

**Biology Committee Meeting Summary, January 11-12, 2017
Doubletree by Hilton, 743 Horizon Dr., Grand Junction, CO****PARTICIPANTS**

Biology Committee: Dave Speas, Melissa Trammell, Jerry Wilhite, Harry Crockett, Dale Ryden, Krissy Wilson, Brandon Albrecht, Pete Cavalli, and Tom Pitts (via phone).

Others: Tom Chart, Julie Stahli, Kevin McAbee, Don Anderson, Tom Czapla, Angela Kantola, Paul Badame, Tildon Jones, Cameron Walford, Rich Valdez, Chris Michaud, John Hawkins, Koreen Zelasko, Travis Francis, Jenn Logan, Lori Martin, Chris Smith, Brian Sadler, Randy Staffeldt, Matt Haworth, Darek Elverud, Ben Schleicher, Ed Kluender, Zane Olsen, Matt Breen, Katie Creighton, Mike Mills, Kevin Bestgen, Zach Ahrens, Brian Hines, Jake Mazzone, Tory Eyre, Cat de Vlaming, Drew Cushing, and Sandra Bohn.

Draft meeting summary was distributed for review on January 31, 2017. Comments to draft meeting summary were provided by: Pete Cavalli, Dale Ryden, Cameron Walford, and Krissy Wilson

Wednesday, January 11**CONVENE: 1:00 p.m.**

1. Review 2016 nonnative fish work and discuss plans for 2017
 - a. Walleye efforts –walleye-specific removal recommended to continue with minor changes:
 - i. Sampling later in the year: September passes in the Colorado River provide low returns in clear water so PIs recommend considering sampling into November (if possible) to take advantage of colder water UDWR Vernal will focus efforts from White River to Sand Wash on Green River, responding to higher catch rates there in 2016.
 - ii. The USGS work on otoliths was a single year project; the report is anticipated within 6-12 months. More samples and analysis will be completed soon. Recommend review by Steve Platania, Kevin Bestgen and Brett Johnson. However, this is not a Recovery Program report, so not subject to the same review process as are Recovery Program final reports.
 - iii. Additional sampling in the 8 miles directly below Tusher Diversion (important portion of the Green River that was previously inaccessible can now be accessed with boat passage) to provide data for Project 128 and to improve ancillary walleye removal. Both the upstream and downstream sampling sections are quite long; therefore, UDWR Moab and the Service (Vernal and Grand Junction) will coordinate to accomplish this in 2017. Project #128 reaches may be revised in FY18/19 (e.g., adding an additional day to a pass or revision of reach responsibilities).
 - iv. USU has proposed a study of triploid walleye to answer outstanding questions (e.g., can stocked triploid walleye overcome diploid, do triploids behave like diploids, etc.). UDWR believes they can commit to fund the first two years of the study but is looking into other potential funding sources (e.g. SRLCC) for the remainder. The Starvation Lake Management Plan (currently out for review) contains conceptual plans which would be formalized after the results of the triploid study become available. Harry said CPW is interested in the triploidy research and would like to coordinate in light

of their interest at Rifle Gap. Kevin added that he's also looking into the feasibility of taking field samples to test for triploidy (e.g. escapees) in river-captured walleye.

