

Revised March 7, 2007

Biology Committee Meeting
January 18-19, 2007, Grand Junction, Colorado

Biology Committee: Tom Chart, Tom Pitts, Misti Schriener (WAPA), Melissa Trammell, Kevin Gelwicks, Krissy Wilson, Dave Speas, Sherm Hebein, and John Hawkins. CREDA was not represented.

Other participants: Dave Irving, Pat Nelson, Tim Modde, Tom Czaplá, Chuck McAda, Angela Kantola, George Smith, Bob Muth, Trina Hedrick, Rich Valdez, Sam Finney, John Hayse, Kevin Bestgen, Craig Walker, Bob Burdick, Mark Fuller, Lori Martin, Paul Badame, and Derek Elverud.

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

Thursday January 18

CONVENE 2:00 p.m.

1. Review/modify agenda – The agenda was modified as it appears below.
2. Approve [November 27](#) and [November 28](#) meeting summaries – The summaries were approved as written.
3. Review assignments from November 27 and 28, 2006 meetings - The Committee reviewed assignments from previous meetings (as were listed in the meeting agenda). Completed assignments and those still pending can be found in the assignment list in Attachment 1.
4. Review/approval of the Starvation report (2002-2005 escapement study by Brunson & Christopherson). Melissa Trammell asked about Tables 1 & 2 numbers of walleye captured in lower Green, noting that probably fewer were caught in 2004 and 2005 because of reduced effort. Also, the scientific name of walleye has been changed. Kevin Gelwicks noted his copy has some pagination problems beginning on page 25. Trina said she’s waiting on information on the elevation of the outlet drain. >Trina will revise the report and post the final version to the listserv.
5. Discussion of fish handling protocol and its use – Tom Czaplá reviewed results of the surveys he received. John Hawkins discussed next steps. John said David Ward reported higher mortality rates in hatchery bonytail pit-tagged by *more experienced* staff, which emphasizes how serious we need to be about handling procedures. Rich Valdez agreed, and noted that technicians can’t learn the nuances of pit-tagging if they’re only shown once; PI’s need to make sure that all technicians fully learn the technique. >John and Tom will develop a handbook clearly outlining operating procedures and provide that to field researchers by mid March. The Committee discussed practice sessions; John said he’ll include something about that in the handbook. Rich Valdez said white suckers are

good surrogates and emphasized the value in having new technicians tag a few white suckers, then open them up to see where the tag ended up. Tim Modde noted that chubs seem especially delicate. Tom Czapla is also looking into a short video on pit-tagging fish. (This might also have application for electrofishing boat setup, etc.) A condition of each permit might be that there is a process in place for training those who will handle fish. Dave Speas noted that he believes BioMark has a pit-tag training video on their website (or on the Greater Columbia River website). The Committee also discussed the need for protocol for where to send any endangered fish that die (including those which may be in various freezers). >After the draft handbook comes out, Tom Czapla will talk with PI's about their training procedures, etc., and determine if a workshop is needed.

6. Review of SOW to analyze survival rates of stocked razorback sucker – Bob Muth reviewed the history and noted that the most recent version of the draft scope of work which addresses all the peer review comments was just sent out by Kevin Bestgen. Tom Pitts asked how important it is to include 2007 data. Kevin said more years definitely improve survival estimates. Tom Pitts asked if we could do something of a quick-and-dirty estimate in addition; Kevin said he would look into the data Chuck and Travis and Tom have compiled. Dave Speas said he believes that covariates such as size at stocking, stocking location, time of year, hatchery, etc. might deserve more attention up front. Kevin said if there's sufficient variation and information, they plan to analyze those variables. The key will be whether there are enough recaptures. Melissa Trammell noted that we also want to know if our current monitoring programs are adequate; thus if data are insufficient for some of the analyses, that could suggest certain changes to monitoring. Chuck McAda said he hopes Kevin will also be able to look at all the data with 2008 included. The Committee approved the scope of work.
7. Finalizing a decision on whether or not to stock pikeminnow above Price-Stubb before passage is completed. Tom Czapla reviewed the history of this discussion (as previously posted to the Biology Committee). Since we know fish move downstream, the question is whether we want to augment the existing Colorado River pikeminnow population. If we wait until Price-Stubb fish passage is provided, stocked fish that move downstream would at least be able to return upstream. Alternatively, Melissa noted, pikeminnow could be stocked in the Gunnison, where the Redlands fish passage allows the fish to go back upstream if they move down. We believe the pikeminnow population in the Colorado River downstream of the diversions is currently increasing. The purpose of stocking upstream would be to expand that population upstream. Misti Schriener suggested that it might be useful to wait until Price-Stubb passage is complete and see if the existing population naturally expands upstream. The Committee's consensus was to *not* stock any more Colorado pikeminnow in the upper Colorado River or Gunnison River at this point and to revisit the question after Price-Stubb fish passage has been completed and we have seen if fish move upstream naturally. (Chuck noted that pikeminnow stocked in the Gunnison River upstream of Redlands and subsequently recaptured have all been recaptured downstream). Currently, all hatchery-produced pikeminnow are going to the San Juan River. The pikeminnow broodstock is held at Dexter and meets our genetic management guidelines. The next Colorado River pikeminnow population estimate will begin in 2008. Chuck said a recent journal article

