



Upper Colorado River Endangered Fish Recovery Program

Dated: March 31, 2015

March 24, 2015, Management Committee Meeting Draft Summary Utah Department of Natural Resources, Salt Lake City, Utah

CONVENE: 9:30 a.m.

1. Introductions, review/modify agenda and time allocations, and appoint a timekeeper – Darin Bird welcomed the group to the Utah Department of Natural Resources.
2. Approve February 3, 2015 draft meeting summary – Angela Kantola posted the draft summary to the fws-coloriver listserv on February 10, 2015. No comments have been received to date. The Committee approved the summary as written. Angela Kantola will post the final to the listserv (*done with this meeting summary*).
3. Washington, D.C. briefing trip – Henry Maddux said the group plans to gather at the cafeteria in Rayburn the first morning of the trip. There have been many changes in House Congressional and committee staffs. Twenty-five briefings are confirmed and 13 remain to be finalized. The group is still trying to schedule a meeting with the appropriations subcommittees for House Energy and House Interior and Related Agencies. The group will split up to attend some briefings scheduled at the same time. The luncheon hasn't been well attended in recent years, so none was scheduled this year. Henry will send out version 3.0 of the briefing schedule shortly. Aaron Chavez, acting director of New Mexico's Interstate Streams Commission, will be participating in the trip. All the Program's non-Federal participants will be in D.C. for at least part of the trip, except Colorado won't be able to join.
4. Updates
 - a. Nonnative fish screening – The Committee discussed action items from January 12:

PDO outlining and developing position paper: On March 17, Kevin McAbee sent the Committee a draft memo and supporting table to help the Program consider both a priority system and a standard cost share structure for participating in projects to screen reservoirs to prevent nonnative fish escapement. Kevin said the memo ties reservoir screening to the [Basinwide Strategy](#) and includes a list of reservoirs that potentially need to be screened. Kevin described Figure 1 in the memo, which outlines the conditions for cost-sharing screening. The Program does not support screening reservoirs solely in order to preserve populations of the worst nonnative species, but does support screening to assist in their removal and replacement. Also attached to the memo was the draft revised compatible/non-compatible species list for reservoir stocking that has been sent to the Biology Committee for approval (and then will come to the Management Committee). >Yellow bullhead and blue catfish should be added to the list of non-compatible species. >The footnote that smallmouth bass may be stocked in waters above Flaming Gorge Reservoir should say "in waters above Flaming Gorge Dam." Krissy Wilson would like sterile smallmouth bass added to the compatible species list (Utah will have to develop the technique for producing adequately sterile smallmouth bass) – the Biology Committee will consider all of these proposed revisions. Patrick recommended cross-walking the reservoirs in the table to follow the color coding of Figure 1. Kevin agreed and showed that, for example, Rifle Gap Reservoir really fits in the Yellow category; Kevin said he could make that more clear in the list of reservoirs (this table needs to be considerably refined working with the States). Tom Chart said our best estimate for addressing escapement at the three most problematic reservoirs would be ~\$1.5M. Tom Pitts asked if we need to have outside assistance to get the list of reservoirs

completed and prioritized so we can begin work. Kevin said so far, we've been analyzing screening alternatives one reservoir at a time (e.g., Paul Badame working on Starvation), but if we want to look at them all at once, we might need assistance. Brent Uilenberg thought it would be premature to seek a consultant's help at this time. The River District has been very helpful on the Elkhead screen; Brent anticipates similar support for a screen at Ridgway and some of the Utah screens. The Committee thought the draft memo generally met their expectations. >The Committee will have two weeks to submit comments on the memo portion to Kevin and Tom Chart, and then the Program Director's office plans to finalize the draft memo for Committee approval. Kevin welcomed comments on how the reservoirs are described in the list, any additional reservoirs, and anything needed to make the list more accurate. >Once the table is finalized, Henry suggested the Committee review it as a standing agenda item. Tom Pitts said we need to add to this a strong public relations campaign, education, and firm support from the States' wildlife commissions to help anglers buy in to the concept of nonnative fish management. Kevin said including anglers in developing lake management plans (e.g. Red Fleet and eventually Elkhead) is critical in getting their buy-in. Henry agreed that we can't start too soon in educating the public. Tom Pitts suggested indicating on the list which reservoirs have lake management plans. Kevin said the Program Director's office now has an intern that is reviewing all the lake management plans and compiling a list of which reservoirs have plans, which ones need updating, which ones have had subsequent illegal introductions, etc. >Comments on the draft memo are due by April 7.

