 and 2022. The two that were physically captured experienced the fastest growth rates ever documented which may provide evidence as to why we don't collect Program defined sizes of juvenile razorback sucker in Lake Powell:

Tag	Stocked Date	Stocked Total Length mm	Captured Date	Captured Total Length mm	Growth mm	Growth per month mm
3DD003D4C4A14	03/01/2022	219	05/07/2023	438	219	15.6
3DD003D4C5606	03/01/2022	207	05/02/2023	405	198	14.1

Juvenile razorback sucker stocked in the San Juan Arm –

2021 – N=3,803 TL range 78-315mm with a mean of 165mm

2022 – N=2,542 TL range 77-278mm with a mean of 147mm

In addition to the two physical captures, 15 were detected on portable antenna in the Spring of 2023 (N=2 stocked in 2021, and N=13 stocked in 2022)

Traditional captures (trammel net and electrofishing) of native fish in the San Juan Arm (n=322) –

razorback sucker – 61 individuals, 1 within year recapture
flannelmouth by razorback sucker hybrids – 16 individuals
flannelmouth sucker – 242 individuals, 29 within year recaptures
Colorado pikeminnow – 3 individuals

Portable submersible antenna resightings in the San Juan Arm (n=271 individual tags) –

razorback sucker – 258 individuals
channel catfish – 2 individuals
Colorado pikeminnow – 1 individual
Unidentified tags with initial encounters not loaded into STReAMS – 10 individual tags

In addition, the San Juan River Basin Recovery Implementation Program has verified (via genetic sampling) that at least 27 of the adult RZ that were translocated upstream over the waterfall have moved upstream and contributed to the successful production of larval RZ in the San Juan River.

126a CO NNF 2023 (sampling through July 3rd) Preliminary Results –

Our office is working with USGS (Patrick Kocovsky, Patrick Hutchins, and Adam Sepulveda) to collect water samples for grass carp eDNA analysis from 11 sites in the CO and GU rivers, to determine presence/absence and prevalence of this species in those river sections.

NNF removed Beswicks, CDOT and Butch Craig (n=1,179)

black bullhead – 148
black crappie – 80
bluegill – 411
hybrid sunfish – 1
common carp - 36
green sunfish – 141
gizzard shad – 8
largemouth bass – 17
white hybrid sucker – 62
white sucker - 302

Endangered fish stocked from Beswicks and CDOT (n=568)

bonytail – 10
razorback sucker – 558

Endangered fish collected in Butch Craig Wetland (n=40)

Colorado pikeminnow – 1 (translocated upstream from Redlands fish passage a few years ago: 2020 or 2021)

Razorback sucker – 39

NNF Removed from river: got a late and slow start due to high flows and low temperatures (n=580)

black bullhead – 8
black crappie – 2
bluegill – 8
green sunfish – 27
gizzard shad – 23
koi - 1
largemouth bass – 9
smallmouth bass – 333 – 72% adults
white by bluehead sucker hybrid – 19
walleye – 16
white by flannelmouth sucker hybrid – 37
white sucker – 97

Endangered fish collected from River (totals include recaptures; n=321)

bonytail – 8
Colorado pikeminnow (lower reach only) – 10
flannelmouth by razorback sucker hybrid – 3
humpback chub – 0
razorback sucker - 300

Price Stubb Detections 2022 (Oct 1, 2022 through July 5th, 2023) Preliminary Results

Individual tags, does not include resightings (n=398)

bluehead sucker – 23

bonytail – 48

Colorado pikeminnow - 0

flannelmouth sucker – 119

flannelmouth by bluehead sucker hybrid – 3

roundtail chub – 19

razorback sucker – 44

UNIDENTIFIED 36% (142/398)

- 1 Distributed to UDWR-Moab 2020
- 1 Distributed to CPW 2013
- 26 Distributed ONFH-GJ 2018-2022
- 1 Distributed GJ FWCO 2020
- 113 are not program tags

GVWU and Redlands Fish Passage – Both opened 4/20/2023 preliminary data through 7/03/2023; due to flooding Redlands was closed from 05/01/2023 – 6/13/2023 and 6/27/2023 – 6/30/2023

After the high flows receded in the Gunnison River this spring, the fish ladder entrance was completely silted in and no water was getting to either the fish ladder entrance or the attraction flow entrance. The bottom end of the attraction flow tube was also completely blocked by accumulated sediment. We were able to get the water flowing and managed to sluice away quite a bit of the sediment. We're getting sediment removal done by Redlands Water and Power this week (via trackhoe/backhoe) in front of the fish ladder entrance in the main channel, as well as in front of the fish return tube. They're also placing new gravel in the area around the fish passage as well.