b. Pike efforts

- i. Pike backwater netting the priority; CPW to net as long as they can from ~ April 1 on; CSU (Ed's crew) and FWS-Vernal will continue to help where possible to prolong effort.
- ii. Yampa effort reallocation discussion; Nonnative fish removal passes in April and May are an important component of project #128 and cannot be foregone; CPW and CSU will coordinate to accomplish passes. Possible modifications to FY-18/19 SOWs. Coordination will be key. Melissa asked about potential high water and Harry said they'll have to work out the backwater sampling on the fly based on runoff.
- iii. Increased net use under 98b techniques - gill nets plus electrofishing. Focusing on most productive habitats and also targeting sites where pike may come in and backfill after CPW's netting earlier in the season.
- iv. With regard to the large cohort produced in the Yampa in 2015, Kevin said it appears that the warm winter likely provided an earlier spawning period and the nets may have been put out a little later than the beginning of spawning. The early spawning could also have allowed the age-0 fish to grow into the gear susceptibility in 2015. Jenn noted that crews were poised to net in 2015, but had to wait until flows came up, so perhaps most of that cohort came from an inaccessible backwater. Cameron said it likely was related to the hydrology. The challenge is to gage temperature and flow to know when to begin netting.
- v. Abundance estimates postponed from Steamboat to Hayden for 1-2 years; continue to focus on targeting backwaters. John says abundance estimates are critical, but they're still learning the reach and developing relationships, so they propose suspending abundance estimates until 2018.
- vi. John said he wasn't needed for the Little Snake removal around Baggs, WY this year and suggests purchasing a fourth data logger with the remaining funds. If funds aren't needed again in 2017, John suggests using them for additional equipment, also (Pete checked after the meeting, and John's help will not be needed in 2017). All agreed. With regard to data loggers, most folks have already or are in the process of transitioning to these for field data collection.
- vii. Continue Merwin trap removal in Grand Valley gravel pits. Jenn said the long-term goal will be to reclaim the gravel pit or plug the breaches, but that will take time in working with the city of Rifle. CPW also is considering reclaiming some HOA ponds containing pike near Eagle. Kevin said Billy has some similar ponds near Steamboat; we may need to talk with the County Commissioners in this area since these small, otherwise-unregulated ponds can become sources of pike in wet years.
- viii. CPW's removal pass from Rifle to the Roller Dam: Jenn said they did Rifle to Beavertail last year (minus one section); this year they didn't do Silt, but will add that back in this coming season.

c. Smallmouth bass efforts -

- i. Further discussion of Yampa River natural flow spike in 2015; various ecological impacts to species; development of spike flow study plan, effects presented by Kevin Bestgen at the Researcher's meeting. John Hawkins mentioned turbidity and sediment events and suggested we brainstorm possibilities for turbidity or sediment application to backwaters where smallmouth bass are nesting. Cam mentioned whether it might be possible to pull some of the sediment from above the dam on the White River to impact smallmouth bass spawning in the White. Tom Chart said the time is ripe for that conversation as we work on developing a White River Management Plan. The use of a

colored dye may be another potential way to simulate turbidity. Tom Chart suggested we could consider researching this on the Duchesne River. There may be application to the 15-Mile Reach (sediment behind the Roller Dam), too.

- ii. More access in Maybell reach after canal modification partnership; important reach for additional effort during surge (Yampa River reallocation discussion); CPW and CSU will coordinate to improve efforts in this reach.
- iii. YOY data in Yampa vs. White for 2015 and 2016; growth, reproduction, spike flow impact; Why is the White seemingly more consistent in reproduction? Cameron sees value in comparing otoliths among all three river basins -- Green, White, and Yampa. Cameron also wondered if a few more days of removal could drive the population down. Jenn noted there was water coming over the dam for an extended period this year. On the Yampa, spike flows would have to come from Elkhead – potentially augmenting a rain event with spike flows (potential landowner impacts would need to be considered).
- iv. Forgoing a second Desolation Canyon bass removal pass (one pass remains and three passes from 128 will take place); that effort will go to more UDWR Moab work in Echo-Split in lieu of FWS-Vernal, which will allow more USFWS time/staff for Johnson Bottom & wetland work. The Committee agreed. Kevin said we likely will want to be flexible with this approach depending on hydrology.
- v. Continue population estimates in the Echo Park to Split Mountain reach since we're able to get robust population estimates in this reach. Kevin Bestgen said this information will be important if we do the flow spike experiments.
- vi. Duchesne update: Matt said they were able to do some spot sampling in the Duchesne this year and are discussing with the Lower Duchesne Work Group the possibility of the Ute Tribe and Mark Fuller's office potentially re-submitting a scope of work to resume project #124 (and more recently #154).

Kevin McAbee asked the Committee how they think the process went this year (foregoing the nonnative fish workshop) and folks thought it went well this year and we can likely follow the same process next year (and continue to make that decision year by year in case significant new information or big changes would require more discussion). Melissa said she would have preferred to have received copies of the presentations prior to the meeting. Kevin Bestgen cautioned (and others agreed) that we need to be very careful about distribution (e.g., not put these on the web) because so much is preliminary data that has not yet been peer-reviewed and finalized. That said, of course, the annual reports are on the web. Kevin sent the nonnative fish presentations to the Committee & PIs. Travis suggested the summary Kevin prepared after the PI calls last year was very helpful.