The River District and CWCB agreed to funding agreement terms for the \$500K NSCF portion of the funding. Reclamation drafted a letter to the Program Director, CPW, and the River District to document commitments regarding responsibilities for funding, installation, operation, maintenance and replacement of the net and related reservoir fishery management actions. Brent outlined the key elements of the memo: 1) Colorado Parks and Wildlife (CPW) will develop a revised Elkhead Reservoir Management Plan; 2) The State of Colorado will provide \$500,000 to the Colorado River Water Conservation District (CRWCD) to partially cover the estimated cost of installing the net (with the Program providing the balance, currently estimated at \$380K); 3) To the extent possible, it is the intent of CRWCD, CPW, Program and Reclamation to install the net in calendar year 2015; 4) CPW will provide staff, equipment, supplies and materials to perform the day-to-day operation and maintenance associated with keeping the net operational, up to \$10,000 per year; and 5) At the end of the useful life cycle of the net, the Program, CPW, CRWCD and Reclamation will consult on the need to replace the net and, if needed, who will assume responsibility for installation, operation and maintenance. With regard to item #4, Tom Pitts said discontinuing net operation would be unacceptable (and would be an ESA compliance issue); therefore, any O&M costs over \$10K should be referred to the Implementation Committee. The group agreed. Brent said he doesn't foresee difficulty funding minor additional O&M, but he and Tom Chart are concerned that major, very costly net repair may be needed soon after installation. Tom Chart said that if the spillway net becomes a non-viable option, then we would likely need to treat the reservoir. Melissa asked if that could be included in the letter. Tom Chart thought a discussion of potential outcomes belonged in CPW's lake management plan; Henry and Tom Pitts agreed. Brent thought the memo accomplishes what it needs to in this regard through the statement in #1, which says "The desired end result is to establish a reservoir fishery that is compatible with recovery efforts and which will eliminate the need to net the spillway." As drafted the letter states that CPW would submit the draft LMP for Program review. Tom Chart offered that more in keeping with the Stocking Procedures the PDO (Kevin McAbee) could work with CPW in drafting the LMP. Harry didn't think CPW would object to that (the Service inevitably turns to the Program Director's office for input, anyway). The Committee agreed to the letter and approved the initial estimate of a Program cost of \$380K (recognizing that this estimate could change). Brent needs CPW and River District comments on the letter immediately.

- b. Colorado pikeminnow and bonytail as sportfish – Krissy Wilson said early settlers used the now-endangered fish as sportfish, and Colorado pikeminnow was something of a legend historically. Since

nonnative species are our greatest threat, educating the public about the value of native species should include their value as a sportfish. Krissy has proposed introducing Colorado pikeminnow and bonytail as catch-and-release sportfish in a “destination” reservoir in Utah. Utah has a contractor assisting with the regulatory portion; (options may include 10(a)1(a) under Utah’s Section 6 agreement, 10(j), or perhaps even a Section 7 route if there’s a Federal nexus to the chosen reservoir). Implementation would be at least two years out. Krissy said the idea is catching on in Utah and her hope is that expectations will build significantly by the time stocking actually occurs. Tom Chart recommended that the Program Director’s office (Tom Czaplá) be included in all future discussions related to Colorado pikeminnow as an experimental sportfish.

- c. Capital projects – Brent Uilenberg distributed a draft revised capital projects 5-year plan. \$11.943M available for 2015, the bulk of which will go to the OMID canal system regulating reservoir. The table includes \$380K placeholders (each) for screening four additional reservoirs. Capital project funding for the Upper Basin has ~\$38M left in its ceiling, with ~\$13M remaining after currently anticipated expenditures: our remaining funds are eroding rapidly.
 - Stewart Lake gate replacement – won’t be complete by runoff, but UDWR is comfortable operating the existing gates one more year.
 - Wahweap dike repairs – USBR and UDWR folks will visit the site soon and repairs should be made within a year and a half. UDWR has \$300K remaining from the first project and may have some additional funds to put toward this.
 - We don’t have a good inventory of gravel pit ponds which may have been breached and need attention; Tom Chart suggested Lori Martin’s crews can best help us understand the scope of the problem
 - d. Instream flow related reports requiring future Management Committee approval – Tom Chart provided an update on three reports in varying stages of review (all of which eventually will come to the Management Committee for approval).
 - FR-Backwater synthesis has both a biological component (draft received from Kevin Bestgen late 2014) and a physical component (draft recently received from Argonne).
 - Peak Flow Technical Supplement addresses how the Program will evaluate spring peak flows as it relates to sediment transport. Another revised draft will go to Program participants by May.
 - Green River flow recommendation evaluation – A team will evaluate Muth et al. and has scheduled a kickoff meeting for May 7. Tom Pitts suggested someone from Utah Water Resources participate on the team. >Tom Chart will send Henry a note and then Henry will ask Water Resources and Water Rights who might participate (*done; Krissy Wilson will represent Utah*). Leslie suggested some analysis of economic impacts (e.g., last year’s Aspinall operations cost ~\$5M). Implementing flow recommendations impacts the Basin Fund which funds the various recovery programs. Clayton suggested either broadening or narrowing the scope of this work, but, either way, committing to evaluating how the recommendations are implemented (which would include economic impacts) at some point. Tom Chart noted that economic analysis was not identified in our Green River Study Plan and therefore is not included in the current scope of work. He agreed with Tom Pitts that economic analysis would be an issue to be covered under supplemental NEPA if: 1) if the evaluation determines that the flow recommendations need to be revised, and 2) Reclamation determined that additional NEPA was necessary.
5. Review draft revised RIPRAP, RIPRAP assessment and draft FY 16-17 Program Guidance – The Committee reviewed these documents posted to the listserv on February 12 and 13, subsequently revised by the technical committees, and then sent to the Management Committee on and March 19. Tom Chart said the RIPRAP is a comprehensive document tracking action items we’ve completed and what we still need to do and suggested it provides the “road map” to recovery. Based on the Implementation Committee’s delegation of review and approval of the RIPRAP revisions / assessment to the Management Committee, the Committee approved the RIPRAP and Program Guidance with some minor revisions as

recorded by Angela on the documents during the Committee's review.

