

Biology Committee Webinar Draft Summary
8:30 a.m. – 12:50 pm, Tuesday, November 22, 2011

PARTICIPANTS: Biology Committee: Melissa Trammell, Dave Speas, Dale Ryden, Krissy Wilson, Shane Capron, Tom Pitts, Brandon Albrecht, Harry Crockett, and Pete Cavalli. CREDA was not represented.

Other participants: Jerry Wilhite (replaced Shane Capron on the Biology Committee), Pat Martinez, Tom Chart, Angela Kantola, Jana Mohrman, Tom Czapla, Matt Breen, Kevin Bestgen, Kevin McAbee, Tildon Jones, Koreen Zelasko, Trina Hedrick, Kirk LaGory, Aaron Webber, André Breton, and Brent Uilenberg.

Assignments are indicated by “>” and in Attachment 1.

CONVENE: 8:30 a.m.

1. Review/modify agenda – The agenda was modified as it appears below.
2. Flaming Gorge Larval Trigger Study Plan / Program's Spring, 2012 Flow Request (Wilhite, LaGory, Chart; 45 min) – Tom Chart said a draft study plan was sent to the Biology Committee this morning. Kirk LaGory drafted an annotated outline of a plan and the ad hoc committee has provided input. The presence of larvae as discussed in Table 5.3 of the Muth et al. 2000 flow recommendations which discusses year-specific real-time information is important. Proposed monitoring research falls into two general areas (five topics in descending priority): a) what meeting a larval trigger is all about (direct results of producing & recruiting razorback suckers) (topics 1: Entrainment and Retention of Larvae in Floodplain Wetlands & 2: Survival and Escapement of Entrained Larvae in Floodplain Wetlands; and b) potential unintended negative consequences of using a larval trigger (topics 3: Availability of Colorado Pikeminnow Habitat; 4: Sediment Mobilization and Channel Maintenance and 5: Nonnative Fish Response). Hypotheses and preliminary list of variables to be measured are listed for each topic, and items already being addressed are identified. The plan also contains an example study matrix of different flow levels and durations and floodplain wetland sites to be studied under each (the latter of which needs input from principal investigators from UDWR and USFWS-Vernal). A conceptual plan for monitoring also is included. The study plan doesn't currently address anticipated study length because it likely will depend on hydrologic conditions (e.g., we will need to study high, medium, and low flow scenarios). (Tom Pitts suggested adding parameters to indicate how many years [e.g. 2] of each hydrological condition we need to study.) Tom Chart said a more detailed draft study plan will come to the Biology Committee by the end of December for approval (however, if Committee members see something that concerns them with this current draft, please let Kirk and the ad hoc committee know now). The goal is to have this study plan finalized before the next flow request letter in Jan/Feb 2012. Under this study plan, the presence of larvae would be the driving factor for spring releases (as opposed to matching the Yampa peak). Melissa asked if flows were so low that no connection would be achieved, would we consider matching the Yampa peak, instead? Kevin Bestgen said perhaps not, since Stewart Lake connects at almost any flow.

3. Report reviews

- a. Review of draft final report C-6/RZ RECR, “Razorback sucker survival and emigration from the Stirrup floodplain, middle Green River, Utah, 2007-2010 by T. Hedrick, A. Breton, and S. Keddy – Trina Hedrick sent the final report and response to reviewers to the Committee on 11/2/11; Koreen Zelasko provided follow-up comments on 11/17/11; Trina sent the Committee a revision and response to comments on 11/21/11. Trina said most of the comments she received focused on the “post-hoc” analysis using Program Mark with recapture information to estimate survival. André Breton provided help with this using Program SURVIV. André said Program SURVIV allows you to build your own likelihood structure and then develop a model to best fit the process you’ve studied. André said the analysis really wasn’t post-hoc; Koreen agreed she’d misused that term in this instance. Melissa asked about André’s confidence in the results in light of only two stocking events. André said the data were sufficient and the parameters fit. Survival was fairly low and not that many fish are being detected once stocked. Melissa asked if Trina thinks this low survival is specific to Stirrup; Trina said yes; we should be careful about extrapolating these results to other areas given the importance of environmental variables. Trina noted, however, that this second analysis showed pretty reasonable survival given the size of fish stocked. With regard to reliability of the analysis, André said the assumptions have been identified and should be kept in mind, but he would still point out that the results are consistent with plausible biological explanations. Dave Speas asked Trina on what she’d based her previous expectation of survival; Trina said that although previous reports had fairly low levels of survival, she’d hoped that the PIT tag reader would detect more of the thousands of fish stocked. Melissa suggested including some of the values from those reports in this report for reference; Trina will add those (with the caveat that these were more short-term studies). Trina will clarify that the model was consistent with the data regarding the size of fish stocked and the few number of fish detected. Dave suggested clarifying that these results can’t necessarily be generalized to other wetlands. (Dale agreed, emphasizing that survival depends heavily on habitat [but in some cases 10% survival would be considered high, based on what they’ve seen in the San Juan. André suggested including some of these comparative survival rates, even if from growout ponds in the report; >Dale will provide data.) Koreen agreed, saying she likes André’s analysis, is concerned that the results not be extrapolated to other wetlands. Trina will emphasize the restriction of these conclusions to the Stirrup. Dave said he has more comments and would like to be able to review this latest revision more carefully. Dave added that he doesn’t get the sense that Stirrup is a productive enough wetland to pursue. Kevin Bestgen commented that estimates are great, but we must keep the reliability of these estimates **clearly** in mind (see the error bars in line 204: “Survival rates were lower than expected for both age-classes, 0.13 ± 0.18 (SE) and 0.20 ± 0.12 (SE) for the young-of-year and the age-2 fish respectively”). This is one habitat in one window of time. >Trina will revise the report based on the comments received today along with any other comments received by December 6, 2011. Trina will provide the revised draft by January 12, 2012 (so that the Biology Committee can review it on January 26). Dave Speas suggested that the Committee may need to seek additional expertise (e.g., biometricians) to evaluate the design of these kinds of scopes of work in the future.

