



Upper Colorado River Endangered Fish Recovery Program

Dated: September 1, 2016

April 29, 2016 Final Management Committee Webinar Summary

Participants: See Attachment 1

CONVENE: 1:00 p.m.

1. Approve draft summaries of March 7, 2016, conference call and August 17-18, 2015, meeting – Angela Kantola posted the draft March 7 conference call summary to the fws-coloriver listserver on March 9. Dave Speas provided some revisions to that summary. The Committee approved the summary as revised. Angela posted the draft August 17-18 meeting summary to the listserver on August 25. Tom Pitts noted the need to add “Elkhead” before “lake management plan” in the first line of item 3.a. Angela Kantola will finalize both summaries and post them to the listserver (*done*).
2. D.C. Trip follow-up – Henry Maddux noted he and other trip participants are working on the meeting summary and final itinerary.
 - a) Extending authorization – Related to extending the authorization, Henry said Congressional staff reminded the group of the need for a second report to Congress (which also will need to address the limited indirect cost recovery rate and “limitation on travel for advocacy purposes” specified in PL 112-270). Legislation to extend the authorization will be somewhat complicated because this is an election year. Henry said they’ve yet to ask a delegation member to take the lead, but he believes Senator Hatch will be willing on the Senate side. The non-Federal Program participants are still discussing who would take the lead on the House side (it would be helpful if that person was from one of the other states, perhaps Colorado). The legislation couldn’t be introduced before January 16, 2017. We need to evaluate capital funds and remaining capital projects; because if the ceiling needs to be raised, it would we need to be addressed in the same legislation. Henry said the plan will be to form a small group to work on the legislation and the report to Congress. Leslie James will need to be involved. We need to know if Western and who from the other States want to participate in that group. For the group to proceed, we need confirmation of all Program partners’ support. Henry reviewed the requirements for the report to Congress. The first report focused on utilization of power revenues and tied it to recovery actions: what we’ve done, what it has cost, and how much of that was power revenues. Shane Capron said he’ll talk with folks at Western about their possible role. Steve Wolff said he’s willing to help out and suggested that once we have a capital construction figure, we need to put it in writing for Program participants to share with their agencies to assure support. Michelle said she’ll find out who will be Colorado’s point of contact. Henry thinks were a couple of months out on contacting the delegation.

Brent Uilenberg said we have ~\$9M of remaining unallocated capital ceiling. We probably could get through 2023 if we had no unanticipated repair needs, such as from flood events. The partners will need to decide if that’s an acceptable risk or if we need to request more capital ceiling. Henry noted that another unknown are the final costs for screening reservoirs to prevent nonnative fish escapement. For now, the Committee will assume no capital increase.

- b) Report to Congress – This report is technically not due until 2018, but will be required to introduce legislation in 2017, so it needs to be produced in early 2017. Tom Pitts noted the report has to identify the need for the funding, the status of the species, and the projected downlisting and delisting dates. The capital funds authorization is through 2023 (the date for downlisting the razorback sucker). Staff of the Water and Power Subcommittee has confirmed that is to be the date for extending authorization of power revenues for annual funding. We'll also need to identify what we'll accomplish with the additional power revenues being requested through 2023. Henry said they've begun talking about the timing of the report and agreed that although it's an aggressive schedule, we must aim to complete it before the November election. With recognition of this short timeline, Tom Chart and Henry noted we'll need very speedy turnaround of feedback from Program partners as the report is drafted.

3. Nonnative Fish Update

- a) Reservoir nonnative fish management (Elkhead, Ridgway, Rifle Gap) – Kevin McAbee provided a reservoir screening status summary that was sent with the meeting agenda (Attachment 3). Kevin said an open house was held in Craig to provide the public information about Elkhead Reservoir, since a new Lake Management Plan and harvest regulations are in place since the last public meeting. Most of the public attending expressed opposition to the eventual end of the smallmouth bass and northern pike fishery in Elkhead, indicating they felt they should still be able to fish for that species with a net in place. CPW and all the partners present made it clear that wouldn't be acceptable. They presented a clear message consistent with the Elkhead LMP and what had been said at the previous public meeting. Kevin said the current estimate of the Elkhead Reservoir net is \$1.1 - 1.2M, but some cost savings are still possible. Colorado is providing \$500K. The River District has been releasing water and making every effort to try to prevent a spill this year¹. Brent noted that these releases come with a slight risk that the Elkhead fish pool wouldn't be filled. Design of a downstream screen is underway for Red Fleet. UDWR successfully created 100% triploid walleye and recently stocked a large number in Red Fleet. The cost estimate from the preliminary engineering design for a screen at Starvation Reservoir is ~\$400K. Spills have been avoided at Ridgway for the past 2 years and the current reservoir forecast is 87%, which may help prevent a spill again this year. A team continues working on a screening solution for Ridgway (likely a net similar to Elkhead). Brent indicated we probably won't have the Federal capital appropriations until 2019 or 2020, so 2020 is probably the realistic construction timeframe. Brent Uilenberg indicated he has placeholder dollars in his capital accounts planning for screens at Ridgway, Starvation, and Catamount, but that those estimates are general estimates. Harry Crockett said he's not aware of smallmouth bass in Crawford Reservoir, but will check. (Harry informed the Committee on May 4 that one smallmouth bass was caught during standard sampling in 2007. There was also an unconfirmed report from an angler who reportedly caught a smallmouth around this same time. The reservoir has been sampled 14 times since then, with no more smallmouth bass ever encountered, nor has Colorado Parks and Wildlife heard any more rumors from anglers. Fortunately, this appears to have been an attempted illegal introduction that failed) >Kevin will continue updating the table for the Committee (and will add Brent Uilenberg's capital cost estimates).
- b) Summary of nonnative fish control actions by basin – A draft summary as requested at the August meeting was sent with the agenda for this meeting. Kevin said the table indicates project, lead, and status (e.g. if ongoing indefinitely, at least until we can move to some maintenance-level management when we're able to flip the dynamics between the native and nonnative fish). Tom Pitts asked if all

