

Biology Committee Meeting
July 12-13, 2005
Grand Junction, Colorado

Biology Committee: Tom Chart, Tom Pitts, Gary Burton, John Hawkins, Melissa Trammell, Kevin Gelwicks, Kevin Christopherson, and Dave Speas. Bill Davis and Tom Nesler could not attend the meeting.

Other participants: Pat Nelson, Bob Muth, George Smith, Tom Czapla, Rich Valdez, Chuck McAda, Angela Kantola, Amy Cutler, Qwent Bradwisch, Mike Montagne, Matthew Andersen, Ray Tenney, Brent Uilenberg, Sherm Hebein, Julie Jackson, Trina Hedrick, Patrick Goddard, and Kevin Bestgen

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

(Note: Several Committee members participated in a tour of Grand Valley capital projects the afternoon of Monday, July 11. Sites visited included the Government Highline Fish screen and passage, Butch Craig floodplain restoration and Redlands screen. Thanks to Brent Uilenberg and Chuck McAda for arranging the tour.)

Tuesday, July 12

CONVENE: 8:00 a.m.

1. Review/modify agenda - The agenda was modified as it appears below.
2. Review and approve draft April 7-8, 2005 meeting summary (sent by e-mail 4/19/05) and draft June 20, 2005 conference call summary (sent by e-mail 6/21/05) - Correct spelling in item #2 in the April meeting summary. Tom Chart referenced item #3 which says "Tom added that bluegill and crappie >10" are basically trophy-size, so not stocking those species <10" would basically eliminate all stocking of these fishes in Elkhead. This would remove a forage fish management tool when we know that these two species don't seem to have any biological impact once they reach the Yampa River" and suggested that we don't, in fact, "know that these two species don't seem to have any biological impact once they reach the Yampa River." An italicized note was added to the meeting summary that impact of centrarchids in the Yampa River is not known. >Tom Nesler still needs to provide the Committee a criteria assessment for when northern pike and bass removal should be expanded upstream (includes pike, bass, and pikeminnow density estimates). >Tom Nesler still needs to have CDOW present the revised Elkhead management plan to the Biology Committee. >Tom Czapla still needs to work with Tom Nesler and Chuck McAda and draft written procedures for who reports what stocking data to whom and when. The summary nonnative fish management outreach document doesn't need to be sent back to the Management, Biology, and Information and Education committees and the researchers. >We still need a revised SOW from UDWR on razorback recruitment to cover the follow-up work on razorback entrainment. (Kevin Christopherson said that the 55,000 larval razorback stocked at the Baeser Bend

floodplain site or very nearby).

3. Review/revise reports due list - >Kevin Christopherson will call Mike Hudson re: due date for Price River report. >Tom Czaplá will ascertain due dates for all the population estimate reports. >Bob Muth will write John Pitlick and ask him to complete his channel monitoring report. The Biology Committee requests that >Tom Nesler get the Yampa aquatic management plan and Elkhead Lake management plan completed by the end of this year. (Tom Pitts noted that this is a PBO requirement.) >The Program Director's office will check to see if they received an electronic copy of the Yampa pike exclusion report.
4. Discussion of Elkhead Reservoir screening in 2006 – what information does the Committee need from the principal investigators to make a recommendation regarding screening nonnative escapement in 2006? Pat Nelson suggested that the principal investigators should provide the following data: review all tag numbers of recaptured smallmouth bass (SMB) and see if they match any SMB stocked in Elkhead (Hawkins); nonnative population estimates comparison between 2004 and 2005 within the next month. We need to make a decision about options for controlling escapement in 2006 by August or September. Ray Tenney said the contractor is behind schedule, but he does not know yet if escapement could be a concern in 2007. Ray said having nonnative fish in Elkhead during and after construction of the expansion accounts for ~\$2 million of the project cost. The contractor said the current conservation pool has to be made smaller, and would like to screen the portion to be siphoned off with 3/4" screen to reduce fish impingement that clogs the screen (the Yampa Plan and Biological Opinion call for 1/4" screens, although they don't refer to siphons). Ray has to give the contractor an answer on this tomorrow. Kevin Christopherson suggested that the problem of fish impinging on the screen is related to velocity and might be solved with greater surface area. Ray Tenney will tell the contractor to find a way to screen to 1/4". The Committee did not have any other concerns about reducing the conservation pool. >Pat will ask the principal investigators to submit tag numbers and population estimates by 8/15/05. Other questions to be considered: could screening be accomplished in the creek; what do we do with the conservation pool?
5. Committee review and comments (*only-no approval required*) on April 22 version of "Genetics Management Plan for Humpback Chub" - Tom Czaplá sent a draft peer reviewed version to the Biology Committee and he'd like their feedback at this point. The genesis of this plan was the supposed "drastic decline" of Grand Canyon population, and also the declines in upper basin populations, with the question to be addressed of when to bring fish into captivity for refugia and propagation. The report on the Douglas' (CSU) genetics analysis is expected in December 2005 (with perhaps a report at the GCMRC science symposium in October). Gary Burton said comments from the lower basin have included that they thought the plan would be integrated basin-wide and more prescriptive. Arizona Game and Fish has suggested that fish should be taken into captivity now; Tom Czaplá said there are already humpback chub at Willow Beach. Tom Pitts noted that he had suggested that this should be a Service document, not a Recovery Program document. Tom said the plan needs to make clear what the Upper Basin