Redlands Native Fish Totals (n=734):

bluehead sucker – 308

Colorado pikeminnow (both translocated to Escalante boat ramp) - 2

flannelmouth by bluehead sucker hybrid – 7

flannelmouth sucker – 255

razorback sucker - 3

roundtail chub – 159

speckled dace – 1

Redlands Non-native Fish Totals (n=108):

black bullhead – 8

bluegill – 2

brown trout – 2

channel catfish – 4

common carp – 2
green sunfish – 16
gizzard shad – 1
longnose sucker – 1
rainbow trout – 1
white hybrid sucker – 26
white sucker – 55

GVWU's Native Fish Totals (n=3,637):

We've also dealt with extremely heavy sediment loads at the GVWU fish passage this year. We met with GVWU and Grand Valley Scada (Bob Norman) to once again discuss what it would take to get power hard-wired to that fish ladder. The old propane generator is starting to fail and in the last 2 years, we've put about \$13,000 in repairs into it. Having power hard-wired into the site would eliminate the need to buy a new generator (or continue fixing the old one) and let us get rid of the large propane tank we have on site that we have to pay an annual fee to rent and fill.

The current thought process is that we would tap into the power feed that runs the closest roller to provide power for fish passage operations.

bluehead sucker – 265
humpback chub – 2 both were not recaptures more evidence towards a growing population in Debeque Canyon
flannelmouth by bluehead sucker hybrid – 5
flannelmouth sucker – 2,682
mountain whitefish – 7
razorback sucker - 2
roundtail chub – 673
speckled dace – 1

GVWU's Non-native Fish Totals (n=1,476):

brown trout – 7
channel catfish – 3
common carp – 2
longnose sucker – 27
rainbow trout – 3
smallmouth bass – 2
white hybrid sucker – 293
white sucker – 1,139

Redlands Canal PIT tag antenna

For the last 10 months, our office has had a wagon wheel PIT tag antenna set up in the tailrace of the Redlands Water & Power (RW&P) power plant (approx. 2 miles upstream from the canal's confluence with the Colorado River). Darek just downloaded the data from this antenna for the last month (it gets downloaded about once/month). In the last month it detected 17 individual Colorado pikeminnow, at

least 22 individual razorback sucker (still sorting out numbers of individual fish vs. resights for RZ), 3 flannelmouth sucker, and 3 roundtail chub. These numbers are not unusual over the last several months. So, there are a number of PIT-tagged (and probably untagged) native fish that are using this off-channel habitat, where it is almost impossible to sample with traditional methods.

Ouray NFH – Grand Valley Unit

We had our first stocking of bonytail last week. Unfortunately, during our annual fish health inspection, our bonytail were diagnosed (for the first time ever) with a low-level Asian tapeworm infection. Unfortunately, our hatchery doesn't have an isolation room and our ponds lack a separate raceway in which to properly treat fish for Asian tapeworm. Our staff coordinated closely with Koreen Zelasko, Bozeman Fish Health Center staff (Lacey Hopper, Jake Veilleaux, and Rick Cordes), Zane Olsen of Ouray NFH-Randlett Unit, and staff from Colorado Parks and Wildlife staff (Ted Smith, Jenn Logan, April Kraft, Colby Wells, and Matt Nicholl) to come up with an effective and workable treatment solution and identify the proper treatment regime to treat our bonytail for Asian tapeworm prior to releases in the wild. Unfortunately, this adds about 4 days onto the harvest and stocking of each pond of fish, so our stocking options have become much more limited, due to trying to minimize stress on these fish after they have been treated (= intensely manipulated) for 4-5 straight days.

