

Biology Committee Meeting Summary
April 6-7, 2006
Grand Junction, Colorado ([Holiday Inn](#), 755 Horizon Drive)

Biology Committee: Tom Chart, Tom Pitts, Gary Burton, Melissa Trammell, Tom Nesler, Kevin Gelwicks, Krissy Wilson, and Dave Speas (the environmental groups and CREDA were not represented).

Other participants: Pat Martinez, Kevin Bestgen, Dave Irving, Pat Nelson, Tom Czapla, Bob Muth, Chuck McAda, Angela Kantola, George Smith, Rich Valdez, Debbie Felker, Al Pfister, Jim Pierce (CRWCD). Friday only: Trina Hedrick, Dan Alonso, Mickey Heitmeyer, Leigh Fredrickson, Diane Pentilla, Steve Berendzen, via phone: Kirk LaGory, Kevin Bestgen, and Kevin Christopherson.

Information & Education Committee members (Thursday morning only): Betsy Blakeslee, Jim Pokrandt, John Shields (via phone), Justyn Hock, and Randy Hampton.

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

April 6, 2006

CONVENE 8:00 a.m.

1. Review/modify agenda – the agenda was modified as it appears below.
2. Approve meeting & conference call summaries - [February 2-3, 2006, meeting summary](#): The Committee added notes to items #9 and #10; >Angela Kantola will post the revised summary to the listserv. [March 3, 2006 conference call summary](#): No changes. [March 9, 2006 conference call summary](#): Minor modifications; >Angela Kantola will post the revised summary to the listserv.
3. Review assignments from 2/2-3/06 meeting and 3/3&9/06 conference calls (30 min.) – See assignments list at end.

Tom Czapla has discussed chub tagging with PI's for humpback chub population estimates. In Westwater and Deso/Gray they've been tagging all chub since ~1992 (helpful to track intergrades); Tom recommends tagging all chubs captured as part of humpback chub population estimates; the Committee agreed.

With regard to using pheromones as attractants for nonnative fish control, Melissa said the product is sold in the U.S. as bait and Pat Nelson said he thinks it's worth trying (with caution, however, as part of the compound basically incites a “feeding frenzy”). Pat Nelson said Lori Martin will test white suckers as attractants for pike next week (and will try to do some control/treatment in this regard, but the main goal is to capture as many pike as possible). The Committee also discussed the potential of using male pike as attractants.

Pat Nelson said he was able to get 2005 summer (just after runoff) color high-resolution digital aerial photos of the Yampa River from FWS-Refuges (who got them through a farmer's organization). Pat Martinez recalled Bill Elmlad's suggestion regarding using high-productivity nursery areas to attract pike, then somehow preventing return access to the river as a passive control method.

Tom Nesler said Colorado has provided recommendations for how PI's should structure their permit applications to accommodate recommended changes for 2006, including removal of smallmouth bass encountered during northern pike efforts.

Pat Martinez gave a presentation on their work with Larry Kolz to prepare to standardize all the boats in the Program's electrofishing fleet. Larry is preparing "standard boat" tables, then Pat et al., will be working to get all the boats standardized once those tables are complete. Steps in the standardization procedure are: measure water conductivity and boat cathode size (wetted hull); attach two 11" stainless steel anodes to the booms at 90" fore and 80" apart; operate electrofisher in AC mode; measure volts, amps, & waveform; compare resistance to "standard boat" tables, and identify and remedy discrepancies, if necessary.

Tom Czapla sent a summary of the Service's new permitting process to the Biology Committee on April 3. As current subpermits expire, they will be replaced by full permits (will require resumes from everyone on the permit, etc.) Tom said the \$100 permit application fee would be waived in most cases.