¹ On May 2, Ray informed the Program Director's office that the continuing snow accumulation with the delay in runoff driving temperatures may make it difficult to continue to avoid spilling. The River District will keep the Program Director's office informed of the forecasted probability of a spill and potential date and the Program Director's office will find out if Colorado Parks and Wildlife plans on netting in the spillway plunge pool to monitor escapement.

these activities are in the RIPRAP and Kevin said he thinks they are. Henry said he would like to see this table somehow incorporated into the report to Congress.

4. White River Management Plan SOW – Michelle Garrison said the contract/scope of work may be split into two parts (flow recommendations and management plan). Michelle will be meeting with contracting and others about this next week and also discussing demands already in the basin plan. James Greer will be involved for Utah and has a contact to inform the Ute Tribe about the plan.
5. RIPRAP assessment and revisions – Angela Kantola said the RIPRAP assessment and revisions were drafted by the Program Director’s office and reviewed/revise by the Biology and Water Acquisition committees. Angela sent draft RIPRAP tables and text to the Committee on Tuesday, April 26. Tom Pitts has recommended identifying in the RIPRAP what needs to be brought to conclusion by 2023 and what management actions will need to continue in post-delisting conservation plans. Angela reviewed the RIPRAP tables and highlighted in yellow those areas that the Program Director’s office will need to revise to respond to Tom’s recommendation and today Tom Pitts provided additional recommendations on the tables in that regard. Tom Pitts said he’s willing to go ahead and approve the RIPRAP for 2016 *and then* address the concerns he’s outlined about actions concluding in 2023. Tom Chart suggested adding columns through 2023 and one identifying management actions that will need to occur post-delisting. Henry and Tom Pitts thought that would be helpful. Brent Uilenberg said the date on OMID needs changing: “The OMID Canal Automation Project is expected to provide at least 17,000 af of water in most years. The check structures in the OMID project began providing partial water savings beginning in the 2014 irrigation season and the project will be fully constructed prior to the 2018 irrigation season.” Robert Wigington said if the environmental groups have any additional comments for the 2016 approval, they’ll submit them be early next week. >The Program Director’s office will finalize the RIPRAP for 2016 and then begin working on addressing 2023. Seth Willey agreed that we should go ahead and finalize for 2023, but said he’s still considering whether the RIPRAP is the right document to tell the story for post-delisting management. Henry said he thinks it will be helpful since it’s considered the implementation plan. The Committee approved the 2016 RIPRAP, with the understanding that >the Program Director’s office will work on identifying actions to be completed or carried on beyond 2023.
6. Review of status of items highlighted in the Service’s 2015 sufficient progress memo – See Attachment 5.
7. Review/approve Peak Flow Technical Supplement to the Green River and Aspinall flow study plans – Tom Chart e-mailed this draft report (along with Part I: the Biological Component of the Backwater Synthesis project, Bestgen and Hill 2015) to the Committee on February 24. The Peak Flow Technical Supplement has been approved by the Biology and Water Acquisition committees. It is considered a technical supplement to the Green River and Aspinall Study plans. Rather than organizing by hypotheses, the report now is presented in five topical areas. Table 5 describes peak flow topics, related and ongoing studies, remaining high priority information needs, and recommended studies. Recommended and prioritized new studies are described for each topic area. These recommendations could be used to affect specific flow recommendations with physical uncertainties that haven’t yet been addressed in ongoing studies. The actual work would be determined in the Flaming Gorge and Aspinall study plans. The Technical Supplement refers back to those study plans and identifies additional research to be done. It recognizes different approaches and considers available funding. Henry noted that the Supplement is not a change to flow recommendations and asked if it needs Management Committee approval; Chart said that’s a good question, and noted that it does add to the RIPRAP. Tom Pitts thanked Tom Chart for his e-mail response questions about the Supplement. Tom Pitts said he’s trying to understand how we tell the States what the peak targets are so they can focus on meeting them. Robert suggested that Tom Chart has explained how monitoring and prioritization can be addressed as we look at flow protection (e.g. through scheduled reviews of the Program’s flow recommendations). Robert said he’s comfortable with the report knowing

we have to address those questions going forward. The PDO will incorporate the Technical Supplement recommendations into the RIPRAP as they address the “2023 and beyond” issues discussed earlier. The Committee considered the Technical Supplement approved.