- a. Draft revised RIPRAP tables and draft RIPRAP assessment – Minor revisions made to Excel spreadsheet.
 - b. Draft revised RIPRAP text – The Committee discussed the PDO's recommendation for odd-year sufficient progress updates with full-blown assessments in the even-years. Under this proposal, the Service would still conclude whether or not the Program provides ESA compliance and would retain the ability to make a different finding in odd years if there's a serious problem. As long as this proposal doesn't contradict anything committed to in the Section 7 Agreement, the Committee was comfortable with the proposal for odd-year sufficient progress updates. Melissa asked if the schedule should coincide with species population estimates; however, those estimates vary by species, so this probably wouldn't work. RIPRAP text won't be changed to reflect the proposal this year, but the Program Director's office will outline how "sufficient progress light" would look as full sufficient progress assessments are developed this year and next. Then the Program can offer recommendations as to whether it thinks the Service should implement the proposal in 2017.
 - c. Draft FY 16-17 Program Guidance – Angela drew attention to the extent to which proposed budget totals exceed anticipated available funds. Tom Chart emphasized that the Program clearly has greater problems than it has budget to solve. Henry said it would be helpful to know what items are ongoing costs we've committed to pay (non-discretionary). >The Program Director's office (Angela) will draft a revised table identifying those. Leslie James asked about outside funding; Tom Chart said we've sought and acquired some; for example, the Service received ~\$260K for work to improve razorback sucker habitat at Johnson Bottom. Bridget suggested razorback sucker work would be appropriate for Cooperative Recovery Initiative funds on National Wildlife Refuges if we're close to downlisting (in the "showing success" funding category). We are also pursuing SRLCC funding to assist with sediment monitoring, which would benefit the Program and compliment the LCC's landscape design project. Tom Chart recognized that there are very likely other funding opportunities, but it takes a considerable commitment of time to track these sources and develop proposals.
6. Review of sufficient progress action items – See Attachment 3.
 7. Implementation Committee follow-up – Tom Chart said the Committee discussed Tom Pitts' memo related to roadmap/benchmarks to recovery at some length. The Program Director's office agreed to review links among the recovery goals, draft recovery plan, and RIPRAP for any gaps and how those might be addressed. Tom Chart said he thinks the time to begin this will be after the April 7 webinar.
 8. Updates on recovery planning and Tom Pitts' memo to the Implementation Committee dated March 3, 2015) – Tom Czaplá said a draft agenda for the April 7 (8-noon) webinar will be out soon. This draft agenda may be tweaked somewhat, but contains the basic elements to be discussed:
 1. *Introduction - Service personnel review 'Threatened' vs 'Endangered' status and required recovery plan content.*
 2. *The Writing Team will provide a presentation that reviews: a) development of the revised demographic criteria; b) development of the revised threat removal criteria; c) compare the 2014 revised plan with the 2002 goals - what has changed and why.*
 3. *A summary of Recovery Team input throughout the process and comments the USFWS has received from them on the current draft.*
 4. *Review the proposed, revised recovery timeframes.*
 5. *Other specific discussion topics requested by MC members prior to the meeting.*

6. Tom Pitts' request for a 'roadmap to recovery' as per his memo to the Implementation Committee, dated march 3, 2015.

Henry asked what level of comments the Committee should raise; Tom Czapla said it would be a good venue for major comments. We'll also want to agree on a due date for written comments. It will be helpful if commenters provide solutions where they raise concerns. Rich Valdez said comparison between the RIPRAP and the draft Pikeminnow Recovery Plan are welcome to identify any gaps. Tom Pitts asked for a table comparing downlisting/delisting criteria between the 2002 goals and the current plan. >Tom Czapla will send this out with the draft agenda (*done*). Henry suggested using the webinar's "hand raise" feature to help track who wants to speak up on the webinar and the Program Director's office agreed. Bridget Fahey won't be on the webinar, but asked the Committee to keep the following in mind: 1) clear recovery criteria that prevent debates down the line as to whether criteria are met; and 2) avoid having so many downlisting and delisting criteria that we have no flexibility to move forward on down or delisting if all criteria aren't fully met in the exact way they were written. Tom Chart encouraged Management Committee members to discuss their concerns in advance with their Biology Committee member and, where possible, keep the Management Committee member the spokesperson on the webinar. Rich suggested it would help for folks to submit their general issues in advance of the webinar.