4. Approve Kevin Bestgen's report: "Effects of Flaming Gorge Dam releases on Lodore/Whirlpool fish community" – Dave Speas noted the report was shortened considerably from its original form. Tom Pitts asked about the low bonytail survival rates in the Green River; Kevin said no bonytail were detected beyond 4 month post-stocking (~25,000 fish have been stocked in the study area). Apparently post-stocking survival has been a little better in the Moab reach. Kevin said they also noted a fair bit of disease in the recaptured fish, which were in rather poor condition, so we need to investigate the reasons for poor survival. (Kevin recalled the small founder stock for these fish.) Chuck McAda likened this to the number of razorbacks lost when put in ponds. Tom Pitts suggested the Committee discuss revising the stocking/propagation plan/protocols in light of this information. Tom Nesler recommended developing a plan to try different stocking sizes, locations, etc. to determine how to get better survival. Melissa suggested that we try stocking bonytail in/near floodplains as opposed to canyon habitats. >Tom Czapla will work with an ad hoc group to develop a white paper describing current stocking results and outlining options (e.g., stocking times, locations, sizes, etc.) that the Program should try in order to increase survival. Tom will identify the ad hoc group and a deadline for completing the draft white paper by April 14. Kevin Bestgen said they wished they had more data from the hatchery (at least a sub-sample of individual weights) to help assess condition. Chuck McAda said he's working with the hatchery staffs to improve this data collection. Given the small number of humpback chub (8) that were captured in Whirlpool Canyon, Melissa asked if Kevin thought some

should be brought into refugia; Kevin said he thinks there are too few fish (not likely more than 50) in the Canyon for this to be useful. Rich Valdez commented that very few humpback chub were caught in the Canyon historically (about the same number captured by Bestgen). Interestingly, Kevin said that one of the 8 humpback captured came from Desolation Canyon. Kevin Gelwicks suggested re-wording the conclusion at the top of page 80 (which could currently be misunderstood to say that bonytail reproduced). The Committee approved the report with that modification. The Committee commented that the line numbers in the draft were very helpful. With regard to the recommendations, Tom Pitts said he doesn't favor beginning a major new monitoring initiative in the Green River above the Yampa. Dave Speas said he does think we need to maintain a presence in that portion of the river, however (as it appears we could see changes similar to those we've recently seen in the Yampa); others agreed. Kevin said he was not implying that the current work needs to be expanded and will modify the recommendation to make that clear. Tom Pitts suggested moving the 4th recommendation to the top. At a later date, the Committee will need to discuss nonnative fish management as raised in this report.

5. Information, education and public involvement for nonnative fish management - Pat Nelson introduced the topic, noting the smallmouth bass "summit" held last November, and the annual nonnative fish management workshop and subsequent Biology Committee meeting in Grand Junction in December. Many suggestions were made regarding I&E in those meetings. Pat has synthesized those recommendations and our goal here is to identify specific I&E activities which could help ameliorate any situations preventing us from implementing nonnative fish management actions needed to recover the fish. Tom Pitts asked how Colorado perceives public response to our efforts at this point. Randy Hampton said there is still significant public resistance to removal of northern pike and smallmouth bass among a small group of anglers (~8-10 who are fairly vocal), but from the public overall, he believes there is less resistance and more support. The small group of concerned anglers has voiced their concerns at angler roundtables, to wildlife commissioners, and to their Congressional representatives. Randy said he's tried to help them understand that they aren't going to be able to stop the nonnative fish management activities. Tom Pitts suggested emphasizing the positive things we're doing (e.g., Elkhead and things we're doing to create sportfishing opportunities, establishing native fish conservation areas, etc.). Randy said we can always "sell" sound biology to the public, so we need to emphasize that. Melissa thanked Randy for his efforts to defend the Program at the westernslopeanglers.com website. Randy described exchanges on the website, noting the counters indicate it is probably viewed by ~250 people. Tom Nesler underscored our need to show how this work is benefiting the native fish community. Since the data is not particularly accessible, Melissa asked how the Biology Committee could help Colorado in this regard. Tom Nesler said one-page summaries are most helpful. Randy agreed, saying that as we have good science showing success, one-page summaries outlining those successes will be especially helpful both within CDOW and with the public (and it may be best to wait to do additional I&E until we have that sound information). Kevin Gelwicks suggested the increase in small-bodied fishes in the Yampa treatment reach is one example of success (assuming the increase continues). Pat Nelson said the 2007 nonnative fish management synthesis reports also may provide information to show success. Debbie Felker recalled concerns expressed about getting