Tom Chart sent the first part of the Backwater Synthesis (BW-Synth) project to the Committee, but it and the next piece should be considered informational as there is not an implementation issue for the Committee to consider at this point. The Management Committee will become engaged, as per the Program Report Review process, after the recommendations from BW-Synth and other technical reports are considered in revision of the Green River Flow and Temperature Recommendations. The Committee agreed.

8. Recovery planning update – The Program Director’s office expects the Colorado pikeminnow population viability analysis, humpback chub species status assessment (SSA), and razorback sucker SSA to be completed by March 2017. Tom Czaplá said the humpback chub SSA draft is nearly complete; and they are planning 2-day in-person meeting in August on the recovery plan. A Colorado pikeminnow PVA webinar was held this week and a 2-day in-person meeting is scheduled in mid-May. The first survey for the razorback sucker SSA is complete (57 respondents) and will be followed by a second survey within a week or so. Tom Chart thanked Kevin Bestgen for recently providing some new analyses (synthesizing multiple pieces of Recovery Program information) that will assist the PVA model. The SSAs for the razorback sucker and humpback chub will reflect the difference in the amount and kind of data we have on their populations.

Tom Czaplá mentioned the recently documented reproduction of stocked bonytail in Stewart Lake (see Attachment 6 for the news release that went out the afternoon of April 29).

9. Hydrology update – Jana Mohrman provided updates on the following:

- GRUWAT: This week Utah provided a new draft of model results describing the frequency and volume of shortages in the Green River at Jensen and Green River. A technical group is reviewing the update and it should be finalized soon. Internally, Utah’s Policy Team has begun to consider ideas to protect Green River flows; Henry Maddux said Utah would like to make a presentation about options/recommendations at the next Management Committee meeting.
- A draft of the 15-Mile Reach PBO summary is being reviewed by the PDO; it will then be reviewed by the WAC and BC before it is reviewed by the MC.
- Ute Water lease: On April 22, 2016, a second year contract for Ute Water lease was signed for a minimum of 6000 af and a maximum of 12,000 af from Ruedi for the 15-Mile Reach.
- “April Hole”: Four conference calls were held this year and the group discovered possible pools for the 15-Mile reach in April: 1) 2016 Ute Water (12,000 af), which Michelle Garrison and Ute Water have said could be used in the spring; 2) River District Pool in Ruedi (5000 af) could be used if financing and contracting was established; and 3) 2015 leftover HUP pool (3700 af) that would need to be use before DOI the start of fill (~ May 1st). Henry asked if there will be a white paper to provide a wrap-up on how we’ve addressed the April Hole. Tom Chart said this will be addressed in the 15-Mile Reach review report. Tom Pitts noted the Program and water users have responded substantially to the “April hole” problem. Tom Chart agreed and said that also will be recognized in the 15-Mile Reach review report.

10. 2017 depletion charge and Program contributions – Angela Kantola referred the Committee to the 2017 depletion charge and Program participant contributions outlined in Attachment 6.
11. NFWF funds status – Angela Kantola reviewed fund status and proposed projects. Through December 31, 2015, ~\$648K was available in the NFWF-managed Section 7 funds account with ~\$314K of that amount now obligated or spent (recovery goals technical assistance, Colorado pikeminnow PVA, Red Fleet rotenone, razorback sucker SSA (San Juan Program, Lower Basin, and Utah also are providing funds for this work), Tusher Wash PIT array, Walton Creek channel modification feasibility study, and continued standardization of the electrofishing fleet). This leaves a balance of ~\$334K for potential new and continued expenses such as:
 - Continued recovery goals technical assistance
 - Maybell Ditch automation (preliminary cost estimate of ~\$70K for gates and telemetry)
 - Assistance to Colorado and Utah for reservoir reclamation (rotenone)
 - Contract to complete CFOPs report
 - Cyprinid key printing

Most of the new deposits coming into the NFWF account are fairly small and no new large depletions are on the near horizon. Kevin McAbee said that the Utah ES office is receiving additional permitting requests for the Gooseberry Narrows projects and if the project is completed, that would add a little over \$100K to the NFWF account. The Biological Opinion for the project was finalized in the early 2000s, and has paid the initial 10% required at permitting, but the remaining 90% would have to be paid if the project is built.

- a) Cost-share of Cyprinid Guide printing costs – Many/most of the Program's technical reports are completed in digital format and not printed in this digital age. Printing is still useful for a few publications, however, and that's certainly the case with the recently completed Guide to Cyprinid Fish Larvae and Early Juveniles of the Upper Colorado River Basin by Darrel Snyder et al. of CSU's Larval Fish Lab. The guide will be printed and bound on high-quality paper suitable for researchers' repeated use in identifying larval cyprinid (minnow family) fishes. Much hinges on the early life history of these native fishes, making the Cyprinid Guide critical for identifying very young cyprinids and helping us detect fish response to recovery actions and other environmental factors. The Recovery Program supports printing this document and making it available to Program researchers. Colorado Parks and Wildlife has offered to print the Guide, but has asked for a \$5,000 cost-share from the Recovery Program. The only sensible way for the Program to get this amount of funding to CPW is via Section 7 (NFWF) funds. The Management Committee approved this expenditure. Committee approved. Harry thanked the Committee.

