

February 19, 2008

Biology Committee Meeting Summary
January 17, 2008, Moab, UT

Biology Committee: Dave Irving, Tom Pitts, Shane Capron, Melissa Trammell, Kevin Gelwicks, Krissy Wilson, Dave Speas, and Tom Nesler. The environmental groups and CREDA were not represented at the meeting.

Other participants: Tom Chart, Chuck McAda, Angela Kantola, Tim Modde, Cassie Mellon, Pam Martin, Trina Hedrick, Bob Muth, Tom Czaplá, Paul Badame, Rich Valdez., Kevin Bestgen, Chuck McAda, John Hawkins, Mark Fuller, Jay Groves, and Patrick Goddard.

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

CONVENE 8:00 a.m.

1. Review/modify agenda – The agenda was modified as it appears below.
2. Approve October 31- Nov. 1 meeting summary – The Committee made the modification Dave Irving had recommended under item #11. >Angela Kantola will post the [revised summary](#) to the listserv (*done*).
3. Review assignments from previous meetings - The Committee reviewed assignments from previous meetings (as listed in the meeting agenda). Assignment updates, those still pending, and new assignments can be found in the assignment list in Attachment 1.
4. Review reports due list – Angela Kantola distributed an updated reports due list. (See updated list for revised due dates, etc.) Tom Czaplá offered to work with Chuck McAda and some of the principal investigators (PI’s) to set up a training workshop on program MARK when PI’s aren’t in the field. USU is offering a 4-day course for \$325 May 13-16 in Logan; >Angela will post the announcement to the listserv (*done*). Kevin Bestgen offered to talk to Gary White about a more formal arrangement to provide data analysis for the Program (he’s retired and has time available). This could be done through LFL’s Colorado pikeminnow estimate work if Kevin is able to fund Gary. >The Program Director’s office will develop a proposal by February on how best to proceed for the Committee’s consideration. Rich Valdez said he doesn’t believe it’s practical to use outside expertise for every population estimate, however.
5. Nonnative fish workshop follow-up
 - a. Changes to FY 08 work – Tom Chart directed the Committee to Table 6 in the nonnative fish workshop report (see Attachment 2). >The PD’s office will ask all PI’s by next Wednesday (1/23) to: 1) estimate cost of changes currently recommended (see attachment #2); 2) estimate the number of nonnative fish removal passes required to achieve a minimum 65% exploitation rate in 2008; 3) determine if they can accomplish the passes that would be required to achieve the 65% minimum; and 4) estimate the cost of those additional passes to reach the 65% minimum. The

PD's office will take this information and make a recommendation for revised nonnative fish work plan for the upcoming field season. Paul Badame cautioned that our current tag losses will prevent us from making an accurate estimate of exploitation rates. Chuck McAda has a few thousand and Paul Badame has 400-500 of the old 400 kHz PIT tags if anyone wants to use them in smallmouth bass to help determine movement. Use of these PIT tags would be very helpful in determining tag losses (and thus developing more accurate exploitation rates in the future). Kevin Bestgen suggested double-tagging just in the Echo Park to Split Mountain reach to get a handle on tag losses. This would require folks outside that reach to scan for tags. Kevin Gelwicks recommended removing the entire pelvic fin at the knuckle, instead. This is a permanent mark that is easily accomplished. The Committee agreed to a full pelvic fin clip for researchers using floy tags on smallmouth bass. >The PI's will consult with one another and determine which fin will be clipped in which reaches.

Chuck noted that their Colorado River pikeminnow estimate will in effect add three smallmouth bass removal passes.

With regard to adding 2-3 days to translocate large (>8-10") LMB (from Skipper's Island, etc.) and move to Highline, Melissa Trammell expressed concern about potential *future* costs that could result from making this kind of token public relations move at this time. Tom Pitts countered that we could really use positive press in the Grand Valley at this time. If possible, CDOW will meet the crews and transfer the fish to Highline (>Tom Nesler will look into this for both the Colorado and Yampa rivers).

