



Upper Colorado River Endangered Fish Recovery Program

Dated: April 30, 2018

December 4–5, 2017, Management Committee Meeting Summary Utah Department of Natural Resources, Salt Lake City

Monday, December 4

CONVENE: 1:00 p.m.

1. Introductions, review/modify agenda and time allocations, and appoint a timekeeper - Henry Maddux introduced Todd Adams who will replace Henry (retiring December 31) on the Management Committee and Chris Keleher, who will be Utah's alternate on the Committee (Chris will be Utah's new recovery programs director). Tom Chart announced that Kevin McAbee will be acting deputy director of the Recovery Program while USFWS works through formally replacing Angela (retiring December 31). Brent said Kathy Callister and Ryan Christianson will be taking over his work on the Management Committee (sharing one vote), as he retires December 31, also.
2. Action item: Approve previous meeting and webinar summaries – The Committee approved the August meeting summary as revised; Kantola will clean typos from tracked changes. The Committee approved the September 1 and 11 call summaries with revisions. >Angela Kantola will post all three in final to the listserv (*done*).
3. Recovery planning update
 - Tom Czapla said a draft Colorado pikeminnow population viability analysis (PVA) report is out for review, with a few folks still needing to submit comments. After comments are addressed, the group will meet to review. The PVA will serve as the final chapter in the species status assessment (SSA). As per the PVA Scope of Work the report will go to the Programs Biology Committee for review, as will the full SSA also will go to the Program's committees for review, also.
 - The Program Director's office has been primarily focused on the humpback chub SSA in recent weeks. The Science Advisory subgroup met on November 9 to discuss changes from version 7 to 8, and to evaluate future scenarios. This version was presented to Service ARDs (Regions 6 and 2) last week. Viability in the SSA is considered at 16 years, but the Service was unsure that was adequate for a foreseeable future analysis. A revised draft SSA went to the Regional Director on November 30; and a meeting is scheduled for December 13. Henry said 40 years seems like a very long timeframe for foreseeable future for this species. Marj said the time horizon is not based on certainty of future, but rather to give space to decision makers to consider the species and the threats.
 - The razorback sucker SSA is being edited and re-formatted and will go out for review soon.
4. Colorado Parks & Wildlife (CPW) request for cost share on Maybell Boat launch – The Yampa State Park boat ramp has been difficult for Recovery Program crews to use and it was especially bad in 2017. CPW has completed a design and in-house cost estimate and is asking for 50% cost share. Lori Martin introduced the proposal to realign and re-work the boat ramp to create a long-term solution with construction in fall 2018. This is leased State Park property for which the lease was just renewed for 20 years. Steve Wolff asked if this might qualify for Wallop-Breaux funding. >Harry will check (*done*). Krissy said Utah has

cost-shared with sportfish restoration motorboat access fees in the past, but Lori said Colorado doesn't have funds available with motorboat access. Lori said they have discussed a 50% cost share of the \$81K construction cost. Melissa Trammell asked if Colorado had considered GOCO funding. Lori doesn't know if GOCO funds are available, but they want to complete the realignment before spring 2019. GOCO funds are usually on 6 or 12-month cycle; Brent agreed GOCO likely wouldn't work for this timeline. Tom Chart suggested capital funds might be appropriate for the cost share if the Committee is willing. Brent agreed that if other sources of funding aren't available, then this would be an appropriate use of capital funds. Perhaps this could be attached to Reclamation's agreement with Colorado for annual funds (>Dave Speas can see if that could be added to their existing agreement [*done*]). If that won't work, we could consider using some of Wyoming's remaining capital dollars at NFWF. The Committee will think about this and discuss further tomorrow under the capital projects update. Tom Chart asked if Colorado has other boat ramps with similar needs and Lori said she doesn't foresee anything else this major in the near future on the Yampa River.

Follow-up discussion on Tuesday: Harry checked into Wallop-Breaux funding, but it's the same source as "motorboat access funding," which already has been obligated. GOCO funding doesn't seem like a likely option. Brent recommends using appropriated capital funds (\$41K), assuming those can be appended to Colorado's 2018 annual funding agreement with Reclamation (if not, they would use Wyoming's NFWF) funding. (Subsequent to the meeting, Dave Speas and Brent Uilenberg checked into the best avenue for providing these funds, and concluded it would be difficult to do so as part of Reclamation's agreement with Colorado for annual funds. Therefore, they recommended Wyoming NFWF funds [remaining from a return of funds on a previous project]; and Wyoming approved.) The Committee approved this (expecting it is a unique, one-time case). Craig Walker asked about waiting until Colorado remedies their boater access funds shortfall, but although Colorado tried to find alternative funds for AIS last year, they remain short and they believe this project is urgent enough to warrant Program cost share.

5. Sufficient progress update – This year's memo, with an abbreviated species status section (and no review of PBOs), has been through Program and Service review, a final review by the Management Committee, and now the final memo is in the Regional Director's office for signature. Henry Maddux suggests considering expanding our use of this abbreviated format. He didn't feel like the memo was missing anything and thinks perhaps the abbreviated format could be used four out of five years instead of every other year. The Committee also may want to consider how species status assessments might be referenced in future full-length sufficient progress assessments. We would still have to figure out when to include reviews of action items in PBOs for the Colorado River subbasin and Green River subbasin (perhaps those could be done in even-numbered years). The Program Director's office supports this suggestion. Melissa Trammell agreed and suggested it may be up to the Service's Regional Director. >Tom Chart will circle back with Noreen on her impression of the abbreviated format. Tom Pitts said the water users support this proposal as long as the memo recognizes Program accomplishments; states that the Program is providing ESA compliance for water projects, and clearly expresses any Service concerns regarding actions to maintain ESA compliance for water projects. Tom Pitts suggested documenting this recommendation, perhaps a memo from the Program Director's office to the Regional Director with a response or concurrence (>the Program Director's office will draft a memo for Committee review).
6. Update on proposal to reauthorize Program annual funding – On November 29, 2017, Senator Cory Gardner (R-CO), along with Senators Orrin Hatch (R-UT), Michael Bennet (D-CO), Martin Heinrich (D-NM) and Tom Udall (D-NM), introduced **S. 2166**, the Endangered Fish Recovery Programs Extension Act of 2017. Representative John Curtis (R-UT) introduced companion legislation, **H.R. 4465**, in the House on November 28. On December 6, 10:00 a.m. EST, the House Natural Resources Committee's Subcommittee on Water, Power and Oceans will hold a legislative hearing on the bill, the "*Endangered Fish Recovery Programs Extension Act of 2017*, to maintain annual base funding for the Upper Colorado and San Juan