12. Other items

- a) Update on PDO hiring a database manager and instream flow coordinator – Tom Chart said the database manager position will be based in Lakewood and should be advertised within a couple of weeks. In light of Jana Mohrman's pending retirement this year, Tom hopes to reestablish an instream flow coordinator position to allow some overlap with Jana and help the incumbent learn the intricacies of managing fish water. The instream flow coordinator also would provide help on flow recommendations. Tom said he is discussing this internally, already has an instream flow coordinator position description, and hope to start the hiring process soon. The Committee agreed they would like to see as much overlap as possible between Jana and a new hire. Tom Pitts said this is critical given the complex relationships between water users, states, and the Program Director's office.

b) Matheson Wetland Preserve – Henry said Utah received (and funded) a proposal from The Nature Conservancy for Endangered Species Mitigation funds to provide habitat for razorback sucker (and hopefully bonytail) at the Matheson Wetland Preserve on the Colorado River similar to what’s been done at Stewart Lake and Johnson Bottom. Utah hopes the Committee will track this and consider participating in the future. This should be accounted for as an additional Utah contribution to the Program (>Henry will provide the funding amount to Angela). Tom Chart thanked Henry and said he thinks this is a really critical area. Tom Chart and Seth Willey said the Service got another CRI grant for retrofitting at Sheppard Bottom on the southern end of the Ouray NWR. The plan is to re-contour the floodplain and manage a portion for razorback sucker larvae. Kevin McAbee said the design will be completed over the next year and construction will ensue after that.

13. Review previous meeting assignments – See Attachment 2.

14. Schedule next meeting, webinar, or conference call – The Committee schedule their next meeting at Reclamation’s office (445 West Gunnison Avenue) in Grand Junction beginning at 1 p.m. on Thursday, September 1 and concluding at noon on Friday, September 2. Melissa Trammell and Dave Speas offered to host a barbecue the evening of September 1. >Angela Kantola will provide a Doodle poll to schedule a webinar around late June or early July. Utah would like to make a presentation about options/recommendations at the next Management Committee meeting.

ADJOURN: 3:55 p.m.

Attachment 1: Participants

Colorado River Management Committee Conference Call, April 29, 2016

Management Committee Voting Members:

Brent Uilenberg	Bureau of Reclamation
Michelle Garrison	State of Colorado
Tom Pitts	Upper Basin Water Users
Steve Wolff	State of Wyoming
Seth Willey	U.S. Fish and Wildlife Service
Melissa Trammell	National Park Service
Robert Wigington and .Patrick McCarthy	The Nature Conservancy
Shane Capron	Western Area Power Administration
Leslie James	Colorado River Energy Distributors Association
Henry Maddux	State of Utah

Nonvoting Member:

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

Recovery Program Staff:

Kevin McAbee	U.S. Fish and Wildlife Service
Tom Czapla	U.S. Fish and Wildlife Service
Melanie Fischer	U.S. Fish and Wildlife Service
Sandi Spivey	U.S. Fish and Wildlife Service
Angela Kantola	U.S. Fish and Wildlife Service

Others

Dave Speas	Bureau of Reclamation
Jana Mohrman	U.S. Fish and Wildlife Service
Harry Crockett	Colorado Parks and Wildlife
Lisa Reynolds	State of Colorado

Attachment 2 Previous Meeting Assignments

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: Western** contracted with Argonne to model and report actual Flaming Gorge power replacement costs going back to 2001. Subsequently, **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.*
 - **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.
 - **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.*

2. **Tom Pitts** will work with **Henry Maddux, Bridget Fahey, 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 **Jana Mohrman** 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.

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).
5. The **Program Director's office** will finalize the RIPRAP for 2016 and then begin working on addressing 2023 (identifying actions to be completed or carried on beyond 2023).
6. **Henry Maddux** will provide Angela the amount that Utah funded for The Nature Conservancy to provide habitat for razorback sucker (and hopefully bonytail) at the Matheson Wetland Preserve so Angela can credit it as an additional Utah contribution to the Recovery Program.
7. **Angela Kantola** will provide a Doodle poll to schedule a Management Committee webinar around late June or early July.