- Others agreed. Dave said that critical in evaluating a scope of work is determining if the questions are appropriately framed and is the study designed to answer those questions. Tom Chart asked if perhaps the body of the report should focus on what the study was designed to evaluate and perhaps move the survival analyses to an appendix (Pete agreed in light of the uncertainty and reliability). Melissa thought not, due to the link of the number and timing of fish that left the site to the number and timing of fish that originally were present. (Harry agreed. Koreen said this underscores Dave's point about initial scope of work review). Dave Speas agreed. Trina said she thinks they can do a good job of addressing the uncertainty and reliability issues in the report without moving the survival portion to an appendix. Dave suggested that the Discussion section would be an appropriate place to do that.
- b. Review of draft final report: Price River – Tom Chart said they discussed Tom Pitts' technical issues and conducted a more in-depth analysis (daily vs. monthly) of the low-flow July-September 1996 period at all four sites. Tom Pitts provided his more exhaustive draft technical and programmatic/policy comments (30+ pages) yesterday. Tom Chart suggested that a small group of Jana, himself, Tom Pitts, Krissy Wilson, and FWS-ES Utah (Amy DeFreese or other) review the comments and make recommendations to the Biology Committee on how to proceed. >Tom Chart will circulate Tom Pitts' comments (*done*) to the small group and work on outlining a schedule. The Committee concurred.
 - c. Update on White River flow recommendations report – Jana Mohrman said this has been delayed due to the Price River work, but the work she's been doing with Reclamation and TNC on the Basin Study (which includes the White) will be helpful. >Jana will provide a revised report to BC and WAC by mid-January.
 - d. Review reports due list – Deferred.
4. Thunder Ranch update – Dave Speas noted Matt Breen sent post-runoff photos and Brent has outlined a work plan for an earth fill plug. Aaron Webber sampled the site and Tildon looked at the breaches (Tildon said Thunder Ranch was completely isolated from the Green River at that point). Brent Uilenberg said designs will be completed and distributed in the next week or so, and they're checking on Provo crew availability. We need to avoid disturbing a heron rookery, but should be okay if construction of the levee repair and the earthen plug is completed by the third week in March. Dan Schaad is working with the ranch owner and manager to make sure they concur with the plans/schedule. Brent doesn't think additional surveying of the breaches in the riverside levee will be necessary; his main concern is that the earthen plug be lower (e.g., 6") than notches in the setback levee so as not to exacerbate flooding; Tom Chart agreed. Melissa asked if the plug could encourage the water to exit via another breach; Brent said all we want to accomplish is to hold some water in the backwater to see how quickly it goes back into equilibrium with the river as the river drops. Dave Speas asked how critical it will be to assess seepage at depths we would want to see on a long-term basis. Brent said he thinks we can learn enough from this assessment with the earthen plug and thinks we'll see 3-4' of depth.
 5. Potential GOCO matching funds for Yampa River habitat restoration – Harry Crockett reviewed the proposal. Steamboat Springs provided a conceptual proposal for GOCO's