fish recovery programs through fiscal year 2023, to require a report on the implementation of those programs, and for other purposes.” Henry Maddux thanked the non-Federal Program participants, especially Tom Pitts, for their work on this. Tom Pitts said water users submitted numerous letters of support on the legislation. Henry said that having the same language introduced in both the House and Senate will help move this forward. Both bills have strong bipartisan co-sponsorship and have received good press. Henry, Andy Colosimo (Colorado Springs Utilities) and Jimmy Hague (The Nature Conservancy) will testify at Wednesday morning’s hearing. Tom Pitts reported that the bill likely will go to the House floor in January or February bundled with other non-controversial legislation. On the Senate side, it likely won’t have a hearing until January, but should be passed by February.

7. Develop process to define a post-2023 Recovery Program and requisite funding mechanisms – Tom Pitts introduced the topic, noting that even if all the fish are de-listed, the Programs will need at minimum need continued funding in both Programs for monitoring, facilities O&M, and rehabilitation of capital facilities as those facilities age (fish screens, fish passages, refugia (if needed), Elkhead Reservoir, flooded bottomlands, etc). Funding levels need to be defined. Since all four species will not be delisted by 2023, the participants need to determine what institutional format is needed after 2023, i.e., recovery programs, habitat conservation programs, or something altogether new. What will need to be funded at what levels, and the funding sources (cost-sharing proposal). Tom Pitts envisions something like another “Blue Book” to define post-2023 needs, goals, and funding arrangements. A similar document will be needed for the San Juan Program. Funding arrangements by participants will have to be renegotiated for both the Upper Colorado and San Juan programs and proposed to Congress in revised legislation authorizing any federal/power revenue funding beyond 2023. Tom Pitts offered his opinion that participants need to look at what recovery means in these large river systems. Threats such as drought, climate change, and nonnative fish will persist. This doesn’t fit the ESA ‘recovery’ model of eliminating threats resulting in continuously increasing populations, and then having self-sustaining populations. Perhaps recovery means maintaining the populations with the fluctuations that occur and avoiding extinction. Henry said the programs won’t have a large construction component going forward into this next phase, but we will have O&M and replacement costs. We can anticipate some continuing adaptive management activities, even post-delisting. One option would be to write the post-2023 plan as if the fish would be de-listed, understanding this may take a while. We need to characterize a new longer-term maintenance phase of O&M&R, monitoring, and adaptive management. If we were to just ask for a 20-year extension of the status quo, it would be a difficult political sell. Tom Pitts suggested the revised recovery plans will need to be consistent with the institutional and legislative arrangements defined by the programs’ participants. Tom Chart said he thinks the humpback chub SSA will lead quickly to the recovery plan and we will need to identify commitments to ongoing management in this highly-regulated big river system. Perhaps this can be done by structuring those commitments around conservation agreements. Shane Capron said it feels like we brought in the ambulance and did the triage and now are getting to the place where we can begin thinking about downlisting. This is forcing us to consider long-term and what partnerships should look like post-delisting. The SSA took longer than we thought. Timelines are going to be an important and challenging part of the discussion. Species’ responses over pretty long timeframes will have to dovetail with what we describe in the post-2023 scenario. Tom Chart suggested that if demographics and threats have been addressed at downlisting, then de-listing could follow quickly once institutional protections (e.g., conservation agreements) are in place. Shane is concerned it could be more difficult to get to delisting than downlisting. Henry suggested that Brent’s approach to identifying average O&M costs going forward is a good example, and now we’ll need to discuss what other elements, including monitoring, hatchery production, nonnative fish management, and flow protection, will need to look like going forward and what they will cost. There will be pressure to reduce costs. Tom Pitts said he thinks this is why we may need to redefine recovery in a large river basin: will we be able to achieve traditional recovery goals in this highly-managed big river system? Patrick McCarthy agreed folks have questions about this and perhaps we need to reformat the Program in a new phase. Patrick suggested it might be reframed as more of an adaptive management or

conservation management program with the goal of sustaining the progress we've made to date. Henry suggested we don't have a process yet, nor have we defined what we're writing towards at this point. Tom Pitts noted that we have identified in the RIPRAP the action items that need to continue and can start there. Tom asked if the San Juan Program has done something similar. Tom Chart suggested we talk with the San Juan Program about this up front. A strong presence from Service regional office folks (e.g., Marj in Region 6) also will be needed to adequately track the Service perspective. Brent suggested we go through those items identified in the RIPRAP as continuing and work from there (and doesn't see that will be that different from what we're doing now). Shane said he thinks the difference may be what it takes to manage nonnative fish to get us to de-listing. Henry noted we will have screened most of the reservoirs that are nonnative fish sources, and the question will be what else is needed after those are addressed. Tom Chart asked about commitments made in records of decisions on Flaming Gorge and Aspinall; Brent said he thinks those are solid, but he is concerned about the Colorado mainstem with so many different entities and voluntary activities. Kevin McAbee said we will need comprehensive basin-by-basin plans for nonnative fish management. We also haven't mentioned landscape scale management to disadvantage nonnative fish, like a smallmouth bass spike flow. Kevin thinks we're getting closer to a much more comprehensive nonnative fish management effort; Tom Chart agreed, noting we've been continually ramping that up. Henry added that we characterize everything related to recovery of these species as a product of programs, but we also need to recognize activities outside the programs (e.g., Grand Canyon humpback chub). Kathy Callister raised the issue of how the Upper Colorado and San Juan programs are administered going forward (separately or together); Shane added that the question of a recovery program for the lower basin also has been raised. Would we want to tie in lower basin humpback chub? Krissy Wilson noted the lower basin will want to be addressed in razorback and Colorado pikeminnow down listing. Krissy said that the states' Section 6 agreements requires the states to enter into a conservation agreement when a species is delisted. Krissy added that we need to describe what post-2023 looks like with the potential of some species downlisted and some not.

