

Biology / Water Acquisition Committee Webinar Summary, October 13, 2015**PARTICIPANTS**

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

Water Acquisition Committee: Jana Mohrman, Michelle Garrison, and James Greer (also Tom Pitts, listed under Biology Committee)

Others: John Fulton (USGS), Richard McDonald (USGS), Peter Fahmy (NPS), Tom Chart, Kevin McAbee, Tom Czaplá, Sandi Spivey, Angela Kantola, Paul Badame, Tildon Jones, Mike Mills, Kevin Bestgen, Dana Winkelman, John Hawkins, Matt Breen, Katie Creighton, and Julie Howard.

CONVENE: 8:00 a.m.

1. (With Water Acquisition Committee): Report review: “Reproduction, abundance, and recruitment dynamics of young Colorado pikeminnow in the Green and Yampa rivers, Utah and Colorado, 1979-2012” – Tom Chart introduced this synthesis project of biological and physical backwater information. The physical habitat report is in revision and will be sent for peer and technical committees review shortly. Kevin Bestgen said their work was aimed largely at understanding declines in age-0 Colorado pikeminnow. Under most hydrological conditions, larval production (Figure 9) appeared high enough to produce large year-classes of age-0 fish, but other factors contributed to low survival to the fall. Figure 18 shows the relationship of mean August - September baseflows to age-0 Colorado pikeminnow in the middle and lower Green River, with recruitment highest in intermediate flow years. This also shows the value of the long-term dataset (collected since 1979). As shown in Table 10, the report recommends higher base flows in the middle Green River, particularly in dry to average years than the recommendations of Muth et al., 2000. Kevin says meeting these new recommendations will be very important in reversing the decline in Colorado pikeminnow in the middle Green River. The report also recommends higher flows for dry to average years in the lower Green River. Kevin observed that 2015 reflected ideal conditions for reproduction and recruitment and flows were in the proposed range for a moderately dry year as recommended in the report. Tom Pitts suggested referencing Table 10 in the recommendation at the bottom of page 62. With regard to both conclusions and recommendations, Tom suggested organizing the conclusions by findings related to fish status and those related to flows and organizing the recommendations by those related to data collection, continued studies, and flows. Dave Speas thanked Kevin for addressing his concerns. Dave noted the vertical lines in Figure 18 didn't print for him. Dave asked about the recommendation to evaluate competing demands and Kevin discussed Figure 27 (which he will center on the page). Dave suggested it might be helpful to mention the effort to evaluate Muth et al. in the conclusions or recommendations. Tom Chart noted that the overview/synthesis chapter also will mention this evaluation. Matt Breen said he was generally pleased with the responses to his comments. Matt echoed the urgent need to implement these higher baseflows. Melissa wondered how we'll be able to implement the differing recommendations for baseflows in the middle and lower Green River and suggested perhaps Reclamation could do some modeling in this regard. Kevin said they suggested prioritizing the middle Green, if prioritization is needed, and agreed that modeling will be useful. Harry asked if the years in which the authors' recommended flows occurred in the middle Green were the same years they occurred in the lower Green (were the recommendations met in both reaches in years when they were met?). Kevin said he thinks they were generally compatible. James Greer asked if Figure 27 is aimed at particular hydrological conditions; Kevin said it's conceptual. James asked where we will find water for both higher peak and higher baseflows. Kevin said we might consider reallocating from different times of the year (e.g., March and April), but as the report states, implementing the recommendations in any year will depend on a host of factors, including water availability. Tom Pitts asked Dave Speas if these recommendations fit within the ROD; Dave said probably not if they were implemented wholesale, but the ROD does have flexibility and these

recommendations could be implemented on an experimental basis (as we are doing with experimental peak flows). Tom Chart said he expects this report will be finalized in time to incorporate it into Program's spring and baseflow request for 2016. Dave said he expects the FGTWG and Reclamation will do their best to implement the recommendations.

The group discovered that not all committee members received the final report and response to reviewer comments that Angela sent out on September 15 (due to the Gmail group e-mail glitch the Service experienced at that time). Therefore, an additional 2 weeks (until Oct. 27) will be provided for comment with reviewers asked to indicate if they believe any remaining concerns should be addressed by the committees as a whole or by a smaller group. Matt Breen asked for a Word version of the document, which Kevin provided. Once this report and the physical habitat reports are approved by the technical committees, they will go forward as a package (including some form of synthesis of the two reports) to the Management Committee since they are flow recommendations report.