“the water development message” out and asked for input on that. Melissa suggested including a note in our nonnative fish management materials regarding the water connection. Tom Nesler countered that the vocal opposition already believes it’s the “powerful water development community” forcing CDOW to remove nonnative fish. John Shields suggested the Program’s nonnative fish management policy should be emphasized. Nonnative fish management is one of several activities we’re doing to recover the fish (and we’ve chosen to work to recover the fish instead of getting locked in conflict like that in the Klamath, for example). This puts nonnative fish management in the larger context. Dave Speas suggested noting where the Program benefits other species, the ecosystem, etc. Tom Nesler stressed the importance of getting the Program partners’ local representatives to embrace our efforts. Randy Hampton suggested that having all these benefits and the larger context described in one place would be helpful. Pat Nelson said that the new FWS brochure on “Why Save Endangered Species” may be a good addendum to our materials. Gary Burton suggested using our public website to post success stories and the like. The group agreed it’s most important to tell the truth, thus bad news (e.g., explosion of smallmouth bass in the Yampa River) also should be made known. Tom Chart suggested also noting that the Program and its partners are attempting to take a balanced management approach, meeting the dual responsibilities for native and sportfish management. Rich Valdez recommended including a short summary of the endangered fish status (because many people don’t know how well the fish are actually doing) and a brief comparison to other species recovery efforts (e.g., California condor). >Pat and Debbie will finalize the materials provided in advance of this meeting (>Committee members will submit any comments to them on these by April 14). With regard to a one-page summary, we’ll want to set the context, outline the responsibilities, and discuss accomplishments. The Biology and I&E committees agreed it would be good to meet together again in the future, perhaps after the nonnative fish management work plan is ironed out each year.

6. Sampling Elkhead conservation pool this spring – Pat Nelson said Bill Elmsblad is retiring next month and likely will not be able to do this sampling. John Hawkins and Dana Winkelman may be able to squeeze it into their schedule, but might need additional volunteers. The goal is to determine overwinter mortality; however not many fish were captured last fall (perhaps an issue of sampling efficiency), and the same could be true this spring. The question for the Biology Committee is whether this is worth doing, as it could dilute some of our early efforts to remove nonnative fish from the Yampa River. Melissa suggested that knowing the amount of overwinter mortality won’t change our nonnative fish removal efforts this year. Tom Nesler said that since winter-kill conditions didn’t develop, if we sample this spring, we’ll either find few fish like last fall or we’ll find more fish, indicating a sampling efficiency problem last fall. >Tom Nesler said he’d talk with Sherm Hebein and see what sampling CDOW can do this spring (perhaps have Billy Atkinson do the work); but noted that it may be difficult to time the sampling.
7. Report on stocking/recapture summary and data requirements – Tom Czaplá presented some preliminary graphical summaries of razorback suckers stocked in the Colorado and Gunnison rivers, the Green River, and in floodplain habitats. >Tom will get a draft report

with razorback sucker data to Chuck McAda by April 14. Chuck will review and revise the report and it will be sent to the Biology Committee by May 1. Tom and Chuck said they don't believe they can provide survival estimates at this point; Bob Muth suggested talking to Kevin Bestgen about this. Tom Pitts said another approach is to ask if we're getting the recaptures we thought we'd get based on our survival estimates in the stocking plans (and by the answer, we'll know whether we need to adjust the stocking plans). Tom Czapla will make a rough attempt at answering this question in his and Chuck's report. The other question is whether we need to begin monitoring to make razorback sucker population estimates. Chuck said the Colorado pikeminnow mark-recapture monitoring should provide equally good data for razorback sucker as for pikeminnow. Chuck suggested some funding should be dedicated to have (probably Kevin Bestgen) analyze and interpret the razorback sucker information along with the pikeminnow information.