2. Razorback sucker population estimates – Tom Czaplak asked how we can improve these estimates. Matt Breen said he's concluded it's not feasible to focus on razorback sucker and Colorado pikeminnow simultaneously in the middle Green (unless there was a full second crew, with a lead biologist). Tildon said sampling for razorback sucker would have to be done earlier than the pikeminnow work. Katie said the increasing numbers they're getting on the lower Green will mean they need to do something different there, as well. Kevin Bestgen said the estimates have limited utility with the current low recapture rates and other difficulties; therefore, we may need to reconsider our methods. One idea they've had is a pilot study in a given reach with one sampling pass plus a couple of floating PIT tag array passes. Submersible antennas would be another possibility, but we'd likely need 12-15 of them. Brandon asked if the fish captured in Lake Powell factored into the survival estimates; Koreen said they didn't. Brandon said the SSA has shown that

fish that enter Lake Powell are not lost to the system. Kevin said they could include the “fish that moved” data, however. Tom Czapla asked if it would be feasible to handle razorback sucker on just the first pass of pikeminnow pop. estimate trips? Also could an antenna on a floating array be pulled more in the middle of the water column (several thought that would not likely be feasible). Tom Czapla questioned whether we need razorback population estimates (i.e., counting stocked fish) until we have adequate recruits in the system. Dale said the San Juan Program has had this same conversation and come to a similar conclusion. Scott Durst and Nate Franssen have drafted a document that identifies triggers for resuming (or starting) population estimates. Kevin suggested looking for recruiting fish probably makes better sense. The group discussed lower-impact sampling techniques and trade-offs with passive sampling versus sampling where the fish are actually handled and not just detected. Tildon reminded the group that submersible PIT tag readers are not foolproof and issues still crop up with the software. Another alternative would be to do a really robust razorback sampling effort in one of the two Colorado pikeminnow “off” years. Travis endorsed this idea and suggested it could be very powerful at the basinwide (including the lake inflow areas) level since these fish move among subbasins. Dave asked if we could consider occasionally sampling the spawning reach and using an index approach. The Committee will discuss this further when the Larval Fish Lab submits their draft report. Melissa asked if it would be worthwhile to net and scan razorbacks, but not measure weight and length. Matt said that would still detract from 100% focus on potential Colorado pikeminnow captures. In that case, perhaps PIs should not net razorbacks on Colorado pikeminnow sampling estimates in FY-17. The Committee could discuss this and other FY17 sampling options at their March 6-7 meeting, but that would be too late to add on additional work. The PIs don’t have ability to add to their already heavy spring workload (true of other crews, also). Colorado pikeminnow sampling begins in mid-April. Not sampling razorbacks will simplify the trips somewhat (e.g. 10 hour days instead of 14 hour days). Kevin Bestgen doesn’t think the Colorado pikeminnow estimates will be much affected, but it will allow PIs to focus in on pikeminnow. Katie said conditions dictate what they can do – if they can net razorbacks, they will. Krissy expressed concerns that sampling only when conditions allow will affect assumptions about the overall sampling data. Questions of capture avoidance and other electrofishing impacts remain, too. Tom Czapla recommends not handling razorback sucker for population estimates in Colorado pikeminnow population estimate sampling this year. That said, crews will keep a sharp eye for small razorbacks and net razorbacks when they have the opportunity just to gather other information about these fish. The Committee agreed, since we now know we’re not getting the information we need. Once we have Koreen’s report, we can consider recommendations for sampling options beginning in FY-18.

ADJOURN: 5:05 p.m.

Thursday, January 12

CONVENE: 8:00 a.m.