Based on anecdotal evidence, we know that Asian tapeworm already exists in wild, native fish populations (e.g., Colorado pikeminnow) in the Colorado River. However, the level of infection in native fish species has never been documented. Based on this event at our hatchery, and a lot of the discussions we had with the group identified above, we are recommending that UCREFRP consider contributing to the performance of wild fish health surveys to identify the infection rate of Asian tapeworm in wild native fish populations, thus allowing hatcheries to identify whether treatments are necessary/cost effective, and whether or not we are putting out clean fish just to have them get reinfected once they enter the wild.

An inter-agency agreement has been completed to allow BIL funding to be used to purchase/install two new HVAC/dehumidifier units at the 24-Road hatchery building (as well as multiple projects at Ouray NFH-Randlett Unit). We have not seen any money transferred yet and will not be able to spend it until FY-2024 anyway. But this is good news. If equipment can be purchased, manufactured, and shipped quickly enough, these repairs could take place as early as late summer 2024.

UDWR-Moab Field updates for UCREFRP BC Meeting

7/11/2023

Data are preliminary

#123d: Walleye Removal- Lower Green and Lower Colorado Rivers (Sam Brockdorff)

- Walleye removal effort during the 2023 spring field season consisted of 6 days of targeted electrofishing and 27 days of ancillary effort during Project 128.
- Effort during Project 128 removed 47 Walleye from the Lower Green River. The remaining information in this update pertains to targeted removal.
- *Note:* Some targeted effort was combined with training, thus some days had little time put on the electrofishing units and efficacy may be lower due to inexperience.
- Field crews spent 3 days fishing below the Tusher Diversion with a total effort of 5.34 hrs expended, resulting in the removal of 3 Walleye (.56 fish/hr). Additionally, 15 Razorback Sucker were encountered. All effort occurred between mid-March and mid-April with water temperatures rising from 2.7 C to 13.3 C.
- Three days of fishing occurred on the Colorado River as well, targeting the reach from Big Bend to the Moab Bridge. A total of 3.5 hrs of effort was expended resulting in the removal of 2 Walleye (.57 fish/hr). Additional nonnative fish encountered include 6 Smallmouth Bass, 1 Yellow Bullhead, and 1 Grass Carp. Fishing occurred from late April into early May with water temperatures rising from 8 C to 11 C.
- These catch rates are significantly lower than years past, however this is possibly due to a narrow fishing window when water temps were still quite low and inexperienced drivers and netters during training.

#128: Adult Colorado Pikeminnow Monitoring- Lower Green River (summarized by Brian Hines)

- Three sampling passes were successfully completed (4/27-5/06/23, 5/14-5/23/23, 5/31-6/09/23) on the lower Green River from Green River, UT (RM 120.0) to the confluence with the Colorado River (RM 0.0).
- Crews captured 74 Colorado pikeminnow (72 unique fish) ranging in total length from 63-671 mm (61 juvenile (32 < 150 mm), two subadult, and 11 adults).
- *2022: 26 (23 unique) were captured in 2022 ranging in total length from 92-544 mm.*
- A spatially stratified sampling approach was implemented for razorback sucker sampling in the lower Green River in 2023. All razorback sucker were netted in designated reaches (one mile reach for every 10 miles of river) and additional razorback sucker were netted when time allowed. In total, 1,108 razorback sucker were captured (1,054 unique fish) ranging in total length from 215-615 mm. In designated razorback sucker sampling reaches crews encountered 97 razorback suckers (96 unique fish).
- *2022: 818 razorbacks (794 unique) were captured in 2022, of which 176 (166 unique) were in designated razorback reaches.*
- Other endangered fish captured included 21 bonytail and two flannelmouth x razorback sucker hybrids.
- Additionally, crews captured and removed 11 black bullhead, three brown trout, five black crappie, eight channel catfish (>450 mm total length), 16 grass carp, 94 green

sunfish, 10 gizzard shad, five smallmouth bass, 47 walleye, two white sucker, and one yellow bullhead.

- 2022: 15 grass carp, 39 green sunfish, 31 smallmouth bass, 125 walleye, zero gizzard shad.

