

January 19, 2010

Biology Committee Draft Meeting Summary
[Holiday Inn Hotel and Suites](#), 2571 Crossroads Blvd
Grand Junction, Colorado, Thursday, January 14, 2010

Biology Committee: Dave Irving, Pete Cavalli, Krissy Wilson, Shane Capron, Tom Pitts, Brandon Albrecht, and Tom Nesler. Reclamation and the Park Service (both due to illness) and CREDA were not represented at the meeting.

Other participants: Tom Chart, Michelle Shaughnessy, Sarra Jones, Tom Czapla, Angela Kantola, Aaron Webber, Katrina Lund, Darek Elverud, Doug Osmundson. By phone: Tildon Jones, Paul Badame, John Hawkins, Boyd Wright, and Trina Hedrick.

Assignments are indicated by “>” and at the end of the document.

CONVENE: 8:00 a.m.

1. Review/modify agenda – The agenda was modified as it appears below.
2. Elect new vice-chair - Melissa Trammell, current vice-chair, now assumes chairmanship of the Committee (but was not available for this meeting). Shane Capron was elected the new vice-chair. Dave Irving has accepted a new position with the Service in the state of Washington; Michelle Shaughnessy replaces Dave as the Service’s representative on the Biology Committee.
3. Approve Biology Committee October 6 meeting and November 10 conference call summaries. The Committee discussed comments submitted by Tom Nesler, Pete Cavalli and Melissa Trammell and revised the October 6 and November 10 summaries. >Angela Kantola will post the revised summaries to the listserver (*done*).
4. Review previous meeting assignments and reports due list. The Committee reviewed assignments (see Attachment 1) and the reports list. >Angela Kantola will send out revised reports due list (*done*).
5. Report reviews
 - a. 132 Westwater HBC 2003-2005. Tom Czapla sent the report to the Biology Committee for review on July 16, 2009. The goal is to complete this older report and focus any major changes will on the 2006-2008 report. A combined analysis of Westwater and Black Rocks data (from Derek and Travis) by Gary White will be made in a separate SOW Tom Czapla asked UDWR to include all the model outputs in both this and the 2006-2008 reports. At the top of page 13, Shane Capron suggested that the authors remove the parenthetical survival estimates. “Westwater Canyon humpback chub population to be anywhere from 5,719 in 1993 (90% survival) to 1,164 in 1997 (59% survival).” Pete Cavalli noted that the 1st Conclusion on pg 16, “Population estimates of humpback chub in Westwater Canyon declined during the study period (2003-2005) but confidence intervals did not overlap” should

read “*did* overlap” (and check for this same error in the body of the report). >UDWR will make these changes, finalize the report, and provide the final copy in pdf to the PD’s office to post on the website.

- b. 121a Larval RBS. Doug Osmundson sent the draft final to the Committee with comments/responses on 12/30. The Committee discussed additional razorback sucker work, as Doug said he will have available field time in 2011 and 2012. (Tom Chart noted that 2012 looks better from a budget standpoint than 2011.) CSU is working on the razorback monitoring plan and will be discussing that with field folks. >The Program Director’s office will review the 121a report recommendations (as well as the Gunnison PBO) and determine what items need to be included in the RIPRAP. Under “Discussion,” Doug will remove the statement “In contrast, hundreds of razorback sucker larvae are collected annually from the Green River system (Bruce Haines, FWS, personal communication).” (To avoid making a potentially incorrect inference to differential survival between sub-basins.) Doug raised the issue of determining whether razorbacks captured in the field are hatchery or wild-produced and suggested that one method would be to not stock any razorback under certain size (including excess fish into floodplains, etc.). If this were followed, excess fish would have to be sacrificed or pond space secured. Add “total” to “Although mean number of *total* fish larvae per sample was similar between rivers in 2004 and 2007, it was six times higher in the Gunnison River than in the Colorado River in 2005.” Tom Pitts asked about potential hybridization; Doug said he’s recommended genetic analysis (which perhaps could be conducted at CSU at a reasonable cost). Krissy Wilson said she believes the sample size is too small to make inferences about hybridization at this point and encouraged finding ways to increase sample size (light traps, etc.). Brandon described more active light-sampling which works well in the lower basin. The group discussed potential PIT-tag loss; Doug will bring up PIT-tagging issue in the Discussion to qualify his recommendation “At present, improper tagging, PIT tag loss in stocked individuals, and faulty tags preclude using the presence or absence of such tags as a definitive means of determining origin” since it didn’t follow directly from the report. >Doug will make these changes and submit the final report to the Program Director’s office to post on the website. Another potential method to determine if fish are wild or hatchery origin would be stable isotope analysis of fin ray punches.
6. Development of a flow request for Flaming Gorge Reservoir. This was discussed briefly at the nonnative fish workshop; 2010 would be a good year to try another flow manipulation to disadvantage bass. Tom Chart noted that the Program Director’s office provides a letter on Flaming Gorge flows each year and is contemplating an approach in 2010 similar to 2009 to continue the 2-year period of elevated base flows, as our datasets are starting to show effects on smallmouth bass. We might also want to consider connection for the Stirrup, as well. Last year UDWR observed that if the Stirrup were filled prior to river connection we would have increased the time fish could have moved in / out. Tom suggested that we use the recently purchased 8” pump (used at Baeser) to prep the Stirrup prior to runoff in 2010. Aaron said \$20K in hoses would be needed to use the Baeser pump at Stirrup, but Trina has indicated that UDWR will use a smaller, 6” pump at Stirrup to address their concerns. Pete noted that the Green River basin is very dry so far this year. Tom said our letter will need to address a wide range of potential hydrologic conditions. Shane recommended that the letter