River Corridors Initiative to reconfigure the Walton Creek site on the south / upstream end of Steamboat (with a 3:1 funding match). Colorado Parks and Wildlife (CPW) was able to incorporate into this proposal the idea of reconfiguring the Walton Creek complex so that it no longer provides northern pike nursery habitat. If Steamboats conceptual proposal is accepted, they will be invited to submit a full proposal next month. The Recovery Program needs to decide if we want to be a matching partner at that point. The Walton Creek area is a large and complex backwater area that Billy Atkinson has documented to harbor pike year-round (his data also strongly suggest it is functioning as a pike nursery). Harry said Brent outlined concerns about manipulations in such an active river channel (in light of problems experienced at Butch Craig and Thunder Ranch). Concerns include: 1) could reconfiguration potentially exacerbate flooding; 2) who will be responsible for O&M; 3) who will accept liability; and 4) COE and FEMA issues. Harry suggested these questions aren't unique to this project nor are they likely to be addressed at this stage. Harry said they think a feasibility study likely could be conducted for \$10K-\$20K, and that, at a minimum, the Program might want to fund that. The whole reconfiguration portion of the project probably will cost about \$650K, of which our share would be \$100K-\$150K, including the feasibility study. Brent reviewed the most recent capital projects budget table; given the shrinking capital funds (only ~\$2M remaining through 2023), if the Program wants to move forward with this, we will have to make trade-offs. Pat Martinez said we've discussed addressing nonnative fish sources, and this seems to be the biggest northern pike haven in the upper reach of the Yampa, but if the Program enters into this project, he'd like to see it be a part of a larger effort to address northern pike in the Yampa River. Dave Speas asked how this source ranks overall for pike sources; Harry said he's not sure, but Billy catches a lot of pike here. The objective would be to make the old gravel pits shallower so they wouldn't be hospitable to pike all year-round; however, Harry thinks these ponds will always reconnect to the river at the highest flows in all (or most) years. Melissa asked if this project might not just be a drop in the bucket and what we will get for our participation. Harry said Billy's impression is that this is the biggest northern pike nursery in the Yampa River. Melissa asked how much effect we would be able to have on that. Harry assumes that if the project is determined feasible, then eliminating that nursery habitat would be a fundamental feature of the project design. Harry would like the Program to commit to the feasibility study and a match contingent on the positive outcome of the feasibility study (alternatively, the Program might commit to the feasibility study, but not a further match until we see the results of the feasibility study). Brent said the only way to answer the flooding questions will be with pretty detailed river cross-sections (in a fairly complex channel). The high water photos show many structures in the floodplain on which flooding could conceivably encroach. Brent would be surprised if an adequate feasibility study could be done for \$20K (Harry noted that their engineer thought another \$50-\$60K would be needed for full design work). CPW would need the Program's answer in January. Dave Speas stressed the importance of letting Steamboat know what the Program would want to get out of this project. While this is consistent with what we want to do for nonnative fish management, it's not clear what else this project will entail. Krissy agreed she would be more comfortable if she had an understanding of the overarching goals of Steamboat's proposed project. Dave suggested that we say in principle, we agree this is the direction that should be taken; however, there are too many unknowns to know if we should proceed at this point. Tom Chart asked Harry to provide more information at the nonnative fish workshop (the bigger project perspective, what a feasibility study would address, etc.) Tom also asked if there's someone we might partner with on the feasibility study. The Committee agreed that we wouldn't want to

commit beyond a feasibility study at this point. >Harry will ask Steamboat if they are willing to proceed on this basis. Tom Pitts emphasized the importance of not getting into any misunderstandings with local governments. We need to clearly understand Steamboat's proposal. >The Program Director's office and CPW will try to work out some of the details of the proposal to the Recovery Program and get back to the Biology (and Management) committees (and provide something by the Dec. 7 nonnative fish workshop). *Water Consult provided comments by email 11/29/11, see Attachment 2.*

