

## BIOLOGY COMMITTEE MEETING

December 4-5, 2001  
Fort Collins, Colorado

Biology Committee: Paul Dey, Tim Modde, John Hawkins, Mike Hudson, Tom Nesler, Tom Pitts, John Wullschlaeger, Tom Chart, Mark Wieringa, and Bill Davis.

Other participants: Bob Muth, Pat Nelson, Gerry Roehm, Angela Kantola, Tom Czapla, Chris Kitcheyan, George Smith, Doug Osmundson, Frank Pfeifer, Chuck McAda, Ron Brunson, Kevin Bestgen, Jay Bundy, Dale Ryden, Steve Petersburg, and John Carron (via phone).

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

### **Tuesday, December 4**

1. Revisions and additions to the agenda - The agenda was revised at it appears below.
2. Approval of September 26-27 meeting summary - The summary was approved as written.
3. Approval of October 23 conference call summary - The third sentence under the Elkhead scope of work item should read: "translocating smallmouth bass *and channel catfish* from the Yampa River." The summary was approved as modified.
4. Review Action Items from 9/29-9/27/01 BC meeting.

### **Review and Approval of Draft Reports:**

5. Hawkins, J., T. Modde, and J. Bundy. Draft October 2001. Ichthyofauna of the Little Snake River, Colorado, 1995 with notes on movements of humpback chub. Project 56-B. Bill Davis asked if the fish community in the Little Snake seems depressed, and if so, would we want to maintain current conditions? John said that while the Yampa does reach very low base flows, he wouldn't describe the fish community as depressed. Bill asked if site selection may have affected sample size and John replied that he believes the sampling sites were representative. Second conclusion (and related location) - replace "migrated" with "moved." Tom Pitts has asked for two weeks to provide written comments on this and the next report. Bob Muth recommended that this report and the next one be consistent and current with the Yampa Management Plan. Tom Nesler said that page 30 notes that many researchers believe recruitment failure as major reason for humpback chub decline – references should be cited here. Conclusion #2 should end with first part of the sentence. The report was approved as final with the foregoing modifications (Tom Pitts' may also submit comments). John Hawkins will provide the final report within 30 days.
6. Hawkins, J.A. and J. O'Brien. Revised October 2001. Management Action Plan for Endangered Fish Recovery in the Little Snake River, Colorado and Wyoming. Project 56-A. This report was previously approved with minor revisions on April 1, 1997, but was never finalized. The Committee discussed whether the report should be further updated to reflect current activities (e.g., Yampa Basin Management Plan). >John and Gerry will review the report and make modifications to reflect current conditions and the

Yampa Management Plan. Tom Nesler noted an apparent inconsistency with regard to recommended research on sediment. The end of page 10 recommends further investigation of river geology – if this is true, be more specific as to what information is needed for management of the Little Snake. Generally, the Committee agreed that the research recommendations need to be more narrowly focused. For example, revise the recommendation regarding historical land use on page 13. Tim Modde asked what contribution the very fine sediments from the Little Snake play in channel maintenance. Revise the cfs number at the of page 30 (should be 4,600 cfs). The Committee discussed year-round residency at length (bottom of page 66). The Committee suggested adding a preamble or forward to the report to set it in proper context, to outline the role it plays at this point in time, and to explain that it was a precursor to the tributary report and the Yampa Management Plan. Tom Pitts is concerned about how this report relates to the Yampa Management Plan and suggested changing the title. Also, it's not really a plan for recovery *in* the Little Snake River. The Committee suggested the report be renamed "Research Plan for Developing Flow Recommendations for Endangered Fish in the Little Snake River, Colorado and Wyoming." On page 73, add an introduction/transition related to the role of the listed questions. Tom Pitts said he believes the report should retain a 1997 context. John will likely delete recommendation #4. Bill Davis questioned whether recommendation #2 belongs in the context of the Little Snake River, and the Committee agreed it did. >John will post the preface/forward section and the final recommendations to the listserver by December 20. >The Committee will respond by January 15 and if comfortable with the revisions, then the report is approved as modified above.