Chuck McAda distributed tables of fish stocked in 2005 by each hatchery. Krissy Wilson suggested that condition factor be added and Chuck said the hatchery folks will need to measure fish weights (e.g., a subsample of 100 fish per lot or a 10% or something) in order to do this. The Committee agreed the information in these tables (plus weight/condition data) will be part of the hatcheries' standard data submission requirement as part of their scopes of work; >Tom Czapla will finalize the stocking data submission procedures and inform all the hatcheries.

8. Discussion/decision on Colorado pikeminnow stocking – Tom Czapla discussed the information he sent to the Committee last week on stocked pikeminnow recaptures. Tom Chart agreed we need more effort to determine if previously-stocked fish are still in the Rifle to DeBeque reach (supporting Tom Czapla's recommendations #2-4), but recommended against resuming stocking at this point since we know some fish are moving downstream where we have an existing pikeminnow population and since GVIC won't be 100% screened this year. Tom Nesler countered that stocking fish this year could help us better monitor their fate since Bob Burdick will be sampling those reaches this year and next. Another way to reestablish pikeminnow in the upper reaches would be translocating subadult fish from below the diversions. The Committee deliberated extensively, but decided not to stock pikeminnow this year. Tom Pitts suggested >the Committee needs to make a decision regarding stocking or translocating and monitoring pikeminnow before Price-Stubbs passage is complete. >Tom Czapla will ask Doug Osmundson how many wild fish were captured to get his population estimate and the total size distribution compared to the recaptured stocked fish.
9. Sampling/Handling Protocol – Tom Czapla said we want to prevent fish losses and need to address 3 things: 1) boat standardization; 2) fish transport; and 3) handling endangered fish when they're brought on the boat. John Hawkins has drafted procedures for PIT-tagging and for the pikeminnow population estimates. With regard to assisting stressed fish, instead of using oxygen bottles on the boats, Tom Czapla suggested supplying each crew with an oxygenator (if they work well, which John Hawkins is testing this week and next – Melissa recommended that Hawkins measure the dissolved oxygen). Dave Speas suggested the version of the oxygenator which would connect to a 12V battery would

likely be the best choice. Krissy commented that continually replacing water in the cooler also helps maintain dissolved oxygen. >Committee members will provide comments on the draft PIT-tagging SOP and Green River pikeminnow sampling procedures and provide comments by April 14. Rich Valdez recommended adding an item to the PIT-tagging SOP to use your forefinger as a gage for locating the needle and avoiding intestinal puncture (as well as steadying your hand).

10. Update on establishing native fish conservation areas – Kevin Gelwicks forwarded Pat Martinez’ presentation and a memo to Wyoming fish staff and will promote the idea at a meeting next week. Wyoming is considering chemical treatments of nonnative fish to help native fish. Tom Nesler said CDOW hasn’t attended to this yet. Tom and Sherm Hebein will need to present the overall idea (statewide perspective) to the aquatics staff. Krissy Wilson said Pat Martinez gave his presentation at their AFS chapter meeting last week (where 75% of the meeting was geared to native fishes). Utah still has considerable differences of opinion between native and sportfish biologists, so this will be an uphill battle, but their new aquatic chief is supportive, so Krissy will discuss it with him and continue to work on this. The Committee is strongly interested in this idea, but recognizes this will be a long process; therefore, the States will provide updates to the Committee as they have new developments to report.
11. Yampa River smallmouth bass translocation – Tom Nesler will make sure CDOW has provided information to the Program Director’s office on where fish will be translocated.
12. Report review procedures and how non-Program reports are addressed – Angela Kantola reviewed recommended changes to the procedures (based on previous meeting discussions), and noted that the Committee also could require line numbers in draft reports for ease of review (the Committee agreed). Tom Pitts asked if this process applies to reports submitted to the Water Acquisition Committee. It does not, but >Tom Pitts will ask the WAC to adopt something similar. The Committee discussed the modifications and finalized the revisions. >Angela Kantola will post the revised procedures to the web.
13. Review reports due list - Krissy said the Price River flow recommendations report will be submitted to the coordinator by September 1. With regard to reviewing Pitlick’s report, he may be able to coordinate a trip back to Colorado with a Biology Committee meeting earlier than August. Tom Czapla said information for the Cataract Canyon humpback chub population estimate report was submitted as part of the annual report, as outlined in the scope of work. >The Committee will review this [annual report](#) at their next meeting, then discuss whether or not this review process is adequate or if they want to require final reports on repeated population estimates in the future, after all.
14. GIS update – George Smith reviewed the project he had CRWCD do a few years ago, available online at <http://www.southwestdata.org/fishdata/viewer.htm>. George now would like to have the Access files of capture and PIT tag data (that Tom and Chuck have been working on) imported into this GIS. The data would have to be updated annually. The Committee asked how this information might be used and by whom and discussed