#160: Larval Razorback Sucker Monitoring- Lower Green and Lower Colorado Rivers

(Blake Hansen and Talitha McGuire)

- Light trap sampling occurred this year on both the Lower Green River - Green River State Park to the confluence (RM: 120 - 0) & Colorado River - Courthouse Wash to Lathrop (RM: 63.9 - 23.5).
- Light trapping efforts were slightly less than previous years as our sample passes were done alongside Pikeminnow population estimates and traps were set when logistically possible.
- Conducted a total of three passes on the Lower Green and the Colorado River.
- This year, all sites sampled were flooded tributaries (as opposed to other low velocity habitat).
- During the first passes of sampling on both reaches, only 5/10 tributary mouths were flooded enough to sample.
- During the first pass, no larval fish were detected throughout 5 sites and a total of 15 set traps.
- First suspected larval suckers were collected during the second pass on May 13 on the Lower Green River reach and May 23 on the Colorado River reach.
- We set 27 traps at 9 sites; 3 traps captured larvae.
- On the third pass we set 30 traps at 10 sites; 27 traps captured larvae.
- 30 of the 72 total light traps set captured larval fish (~41%).
- Of the 10 tributary sites sampled, all yielded larval fish samples by the end of the light trapping sample period of June 13th.
- Sampling for YOY razorbacks via seining will begin July 25th and go through September 7th with a total of two passes scheduled for both the Lower Green and Colorado River.

#176: Matheson Wetlands

- Last year (2022) we discovered green sunfish in the Central Pond. In March of this year, we partnered with the PDO for a day dedicated to assessment, removal, and light mud wrestling. Using backpack electrofishers and seines, hundreds of small (<100 mm TL) sunfish were encountered and removed. The small size suggests possible in-pond reproduction. Further removal will need to occur to completely eradicate sunfish from the wetlands. All options (sodium sulfite?) are currently on the table and our hope is to address this before the next entrainment cycle (April 2024).
- Preceding run-off (early April), screens were lowered into place, the gate was opened, and supplemental water was turned off to allow for a natural inundation (instead of a "pulse").
- The lower Colorado peaked at about 41k on May 19th (as measured at the Cisco gage, actually near Dewey Bridge).
- The control structure was not breached during the peak and was able to hold back a sizable group of carp in the inlet channel.

- Despite this, widespread inundation and flooding indicated water was overbanking somewhere else in the wetlands. Reconnaissance (foot, canoe, drone) revealed that the river had breached several berms and barriers in the south end of the wetland. Adult carp (and likely other large-bodied nonnatives) were able to gain access at these breaches and were observed in the Central Pond.
- Larvae (pending lab ID) were first detected in the lower Colorado River during Project #160 on May 23.
- The gate was closed on June 14th when mainstem flows began consistently dropping but were still above 20k cfs. Current flows remain above 10k but are declining consistently.
- Summer sampling effort has now shifted to monitoring water quantity and quality in the central pond.

UDWR Vernal Field Station

BC Updates on Projects 128, 165, 123b – July 2023

Project 128 CO Pikeminnow:

Pass 1 4/17-4/28: 9 CO Pikeminnow, 35 Razorback

Pass 2 5/1-5/11: 20 CO Pikeminnow, 379 Razorback

Pass 3 5/15-5/25: 6 CO Pikeminnow, 176 Razorback

Total CO Pikeminnow: 35

Total Razorbacks: 590

No CO Pikeminnow recaps between passes but 18 recaps from previous seasons and 17 new fish tagged.

CSU assisted for the first week of pass 2 & 3 when the bulk of RZBs were present.

Data has been submitted to Mich we're working on correlating the chase boat fish to their original sampling boats.

Project 165 – Stewart Lake:

Bonytail stocked May 15th

Antennas deployed on river side of outlet drain and in the wetland on 4/28

Downloaded antennas on 5/23 & 6/14—5/23 DL showed strong Bonytail presence in wetland, 6/14 DL antenna battery failed quickly on wetland side and did not record

Block nets were set up in 2 low water crossings prior to the peak flows; from initial observations it does not appear that large nonnatives were able to enter the wetland

Began filling the wetland on 6/2 this continued until the afternoon of 6/14

Final gauge height at gate closure in wetland was 6.91'

Light traps were deployed for 2 nights 6/7-6/9 mid filling and larval Razorbacks were detected in increasing numbers (40+; preliminary ID by Saidee + Mike) there was not time for more light trapping post fill

Supplemental water was called for on 6/22 and arrived 48 hours after on 6/24

Project 123b—NNF removal GR

Fyke nets and tributary e-fishing was conducted 5/29-5/31

Nets were set in Brush Creek & Stewart Lake Drain; shocking was done in the same plus an attempt in Ashley Creek but due to high water no nets were set in Ashley.