Mark Fuller and Jay Groves presented a draft scope of work for nonnative fish control in the lower Green and tributaries within and adjacent to the Uintah and Ouray Indian Reservation (would include the lower portion of the White River and the Duchesne River). Paul Badame offered background, saying that by 2006 they had very low catch rates in Desolation and it was determined effort should be moved elsewhere. However, now it appears that smallmouth are expanding their range in Desolation, so they would like to determine distribution and compare numbers with previous years. The proposal is for two electrofishing passes with all fish removed in both passes. Program cost would be \$36.4K (plus \$10K in-kind from the Tribe). All nonnative fish species would be removed. Mark said Bruce has suggested we need to stay on top of nonnative fish populations we may have reduced in order to prevent rebound. If this scope is funded, it could tie in with Duchesne River habitat work (FWS is discussing the need for the latter).

Committee members suggested high priorities for FY 08 work. Melissa emphasized expanding smallmouth bass removal into the additional reaches identified by Lori Martin and John Hawkins (Krissy agreed with this need for increased effort on the Yampa) and also settling the tag loss questions with a tag loss study in the Split Mountain reach. Dave Speas and Melissa recommended the full fin clip as opposed to pit tagging. Kevin Gelwicks recommended riverwide double-tagging via fin clip of floy-tagged fish since restricting the tag loss study to one reach would not address all variables (e.g., stream reach, etc.). Dave Speas emphasized 98a and 98b. Shane

emphasized projects that can achieve the 65-80% exploitation rate. For other reaches/species, we need emphasis on stock assessment and tag loss. Kevin Bestgen emphasized working in a reach with few logistical issues and the ability to do numerous passes (Echo to Split), perhaps even cancelling everything downstream and moving the effort upstream (could solve tag loss and exploitation rate simultaneously). Dave also emphasized #123. Melissa agreed, but said she thinks we're already at the target exploitation rate in that reach, so we should verify tag losses, but not increase effort there. Tom Chart acknowledged the difficulty of making these decisions based on our current data. Clearly, we need the more comprehensive synthesis. Melissa and Krissy agreed that the second level synthesis is the most important new work. Tom Nesler asked if it would be a higher priority to achieve the smallmouth bass exploitation rate in the Green River than to expand smallmouth bass removal reaches in the Yampa River. Tom Nesler said he thinks expansion into RM 90-80 is doable; but he'll have to discuss RM 100-90. Bob Muth said he hopes we can get there in light of what's been learned on the San Juan River about removing nonnatives all the way through a reach.

- b. How to address other recommendations – Tom Chart recommended re-instating the nonnative fish subcommittee to follow up on the other recommendations and report back to the Biology Committee on a regular basis. Membership in this subcommittee will vary based on topic and member availability. To begin with, the subcommittee will work on addressing the other recommendations from the workshop and the members will be: Tom Chart (chair), Melissa Trammell, Dave Speas, and Shane Capron. The subcommittee will maintain close communication with the PI's and keep the rest of the Biology Committee informed on all their communications, as well.
6. General discussion of nonnative fish management synthesis reports and review for final approval of Bob Burdick's report ("Removal of Smallmouth Bass and Four Other Centrarchid Fishes from the Upper Colorado and Lower Gunnison Rivers: 2004-2006") Tom Nesler suggested conclusion #5 isn't a complete sentence and it's unclear what's being concluded. Clarify to explain that a year class was lost but that loss can't be directly attributed to environmental factors. Also, is conclusion #7 (re: electrofishing efficiency) a conclusion of this report? No data analysis in the report leads to this; so perhaps it should be characterized as an uncertainty. In recommendation #1, specify what is meant by a two-fold increase in the number of passes. Is it reasonable to recommend increasing passes to achieve the desired exploitation rate? Melissa said she thinks this is appropriate (whether we are able to implement it or not). Under recommendations #2, #4, and #7, Bob needs to explain why he's making these recommendations. Tom Nesler emphasized that recommendations should follow from the data, not simply the author's opinion.
>Bob Burdick will revise the report based on these comments and finalize it.

See the reports due list for revised deadlines for discussion of overdue synthesis reports. Tom Chart commented that if we have a second round of synthesis reports in the future, we'll need to make our expectations much more clear (level of analysis, etc.). This may be something the nonnative fish subcommittee will want to address.