concerns regarding making data public before it's been published and making fish location data public. Bob Muth commented that GIS is a very powerful data storage and retrieval system. Chuck McAda said he sees GIS as useful tool for researchers to summarize data, but doesn't see it being particularly useful more generally. >George Smith will develop a scope of work to evaluate this tool (~\$5K). One question we'll need to address is whether we want to use it for detailed data analysis, specific data retrievals, and/or big-picture data views.

15. Update on information needs to determine if reservoir operations provide opportunity for nonnative fish escapement – George Smith distributed a draft spreadsheet he's begun to develop (working with Pat Martinez and Trina Hedrick). >The next step is to contact the reservoir operations to determine operations (Dave suggested including frequency of spills during the period of record). Tom Nesler said some of these reservoirs require lake management plans (and should be noted in the spreadsheet). The Committee will use this information to assess threats of nonnative fish escapement and determine if there are operational changes that are needed to reduce those threats.
16. Next meeting: date, agenda items, times and location – Tuesday, July 18 in Grand Junction 8:00 a.m. to 4:00 p.m. Kevin Gelwicks will assume chairmanship at that point (and the Committee will need to elect a new vice-chair). Agenda items will include proposed criteria for nonnative fish removal; response to concerns about propagation issues; discussion of stocked fish summaries; review/discussion of white paper on options for changes to stocking plans; review of the Yampa humpback chub estimate report; review of Cataract Canyon humpback chub annual report; review a draft GIS SOW; discussion of stocking or translocating and monitoring pikeminnow upstream of the diversions; possible review of Pitlick's Colorado River channel monitoring report; and possibly use of pheromones in nonnative fish control.

ADJOURN 5:15 p.m.

April 7, 2006

CONVENE: 8:00 a.m

17. Ouray floodplain management - Mickey Heitmeyer & Leigh Fredrickson presentation (*See [Evaluation of Ecosystem Restoration and Management Options for the Ouray National Wildlife Refuge, Utah](#)*) – Dan Alonso introduced Mickey and Leigh. Dan said this study will serve as the basis for the Ouray NWR habitat management plan and the Refuge wants input from the Recovery Program on that plan. Leigh Fredrickson offered some history and background of their work at Ouray and plans for restoring the natural ecosystem processes. Mickey presented the results of their study, emphasizing the need for downstream levee breaches that allow inflow at ~16,000 cfs (upstream breaches eventually silt in) and the need to avoid continuously flooding sites for more than 2-3 years. The goals of the habitat management plan will be to maintain a complex of historic habitats; improve river connectivity to the wetlands; emulate natural water regimes; enhance riparian woodlands, and enlarge habitat patches. Mickey outlined

recommendations for Wyasket, Johnson, Woods (Old Charlie), Leota, and Sheppard. Dan Alonso said they are implementing these recommendations (some more quickly than others, as some require permits, etc.). Leigh noted that the levees and breaches do have to be regularly maintained. Rich Valdez asked about inundation elevations as related to reduced peak flows; Mickey said we need to create breaches at ~16,000 cfs to restore historic inundation frequency. Pat Nelson asked about theories on how wetlands like Johnson became “bowls;” Mickey said they’re not deep bowls, so natural levee deposition probably played a role, but he thinks river dynamics probably operated over long time frames (e.g., maybe 1000-year events) to create bowls.