6. Update on stationary PIT-antenna to be installed on the White River – Under consultation with FERC on potential direct impacts of a pipeline rebuild that crosses the White River in Utah, the project proponent (Questar) has agreed to fund a passive antenna to detect PIT-tagged fish. The Committee inadvertently skipped this item, but Kevin McAbee will present information at the next Biology Committee meeting.
7. Razorbacks found in Green River floodplain sampling (and issue of releasing untagged fish) – Aaron said they sampled 15 wetlands and found endangered fish in 10, including wild-reared age-0 razorback in Wyasket Lake (15) and Leota 4 (3). They found 58 untagged 175–350 mm razorback, mostly in Leota Bottoms wetlands (from Oct 2010 stocking of fingerling fish). They also found fish originally stocked in mainstem. One bonytail was found in Baeser, which had been stocked in the Stirrup and detected leaving ~1.5 months later, then made its way to Baeser. At Thunder Ranch, they didn't find endangered fish, but a large number (109) northern pike ~300 – 550 mm (they caught only 5 northern pike in all the other wetlands combined). Unfortunately, it is unlikely that the pike in Thunder Ranch will winter kill. (All this information will be in the Baeser annual report). With regard to releasing untagged fish, Tom Czapla said it was fortunate that LFL could distinguish the fish in this case, but since that's likely only possible in the first year, the Program Director's office recommends making a **firm, standing decision that in the future, we not stock any more untagged fish**. Tom Chart said this will be especially important as we implement the larval trigger study plan. **The Committee agreed**. Aaron suggested looking into ways we can use these wetlands to stock fish, however (Pete agreed, saying he thinks we should consider other marking methods [including smaller PIT tags]). Dave Speas said he doesn't have enough confidence in 8mm tags yet and that 12mm tags are being used in fish as small as 80mm. The Committee also agreed that **future stocking must be done in the context of the revised integrated stocking plan**. Tildon said Dave Schnoor also is working to get larval production more in line with number of fish needed for stocking, so perhaps we won't have so many excess fish in the future.
 - a. Floodplain Management, the 'Modde Plan' and current stocking policies – Dave Speas called the Committee's attention to the fact that, in practice, stocking of floodplain wetlands in recent years suggests that we may need to update our guidance (e.g., the annual implementation plan that Tim Modde drafted and the Committee adopted some years ago). We're currently stocking fish in these floodplains in a very ad hoc fashion. Dave urged the Committee to review the Modde plan and have a discussion regarding how to update it and proceed. For example, Modde's plan emphasizes the importance of first evaluating wetland water quality. Tildon said we've not done much spring sampling to determine what wetland fish communities look like prior to runoff. (Dave noted that this is proposed in the larval trigger study plan). Dave asked: 1) should we do something about the pike in Thunder Ranch now;

- 2) do we have any assurance that the Thunder Ranch manager would operate a control structure in accordance with our nonnative fish management principles; 3) do we reset our wetland sites enough? Krissy said our floodplain management plan should dovetail with the larval trigger study plan. Dave said the Modde concept of an annual implementation plan for wetland sites is very important. Tom Chart agreed it's time to revisit this. Considerable information is coming together, including the floodplain synthesis and the larval trigger study plan (and soon the razorback monitoring plan), which will help us take a more programmatic approach to floodplain management. Tom Chart said Pat Martinez is reviewing options for addressing the northern pike at Thunder Ranch and will discuss those at the nonnative fish workshop. CRFP-Vernal is drafting a scope of work for next year's floodplain work.
8. Humpback chub action plan update - Tom Czaplá said the ad hoc group had an initial call to discuss the genetics management plan; based on that call, he provided draft information that the group is reviewing. Tom would like to get comments back from the group before Christmas. One question the group is wrestling with is whether to develop refugia stock from upper basin humpback, knowing they may have roundtail chub genetic material, or should we use pure strain lower basin humpback chub. Tom Czaplá said he expects to have a draft plan for Committee review by spring with some implementation this field season (e.g., fin clips taken for genetic analysis).
 9. Review previous meeting assignments – Deferred.
 10. Finalizing October 13, 2011, WAC/BC webinar summary (wherein the Committees reviewed/approved the sediment report) – With regard to the sediment report, Tom Pitts said there seems to be a disconnect between how we're formulating versus evaluating flow recommendations. Since the report didn't really provide an evaluation of how peak flows affect habitat (but, rather, provided a technique), we need to determine how we're going to evaluate flow recommendations. Tom Chart agreed we need to identify next-steps to evaluate flow recommendations, particularly on (but not limited to) the Gunnison where sediment transport is so important. Tom said Kirk LaGory is willing (and would check with WAPA to see if they would support his involvement) to provide leadership on this, so Tom recommends a group of fish biologists involved in developing the flow recommendations as well as geomorphologists (e.g., John Pitlick and Cory Williams) to identify logical next steps (e.g., is MD-SWMS modeling the best way to proceed). Dave said there was once a project to monitor sediment transfer in the Duchesne River and that this was summarized by Cory in a data series report, but not in the final SIR. Dave said it would be good to know if that data series report provided what was needed and how it should be used. >Tom Chart and Jana and Kirk will convene this group. Jana Mohrman sent the draft webinar summary to the Biology and Water Acquisition Committees on 10/17/11; comments are due from both committees by December 6 and will be considered final and approved if no comments are received.

11. Agenda items for next meeting (January 26 in Grand Junction, the day after the January 24-25 researchers meeting, which Colorado Parks and Wildlife is hosting.) (All; 5 min) – *Agenda items may include:*
- Final report reviews:
 - Westwater humpback chub population estimate (final sent to BC 11/14/11)
 - Deso/Gray humpback chub population estimate (final sent to BC 11/21/11, but revised version anticipated to address R. Valdez comments)
 - Review of White River flow recommendations (potentially)
 - Update on Price River position paper
 - Update on stationary PIT-antenna to be installed on the White River
 - Humpback chub action plan
 - Basinwide nonnative fish management strategy
 - Review of 2012-2013 contingency list and cuts to nonnative fish management budgets (this review will be most timely after the 2012 budget picture becomes more clear and the Committee reviews recommendations from the December 7-8, 2011, nonnative fish workshop).
12. Consent items: Review and approve September 30 webinar summary; Dave Speas will send suggested revisions; defer approval to next meeting. Committee discussion regarding excess razorback (agenda item #11 of the September summary) may be found under assignment #5, sub-item “Razorback Sucker.”