Attachment 3
Reservoir Screening Summary

Reservoirs likely needing screens	Reasoning for screen	Proposed screen type and location	Status	Proposed completion date	Total estimated cost	Program portion
Red Fleet Reservoir	Illegally introduced walleye population chemically removed October 2015; Reservoir stocked with hybrid bass (wipers) in fall 2015 and sterile walleye in spring 2016; LMP finalized August 2015.	Downstream flat plate screen in entire channel (best estimate at this stage)	UDWR submitting for internal funds (Habitat Council) to pay for engineering study to evaluate screening options	Temporary barrier will be used beginning in 2016 if spill occurs; Engineering 2017; Permanent barrier 2018	Screen unknown	Program paid \$88,487.25 for rotenone and KMnO4. Unknown Screen cost
Elkhead Reservoir	Contains smallmouth bass and northern pike populations; LMP includes management as a largemouth bass, bluegill, and black crappie fishery; LMP approved by States and Service	Outlet screens (in place) & spillway net (in planning);	Net scheduled for install fall 2016; NEPA complete; Contracting in place; CRCD is coordinating engineering; New unlimited harvest regulations in place beginning April 1, 2016	Net install – Fall 2016	Total Project cost approx. \$1.2 million: Net \$245K; Installation \$200K; Debris Boom \$300K; Boom Anchors \$165K;	Estimated to be \$550,000 to \$600,000 from capital accounts;
Starvation Reservoir	Contains fertile walleye and smallmouth bass populations	Flat plate screen across stilling basin during spill (proposed); Outlet not screened but not thought to be a problem	Modular rigid temporary screen in place. Operated in 2015 and cleaned weekly. Will remain over winter. If reservoir spills, requires treating the stilling basin annually (accomplished in 2014 & 2015); UDWR will install permanent screen with same orientation as the temporary screen; LMP to be drafted; may consider sterile walleye & smallmouth bass stocking as a management strategy;	Temporary Screen – March 2015 (done); Permanent Screen install – 2016/2017 (dependent upon completion and approval of LMP); Rotenone treatments in stilling basin – ongoing	\$400,000 estimate. Cost could be reduced if BOR force labor is used and scheduled to coincide with other onsite maintenance	Estimated at \$300,000 (75%)?
Ridgway Reservoir	Contains illegally introduced smallmouth bass population	Preliminary evaluation demonstrates net, coanda screen, or rigid screen are likely the most effective and feasible alternatives; Net seems to be leading candidate but must consider debris loading and dam safety components	Tri-County WCD avoiding spills (avoided in 2014 & 2015); CPW applied a no-limit bag for SMB on April 1, 2015; Held harvest tournament in 2015, removed 36% of population; Working group meeting semi-annually to discuss screening options	net or screen – unknown; But working towards ASAP solution		Costs above \$500,000 – similar to Elkhead? \$500K?

Reservoirs likely needing screens	Reasoning for screen	Proposed screen type and location	Status	Proposed completion date	Total estimated cost	Program portion
Catamount Reservoir	Contains northern pike population	spillway net and penstock screening (preliminary concepts)	CPW actively removing northern pike; has reduced size structure of the pike population and improved other fish population conditions (trout, sucker, etc.); over 14,000 pike removed; Catamount Metro has FERC exemption for hydropower that requires screening of new facilities;	spillway net – unknown;		
Stagecoach Reservoir	Contains northern pike and walleye populations	likely not needed if Catamount screened	CPW will remove northern pike and walleye as part of ongoing projects; Upper Yampa WCD can hold reservoir below pike spawning habitat in above average years, but not in below average years; CPW requests they hold reservoir lower in all years until after pike spawn; Other options (vegetation mowing, harvest incentive, etc.) have been discussed;	unknown		
Chapman Reservoir	Contains illegally introduced northern pike population	likely not needed if Catamount screened (upstream of Stagecoach per Harry) or if chemically treated	On CPW's chemical treatment schedule; CPW negotiating with local users; Hopeful that it can be treated in September 2016	September 2016;		
Crawford Reservoir	Contains smallmouth bass, walleye and northern pike	unknown	Northern pike removed in 2014 and 2015, reducing the size structure; Removal will not take place in 2016 because it is not cost effective to remove the few individuals left. Removal will resume if needed.	Unknown		

Reservoirs likely needing screens	Reasoning for screen	Proposed screen type and location	Status	Proposed completion date	Total estimated cost	Program portion
Private Ponds (Larson Ponds, Snyder Pond, etc.)	Contain northern pike and smallmouth bass populations	unknown	Filling in stream breaches at Snyder Pond (& likely others) is not an option for liability and cost reasons (per Uilenberg); CPW is actively netting (2015+) to remove nonnative fish and prevent aquatic biota connections to the river; CPW built a Merwin Trap specifically tasked for Snyder Pond in 2016	unknown		
					Total estimated Program commitments	\$ 1,488,487