9. Updated consultation list – *The [consultation list has been updated through December 31, 2014](#).*

Upper Colorado River Endangered Fish Recovery Program Summary of Section 7 Consultations by State 1/1988 through 12/31/2014				
		HISTORICAL DEPLETIONS	NEW DEPLETIONS	TOTALS
State	Number of Projects	Acre-Feet/Yr	Acre-Feet/Yr	Acre-Feet/Yr
Colorado ^{1,2}	1207	1,915,681	206,620	2,122,301
Utah	240	517,670	97,279	614,949
Wyoming ²	398	83,498	35,694	119,192
Regional ^{3,4}	238	(Regional)	(Regional)	0
TOTALS	2,083	2,516,849	339,593	2,856,442

10. Review previous meeting assignments – See Attachment 2.

11. Schedule next meeting, webinar, or conference call – The Committee scheduled:

- A tentative, follow-up recovery goals webinar on May 6 from 10 a.m. to 2 p.m.
- A regular Committee webinar on May 27th from 9 a.m. to 2 p.m.
- Their regular summer meeting with an evening barbecue August 17-18 starting at 10 a.m. on the 17th and adjourning by noon on the 18th (likely the same Denver venue as last year: Red Lion hotel and Cherry Creek State Park).

ADJOURN: 3:40 p.m.

Attachment 1: Attendees
Colorado River Management Committee Meeting, March 24, 2015

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
Bridget Fahey	U.S. Fish and Wildlife Service
Melissa Trammell	National Park Service
Patrick McCarthy	The Nature Conservancy
Clayton Palmer	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
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Recovery Program Staff:

Tom Czapl	U.S. Fish and Wildlife Service
Kevin McAbee	U.S. Fish and Wildlife Service
Angela Kantola	U.S. Fish and Wildlife Service

Others

Darin Bird	Utah Department of Natural Resources
Jana Mohrman	U.S. Fish and Wildlife Service
Rich Valdez	SWCA
Krissy Wilson	Utah Division of Wildlife Resources
Dave Speas	Bureau of Reclamation

Via phone:

Ray Tenney	Colorado River District
Harry Crockett	Colorado Parks and Wildlife

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.* For the 2012 & 2013 *Program Highlights*, we used the \$37.4M annualized estimate. **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. **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*). **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. *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: Water user and Colorado additional costs added and documented in Kantola's Briefing Book Pie Chart Data spreadsheet. Power revenue replacement costs "placeholder" from previous years retained until Argonne report finalized and approved (currently in revision). 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.
2. **Angela Kantola** still needs to draft a proposed annual schedule of Management and Implementation committee meetings. Angela will draft this as one face-to-face meeting of the IC and two of the MC (August and ~March, one in Denver and one in Salt Lake). *3/24/15: Pending (meanwhile, the Management Committee has committed to meet in person twice a year [typically March in Salt Lake City and August in Denver] and the Implementation Committee has committed to meet in person once a year [typically late September or early October in Denver] and by webinar once a year (typically early March).*
3. **Tom Pitts** will work with **Henry Maddux, Bridget Fahey, and Brent Uilenberg** to frame a discussion about what will recovery look like 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.*
4. **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. *3/24/15: If things go well, a contractor should be on board by June 2015.*
5. The **Program Director's office** will share Elkhead net design documents with the Biology and Management committees and ask anyone with concerns to respond within a week of that e-mail.
6. The draft revised compatible/non-compatible species list for reservoir stocking has been sent to the Biology Committee for approval (and then will come to the Management Committee). Yellow bullhead and blue catfish should be added to the list of non-compatible species. The footnote that smallmouth bass may be stocked in waters above Flaming Gorge Reservoir should say "in waters above Flaming Gorge *Dam*." The **Management Committee** will have until April 7 to submit comments on the draft memo regarding a

priority system and cost share structure for reservoir screening to Kevin McAbee and Tom Chart, and then the **Program Director's office** plans to finalize the draft memo for Committee approval. **The Management Committee** will review the reservoir screening table (once finalized) as a standing agenda item.

7. **Angela Kantola** will draft a revised table identifying what Program projects are ongoing costs we've committed to pay (non-discretionary).