discusses pikeminnow genetics at Dexter and in the wild. Bob Muth said he wants to be sure Green River fish are appropriately represented in that broodstock. >Tom Czapla will follow up on the Dexter genetics and get back to the Committee.

8. Brief introduction/discussion of the draft floodplain operational plan – Dave Speas sent out a draft scope of work (originally authored by Tim Modde) for an annual operating plan for our floodplain sites as a whole. Tim has since developed a draft scope of work just for Johnson Bottom. So, in addition to the draft “umbrella” SOW, there are also draft SOWs for Johnson and Thunder Ranch, as well as a Utah monitoring plan. Pat Nelson said much of the discussion boils down to one’s view of recovery, that is self-sustaining populations, but with what level of continuing intervention at floodplain wetlands? Pat says he hopes to configure the floodplains so they successfully entrain razorback larvae which subsequently recruit to the river in 2-3 years. Intensive hydrological management of floodplain wetlands is at the other end of the spectrum. Likely, we’ll need to do some management until the wild population and reproduction is adequate. When he recommended monitoring the floodplains, Pat envisioned determining whether they hold water year-round, how often they reset, how long they can sustain fish, etc. Tim said he didn’t intend the Johnson Bottom scope of work for funding, but rather as an example. He thinks the umbrella scope is more important so that we have options identified based on a range of possible hydrological conditions (and can thus take advantage of different opportunities presented by different hydrologic conditions). Tim said he’s come to believe that we won’t have water in these floodplains naturally in the majority of years, so if we want to rear fish, we’ll have to pump water. >Pat Nelson will post Tim Modde’s most recent umbrella scope of work to the Biology Committee. Dave Speas suggested we may want to focus on the Stirrup wetland this year, thus we should do a specific plan for the Stirrup this year; >Tim and Trina will draft and distribute this scope of work. We also need to start on a monitoring plan this year; >Trina will draft & distribute the monitoring scope of work. >The Biology Committee will discuss these scopes of work on an upcoming conference call (February 1).
9. Schedule next Biology Committee meeting, conference call – The Program Director’s office will post draft RIPRAP revisions, draft RIPRAP assessment, and draft FY 08-09 Program guidance for committee review by February 9. The Committee scheduled a conference call (with a possible web conference component, if needed) to discuss the Green River Study Plan as well as floodplain management from 2:00 – 4:00 p.m. on February 1. The next meeting will be March 7-8 in Grand Junction (maybe near 24 Road, rather than at the Holiday Inn), starting at 8:00 a.m. on March 7 and likely running through most of the day on March 8.
10. Review reports due list – Angela Kantola distributed the latest update. >Tom Czapla will check on the status of the Colorado pikeminnow report and if anything can be done to get information back from Ken Burnham as soon as possible. >Chuck McAda needs to get the Black Rocks humpback chub report back to the Committee with peer review comments incorporated and will try to do that before the next meeting. >The Program Director’s office will get comments to Utah on the Price River report. >Utah will get the Cataract humpback chub report out. >George Smith will revise the due date for 85f (this

will be folded into the USGS work, report due in 2008). >Angela Kantola will revise and post an updated list (and will include due dates for the nonnative synthesis reports). >Tim Modde will let the Committee know when his Yampa Canyon report is ready for another review.