Genetics Management Plan is and noted that the plan contains much discussion of Service policy on captive propagation, which seems more restrictive than what we're doing in the Upper Basin (Tom Czaplá will check to see if that policy was finalized.) Tom Pitts noted that the sixth recommendation that augmentation should not occur until threats removed or minimized is not consistent with what we're doing in the upper basin and the San Juan. Tom also said it needs to be clear that Service is recommending that there be no captive propagation program at this time if that's the case. Tom asked if a genetics management plan needed for the young-of-the-year fish brought into refugia. Tom Czaplá said he doesn't think we need broodstock or propagation for humpback chub at this point, and Tom Pitts replied that the plan needs to identify the purpose of bringing fish into refugia. Melissa Trammell suggested that the footnoted recommendation that the threshold requiring captivity should be determined by the Recovery Team should be made a specific recommendation. Melissa echoed Tom Pitts' concern that the plan is not clearly laid out (sequence, etc.). Also, clarifications made to reviewers should actually be made within the document itself. John Hawkins suggested revising the title to "Assessment of the Need to Protect Humpback Chub in Refugia and Develop Broodstock." Dave Speas agreed. Bob Muth emphasized that many questions being raised can't be addressed until the Douglas' report is finalized. The Committee agreed this is a preliminary assessment. Therefore, Kevin Christopherson suggested that a 1-2 page position paper would suffice at this point. Gary Burton noted that the term "alternatives" in the plan is confusing. Tom Chart said that in addition to the Douglas' report, we need the Recovery Team decision on threshold. >Biology Committee members may comment on the document by August 15, 2005.

6. Report review - Discussion/approval of final changes to Gunnison River/Aspinall Unit Temperature Study – Phase II, Project No. 107, Boyer and Cutler. (See: 4/11/05 e-mail from Amy Cutler responding to comments by Dave Tomasko and Gary Burton; 4/22/05 comments from Bill Davis; and 6/6/05 e-mail containing revised final report). Amy summarized the revisions made in response to Gary Burton, Bill Davis, and an anonymous reviewer. The goal of the study was to determine whether water temperatures are available in the reservoirs to produce downstream warming and determined that could be accomplished with a temperature control device (TCD) at Blue Mesa (because it is by far the largest reservoir – even though it is the furthest upstream of the 3 reservoirs). Amy clarified that the model has a +/- 1 degree error (or less). Gary Burton noted that most of his and Bill's comments were outside the scope of what Amy was asked to do; thus, he believes we can move forward with approval of this report as long as we understand: 1) that such approval doesn't imply that we're recommending moving ahead with a TCD; and 2) there are uncertainties that would have to be cleared up before considering moving ahead with a TCD. The uncertainties include: effect of tributary inflow temperatures; need for sensitivity analyses of the effect of input variables on model outcome; how the flow dynamics work through lower two reservoirs; and the effect of combined errors in the model. Gary said he and Bill believe these uncertainties combined tend to overstate the case for downstream warming potential at Delta. Kevin Christopherson asked and Amy confirmed that those uncertainties could be answered with additional work (~\$10-\$25K). Tom Pitts asked if we could determine over a larger period of record, how often the temperature benefits would occur and Amy said that

could be determined (this would be considered one of the uncertainties). Tom Pitts asked that the uncertainties be clearly identified in the report and Amy agreed to do that. The Committee then discussed conclusions and recommendations. Tom Pitts, page 71: where more temperature monitoring is discussed, clarify that what is meant is more locations. Also, on page 71 where “significant” and “important” temperature changes are referenced, identify the actual temperature ranges. Tom also asked that Table 7 be in the body of the report rather than in the conclusions/recommendations section. And with regard to the comment on model accuracy on page 3 (3rd sentence) that says they only looked at one portion of Osmundson’s report, clarify that’s the temperature portion of the report and clarify that they “do not address Osmundson’s recommendations regarding annual thermal units” (as opposed to language regarding requirements for fish to thrive). In the question that references what are the most feasible TCD options, Tom Pitts suggested a better term would be the most effective TCD options. Also, correct the “TAU” typo. John Hawkins suggested that the specific recommendations that are already in the report be pulled out into a distinct list (no new recommendations would be expected). Gary said he had trouble comparing the text in the average flows section with Table 7 and has asked Amy to clarify some things in that table. The Committee approved the report with the inclusion of the foregoing changes. >Amy will revise and finalize the report. Tom Pitts commented that the Committee needs to address *not* whether we can get x degrees of temp improvement at Delta, but whether we need an increase in temperature to achieve recovery (especially in light of the very considerable cost). The Committee will discuss this at a future meeting. Sherm Hebein added that CDOW asked Laurel Saito (formerly of CSU) to model the NPS proposed withdrawal of surface water for spring peak enhancement and Laurel found that taking water from the surface (resulting in a cooling of even 1-2 degrees) would significantly cool the lower water levels in Blue Mesa.