build a strong biological case for all recommendations, especially those under the drier hydrological scenarios. Shane asked if we need to consider temperature recommendations / manipulations as well as flow. Shane suggested the possibility of going up to 16° then dropping back to potentially really disadvantage smallmouth bass. Tom said he had hoped that we would have developed a more comprehensive flow / temp manipulation study (either a new SOW or a new task in the Proj. 115 SOW) by this time. However, the information CSU has gathered and continues to gather on SMB spawning time should lend itself to that type of effort in the near future. The Program should consider incorporating temperature manipulations into that study design. >The Program Director's office and Dave Speas will draft the letter. In light of the 45 bonytail Trina found in Stewart Lake, Krissy suggested recommending flows that will allow fish to be able to enter Stewart Lake at high flows and then exit.

7. Review of revised Baeser Bend SOW – Tom Chart sent the draft revised SOW to the Committee on January 4. It has a significant cost increase (~\$26K) from 2009 to cover the intensive netting effort required almost daily throughout October. Aaron said 2009 was the first full season for Baeser. The significant fish mortality experienced in 2009 (primarily due to bird predation) should be resolved with the pump to keep water levels up and thereby maintain cover in the weed beds in 2010). To help prevent bird predation, Krissy mentioned the possibility of using anchored Christmas trees to provide removable cover. Aaron said nonnative cyprinids are abundant in Baeser, so it's not currently useful for stocking larval razorbacks. The main question now is whether we want to use Baeser to evaluate wetlands for stocking larval or fingerling-size fish. If larval, then we'll need to re-set Baeser. Aaron recommends continuing to stock fingerling-size fish, as they still have a full year to acclimate before they're released into the river. Aaron said they stocked 1,026 razorbacks from Baeser into the Green River this year. Tom Chart said it was important to learn that we could put larvae into Baeser and get them to stockable size. Tom would prefer going back to stocking larvae and suggested re-setting Baeser via winter kill in the future. Aaron recommended a rotational schedule of draining other sites on the Ouray NWR to winterkill nonnatives, refill the sites, and then stock larvae. Dave Irving said the refuge manager is open to this. Krissy recommended finding less expensive methods for re-capturing fish from the wetlands (e.g., partially drain the sites). Aaron said Baeser could be pumped semi-dry with the purchase of additional hose. Krissy is willing to approve the scope for 2010-2011, but recommended >reviewing Modde's plan and developing a plan to implement rotational floodplain management. The Committee approved the revised 2010-2011 Baeser SOW. >The PD's office will post the revised SOW to the listserver (with "redside shiner" corrected to "sand shiner").
8. Nonnative fish SOW revisions for 2010 – The nonnative fish subcommittee reviewed these earlier this week. The revisions are responsive to recommendations from the recent nonnative fish workshop wherein we realized that we may have been missing a portion of the smallmouth bass spawning period on the Yampa River and downstream on the Green River. Angela Kantola and Tom Chart said the recommended changes fit in the 2010 budget, but 2011 is much tighter, so 2011 budgets for these and other SOW's may need to be reconsidered as we get closer to 2011.
 - a. 125 & 98a – John Hawkins summarized changes, saying they've coordinated between DOW and CSU and will increase sampling intensity (number of passes, especially in