Attachment 4
Nonnative Fish Management Actions by Basin

Species	Action	Project #	Agency Lead	Status
Yampa River basin				
SMB	Smallmouth bass removal in Yampa Canyon	110	FWS Vernal	Ongoing until nonnative and native species dynamics support species recovery
	Smallmouth bass removal in Little Yampa Canyon and surrounding areas	125	CSU & CPW	Ongoing until nonnative and native species dynamics support species recovery
	Smallmouth bass "Surge" of coordinated removal by multiple agencies	125	CSU, CPW, FWS Vernal, FWS GJ	Ongoing indefinitely - primary means for long term control of SMB in Yampa basin
	Evaluate predator removal in Yampa River	140	CSU	Ongoing until nonnative and native species dynamics no longer need monitoring
Pike	Northern pike removal from Hayden to Craig	98b	FWS Vernal	Ongoing until nonnative and native species dynamics support species recovery
	Northern pike removal below Craig	98a	CPW	Ongoing until nonnative and native species dynamics support species recovery
	Northern pike removal from Steamboat to Hayden	125	CSU	Ongoing until nonnative and native species dynamics support species recovery
	Netting of pre-spawn northern pike in backwaters surrounding Craig	98a&b	CPW & FWS Vernal	Ongoing indefinitely - primary means for preventing pike spawning in Yampa basin
Reservoirs	Netting of Elkhead reservoir for escapement prevention		CPW & Colo River District	Net in place until SMB and Pike are removed from reservoir (assuming no sterile predator is stocked)
	Northern pike removal at Catamount Reservoir		CPW (non-Program)	Ongoing until net in place or population controlled; removal likely less frequently as population controlled
	Northern pike escapement study and opportunistic removal at Stagecoach Reservoir		CPW (non-Program)	Escapement study ending by ~2018; removal continuing until population controlled;
Policy	No translocation of nonnative fish		UCRP	policy in place indefinitely
	Unlimited bag and possession of smallmouth bass and northern pike		CPW	policy in place indefinitely

White River basin				
SMB	Smallmouth bass removal below Taylor Draw Dam	167	UDWR, FWS Vernal, CPW	Ongoing until nonnative and native species dynamics support species recovery
Policy	Unlimited bag and possession of smallmouth bass and northern pike (Colorado Reach)		CPW	policy in place indefinitely
	Must kill of smallmouth bass and northern pike (Utah Reach)		UDWR	policy in place indefinitely

Colorado River basin				
SMB	Smallmouth bass removal below Grand Valley Water Users Dam	126a	FWS GJ	Ongoing until nonnative and native species dynamics support species recovery
	Removal of nonnative fish at GVWU fish passage	C-4b GVP	FWS GJ	Removal as long as passage is operated to prevent upstream colonization of nonnatives
Pike	Supplemental lethal removal of smallmouth bass and northern pike in the Colorado River between Silt and Beavertail Mountain	126b	CPW	Ongoing until nonnative and native species dynamics support species recovery
Walleye	Walleye removal from Grand Junction to Potash, UT	126a	FWS GJ	Ongoing until nonnative and native species dynamics support species recovery
Reservoirs	Nonnative fish removal from streamside gravel ponds	126a & b	CPW and FWS GJ	Ongoing until ponds do not contain nonnative species
	Coanda Screen operation below Rifle Gap Reservoir		CPW (non-Program)	Screen in operation indefinitely, as long as predatory species are in reservoir
	Net operation at Highline Reservoir	C20	CPW	Screen in operation indefinitely, as long as predatory species are in reservoir
Policy	Unlimited bag and possession of smallmouth bass and northern pike (Colorado Reach)		CPW	policy in place indefinitely
	Must kill of smallmouth bass and northern pike (Utah Reach)		UDWR	policy in place indefinitely

Gunnison River basin				
All	Removal of nonnative fish at Redlands fish passage	C-4b Redlands	FWS GJ	Removal as long as passage is operated to prevent upstream colonization of nonnatives
Reservoirs	Ridgway Reservoir coordination including harvest tournament and potential escapement barrier		CPW	Screen in operation indefinitely, as long as predatory species are in reservoir
Monitoring	Fish comm. monitoring in place to detect if a nonnative invasion occurs	163	FWS GJ	Ongoing until nonnative and native species dynamics no longer need monitoring
Policy	Unlimited bag and possession of smallmouth bass and northern pike (Colorado Reach)		CPW	policy in place indefinitely

Green River basin				
SMB	Nonnative removal (SMB and Pike) and flow analysis in Lodore, Whirlpool, and Browns Park	FR-115	CSU	Species removal in place. Spike flow in use in drier years until nonnative and native species dynamics support species recovery, if deemed useful and possible;
	Smallmouth bass removal in Echo Park - Split Mtn	123a	FWS Vernal and UDWR Moab	Ongoing until nonnative and native species dynamics support species recovery
	Smallmouth bass spawning disruption (surge) in Echo Park - Split Mtn	123a & b	FWS Vernal, UDWR Moab, UDWR Vernal	Ongoing until nonnative and native species dynamics support species recovery
	Smallmouth bass removal Split Mtn to Ouray	123b	UDWR Vernal	Ongoing until nonnative and native species dynamics support species recovery
	Smallmouth bass removal in Desolation Canyon	123a	UDWR Moab	Ongoing until nonnative and native species dynamics support species recovery
Pike	Northern pike removal in middle Green River	123b	UDWR Vernal	Ongoing until nonnative and native species dynamics support species recovery
Walleye	Walleye removal in lower Green River below Desolation Canyon	123a	UDWR Moab	Ongoing until nonnative and native species dynamics support species recovery