7. Evaluation of stocked fish - Tom Czapla distributed a revised, coarse summary and evaluation and said >he will provide a more full report by the end of August. Chuck McAda provided a summary from Doug’s population estimate work (still draft, another version >to be provided by the end of August) and noted that they caught quite a few pikeminnow in 2005 that were stocked by CDOW near Rifle in 2004, some of which had moved fairly far downstream in the Colorado River. Tom Czapla said CDOW has been requesting that pikeminnow be stocked in currently unoccupied or unavailable habitats, with their stocking plans stating that if pikeminnow are not retained in those areas, stocking would be re-evaluated. Clearly, many of those fish are being found significantly downstream of those areas, so the Committee may want to address that. Tom Pitts noted that the fish can’t return until the passage facilities completed, however. Chuck said we’ve only taken a cursory look for these fish in the Colorado River reaches where these fish were stocked, but finding some in the canals suggests that some of those fish have remained within the stocking reaches. Bob Muth said the integrated stocking plan clearly states that if stocked fish are found in occupied habitat, Colorado will re-evaluate that portion of the stocking plan. >Colorado needs to do this. Until that is re-evaluated, Bob Muth suggested it may be appropriate to suspend stocking pikeminnow in those reaches. On the Green River, Kevin Christopherson said they are finding stocked razorback on the spawning bar; however, the overall low return rates are disappointing, so we may want to

take a closer look at the recapture data and consider if it may be more desirable to stock razorback into the floodplains in the future. Chuck McAda discussed the data sets and the need to maintain consistency. Chuck said he'd like to review the data sets with an ad hoc group, and also added that he thinks we need to standardize one data file from each field station. The ad hoc group will include: Chuck, people collecting the data (e.g. Ron Brunson, Mike Montagne and a field person from the Vernal CRFP, Quent Bradwisch, John Hawkins, et. al.), Melissa Trammell, Dave Speas, and Tom Czapl. >Tom Czapl will set up a conference call for the group next week.

8. Discussion of draft outline of the approach for Research Framework Phase I, Objective 2: Linking species threats to management actions - Rich Valdez distributed and described the outline. Matthew asked about endangered species response, and Rich said he was considering a column for that. John Hawkins said he sees the potential for creating just another list of all our activities, whereas he thinks a species orientation would be better, listing the life stages and the things we believe affect those life-stages. Tom agreed that a life-stage orientation would be good. Rich clarified that he did envision a table for each species and suggested that those tables might be organized by life-stages. Bob Muth suggested that in addition to the life-history model, it seems like we might need a characterization of each population (management actions are really tuned to the populations). Rich said this will be more of a "search" mode than an "audit." >Rich and Kevin will try a "dry-run" example to see how this all works out. Rich will do this for the Green River pikeminnow population and provide it for the next Biology Committee meeting. Despite all the stratifications that are being considered, Rich will try to provide something simple enough so we can see the big picture.
9. PIT tag technology and bulk purchases – Discussion of recommendation to form an ad hoc group to develop the requirements that the Program needs for PIT tags and readers. Proposed participants to develop specific requirements so Reclamation can set a five-year order program that initially needs to go out for bid are: Dave Speas, Dale Ryden, Mark McKinstry, Chuck McAda, Quent Bradwisch, David Campbell, and Kevin Christopherson. Dave Speas distributed a summary of what we know about PIT tags at this point. Reclamation was about to buy ~\$1M of tags and readers from BioMark when they discovered other manufacturers had products we should consider. We've been using full-duplex BioMark tags which are designed for salmon and which allow deployment of fixed antenna in a stream that can read 50 fish passing at one time. Dave recommends an ad-hoc group to discuss PIT tag needs over the next few months and consider not only the basics of the number and types of tags and readers needed, but also the role of PIT tags in the Program and how we want to use them. Tom Pitts asked if we should be looking at a service rather than a product, the service being to hire someone who knows the technology and can tell us what technology we need based on the ad hoc group telling them what results we want. Dave said he thinks we can do this on our own, but he agreed the ad hoc group should discuss this possibility during their conference call this Friday. John Hawkins noted that the more common name for these tags is "RFID" tags. Chuck agreed we first need to decide what we want to be able to do with these tags (e.g., count fish exiting floodplains and/or screen return pipes?). The Committee approved the ad-hoc group approach. The goal is to issue the RFP this fall. Gary suggested we should

make it clear to the manufacturers that we want to review the technology every few years, but we also want to maintain our ability to use old technology (i.e., tags already deployed). >The ad-hoc group will bring their recommendations back to the Biology Committee for consideration at their next meeting.