- the upper reaches). They've developed a detailed sampling schedule to help coordinate crews. Increased sampling will help target the 2007 year class which would begin spawning this year. In August, they'll conduct longitudinal sampling for age-1 SMB to assess their success of the removal efforts. The cost increase is ~\$53K for #125 and ~\$13K for 98a.
- b. 110 – Tom Chart said changes to this SOW are minor. Tildon said they'll be targeting the spawning period, which lines up with their current sampling. They won't repeat the unsuccessful April pass they tried in 2009. They'll be more flexible in tagging roundtail chubs (won't tag on every pass). No change in budget.
 - c. 123a – Tildon described changes to the schedule to increase sampling intensity in the spawning/nesting period. No change in budget.
 - d. 123b – UDWR has modified their SOW to add the reach below the Duchesne River. This adds about two days to each pass, but they believe they can do all 12 passes at 8 days/pass (leaving no time for equipment malfunction, however). Another change is white sucker/hybrid removal between Echo and Split; Dave Irving asked if that is already being sampled by others (e.g., Kevin Bestgen?) Aaron confirmed that CSU is capturing all fish to Whirlpool. Therefore, UDWR just needs to sample Island, Rainbow, and Split Mountain. >Trina will revise the SOW to sample only this area (which will probably only require one extra day of sampling instead of two). Cost increase is ~\$12K (a little less with the reduced white sucker sampling area).
 - e. 158 – In this SOW, a change is proposed for the study design to have three controls, three treatments using smaller mesh size nets, and three treatments with the larger mesh size. This will help answer the question of what's required to keep nonnative fish out of the backwaters, but also address pikeminnow needing to move in and out of the backwaters through the net. The block would remain up throughout the season in the treatments. Cost increase is ~\$10K.
 - f. 126b – CDOW's costs increased slightly (\$1,444) to reflect actual '09 temporary time and equipment maintenance expenditures.

The Committee approved the revised scopes of work.

- 9. Other nonnative fish items – Tom Chart noted that Aaron raised the issue of whether or not we'll continue to translocate fish into Loudy-Simpson. >CDOW has indicated they will review the data and make a recommendation prior to the field season.
- 10. Overview of new demands/needs for research/monitoring or other projects resulting from the Aspinall PBO – Tom Chart and Angela Kantola reviewed Program obligations under the Gunnison River Basin PBO (see Attachment 2). The Program Director's office will include these as they make recommendations for RIPRAP revisions. With regard to tissue samples for selenium analysis, surrogate species will be required for razorback in the Gunnison. Krissy Wilson noted that if we're collecting tissue samples from razorback, we should include a sample for the isotope analysis discussed earlier to distinguish between wild and hatchery-stocked fish. The PBO requires Reclamation to develop a Selenium Management

Plan; Tom Pitts said the water users have asked that the current methodology of dose/response relationships be applied to determine appropriate levels of selenium to insure recovery of Colorado pikeminnow and razorback sucker. This would require sampling razorback eggs (likely in a controlled laboratory environment). It's possible that EPA could be interested in doing this work. Work under the Study Plan to evaluate flows likely will involve sediment monitoring.

11. Schedule next meeting – March 10 to 11 from 12:30 p.m. on the 10th through noon on the 11th in Grand Junction at the Holiday Inn and Suites (with March 11-12 as alternates if 10-11 doesn't work for Melissa Trammell and Dave Speas). >The Program Director's office will reserve a meeting room (at the Holiday, or potentially at the Clarion if we find it satisfactory for the researchers meeting in a few weeks).

ADJOURN by 12:10 p.m.