3. Discussion of confirmed collections of Grass Carp larvae in Lake Powell – Kevin McAbee referenced the January 4, 2016, listserver posting on this topic. >Biology Committee state representatives will review/describe grass carp stocking regulations and summarize stocking history. Dave said we have seen grass carp in the system before (always removed), so he was not terribly surprised by the news. Travis has provided a data file on grass carp captures; Melissa said two ripe male grass carp were caught by UDWR-Moab in 2012. Drew said each individual triploid fish brought into Utah is tested for triploidy (not just a subset test). Katie said they caught 9 grass carp in the lower Green River in 2016. Harry said CPW regulations require USFWS triploidy certificate (uncertain if that’s per fish or per lot). Pete thinks Wyoming

doesn't test individual fish but only allows fish from one hatchery (where the fish are tested three times). Almost all grass carp stocking is private. Paul asked if grass carp are being stocked on any Tribal lands. Dave Speas asked if the NNF Strategy address triploidy or grass carp. Triploids are on the compatible list and the Strategy references precautions. >Kevin McAbee will review. Kevin Bestgen said grass carp records are all over the basin and they plan to write a short note about it. A spike in grass carp captures occurred in 2008 and ~5/year have been captured in the basin since then. The author of the reproduction/dispersal model for Asian carp may be helpful. Melissa suggested it would be useful to learn the numbers of diploid vs triploid fish in the system. Krissy said UDWR receives at most one application/year to stock grass carp. Field sampling techniques/protocol for triploidy testing need clarification. >Kevin McAbee will research and then provide PIs with protocol and list of needed equipment. Sandra said a new onsite genetics test for grass carp is forthcoming to identify eggs or larvae as grass carp. >Kevin McAbee will ask Mark Fuller to contact the Ute Tribe to review/describe their grass carp stocking regulations and summarize stocking history. >The PDO will ask the San Juan Program to respond similarly.

4. Review UDWR's red ear sunfish proposal – UDWR first showed interest in redear sunfish at Lake Powell to combat quagga mussels and submitted a risk assessment to the Lake Management team; next UDWR considered redear sunfish for snail control at Pelican Lake. Krissy said UDWR's assessment concluded redear sunfish would consume quagga mussels (but not control them), and that they wanted to study redear for the next 5 years (not stock them in Lake Powell at this time since bluegill are in Lake Powell and occupy the same niche). UDWR has submitted an official request for redear to be added to the Compatible Species List. Krissy clarified that Lake Powell is off the table for at least 5 years, so the question today is did UDWR reach the correct conclusion that redear will not establish in the upper basin. Tildon said the analysis focused heavily on Powell and tributaries and he doesn't think it adequately addresses stocking redear into Pelican Lake with its nearby floodplain habitats (unscreened Pelican Lake water does reach Leota). Drew said since bluegill are in Pelican, the question is whether redear pose any additional threat. Melissa Trammell said her concerns relate to floodplain habitats and that we need to move away from adding species without first showing that there is no additional threat. There are bluegill and other fish in the system and many panfish already are on the compatible list. Drew said UDWR is asking for the Biology Committee's help in filling in the blanks in the white paper. If there's no risk beyond what's identified in the white paper, then Drew would like redear added to the Compatible Species List. Dave said he thinks the assessment addresses Lake Powell risks (though he has questions about the downstream escapement risk), but does not believe it is adequate to extrapolate to upstream habitats with floodplains. We've been surprised repeatedly by how quickly and where nonnative species have established and we would be ill-advised to add another species to the compatible species list. Dave asked why UDWR wants to stock redear in Pelican since it has no quagga mussels; Drew said if the right species (e.g. bluegill or redear) is present, it might prevent establishment of quagga as the body of water is inoculated with individual mussels via boats. Tildon pointed to Part 2 of the paper which looks at bluegill and green sunfish and compares redear to bluegill. Tildon suggests we should be comparing redear to green sunfish which are highly invasive in off-channel habitats. Redear spawn earlier than bluegill and at lower temperatures, which would give them an advantage in a riverine environment. This would suggest redear are a greater risk than bluegill. Harry Crockett said the white paper really needs to address behavior of redear sunfish in floodplain wetlands. Drew said he thinks Colorado has redear in ponds alongside the Platte; >Harry will provide whatever information CPW has on that. Melissa suggested tabling UDWR's request to put redear on the compatible species list until their 5-year study is completed. Drew said they had hoped to be proactive. Harry said we have other centrarchids on the compatible list, likely many because they were "grandfathered" in because