2. Presentation from Dr. Kevin Bestgen and John Fulton of USGS on their proposal (submitted but not funded under the Science Support Partnership) linking hydraulic modeling with active and passive transport of larval razorback – John Fulton described the project, which has a goal of developing a management tool to optimize streamflow and floodplain connections. USGS proposes a particle-tracking model to address uncertainties in razorback larval life stage, including drift speed and pathway, active vs passive drift, and interaction with floodplains. Richard McDonald described similar work in the Kootenai and Snake rivers, showing model simulations, and describing study objectives. Once the model is validated at a Green River floodplain site, it could have application to other floodplain sites, help evaluate floodplain restoration design to optimize larval use, help evaluate hydrographs, and potentially be applied to other fish species. Dave Speas asked if the model would be applicable over a range of flows; Rich said he thinks so. Melissa asked how sensitive the model might be to a specific release site (noting that the spawning site is a very specific site). Rich said he thinks it's most important close to the release site, and then becomes less important downstream. Tom Chart said he's been impressed by how far the technology has progressed since the Project 85f – MD-SWMS effort and how the proposed modeling could help us manage floodplains like Stewart Lake and Johnson Bottom. He thinks this approach also may help manage trade-offs when water availability is limited. Melissa noted we've thought a lot about what happens to larvae once they're in the floodplain (especially single-breach vs. flow-through floodplains) and asked if that might be incorporated in this study. John Fulton said he thinks more simulation would be required to get to that level of understanding. Dave asked how far downstream we could model the simulations; Kevin said he thinks a conceptual and actual wetland could be modeled as far downstream as Stewart Lake. Richard said once they've validated the model, they could relatively quickly develop a hydraulic model for any other reach and apply it there. Kevin Bestgen said they're currently looking for other funding sources (including Reclamation). Tom Chart said they'll also apply for SSP funds again next year, perhaps phasing the project, while also looking for other funding sources.
3. Report review: Project 161 (part 3) entitled "Population Dynamics Modeling of Introduced Smallmouth Bass in the Upper Colorado River Basin" – Kevin McAbee said this report accompanies the projection tool. Kevin Bestgen said this simulation portion was really the key part of the three-part report. Modeling focused on Little Yampa Canyon, but also is applicable to other reaches. The model showed we can affect reductions in smallmouth bass via mechanical removal, but environmental factors also are important, with bass responding positively to warm, low-flow years. The model showed the surge effort is effective in increasing bass removal and probably also disrupting spawning and interrupting reproduction. Other factors that can be modeled include climate change and immigration. The model has proved to be a very useful tool and will be helpful simulating different management options. Kevin Bestgen said they will verify the equations in Appendix 1 with Bruce Haines. They also will incorporate a cleaned-up user manual in the final report as another appendix. Kevin McAbee asked about proposing a structured decision process next step. Kevin Bestgen said it will depend on the level of questions to be asked and decisions to be made; we

can make some decisions with the existing model, but a structured process could be useful particularly if there was interest in incorporating a cost-effectiveness component. Kevin McAbee suggested discussing this at the upcoming nonnative fish workshop. Dave Speas agreed we need to use this product to guide management, especially as we get closer to the end of the Recovery Program. Kevin Bestgen noted that the simulation model can answer questions like whether it's more effective to remove adult smallmouth bass or young bass, etc. Kevin Bestgen said they will finalize the report over the next month and ask Committee members to let them know if they have any additional changes. The Biology Committee approved the report.