ADJOURN by 12:50 p.m.

Attachment 1: Assignments
(Asterisked items also on meeting agenda)

Note: the order of some assignments has been changed to group similar items together. For earlier history of items preceded by an ampersand "&", please see [previous meeting summaries](#).

1. * & The **Program Director's office** will work with **CDOW** and **Aaron Webber** on the potential to design a permeable, hydrologically-stable (gravel?) berm to prevent pike access to the oxbow slough at RM 151 on the Yampa, and then clean it out once and for all.
 - 9/30/11: Harry said the site has changed and may now be a less formidable backwater.
 - 3/11/11: Harry Crockett provided a list of habitats CDOW would like to work on (attachment 3 to [March 1-2, 2011 BC meeting summary](#)). A rapidly eroding bank at the Yampa SWA is the highest priority, but CDOW can't access funds to stabilize it until July 1. **Harry and Dave Speas** will talk with Brent Uilenberg about the possibility of getting capital funds; **Harry** will follow up with CDOW to make sure they could move forward with the temporary fix this year. **CDOW** also will look to see if other funds might be available. Other items on the list may be considered after a synthesis of the northern pike data.
 - 5/2/11: *Sherm Hebein at CDOW found funding and the bank stabilization project at Yampa SWA was completed on April 13, 2011, just prior to rapidly-increasing flows. Billy Atkinson reported that the project appears successful and we shouldn't see further bank erosion this in stretch. Connectivity to the adjacent pond system has potentially been alleviated. CDOW will do more permanent work on this Yampa SWA site later this year. Harry clarified that in an exceptionally high water year like this, there will still be sheetflow over the site from upstream, but hopefully the bank will hold so that the site doesn't connect in lower water years. CDOW will still be looking for funding for other items on their "bucket list."*
 - 9/30/11: *Harry said the site held up fairly well in the high flows (no erosion or destabilization to the reinforced portion). Some of the unreinforced portion (downstream) experience erosion (but not back to the ponds) and should be fixed before next spring. With their capital funds currently on hold; CDOW is looking for ways to complete this work.*
 - 11/22/11: **Harry Crockett** will ask Steamboat if they are willing to proceed on the basis discussed by the BC. The **Program Director's office and CPW** will try to work out some of the details of the proposal to the Recovery Program and get back to the Biology (and Management) committees (and provide something by the Dec. 7 nonnative fish workshop).

2. * & 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.
 - 5/6/10: *The Program Director's office will complete the addendum to the White River report and provide a status update and recommendation on the draft Schmidt and Orchard report on peak (channel maintenance) flows for Biology Committee review by July 1, 2011.*
 - *Sent to BC July 1, 2011. 9/30/11: conflicting comments have been received, Tom Pitts has asked Jana for an extension on the comment deadline (extended to Nov. 2). See also agenda item #3c.*
 - 11/22/11 *Progress on revising report delayed due to Price River report; Jana Mohrman will provide a revised report to BC and WAC by mid-January.*

3. ***& Program Director's office (Jana Mohrman and Tom Chart)** expect to provide a draft of the Price River report by the end of August 2009. *7/13/09: 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.*
 - *12/12/10 Program Director's office will use the information currently available to >develop a position paper on Price River flow recommendations for Committee review. The Program Director's office will revise the draft Price River position paper and get it to the Biology Committee within the next week, with comments due a month later.*
 - *Price River position paper sent 12/30/10 with comments due Jan. 31/ 11. UDWR may submit a Price River PIT tag proposal for "activities to avoid jeopardy" funding.*
 - *3/11/11: **Tom Chart** will respond to comments and revise the report (in consultation with the Service) and bring it back to the Committee by July 1, 2011.*
 - *6/21/11: Sent to Biology Committee; on 7/12/11 agenda (7/12/11: review/approval deferred to 9/30/11 at Tom Pitt's request); 9/29/11 Pitts' comments submitted; 9/30/11: See agenda item 3a: >**Tom Chart and Jana Mohrman will meet with Tom Pitts** very quickly to try to work out technical issues, and get recommended revisions back to the Committee as quickly as possible. The Committee tentatively approved the report pending Committee e-mail (or potential conference call) approval of changes to be provided via the listserver from Tom Chart subsequent to he and Jana meeting with Tom Pitts. Tom Chart anticipates clarifying hydrologic analyses, but not overall report recommendations. Tom Pitts will still file a report on the non-technical issues. These issues were discussed at the [Management Committee on October 12](#). Potential technical revisions pending.*
 - *11/22/11 **Tom Chart** will circulate Tom Pitts' recent draft technical and programmatic/policy comments and he and **Jana Mohrman** will convene a small group (Tom, Jana, Tom Pitts, Krissy Wilson, and FWS-ES Utah (Amy DeFreese or other) and develop a schedule for the group to review the comments and make recommendations to the Biology Committee on how to proceed.*