The group agreed the next step would be reviewing column N in the RIPRAP tables (anticipated post-Program activities). Identifying costs of those will be a next step. Henry suggested identifying post-2023 options (e.g., reduced or changed hatchery production at certain time milestones, reduced or changed species monitoring), etc.

The next step is to schedule meetings and develop a skeleton structure for process. The PDO can review that column in the RIPRAP as part of their January review. Henry suggested that review be done with an eye to how it could be divided into workable chunks that committees or subgroups can work on.

The next report to Congress is due September 30, 2021; Patrick suggested working backwards to develop a process and timeline. As far as post-recovery examples, Shane said the Stellar's sea lion may offer an example. Plenty of ongoing management is required to keep species off the list. Negative effects on these species will always be present, but aren't necessarily threats that would put them back on the list. Tom Chart said that Service folks can help us with this, also.

Henry asked >Committee members to look at column N of the RIPRAP and provide comments (e.g., additions/subtractions, additional level of detail) to the PDO prior to January 16 when the PDO will begin reviewing the RIPRAP and suggesting revisions. Angela Kantola suggested Committee members consider whether they might want to each recommend a short (1 paragraph) list of activities they believe should continue, end, and begin post-2023 (a variant on a "start-stop-continue" exercise)

Steve asked about what Krissy raised -- do we need to look at more coordination with the lower basin? (Note: coordination vs. incorporation so that group size remains workable). Lain asked about Basin Fund constraints. Tom Pitts said the authorizing legislation is a separate issue -- it is just for the Upper Colorado

and San Juan programs. Katrina Grantz said the Basin Fund is used to fund the Grand Canyon Adaptive Management Program and other programs. Kathy echoed the question of how we will manage species with different listing status post-2023.

Follow-up discussion on Tuesday: Tom Chart thought yesterday's discussion was a helpful start. Committee members will review column N in the RIPRAP and their continue-stop-start summary as discussed above. Brent's discussion of long-term capital project maintenance also is helpful. Funding sources also will be a concern. Steve said we will need to have all this sorted out by 2021. (Kathy Callister clarified that Federal budgets are submitted three years in advance; therefore, Reclamation will need information by 2020.) Steve suggested a small group meet after the first of the year to develop a framework for moving forward. Then the next discussion of the full Committee on this topic would be at the in-person meeting in April. Volunteers for the small group are: Steve, Ryan and Kathy, and others who respond to email. >The PDO will send out a Doodle poll for early February (*done*). Henry's and Brent's input also will be important before they leave. Shane suggested it may help newer folks to review how the Program was formulated and the issues that addressed and resolved when the Program was negotiated in the mid-1980s as a kick-off to this discussion. Tom Pitts said he'd be willing to provide a 20-30 minute overview for the April 10-11 meeting. >Tom Chart will talk to the San Juan Program about how they want to participate (*done*). The Coordination Committee might want to join the April meeting via webinar for Tom Pitts' presentation. >Tom Chart will suggest that Sharon send the post-2023 discussion from this summary to her committees (*done*).

ADJOURN 4:30 p.m.

After the meeting on Monday, the Committee and others enjoyed a dinner in honor of Henry Maddux and Brent Uilenberg, both of whom are retiring December 31, 2017 (see Attachment 3).

Tuesday, December 5

CONVENE: 9:00 a.m.

8. Presentations

Don Anderson and Tom Chart presented Brenda Alcorn of the Colorado Basin River Forecast Center with a plaque of appreciation for providing timely informational support to water users throughout the mainstem upper Colorado River basin and to recovery efforts for the endangered fishes:

*She logged-in to our calls almost weekly,
After crystal-ball gazing obliquely,
She provided great insight
And mostly she's been right;
Thus supporting our progress uniquely.*

Tom Chart and Angela Kantola presented Brent Uilenberg with Tomelleri prints of the four fish in appreciation for his many years of service to the Recovery Program, highlighting his phenomenal work on capital projects throughout the basin.

9. Updates

- Update on the GREAT committee's review of flow recommendations in Muth et al. – Kevin Bestgen provided background on evaluation of the Muth et al. Green River flow and temperature

recommendations. Kevin said that since the biological opinion was finalized, new information has been gained on floodplain wetlands and razorback recruitment, larval trigger flows, baseflow effects on pikeminnow recruitment, and nonnative fishes. The GREAT's evaluation is nearing completion, with additional modeling analysis being provided by Heather Patno at Reclamation, and a draft report is expected March 31, 2018.

- Nonnative fish screening - Attachment 4 – Kevin McAbee reviewed the current condition of 5 reservoirs considered most important with the goal to complete all by 2020/2023. Kevin praised UDWR for all of their efforts at Starvation and Red Fleet (screen planned to be installed after an environmental review around Ute ladies' tress). Paul Badame noted an MOU is being developed for funding transfers from Reclamation. Brent said an additional O&M contract would probably be necessary before funds could be transferred. With regard to cost-share, Brent recommends the Committee strategize expenditure of remaining funds and need for long-term OM&R. One strategy would be to spend a fair bit on rehabilitation and replacement now to reduce the amount of funds we'll need to request over the longer-term. To employ that strategy, we will need to conserve what funds we can and look for as much cost-share as possible on currently planned capital projects like Starvation, Red Fleet, and Ridgway. Steve asked about contingencies; Brent suggested we might leave a couple of million dollars in the fund until 2023 then use that for replacement costs in 2023 if no emergencies arise. Tom Pitts asked >Brent will provide a list of O&M contracts and their expiration dates (*done*). Craig suggested that spreading out construction dates might help Utah with replacement costs in the long-term. Kevin McAbee agreed, but said we're also trying to complete all these projects within about a 6-year timeframe. Fortunately, the structures are different and thus may have different life spans. >Kevin will work on adding expected structure life-spans to the reservoir list. Kevin reviewed Scofield (UDWR has chosen to establish a sterile walleye population, which the Program requires to be sterile and to have a screening device in place to prevent escapement). The Program does not have cost share on this project. Craig Walker said it's cheaper to put a net on the reservoir than to treat the reservoir every 6 or so years for illegal introductions. Ridgway is the reservoir with illegally introduced smallmouth bass potentially affecting the Gunnison, but is also the most complex to screen from an engineering perspective. A working group is developing a solution, likely a net. Kevin anticipates that this net will be more expensive than the one at Elkhead. In the interim, water users are working hard not to spill and CPW is holding tournaments to reduce the population. Brett noted that Ryan has developed an O&M contract for Ridgway Reservoir, which is currently being negotiated with Tri-County Water. Catamount and Stagecoach contain northern pike and walleye, respectively. We can treat both of them with a single screen at Catamount and management actions in both reservoirs. Kevin and CPW have been working with the Catamount Metro District and an initial stakeholder meeting is scheduled for January to discuss water management, sportfish concerns, etc. to develop an alternatives analysis. Kevin said many stakeholders (citizens and the Metro District Board) are supportive of solutions and of native fish. Michelle Garrison said Colorado Water Conservation Board will have at least \$1M to provide for the Ridgway solution and will provide funds (amount to be determined) for Catamount, as well. The Committee thanked CWCB.
- Colorado's Nonnative Fish Work Group and harvest incentive tournaments – Michelle said the Work Group continues to meet and provided a report to CPW Director Bob Broscheid in November 2016. "Must kill" may not be an option CPW can implement in the near future, but CPW has implemented several other strategies. Bag limits on northern pike and small mouth bass have been removed in the Colorado River Basin (e.g., bag limits, etc.). Elkhead and Ridgway fishing tournaments will continue. Participation and cash prizes are increasing each year. At Ridgway, captures have increased from ~21% of adult smallmouth population in the tournament a couple of years ago to 53% this past year, resulting in the lowest population estimate in the reservoir since 2015. In addition, although some in the local angling community have opposed the tournament at Elkhead, it was very successful this year. Cash prizes like those used at Elkhead seem to provide a better incentive, so those will be used at Ridgway