10. Review of draft FY06-07 work plan (information posted to listserver 6/24/05) - Angela Kantola and Bob Muth introduced the draft work plan, noting the tight funding for FY 06 and 07, but adding that additional funds (amount to be determined) will be available in FY 06 assuming that Congress appropriates the Service's ~\$700K in FY 06 when the appropriations bill comes out of conference. Therefore, Bob and Angela recommended that the Committee develop and prioritize a recommended list of additional work should additional funds be available.
- 19 Tom Chart asked about real-time temperature monitoring on the Green River; George Smith said he has permits for this work, but the information wasn't relevant during the drought years. He suggests we look to see if the existing data we're collecting this year (2005) will suffice before we consider adding a gage at Echo Park (for which we'd need to develop an RFP). There is an emergency phone on the ranger station there. >Angela and George will review the budget (question about whether no overhead on Wyoming funds reduces the budget need).
- 70 Melissa Trammell objected to the "ultimatum" statement in the scope of work that says Colorado won't move forward on instream flow filings unless the Program approves Rick Anderson's methodology; >Tom Pitts will raise this issue with the Management Committee.
- Sed Instead of carrying FY 05 Steamboat lease funds to fund this, put Steamboat lease funds to 135a (which zeroes out 135a for FY 06 and should reduce it slightly in FY 07). Fully fund this study and put FY 05 Steamboat lease on the priority list, if it's needed.
- 115 The \$10K was to write up FY 05 data only. LFL has funds for writing up the FY 02-04 work. Moved potential work for 06-07 to instream flow section. Bob Muth suggested the question is what do we need to do in Lodore Canyon related to the Flaming Gorge flow recommendations and biological opinion.
- C-4b \$23K allows Grand Valley Project passage operation for 50 days (10 consecutive days per month anticipated in order to make it work with shifting personnel between projects) in FY 06. Brent said the only remaining question is how will passage operation affect irrigation and hydropower water and we should be able to answer that this summer when we do another test run in August or September.
- C-5 Brent said he's been working with the recreationists to find funds for the whitewater park portion of the Price-Stubb fish passage; they must have their funds deposited with NFWF absolutely no later than March 1, 2006 (but

Reclamation would like to award the contract earlier, resulting in some cost savings).

C-6

HYD >The Program Director's office will look into why we have this in capital funds.

EAS Kevin Christopherson asked if these easement management costs would go on in perpetuity, especially in light of the fact that we're not using terraces as much and weed control seems minimal. Is what's being done in this SOW what we most need done for recovery? Pat Nelson said these funds are for management of the 16 easement properties on the Green, Colorado and Gunnison rivers. Kevin suggested we may want to review each of these sites. Tom Pitts commented that in light of the equipment costs, the total for this scope of work should be reduced in future years. Tom added that the gas costs seem unreasonable. >The Program Director's office will talk with Dan Alonso to clarify this scope of work.

ENT Added funds from RECR here; put RECR on FY 07 priority list (or do in FY 08).

New Yampa River pikeminnow entrainment - John Hawkins noted there will be private property access issues with this work. Also, the ditch is operated through November, because landowners water livestock with it. And pools apparently don't remain after the canal is shut off. Kevin Christopherson said this might be an application for antenna-read PIT tags. The group agreed the RFP will need to be written a little more broadly (and an RFI [request for information] may be appropriate first).

98a Pat Nelson said he reviewed the budget and the primary increase over FY 05 is ~35% indirect costs on labor. Also includes some replacement equipment. Sherm Hebein said the Federal auditor told CDOW that if they didn't start charging overhead on ALL their Federally-funded projects (including ones funded with Federal funds other than Federal Aid funds) they would lose all their Federal Aid funds. >Angela Kantola will ask the Service's Federal Aid shop about this, as Federal Aid (Pittman-Robertson, Dingell-Johnson, Wallop-Breaux, or ESA Section 6 funds) funding has nothing to do with this project, which is funded with power revenues handled by the U.S. Bureau of Reclamation and by State license funds.

ADJOURN: 4:45 p.m.

Wednesday, July 13

CONVENE: 8:00 a.m.

Review of draft FY06-07 work plan, continued.

98a Continued: Do waders, jackets, dip nets, Floy tags, etc. need to be purchased in both years? Delete FY 05 portions. >Pat Nelson will review budget with Lori Martin. The Committee left original budget from Program Guidance in the budget table.

- 98b Is the need to purchase two boat motors every year valid (plus \$3K maintenance)? (SOW's for both #123 and #124 also request 2 motors/year, for a total of 6 new motors for Vernal CRFP each year.) Do GPS units need to be purchased each year? Why are \$3K GPS unit required? >Pat Nelson will review the budget with Sam Finney to make sure these costs are justified and not just a copy/paste error. Chuck McAda noted that stations do need to have backups in case of breakdowns so that work is not delayed. Kevin Christopherson added that the itemization requirements force principal investigators to attempt to predict every item that may break down (and many things do break in this kind of work).
- 98c The Committee agreed this work should be discontinued after 2005 (although it might need to be repeated at some point in the future).
- 109 Kevin Christopherson said this work remains at maintenance level northern pike control. Although we've discussed whether this needs to be done each year, fish are removed prior to spawning, so it's a preventative effort, and several razorback recaptures also are picked up in the course of this work.
- 110 Melissa Trammell said she thought the Committee had asked the principal investigators not to do the catfish population estimate, and noted that portion of the work is still in the SOW. Several Committee members thought that was the agreement; >Pat Nelson will check the meeting summary and discuss this with Mark Fuller.
- 123 Are 2 boat motors/year justified (FWS portion)? >Pat will check with Mark Fuller (note #98b and #124 also request 2 motors/year).
- 124 Mike Montagne said they've done two passes and haven't caught too many fish in the Duchesne (water has been fairly high); the third and last pass is coming up and flows are lower now. Mike said he thinks the several years of low water and the many beaver dams have kept the fish populations fairly low. Tom Chart said some whole fish community sub-sampling is being done as part of this work to help evaluate the flow recommendations. Kevin Christopherson commented that UDWR is doing some native fish work in the Duchesne River outside the Recovery Program. >Pat Nelson will check with Mark Fuller about the two boat motors/year (also requested in #98b and #123).
- 125 John Hawkins said the electric seine in the FY 07 budget should be deleted (\$1.5K). >The Program Director's office will post the revised SOW to the website.
- 126 This SOW has been revised to continue removal in FY 07. >The Program Director's office will post the revised SOW to the website.
- 144 >Kevin Christopherson will revise the SOW to clarify in objective #3, sampling

of “a minimum of 3 low velocity habitats.” Kevin described this as a minimum level effort, and we’ll see if it’s adequate to provide the needed information.