4. **&The Program Director's office** will prepare a list of issues to be resolved regarding Tusher Wash screening (e.g., levels of mortality acceptable for what size classes, potential O&M costs, etc.) to help move this decision forward (and provide that to the Biology Committee and the Service). *Done.*
 - *5/6/10: A small group (**Melissa, Kevin McAbee, Dave Speas, Tom Pitts, and Tom Czapl**a) will work with **Kevin Bestgen** to review/build on the risk assessment, focusing on understanding existing impacts and what could be gained by various screening options. Tentatively, it would seem the best choice would be fish friendly runners with a screen on the irrigation ditch (contingent on further analysis). *BC to submit proposal to MC by 12/31/10.**
 - *12/13/10 BC discussion: The Biology Committee recommended >starting with a literature review (there may be good information from low-head structures in the eastern U.S.); working on outlining what would be needed in a mortality study (including engineering considerations); and further investigating whether the owners would consider full or partial decommissioning.*
 - *3/1/11 As **Kevin McAbee** gets engineering info from the irrigators, he will share it with the ad hoc group. **Kevin** also will inquire more about the purpose of the 9" (at riverbank) – 20" (at center) concrete cap, to determine whether it is to benefit the existing diversion, or both the existing diversion and the proposed diversion on river left.*
 - *5/13/11: Dave provided a list of questions from Juddson Sechrist; the **Tusher ad hoc group***

reviewed and discussed these on April 4 (summary sent to BC 4/20/11), agreed to have another meeting (site visit) this summer, and re-iterated the need for an initial literature search/review focusing on fish mortality at other sites with small hydro-electric facilities and smaller hydraulic head differentials. Krissy Wilson would like to participate in the site visit. >**Tom Czapla** will schedule the site visit (and talk to Kevin McAbee to see if he can arrange for the group to tour the inside of the facility). The **Program Director's office** and **Reclamation** will discuss how to get the mortality study done after we determine the information needs and timeframe.

- 9/30/11: The **Program Director's office** will ask if **Brent Uilenberg** and **Bob Norman** can provide description/specifications of the hardware at Tusher to help us understand if it can be retrofitted (11/8/11: awaiting reply). **Tom Czapla** will send a Doodle request to reconvene the ad hoc group to discuss who should do the literature review.
5. & Tasks related to stocking and genetics have been gathered here under revising the Integrated Stocking Plan. **Tom Czapla** is convening a group to revise the plan, address humpback chub genetic issues, and develop a humpback chub action plan; he will send out a draft revised stocking plan in early October 2011 and convene a conference call of the ad hoc group to review it in October or early November.
- 5/13/11: Cost-benefit analyses should be included in the revised stocking plan; Tom Chart said he thinks the **Program Director's office** can initiate this analysis. Results of the health condition profile meeting held at Dexter in March should be incorporated into the revised stocking plan. Discussion of humpback chub and back up pikeminnow broodstock were prominent in this meeting. Horsethief pond water may be whirling disease positive, but Krissy said that Utah can apply for a variance from their Fish Health Board since the fish will be stocked where whirling disease is present and razorback are not known to carry WD.
 - 6/2/11: Core ad hoc group identified: Harry Crockett, CDOW; Krissy Wilson, UDWR; and Pete Cavalli, WFG; Dale Ryden and/or Dave Schnoor, Travis Francis, USFWS; Dave Campbell and Scott Durst, San Juan Recovery Program; and input from hatchery managers as needed (particularly as it pertains to space at facilities).
 - 11/22/11: Conference call to discuss humpback genetics and potential refugia/propagation held 11/2/11; draft action plan materials sent to group from Tom Czapla, with comments due back before Christmas .

Humpback Chub

The **Program Director's office** will communicate with Gary White to determine how many and which of the questions from the HBC workshop to focus on. Pending. **Derek Elverud** will provide the database for Westwater for Gary White to combine with Black Rocks, which will require a separate SOW.

- 5/13/11: Black Rocks and Westwater data have been transferred to Gary White; **Program Director's office** will check to make sure we've got this analysis covered.