### **Wednesday, December 5<sup>th</sup>**

7. Gunnison Temperature SOW. Project 107. Tom Nesler noted that the modeling will rely on Aspinall operational scenario from 1997-2000 and questioned why it wouldn't instead use the Aspinall flow recommendations. Tom Pitts asked if the model would be valid if the recommendations were outside the calibration range. John Carron said he didn't think that would be an issue. Mark Wieringa distributed a summary of information from Shane Collins regarding cost-benefit of enhancing temperatures in the Gunnison via a temperature control device. In response to Shane's summary, Doug Osmundson clarified that the goal to benefit the endangered fish is not to get the water to 25°C, but rather to increase the annual thermal units to 40 or more. John said he's proposed a statistical regression model with a time component that will estimate daily average temperatures and generate monthly ATU's. Doug said that would be adequate (more detailed diurnal modeling wouldn't be needed). Mark asked why we should do this analysis if we don't think the Program would want to spend \$15-\$80M on a temperature control device (TCD). Frank said he would tend to agree if the model will necessarily determine that a TCD is the only way to raise the temperature. John Carron said that Phase I did indicate that flow modifications would not be adequate to raise temperatures, but it's not clear which reservoir should have a TCD (probably Blue Mesa, but not necessarily), nor whether a fairly simple or more complex TCD would be needed. Tom Pitts suggested estimating costs for both simple and more complex TCD's at Blue Mesa and Crystal and then Program can decide whether to go ahead with the modeling based on that range of costs. Changes based on the flow recommendations will have some impact on both stream and reservoir temperatures, but not to the degree necessary. Tim said the Service supports this work to meet recovery goal requirements, noting that we're proposing to spend considerable funds on Elkhead while the potential impact to pikeminnow

populations may be less than in the Colorado. Tom Pitts said he doesn't think Reclamation can avoid the issue of temperature impacts in their Aspinall reoperation EIS, and they're going to need a model to do that. The majority of the Committee voted to proceed with Phase II, with Mark Wieringa opposing (>Mark may file a minority report). Clarify that the progress reports identified in the deliverables go to the Biology Committee. Deliverables also should identify peer review of the draft report, and some of those reviewers should have expertise in reservoir temperature modeling. Budget needs to identify staff level and time. The budget also should be split among fiscal years (roughly, tasks 1-3 would occur in FY 2002 and 4-5 in FY 2003). Tom Pitts asked about expanding the hydrology beyond 1997-2000, but this could increase costs. Tom Chart asked that if the number of scenarios is finite, that Amy and John get the Biology Committee's input on what those scenarios will be. >John Carron will revise the scope of work within the next week; Gerry Roehm will work with John and get the scope posted to the Biology and Management committees. Then it will be on the Management Committee agenda on January 23. Tom Nesler questioned if we're making 40 ATU's a benchmark and recommended that we revisit Doug's report and the Committee discuss the appropriateness of this threshold at a future meeting. Paul Dey suggested considering this in the context of the bioenergetics work that John Hayse is doing.

8. Starvation Reservoir Escapement Revised SOW - Draft report to coordinator in April 2003. Show any FY 2004 work under FY 2004 (assume cost is \$0, or move part of \$64K to 2004); Reflect new simultaneous peer and Biology Committee review. Scope should indicate that the report will put data into context of what we know about the Duchesne River and it's resident smallmouth bass population. John Hawkins asked what our threshold is for action (how many nonnative fish have to be escaping for us to decide that we need to prevent escapement)? The Committee recommended approval of the scope of work. >Ron will revise the scope and it will be considered at the January 23 Management Committee meeting.
9. Summary and discussion of floodplain habitat restoration workshop results held November 27, 2001. Pat Nelson distributed copies of the workshop summary (also posted to the listserv on December 3). Tim recommended that this summary eventually evolve into a floodplain management strategy. Tom Pitts said he'd still like to define how much habitat we need (Valdez and Ryel are working on an initial estimate).