Tom Czapla noted that some of the items in the propagation section of the work plan have never required scopes of work (hatchery contingency, PIT tags, pond leases). Tom added that the Ouray NFH SOW is higher than expected in Program guidance, but the Service (Fisheries) has committed to pay the full cost of Ouray O&M, anyway. >Angela Kantola will change the amount in the budget spreadsheet when Fisheries tells her the final amount in early FY 06 (this does not affect Program budget bottom line.) Tom Czapla said the use of growout ponds in the Uintah Basin is winding down, but ponds are still in use in the Grand Valley.

PONDS Tom Czapla said he doesn’t believe there’s a need to use Leota L10 on Ouray NWR for growout at this time. Chuck said DeBeque and Peters ponds are near Reclamation selenium-mitigation areas, but annual maintenance is required, so Reclamation does need \$5K for this in FY 06 and FY 07 (the Committee added that to the budget spreadsheet). Chuck said they’ve had difficulty getting water for the DeBeque ponds, but will keep trying.

Tags The Committee reduced amount for PIT tags to \$100K, since \$100K will carry over from FY 05 (>Dave Speas will check with Reclamation’s power office to make sure this will happen). Tom Czapla said that while Ouray NFH hatchery staff were focused on raising larval fish for the floodplain study, cormorants hit their growout ponds (there was also a disagreement about cormorant control methods, but they’re working on resolving this). Ouray NFH has retrieved 3,000 razorbacks from the Ouray ponds and may get another 3,000 from leased ponds, but this is significantly lower than the 15,000 fish they were scheduled to raise for stocking this year. This means PIT tag needs will be lower, also. Mike Montagne said cormorant populations seem to be exploding, but he’s working on a solution (probably nets) that will eliminate their predation on the fish ponds.

29c Tom Pitts asked for info on ~\$8K/year travel & training and ~\$18K/year vehicle. >Matthew Andersen will provide additional detail and revise the SOW and provide it to Tom Czapla to be posted on the website..

29d Tom Pitts said the lease of 3 0.3-acre ponds from Trinidad State Junior College pond lease cost seems high and asked for clarification. >Tom Czapla will work with CDOW to get clarification and get the required budget detail in this scope of work and post a revision to the website.

Tom Czapla introduced the monitoring and research section. Tom’s understanding was that humpback chub sampling would be 3 years on for the very first estimate, then 2 off/2 on/2 off/2 on/2 off, but others understood it would be a continuous 3 years on 2 off/ 3on / 2 off... >The Committee will resolve this as part of their review of the population estimate workshop summary. (Note: >Tom Czapla will provide an easily-visualized

sampling schedule as a tool to help the Committee reach that decision.)

- 15 Kevin Bestgen explained that larval fish identification in this scope of work includes part of the drift net samples. Dave Speas said Mike Berry or Nancy Coulam at Reclamation who has more experience with curation may become the new Reclamation contact for this scope of work.
- 16 Tom Pitts asked about data submission, and Chuck said PIT tag data is up to date, but other data submission is somewhat behind, so he needs to send out some reminders. Chuck said he'd like to review the database setup with a small group to see if we want to handle the data differently. >Tom Czapla will correct the budget summary typos.
- 22f Change title so it's not confusing with ISMP. "Annual assessment of ..." >Tom Czapla will revise SOW to correct the title.
- 121 Melissa Trammell and others questioned whether we should discontinue this Gunnison River larval RBS sampling. Chuck said he thinks it's appropriate to wrap this work up and consider the other work submitted under the new scopes of work. We've answered the question "do razorback spawn in the Gunnison River?" and Chuck said he thinks it would make more sense to pursue the questions in the new scopes of work (where are fish spawning, etc.) See discussion under New2 and New3, below.
- 128 Kevin Christopherson commented that this pikeminnow population estimate work and the smallmouth bass removal work are scheduled in the same reaches in the same year. (Six passes for 3 years, 3 passes for 3 years, 6 passes for 3 years, etc.) It's also a considerable amount of money for both of these studies. (And >Tom Czapla needs to check with Dave Irving on their ability to do the smallmouth bass work, pikeminnow population estimate, and Duchesne sampling all in one year.) Pikeminnow are sampled in the spring, smallmouth bass in summer and fall, which will result in shocking those reaches six times a year. We have to do the population estimates, so the question becomes "can we change the smallmouth work at all?" Even if we believe the potential for harm to the fish is very low, Tom Czapla cautioned that this sampling intensity could result in capture avoidance behavior and affects our population estimates. Bob Muth suggested that one approach might be to focus on smaller smallmouth bass, and recommended that >the Committee considers this option during the nonnative fish workshop. >Tom Czapla will make sure this gets on the agenda for discussion during the nonnative fish workshop. At this point, we'll tentatively go ahead with both studies.