7. Second-level synthesis of nonnative fish management reports – Tom Chart provided a

draft outline last week. The nonnative fish subcommittee might want to take this to the next step. Dave Speas said he thinks this is a good outline to the extent that it focuses on biological issues. >Committee members will provide comments on Tom's outline by January 31, then the nonnative fish subcommittee will discuss it further (e.g., how to accomplish the work, etc.). We'll need one synthesis for smallmouth and one for northern pike. >Chuck will need to complete the catch/tag database for smallmouth bass and northern pike and put it into Access before the second-level synthesis can begin. Melissa noted that in the future, perhaps we should require PI's to submit these data annually, rather than at the end of their 3-year study periods. The Biology Committee or nonnative fish subcommittee may even want to take this one step further and specify what/how data are collected (a la ISMP). Bob Muth said that ideally, it would be good to have the movement and distribution data before 2008 sampling begins.

8. Nonnative Fish Stocking Procedures update – Tom Nesler provided a revised version to the Stocking Procedure participants on January 15, 2008. >Tom Chart will review this and get comments back to the States no later than February 15, then Krissy, Kevin, Tom, and the Service will submit it for agency review (one month review time). The Colorado River Fish and Wildlife Council meets again in April. Krissy Wilson noted that UDWR's 2008 fishing proclamation requires anglers to kill any bass caught in the Green River.
9. Discussion of the Yampa River nonnative fish management strategy – Tom Chart says the ad hoc group met yesterday evening and he thinks this is close to completion. Rich Valdez will submit a final draft to the PD's office the week of January 28; then it will go to the Biology Committee by February 5, along with a summary of the major changes. This will be on the agenda for the February 15 Biology Committee meeting. Dave Speas thanked Tom Nesler for his help on this document. One of the tasks assigned to the newly formed nonnative fish subcommittee (see Item 5b above) will be to follow up on the recommendations in the strategy.
10. Next steps in review of selected upper basin reservoirs' nonnative fisheries, outlet works and operations, and potential for fish escapement – Already discussed. This may also be a nonnative fish subcommittee topic.
11. Update on Baeser Bend SOW – Tom Chart said Tim revised his scope of work to reduce costs and focusing on stocking and one test-netting in September at a cost of \$18.9K (primarily for pumping water to maintain freshness). Flows need to be 23,000 cfs to inundate Baeser. Ouray NWR will plug the breach. Tom Chart said we need some water quality monitoring. Tim said monthly monitoring would probably cost ~\$4K (for a total of ~\$22.9K); >Tim will revise the scope of work accordingly. The Committee approved the revised scope of work with that revision.
12. Spring/summer Flaming Gorge Releases – Dave Speas recalled Rick Clayton's Tuesday presentation and the February 28 deadline for identifying any research needs outside the flow recommendations. The planned [Stirrup escapement study](#) would require connectivity to the main channel (requiring >14,000 cfs for a minimum of a week). >The Program Director's office will work with UDWR and the committees to craft the Program's request. We don't yet know what the hydrologic forecast is at this point. At

some point, we will want to explore the possibility of flows to disadvantage nonnative fishes, so it would be good to begin those discussions.

13. Update on proposed whitewater park on the Colorado River near Grand Junction – Bob Muth said the technical meeting scheduled for January 30 with Palisade, the contractors, the Service, CDOW, COE, and Reclamation was cancelled at Palisade’s request and will be re-scheduled sometime in the next couple of months. A meeting may be scheduled with irrigators and other local public in the interim.
14. Hybrid identification – >Dave Speas will ask Wayne Hubert what information he could make available to the PI’s at this point. >Chuck McAda will provide photos to UDWR of fish they consider hybrids. Kevin Gelwicks said Rick Anderson’s identification was 97-98% accurate (as verified by genetics analysis). Four investigators collecting fish collected in Wyoming were 95% accurate, with most of the errors being identification as the wrong hybrid. Chuck McAda offered that a visit to operations at the Redlands Fish Ladder would provide an opportunity to observe a variety of sucker hybrids in a short time.
15. Electrofishing standardization – >Tom Czapla will work with Pat Martinez to get the summary table and other important information out to the PI’s before the start of field season. >Standardizing rubber rafts will be the next step after we get done with the aluminum boats.
16. Schedule next meeting – February 15 in Denver near DIA from 8 a.m. to 4:00. p.m. >The Program Director’s office will make arrangements. *Done. Meeting will be at the [Country Inn and Suites](#) in Denver.*

ADJOURN 3:40 p.m.