### **Review and Approval of Draft Reports:**

10. Birchell et al. October 2001 Draft. The Levee Removal Project: Assessment of Floodplain Habitat Restoration in the Middle Green River. Project CAP-6-LR. Pat Nelson distributed a summary of highlights of the report. Each chapter needs bulleted conclusions and recommendations. Much of chapter 8 tables could be put into an appendix. Figures with yellow backgrounds are difficult to read. The g-factors beginning on page 8.17 need to go into one table. Chapter 10 needs a section explicitly reiterating the goals and objectives and how they were met. In fact, each chapter should refer back to the study goals and objectives. Some conclusions belong in the discussion section. Units of measure need to be made consistent (metric or both).

Chapter 1: Figure 1.2 is a synthesis item that ought to be incorporated in Chapter 10. The figure cites using ISMP data to estimate nonnative abundance – has this worked? The second sentence of last paragraph on page 1.11 needs fixing. Energy input at the top

of page 1.5 should mention light. Has there been any work done on allochthonous input from upstream? The goal cited on page 1.8-9 should be to test hypotheses to distinguish between the study goals and the levee removal program goals (true throughout the document). Qualify table on page 1.19 (high density/low density nonnatives were not found).

Chapter 2: On page 2.5, the description of the goal of levee removal cites frequency of flooding, but not timing, duration and magnitude.

Chapter 3: Second paragraph in conclusions appears to be discussion.

Chapter 4: Conclusions on page 4.19 uses undefined acronyms. Were any measures of allochthonous sources of phytoplankton (not periphyton) productivity made? Productivity at the site (as opposed to by volume) is not really a valid measure. Tom Pitts asked what “suggest” means in the last paragraph of page 4.21. The conclusions should tie directly to the study objectives.

Chapter 5: The increase in zooplankton reported as a statistical difference on page 5.12 should be discussed from an aquatic ecosystem perspective.

Chapter 6: The data didn’t really demonstrate increased riverine productivity (page 6.13 and also page 5.18).

Chapter 8: On page 8.23 Colorado squawfish should be pikeminnow. Make scientific names consistent. Clarify “duration” (of what) in the first sentence of last paragraph on page 8.14. Tom Nesler previously asked why trammell nets were set for only 2 hours on a single morning; however, the discussion of trammell nets has now been deleted. Clarify how different gear was used and why. Stomach sample discussion - how was fullness determined? What is the importance of this discussion to the interpretation of the study results and conclusions? If the data are not presented, then perhaps this discussion should be deleted. There’s a disconnect on pages 8.24-25 (the report assumes that accessible floodplain habitat is limited, yet it also says the 200ha opened in this study had limited riverwide impact because it was only a small amount of the available floodplain habitat). Clarify that that terraces are abundant, but what is needed most is floodplain depressions. Also need to stress the importance of increasing frequency of inundation at lower flows. Clarify the meaning of the last sentence on page 8.26. There are typographical errors in the title of Table 8.1. Use the term “electrofishing” not “electroschocking.” Figures 8.3-8.8 look at difference between fish caught in main channel versus floodplains; recommend combining electrofishing and seining information into one graph (two series on one graph). Methods discuss measuring abundance - is this true, or were they in fact measuring captures? (Change to “relative abundance” and check to see where else this occurs.)

Chapter 9: Fix date/duration confusion in the third sentence of the first full paragraph on page 9.11 (and look for this elsewhere in the document). First full paragraph on page 9.16 references a “very intensive sampling effort” but this is never defined (similar problem on page 9.18). This chapter or the previous one needs to identify the net benefit of levee removal to endangered fish. The sentence at the top of page 9.37 that refers to “all detected increases of nonnative fish in the river” should say “unrelated to breaching

of the levees.” First references to new species should cite the scientific names. Clarify conclusions on pages 9.34 and 9.35 – the current inference that nonnatives from/in the floodplain may not be as detrimental as nonnative riverine top predators is not supported by the data.