The group discussed the concern about work (both field *and* office work) conducted in the early part of each fiscal year, and how that will be covered if carrying over funds from the previous fiscal years is restricted by Reclamation (especially between FY 06 and 07, but potentially in future years, also). >Angela Kantola and Dave Speas will

discuss this with Reclamation's finance folks and the Service and state, etc. finance folks to figure how this will work.

129 If funds for fall sampling need to be provided in the foregoing fiscal year (see discussion in previous paragraph), then the \$60K budget will need to be increased (see scope of work). The Committee discussed the confusion over the humpback chub sampling schedule (Rich Valdez said he understood the consensus to be that 3 years on was better than 2 *if* folks are comfortable with potential impacts of handling the fish 3 years in a row). Tom Czapla suggested that since there's no budget implication until FY 08, we should raise this in the review of the population estimate workshop summary. John Hawkins suggested that carrying an oxygen tank and salt on board would help reduce fish stress (Chuck does this at Black Rocks).

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138 >Patrick Goddard will look into the cost increase over what was projected for FY 06 and 07 and get back to Tom Czapla on this.

145 Completion of phase I is \$18.8K, but we won't make a decision about how to continue with Phase II until early FY 06 (though Tom Pitts said he thinks we're committed to moving ahead with this in some fashion). Only ~\$30K is needed in FY 07, however. Increase to \$65.8 (Phase II is the placeholder portion).

New1 Cyprinid key - Chuck said he thinks the odds of the San Juan cost-sharing this are fairly low. Initially, the budget was expected to be \$33K, but it came in much higher (\$93K) to accomplish the task in a shorter time-frame. We'd hoped to cost share the work with the San Juan Program and Reclamation. Tom Czapla said although we don't have cost share in place at this point, we might be able to see if the seven basin states (for their conservation strategies) and Reclamation ("activities to avoid jeopardy" funds) would be willing to cost share. Meanwhile, we'll leave in the placeholders. >Reclamation, the Program Director's office, and others will "beat the bushes" to try to find cost share for this important work.

New2 Evaluation of stocked fish in the Gunnison River - Chuck McAda said this could be combined with the work to identify razorback sucker spawning sites. >Chuck will combine the scopes of work and get them to Tom Czapla to post on the website and notify the Biology Committee. Chuck will break this revised scope of work into 3 components as best as possible, to also include larval sampling component, should we decide we want to continue that work, or pick it up again

in the future. The Committee put this project on the “to be prioritized” list with the two scopes combined, minus \$32K (per the note in the other scope). Bob Muth emphasized that the scope needs to indicate how the information gathered will be used in management. Bob also noted that this might be a project which would have to be competed. Rich noted that floodplains were quite different between the Colorado and Green rivers and the Colorado basin floodplain management plan noted a need to determine where fish are spawning (so efforts can be focused more on key floodplains).

New3 Identify razorback sucker spawning sites in the Gunnison River - Melissa said she won't push for larval sampling this year, but isn't convinced that the information might not be useful for Aspinall operation sometime in the future.

The Committee reviewed the projects on the “additional work” list on the budget spreadsheet and prioritized them.

11. Report review/approval – “Survival and growth of stocked razorback sucker and bonytail in multiple floodplain wetlands of the middle Green River under reset conditions.”, Modde and Haines, Project C-6-bt/rz. (Provided to BC via e-mail on 5/31/05) - Kevin Christopherson said his biggest concern with the report is that a number of conclusions have been drawn despite the fact that there was almost no statistical significance in the data. It's certainly good news that razorbacks survived in the presence of nonnative fishes, though. Kevin asked if objective #2 accomplished (only two of the parameters outlined are reported in the data summary). Kevin said the report was hard to follow (sometimes difficult to determine which species and which year is referenced). It's unclear which sites got what density of sampling (e.g., nets set over 3-8 days). The calculation in the middle of page 8 was very confusing (Melissa agreed) and needs more explanation (appears to be considerable massaging of the data without explanation). Kevin noted similar concerns on page 9. Also, with less than 1% survival at all sites, it seems a stretch to suggest one site is better than another. Leota actually had the lowest growth rates in 2003 (the text indicates it had the fastest growth rates). There is no figure 9a (yet it's referenced in the text). There is no table relating bonytail and submergent vegetation. Kevin raised several other concerns with both the text and tables (which are very difficult to decipher), and >will submit a mark-up or written comments to Tim. Rich Valdez suggested some of the confusion in the tables may be caused by treating submergent vegetation and nonnative fish as independent variables instead of covariates. Kevin Christopherson said he was somewhat surprised that the report came through the peer review process with these problems. Melissa Trammell suggested and the Committee agreed that >the Committee apologize to Tim for not providing individual comments on this report before now, >send Tim individual written comments by July 29 (with copies to the rest of the Committee) and ask Tim if he could have the report back to the Committee by September 6 so the Committee can reconsider this report for review at the September 19-20 meeting. Kevin and Melissa suggested the recommendations are reasonable ones, although they aren't necessarily supported by the data.
12. Report review/approval – “Population Estimate for Humpback Chub (*Gila cypha*) in