4. Update--Colorado pikeminnow Population Viability Analysis (PVA) – Tom Czapla said the draft scope of work was sent out last Tuesday, though it's still in development (e.g., budget portion with Phil Miller). Tom Pitts submitted comments yesterday. Rich is working on some of the preliminary data and developing a model for the matrix; hopefully that will go out to the group before Christmas. Phil Miller will join the project in February. Tom Chart said this version of the scope of work includes Service representatives and a number of species experts to participate in the up-front work pulling together life history information prior to February. The workshops beginning after February would be open to stakeholders. Tom Pitts asked about process in the event downlisting might be warranted. Tom Czapla said that will be up to the Service; but a species status assessment may not be necessary. With regard to Tom Pitts' comments recommending additional stakeholder participation, Tom Chart said that participation opens up under Task 3. Tom Pitts said he would like to see broader participation for tasks 1 and 2 with reviews of those tasks built in. Dave Speas said he would agree as long as it doesn't compromise the timeline. Tom Chart affirmed Dave's concern and said they are trying to keep the group small enough to produce the required products in a timely manner; then seek Program(s) review. Comments from both the Upper Basin and San Juan programs are due in 2 weeks (October 27). Pete Cavalli suggested the final project identify the parameters in which we have the highest confidence and to which parameters the model is most sensitive. Dale Ryden noted that the San Juan PVA (p. 33, second paragraph) discusses realities and uncertainties and what's reasonable to expect from the model. Tom Chart said that if major technical issues are brought forth in the next 2 weeks, we may need to convene a Biology Committee call, but otherwise, he envisions addressing comments received by Oct. 27 and then sending the SOW to the Management Committee for approval (copying the Biology Committee). The Committee approved this process.
5. Review draft scope of work for Razorback Sucker Species Status Assessment (SSA) – Tom Czapla received comments from Kevin McAbee and Harry Crockett. Tom Pitts asked why we're doing an SSA rather than a PVA and if we'll need to do a PVA on the razorback to consider downlisting. Tom Czapla said a PVA would not be required (there are other ways to determine the risk of extinction) after an SSA. Brandon says an SSA relies on existing information and the idea for the razorback is to use a Delphi or similar approach to assess experts' views. Dave Speas observed that it would be difficult to do a credible PVA on razorback sucker without recruitment information. Tom Chart agreed and observed that the PVA done for the stocking-driven Colorado pikeminnow San Juan population was based on evaluation of the effects of heavy metals. Tom Pitts suggested the SOW should have tasks to accomplish each of the Service's objectives for an SSA. For example, if assessing species viability will be done by a Delphi technique, then that should be spelled out. Dave suggested changes to the scope of work should go forward, but *as* they begin work on the SSA to maintain the schedule. Dave asked about "This effort will also include means for a natural resource sociologist query and quantify researcher's, investigator's, and manager's opinions as to their perception of the future of this species." Brandon said this may involve a Delphi approach, but that's flexible, so he left it a little vague. Brandon will add subtasks addressing the Service's objectives for an SSA. >Tom Czapla and Brandon Albrecht will send the Committee a revised SOW with request for approval via email.
6. Update: Humpback chub Recovery Plan – Tom Czapla said the entire team (all three subgroups: writing, science advisory and implementation) will meet on November 18 and an agenda and location should be out later this week.

7. Update: Horsethief Canyon Native Fish Facility and pond-spawned humpback chub progeny – Dale Ryden referenced his September 14 e-mail. Of the 17 assumed humpback chubs, 13 had survived and they also retrieved one mortality. Samples from these 14 fish plus 140 progeny were sent to Wade Wilson for genetic analysis (which should be available in February). The progeny (~1,500) are now in a separate pond and all of these fish appear to be humpback chub. The wild-caught fish from last year and this year (10-12) are in another pond. Horsethief has space to hold these fish until April, after which they would need to treat them and hold in indoor tanks. Options would include: stock progeny where parents were taken from; hold some for broodstock; use some for educational purposes; combine with wild-caught adult fish, etc. >Dale will provide the genetics results as soon as they are available and then the Committee will discuss options.
8. Update: CNHP [STReaMs database](#) project – Dave Speas said a live version of the database is now available and CNHP has reconvened the core group in a series of workshops to fine-tune functions. Kevin McAbee said the next version will be released tomorrow. CNHP will present on this penultimate version at the Researchers Meeting in January and then there will be a hands-on workshop at CSU March 14-15. Dave said CNHP also is working on incorporating antenna data. CNHP encountered a very clean data set. Of the data they received, only 1% of records have an error type that will require further investigation and was therefore not entered into STReaMS.
9. Bonytail Research Project – Dave Speas said Mark McKinstry convened a grassroots meeting to discuss potential bonytail recovery actions in July; Ron Kegerries (BIO/WEST) summarized the discussion and the idea is to use that summary to see who might want to conduct further work. Dave Speas has been looking for alternative funding and when he has more information about that in the next few months, he'll send Ron's summary out to start the discussion.
10. Review previous meeting assignments – *See Attachment 1.*
11. Review reports due list – Angela Kantola will send an updated list for Krissy to distribute with the meeting summary (*done*).
12. Schedule next webinar or meeting and identify agenda items – The next meeting is scheduled for January 14 in at the Student Union of Fort Lewis College in Durango (convening at 8:00 or 8:30 a.m. and adjourning no later than 3 p.m.) after the Researchers Meeting.
13. Consent item: Review and approve July 28-29, 2015, Biology Committee meeting summary – Dave Speas, Kevin Bestgen, and Kevin Thompson provided edits which Angela Kantola sent with this agenda. The Committee had no additional changes. Angela Kantola will post the revised summary to the listserver (*done*).
14. [Biennial Conference of Science & Management on the Colorado Plateau & Southwest Region](#) – Tom Chart thanked Dave Speas, Travis Francis, and Kevin Bestgen for their presentations at the special session on “Revisiting Science and Adaptive Management in the Federal Colorado River Programs and Other Streams and Rivers of the Southwest” last week.