After the ad hoc group meets, Melissa Trammell will draft an Environmental Assessment of the impacts of the humpback chub captivity management plan (also addresses how to deal with captured roundtail chub); **Krissy Wilson** will work with **Melissa** on the EA. **Tom Czapla** will send out the briefing paper he received with the humpback chub genetic data to the Biology Committee (done). **Melissa Trammell** will review Dexter's new plan to see if it may impact this (also will talk to Tom Czapla).

- 3/11/11: **Melissa** will talk to the Park about what they want to do with the chubs in captivity

at Ouray and Mumma (likely return them to the river after acclimation) if the Program does not want to keep them. Melissa suggested assessing morphology now that the fish have matured somewhat (Travis said he's seen the fish and they don't look like humpback to him). The Committee agreed to keep the fish in captivity for now.

- *5/13/11: >Harry Crockett will check with CDOW to be sure the putative humpbacks at Mumma get moved to Ouray NFH – Randlett (requires an import permit from Utah Dept. of Agriculture). (Krissy noted that all states now require imports to have AIS certification (Krissy sent the criteria to the Committee on 7/7/11, as well as disease certification.) >Dale Ryden will also talk to Dave Schnoor.*

*As identified in the sufficient progress assessment and requested by the Management Committee, the **Program** will develop an action plan for establishing refugia for humpback chub (avoiding getting bogged down in genetic analysis). Mike Roberts has recommended building in limiting factor/life history studies to better understand what's going on in the system that's affecting humpback chub populations.

Razorback Sucker

The **Service (GJ-CRFP and the Program Director's office)** will make recommendations for how/where to manage the razorback sucker spawned this year at the Grand Valley facility and bring those back to the Biology Committee.

- *3/11/11 The Biology Committee directed Dave Schnoor to focus on size, not numbers, and not to try to harvest fish in the spring, since additional funds are not available.*
- *9/30/11: Ouray NFH has ~100K extra fingerlings. >Krissy will find out what UDWR could do at Wahweap; 11/22/11 Krissy said she believes space is available at Wahweap and >will confirm how many they could hold there. 9/30/11: **Dave Schnoor** said Ouray might be able to overwinter the fish that aren't yet 150mm. Some fish also could be held back to grow to 400mm+ next year for stocking. He will plan on doing that and will >get a proposal back to the Committee by mid-October. Survival was very high this year, so the fish are smaller. 11/22/11: Tom Czapla has discussed with Dave, Ouray will hold as many fish as possible with anticipation of meeting a larger stocking size goal next year. >Tom Czapla will check with the lower basin to see if they need any of these fish.*

The **Service's CRFP office** is working to salvage as many fish as possible from the soon-to-be-discontinued leased ponds this year. Analyses show fish stocked in the summer have the lowest survival rate, so the **Service** will recapture and stock the fish as soon as possible.

- *9/30/11: In progress; will be in stocking report.*

Dale Ryden and **Dave Schnoor** will write up the Ouray hatchery needs (water source for Randlett and generator for Grand Valley) and submit this to the Program via Tom Czapla. **Dale** also will seek Service funding for these needs. The report will include a discussion the relative risks of power outages at Grand Valley. Melissa suggested that for the long-term, we need a feasibility study for alternative water sources for Randlett.

- *5/13/11: Dale said Reclamation says alternative water sources would have a \$10M price tag. The Service has been discussing the manganese problem and will convene a group to discuss (Program Director's office, hatchery folks, Reclamation, etc.). Dave Schnoor has explored the idea of a generator for the Grand Valley unit. The **Service** should have a more comprehensive idea about these things in a few months.*
- *7/6/11: Dale e-mailed write-up (discussed briefly at 7/10-11 BC meeting).*