they've been in the system and we haven't seen problems. That doesn't mean they've been exhaustively researched. If UDWR wants to propose a specific lake management plan with redear, Colorado is willing to review on that case-by-case basis (and would prefer to do that than just put the species on the compatible list, which they are not prepared to do). Tildon said he believes considerable information on green sunfish in riverine and floodplain environments is available and should be included in the white paper. Travis said green sunfish is the #1 species they've been removing from the Colorado River. Kevin McAbee asked if UDWR is expecting to expand the scope of the white paper. Drew said he'd appreciate help in evaluating the risk of redear sunfish anywhere. McAbee emphasized the importance of assessing risk by comparing redear to green sunfish and by considering risk to floodplain habitats. Drew said they would appreciate references that point to green sunfish being a better comparison. Dave Speas emphasized: 1) redear are a new species to the upper basin; 2) they're not sterile (so will get out and reproduce); 3) anglers move fish. Brandon Albrecht said redear are pretty common in some areas of the lower basin. They can grow to large sizes and be very popular with anglers. Folks looking at quagga below Lake Mead are finding the veligers deeper than the thermocline, where redear may have little impact. The concept of hybrid vigor also may be a concern since these fish are known to readily cross with bluegill and similar species. Brandon noted these things were not included in the risk assessment. Redear were in locations below Lake Mohave before quagga and they have not stemmed the tide of quagga. UDWR asked if the Committee would consider triploid redear; the Committee's sense was that is a very different question, plus we now have new concerns about triploidy (in light of grass carp [we don't yet know if those fish emanated from supposedly-triploid fish, but it's something that needs further investigation, as well as clarification in the NNF Strategy]). Tildon said one thing that really stood out to him in the white paper is that young of year Colorado pikeminnow, humpback chub, and razorback sucker are known to use backwater habitats, likely the same habitats redear would use, and so redear introduction could increase competition. Tom Chart concluded he doesn't think the Program has anything to add to the white paper that could result in anything but a "no and why" decision. Drew said he will appreciate any information the group can provide to help him defend that decision. Krissy said UDWR will review comments provided today and outline next steps. Drew suggested some follow-up discussion could be held at the tri-state meeting in Grand Junction in June.

5. Population Monitoring – Tom Czaplá and Kevin McAbee said some of these issues were discussed yesterday (especially the razorback and field aspects), however, can STReAMS help us understand questions around our population estimates, like:
 - declining detection probability over time under 128;
 - gear avoidance;
 - ETS gear (and continued refinements with temperature, differing species response, etc.)
 - improved survival estimates using antenna detections

We have a STReAMS workshop March 14 at CSU wherein we want to consider how the database may be used. Dave noted a postdoc at USU (Rob Schorr) also is looking into antenna data and hopefully will be able to attend (Kevin McAbee and Tom Chart encouraged him to do so). Tom Chart suggested this meeting will be a good time to discuss the many "moving pieces" in the system, including how fish may be redistributing themselves, increasing number of razorbacks in the system, new ETS gear, response to electrofishing (population estimate and nonnative fish work), etc. Cam suggested that if age-1 and age-2 bass avoid electrofishing, long-lived fish may be expected to do so, also. He's wondered if we could compare electrofishing to floating PIT antenna. >The PDO will provide a draft March 14 agenda for the Committee's review by January 26.

6. Update on SSAs and CPM PVA – Tom Czaplá said recovery team comments on the humpback chub

document are due January 20, the viability chapter will go to the team in mid-February. We're selecting peer reviewers for the SSAs. We have a final version of the razorback SSA from Bio-West and are selecting peer reviewers for it, as well (likely by mid-February). A conference call or webinar will be scheduled with the Colorado Pikeminnow PVA contractor and the team to discuss model scenarios within the next month.

7. Discussion of other anticipated changes/new work FY 18-19

- a. *Gila* genetics – Tom Czaplá said he provided comments on a draft in December, but Westwater samples hadn't been included. Sandra is going to run those and revise the report. Peer reviewers will include the Douglas', and we're looking for others, also. Katie said the samples sent from Westwater at this point are ones they are fairly sure are humpback, but they will be sending samples considered a range. Travis said fish with a range of morphologic characteristics were sent from Black Rocks.
- b. Floodplain management funding – Tom Chart said the PDO will begin their RIPRAP assessment and development of draft FY 18-19 program guidance next week and will look for any flexibility for more floodplain work (e.g., Johnson Bottom, Sheppard, Old Charlie, etc.). Katie said they should have documents to discuss regarding Matheson wetland in March.