Attachment 1

Assignments carried over or modified from previous meetings:

1. Tom Nesler will check on the status of revision of the Yampa River Aquatic Management Plan. 1/15: To be completed by 5/1/09. 7/8: In CDOW review/revision with commitment to MC to provide by early July. 7/13: Draft will be available for internal review by mid-July. CDOW will send the draft out the States and Service (NNFSP) prior to Greg Gerlich's final approval. 9/21: The draft final will be distributed to the Recovery Program office and the NNFSP Agreement signatories as a courtesy copy for review and comment. Pending comments received and further revision, Greg Gerlich and Tom Nesler will approve the plan. 10/6: The plan has been sent to the Program Director's office and the signatories to the NNFSP for courtesy review (comments due by the end of October). 1/15/10: FWS provided comments in early November. >Tom Nesler will check with Sherm to see if Wyoming provided any comments; CDOW will respond to comments and copy the Biology Committee.
2. The Program Director's office will work with CDOW and Aaron Webber on the potential for designing a permeable, hydrologically-stable (gravel?) berm to prevent northern pike access to the oxbow slough at RM 151 on the Yampa, and then clean it out once and for all. 10/30 CDOW has contacted the property owners of the RM 151 backwater, but hasn't been able to meet with them yet. Mark Wernke from Reclamation is willing to take a look at the property with CDOW. A fairly long berm would be required (>3,000') and we'll need to determine the best type (more permanent configurations could be very expensive). The funding source would need to be determined, with Partners for Fish and Wildlife, lottery funds, grant funds, etc. as possible sources to be explored. 1/15: Tom Nesler said they plan to get engineers develop specs/estimates this spring for something like a 10-year berm structure; the next step will be to find funding (perhaps as a habitat project through GOCO). This would be the first of three or four such projects. Tom Pitts suggested that if the Program provides some matching funds (annual or capital), it might improve the probability of getting GOCO money. Tom also suggested that if we have a project in the hopper, we might be able to compete for end-of-year Reclamation funds. 2/10: The PD's office considers this a high priority and will contribute funds, if available (see revised FY09 budget). 2/20: Recovery Program funds likely available; CDOW working to get engineers on the ground; Nesler considering different approaches (berm, fill the oxbow, etc.). 4/20: Tom Nesler said they've met with the landowner and Reclamation engineers will do an onsite survey as soon as the snow melts. 1/5/10: Project deferred indefinitely; Reclamation cautions that the lesson from the Butch Craig floodplain site is to be very cautious before considering modifying habitats. Based on the channel dynamics in this area of the Yampa River, it would be unwise to construct an impervious dike at the mouth of this backwater. 1/14/10: The Committee discussed other options to eliminate spawning in this area; the >PD's office will provide Mark's trip report to the BC and work with CDOW to outline options for Committee discussion at the next meeting (options could include: make the entrance too shallow for adults; a dike set back instead of right at the river; direct removal/net sets; piscicides, etc.)
3. Within the next month, >the Service and Program Director's office will provide the Committee a draft addendum to the White River report that will present the measured flow requirements in a historical hydrologic perspective. The Program Director's office also will research where we left Schmidt and Orchard's draft report on peak (channel maintenance)

flows and recommend whether to have it reviewed by the geomorphology panel. The Program Director's office will use the information currently available to >develop a position paper on Price River flow recommendations for Committee review. 10/16 Pending; out by the end of November-1/5: February 2009. 2/20: Bob Muth said he's making good progress on this and he'll have a draft to the Committee by ~~early March~~ end of April. 7/8: Mohrman and Chart expect to provide drafts of this and Price River report by the end of August 2009. 7/13: Dave Speas said the goal for the Narrows EIS is to get it out for public review in the fall, so the above schedule should work. The PD's office will keep the Service's SLC-ES shop in the loop on Price River. 9/21: Chart and Mohrman have made good progress on this, but other priorities have so far prevented completion. 1/14/10: still pending and the PD's office will continue to communicate with Reclamation re: Narrows.