Desolation and Gray Canyons, Green River, Utah 2001-2003”, Jackson and Hudson, Project 22k (Provided to BC via e-mail on 4/18/05). Patrick Goddard asked if the Committee concurred with Julie’s recommendations for changes in sampling (locations, timing, gear type, etc.) to capture more fish. Patrick suggested that they also need to know if the Committee wants them to put more work into this sampling (which would increase costs, obviously), in order to get better data. Rich Valdez said he thinks both the Westwater and Deso/Gray humpback estimates are moving in the right direction, so he suggests staying on course, make the sampling changes they’ve recommended, but not try to expand sampling at this point. Rich noted that we may not be able to get much greater precision in humpback estimates. Gary Burton asked if taking the entire suite of morphometric data might increase handling the fish and increase stress. Julie suggested taking a picture of fish on a grid might be the best way to address this without increasing fish stress. Patrick said he thinks this report substantiates the advantage of sampling for 3 years instead of only 2. Gary asked about the weather factors which may have increased sampling efficiency and Julie said it may have been turbidity that made the nets more difficult to see, increased food availability, or other reasons. John Hawkins asked if others had an opinion on the value of including all the different estimators in Table 1 in the appendix. Tom Czapla said he thinks it’s important to keep that in the report (with inclusion of justification for which estimator model was chosen), but Kevin Bestgen disagreed. John said that if all estimators are included in the table, then there needs to be explanation of why certain estimators were *not* used. Tom Chart, Melissa Trammell, Kevin Christopherson, and Dave Speas agreed that the models not used shouldn’t be presented. The Committee accepted the report with minor revisions. >Julie will revise and finalize the report.

13. Report review/approval – “Population status of Colorado pikeminnow in the Green River Basin, Utah and Colorado”, Bestgen et al., Projects 22i and 22j (provided to BC via e-mail on 6/14/05) Rich Valdez noted that a prior version gave survival rates for each of 3 or 4 years, but the final version has only the combined survival rate; Kevin Bestgen said they discovered a data error (fish attributed to the wrong reach) which contributed to that, and in their re-analysis, they decided not to use the model with year-by-year survival rates, and it was more legitimate to present the average annual survival rate. None of the conclusions really changed. >The Committee accepted the report as revised, with the proviso that the >Tom Czapla will contact Tom Nesler as soon as Nesler is available to make sure he didn’t have any concerns about the report (if so, Tom Nesler needs to post detailed comments on those to the Biology Committee by July 29).
14. Next meeting: date, agenda items, times and location - In Grand Junction at the Holiday Inn (same room, if possible) September 19-20, starting at 10:30 a.m. on the 19th and running until ~4 p.m. on September 20th. Agenda items will include: Miller-Musseter report; report on pikeminnow movement in and out of Lodore Canyon; whether Gunnison River temperature increase is needed for recovery; research framework (Green River pikeminnow population example); PIT tag technology; population estimate workshop summary review (and discussion of the humpback chub population estimates sampling schedule); possibly Tim Modde’s floodplain report.

ADJOURN: 3:30 p.m.

ASSIGNMENTS

1. Tom Nesler still needs to provide the Committee a criteria assessment for when northern pike and bass removal should be expanded upstream (includes pike, bass, and pikeminnow density estimates).
2. Tom Nesler still needs to have CDOW present the revised Elkhead management plan to the Biology Committee.
3. Tom Czapla still needs to work with Tom Nesler and Chuck McAda and draft written procedures for who reports what stocking data to whom and when.
4. A revised SOW is needed from UDWR on razorback recruitment to cover the follow-up work on razorback entrainment.
5. Kevin Christopherson will call Mike Hudson re: due date for Price River report. *Done.*
6. Tom Czapla will ascertain due dates for all the population estimate reports.
7. Bob Muth will write John Pitlick and ask him to complete his channel monitoring report.
8. The Biology Committee requests that Tom Nesler get the Yampa aquatic management plan and Elkhead Lake management plan completed by the end of this year.
9. The Program Director's office will check to see if they received an electronic copy of the Yampa pike exclusion report.
10. Pat will ask the principal investigators to submit tag numbers and population estimates on Yampa nonnative fish work by 8/15/05.
11. Biology Committee members may comment on the April 22 version of "Genetics Management Plan for Humpback Chub" by August 15, 2005.
12. Amy Cutler will revise and finalize the Aspinall Unit Phase II temperature report.
13. Tom Czapla will provide a more full evaluation of stocked fish report by the end of August.
14. Chuck McAda will provide a revised summary of stocked fish from Doug's population estimate work by the end of August.
15. CDOW needs to re-evaluate stocking pikeminnow in currently unoccupied or unavailable habitats, since their with their stocking plans stating that if pikeminnow are not retained in those areas, stocking would be re-evaluated (many of the stocked fish are being found significantly downstream of those areas).