Chapter 10: Page 10.6 Delete first sentence (can’t claim that a “potential” is a serious problem). Primary productivity (bottom of page 10.7) is important to all fish, not just razorback sucker. The data don’t support the second sentence of the last paragraph on page 10.10. Clarify what seems to be a discrepancy between second sentence of second paragraph on page 10.11 and the last sentence of the first paragraph on 10-12. Wherever the results do not clearly show that nonnatives are a problem, then don’t infer otherwise. Delete “prefer” from the last paragraph of page 10.13. On page 10.21-22, there’s an unsupported inference that somehow fish in a more natural setting may achieve sexual maturity sooner than they would in a hatchery growout pond because of more rapid growth. Drop the comparison to hatcheries unless there’s data to support it. General comment - our floodplain habitat restoration goal was to open large areas for natural floodplain function, yet we seem to instead be emphasizing highly-managed sites. Make sure this synthesis chapter tells the story that the introductory chapters said it would and that it relates back to the study goals, objectives, and hypotheses. The introductory chapters may need to more clearly describe changes made to the study design as the work progressed. Chapter 10 should reference back to conclusions in the foregoing chapters (see the Flaming Gorge report for an example). Recommendations should be clearly connected to the data collected in this study. Chapter 10 doesn’t really synthesize the report. The basic elements listed on page 10.3 not related to study goals and objectives. The recommendations are very limited (based only on belief that depression management contributes the most to razorback recovery). The report needs a solid synthesis chapter with clear conclusions and recommendations. >Pat Nelson will post a recommended schedule for revising the report to the listserver.

11. Bundy, J. and K. Bestgen. August 2001 Draft. Evaluation of the Interagency Standardized Monitoring Program Sampling Technique in Backwaters of the Colorado River in the Grand Valley, Colorado. Project CAP 18/19. Check verb tenses on page 2 (some perhaps should be past tense). Page 34, fourth conclusion is perhaps a recommendation. First conclusion should define what adequate accuracy implies (adequate for what). The Committee approved the report with the foregoing modifications. >Kevin will finalize the report by December 15. >Pat will build the recommendations into the nonnative fish control workshop.
12. Modde, T. and M. Fuller. May 2001 Draft. Feasibility of Channel Catfish Reduction in the Lower Yampa River. Project No. 88. Instead of referring to “brood” fish, call large catfish “adult” catfish. Correct spelling of “feasibility.” Tom Nesler said Table 6 didn’t address his comment on length/frequency distribution. Instead, show that distribution over time so we can see if it is changing. Conclusions need to be bulleted. Table 3 outlines trips for 1998; add one for 1999. Were data on any other environmental variables collected or are they available to describe the conditions? Tim will add temperature data. The report refers to population estimate data collected by Rick Anderson at Deerlodge; is comparable CPUE data also available? Note that this sort of removal also should be done in the middle Green River (not just limited to tributaries). Check spelling on Table 1. (A final editorial review is in order.) Recommendations

should address the most effective removal method. In light of the longitudinal gradation of fish size found (high density of bigger fish further upstream), Tom Chart suggested that perhaps recommendation #2 should recommend moving upstream. Tim said he thinks it's more important to focus on the area of greatest impact (Yampa Canyon). The Committee approved the report with the foregoing modifications. >Tim will post the bulleted conclusions and revised recommendations to the listserver by December 20.