Cyprinids	Reduce densities of nonnative fish, particularly cyprinids, in backwater habitats before and after arrival of CPM larvae.	158	UDWR Vernal & FWS Vernal	Final report pending - will demonstrate future recommendations
Reservoirs	Rotenone treatment and screen installation at Red Fleet Reservoir		UDWR (non-Program)	Screen in operation indefinitely, as long as predatory species are in reservoir
Policy	Unlimited bag and possession of smallmouth bass and northern pike (Colorado Reach)		CPW	policy in place indefinitely
	Must kill of smallmouth bass and northern pike (Utah Reach)		UDWR	policy in place indefinitely

Duchesne River basin				
Reservoirs	Screen Starvation Reservoir to prevent walleye and SMB escapement		UDWR (non-Program)	Screen in operation indefinitely, as long as predatory species are in reservoir
Policy	Must kill of smallmouth bass and northern pike (Utah Reach)		UDWR	policy in place indefinitely

Attachment 5

Status of Action Items from the 2015 Sufficient Progress Letter (only those items not being tracked elsewhere)

April 19, 2016

#	Recommended Action Items	Lead	Due Date	Status
General – Upper Basin-wide				
1	Reduce impacts of nonnative fish on humpback chub. Complete recommendations for and implement humpback chub broodstock development.	States, FWS PDO/BC	Ongoing	Yampa Canyon smallmouth bass removal (Project 110) continues and is complemented by similar efforts upstream (Projects 125, 98a, and 98b) and downstream (Project 123a). In Desolation Canyon, smallmouth bass, walleye, and other nonnative species are removed during Colorado pikeminnow population estimates (Project 128) and during specific nonnative control trips conducted under Project 123a. Smallmouth bass and walleye removal occurs upstream and downstream of Westwater and Black Rocks under project 126a. Ad hoc group developing action plan; fin clips are being analyzed to determine humpback chub genetic diversity and potential use in broodstock development. FWS continues to bring young humpback into the hatchery for backup broodstock.
2	Develop scope of work to investigate age-0 and age-1 humpback chub mortality (especially in Black Rocks/Westwater and Desolation canyons) as recommended in the Research Framework).	USFWS		Young of year component now incorporated into adult sampling to help track the young life stages.
Green River				
3	Maintain revised schedule to implement flow Green River protection in FY 16-17.	Utah/USBR	FY 17	Modeling completed by documentation pending.
4	Continue government-to-government consultation with Northern Ute Tribe and request that the Old Charlie Wash lease be renewed.	USFWS	N/A	Service is working with Tribe on lease renewal and will meet again with the Tribal Business Committee in mid-June. Meanwhile, Service is exploring options to resume sampling at Old Charlie. Researchers were able to get permits for their work on the lower White River.
5	Construct weir wall in the Green River Canal to prevent endangered fish entrainment.	USBR	FY17	Design & engineering underway; Reclamation expects to award a contract in FY17 and complete the weir wall in FY18 for a total cost about \$4M. NRCS has completed the diversion rebuild.
6	Eradicate white sucker at Browns Park.	UDWR		UDWR is planning to eradicate the large population of white sucker in Browns Park WMA (floodplain and streamside ponds adjacent to the river), which may be a source for white sucker in the Green River. UDWR met onsite with engineering firm on April 13, 2016 to discuss design options for a permanent solution to prevent recolonization of nonnative species. White sucker eradication will occur as part of larger project. Browns Park modifications may also create a location for bonytail stocking.
Yampa River				
7	Complete accounting of past depletions using the StateCU model (Due date from YPBO - 1st report July 1, 2010; 2nd report July 1, 2015). Report to include discussion of the need for flow protection (which would require a peak flow recommendation).	CWCB	2016	The irrigated acreage assessment was completed (agricultural consumptive use does not appear to be increasing). Other depletions (M&E, transbasin exports, etc.) are still being estimated. Another contract was awarded to update the dataset. The models will be updated through at least 2012. Colorado has placed a high priority on the Yampa and Colorado river basins portion of this work. CWCB is estimating depletions and will be reviewing those numbers. There may be increased depletions on the Colorado for transbasin diversions (not coming close to the cap, however), but the numbers need to be reviewed before sharing with the PDO and the WAC.

Duchesne River				
8	The Service will continue to pursue government-to-government consultation with Northern Ute Tribe so that in-river removal of nonnative fish can be resumed in the Duchesne River	FWS/Northern Ute Tribe	N/A	Service has resumed discussions with the Ute Tribe, but no change to this yet. UDWR working with Northern Ute Tribe on operation of fish passage at Myton Diversion (passage will allow endangered and other native fishes to move upstream); Utah just approved funding for operation of that passage.
Colorado River				
9	Improve achievement of flow targets, especially in drought years.	Program	Ongoing	The Program is working to improve the overall strategy for flow augmentation in the 15-Mile Reach to be considered each spring and adjusted as the year progresses, addressing all possible sources of water, priorities, antecedent conditions, projected flows and supplies, including OMID, Grand Valley Project, CFOPS, etc. In 2015 (9,000 af) and 2016 (up to 12,000 af), CWCB leased water from Ute Water Conservancy District for release from Ruedi using SCTF monies. The OMID Canal Automation Project is expected to provide at least 17,000 af of water in most years. The check structures in the OMID project began providing partial water savings beginning in the 2014 irrigation season and the project will be fully constructed prior to the 2018 irrigation season. Finally, the 15-Mile Reach PBO requires review of progress to implement flow protection / effects on endangered fishes in 2015; the draft review is currently in review in the Program Director's office and should be out within a month.
10	Complete CFOPs report (evaluation of options for providing and protecting additional peak flows to the 15-Mile Reach).	Water Users	2016	Draft expected June 2016 and final in September 2016. Draft will identify the Service's "fish pools" and which ones are subject to exchange (base to peak flows) (will require State Engineer legal review).
11	Determine if and how the Recovery Program can assist irrigation companies in improving screen operations to further reduce entrainment of native and endangered fish at the GVIC, GVP, and Redlands diversions.	USBR		