18. Green River flows

Updated forecast – Dave Speas said the forecast hasn’t changed much; we’re still looking at a hydrology of 106% of normal in the Green and Yampa runoff of ~120%, with a total forecast at Jensen of 30-40% exceedence; so we likely can attain 18,600 cfs for two weeks (what the FG TWG has recommended), providing these hydrologic conditions persist. Western has proposed an alternative if exceedence goes beyond 40% (still an average, but not quite as wet year).

Changes or additions to the entrainment SOW – The Committee discussed sampling levels at various flows and breaches (in relation to the Ouray NWR presentation). Gary asked if we have enough information from bottom inflow/outflow configurations; Pat said they considered including Stirrup, but already looked at it for 2 years and found it behaves as expected, so they decided to study three flow-through sites, instead. So far, the upstream breaches have not filled with sediment. No changes were made to the scope of work.

Gary introduced their alternative proposal should exceedence be greater than 40%, noting that it doesn’t impact the scope of work or the current TWG proposal. The alternative proposal is for an instantaneous peak of 18,600 cfs followed by 2 weeks at 14,000. Dave noted that Reclamation’s original alternative at this flow level (prescribed in the ROD and in the flow recommendations) was 18,600 for one day then a minimum flow of 8,300 cfs for an unspecified duration. Melissa said she doesn’t think we need to target 14,000 specifically for 2 weeks (she’d rather see 16,000 cfs or 18,000 cfs, actually); Gary said he doesn’t think we would drop flows to get to 14,000. Tom Chart questioned whether we have a specific research need for 14,000 cfs. Kirk LaGory explained the desire to maintain at least a minimum connecting flow. Since this won’t change research or monitoring, and noting that we didn’t intend floodplains to connect each year, Melissa said she doesn’t see the need for a 14,000 cfs target (and doesn’t want to see this become a permanent target). Kirk suggested it’s possible we could entrain more fish at a lower flow maintained for a longer period of time, and this could be an opportunity to test that. Bob Muth clarified that the questions before the Biology Committee should be: 1) do we support flows to entrain larvae for the longest period possible (yes); and 2) are there data to support connection at 14,000 cfs minimum (yes). Dave Speas emphasized that “yes” with regard to 14,000 cfs relates *only* to connection. Then the TWG can take this information and go from there. Rich Valdez asked about the consideration in the

proposal that says: “Entrainment rates in nursery habitats were site-specific and no clear difference was seen in rates at different flows. Entrainment occurred at 14,000 cfs and no other flow was unambiguously better.” Rich and Dave and Tom Chart suggested that this is overstated and/or premature. Kirk and Gary said the proposal is neutral with regard to bypassing flows. Kevin Christopherson commented that Stewart Lake and Thunder Ranch entrain larvae at 14,000 cfs. Dave Speas said he believes Rick Clayton would take exception to the fifth consideration: “Volume of water available for entrainment is fixed and there is a tradeoff between magnitude and duration. The ‘best’ flow is the one that provides good entrainment for the longest period of time for any given volume.” Rich suggested that it makes sense to try to add another data point, but 14,000 cfs makes people nervous. Kevin Christopherson said they’re willing to take measurements at as many sites as possible if we have 14,000 at any duration (unfortunately, they’ll probably be too busy with sampling to make measurements at additional sites at higher flows). Dave Speas said his main objection is to the process and this proposal coming in at the eleventh hour. Gary said when the Biology Committee discussed the letter, it was apparent this would be discussed at the TWG (which has now sent it back to the Biology Committee). Gary also noted that the process is very compressed this year and no one expects such a short timeframe in future years. The Biology Committee has answered the two questions outlined above, and thus responded to the TWG. Dave agreed the process will not be so compressed next year. Dave added that (with Gary and Tom Chart’s assistance) he’s begun to work on a study plan to work on information gaps. The Committee briefly considered the potential to use flow management to disadvantage nonnative fish and agreed this should be part of the study plan/Program guidance.