11. GCMRC – Tom Czapla reported on a conference call with Matthew Andersen, Lew Coggins, and John Hamill last week. GCMRC is planning to do a 2-3 pass mark-recapture population estimate (concurrent sampling) in the LCR and mainstem this year. Tom said they encouraged GCMRC to do this just once (in light of concern about humpback chub sampling prior to spawning) to verify the ASMR model. Rich said it will be difficult to distinguish mainstem from LCR fish in the spring (one reason that he and others recommended fall sampling).
12. Wahweap Hatchery damage – Krissy Wilson said a storm event last October caused major flood damage at Wahweap which eroded the drain system to two of the Colorado River fish ponds. They're working with NRCS on stream "restoration" to prevent future events, but Utah will need help from the Program (<\$25K) to repair the outlet structures on the endangered fish ponds. >Krissy will get a proposal from Quent and submit that to the Program.

ADJOURN 5:00 p.m.

Friday January 19

CONVENE 7:30 a.m.

13. Report on 1/9/07 field workers' bass removal workshop (summary previously distributed to Biology Committee) – Tim Modde reviewed highlights of the meeting, noting the goal was to establish a target and strategy for smallmouth bass removal. They defined the target as a population crash, which requires a minimum of 65% exploitation (within year) (the models indicate that you have to remove at least 65% to begin to cause a population decline.) The group then discussed the number of passes needed to achieve the 65% and developed recommendations for reallocating field efforts where possible (not including Yampa Canyon and Colorado River). Population estimates would be needed to track the population trajectory over time. (The Committee discussed the frequency of population estimates, which is a matter of debate. Sam Finney re-emphasized the difficulty in getting good population estimates where probability of capture is low). Tim said the group would like to have a similar meeting *before* the nonnative fish workshop next year. Tim added that he believes we could be more predictive with our northern pike removal efforts by applying this same modeling approach we've used for smallmouth bass. Tim added that he believes we should focus our resources on removing enough fish to begin to "tip the balance," (i.e., achieve at least 65% within-year exploitation), and that initially, this is more important than monitoring nonnative or native fish response. Dave and Tom Chart emphasized the need to analyze the effect of mark-recapture on our exploitation rate (for each population). The Committee agreed.

14. Review of nonnative fish management scopes of work (see draft nonnative fish work plan guidance Pat sent to Biology Committee) - Pat discussed the Yampa River strategy, which should serve as a template for the strategies for other reaches. Strategies should include target objectives for percent reduction of targeted fish species and native and endangered fish species response (species composition, relative abundance, etc). We need to determine how this response will be monitored (small-bodied fish in slackwater habitats, large-bodied fish in main channel habitats) and when monitoring needs to begin.

Colorado & Gunnison rivers – Pat said Bob Burdick recommends shifting most of the effort from the Gunnison River (#121a) to this study. There would be one marking pass. Bob Burdick clarified that if they do one marking pass, realistically they probably can only do six (not seven) subsequent removal passes. Dave Speas noted that logistics, rather than data, seem to be driving the number of passes on the Colorado. Will six removal passes be adequate to achieve 65% within-year exploitation? Bob Burdick said no; ~35 passes would be required to achieve 65% exploitation, and each pass requires 7 working days (infeasible). Krissy asked whether it's worth the effort, then. Chuck McAda said that while the models recommend 65% exploitation, they have yet to be verified, and because of the uncertainties, he believes this is a worthwhile effort. Melissa Trammell emphasized the lower densities of smallmouth in the Colorado River and the need to “keep a lid” on the population. Paul Badame agreed, noting that the Colorado may be similar to the lower Green where bass recruitment is low and thus, removal that doesn't achieve 65% is still useful. CDOW is willing to help with this work (details to be determined, then a scope of work will be developed). Bob Burdick said he sees sampling to monitor the fish community (small-bodied and large-bodied) as separate efforts, because that sampling is very different than sampling for most effective smallmouth bass removal (even monitoring the mainstem species composition). Tom Chart emphasized the importance of characterizing the native fish community on the Colorado (soon). Bob Burdick said Doug Osmundson has drafted a scope of work (~\$18K) to do this work in the fall (would link to his '94-95 food web dataset). Chuck said he still needs to determine if they'll have the manpower to accomplish it this work (as well as the proposed ISMP sampling). This may be where CDOW can help. Mark Fuller said the data from their species composition sampling in certain reaches on the Yampa River in 2001, 2002, and 2004 has been very useful (and the sampling didn't seem to detract significantly from removal efforts). Melissa and John Hawkins described where they've used similar sampling strategies. Bob Muth suggested focusing on nonnative fish removal today and that we need to take a basinwide look at how we're going to monitor native fish community. The group agreed to moving the Gunnison effort to the Colorado and conducting one marking pass. The Gunnison scope of work and permit application should specify the list of nonnative fish captured incidentally which will be lethally removed. Bob Muth asked if the concern about beginning sampling after pikeminnow spawning needs to be considered in other rivers/reaches. Spawning sites on the Yampa are known (and avoided), but waiting until after spawning would cut the Yampa sampling period in half. John Hawkins said they're trying to sample before spawning, which is the most effective time to sample on the Yampa.