NEWS RELEASE

April 29, 2016
FOR IMMEDIATE RELEASE

Contact: Krissy Wilson, Native Aquatic Species Program
Coordinator, UDWR
801-538-4756

Brent Stettler, Conservation Outreach Manager,
UDWR
435-613-3707

Dr. Tom Czaplá, Propagation and Genetics
Coordinator, Upper Colorado River Endangered Fish
Recovery Program
303-236-9884

ENDANGERED BONYTAIL SPAWNING CONFIRMED IN A GREEN RIVER FLOODPLAIN

JENSEN, UTAH – For the past four years, the Upper Colorado River Endangered Fish Recovery Program and its partner the Bureau of Reclamation have coordinated spring releases from Flaming Gorge Dam to connect floodplain habitats along the Green River near Jensen, Utah to provide important nursery habitat for endangered Colorado River fish. The primary beneficiary of those releases to date have been larval endangered razorback sucker (*Xyrauchen texanus*). In 2015, however, Utah Division of Wildlife Resource (UDWR) researchers, Matthew Breen, Dr. Robert Schelly, and Randy Staffeldt determined that previously stocked, endangered adult bonytail (*Gila elegans*), entered the Stewart Lake managed floodplain. When the floodplain was drained in autumn, UDWR handled 19 young-of-year native chub ranging in total length from 1.5 – 2.5 inches (37 – 64 mm). Four of these fish did not survive and were preserved according to standard protocol.

In the past, UDWR assumed the incidental chubs they encounter when draining Stewart Lake were likely roundtail chubs (*Gila robusta*). However, in reviewing their data this winter, the researchers realized the size of the four *Gila* collected did not fit with the timing of roundtail chub spawning and that these fish might be evidence of the first documented reproduction of bonytail in the wild! The preserved specimens were then positively identified as bonytail via morphometric (scale and body measurement) analyses by Dr. Kevin

Bestgen and Darrel Snyder, of the Larval Fish Laboratory at Colorado State University, and through genetic analysis at the U.S. Fish and Wildlife Service's Southwestern Native Aquatic Resources and Recovery Center, Dexter, New Mexico by Dr. Wade Wilson. In the early 1980's wild bonytail were brought into captivity for hatchery reproduction. This finding documents the first reproduction of bonytail in the wild in the upper Colorado River basin and represents a major step forward in the recovery of this species.

###

COLORADO RIVER RECOVERY PROGRAM
¹FY 2017 DEPLETION CHARGE AND ANNUAL BUDGET
ADJUSTMENTS
January 28, 2016

ITEM	FY 2016	FY 2017
² DEPLETION CHARGE:	\$20.87	\$20.89
³ AGENCY ANNUAL CONTRIBUTIONS:	FY 2016	FY 2017
⁴ Bureau of Reclamation (maximum power revenues)	\$5,448,190	\$5,448,190
⁵ Fish and Wildlife Service	\$1,262,394	\$1,263,657
Colorado	\$218,918	\$219,137
Utah	\$153,784	\$153,938
Wyoming	\$48,686	\$48,734
ANNUAL/O&M TOTAL:	\$7,131,972	\$7,133,656

NOTES:

¹Adjustments for 2016 (except for Bureau of Reclamation annual contributions) are based on a 2015 Consumer Price Index increase of 0.1% over 2014 (source: Bureau of Labor Statistics; <http://www.bls.gov/cpi/cpid1512.pdf> [Consumer Price Index - All Urban Consumers, Series Id: CUUR0000SA0, Not Seasonally Adjusted, Area: U.S. city average, Item: All items, Base Period: 1982-84=100], released January 20, 2016).

²The balance (unaudited) reported by NFWF in the depletion charge ("Section 7") account was \$648,717 as of December 31, 2015.

³FY 2017 depletion charge and budget adjustments become effective October 1, 2016. Agency annual contributions shown are the established contributions; actual contributions may vary somewhat.

⁴Maximum power revenues adjusted for inflation will be calculated using CPI released in October 2016, per PL 106-392. (See Dec. 13, 2004, Management Committee meeting summary for an explanation of the difference.). Figure shown currently is same as 2016.

⁵The actual Service FY 17 contribution is expected to be about \$1,332,400 (\$737,400 recovery funds and \$595,000 hatchery O&M).