19. Other – Dave Irving said his office needs field assistance the week of April 17th (2-3 people) (perhaps a Deso/Gray trip) and the week of April 24th (4 people) (mainly White River).

ADJOURN 11:30 a.m.

Biology Committee Meeting Assignments
April 6-7, 2006

Carry over from previous meetings (some assignments modified in this meeting):

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). Tom Chart and others are now working on this. The Yampa aquatic management plan can't be revised until this is accomplished (Biology Committee has requested this by the end of the year). Tom Nesler will discuss the status of the revision with Sherm Hebein (complete revision or just an update of nonnative fish control and native fish management sections). The Yampa plan will be revised before Bill Elmlblad retires in 3 months. Tom Chart will work with Kevin Bestgen, Al Pfister, and Patty Gelatt to develop draft criteria for levels of nonnative fish removal (and nonnative fish population levels) and bring it back to the Committee for discussion and presentation to Colorado. Tom Chart will try to have something to the Committee two weeks prior to the next (April) meeting. *No time on April agenda; deferred to July 18 meeting.*
2. The Service will provide background information on propagation issues/concerns 2 weeks prior to the December meeting (this was deferred to a future meeting). A draft response from Chuck is circulating and will be provided to the Committee for review at a future meeting (after Ouray's information is incorporated). *No time on April agenda; deferred to July 18 meeting.*
3. Vernal CRFP will keep the Biology Committee informed of the number of smallmouth bass they capture in the White River and if any change is needed in their sampling effort. Dave Irving will modify the FY 06 population estimate scope of work. Researchers will report numbers of smallmouth bass captured from the White River to Committee as quickly as possible. PI's will need to coordinate with Pat Martinez on collection/delivery. *Pending.*
4. The Service and Program Director's office will prepare description of the intended process, time frame, and lower basin involvement for the 2007 recovery goal review (perhaps a scope of work). *Pending.*
5. Krissy Wilson will forward Utah's report from the three species plan to George Smith. *Pending (Trina and George discussing what reports are needed.)*

New Assignments

1. Angela Kantola will post the revised meeting/conference call summaries to the listserver. *Done.*
2. Tom Czapla will work with an ad hoc group to develop a white paper describing current stocking results and outlining options (e.g., stocking times, locations, sizes, etc.) that the

Program should try in order to increase survival. Tom will identify the ad hoc group and a deadline for completing the draft white paper by April 14.

3. Pat and Debbie will finalize the nonnative fish I&E materials provided in advance of this meeting (Committee members will submit any comments to them on these by April 14).
4. Tom Nesler will talk with Sherm Hebein about what sampling CDOW can do in Elkhead this spring (perhaps have Billy Atkinson do the work).
5. Tom Czapla will get a draft report with stocked razorback sucker data to Chuck McAda by April 14. Chuck will review and revise the report and it will be sent to the Biology Committee by May 1.
6. Tom Czapla will finalize the stocking data submission procedures and inform all the hatcheries.
7. The Committee needs to make a decision regarding stocking or translocating and monitoring pikeminnow before Price-Stubb passage is complete.
8. Tom Czapla will ask Doug Osmundson how many wild fish were captured to get his pikeminnow population estimate and the total size distribution compared to recaptured stocked fish. *Done (posted to BC 4/7/06).*
9. Committee members will provide comments on the draft PIT-tagging SOP and Green River pikeminnow sampling procedures and provide comments by April 14.
10. Tom Pitts will ask the WAC to adopt a report review procedure similar to the Biology Committee's.
11. Angela Kantola will post the revised report review procedures to the listserv (*done*) and web (*pending*).
12. The Committee will review the Cataract Canyon humpback chub [annual report](#) at their next meeting, then discuss whether or not this review process is adequate or if they want to require final reports on repeated population estimates, after all.
13. George Smith will develop a scope of work to evaluate GIS applications (~\$5K).
14. George Smith will continue developing the spreadsheet on reservoir operation (related to potential nonnative fish escapement); the next step is to contact the reservoir operations to determine operations.