Yampa River

98b Hayden to Craig – Finney

- Seven passes April–June (as in previous years)
- Northern pike: Mark on first pass. Remove on subsequent passes, and stock into Loudy Simpson or YSWA.
- Smallmouth bass: On all passes, mark and release; however, if start seeing numerous bass, call CDOW: Sherm Hebein (970-255-6186, now in Grand Junction rather than Montrose), Tom Nesler, or Steve Yamashita. Melissa Trammell and Tom Chart and Kevin Gelwicks and Dave Speas said they think these fish should be removed, not marked and released. Sherm said Colorado views this reach as a buffer zone between critical habitat and upstream fishes. There aren't that many smallmouth there, but if we see an explosion in the number of bass there, then Colorado would discuss removal. Otherwise, they'd like to see how this buffer zone works. Sam Finney said he can see this as a northern pike buffer, but it wouldn't seem to apply to smallmouth.

Sam Finney asked about removing northern pike in public waters near Steamboat (Chuck Lewis area), the 98c reach. One crew could remove a significant number of fish in 3 days. Melissa noted that this would be a good time to catch the fish while this area is being re-constructed and the pike are still concentrated there (and prevent them from being displaced downstream). Local anglers in the area prefer trout. (More information on fish that moved down from this reach will be in the upcoming synthesis report.) The Biology Committee believes such removal of pike above Hayden is necessary to adequately reduce pike numbers in the Yampa River. Sherm said CDOW will address the Chuck Lewis SWA (removing pike in areas that are isolated from the river) and will let the Program know if they need any assistance.

98a Craig to DNM – Martin (10 miles), RM 134-124, also RM 100 - 58

- Northern pike (RM 134-50), stays the same: Mark on first pass. On all removal passes, remove and stock into Loudy Simpson. Melissa questioned the need to get a population estimate *each* year. Lori's crew has caught ~25% of the fish on the first (marking) pass, then most of those fish aren't seen again. If we continue with the marking pass each year, Melissa suggested we add another removal pass (John Hawkins said this might be most appropriate just in pike [and bass] concentration areas). Lori said the difficulty is getting all their passes done in all 5 reaches; realistically they can only commit to 4 passes, with 5 as a possibility, but not assured. Dave Speas and Tom Chart concurred with dropping the marking pass (i.e., not doing a marking pass each year). Tom suggested Hawkins' reach could provide an indicator of the population. Melissa and Dave noted that catch rates might provide a good index of relative abundance in this reach. Bob Muth pointed out that the bass removal criteria apply to Hawkins' reach, not really to Lori's (for pike, the criteria apply to both reaches). Bob asked how useful another pass would be and if there are other techniques we should use to try to remove pike in this reach (especially if they may be avoiding capture after the first pass). Sherm said that CDOW currently requires population estimates for all river reaches in Colorado

in 2007 except for DNM (Yampa Canyon). Sherm suggested the Program might examine other ways of getting a population estimate in Yampa Canyon; then perhaps that could be extrapolated to other reaches. Sam and Melissa said that this will only work for pike, not for bass, so there's nothing to extrapolate. Lori said fyke-netting at the beginning of the season also is useful, but probably would require a separate crew. Paul asked about removing the pike captured in fyke nets; Sam Finney said that while this would affect the precision of the population estimate, it might not affect the accuracy. >CDOW will discuss whether they can do the fyke netting (if not, perhaps FWS could work with Lori on this, CDOW will discuss). Dave Speas emphasized the synthesis report requirement to assess ability of catch rates as population indices. Melissa emphasized that all of these decisions will be revisited for 2008. Tom Chart emphasized that from a technical perspective, the most logical thing would be to remove the marking pass to improve the exploitation rate (and also use other capture techniques); keeping the marking pass is based on policy.