next year. Melanie has offered to help with additional community outreach in connection with next year's tournament. Tom Pitts noted the water users have participated in this work group (following their request to CPW in 2014 for must-kill regulations). The group has been very successful and Tom commended CPW on the fishing tournaments, which require a great deal of work. Brett Gracely of Colorado Springs Utilities has been participating in the group and suggested water users might help spread the message of nonnative fish management to customers through bill stuffers and newsletters. Melanie drafted articles for inclusion in water user bills, etc. Aurora put an article in their newsletter that went to 90,000 households, the River District included information on their website, and Grand Junction is working on something now. Krissy asked about "fishery management incentive payments" offered at River District reservoirs (e.g. \$20/fish at Wolford). Melissa relayed data provided by Ray Tenney: no funds were paid out in 2016; in 2017, 24 pike were turned in. Even though the numbers have not been high, this is an important part of our overall messaging. Kevin McAbee noted that the Work Group also has been discussing how to address legal disposal of unwanted smallmouth bass and northern pike in Colorado.

- Capital projects – Brent said Tusher Wash entrainment preclusion is in progress with designs complete and a specifications package submitted to Salt Lake with a target award date of August 2018. The \$1.5M grant for the Grand Valley power plant rehabilitation has been awarded and Orchard Mesa Irrigation District (OMID) received \$0.9M from the USBR [WaterSMART Grant Program](#). Construction/rehabilitation likely won't be completed by this spring, which could raise some issues. OMID's canal automation system is largely in place. OMID will see how things proceed this coming season and then determine the best use of the small amount of remaining funds. Methods of establishing a benchmark and monitoring performance still need to be determined and Brent will provide suggestions for this. The remaining capital project ceiling is being indexed now; currently we estimate we have ~\$6.7M or a little less remaining. This will likely be used for the reservoir escapement structures and a \$1M placeholder in 2020 for floodplain habitat development. Brent recommends we use \$20K in capital funds for initial design at Stirrup floodplain. We have bathymetry and need to determine next steps. Tom Chart agreed and said he thinks the Stirrup is a worthy site. The Committee approved.
 - Drought Contingency update – Drought Contingency Planning in the Colorado River basin consists of three main pieces – Upper Basin Plan, Lower Basin Plan and a new Minute with Mexico. Steve Wolff said the new Minute has been completed (Minute 323). The Upper Basin Plan has three components, but the most relevant piece to this group is an agreement on CRSP reservoir operations. This agreement has almost been finalized. The Lower Basin Plan has been delayed, but will hopefully be completed in 2018. Ultimately, federal legislation will be needed to implement all of this.
 - Steve asked Todd Adams to update the group on the status of the Lake Powell pipeline. Todd said there was a public Reclamation contract-negotiating meeting yesterday with the State of Utah for a proposed exchange of water out of Lake Powell to serve the pipeline; those discussions also address Flaming Gorge releases in connection with that project.
 - Health condition profiles – Tom Czaplá said UDWR sponsored an HCP workshop in Grand Junction last week. All hatcheries stocking Bonytail and razorback sucker will do full health condition profiles on 50-60 fish each year going forward to better understand the condition of fish we're stocking. Tom said it was a great workshop and thanked Utah for sponsoring it.
10. Floodplain Management – Tom Chart reviewed the importance of floodplain management that serves as nursery habitat. Site management is more intense than originally predicted, but is required to exclude nonnative predators, manage water quality and quantity, and adequately fill and drain the wetlands. Stewart

Lake continues to be the most productive location, and the Programs has been working to reproduce that model at other sites. In the fall of 2016, more than 2,000 wild razorback suckers were released from Stewart Lake back into the river. To use capital funding to create new locations like the Stewart Lake model, Reclamation has asked us to prioritize efforts across the basin based on the likelihood of the most important attributes at each sites (i.e. proximity to spawning sites, ability to connect, ability to install control structures), and this has been provided to the Biology Committee. The most promising wetland on the list was the Stirrup. It is important to recognize the ongoing maintenance of these wetlands. Brent said recent repairs to the outlet water control structure at Stewart Lake are now completed and working. Another issue at Stewart Lake is increasing encroachment of cattails that is decreasing open water habitat for larval razorback. UDWR is working on a burn plan to remove these cattails (Attachment 5). Krissy described the burn that is scheduled for April 2018. In the future, UDWR plans to section off the wetland and burn a section each year. Krissy praised Matt Breen for his work on this project. With regard to questions about burn residue, Krissy said Matt Breen hopes to flush that out before razorback would be present. Brent pointed out this is another example of ongoing management that will continue to be required post-2023.

Matheson Preserve – Paul Badame said TNC co-owns the property and is providing cost share and UDWR is looking for sources of additional funds. Restoration likely will start small (~3 acres) with the potential to expand to 20-30 acres.