Attachment 1

Update on assignments completed or underway:

1. The Service will discuss Program activities with BLM and other agencies (e.g. NPS, BOR) to develop guidelines for the type of activities (e.g., major construction versus operational) requiring NEPA compliance. *1/18: Pat Nelson and Bob Muth spoke with Dan Alonso who's agreed to talk with BLM; Dan doesn't believe NEPA will be required. Pat will know more next week. 3/1: Dave Irving and Pat Nelson have been in contact with BLM. At present it appears that BLM is supportive of Recovery Program actions to assist in recovery of the endangered fishes. They requested that we submit proposals to them (in NEPA format; for their files) prior to proceeding with certain types of recovery activities (such as rotenoning, pumping, etc.). The need to develop such proposals would be determined on a case-by-case basis after making contact with BLM. 3/7: Pat said a programmatic NEPA will require more effort and he will begin to work on that as soon as he can. 4/23: Pat said this is on hold right now; we'll clarify roles and responsibilities for this during the 4/24 floodplain discussion. Site-specific NEPA, landowner permission, permits, water rights, Section 7, etc., will be the responsibility of the principal investigator. 7/16: Pat Nelson said it appears NEPA will be required on all our proposed work on BLM properties (just finished on the Stirrup; Tim Modde is working on NEPA for Baeser). A programmatic NEPA could take 1-2 years, unfortunately. Tom Chart endorsed the idea of a programmatic if possible. Tom said that if Tim Modde is willing to draft a list of all the possible floodplain activities we may want to do in the Green River, that would be helpful. (Currently working on an EA for Above Brennan, Stewart, and Baeser). 10/31: The programmatic-approach EA passed Vernal BLM ~ a month ago and should have approval in ~3 weeks. 1/17: SLC BLM has requested formal Section 7 consultation, but it should be done by the end of February 2008. (Paul Abate in the FWS SLC office is working on this.)*

Assignments carried over or modified from previous meetings:

1. Tom Pitts will ask the WAC to adopt a report review procedure similar to the Biology Committee's. Tom Pitts will recommend changes to the Program Director's office for discussion at the next Biology Committee meeting. *Pending.*
2. The Program Director's office will provide the Biology Committee with a summary of what the White River flow recommendations report said and what the shortcomings were *4/23: This will be provided to the Biology Committee in advance of the July 16 meeting. 7/16: Deferred to next meeting. 10/31: Tom Chart said the PD's office will be working on this and the Price River items in the coming months.*
3. Bob Muth will talk to Dave Campbell about funding from the SJRIP for the cyprinid key. *4/24: Pending (Chuck McAda and Darrel Snyder have been discussing this). 7/16: San Juan Program funding doesn't look promising, although San Juan funding is reflected in the scope of work. 10/31: >The PD's office will follow up with Sharon Whitmore on this. 1/8: San Juan PD considering.*
4. John Hawkins will change "procedures" to "guidance" and delete "U.S. Fish and Wildlife Service" from the fish handling procedures cover page. Comments on the draft should be

submitted to Tom Czapla and John Hawkins by May 31. Tom Czapla will do a first-cut revision, and then send it out for broader review. The Program Director's office will take the lead to incorporate comments, make revisions and get this document formalized. 7/16: *Tom Czapla will have a draft to Bob Muth by the end of this week, then it will be sent back to the Biology Committee for review before it is finalized. 1/17: Will be out by end of February.*