-Smallmouth bass: Within the South Beach reach (RM 134-124) Mark on first pass. On all removal passes, if >10" remove and stock into Elkhead Reservoir or Craig Pond (not to exceed 200 from 98a and 125 combined), if <10" euthanize. John Hawkins said the bass workshop recommended 8 removal passes in the 10-mile reach Lori sampled above Hawkins 124-100 RM reach (Lori did 1 mark, 3 removal passes in 2006). John said they could help Lori with an extra pass in the 10-mile reach above. The Biology Committee supported 4 additional passes in this reach. FWS might be able to do the additional 4 passes. >CDOW will work with Pat and John and Sam to determine how to accomplish 4 additional passes. There's another concentration area near Maybell (RM 90-80) where additional removal was recommended by the workshop participants (again, 8 passes would be needed), but there might be public relations considerations since Lori's worked so hard to build relationships with landowners in this area. Sherm said CDOW will have to discuss the potential expansion of bass removal in RM 90-80; >he will get a decision on this as quickly as possible. The Biology Committee supports expanded removal.

125 – Hawkins (24 miles, RM 124-100) 2007 would remain the same as previous years.

-Northern pike: Mark on first pass. On all removal passes, remove and stock into Loudy Simpson.

-Smallmouth bass: Use new tag colors or numbers beginning in 2007 (to help evaluate escapement from Elkhead Reservoir). Mark on first pass. On all removal passes, if >10" remove and stock into Elkhead Reservoir (~200 total from 98a and 125 combined would go to the Craig Justice Center Pond), if <10" euthanize.

-Continue current efforts to evaluate species composition response to nonnative removal (i.e., project #'s 125 and 140).

110 - Fuller

-Northern pike: Remove and euthanize when encountered.

-Smallmouth bass: Remove and euthanize on all passes (no mark/recapture pass in 2007).

-Channel catfish: Discontinue for 2007. With no removal upstream and downstream, this area is being repopulated each year. SOW will be revised to reflect this. Because of the reduced catfish effort, they will be able to sample the large-bodied fish community in several 1-mile reaches.

-Discontinue bass and catfish relocation efforts. (Yes, for 2007.)

-Continue efforts to monitor response in species composition in main channel habitats. (Adding monitoring of species composition within slackwater habitats will be deferred for this year while we address this issue basinwide.)

Krissy suggested burbot potentially could be captured in this area, and so should be added to the scope of work and permit application.

Duchesne River

-Discontinue nonnative removal portion in 2007 (Pat Nelson recommended considering one pass in 2008 to check on things) (>Dave Irving will talk to the Ute Tribe about this.)

-Move effort to Split Mountain

White River

-Remove and euthanize any smallmouth bass encountered during CPM monitoring. Document when and where bass were captured. (This will be added to the scope of work and permit application.) Pat Martinez wants smallmouth bass and black crappie from the White River. Tim Modde suggested also removing black crappie. Sherm said he would approve that if it's in the scope of work and permit application.

Green River

-Discontinue Duchesne River project #124 in 2007.

-Discontinue Desolation Canyon smallmouth bass removal in 2007.

-Discontinue project #109 in 2007. Remove northern pike during all other sampling efforts, including smallmouth bass removal and CPM monitoring.

-From Echo Park (RM 345) to Split Mountain (RM 319), one smallmouth bass marking pass and 14 removal passes (Vernal FWS and Moab UDWR). In addition, assist with efforts between Split Mountain (RM 319) and the Duchesne River (RM 248)

-From Split Mountain (RM 319) to Duchesne River (RM 248), one smallmouth bass marking pass and 9 removal passes. In addition, assist with efforts between Echo Park (RM 345) and Split Mountain (RM 319).