Attachment 3

Status of Action Items from the 2014 Sufficient Progress Letter

March 24, 2015

#	Recommended Action Items	Lead	Due Date	Status
General – Upper Basin-wide				
1	Fully implement the <i>Basinwide Nonnative Strategy</i> and continue work with the States to implement the specific, tangible actions added to the RIPRAP in 2013 (Table 2a).	States, PDO, FWS		See Table 2a for this and other nonnative fish management actions.
2	Complete revised <i>Integrated Stocking Plan</i> .	PDO	3/31/15	Done.
3	Complete recommendations for and implement humpback chub broodstock development.	PDO/BC		Ad hoc group developing action plan; genetic analysis of upper basin chubs to be completed ~ January 2016. Conference call with hatchery managers 2/4 and subsequent meeting at Dexter to discuss backup broodstock. FWS will continue bringing young humpback into the hatchery for backup broodstock.
4	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).			FY16-17 guidance includes work to incorporate young of year component back into the adult sampling; won't fully address, but help track the young life stages. FWS will sample for young age classes in FY15 in Black Rocks even though population estimate work deferred a year.
5	Support research and coordinate with the San Juan Program to determine contaminant dose response information related specifically to the endangered Colorado River fish as well as necessary remediation. Service will consult with EPA on proposed revised fish tissue-based criteria for selenium with respect to impacts on the endangered fish.			San Juan River Recovery Implementation Program is conducting a population viability analysis for Colorado pikeminnow to determine how impaired reproduction, (linked to elevated levels of heavy metal s or selenium) would affect population dynamics. 1. >PDO will share San Juan's Colorado pikeminnow PVA analysis with Biology and Management committees as soon as possible (and provide timeframe if it's not available). Also selenium sampling on Gunnison. Evaluation of selenium in wild razorback sucker fish tissues from Stewart Lake.
Green River				
6	Track concerns about baseflows (e.g., in 2013, 104 days were below 1,500 cfs and 47 days were below 1,300 cfs minimum summer baseflow targets at Green River, Utah) as Green River flow recommendations evaluated.	PDO		Draft backwater synthesis report (biological portion) out for review by Biology Committee that will help us understand baseflow needs. Initiate Green River flow recommendations evaluation in spring 2015 (Kickoff meeting held February 24.)
7	Complete modeling work and maintain revised schedule to implement flow Green River protection in FY 16-17.	Utah/USBR		Modeling completed and on way to State policy review (Robert King lead). GRUWAT drafting a white paper on findings from modeling.
8	Complete backwater synthesis draft final report (anticipated summer, 2014) and launch evaluation of Green River flow recommendations (scope of work for evaluating the recommendations in review; scope for conducting experiment to disadvantage smallmouth bass anticipated later in summer 2014).			Biological portion of report in peer/BC/WAC review. Physical habitat portion draft submitted to PD in March. Synthesis report to follow.

#	Recommended Action Items	Lead	Due Date	Status
9	Continue government-to-government consultation with Northern Ute Tribe and request that the Old Charlie Wash lease be renewed.	USFWS		Service working to meet with Tribe (as yet unsuccessful).
10	Implement entrainment solution at Tusher Wash.	USBR		The Program is planning a fish exclusion system for the canal. NRCS rebuild of diversion structure scheduled to begin in fall 2015, pending signature of a ROD by NRCS. NRCS will incorporate fish passage into this structure. USBR pursuing a fish exclusion system through a separate process, will begin design of weir wall similar to the one recently installed at Hogback Diversion on the San Juan.
Yampa River				
11	Provide: accounting of past depletions for the Yampa River (due in 2010); back-casted baseline of current depletions; and a recommendation and justification addressing projected future depletions and whether or not additional instream flow filings or other flow protections mechanisms should be considered.	CWCB		CWCB is scheduled to complete accounting of past depletions using the StateCU model (Due date from YPBO - 1 st report July 1, 2010; 2 nd report July 1, 2015). The depletion accounting report will include a discussion of the need for flow protection (which would require a peak flow recommendation). The irrigated acreage assessment update was completed. Another contract was awarded to update the dataset. The models will be updated through 2012. Colorado has given high priority to the Yampa and Colorado river basins portion of this work. 2/3/15: Michelle said CWCB still working on updating models and has someone contracted to update all the west slope models (will share timeline as soon as available), then next step will be depletion accounting. Don't anticipate a lot of changes in consumptive use, but corrections as to where depletions occur, etc.
White River				
12	Develop White River Management Plan	CWCB/PDO		CWCB is working on contracting and the Program Director's office will continue to track progress over the next year. Previously established due dates were: model completion fall 2014; plan completion winter 2015; and PBO summer 2015. CWCB will submit a draft scope of work to contracting by 2/6/14. After 1 week-2 month review process, will go out for bid (10 days to 2 weeks), followed by interviews, and selection of a contractor.
Colorado River				
13	Improve achievement of flow targets, especially in drought years.			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. FWS and Reclamation are exploring opportunities (and would include Colorado and the River District in these discussions) to continue delivering Ruedi water (or a portion thereof) to replace the release of 10,825 acre-feet of Ruedi Reservoir water that concluded in 2012. CWCB is exploring possibilities for at least short-term flow augmentation in the 15-Mile Reach and in March 2015 their Board initiated 120-day review of a proposal to lease a portion of 12,000 acre-feet of water that Ute Water owns in Ruedi for an instream flow. (In January 2015, CWCB approved including a request in the 2015 SCTF bill to spend up to \$500K for this lease.) In addition, the OMID Canal Automation Project is expected to provide about 17,000 af of water in most years. The check structures in the OMID project are complete and will result in partial water savings beginning in the 2014 (current) irrigation season. The project will be fully implemented in 2016. Finally, 15-Mile Reach PBO requires review of progress to implement flow protection / effects on endangered fishes in 2015. PDO anticipates limited staff availability from FWS-ES-Grand Junction to help with this review.
14	Maintain ability to meet April flow targets (prevent future "April Hole")			Grand Valley Water Users cut back their irrigation diversions during the 'April Hole' by >800 cfs. CWCB has reviewed hydrology and characterizes 'April Holes' of the magnitude seen in 2013 as very rare. In the future, water users and the Service will