5. Craig Walker and George Smith will work together to finalize the Price River report using the table of exceedances that George provided. Craig will provide a report to George that discusses using surrogate streams, and if it seems appropriate, George will add that analysis. 7/16: *George said he didn't receive anything other than reference material on this and Craig has now taken another job within UDWR. George said he believes the work he did looking at the San Rafael is the most appropriate approach; >George will add his San Rafael analysis into the Price Report. 10/31: George has been working on this, putting technical information in appendices, and adding San Rafael hydrology. The PD's office will complete this in conjunction with White River report follow-up). 1/8: Pending.*
6. Bob Muth will call Dave Campbell regarding options for compatibility between databases since the SJRIP is moving their database to FWS. 7/16: *Bob Muth said Dave agrees this is a good idea and will be getting back to Bob on how to proceed. 1/17: In progress.*
7. Shane Capron will get a firm commitment from Clayton Palmer and Kirk LaGory re: Western's contribution for additional report costs for this project 85f (sediment monitoring) in FY 2009. 10/31: *PD's office has verbal commitment; will seek firm commitment. 1/17: Bob Muth will check with George Smith re: his conversation with Clayton Palmer.*
8. Pat Nelson and Dave Speas will discuss the draft floodplain vs. flow synthesis RFP. 1/8: *RFP pending. 1/17: Dave said this should be posted by the end of the month. Melissa Trammell suggested that the Biology Committee should somehow be involved in this process (e.g., chair sit on the TPEC) Dave Speas says this assumes the chair's agency isn't planning on bidding, and noted that although non-Federal employees can sit on a TPEC, they cannot vote. Anyone contributing to the writing of the RFP must sign a conflict of interest form. The RFP is based on language in the FG Study Plan. Bob Muth said that RFP's will always be based on Program Guidance. Tom Pitts said it's not important to him that a Biology Committee sit on the TPEC, as long as the TPEC is technically qualified. Further, it would not be possible for one person from the Biology Committee to represent the entire Committee. >Dave Speas will notify the Biology Committee when the RFP is advertised on grants.gov so that those who may be interested in serving on the TPEC can volunteer. Dave will chair the TPEC and select the TPEC members.*
9. Tom Czapla will work to get the questions regarding what hatchery repairs are needed at Grand Valley resolved as soon as possible. 10/31: *Grand Junction working to get cost estimates; \$44.4K funds placeheld. 1/17: Chuck said that a larger de-humidifier would be too costly; their current plan is to repair the walls so they can withstand the humidity. The Biology Committee expressed interest in a full solution. >Chuck will provide the full estimate to Tom Czapla. >Bob Muth will discuss the possibility of using capital funds with Brent Uilenberg.*
10. Tim Modde will follow-up on the cost for bringing young *Gila* into captivity. 10/31: *Dave*

Irving said they were able to get drive-in access through Mantle Ranch (the new landowner was very helpful). 400 Gila were captured over 4 days. Of the 200 fish at Ouray, they've only had ~5 mortalities. >The PD's office will outline the process (and permits) for returning roundtails to the river (as well as the fate of any humpbacks). 1/8: Pending fish identification in 2008. 1/17: ~180 fish are at Ouray NFH, they believe 15-20 are humpback. >The Committee asked for an update on Mumma's fish. Tom Czaplá said he called Dave Schnoor who reported that the fish are doing well with only 10-12 mortalities. (Kevin Bestgen said that preservation in formalin will best help with identification, but even then, if the fish were in very poor condition, identification may be difficult.) Melissa Trammell said the Park will have to participate in the decision about whether the fish are ultimately returned to the river or not (at this point, they expect they will go back to the river). Kevin Bestgen suggested it may take 2 years to grow the fish to a size where they can be identified.

11. Tom Czaplá will check on FY 08-09 costs for #132 (Westwater humpback chub population estimate). *1/17: Resolved with SOW received last week; SOW will be posted to web.*
12. The Program Director's office will make a recommendation to the Committee as to the meaning of "periodic monitoring" in Cataract Canyon. *10/31: Based on recovery goals: generation time (every 3 years). Melissa noted that the next scheduled monitoring would be calendar year 2008. >The PD's office will convene a conversation regarding methods for monitoring small chub populations. 1/17: Pending*
13. Tom Nesler will follow up on the status of the Yampa pike sources report. *1/17: Pending.*
14. The Park Service will send copies of Tim Modde's Yampa Canyon smallmouth bass report to the Biology Committee and the PD's office when it is finalized. *1/17: Pending, but probably won't be finalized for a year or so. Melissa suggested that Tim needs to revise the report based on Brett Johnson's comments, but Tim said he needs to discuss some of the comments with the Park Service before he makes the revisions.*
15. Tom Nesler will review his comments on the synthesis report for 98b and Sam Finney's responses and provide rebuttals to Sam and the Committee *(1/8: pending)*. Dave Speas and Melissa Trammell will do likewise *(done)*. Tom Chart will work with Sam Finney and Dave Irving to reach resolution and provide responses to the Committee on remaining issues (as an interim step to seek consensus before Sam revises the report again). *1/17: Pending; >Tom Chart will work with reviewers and Sam.*
16. Tom Nesler will see if CDOW can provide a report on Billy Atkinson's work on pike in Catamount and the river below. Update provided at nonnative fish workshop; workshop participants recommended CDOW provide some kind of management plan. *1/17: Billy will provide a Catamount pike removal document/strategy by the end of February.*
17. The Program Director's office will review the information gathered to date on reservoir operations and potential nonnative fish escapement and call for a scope of work to follow up. *1/17: >PD's office will develop or call for a scope of work.*
18. George Smith will find out the temperature range of the Elkhead releases. *1/17: Angela Kantola reported that Ray Tenney said they've made no temperature measurements.*