11. Member updates

- Patrick said TNC is working on a project similar to the Matheson Preserve with Four Corners Power Plant mitigation funds to restore a site on the San Juan. Their Biology Committee is reviewing potential effectiveness and Patrick has recommended they look at upper basin projects to compare notes.
- Melissa noted that related to the GREAT team, the Park Service has some concerns about channel simplification in the Green River in Dinosaur National Monument. The Park Service commissioned a white paper completed by Jonathan Friedman that offers suggestions for monitoring and mitigation. A draft has been shared with the GREAT and a final will be out within a couple of months.
- The Park Service is working on an EA in the Grand Canyon to expand its capability for managing nonnative fish. Materials are on their website and the comment period has been extended to January 5.
- A group of Humpback chub experts, commission by the Recovery Program, has convened to consider reestablishing humpback chub in Yampa Canyon (and discussions have expanded beyond just Yampa Canyon). Rich Valdez provided a draft that Melissa is reviewing. She plans to reconvene the group with the goal of developing a ranked list of potential sites for translocation/reintroduction.
- Michelle said Colorado will have draft depletion accounting for the Colorado and Yampa rivers to Tom Chart by the end of December and to the WAC in January.

12. Review previous meeting assignments – See Attachment 1.

13. Management Committee chair – Tom Chart said Committee has had only a handful of chairs with a precedent of a state representative serving because states are beneficiaries of ESA compliance, they lead communication with Congress, and they also will lead as we begin to consider the long-term protection of the fish via conservation agreements. The Committee nominated and approved Steve Wolff as the new chair and thanked him for his willingness to assume this responsibility.

14. Dates for D.C. briefing trip - Trip participants are holding the dates of March 19-23 for the trip, which fits with the House calendar (no Senate calendar is available yet, but likely will be compatible).
15. Action item: Schedule next meeting, webinar, or conference call – The Committee typically schedules an in-person meeting in March (agenda items include review/approval of RIPRAP revisions), but likely will want to schedule a webinar before then to discuss legislation and the post-2023 Recovery Program. The next Implementation Committee is April 5. The Management Committee will meet April 10-11: the afternoon of April 10 (1-5 p.m.) and the morning of April 11 (8 a.m.-noon) near DIA. The post-2023 agenda item and Tom Pitts' presentation will be first thing on the agenda on April 10. >The Program Director's office will reserve a meeting room (*done. Fairfield Inn near DIA*). [The meeting was subsequently re-scheduled for April 26 and 27 at the request of committee members with conflicts] .

ADJOURN: Noon

Attachment 1
Meeting Assignments

Items preceded by an asterisk are also addressed in the agenda.

1. **Tom Pitts** will work with **Clayton Palmer and Brent Uilenberg** and provide a list of additional Program contributions to be added to the Program's budget pie chart that appears in each year's briefing book. *In process.*
 - **Power revenues: WAPA Western** contracted with Argonne to model and report actual Flaming Gorge power replacement costs going back to 2001. Subsequently, WAPA Western will provide annual power replacement cost for the previous year each January for inclusion in the *Program Highlights* pie charts. Those pie charts will include a footnote explaining the calculation and assumptions. For the 2012 & 2013 *Program Highlights*, we used the \$37.4M annualized estimate of power revenues. *A Cost Subcommittee met several times via conference call to review the proposal for and results of the power replacement costs analysis. 1/29/14: Power revenue replacement costs "placeholder" from previous years retained until Argonne report finalized and approved (currently in revision). 5/27/15: Clayton Palmer said Argonne's work had been delayed by their involvement in the LTEMP EIS, but they recently had a conference call on completing work on power replacement costs and hope to have draft to share with the subcommittee soon. 7/21/15: Clayton has a conference call with Argonne next week and will provide an update for Angela to send to the Committee. 4/29/16: Shane Capron said Western expects something in July. 3/27/17: Shane said WAPA Western continues to work on this, but has had some staff changes delay the process somewhat.*
 - **San Juan: Tom Chart** will ask **Dave Campbell** to work with the SJCC to determine their additional costs not currently reported (e.g., Southern Ute expenditures on population model). Also, **Patrick McCarthy** will provide information on TNC's capital contributions in the San Juan Program (*done*).
 - **Water users/Colorado: Program participants** will identify other significant costs that have not previously reported (e.g., the Granby component of 10,825 which is estimated at \$16M, \$1.25M contributed by Colorado for GVWM and \$1.5M for OMID, CRWCD contributed property for OMID, etc.) (*Done*). *1/29/14: Water user and Colorado additional costs added and documented in Kantola's Briefing Book Pie Chart Data spreadsheet. 3/20: Tom Pitts said that a few adjustments on water user contributions will need to be made, but we seem to have the totals and process for updating pretty much squared away. Tom Pitts will work with the water users to develop an annual report on O&M and contract costs on the 10,825 water. >Angela Kantola will provide Tom Pitts a list of scopes of work needed to document water user contributions to the Program (as outlined in the water user contribution table that is part of the pie chart calculation). 7/18/15: Pending. 8/1/17: Water user contributions are documented on a worksheet in the spreadsheet "2009 and Forward Briefing Book Pie Chart Data.xlsx" which the PDO works with Program participants to update each January.*

2. ***Tom Pitts** will work with **Henry Maddux, Marj Nelson, and Brent Uilenberg** to frame a discussion about what will recovery look like (post-delisting) as it relates to flows, ongoing operation & maintenance, continued monitoring, and responding to nonnative fish concerns. They will then bring it back to the Management Committee at a later date. *2/3/15: Henry Maddux said this may be part of comments on the Recovery Plan and become part of the recovery plans. 5/27/15: Tom Pitts suggested this will need to outline commitments necessary to maintain the Program's accomplishments. Tom Chart said perhaps this is something that can be outlined before next year's briefing trip. 7/21/15: Tom Chart thinks the discussion might be framed in a one-pager that folks could have if needed during next year's briefing trip. March 2016: Melanie Fischer created the "[Path to Recovery](#)" document.*