Fykes: 2 Walleye, 1 Northern Pike, 2 White Sucker, 4 Smallmouth Bass, 2 CO Pikeminnow, 36 Razorback, 3 Bonytail

E-fishing: 7 White Sucker

1 Razorback in a fyke in Stewart Drain was from the October 2022 Stewart Lake release and we put that fish back into Stewart for another growing season. (193mmTL)

One day of shocking removal was conducted on the Duchesne River starting 5 miles upstream of the confluence with the Green River on 6/5—data can be provided upon request from the tribe

Surge shocking was completed at island park on 6/20 & 6/21

2 Brown Trout, 3 Northern Pike, 29 Smallmouth Bass, 17 White Sucker

A day of targeted SMB removal in the first 15 miles of the middle GR was conducted on 7/5

2 Green Sunfish, 45 Smallmouth Bass, 3 White Sucker, 2 CO Pikeminnow

It was noted that the Pikeminnow that were handled were both male and one was expressing gametes and tuberculated (captured in MGR section A)

Project 167- White River Smallmouth Bass Removal

Pass 1 06/12-06/14 Big Trujillo boat launch to Bonanza Bridge: Smallmouth Bass: 14, Green Sunfish: 2, Black Crappie: 2

Pass 2 06/26-06/30 Big Trujillo boat launch to Enron takeout: Smallmouth Bass: 29, Black Crappie: 8, WhitexBluehead Hybrid: 4, White Sucker: 2

Pass 3 to be completed on 07/12-07/14

Total SMB: 43

8 Roundtail were collected during the first pass.

Data will be submitted after all passes have been completed.

Project 180

Red Fleet screen flows went up to about 150 cfs so they could avoid spilling. That made it difficult to clean the structure, but we just went out 3x / week over the runoff period and cleaned it as best they could. It was a good effort between natives and sportfish to get it done, especially since our maintenance guy left at the end of May. Apparently the reservoir did spill a little, but it wasn't extensive and the screen we have across the spillway worked just fine (no blowouts). And they didn't have to raise the outflow any higher so the main screen did stay functional. We pretty much just have to open it up around flows of 175 cfs.

Starvation is spilling bigger than what I ever remember seeing it. Troy O at CUWCD says it's been between 300-350 cfs is all. This is the first time it's ever overtopped our waders. When State Parks cleaned it, they used a canoe to get out and not have to swim. Those of us just relying on waders were pretty much only able to get about halfway across. But we've been able to clean the nearshore half pretty well and like I said, State Parks has been able to clean it really well (this week). Troy says it's going to continue for at least a week, if not 2 more. And Starvation seems to be more full than even last week. It's at 101% capacity now and was at 100.5% or so when I went out when it overtopped my waders. The

screen is barely visible above the top of the water level in places and I think it's possible that we likely will have escapement this year. The one thing that may save us is that walleye like the bottom and it's just overtopping the screen so maybe the walleye won't find those weak points. We'll keep sending folks out, keep cleaning what we can, and we'll get out and treat the stilling basin in October. It will likely require a maintenance day after the spill as well. I am actually meeting the engineer out there today so he can see what it looks like during the spill and see how the temp screen is functioning. Not sure it will help or what, but we feel like it might be useful for him to see it at this level of spill.

CPW- UCRRP updates July 12, 2023

White River smallmouth bass nonnative fish control

The equivalent of 6 days of removal effort occurred on the White River below Taylor Draw Dam between June 19 and June 28. Flows continued to be high but temperatures began to approach 16 C by June 23. The majority of the catch occurred in the reach directly below the dam. Catch rates (although not yet calculated) appeared to be continuing in a downward trend for the 2nd year in a row.