New Assignments:

1. Angela Kantola will post the revised October 31-November 1 BC summary to the listserv. *Done.*
2. John Hawkins will submit his nonnative fish synthesis report (#125) by the end of January.
3. The PD's office will provide guidance on format for the Yampa pike sources report.
4. Tom Nesler will provide a revised due date for Lori Martin's nonnative fish synthesis report (#98a).
5. Bob Muth, Rich Valdez, Kevin Bestgen, and Tom Czapla will discuss and provide new due dates for the Research Framework report by Jan 31.
6. Chuck McAda will discuss with Tom Czapla and Doug Osmundson to determine how to complete the Colorado pikeminnow population estimate report.
7. The Program Director's office will develop a proposal by February for the Committee's consideration on how best to proceed with program MARK training for PI's.
8. Angela Kantola will post the announcement re: USU's 4-day Program MARK training (May 13-16 in Logan) to the listserv. *Done.*
9. The PD's office will ask all PI's by next Wednesday (1/23) to: 1) estimate cost of changes currently recommended (see attachment #2); 2) estimate the number of nonnative fish removal passes required to achieve a minimum 65% exploitation rate in 2008; 3) determine if they can accomplish the passes that would be required to achieve the 65% minimum; and 4) estimate the cost of those additional passes to reach the 65% minimum. *Done.* The PD's office will take this information and make a recommendation for revised nonnative fish work plan for the upcoming field season.
10. The Committee agreed to a full pelvic fin clip for researchers using floy tags on smallmouth bass. PI's will consult with one another and determine which fin will be clipped in which reaches.
11. Tom Nesler will look into the possibility of CDOW meeting nonnative fish removal crews and transferring fish (on both the Colorado and Yampa rivers).
12. Tom Nesler will look into expanding smallmouth bass removal into Yampa River RM 100-90 (which would be under Lori Martin's study).
13. The PD's office will work with CDOW and Sam Finney on the potential for designing a permeable, hydrologically-stable (gravel?) berm that prevents NP access to the oxbow slough, then clean it out once and for all.
14. Chuck McAda and Tom Nesler will discuss the potential of adding 1 marking + 3 removal

passes to the Colorado River smallmouth bass project via the Colorado pikeminnow population estimate study.

15. Angela Kantola and Kevin Bestgen will resolve the budget concerns with project #140.
16. Tom Nesler would like to know if there are enough adult native fish remaining in the Yampa River to detect a native fish response. He will discuss ways of determining this with Kevin Bestgen and Tom Chart.
17. Dave Irving will develop a SOW for Cross Mountain Canyon nonnative fish removal (although it may not be a priority this year).
18. Tom Nesler will see if he can provide Rick Anderson's Colorado River fish community data to both Chuck McAda and Rich Valdez.
19. Bob Burdick will revise his Colorado River nonnative fish removal synthesis report based on the Committee's comments and finalize it.
20. Committee members will provide comments on Tom Chart's second-level synthesis outline by January 31, then the nonnative fish subcommittee will discuss it. Chuck McAda will need to complete the catch/tag database for smallmouth bass and northern pike and put it into Access before the second-level synthesis can begin.
21. Tom Chart will review the latest draft of the nonnative fish stocking procedures and get comments back to the States no later than February 15, then Krissy, Kevin, Tom, and the Service will submit it for agency review (one month review time).
22. Rich Valdez will submit a final draft of the Yampa strategy to the PD's office the week of January 28; then it will go to the Biology Committee by February 5, with a summary of major changes. This will be on the February 15 Biology Committee meeting agenda. The nonnative fish subcommittee will need to ride herd on the recommendations in the strategy.
23. Tim will revise the latest draft of the Baeser Bend scope of work to include water quality monitoring (for a total SOW cost of ~22.9K).
24. The Program Director's office will work with UDWR and the committees to craft the Program's request for Flaming Gorge flows to support the Stirrup study.
25. Dave Speas will ask Wayne Hubert what information he could make available to PI's on sucker hybridization at this point. Chuck McAda will provide photos to UDWR of fish they consider hybrids.
26. Tom Czapla will work with Pat Martinez to get the summary table and other important information out to the PI's before the start of field season. Standardizing rubber rafts will be the next step after we get done with the aluminum boats.
27. The Program Director's office will make arrangements for the February 15 Biology Committee meeting in Denver near DIA (*Done*).