Adjourn: 12:40 pm

Attachment 1: Assignments

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. Tusher Wash Screening:

- **Brent Uilenberg** and **Bob Norman** will contact the Program Director's office regarding input from biologists on the Tusher Wash weir wall design. 5/28/15: *Kevin McAbee said Reclamation (Norman and McWerter) has begun work on design. 10/13/15: The O&M contract for the weir is nearing completion; additional head will be required at the top of the raceway which will require replacing an 8-gate structure and result in a total cost off ~\$2.5M. The NRCS diversion replacement is in final design and Kevin recently sent the Management Committee information on the Program's portion (~\$58K in Section 7 funds) of the antenna array cost.*

2. Humpback Chub (population estimates)

- & Humpback chub combined population estimate from Gary White. 6/28/13: *Three reports are pending: a 2011-2012 Black Rocks report, a 2011-2012 Westwater report, and a 1998-2012 combined analysis report. Previous discussion indicated the combined analysis would be provided by LFL and tacked onto the Black Rocks report, but it doesn't fit neatly into either the 2011-2012 Black Rocks or 2011-2012 Westwater reports because it has data from both. Further, Grand Junction CRFP's SOW only covered writing a Black Rocks report, not a combined report. 1/16/14: What Kevin Bestgen presented was the joint report and parts of it will appear in the individual reports. A young-of-year sampling effort may need to be added back to the fieldwork (included in draft FY16-7 SOW). Czapla said we have new due dates of January 2015 for the Black Rocks and Westwater reports. 5/28/15: Travis was working with Kevin Bestgen on the methods section; Kevin has provided revisions and Travis anticipates completing a draft by the end of June. Brian Hines said he's on a similar schedule and will have something by the end of July or August. 7/28/15: both reports now expected by the end of August.*

& 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. 2/21/14: No deliverable on Upper Basin fin clips; cost would be ~\$37K (Committee considering, but not our highest priority; see 2/21/14 meeting summary). 8/26/14: Reclamation is working on the funding agreement (may inform index of effective population size different than that for the Grand Canyon population). Tom Czapla said Moab handled at least 25 Deso and WW humpback chubs during smallmouth bass removal and got fin clips from all of them. Tom Czapla said he thinks the priority for analysis should be the Desolation, Westwater, and Black Rocks fish. Moab may still collect some more in Westwater this year. The roundtail chub would be a lower priority. 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 Czapla sent to BC 1/21/15); >**Melissa Trammell will find and send the plan development proposal document to Tom Czapla 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 (pending).*

3. & Nonnative fish management follow-up:

- **Walleye:** >**Kevin McAbee and Paul Badame** will work on organizing a “walleye summit” with appropriate outside expertise. *Pending. 10/27/14: Still trying to get some outside funds to support this effort. 7/28/15: Matt Breen suggested contacting Greg Sass with Wisconsin-DNR about a walleye presentation for the walleye summit or the NNF workshop. 10/13/15: Kevin McAbee has invited Dr. Dan Iserman from Wisconsin to come to the workshop.*
- & **Private (LaFarge, aka Snyder) Pond near Rifle:** **Harry Crockett** will find out if the landowner will allow and if CPW can reclaim the pond before spring runoff (considering a seismic gun option); >**Tom Chart** will coordinate with **Harry and Brent Uilenberg/Bob Norman** on repairing the notches after runoff. *6/11/14: Sampling ongoing and Reclamation will work with CPW on filling the old notches. Harry said rotenone is still an option (and more likely than a seismic water gun approach at this point). 8/26/14: Harry said they couldn't arrange a site visit (CPW, Reclamation) before spring runoff, but that could happen now that flows have receded (>Tom Chart will contact Brent about this). Harry Crockett will contact Jackson Gross and let him know the Committee appreciate Smith-Root's interest in the Snyder Pond work (and willingness to bring considerable cost-share) (done), but would like to see a proposal that includes evaluation of success and a report. 6/11/14 Jackson indicated that the availability of hydraulic pumps had been a problem this spring, but that pumps are now available from Smith Root. 8/26/14: CPW is more interested in the rotenone option at this point. Dave said sonic water guns might be useful in the Yampa wetland areas. 10/27/14: **Reclamation** will review plans for filling the notches with the city of Rifle, which has a nearby water intake. 5/28/15: Filling the notches is not feasible since it turns out they maintain the hydraulic pressure on either side of the levee within specific bounds. Lori Martin has been gill-netting the ponds since ice-out and installed a big trap net a month ago near the outlet to trap or obstruct fish trying to leave the pond once it connected. Long-term solution(s) will need to be considered further. Rotenone might still be an option (since pike are not abundant in the Colorado River and Rifle Creek has been screened, the chances of re-invasion are reduced). 10/13/15: see below.*
- **Dave Speas** will talk to Rob Clarkson regarding what support he may be seeking for the novel piscicide study. *3/4/15: Dave said the work is being done at a USGS facility in Wisconsin; Rob reports that the PI estimates testing Supraverm at ~\$10K per additional species. Wisconsin likely has walleye, bass, and pike readily available and they believe they could get endangered fish from Arizona. Rob told Dave he did not expect to see any difference in test results among Gila species. 5/28/15: Kevin McAbee pursued Service funding for adding species to the Supraverm study, but USGS then said they didn't believe Supraverm was proving as selective as initially thought. Paul Badame, Kevin McAbee and Harry Crockett will find out if Utah and Colorado have regulations similar to the one that David Ward in Arizona that allows temporary use of ammonia as a piscicide. Kevin McAbee 2/25/15: David had indicated he acquired a 24(c) Special Local Needs pesticide registration from the state of Arizona. 24(c) references a section of the Federal Insecticide, Fungicide, and Rodenticide Act that gives ALL states the ability to "register an additional use of a federally registered pesticide product". Both Utah and Colorado (and I assume all other states) maintain a list of pesticides registered in this way. (Kevin e-mailed the Committee a summary from various state and federal websites describing this regulation). Kevin concluded if someone devoted the time and energy, the Recovery Program should be able to try to apply for a 24(c) registration for ammonia, just like Ward et al. did (likely going through the state's department of agriculture). However, approval requires a lot of specific planning and paperwork, and is not guaranteed. Committee to discuss ramifications of this conclusion. 3/4/15: Krissy suggested some of the ponds that Dale suggested would be good tests. Kevin asked if it might be used at LaFarge Pond if Rifle is concerned about rotenone; Sherman said potential impacts would need to be carefully investigated, but it could be considered. Krissy recommended that both Utah and Colorado begin investigating the process and required lead time. Sherman Hebein contacted Laura Quakenbush; Pesticide Registration Coordinator for Colorado's Division of Plant Industry and forwarded the subject email and attachments to her. Laura and John Scott, Pesticide Section Chief, will review the situation and advise what options are open to use ammonium hydroxide as a piscicide in Colorado. 5/28/15: Kevin McAbee again asked if ammonia might work at LaFarge and if we should pursue permitting for its use at this site; >Kevin will discuss with Lori Martin and >Harry Crockett will let Laura Quakenbush know we're*

still interested. 7/28/15: The Merwin trap may be effective enough at Snyder, but if/as we discover other locations, we might consider piscicides. **Utah** may look into whether ammonia could work at the pond below Flaming Gorge at Brown's Park. 10/13/15: Kevin reported that Rob Clarkson waiting for a first year report from the Service and may present that at the workshop. Dave Ward has had difficulties finding locations to test ammonia and is interested in talking to upper basin researchers about potential experimental locations. Kevin is discussing this with CPW (e.g. at LaFarge Pond) and UDWR (e.g. at Brown's Park to control white sucker).