With regard to 2017, Speas noted we potentially could have flows like 2011. Tildon noted that some of the floodplains were dry going into 2011, where most have water this year. Tildon has asked for leeway to focus on managed wetlands; the Committee agreed. If we're going to have more inundated wetlands, does the Committee want Tildon to do more broad surveys or focus on managed wetlands. Tildon said the changes to Deso/Echo work could allow them to do a broader assessment of floodplain mid-summer and then go back for more in-depth work as needed in the fall. Larval trigger sampling will continue unchanged. Tom Chart asked about the potential of main-channel low-velocity habitat sampling if we have a year like 2011 (for larvae returning from terrace habitats). Dave noted we wouldn't know where the fish came from, though.

- c. Graduate research projects – Tom Chart recalled the Committee's earlier discussion of management-related questions that might be addressed. UDWR has an education assistance program that Katie is considering for Chris Michaud and Zach Ahrens, with work on walleye and on floodplains (potentially Matheson or more). This work could begin in the fall. Kevin McAbee said Chris might work on walleye triploidy; Chris is investigating this further. Katie said she would like input from the Committee on questions they'd like investigated. Kevin Bestgen said he's working on a project for Cat, perhaps related to questions about razorback light trap sampling or floodplain fish exclusion. LFL has funds that might help begin work this spring and will bring their proposal to the Committee for review. These kinds of projects need to have some flexibility, a high probability of success, and a field component for training purposes. Krissy asked if smallmouth bass nest disruption might be a suitable project, but Kevin Bestgen thinks that would be complicated in terms of assuring success. The PDO will include this on future agenda items for updates.

8. Elect 2017 Committee vice-chair – The Committee selected Melissa Trammell as the 2017 vice-chair (and she will become chair in 2018).

BC chair rotation through time

1998-1999	BOR	Larry Crist
1999-2000	FWS	Frank Pfeifer
2000-2001	WAPA	Art Roybal
2001-2002	WY	Paul Dey
2002-2003	BOR	Tom Chart
2003-2004	Utah	Kevin Christopherson
2004-2005	NPS	Melissa Trammell
2005	CDOW	Tom Nesler (1/2)
2005-2006	BOR	Dave Speas (1.5)
2006-2007	WY	Kevin Gelwicks
2007-2008	Utah	Krissy Wilson
2009	FWS	Dave Irving
2010	NPS	Melissa Trammell
2011	NPS	Melissa Trammell
2012	CPW	Harry Crockett
2013	WAPA	Jerry Wilhite
2014	BOR	Dave Speas
2015	UDWR	Krissy Wilson
2016	WYGF	Pete Cavalli
2017	FWS	Dale Ryden
2018	NPS	Melissa Trammell

9. Review previous meeting assignments – See Attachment 1.

10. Review reports due list – The Committee reviewed the list.

11. Review/modify March 6-7 agenda items – March agenda items will include: review of draft revised RIPRAP and assessment and draft FY18-19 Program guidance; razorback sucker monitoring; Matheson wetland; graduate research projects, Sportsman’s Lake follow-up; grass carp follow-up (with Dr. Kočovský) ; and potential review of Deso-Gray humpback chub and Green River Colorado pikeminnow population estimate reports. The meeting will be in Grand Junction (location TBD) from 1-5 p.m. on Monday, March 6, and 8:30 a.m. - 4:00 p.m. on Tuesday, March 7th. Next year’s researcher meeting will be hosted by the Fish and Wildlife Service and will be held in Vernal January 23-24, followed by a Biology Committee meeting the afternoon of the 24th and morning of the 25th. The Program Director’s office believes they can accommodate this schedule by holding their work planning session (drafting RIPRAP revisions and assessment) the week before.