4. *Melissa believes an Environmental Assessment of the impacts of the Humpback chub captivity management plan (also addresses how to deal with captured roundtail chub) will need to be written; Krissy will work with Melissa on the EA. 7/13: Melissa needs to coordinate with the NPS if this is the case and she intends to do that in the next few weeks. 10/6: John Reber reported that Melissa Trammell will do the EA for this.*
5. *Krissy Wilson will provide Utah's Health Condition Profile to Tom Czaplá. 4/20: Krissy has asked for a formal write-up from their hatchery folks. 7/13: Krissy will condense relevant information gleaned from hatchery managers and consider organizing workshop(s) in the future. 10/6: Krissy provided this information to Tom Czaplá and will work with Tom to determine if we'll host a workshop for hatchery personnel (pending, will schedule after new hatchery manager is in place at Ouray NFH).*
6. *The PD's office will communicate with Gary White to determine how many and which of the questions from the HBC workshop to focus on. Pending.*
7. *The PD's office, Vernal CRFP and UDWR will coordinate with the Ute Tribe (Jay Groves) to see if there is interest in a greater level of sampling on the White River. Pending. 10/6: UDWR has been sampling in the White and the Tribe had planned to sample there, but this work has been delayed due to the Tribe's work on their hatchery. UDWR and FWS will follow-up with Jay to see if the Tribe would like them to go ahead and sample the White.*
8. *Derek Elverud will provide the database for Westwater for Gary White to combine with Black Rocks, which will require a separate SOW. 10/6: Travis said they plan to complete the reports, then revisit the SOW.*
9. *The Program Director's office will revise the final report format to indicate the need to include the agreement number on final reports. 1/5/10: Pending*

New Assignments

10. *UDWR will revise and finalize the Westwater humpback chub report, and provide the final copy in pdf to the PD's office to post on the website.*
11. *Doug Osmundson will revise and finalize the larval razorback sucker report, and provide the final copy in pdf to the PD's office to post on the website.*

12. The Program Director's office will review the 121a report recommendations (as well as the Gunnison PBO) and determine what items need to be included in the RIPRAP.
13. The Program Director's office and Dave Speas will draft the Flaming Gorge flow letter.
14. The Service will review Modde's plan and develop a plan to implement rotational floodplain management.
15. The PD's office will post the revised 2010-2011 Baeser SOW to the listserver (with "redside shiner" corrected to "sand shiner").
16. Trina will revise the 123b SOW to sample only this area (which will probably only require one extra day of sampling instead of two). Cost increase is ~\$12K (a little less with the reduced white sucker sampling area).
17. CDOW will review the Loudy-Simpson escapement data and make a recommendation for where to translocate fish prior to the field season.
18. The Program Director's office will reserve a meeting room for March (at the Holiday, or potentially at the Clarion if we find it satisfactory for the researchers meeting in a few weeks).

Attachment 2

New demands/needs for research, monitoring and other projects from Aspinall PBO

Recovery Program Obligations under the PBO:

Monitor fish populations in Gunnison River: Program monitors pikeminnow populations and is developing a basin-wide razorback monitoring program to include monitoring of multiple life stages. Monitoring program design is expected to be completed in fiscal year 2010. Implementation to begin in 2010 and include multi-life stage monitoring on the lower Gunnison. Density estimates will be developed for Colorado pikeminnow and razorback sucker in the lower Gunnison River.

Collect tissue samples during monitoring: During fish community monitoring in the lower Gunnison River, tissue samples will be collected from razorback suckers, as well as a chosen surrogate species, to determine selenium concentrations.

Assist in development of Study Plan to evaluate effects of Aspinall reoperation and how it improves habitat & contributes to recovery. Complete within one year of PBO. Include an evaluation of the effects of reoperation on critical habitat in the Gunnison River and Colorado River from the Gunnison River confluence to Lake Powell. Focus on previously identified uncertainties related to geomorphic processes, floodplain inundation, and temperatures:

While relationships among initial motion, significant motion and streamflow are well defined, duration of flows necessary to accomplish habitat work is not completely known. Because flow duration recommendations were developed based on a wet period, the recommended durations require a large volume of water that may not always be available.

Water availability may limit the ability of the Gunnison River to meet the Flow Recommendations under certain conditions.

Because of timing and other differences in runoff patterns of the Colorado and Gunnison rivers, it is difficult to predict the effect of Gunnison River flow changes on the Colorado River.

The trade-off facing Colorado pikeminnow between stream bed maintenance and temperature regime in the Gunnison River is an uncertainty that may need to be evaluated by the Recovery Program.

The Recovery Program may need to evaluate the trade-off between high spring flows and base flows needed during the mid- to late summer to operate Redlands (and, to a lesser extent perhaps, maintain movement of sediment through the system).

Conservation Recommendations: (Discretionary agency activities to minimize/ avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.)

Selenium: Recovery Program initiate investigations to determine appropriate levels of selenium to insure recovery of Colorado pikeminnow and razorback sucker. Any new studies would follow established Recovery Program protocol for priority and funding.