13. Annual Operation Plan. Tom Czaplá said the hatchery managers met last month to discuss how to meet the revised stocking plans. Razorback sucker: Grand Junction will cross 12-20 lots to produce ~50,000 larvae and result in 16,440 fish required in Colorado's plan. Ouray will cross six F1's to produce 60,000 larvae and 3,700 fish per lot called for in Utah's plan. The four current lots will meet ~80% of the fish called for in Utah's plan. Bonytail: Likely will try to spawn fish at Wahweap this year. These fish would be stocked in the fall 2003. The Program will request 50,000 fish from Dexter (part for production and part for broodstock development). The Mumma facility has about 25,000 bonytail that will be stocked in the fall of 2002 in two locations in Colorado. 40,000 bonytail will be requested from Dexter for the Mumma facility to produce fish for stocking in 2003. Colorado pikeminnow: 5,000 pikeminnow will be requested from Dexter for the Mumma facility to raise ~2,700 6" pikeminnow for stocking. Streamside spawning in Grand Junction also will continue with the goal of producing ~5,000 larvae to yield ~2,700 6" pikeminnow for stocking. Any excess fish probably should be provided to the San Juan program. In conclusion, we should begin meeting the stocking plans for razorback and bonytail next fall and begin meeting the pikeminnow stocking plan by 2003. Tom Nesler said their pathologist has found Asian tapeworm in fathead minnow in both of the growout ponds at the Mumma facility. A larval nematode which is pathogenic to some minnows also has been found there. Tom Czaplá said the fish will be treated before stocking.
14. Draft Stocked Fish Monitoring Plan (Hudson) – Discuss scheduling of comments and review period. The draft monitoring plan will be e-mailed to Tom Czaplá on December 10. Bob Muth said he thinks this needs to go out for peer review. So, the schedule will be to go out for peer/BC review by January 10 and the final back to the BC by 3/30/01.
15. Overdue Reports - Angela Kantola distributed copies of the latest overdue reports list. >Angela will review the date sequences on the reports due list to make sure the draft final to the Biology Committee is consistently 2.5 months after the date for peer/BC review. >Pat will send Tim Modde a copy of the final mosquito report.
16. Tim reported that they just received verification from the Larval Fishes Lab that they caught ~30 age 0 and age 1 humpback chub in Island Park in summer 1999.
17. Next meeting - February 12 (followed by a nonnative fish workshop on February 13-14) in Grand Junction.>Frank Pfeifer will arrange a meeting room for both. >The Program Director's office will send out an agenda for the nonnative fish workshop within the next week. >Pat will send out the revised 2002-2003 floodplain umbrella SOW to the Committee for review and comment (previously distributed at habitat restoration workshop).

Reports for the next BC meeting, February 2002:

Osmundson, D. Population Dynamics of Colorado Pikeminnow in the Upper Colorado River, 1991-2000. Project 22A.

Meismer, S. and M. Trammell. November 2001 Draft. Nonnative Cyprinid Removal in the lower Green River and Colorado rivers, Utah. Project 87A.

Burdick, B. November 2001 Draft. Evaluating the use of Sloped Gravel-Pit Ponds by Listed and Non-Listed Native Fishes and Removal of Nonnative Fishes from Sloped Gravel-Pit Ponds in the Upper Colorado River Near Grand Junction, Colorado. Project C-6-GP

Other agenda items for February 2002 BC meeting:

- Review of fish disposition policy.
- Facility Needs Plan
- Region 2 request to transport wild bonytail from upper basin to Dexter to expand broodstock (scope of work currently provides for those fish to go to Wahweap).

ASSIGNMENTS:

Tom Czapla will e-mail the fish disposition policy to the Biology Committee.

John Hawkins and Gerry Roehm will review the Little Snake River management action plan and make modifications to reflect current conditions and the Yampa Management Plan. John will post the preface/forward section and the final recommendations to the listserver by December 20. The Committee will respond by January 15 and if comfortable with the revisions, then the report is approved as modified above.

John Carron will revise the Gunnison Phase II temperature modification scope of work within the next week; Gerry Roehm will work with John and get the scope posted to the Biology and Management committees. Then it will be on the Management Committee agenda on January 23. Mark Wierenga may file a minority report on this.

Ron Brunson will revise the Starvation Reservoir nonnative fish escapement scope of work and it will be considered at the January 23 Management Committee meeting.

Pat Nelson will post a recommended schedule for revising the levee removal report to the listserver.

Kevin Bestgen will finalize the Evaluation of the Interagency Standardized Monitoring Program Sampling Technique in Backwaters of the Colorado River in the Grand Valley, Colorado report by December 15. Pat Nelson will build the recommendations into the nonnative fish control workshop.

Tim Modde will post the bulleted conclusions and revised recommendations for the channel catfish removal report to the listserver by December 20.

Angela will review the date sequences on the reports due list to make sure the draft final to the

Biology Committee is consistently 2.5 months after the date for peer/BC review.

Pat Nelson will send Tim Modde a copy of the final mosquito report.

Frank Pfeifer will arrange a meeting room for the February Biology Committee meeting and nonnative fish control workshop.

The Program Director's office will send out an agenda for the nonnative fish workshop within the next week.

Pat Nelson will send out the revised 2002-2003 floodplain umbrella SOW to the Committee for review and comment (previously distributed at habitat restoration workshop).