3. **Michelle Garrison** and **Don Anderson** will add appropriate detail to the White River Management Plan scope of work for the in early November (*done*) and Colorado will issue an RFP (*in process*). **Michelle** will

share the updated White River Management Plan SOW with the Management Committee when it goes out for bid and discuss who may want to be on the review panel. 9/2/16: *Michelle will share the SOW from the roundtables, and also the SOWs for the remaining portions.* 2/13/17: *Michelle said they're working on the modeling contract SOW now and will provide that to the Committee this week (done and comments received and provided to Wilson Water). The remainder of the work is covered in a separate SOW and CWCB will provide that to the Committee before contracting that part.* 12/5/17: *Michelle said good progress is being made and will soon provide an updated SOW to the Committee. WWG provided good work on possible scenarios and a management plan and scope of work for developing that are next.*

4. **The Management Committee** will review the reservoir screening table as a standing agenda item (perhaps on the Biology Committee's agendas, as well). Kevin McAbee will continue updating the table for the Committee (and will add Brent Uilenberg's capital cost estimates). 12/4/17: **Kevin McAbee** will work on adding expected structure life-spans to the reservoir list
5. **Melanie Fischer** will work with **Dale Ryden's staff** to develop a visual representation of fish passage use. *In progress.*
6. **Melanie Fischer** will investigate whether we might be able to place an aquarium at the Flaming Gorge visitor's center, which is going to be remodeled (will depend on whether they can maintain one). *This center isn't open in the winter, so Melanie has concerns about how the fish would be cared for year-round, so she will be discussing that with them.*
7. The Management Committee supports the proposal to use the abbreviated sufficient progress memo format four of every five years (rather than only in odd-numbered years). Reviews of action items in PBOs for the Colorado River subbasin and Green River subbasin would be included in even-numbered years. The **Program Director's officer** will check in with Regional Director, Noreen Walsh, and if she approves, will document this recommendation with a memo from the Program Director's office to the Regional Director (with a line for response/). The **Program Director's office** will provide the draft memo to the Management Committee for review.
8. To begin development of post-2023 plans, **Management Committee members** will review column N of the RIPRAP and provide comments (e.g., additions/subtractions, additional level of detail) to the Program Director's office prior to January 16 when the **PDO** will begin reviewing the RIPRAP and suggesting revisions. They also will recommend a short (1 paragraph) list of activities they believe should continue, end, and begin post-2023 (a variant on a "start-stop-continue" exercise). **Tom Chart** will talk to the San Juan Program about how they want to participate in this effort. >**Kevin McAbee** will send out [a Doodle poll for an early February call](#) to develop a framework for moving forward (*done, see link*). >Tom Chart will suggest that Sharon send the post-2023 discussion from this summary to her committees. The Coordination Committee might want to join the Committee's April meeting via webinar for Tom Pitts' presentation on Program history. **Tom Chart** will suggest that **Sharon Whitmore** send the post-2023 discussion from this summary to her committees.

Attachment 2: Attendees
Colorado River Management Committee Meeting, December 4-5, 2017

Management Committee Voting Members:

Brent Uilenberg	Bureau of Reclamation
Michelle Garrison	State of Colorado
Tom Pitts	Upper Basin Water Users (via phone)
Steve Wolff	State of Wyoming
Marj Nelson	U.S. Fish and Wildlife Service (via phone)
Melissa Trammell	National Park Service
Patrick McCarthy	The Nature Conservancy
Shane Capron	Western Area Power Administration
Leslie James	Colorado River Energy Distributors Association (via phone)
Henry Maddux	State of Utah (Monday)
Darin Bird for Henry	State of Utah (Tuesday)

Nonvoting Member:

Tom Chart	Recovery Program Director, U.S. Fish and Wildlife Service
-----------	---

Recovery Program Staff:

Tom Czapl	U.S. Fish and Wildlife Service
Kevin McAbee	U.S. Fish and Wildlife Service
Don Anderson	U.S. Fish and Wildlife Service
Julie Stahli	U.S. Fish and Wildlife Service
Melanie Fischer	U.S. Fish and Wildlife Service
Angela Kantola	U.S. Fish and Wildlife Service

Others

Ryan Christianson	Bureau of Reclamation
Chris Keleher	Utah Department of Natural Resources
Paul Badame	Utah Division of Wildlife Resources
Krissy Wilson	Utah Division of Wildlife Resources
Harry Crockett	Colorado Parks and Wildlife
Kathy Callister	Bureau of Reclamation
Dave Speas	Bureau of Reclamation
Lori Martin	Colorado Parks and Wildlife (via phone)
Todd Adams	Utah Division of Water Resources
Katrina Grantz	Bureau of Reclamation
Mike Mills	Central Utah Water Conservancy
Lain Leoniak	Colorado Attorney General's Office (via phone)
Brenda Alcorn	CRBFC
Craig Walker	Division of Wildlife Resources (Tuesday)
Kevin Bestgen	Colorado State University, Larval Fishes Lab (Tuesday, via phone)

Attachment 3

My Favorite Fish

(sung to the tune of “My Favorite Things”, from *Sound of Music*)

Lyrics by Don Anderson

Pikeminnow swimming upstream to go spawning,
Bonytail stocked when the day is just dawning,
Razorback suckers that I get to kiss,
These are a few of my favorite fish.

Chubs colonizing wherever it matters,
moving down channels and swimming up ladders,
Invasive walleye served up as a dish,
These are a few of my favorite fish.

(Chorus)

When the dams come,
When the droughts hit,
When I’m feeling sad
I simply remember my favorite fish
And then I don’t feel ... so bad.

Fish found in wetlands we access by dirt roads,
Others we count when we zap with electrodes,
Invasive species that I get to squish,
These are a few of my favorite fish.

Native fish using the Green’s tributaries
including the Yampa, though it really varies,
More natives thriving is my deepest wish,
These are a few of my favorite fish.