#	Recommended Action Items	Lead	Due Date	Status
				address the potential for this situation to recur as part of the normal HUP calls regarding water management for the 15 Mile Reach and determine what measures if any should be taken based on current conditions. This should avoid a repeat of the extreme low flows in the spring. The Service and water users will formalize specific recommendations prior to the 2015 irrigation season to deal with the situation should it recur in the future and implement those recommendations as needed to avoid or mitigate April low flows. CWCB is exploring possibilities for at least short-term flow augmentation in the 15-Mile Reach. Everyone watching flows closely as April approaches.
15	Provide the depletion accounting report that was due July 1, 2010.			See first item under Yampa River: CWCB is scheduled to complete accounting of past depletions using the StateCU model (Due date from YPBO - 1 st report July 1, 2010; 2 nd report July 1, 2015). The depletion accounting report will include a discussion of the need for flow protection (which would require a peak flow recommendation). The irrigated acreage assessment was completed. Another contract was awarded to update the dataset. The models will be updated through 2012. Colorado has given high priority to the Yampa and Colorado river basins portion of this work. Michelle said CWCB still working on updating models and has someone contracted to update all the west slope models (will share timeline as soon as available), then next step will be depletion accounting. Don't anticipate a lot of changes in consumptive use, but corrections as to where depletions occur, etc.
16	Complete CFOPs report (evaluation of options for providing and protecting additional peak flows to the 15-Mile Reach).			CFOPS Phase III (a due date of Sept 30, 2010 was identified in the 2010 RIPRAP) draft report distributed April 2. Tom Pitts proposes meeting with PDO to explore completion via contract with Section 7 funds.
17	Increase operation of fish screens.			HUP call participants will continue to discuss screen operation with the goal of more frequent operation at the GVIC canal (recognized as the oldest and most problematic design). The Program will continue to evaluate ways to improve screening operations and methods, and to fund salvage operations of fish remaining in the canals at the end of the irrigation season.

Table 2.a.

Upper Colorado River Endangered Fish Recovery Program
 Nonnative Fish Management Actions: an Addendum to the Recovery Action Plan
 January 2015 Update on Progress

River / Action	Responsible Entity(s)	New RIPRA P#	2013	2014	2015	Out years	PDO/MC update 3/2015
General (in addition to ongoing projects / actions)							
Finalize the UCR Basin Nonnative and Invasive Aquatic Species Prevention and Control Strategy (Basinwide Strategy).	Program Director's Office (PDO)	III.D.	X				<i>Complete; Feb, 2014.</i>
Cease translocation of all nonnative predators to any fishery within the UCR.	States / Program	III.E.		X	X	X	<i>Implemented 2014 field season.</i>
The States will commit to remove northern pike and / or replace them with a Compatible (compatible with	States / Program	III.F.	States will convey this message in their Fishing				<i>CPW treated Paonia Resv. and held must kill fishing derby at</i>

River / Action	Responsible Entity(s)	New RIPRA P#	2013	2014	2015	Out years	PDO/MC update 3/2015
recovery) species (as identified in the Basinwide Strategy) throughout the UCR Basin. Specific waters will be targeted based on risk of escapement, opportunity and available resources.			Brochure / Guidebook starting in 2014				<i>Stagecoach. CPW began removing pike from Crawford in 2014 (~74% of the adult population removed). UDWR treated Stewart prior to inundation. Yampa pike removal expanded up to Steamboat in 2014. CSU programmatic synthesis of northern pike removal efforts (January 2015) demonstrated current removal efforts are inadequate to permanently reduce pike abundance in the Yampa River.</i>
Implement 'must kill' regulations for northern pike throughout the UCR basin (exceptions may include waters where northern pike are being replaced by tiger muskie).	WY and UT	III.F.1.		X	X	X	<i>Done in WY (must-kill and nongame fish designation). Done in UT.</i>
Continue discussions concerning "must kill" regulations on northern pike throughout the UCR Basin to develop a proposal supported by law enforcement for regulatory consideration.	CO	III.F.2.	X	X	X	X	<i>If Colorado is unwilling to pursue must-kill regulations throughout the UCR basin in Colorado, then State is urged to pursue a comprehensive suite of alternative actions, in concert with Program partners, to achieve the necessary biological outcome. CPW convened a group of Program stakeholders to develop new nonnative fish management actions; first meeting held 11/04/14; second meeting scheduled for 4/2/15.</i>