12. Review and approve December 13, 2016 Biology Committee webinar summary – Dave Speas would like to clarify the depth comment (Stirrup versus Above Brennan) in that he thinks the depth varies. Krissy knows that Stirrup was deeper than Above Brennan before 2011, but doesn’t know if that remained the case after the 2011 flooding. >Julie Stahli will qualify that statement. Also, on page 5 where it says “Tom recognized that wholesale release of nonnatives...” we will clarify that “less intensive” means no sorting.

13. Other items: Krissy announced this is her last Biology Committee meeting and Paul Badame will be taking over for her on the Committee going forward. Krissy will remain involved with the Management Committee and involved in a number of Program-related activities, but she will be retiring at the end of the year and is

transitioning various duties. The Committee expressed their whole-hearted thanks to Krissy.

ADJOURN: 11:35 a.m.

Attachment 1: Assignments

(Asterisked items are on the meeting agenda)

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. Humpback Chub (population estimates)

& Humpback Chub (broodstock development / genetics)

As identified in the 2012 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. *After Wade's report is received, a workshop should be held to include discussion of when and where fish would be stocked. Tom Chart recommended outlining questions for a workshop, conducting the workshop, and then finalizing the action plan. 10/27/14: Reclamation awarded contract to SNARRC for analyzing remaining fin clips and completing report (including lower basin data). 1/15/15: data on upper basin chubs will be written up within about a year. The subgroup developed a list of questions for Wade to address (Tom Czaplá sent to BC 1/21/15); >**Melissa Trammell will find and send the plan development proposal document to Tom Czaplá** by January 21 and Tom will send it to Wade with a courtesy copy to the Biology Committee and Kevin Bestgen. (Done). Wade said he will revise the scope of work (done; any comments due by January 29). Additional work pending results from Wade.*

2. Regarding white sucker hybrids, **Harry Crockett** will talk to **Kevin Bestgen** about any further work needed

subsequent to the identification guide that Pat Martinez distributed last year. *8/26/14: Ongoing (very complex issue that really deserves a combined genetics and morphological study). This could be put into the next round of Program Guidance (PD's office did) and we should be considering potential outside funding sources, as well, since this relates to more than listed fish. 1/13/16: The 2016 Colorado-Wyoming AFS meeting will have a dry lab workshop on sucker identification and hybrids. Kevin Bestgen recommends a genetics study linked to a morphological study. 3/11/16: The joint meeting of the CO/UT/WY AFS chapters next year may be an appropriate venue to have another mini-workshop on identifying hybrid suckers. 8/22/16: Some support from the AFS chapters/members may be needed for Dr. Bestgen to lead this; Harry Crockett will discuss with Kevin Bestgen. 1/12/17: Harry said AFS doesn't want to include this as part of the continuing education this year. Krissy asked Ed Kluender if LFL would be willing to offer a workshop to UDWR, so she's going to explore that. Kevin Bestgen said that's difficult to travel, so Krissy will explore travel options (and Colorado and others then would want to participate). Kevin said they could consider combining this with a fish identification workshop. >Kevin Bestgen will look into establishing this as a registration-based class (hopefully annually).*

3. **Krissy Wilson** will find out if PIT tag data from the San Rafael and Price rivers are being submitted to

Travis. *3/4/15: Some has been submitted in past years, but not the most recent year or two; UDWR will submit to Krissy who will submit to Travis by March 15. 5/28/15: Krissy submitted a partial list, but will submit more once the antenna data is available. 7/28/15: Dan Keller will update this shortly. 10/13/15: Krissy said all the San Rafael data have been submitted; **Krissy and Dave** will check with others (Peter MacKinnon) about the Price and Dolores river data. Peter and CNHP are aware that all of the antenna data needs to go into STReaMS. 7/22/16: Data are being provided to STReaMS, but not yet automatically*

loaded (still building that interface). **Julie Stahl** will make sure remote antenna data (from these and any other tributaries) gets to the database and is accessible. **Julie** also is identifying PIT antenna locations/start dates, and missing data. 1/12/17: Recent data from the San Rafael and Price rivers are in STReaMS. We will continue to load in data over time. The Dolores data is not currently in the system, but is on-site at CNHP and is on Amy's to-do list in February.