Photo by Melissa Trammell



Photo courtesy of Utah DNR

(Chorus)



Photo by Melanie Fischer

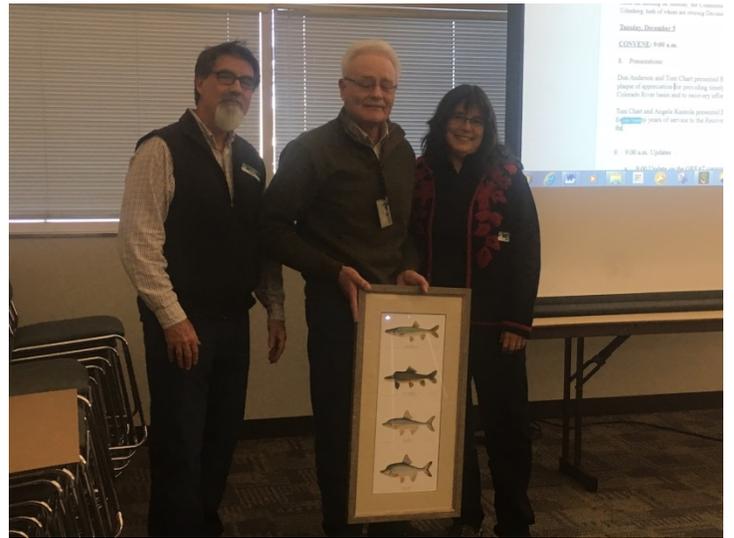


Photo by Melanie Fischer

Attachment 4 Reservoir Escapement Summary

Reservoirs needing screens	Reason for screen	Proposed screen type and location	Status	Proposed completion date	Total estimated cost	Program portion
<p>Starvation Reservoir</p> <p>Duchesne River basin on Strawberry River</p>	<p>Contains fertile walleye and smallmouth bass populations; LMP completed;</p>	<p>Flat plate screen across stilling basin during spill;</p> <p>Outlet not screened because not thought to be a problem.</p>	<p>Modular rigid temporary screen in place. Operated annually since 2015 with later rotenone of stilling basin.</p> <p>UDWR will install permanent screen with same orientation as the temporary screen.</p> <p>MOU and Operations Plan under review by stakeholders, may require an O&M contract. NEPA near completion</p>	<p>Permanent screen install scheduled- Jul/Aug 2018</p> <p>(Staffing issues delayed 2017 construction)</p>	\$406,000	<p>Estimated at \$250,000</p>
<p>Red Fleet Reservoir</p> <p>Green River basin on Brush Creek</p>	<p>LMP finalized and reservoir rotenoned in 2015; Reservoir stocked with hybrid bass (wipers), and sterile walleye which requires screening.</p>	<p>In-channel screen downstream of outlet works (similar to Rifle Creek screen) with emergency stilling basin measures (spills are extremely rare).</p>	<p>50% engineering and draft alternatives document presented to BC on March 6th.</p> <p>Coordination team meeting occurred October 2017. Ute Ladies-Tresses were found to occur on construction site. NEPA process being initiated by BOR</p>	<p>Engineering 2017-18; Permanent barrier planned Fall 2019</p>	\$400,000	<p>Estimated at \$250,000;</p> <p>Program paid \$88,487.25 for rotenone project.</p>

Reservoirs needing screens	Reason for screen	Proposed screen type and location	Status	Proposed completion date	Total estimated cost	Program portion
<p>Scofield Reservoir</p> <p>Green River Basin on Price River</p>	<p>New Lake Mgmt Plan in 2017. Lake treated in 2017 and stocking includes wipers, tiger muskie and potentially sterile walleye which requires screening.</p>	<p>Downstream of outlet works and spillway. A modular (movable) vertical screen, placed at the base of a weir wall. The screen panels will consist of horizontal round pickets set to a gap to eliminate escapement of stocked fish.</p>	<p>Initial design concepts have been discussed with FishBio and a bid was provided for fabrication and install assistance.</p> <p>DWR Regional office is prepping an RFP and developing an agreement/MOU for installing and maintain the screen on BOR property</p>	Spring 2018	\$50,000 UDWR will fund fabrication, installation, and upkeep.	\$0
<p>Ridgway Reservoir</p> <p>Gunnison River basin on Uncompahgre River</p>	<p>Contains illegally introduced smallmouth bass population</p>	<p>In-reservoir net likely will match design criteria of Elkhead net; USBR to own net and fund through federal procurement</p>	<p>Working group meeting quarterly to discuss screening options; Tri-County WCD avoiding spills (avoided since 2014); CPW held tournament annually since 2015; O&M contract for facility ownership in draft</p>	2019 goal	Brent has placeholder of \$2.3 million	CWCB - \$1 million commitment for solution; Program likely cover costs above this commitment
<p>Catamount Reservoir</p> <p>Yampa River basin on Yampa River above Steamboat Springs</p>	<p>Contains northern pike population</p>	<p>spillway net and penstock screening (preliminary concepts)</p>	<p>CPW removing northern pike; Catamount Metro has abandoned FERC exemption; CPW and Program attended Metro board meeting August 2017 and created list of stakeholders; First stakeholder meeting in January 2018</p>	2020 goal	unknown	CWCB - investigating \$500,00 commitment; Program likely cover costs above this commitment

Reservoirs needing other solutions	Reason for solution	Proposed solution	Status	Proposed completion date	Total estimated cost	Program portion
Stagecoach Reservoir Yampa River basin on Yampa River above Catamount Reservoir	Contains northern pike and walleye populations	Paired with Catamount screen; Mechanical removal and water management options.	CPW will remove northern pike and walleye as part of ongoing projects; Upper Yampa WCD complying with FERC & BO; CPW requesting UYWCD to do additional actions	Catamount net in 2020 ;	n/a	n/a
Chapman Reservoir Yampa River basin on Little Oak Creek above Stagecoach Reservoir	Contains illegally introduced northern pike population	chemical treatment	On CPW's chemical treatment schedule; need reservoir mapping for project planning	2018		Need rotenone estimate from CPW
Crawford Reservoir Gunnison River basin on Smith Fork	Contains northern pike ; Failed attempt introduction of SMB.	Unknown (continued removal and water management are options)	CPW mechanically removes Northern pike; 68% removed in 2015; CPW proposed water management to limit pike, but water operations not able to match CPW requests at this time;	unknown		
Off-channel Ponds (Larson, Snyder, etc.) Colorado River near Rifle	Contain northern pike and smallmouth bass populations	Unknown (netting and removal are current options)	CPW is actively netting since 2015 under project 126b;	ongoing		Program paid \$15K for Merwin Trap in 126b SOW in 2016;
Total estimated future Program commitments \$ 4,000,000 (approximate) (note half is unknown Ridgway net costs)						