16. Tom Czapla will set up a conference call for the ad-hoc group (Chuck McAda, people collecting the data [e.g. Ron Brunson, Mike Montagne and a field person from the Vernal CRFP, Quent Bradwisch, John Hawkins, et. al.], Melissa Trammell, Dave Speas, and Tom Czapla) to discuss stocked fish data next week.
17. Rich Valdez and Kevin Bestgen will do a test run of the research framework for the Green River pikeminnow and provide it for the next Biology Committee meeting.
18. An ad-hoc group (Dave Speas, Dale Ryden, Mark McKinstry, Chuck McAda, Quent Bradwisch, David Campbell, and Kevin Christopherson) will discuss PIT tag needs, consider the basics of the number and types of tags and readers needed, and the role of PIT tags in the Program and how we want to use them and bring their recommendations back to the Biology Committee for consideration at their next meeting.
19. FY 06-07 Draft Work Plan assignments
 - 19 Angela and George will review the budget (question about whether no overhead on Wyoming funds reduces the budget need).
 - 70 Tom Pitts will discuss with the Management Committee the “ultimatum” statement in the scope of work that says Colorado won’t move forward on instream flow filings unless the Program approves Rick Anderson’s methodology with the Management Committee.

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HYD The Program Director’s office will look into why we have this in capital funds.

EAS The Program Director’s office will talk with Dan Alonso to clarify this scope of work.

98a Angela Kantola will ask the Service’s Federal Aid shop about the ~35% indirect costs on labor (included because a Federal auditor told CDOW that if they didn’t start charging overhead on ALL their Federally-funded projects (including ones funded with Federal funds other than Federal Aid funds) they would lose all their Federal Aid funds.

Pat Nelson will review the budget with Lori Martin.

98b Pat Nelson will review the budget with Sam Finney to make sure these costs are justified and not just a copy/paste error.

110 Pat Nelson will check the meeting summary where this SOW was discussed and and discuss the inclusion of the catfish population estimate this with Mark Fuller.

123 Pat Nelson will review the budget with with Mark Fuller.

124 Pat Nelson will check with Mark Fuller about the two boat motors/year (also requested in #98b and #123).

- 125 The Program Director's office will post the revised SOW to the website.
- 126 The Program Director's office will post the revised SOW to the website.
- 144 Kevin Christopherson will revise the SOW to clarify in objective #3, sampling of "a minimum of 3 low velocity habitats."
- 29b Angela Kantola will change the amount in the budget spreadsheet when Fisheries tells her the final amount for Ouray NFH in early FY 06 (this does not affect Program budget bottom line.)
- Tags Dave Speas will check with Reclamation's power office to make sure \$100K, will carry over from FY 05.
- 29c Matthew Andersen will provide additional detail on the on ~\$8K/year travel & training and ~\$18K/year vehicle . and revise the SOW and provide it to Tom Czapl to be posted on the website..
- 29d Tom Czapl will work with CDOW to get clarification the cost to lease 3 0.3-acre ponds from Trinidad State Junior College and get the required budget detail in this scope of work and post a revision to the website.
- 16 Tom Czapl will correct the budget summary typos.
- 22f Tom Czapl will change the title so it's not confusing with ISMP. "Annual assessment of ..."
- 121 Tom Czapl will check with Dave Irving on their ability to do the smallmouth bass work, pikeminnow population estimate, and Duchesne sampling all in one year.
- 138 Patrick Goddard will look into the cost increase over what was projected for FY 06 and 07 and get back to Tom Czapl on this.
- New1 Cyprinid key - Reclamation, the Program Director's office, and others will "beat the bushes" to try to find cost share for this important work.
- New2 Evaluation of stocked fish in the Gunnison River - Chuck McAda will combine the scopes of work and get them to Tom Czapl to post on the website and notify the Biology Committee. Chuck will break this revised scope of work into 3 components as best as possible, to also include larval sampling component, should we decide we want to continue that work, or pick it up again in the future.

The Biology Committee will resolve the question of humpback chub population estimates sampling schedule as part of their review of the population estimate workshop summary.

(Note: >Tom Czapla will provide an easily-visualized sampling schedule as a tool to help the Committee reach that decision.)

Angela Kantola and Dave Speas will discuss with Reclamation's finance folks and Service and State, etc. finance folks how to address the concern about both field *and* office work conducted in the early part of each fiscal year (how that will be covered if carrying over funds from the previous fiscal years is restricted by Reclamation [especially between FY 06 and 07, but potentially if future years, also]).

Tom Czapla will make sure the nonnative fish workshop agenda contains discussion of focusing on smaller smallmouth bass (which would reduce sampling intensity on pikeminnow)

20. Kevin Christopherson will submit a mark-up or written comments on Tim Modde's report. The Committee apologizes to Tim for not providing individual comments on this report before this meeting. Committee members will send Tim individual written comments by July 29 (with copies to the rest of the Committee) and ask Tim if he could have the report back to the Committee by September 6 so the Committee can reconsider this report for review at the September 19-20 meeting.
21. Julie Jackson will revise and finalize the "Population Estimate for Humpback Chub (*Gilacypha*) in Desolation and Gray Canyons, Green River, Utah 2001-2003" report.
22. The Committee accepted the "Population status of Colorado pikeminnow in the Green River Basin, Utah and Colorado" report as revised (Kevin Bestgen will finalize the report), with the proviso that the Tom Czapla will contact Tom Nesler as soon as Nesler is available to make sure he didn't have any concerns about the report (if so, Tom Nesler needs to post detailed comments on those to the Biology Committee by July 29).