<p>Remove smallmouth bass and / or replace them with a Compatible species (as identified in the Basinwide Strategy) everywhere they occur throughout the UCRB (exceptions = McPhee Res., Lake Powell Res., and upstream of Flaming Gorge Dam; and 'containment' may prove to be a viable management option for smallmouth bass at Starvation Res.). Specific waters will be targeted based on risk of escapement, opportunity and available resources.</p>	<p>States / Program</p>	<p>III.G.</p>	<p>States will convey this message in their Fishing Brochure / Guidebook starting in 2014</p>				<p><i>CPW treated Miramonte. Good progress being made to address Elkhead; Program has approved recommendation to screen first. Program partners working on a response to smallmouth at Ridgway. Tri-County operating reservoir to prevent spilling, CPW considering regulations, screening, chemical reclamation, and harvest incentives.</i></p>
<p>Implement 'must kill' regulations for smallmouth bass throughout the UCR basin (see exceptions above).</p>	<p>WY and UT</p>	<p>III.G.1.</p>		<p>X</p>	<p>X</p>	<p>X</p>	<p><i>UT implemented in the Green River downstream of Flaming Gorge Dam. All WY bass populations currently above Flaming Gorge Dam; will add regulations if show up elsewhere.</i></p>
<p>Continue discussions concerning "must kill" regulations on smallmouth bass throughout the UCR Basin to develop a proposal supported by law enforcement for regulatory consideration.</p>	<p>CO</p>	<p>III.G.2.</p>	<p>X</p>	<p>X</p>	<p>X</p>	<p>X</p>	<p><i>If Colorado is unwilling to pursue must-kill regulations throughout the UCR basin in Colorado, then State is urged to pursue a comprehensive suite of alternative actions, in concert with Program partners, to achieve the necessary biological outcome. CPW convened a group of Program stakeholders to develop new nonnative fish management actions; first meeting held 11/04/14, second meeting scheduled for 4/2/15.</i></p>
<p>The States are dedicated to reducing burbot numbers through all means practicable (including targeted removal) throughout the UCR Basin. Current</p>	<p>States / USFWS</p>	<p>III.H.</p>	<p>States will convey this message in their Fishing Brochure / Guidebook</p>				

management practices (e.g., ‘must kill’ regulations; fishing derbies at Flaming Gorge) considered adequate.			starting in 2014				
Implement ‘must kill’ regulations for burbot throughout the UCR basin. Done in WY and UT. Wyoming and Utah implementing burbot bash; WY research projects.	WY and UT	III.H.1.	X	X	X	X	<i>Done in WY and UT. WY and UT implementing burbot bash; WY research projects.</i>
Continue discussions concerning "must kill" regulations on burbot (as a preemptive measure) throughout the UCR Basin to develop a proposal supported by law enforcement for regulatory consideration.	CO	III.H.2.	X	X	X	X	<i>If Colorado is unwilling to pursue must-kill regulations throughout the UCR basin in Colorado, then State is urged to pursue a comprehensive suite of alternative actions, in concert with Program partners, to achieve the necessary biological outcome. CPW convened a group of Program stakeholders to develop new nonnative fish management actions; first meeting held 11/04/14, second meeting scheduled for 4/2/15.</i>
Promote increased production of sterile gamefish (e.g., hybrids, triploids), as Compatible sport fish.	Service / States / Program	III.I.	X	X	X	X	<i>In discussions in WY, UT&CO.</i>
Work with State Wildlife agencies and water user groups to increase awareness amongst States’ legislatures and the courts of the ecological and financial ramifications of illicit introductions.	States and PDO via the Implementation Committee	III.J.	X	X	X	X	<i>Ongoing in all states. (WY reg changes (leg)); PDO spoke to Judicial College in Reno; raised at IC meeting Sep 2013.</i>
Yampa River (in addition to ongoing projects)							
Elkhead Reservoir – establish a compatible sport fishery		III.B.1.a (2)(a)					<i>Ongoing – Program has approved screening first. CO will cover \$500K toward screen from SCF.</i>
Coordinate / schedule drawdown with Colorado River Water Conservation District (CRWCD)	CPW / Program / CRWCD	III.B.1.a (2)(a)(i)	X				<i>Deferred in favor of screening first.</i>
Develop / Implement Communications Plan	CPW / Program	III.B.1.a (2)(a)(ii)	X				<i>Implementing. Working group met with stakeholders in Sep 2014, local government in</i>