Yampa River nonnative fish control

CPW expended 22 days of effort on the Yampa River this year (18 days on 98a reach, 2 days helping CSU in Lily Park, 2 days for white sucker pop estimate). During the 98a work, CPW captured 82 northern pike for a CPUE of 0.45 fish/hour (slightly higher CPUE than last year). CPW also removed 1273 smallmouth bass and 12,752 white sucker. The total number of each species was less than last year but catch rates have not yet been calculated. CPW conducted a 2 day mark/recapture survey following removal passes. The effort was targeted at estimating white sucker abundance but all species were collecting during this survey. The survey took place as flows declined and resulted in the removal of an additional 19 northern pike and a higher catch rate (1.69 fish/hour) than occurred during targeted removal passes. It is likely that high flows this year allowed pike to better evade capture during spring electrofishing efforts. Also, it is important to note that backwater netting efforts were reduced this year because the Yampa River went from ice to flood stage very quickly.

Rifle Municipal Pond

Biologists broke ice off the pond on March 20th to set nets. Nets were set from March 20-27th and removed 74 northern pike. Most were age 2 fish with a handful of age 1. Only one fish appeared to be sexually mature.

Mamm Creek Pits

River flows never reached levels high enough to breach the Mamm Creek Pits this year. The Merwin trap was not deployed.

Kenney Reservoir

Work was conducted from April 17-20. Trap nets were left overnight in potential northern pike spawning habitat. Gill nets were set during the day and checked every two hours to limit by catch of native species. No northern pike were captured in 2023. Three species were captured and PIT tagged during the project. Unfortunately, we are seeing an increase in nonnative hybrid sucker. The source of these fish is unknown. Very few non-native sucker or hybrids have been found in the White River upstream of Kenney Reservoir.

Upper Yampa River reservoir and pond nonnative fish control

Targeted removal of northern pike was conducted at Lake Catamount, Casey's Pond, and the county road 16 pond. A reduction in catch rates from 2022 levels occurred at Casey's Pond and the county road 16 pond. Catch rates are not calculated yet for Lake Catamount but resulted in similar numbers removed

as spring 2022 efforts. Removal of northern pike and walleye occurred opportunistically during sampling events at Stagecoach Reservoir.

Elkhead Reservoir tournament

Pre-tournament, CPW captured and marked 204 adult northern pike and 139 adult smallmouth bass. During the tournament, 150 registered anglers turned in 417 northern pike (370 adults) and 628 smallmouth bass (263 adults). Population estimates are not yet calculated. Overall the tournament went really well. There were more anglers registered than last year and they were catching primarily pre-spawn bass. Less fish were turned in during the 2023 tournament compared to the 2022 tournament but it is undetermined if it was related to tough fishing conditions or smaller populations. Tiger muskie were stocked in Elkhead and have been a part of that fishery since September of 2022.

Ridgway Reservoir

Reservoir levels reached the screen for the first time this year. The screen appeared to operate as expected.

The Ridgway Reservoir Classic Tournament is under way from July 8 through August 6. Registered anglers specifically target smallmouth bass for cash prizes.

Highline Lake

Monitoring continues on a weekly basis following treatment of Highline Lake for zebra mussels. There have been no detections of veligers, settlers, or adult zebra mussels.

Antennas

Salt Creek antennas are running. Due to staff shortages and high flows, antennas have not yet been deployed in the Maybell ditch.

Stocking

500 bonytail stocked in Salt Creek on March 28.

Other notable projects

CPW has been investigating the utility of using genetic markers for identifying northern pike sources. Initial investigation is showing some genetic differences that could potentially be used to identify sources of illegal introductions of northern pike. Genetic testing could provide a quick and cost efficient tool compared to stable isotope testing of otoliths. CPW is hoping to secure funding to further the genetic investigation in 2024.

CPW has provided funds to contract the 30% design and cost estimate of two outlet screens to prevent fish escapement at the Rifle Municipal Pond and the Clifton Nature Pond.

Flows allowed for native fish survey work on the Dolores River for the first time since 2019. Two reaches were sampled with the catch dominated by native species, primarily flannelmouth sucker, bluehead sucker and roundtail chub.