Reservoirs with existing screens	Reasoning for screen	Existing screen type and location	Status	Completion date	Total estimated cost	Program portion of funding
<p>Elkhead Reservoir</p> <p>Yampa River basin on Elkhead Creek</p>	<p>Contains smallmouth bass and northern pike populations; LMP includes largemouth bass, bluegill, and black crappie fishery; LMP finalized</p>	<p>Outlet screens (in place) & spillway net (in place);</p>	<p>Successfully operated under spill conditions in 2017; New unlimited harvest regulations in place beginning April 1, 2016; Tournament held June 2016 and 2017.</p>	<p>Completed September 2016</p>	<p>Total Project cost \$1.37 million</p>	<p>\$837,000 from capital accounts</p>
<p>Rifle Gap Reservoir</p> <p>Colorado River basin on Rifle Creek</p>	<p>Contains smallmouth bass, walleye and northern pike; Stocked in 2016 with 98.9% triploid walleye, but no diploid removal;</p>	<p>Coanda screen downstream of outlet</p>	<p>Screen excluding small and large fish; no nonnative fish captured in creek below screen since installation;</p>	<p>Completed in 2013</p>		<p>\$0 (CPW purchased with Section 6 and other CPW funds)</p>
<p>Highline Lake</p> <p>Colorado River basin on Salt Creek</p>	<p>Compliance with stocking procedures. Contains largemouth bass, crappie, and trout; Gizzard recently established</p>	<p>Net across spillway</p>	<p>Net operational since 1999, replaced twice.</p>	<p>Completed in 1999; Replaced in 2006 and 2014</p>	<p>\$225,000 for first net; \$100,000 for second net; \$90,000 for third net;</p>	<p>\$415,000</p>
<p>Juniata Reservoir</p> <p>Colorado River basin on Kannah Creek</p>	<p>Contains smallmouth bass and walleye populations</p>	<p>Coanda screen on outlet into irrigation ditch to Kannah Creek</p>	<p>Grand Junction City maintains screen. Low escapement risk b/c water goes into treatment plant or Purdy reservoir for irrigation use.</p>			

Reservoirs not needing screens	Reasoning for not needing screen	Existing escapement condition	Status		Program portion of funding
Harvey Gap Reservoir Colorado River basin near Silt	Contains smallmouth bass and northern pike and other species (tiger muskie, channel catfish, and largemouth bass).	Drains to agriculture fields.	Likely drawn down for dam inspection in 2017 ; Since it contains problematic NNF and will be drained, should we investigate a treatment to eliminate it as a source for translocations or other risk?		
Miramonte Reservoir Dolores River basin	Contained illegally stocked smallmouth bass population	Problematic species removed	Reservoir treated in 2013 to remove smallmouth bass		\$25,000 for rotenone costs
Paonia Reservoir Gunnison River basin on North Fork of Gunnison	Contained illegally stocked northern pike population	Problematic species removed	Reservoir treated in 2012 to remove northern pike		\$3,000 for rotenone costs
McPhee Reservoir Dolores River basin near Dolores, CO	Contains smallmouth bass and illegally stocked fertile walleye populations	Low reservoir releases; escapement non-problematic	McPhee “spills” using a low reservoir release that is unlikely to entrain fish; USBR only uses top spillway in emergencies; last used in 1993 and thus released SMB 2017 sampling during such a “spill” did not document any SMB. CPW did not apply unlimited harvest for SMB here because of lack of escapement risk		
Rio Blanco Reservoir White River basin below Meeker	Contain northern pike population	No outlet releases; Rotating drum screen on the inlet canal	A closed basin fishery that is topped off with White River water periodically but location is very close to the river, creating a risk of escapement from angler fish movement or river connection		
					Total past Program commitments \$ 1,280,000

Reservoirs likely unable to be screened	Species concern of	Why screen not feasible	Notes
Lake Powell	Contains fertile walleye, striped bass, shad and smallmouth bass populations	High inflow (up to 70K cfs); Changing lake levels; Recreational boaters	Lake Powell LMP drafted; UDWR considering redear sunfish as quagga control and sport fish, but on hold for 5 years to determine bluegill (similar species) response to quagga; USGS & FWS investigating if Powell is source of riverine walleye using otolith microchemistry
Flaming Gorge Reservoir	Contains smallmouth bass and burbot populations	Greatest opportunity for escapement is over the spillway, which is only used in emergency situations. Likelihood of spills is extremely low (has not occurred since 1999), but would likely be of a very high volume (> 5000 cfs) if deemed necessary. Screening the common outlet works (selective withdrawal structure or bypass tubes = less escapement risk) would be highly problematic and presumably cost prohibitive.	Burbot risk assessment in draft. Burbot life history may not place them at high risk of escapement. However, 3 burbot have been captured below Flaming Gorge in recent years; One in Green River near Jensen (farthest downstream capture) Higher than normal captures of kokanee and lake trout documented during prolonged bypass us in 2017.

Attachment 5

Planned burn of Stewart Lake spring 2018

- The District Fire Warden from Utah Division of Forestry, Fire, and Lands is very confident that a complete burn in 2018 is both manageable and can be conducted safely. We did a thorough inspection around the entire wetland to identify a burn layout and path, areas for fire breaks, etc., all of which will go into a detailed burn plan. The burn will likely take two days entailing two separate fires; about 50 acres in close proximity to perimeter residents one day to create a large fire break, avoiding any incidents that could be caused by prevailing winds, and a second day to take care of the remaining ~400 acres of vegetation.
- The area will have to be patrolled for only a short duration after that. Our Habitat section will be able to provide the equipment and manpower to conduct all necessary mowing to create firebreaks in advance.
- We will receive free labor from the Uintah County Fire District because the burn will provide an excellent training exercise for them, in addition to a statewide training opportunity for the UDFFL next and following years. The UCFD folks will be going door to door with residents on the perimeter and will take care of public announcements.
- Out years will likely involve rotating through individual sections (one per year) and some years may be skipped if the fuel load is not adequate. Working on approval of the burn plan. However, all three UDFFL folks that were on site and will be drafting the plan are confident that this one can be fast-tracked due to the multi-benefit nature of the project.
- UDFFL will provide a cost estimate (equipment and labor) ASAP so that we can submit a WRI proposal by the first week of January. They will also make this burn plan a priority and hopefully will have a draft for our review sometime in January and then push on for final approval.
- If approved, we plan for a burn in April at the latest and this plan essentially will cover us indefinitely since they intend on being much more thorough than the previous burn plan.