							<i>December and held public meeting in February 2015.</i>
Complete necessary environmental compliance	CPW / CRWCD	III.B.1.a . (2)(a)(ii) i)	X	X			
Identify and secure sources of replacement compatible sport fish.	CPW	III.B.1.a . (2)(a)(i) v)	X	X			
Treat reservoir and necessary habitats in the upper Elkhead Creek drainage.	CPW / Program / CRWCD	III.B.1.a . (2)(a)(v))		X			<i>Deferred in favor of screening first.</i>
Stock compatible sport fish	CPW	III.B.1.a . (2)(a)(v) i)			X		
Evaluate / retreat if necessary	CPW / Program / CRWCD	III.B.1.a . (2)(a)(v) ii)				X	
Walton Creek confluence area							
Evaluate feasibility of habitat modification to eliminate / reduce northern pike spawning habitat.	CPW / Program / BOR	III.B.1.d . (1)(b)(i)	X	X			<i>\$500K re-secured for modification from SCTF. Program contributed \$30K Section 7 funds to feasibility / design.</i>
Modify habitat as indicated through feasibility investigations.	CPW / Program / BOR	III.B.1.d . (1)(b)(ii))		X	X	?	<i>Very encouraging – TNC may have been a major player in making this happen.</i>
Upper River (upstream of Hayden, CO)							
Increase mechanical removal of northern pike in main channel and floodplain habitats as directed by Colorado Parks and Wildlife.	CPW / Program	III.B.2.d . (1)		X	X	X	<i>CPW and CSU reinitiated removal in this reach in 2014. Flows made work difficult to complete. Scheduled for 2015.</i>
Stagecoach Reservoir.							
Convert and extend the ongoing northern pike escapement study to a removal effort (will require an addendum to existing FERC Biological Opinion).	CPW / potentially Program in outyears	III.B.1.f.		X	X	X	<i>Stakeholders agreed to modify tagging study to removal effort. FWS writing FERC to communicate this change, which is acceptable under the existing BO. CPW likely open</i>

							<p><i>to removal, but doesn't have resources to implement (removal from Catamount being the higher priority).</i></p> <p><i>CPW continues to remove pike from Catamount and also has plans to eradicate the illegally established population of northern pike in Chapman Res.</i></p>
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White River

Determine and implement an adequate level of mechanical removal to reduce smallmouth bass.	CPW / Program	III.B.2. a.	X	X	X	X	<p><i>Program implementing as much mechanical removal as possible below Kenney; new techniques in discussion. Recovery Program continues to support and encourage a multi-agency effort to designate White River as a native fish conservation area. Utah continues to discuss.</i></p>
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Develop a measure of successful suppression of SMB	Program	General :III.B.2. a.(1)		X			<p><i>Pending. Sampling crews continue to remove as many fish as possible.</i></p>
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Green River (in addition to ongoing projects)

Direct new (or shift existing) nonnative fish removal efforts to address increasing numbers of walleye.	Program	III.A.4. d.	X	X	X	X	<p><i>Walleye captures have increased in upper and lower Green River; gizzard shad have been found in lower GR backwaters since 2007 and increased markedly over the past few years in lower Colo. River backwaters. Gizzard shad could significantly affect food web ecology in backwaters and mainstem. Illegal population of walleye in Red Fleet Reservoir is</i></p>
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					<p><i>problematic source. UDWR convened Red Fleet user group to develop a Lake Mgmt. Plan in order for reclamation to occur (rotenone). UDWR plans to rotenone in October 2015 and then develop a compatible sportfishery and install a screen.</i></p> <p><i>UDWR adjusted work to add spring and fall passes for walleye and gizzard shad removal in lower Green River in years when pikeminnow population estimates not conducted. 4 2014 spring sampling trips in lower Green yielded 149 walleye. UDWR also added one spring pass for walleye in the middle Green. Work will continue in 2015 (deferring humpback chub population estimates by one year to better time those estimates in the future and to provide additional capacity to focus on walleye in 2015).</i></p>
Develop a management strategy to address escapement of walleye (and smallmouth bass) from Starvation Reservoir.	UDWR	III.A.4. e.	Dec. , 2013		<p><i>UDWR produced a timely feasibility report; installed a temporary screen in spill channel during spring 2014 runoff; will install more robust temporary screen in 2015 and is pursuing a permanent solution (but expected to seek funding assistance from Program). USBR may be able</i></p>

							<i>to complete installation and construction of the permanent screen in October 2015.</i>
Implement recommendations from the management strategy.	UDWR / Program	III.A.4. e.(1)		X	X	X	<i>Pending.</i>
Colorado River (in addition to ongoing projects)							
Upstream of Grand Valley Project dam: Determine and implement an adequate level of mechanical removal in the main channel. More importantly, use all techniques available to eradicate northern pike (and other nonnative species of concern) from floodplain habitats.	CPW / Program	III.A.9.	X	X	X	X	<i>CPW: a) implemented significant mechanical removal; b) coordinating with USBR on future levee work at LaFarge Pond.</i>
Develop a measure(s) of successful suppressions of northern pike (and other nonnative species of concern).	Program			X			<i>Pending.</i>
Direct new (or shift existing) nonnative fish removal efforts to address increasing numbers of walleye in the lower river.	Program	III.A.8.	X	X	X	X	<i>2 additional removal passes added from Cisco to Dewey Bridge and one pass was added from Dewey Bridge to Potash in 2013. Service added 2014 fall passes to remove walleye in lower Colorado reaches (Cisco to Potash) and UDWR added removal passes for the Lower Green. FWS removed 109 walleye (346 - 600 mm TL,) during 2014 CPM pop estimate trips from RM 108 (just downstream of Cisco) to RM 3.5 (just above the confluence). With regard to escapement of fish from Lake Powell, a management plan is being developed and upper basin will be involved in review (Dale Ryden representing).</i>