- To get the word out to anglers and guides to report fish captures below Flaming Gorge, **Jerry Wilhite** will mention it to guides when he talks with them each year, and we will mention it at the Flaming Gorge meeting, also. Jerry also will e-mail a few of the active folks and ask them to spread the word; >**Kevin McAbee** and **Melanie Fischer** will draft something for Jerry to share with the Green River Outfitters and Guides Association (GROGA), asking them to report burbot, northern pike, smallmouth bass, kokanee, and Colorado pikeminnow seen or caught in the A, B, and C sections. 7/28/15: *Kevin McAbee and Krissy and Jerry have drafted a letter that Trina Hedrick and Ryan Mosely commented on, also. Jerry and Ryan will be the points of contact for data submission.* 10/13/15: *Jerry met with GROGA last week and provided a letter and data sheet. Jerry emphasized the need for photos. Jerry will meet with them again early next summer.*
- 4. **Brent Uilenberg** and **Harry Crockett** will be working with CPW and Reclamation engineers to evaluate the potential for a permanent barrier downstream of Ridgway Reservoir. 6/11/14: *Harry said Brent would like to define the sideboards before committing time to this. The **Program Director's office** will begin the conversation on this and Elkhead with Brent. Meeting/conference call was held on August 6th in Glenwood Springs.* 8/26/14: *a meeting is scheduled September 4. Dale Ryden said they sampled from Delta to Redlands and didn't find any bass, so that's good news.* 3/4/15: *CPW, CWCB, and Reclamation have talked to Tri-County and they will attempt to avoid spilling again this year.* 5/28/15: *Kevin McAbee is working on setting up a stakeholder meeting in July (7/28/15: now contemplated for September or October). We will keep reservoir updates as a standing agenda item.* 10/13/15: *Stakeholder meeting was held September 2 to discuss long-term solutions for how Ridgway might parallel the Elkhead process (net or similar escapement prevention, LMP revision, etc.) and how woody debris might be managed. Another meeting will be held in February or March.*
- 5. 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.*
- 6. Related to the peak flow study plan, **Jana Mohrman** will look into cost estimates for additional aerial photography analysis. **Committee members** will continue their review of the draft plan and provide comments by the end of September (the same will be requested of the WAC). Within two weeks, **Tom Chart et al.** will prepare a short background outlining the genesis of this work and restate the objectives (done). **PDO** sent revised plan to BC & WAC for review; comment deadline extended to January 23; revisions and review pending. 5/28/15: *Jana said the study plan is still being revised and more tightly connected with the Green River and Aspinall study plans. The 2011 aerial photos will be posted on the internet by the end of this summer (not georeferenced).* 7/28/15 *The **Program Director's office** received a revised draft on August 11, 2015.* 10/13/15: *Tom Chart is reviewing and will send to the BC and WAC by the end of October.*
- 7. **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 will check with others (Peter McKinnon) about the Price and Dolores river data. Peter and CNHP are aware that all of the antenna data needs to go into STReAMS.