Attachment 2
January 17, 2008, Biology Committee Discussion of
 Nonnative Fish Workshop Table 6.0 RECOMMENDATIONS TO THE BIOLOGY COMMITTEE

Existing Projects	P.I.	Recommendation to BC	2007 # passes (mark + removal)
98a (Middle Yampa)	Martin	<p>Add SMB <i>removal</i> to RM 90-80 (below Juniper). Skip NPK marking pass to increase removal (would req. permit change).</p> <p>BC 1/17: John Hawkins cautioned that if fish aren't tagged, it will be difficult to describe movement. Tom Nesler said Lori's study <i>will</i> include a marking pass. Tom said he will recommend expanding SMB removal in RM 80-90 (below Juniper). Can the number of passes be increased to achieve the 65% target exploitation rate (may be flow limited)? (Bruce Haines recommended 60-85%.) The BC would like to see a minimum of 2 more removal passes. >Nesler will look into expanding removal into RM 100-90).</p>	1+5
98b (Upstream of Craig)	Finney	<p>Flotilla on backwaters? Try flotilla in channel? Add as many passes as possible here because of bang for the buck. Focus on conc areas. Reconsider and secure translocation areas, time of stocking, possibility of berming (also 98a and 125) (also, do we need to sample these sites to det. if repro. is occurring? O/W survival may be minimal)</p> <p>BC: 1/17: Nesler suggested designing a permeable, hydrologically-stable (gravel?) berm that prevents NP access to the oxbow slough, then clean it out once and for all. More passes in the mainstem would be fine. >PD's office will work with CDOW and Sam Finney on this. Chemical treatment might be possible late in the year, depending on flows.</p>	1+6

Existing Projects	P.I.	Recommendation to BC	2007 # passes (mark + removal)
98c (Upper Yampa: Steamboat)	Finney	Discussed removal (need access/permission; would req. permit change, and would need to make case [cost/ben], first). Maybe better for now to ask CO to submit their detailed plan/timeframe (not a binding doc.) and provide support for Billy's work and let that play out. Billy looking at some off-channel ponds, also. Note: capture prob. high, wouldn't take big effort to have removal impact.	0
109 (Middle Green)	Monroe	Shift into 123b.	Fyke nets
110 (Lower Yampa)	Fuller	Do pop est in '08 for smb (is in '08 SOW already) Maximize passes as possible (depends on flow)	4 of 7
115 (Lodore)	Bestgen	Discuss w Irving. BC 1/17: Stay the course.	2
123a (Middle Green SMB)	Badame	Consider double-tagging and/or new tag type. Maybe 2 marking passes, and move these into early June. BC 1/17: Change to 2+14 passes; double-tag.	1+14
123b (Middle Green)	Hedrick	Start earlier (June), add 3 passes for total of 12, consider 2 tagging passes (6 days) Prob n/c in budget to do this. BC 1/17: Change to 2+10 passes.	1+8
125 (Middle Yampa)	Hawkins	Add 2 passes to Lily Park reach. Discuss w CDOW adding removal in 10-mile Juniper segment below 24-mile reach (RM 100-90, which is Lori Martin's reach). BC 1/17: 1+7-9 /1+7-9. >Nesler will look into RM 100-90 (which would be under Lori Martin's study).	1+7 /1+5
124 Duchesne	Vernal CRFP	N/C BC 1/17: Mark Fuller said a scope connected to Desolation	(3)