- 8/24/11: *Service purchased Grand Valley Unit generator. Service/Reclamation met to discuss manganese; proposal to hire contractor and install additional filters pending.*
 - 9/30/11: *Proposal for contractor review of alternatives for remediating the manganese problem approved by Management Committee.*
6. The **Biology Committee** will work on prioritizing their list of potential additional capital projects at a future meeting. *Ongoing.* By September 22, 2010, **Committee members and others** who suggested capital project ideas will provide short explanatory/descriptive text (preferably just a paragraph), and then the **Committee** will decide when to take the next steps (individual ranking, group discussion of combined ranking, etc.). *UDWR comments submitted; next BC discussion on hold.*
 7. The **Program Director's office** will follow up on establishing a process to track percentages of hybrid suckers using standardized protocol for identification of hybridization at fish ladders and in monitoring reaches. *Pending. Reclamation approved a CU study (through "other activities to avoid jeopardy") to crossbreed suckers and test fitness.*
 8. Northern pike synthesis – 5/13/11 **Harry Crockett** will let Billy Atkinson know it will be helpful to compare the recruitment information to Billy's tag records from above Hayden (Harry will ask Billy to make his data available to Kevin Bestgen and Koreen Zelasko).
 9. **Biology Committee members** will review the Research Framework recommendations in advance of reviewing the FY 12-13 work plan in July. *Not done; suggest review for FY 14-15 Program Guidance.* The **Program Director's office** will revise the Research Framework report on the web include a "last updated on" statement and a caveat that clarifies that this was incomplete and was a "point in time" database and direct users to the Program's laserfiche library and Program website. They also will correct the wording at the bottom of the second page of the report that suggests it is a "review draft." *Pending.*
 - 9/30/11: *Committee members will send comments via e-mail (to the entire Committee) by October 31 as to whether they see items in those recommendations that should be captured in our current list of contingency projects or the next round of Program Guidance. 11/7/11: No comments received to date.*
 10. Spring Flows 2011 – aerial photography - 7/10/11: *See Attachment 2 for reaches flown. The Program Director's office will look into potential partners to help fund stitching and georeferencing. 8/24/11: In progress. 9/30/11: CWCB's floodplain mapping unit has offered to assist. COE may help, but hasn't found funds yet. WAPA also may be interested.*
 11. **Krissy Wilson** will forward the Committee UDWR's plan for larval light trapping in Flaming Gorge Reservoir (looking for burbot) when she gets it. 9/30/11: *this survey for larval burbot couldn't be completed as the likely window was missed this year; willing to consider in next year's work plan. This will be discussed at the nonnative fish workshop.*
 12. The **Program Director's office** will make a recommendation regarding whether or not to password protect the PIT tag GIS site. *Pending.*
 13. As the FY12-13 budget situation becomes more clear, the **Biology Committee** will review and prioritize current contingency projects and the passes that were cut from nonnative fish

projects. 8/25/11: *Pending; it may be most efficient to defer this exercise until the 2012 budget picture becomes more clear and the Committee reviews recommendations from the December 7-8, 2011, nonnative fish workshop.*

14. **The PDO** will notify all potentially affected field personnel in the event of future Elkhead releases.
15. **Trina Hedrick** will revise the Stirrup report based on the comments received on 11/22/11 along with any other comments received by December 6, 2011. Trina will provide the revised draft by January 12, 2011 (so that the Biology Committee can review it on January 26). **Dale Ryden** will provide Trina with razorback sucker survival data from the San Juan Program.
16. **Tom Chart and Jana Mohrman and Kirk LaGory** will convene a group fish biologists involved in developing the flow recommendations as well as geomorphologists (e.g., John Pitlick and Cory Williams) to identify logical next-steps (e.g., is MD-SWMS modeling the best way to proceed) to evaluate flow recommendations, particularly on (but not limited to) the Gunnison where sediment transport is so important.

Attachment 2: Water Consult comments on Walton Creek Park habitat modification



Water Consult

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TO: Tom Chart
cc: Biology Committee, Management Committee

FROM: Tom Pitts

SUBJECT: Walton Creek Park Habitat Modifications – Yampa River at Steamboat Springs

At the November 22, 2011 Biology Committee meeting, we discussed the Walton Creek Park project. My understanding of the project is limited, and I haven't seen anything in writing other than the excerpt from the preliminary draft meeting summary (attached). I understand that the Recovery Program's role would be to fill in some ponds created by gravel pit operations that currently provide habitat for northern pike in conjunction with improvements to trails and fishing access in the event the City of Steamboat Springs obtains a grant from GOCO for those improvements. I support both increased efforts to control non-native species and cooperative efforts with local government/agencies and appreciate Harry Crockett's efforts to capitalize on this opportunity.

I have the following comments regarding the project:

1. The need to link non-native control activities with the GOCO grant is not clear, other than that the activities are in the same areas. A less formal cooperative linkage may be appropriate given the activities and time frames being discussed.
2. Filling of the ponds will require a 404 permit. Will this trigger NEPA compliance on the entire GOCO grant application? Who would be responsible for the costs of NEPA compliance?
3. At the Biology Committee meeting, concerns were raised about the impact of filling in the ponds on flood stage in this developed area. Who will conduct the flood stage analysis, at what cost, and at whose expense?
4. Will there be ongoing operation and maintenance expense associated with filling of the ponds?
5. How does filling in the ponds fit into an overall non-native control strategy in the Yampa?

6. The Program staff needs to be involved in the discussions with the City.

7. A specific proposal/SOW needs to be submitted to and reviewed by the Biology and Management Committees regarding this project that addresses all the issues before any commitments are made.

I am most concerned about creating misunderstandings with the City of Steamboat Springs regarding the Recovery Program's role and commitments to this project and the potential for damaging our relationships with the City or the congressional delegation vis-à-vis Price-Stubbs.

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