-Continue to monitor response in species composition in slackwater habitats (project #144)

General

For all reaches in Colorado, if nonnative fish species are encountered that are not covered in the permit application, call CDOW immediately. Sherm asked the Committee's recommendation on gizzard shad, and the Committee recommended they be removed as they are encountered (and also documented). Sherm asked that gizzard shad be addressed

in all the Colorado permit applications. Krissy said this goes for Utah, also. Sherm also asked that field folks document and report anything unusual (e.g., a member of the public reported a pile of catfish on the riverbank that prior to the field season, so someone other than Program biologists was removing fish).

Add to all FY 2007 nonnative fish removal scopes of work:

- List of all fish species that will be removed, and final disposition (e.g., relocated, euthanized)
- Describe how euthanized fish will be (discreetly) disposed of (e.g., buried, taken to dump, etc.).
- Describe all planned sampling activities and gear types (to match with collection permits)
- Describe planned experimentation with new techniques and gear types (strongly encouraged)
- Describe how smallmouth bass spawning/nesting periods and locations will be determined, if possible (strongly encouraged; see guidance from Tom Nesler)
- Describe how species composition of smaller fish is being or will be evaluated in slackwater habitats (e.g., reinstate YOY ISMP protocols?) (Deferred for areas where it's not yet being done.)
- Describe ways in which data will be presented in annual reports to be comparable to target criteria (e.g., # adult northern pike and smallmouth bass per mile; percent composition of fish species in both main channel and slackwater habitats [where this work is being done], etc.). (Deferred for areas where it's not yet being done.)
- State that data will be presented for all years of study within each annual report (e.g., population estimates, catch rates, catch rates per river mile, etc.).

>Pat will revise and distribute the FY 07 draft work plan guidance "bullets" document and send that out on Monday; PI's will revise their SOW's by the end the week (January 26). The Program Director's office will then determine if there are funding shortfalls and/or areas that require additional Committee discussion.

15. Upcoming nonnative fish web presentations – Pat Nelson said he's lined up experts up to give us web conference presentations on techniques such as genetic modification, use of pheromones, etc. He will determine when they are available and announce the dates and times of the presentations. John Hawkins said it would be helpful to be pointed to any useful references in advance for preparation. Pat will do that and also post the presentations in advance if that's possible.
16. Discussion of nonnative fish management data analysis and peer review – In light of the large amount of data being collected, Dave Speas said the question is can/should we be doing more with the data, and if so, should we have a statistical/biometric consultant help us. Melissa said she'd like the PI's to tell us if they believe they can meet what's being requested in the synthesis reports, and if not, do they need more time and/or do we need outside expertise? So far, it seems the PI's believe the things Pat has asked for in the synthesis reports are already things they were planning to include. Dave expressed

concern that we may need to ask PI's to spend more time with data analysis (and less time in the field). John Hawkins said he believes the field work will be compromised if this is done – they need to be in the field with their crews. Paul Badame said it would be helpful to distinguish 2 year old fish (150-250mm) from adults next year to help get a handle on recruitment. Dave added that this and our earlier discussion regarding expanding field work suggest that we are really bumping against the limits of our current resources (PI's, crews, equipment, and funds). Regarding peer review, Pat Martinez is willing to review the synthesis reports and is contacting other experts outside the basin who would be willing to review them, also. Rich Valdez also has agreed to provide at least a cursory review. Pat said he also wants Tom Nesler to review them. The diagram in the Green River study plan illustrating the 4 different levels of analysis we typically employ in the Program is applicable here. John Hawkins endorsed getting overall peer review of our strategies/plan/approach. We'll have a better idea of additional data analysis needed after we have the synthesis reports, and these could be combined with the strategy for peer review.

17. Review of revised Yampa River nonnative criteria - Tom Chart provided graphs that speak to the criteria that were agreed on (for now) for the upper Yampa (RM 100-124). Tom said we may also want to consider adding a criterion related to the annual exploitation rate. The Committee agreed. >Tom will send revised criteria to the Committee 2 weeks before the March meeting (so the Committee can finalize the criteria at that meeting).

ADJOURN 1:45 p.m.