Existing Projects	P.I.	Recommendation to BC	2007 # passes (mark + removal)
will be submitted by the Tribe, UDWR, and FWS.			
126a (Upper Colorado)	Burdick	Maintain sampling protocol (incl. Silt-Beavertail 2 passes). Add complete raft electrofishing setup plus flatbed trailer. Consider SOW to characterize status of native fish and fish community. Consider add'l effort 2-3 days to translocate large LMB (from Skipper's Island, etc.) and move to Highline.	
BC 1/17: Potentially 1+3 additional passes through Colorado pikeminnow population estimate study. >Chuck and Nesler will discuss.			1+6/2
126b CDOW asst. to 126a	Martin	These 2 passes added 33% removal (>100mm). Consider electric seine (maybe concurrent with small-bodied native fish). Maybe work w Doug during late June CPM estimate to start mark/removal earlier before bass spawn. Doug could add smallmouth removal to CPM pop est passes. Coord. may affect SOW. Maybe at least mark SMB on last CPM pop est pass. Discuss need for permit change w CDOW (they would like a permit for each SOW). Consider add'l effort 2-3 days to translocate large LMB (from Skipper's Island, etc.) and move to Highline.	
BC 1/17: Add 2-3 days to translocate large LMB (from Skipper's Island, etc.) and move to Highline.			2
140 (Native Fish Response)	Bestgen	Restore to original budget level (did 5 years of work for 4 years of funding). Increase removal to reduce pred. effect? Try experimental extensive removal in areas where we supplement native fishes to det if removal efforts are sufficient?	n/a

Existing Projects	P.I.	Recommendation to BC	2007 # passes (mark + removal)
		<p>BC 1/17: Field season overlaps fiscal years, so need to rectify funding. >Angela and Kevin B. to resolve. Nesler would like to know if there are enough adult native fish remaining such that a response is possible. >Kevin B. to discuss with Nesler and Chart. (Perhaps revising SOW to add this component, or CDOW crews may be able to help. Note: Hawkins already does a 1-mile stretch where they sample everything. The 3-species Program might have funds for this.)</p>	
144 (Middle Green Native Fish Response)	Hedrick	<p>N/C</p> <p>BC 1/17: Report due at end of May, but UDWR recommends next report being on same schedule as Bestgen's.</p>	n/a
150 (Middle Green WSU)	Hedrick	<p>Electrofishing and fyke netting in early spring more effective; shift this and 109 into 123b.</p> <p>BC 1/17: Agreed.</p>	
C18 & 19 (Isotope)	Martinez	<p>BC discussed separate SOW on resv operations and escapement potential. Assessing add'l species, incl. illicitly introduced fish. Program needs to acknowledge illicit stocking, encourage fines, education, etc. (e.g. CO/WY AFS resolution). Letter from PD? Anglers are actively removing tags from smb in Elkhead. Need to discourage that.</p> <p>BC 1/17: A little delay in isotope work (graduate student quit). PD's office will develop SOW for risk analysis of nonnative escapement from reservoirs. Outreach to bass club and its leadership may help with tag removal.</p>	
Cross Mtn Canyon	Finney	<p>Repeat and take a closer look (w/ a budget)</p> <p>BC 1/17: SMB densities are high in this 4-mile reach, but it</p>	

Existing Projects	P.I.	Recommendation to BC	2007 # passes (mark + removal)
		<p>may be a lower priority than increasing efforts elsewhere. >Irving will develop a SOW just in case.</p>	

The following recommendations were made for potential new starts for consideration by the Biology Committee.

Potential New SOWs	P.I.	Recommendation
Add Co. R. Native fish response (see 126a)		BC 1/17: Maybe a YOY component (ala ISMP), although it yield primarily nna cyprinids. Could repeat comprehensive fish community survey, but this is more costly. Rick Anderson's data might be helpful. >Nesler will see if he can provide Rick's data to both Chuck McAda and Rich Valdez.
Resv oper/escapement		BC 1/17: Discussed; PD's office to develop SOW, but probably not for FY 08.
Cross Mtn Canyon		BC 1/17: Discussed; >Irving will develop SOW.
Rifle Creek screen		BC 1/17. Muth: this is a CDOW issue at this time.
2nd Level synthesis		BC 1/17: Chart: need to develop SOW and start in FY 08 (on BC agenda this afternoon).
Not SOW: Need to create updated spreadsheet of tags before placing orders each year		<p>Bring to researchers meeting and discuss during 2nd day aft.</p> <p>BC 1/17: Hawkins: Need to make sure CDOW is part of the annual discussion / list exchange before tag order is made.</p>
NNA control & monitoring in Deso Canyon	FWMAO, UDWR, Ute Tribe	BC 1/17: Mark Fuller, Jay Groves, and Paul Badame provided a draft proposal.