4. Kevin McAbee suggested the **database manager**'s first assignment should be summarizing and analyzing the STReaMS bonytail data, to provide the committee and hatcheries with an initial idea of the number of fish that remain in the system over time, and the characteristics of those fish. The Committee agreed. 1/12/17: *Julie presented some information at the researchers meeting and will continue this work with the PIT antenna information.*
5. The Committee endorsed an experiment to tag smaller hatchery razorback and bonytail (for fish coming out of floodplains); >**Tom Czapl**a will investigate which hatchery could do this. **Tom Czapl**a will check the BO written for scientific take permits to see if any change in permitting would be required. 1/13/16: **Matt Fry** is experimenting with tagging smaller fish and will document this work for the Committee in the Ouray NFH 2016 annual report. >**Tom Czapl**a will make sure this has been written up. *Melissa Trammell said Dave Ward has done a great deal of work on this and will send the references to Tom Czapl*a. Dale Ryden and others emphasized that experienced hatchery personnel likely will always be able to tag smaller fish than seasonal technicians in the field.
6. **Angela Kantola** will make a note for the FY18-19 work plan review it would be good to have more introduction of new or significantly revised scopes of work from PIs (perhaps on a webinar a week in advance of the work plan review meeting). *Pending; 1/12/17: PDO will discuss and recommend dates for a webinar this summer.*
7. **Darrel Snyder** will send the "Fishes of the Upper Colorado River Basin" information that includes a map of the UCRB with boundaries for its 8 HUC (4-digit) sub-basins and a table summarizing the recent (past decade) distribution and general relative abundance in lotic and lentic habitats within those sub-basins information to Tom Czapl (done). The **Program Director's Office** will maintain this information on the [Program website](#) (done).
8. ***Biology Committee members** can share any thoughts/comments on proposed graduate research projects back to the Committee and the Committee will track as a future agenda item to determine any next steps or specific projects we want to focus on.
9. Floodplain follow-up assignments:
 - In light of the planned cattail treatment at Stewart Lake, **Dale Ryden** will check to see if his shop has information on effects of the herbicide Rodeo on fish. This hasn't been used at Ouray, but Dan Schaad thought Refuge Biologist, Diane Pentilla, may have some knowledge of it. *Done.*
 - **Matt Breen** will check into the possibility of filling the Stewart Lake low-spot breaches with dirt rather than netting them in the spring. *Can't be filled in, but a more permanent screen/grate may be possible.* Matt also will confirm current ownership of Sportsman's Lake and recommend where to go from there. *Matt submitted a report and Committee members may discuss with him further via e-mail and at the next meeting.*

- **Tildon Jones** and **Kevin Bestgen** will discuss the potential to use light trap sampling to measure larval drift densities and make recommendations to the Committee. *Done for now (being considered as part of potential student projects)*
 - **Matt Breen** will prepare revised scope of work for Stewart Lake. *Pending.*
 - **Tildon Jones** will ask Bruce Haines about the small wetlands in the Horseshoe Bend area. *Done. Discussed in levee removal project report (appears to dry by mid-summer); however evidence some fish overwintered in the 90s.*
 - The **Program Director's Office** will discuss terms of the Escalante wetland and Lamb property leases with **Ouray NWR (Dan Schaad, Sonja Jahrsdoerfer, and Andrew Pettibone)**. Tildon noted that the easements may be protecting these floodplains from other development. *Pending.*
 - Any additional comments on Dave Speas' floodplain sites white paper should be submitted by December 27. *Done; Dave revising and will include references to specific decisions from the follow-up meetings.*
14. Regarding grass carp, >**Biology Committee state representatives** will review/describe grass carp stocking regulations and summarize stocking history (*Pete Cavalli provided a map showing grass carp producers and suppliers on 1/15/17*). Field sampling techniques/protocol for triploidy testing need clarification. **Kevin McAbee** will research and then provide PIs with protocol and list of needed equipment. **Kevin McAbee will ask Mark Fuller** to contact the Ute Tribe to review/describe their grass carp stocking regulations and summarize stocking history. The **PDO** will ask the San Juan Program to respond similarly.
15. **Harry Crockett** will provide Utah whatever information CPW has on redeer sunfish in ponds alongside the Platte.