Attachment
Assignments from January 18-19, 2007, meeting (Grand Junction)

Update on assignments completed or underway:

1. Program staff will discuss how Mike Carpenter's time-series monitoring of sediment deposition and erosion at the Jensen Bar can be tied into the USGS SWMS work. *1/18: George met with USGS folks to discuss this. USGS will incorporate Mike Carpenter's data into project 85f; collecting pressure sensor data this year and next.*

Assignments carried over from previous meetings:

1. 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 (Service R6 & R2 discussing draft strategy). 1/18: Conference call between Regions 2, 6 and 1 next week to discuss the strategy.*
2. 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. 1/18: Pending.*
3. Utah will work with Pat Nelson to submit/revise scopes of work to address white sucker removal. *Pat said Trina is proposing a separate pass for white sucker with Utah funds. Also during their removal of smallmouth bass under the 1/18: Recovery Program, Utah will remove white sucker as they are encountered. One question is whether this would dilute our smallmouth removal efforts (hopefully not). Pat will cross-check with Bestgen's 3-species report (and the Lodore report) to determine if the mainstem Green River should be the focus for white sucker removal. 1/18: Pat Nelson said Utah has submitted draft scopes of work; he's awaiting input from Kevin Bestgen regarding whether white sucker are a serious issue in the mainstem Green. Kevin said they are seeing increasing hybridization in the mainstem, but it's not clear if they're an issue in the lower reach. Bob Muth asked if this would dilute our smallmouth bass removal effort? Trina said she doesn't believe it would since they propose to add a pass to specifically remove white suckers, then remove them incidentally during smallmouth bass passes. >Pat Nelson will forward scope of work to BC; BC will respond within 2 weeks if have any concerns (there's no extra cost). Bestgen recommended a pre-season training session/workshop on fish identification.*
4. John Pitlick will revise the channel monitoring report, add Tom Pitts' comments and his responses to the appendix, and post the report to the Biology Committee by early January, then the Committee will then have 2 weeks to respond. *1/18: Pending – now expected early February.*
5. 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.

6. Tom Czapla will finish analyzing the 2005 and 2006 bonytail information, provide that analysis to the bonytail stocking ad hoc work group, and work with the group to develop recommendations to the Biology Committee for potential modifications to the stocking plan by early February. *Analysis emailed to ad hoc work group Friday, January 5. 1/18: Czapla will set-up conference call for next week.*
7. The Program Director's office will review due dates for humpback chub population estimate reports. *1/18: Pending; Czapla will get this done.*
8. Tom Nesler will check on the status of the Elkhead Reservoir and Yampa River aquatic management plans.

New Assignments:

1. Trina Hedrick will revise the Starvation Reservoir escapement report and post the final version to the listserv.
2. John Hawkins and Tom Czapla will develop a handbook clearly outlining operating procedures for fish handling and provide that to field researchers by mid March. After the draft handbook comes out, Tom Czapla will talk with PI's about their training procedures, etc., and determine if a workshop is needed.
3. Tom Czapla will follow up on genetics of the Colorado pikeminnow broodstock at Dexter NFH to be sure Green River fish are appropriately represented and report back to the Committee.
4. Pat Nelson will post Tim Modde's most recent umbrella scope of work to the Biology Committee. Tim and Trina will draft and distribute a scope of work for Stirrup for this year and Trina will draft & distribute a monitoring scope of work. The Biology Committee will discuss these scopes of work on an upcoming conference call (Feb. 1).
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6. Krissy Wilson will get a proposal from Quent to repair the outlet structures on the endangered fish ponds at Wahweap and submit that to the Program.
7. CDOW will discuss whether they can do fyke netting for 98a (if not, perhaps FWS could work with Lori on this, CDOW will discuss). CDOW will work with Pat and John and Sam to determine how to accomplish 4 additional passes under 98a. There's another concentration area near Maybell (RM 90-80) where additional removal was recommended by the workshop participants (again, 8 passes would be needed), but there might be public relations considerations. Sherm said CDOW will have to discuss the potential expansion of bass removal in RM 90-80; he will get a decision on this as quickly as possible.
8. Dave Irving will talk to the Ute Tribe about considering one nonnative fish removal pass in the Duchesne River in 2008 to check on things.
9. Pat will revise and distribute the FY 07 draft work plan guidance "bullets" document and send it out on Monday; PI's will revise their SOW's by the end the week (January 26). The Program Director's office will then determine if there are funding shortfalls and/or areas that require additional Committee discussion.
10. Tom Chart will send revised nonnative criteria to the Biology Committee 2 weeks before the March meeting (so the Committee can finalize the criteria at that meeting).