8. - **Kevin McAbee** will follow up with **Julie Howard** regarding impacts of wind speed on sampling efficiency and potentially safety. 5/28/15: *On hold until Julie returns.* 10/13/15: *Kevin and Julie discussed; Julie is working on looking at how catch rates are affected when winds pick up and sampling has to cease or motors have to be used. Julie will work on this with Moab office data and trips for the time being. This can come off the assignments list after this meeting.*
9. - The **PD's office** will talk to Steve Platania about otolith microchemistry as they investigate options to have USGS analyze otoliths. 5/28/15:– *Pending, but meanwhile we're submitting a proposal for FWS funding to have additional walleye otoliths (and potentially other tissues) analyzed for strontium and maybe other isotopes. This is a bit of a pilot study to work with the USGS lab here in Lakewood which has all the needed equipment here. Focus on lower Colorado and lower Green river walleye otoliths. Kevin said they've mentioned Steve Platania's work to USGS and if the study is funded, they will be in touch.* 7/28/15: *Funding status should be known in a couple of weeks.* 10/13/15: *Kevin McAbee said the proposal he and Travis and USGS submitted was funded. Not only will we get these otoliths analyzed within the next year, but we'll find out if we can use USGS in Lakewood to analyze these isotope data going forward. This assignment can come off the list after this meeting.*
10. As the time to stock bonytail approaches, **Tom Czapla** will seek the Committee's approval of stocking locations via e-mail. 5/28/15: *Wahweap bonytail went to locations identified in the plan (Green River at Jensen Bridge and Green River State Park and Dewey Bridge on the Colorado). Dale would like to add a site near Rifle (this year or later) for about a fourth of the fish they stock (~2,500). In light of anglers around Rifle, Dale will check on planned stocking dates. Harry wondered if downstream around Rulison would be better; Dale will check truck access. Tom Chart asked if hits on the Price-Stubb antenna might provide information; Dale thought it could help, but wouldn't be definitive. Harry asked if we could more formally analyze what's working in terms of stocking locations; others endorsed this idea. The Committee concluded this won't happen until we have someone in the database position to do the analysis. Meanwhile, Tom Chart said he has no objection to trying other sites. Krissy Wilson recalled the bonytail that went into Stewart a few years ago and left as flows receded; therefore, we should continue to work to find low velocity habitats from which bonytail can leave of their own volition. Dale said one difficulty has been that low velocity sites are often quite inaccessible for safe transport of fish. Another option is to stock fish far enough upstream of low velocity habitat so they can drift in. Dale will stock at previous locations for now and further explore low velocity habitats in this area and discuss sites with Harry.* 7/28/15: *Dale said they have a couple of locations to consider in lower-water years. Sherm said Lori and Jen observed that when we put bonytail in Butch Craig showed up in the Gunnison River at larger sizes. To use Butch Craig for this purpose again, we need to address access issues (re-establish contact with and permission from landowners) and rotenone to remove nonnative fishes. CPW and FWS will continue to discuss and decide how to move forward to re-acquire access and remove nonnative fishes. Dale also will check to see if Butch Craig is part of the Colorado River floodplain refuges.* 10/13/15: *Dale said BLM oversees Butch Craig access and he hopes to meet with the landowner in the next week or two in hopes they can do some netting in the pond, determine boat access, notch condition, etc. Dale will coordinate this with Jenn Logan.*
11. The Committee endorsed an experiment to tag smaller hatchery razorback and bonytail (for fish coming out of floodplains); **Tom Czapla** will investigate which hatchery could do this. **Tom Czapla** will check the BO written for scientific take permits to see if any change in permitting would be required.

12. FY16-17 Work Plan

- **Kevin McAbee** will include in the December nonnative fish workshop a discussion of how best to focus effort under Project #110. Lower Yampa River smallmouth bass control, since so few large bass are captured in this work.
- **Kevin Bestgen** and others will discuss and flesh out the proposed objective #8 for FR-115 to study effects of flow/temperature disturbance on smallmouth bass reproduction for FY16 funding after Kevin provides a draft (perhaps after the next GREAT call/meeting).
- **Tom Czapla** will tell **PIs** what additional information the Program Director's office would like to see in the population estimate annual reports (esp. #128) (*in draft; will go out with call for annual reports*).
>The #128 SOW should be modified to provide that direction to the PIs (*pending*).
- **#131 Dale** will check with Travis to be sure he's comfortable that he can accurately identify very small *Gila*; at a minimum, we'll need to send verification samples to LFL. *10/13/15: Dale said Travis is comfortable down to 150mm; a subsample of the catch would have to be sent to LFL to verify species on very small fish (e.g., 50-60mm) (to confirm humpback chub spawning). Julie Howard asked if they should be collecting any of the small (60-80mm) juveniles they're capturing in Desolation (and potentially Cataract) Canyon. Tom Chart suggested just fin-ray counts, and, if possible, grid board photos.*
- **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).

13. Tom Czapla and Brandon Albrecht will send the Committee a revised razorback sucker SSA SOW with request for Committee approval via email.

14. Dale Ryden will provide the Committee results of Wade Wilson's humpback chub (wild and pond-spawned progeny) genetics analysis as soon as it's available and then the Committee will discuss options.