

Biology Committee Draft Summary  
Vernal, Utah, September 28-30, 2010

Topics for the review and site tour included review of management plans for the [Green](#) and [Colorado](#) river basins; discussion of options for Baeser Bend and Old Charley Wash (Modde's rotational floodplain management plan); Reclamation's work to implement recommendations from [Heitmeyer and Fredrickson 2005](#); recommendations from Bestgen's floodplain synthesis report (in BC review); and continued work to monitor floodplain sites under C-6 Hydro. The group also discussed overall floodplain management strategy.

Biology Committee: Melissa Trammell, Dave Speas, Michelle Shaughnessy, Pete Cavalli, Krissy Wilson, Shane Capron, Tom Pitts, and Brandon Albrecht. CREDA and Colorado were not represented.

Other participants: Ryan Mollnow, Mike Roberts, Trina Hedrick, Jon Schutz, Matthew Lindon, Marc Stilson, Heather Patno, Aaron Webber, Kevin McAbee, Patty Gelatt, Jay Groves, Harley Cambridge, Peter Crookston, Scott Ackerman, Pat Martinez, Tom Chart, Tom Czapla, Angela Kantola, Jana Mohrman, Gene Shawcroft, Bruce Haines, Dave Beers, Diane Penttila, Dan Schaad. By phone (Sep 30): Mark Wernke, Bruce Smith, Bruce Marvin, and Anthony Sarinacci, and Ed Settle.

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

The Committee recognized Tom Nesler's contributions to the Recovery Program (Tom is retiring as of September 30). The Committee also recognized Trina Hedrick's contributions, whose involvement with the Recovery Program significantly reduced with her recent promotion to Northeast Region Aquatics Manager.

## **Tuesday, September 28**

***CONVENE: 1:00 p.m. @ [Ouray National Wildlife Refuge Headquarters](#)***

Refuge Manger, Ryan Mollnow took the group to the overlook on the Refuge for an overview of most of the area floodplain sites, including Brennan, Johnson, and Leota. The original purpose of the Refuge was waterfowl production, but it's a little too far south for this purpose. Now the Refuge is primarily managed for migratory waterfowl, but more indirectly. The main goal is to restore the natural, historic ecosystem functions using a holistic approach and they are more than willing to help with endangered fish recovery in this context. They are working to reduce the cattail densities and improve cottonwood regeneration. Johnson floods about every two years, Leota every two to three years, and Wyasket every five to seven years. Each wetland has a gravity control structure. There are four levee breaches (two on Johnson and two on the Leota floodplain complex) and they prefer to breach the lower end to reduce siltation. The Refuge doesn't do as much pumping as they did previously. Old Charley (Woods), Leota, and Johnson all have kettles.

The group next visited Leota Bottoms, stopping near L10 and L4. Leota has the largest fish kettle, which is primarily used as a drain structure. The Refuge can pump screened water in from Pelican Lake. The group walked to the Leota breach. The breach is armored to prevent it from cutting too deeply. The Refuge mows it occasionally to prevent establishment of woody vegetation, and recently scraped off deposited sediment down to the armoring. L4 has potential as a growout pond; it can be supplied with hatchery water (NNF –free) or filled from the river, can hold water over winter, and is deep enough to somewhat protect fish from waterfowl predation. It was burned this spring to kill some of the cattail.

Near the confluence of the Duchesne River, Jay Groves outlined the COE proposal for a floodplain ecosystem restoration/fish entrainment-passage project. One problem at this site is that fish are being lost to entrainment each year. They would like to involve the Recovery Program in this planning process.

### **Wednesday, September 29**

***CONVENE: 8:00 a.m. @ Vernal UDWR Office, 152 East 100 North***

The group visited floodplains on the east side of the river, beginning at the private Thunder Ranch, where ranch manager, Frank Biggs, took the group to an overlook of the large Thunder Ranch floodplain. Amidst elk bugling and the calls of sandhill cranes, Frank described the several levee breaches that allow water into the site (which is almost completely under water in the spring). This is a young wetland with multiple inlets which potentially entrains more razorback sucker larvae than many of our other sites (the razorback spawning site is just upstream). Some of the inlets may need to be cleaned of sand deposits in the near future. Ryan and Dan and Frank have been discussing the potential for a water control structure at the lower end of the site to help hold more water. The crescent-shaped south end always has water, but it becomes shallow (~2' deep) and could freeze solid. There are springs or seeps along the base of the bluff, however, that may reduce the threat of winter freezing. Frank said he would be willing to discuss the potential for the Recovery Program to sample this south end of the wetland for endangered fish.

The group next visited the Stirrup, where UDWR has had a remote PIT-tag antenna in the long, narrow breach and has detected razorback sucker, Colorado pikeminnow, and bonytail. Multiple year classes of razorback sucker have been stocked here. No larval razorback sucker have been detected in minimal light-trapping. A final report on the UDWR's Stirrup project is due in December. Once razorback sucker move out of the site (~30/year), they don't tend to return. There is some pelican and cormorant predation, as well as partial winter kill (UDWR has not had funds to pump water to refresh the site before winter). The site has nonnative bullheads, carp, and fathead minnows. The Stirrup begins to connect at 13-14K cfs, but native fish ingress and egress appears contingent on flows greater than 15K cfs. As a fairly small site, it's been good for research, but may not be ideal for long-term management.

The group had lunch at the 38-acre Baeser Bend site where Aaron Webber described its recent use as an acclimation site for razorback sucker. The site was reset the winter of 2007-2008 and, larval fishes subsequently survived in the presence of nonnative fish that were pumped in with water that May. The site now has fathead minnow, sand shiner, and red shiner, and none of the 100,000 larval razorbacks stocked in June 2009 survived. (Thus, the site needs to be reset before

it can be used for larval fish again.) There also is some pelican predation at the site. Survival of fingerlings stocked in the site is 45-50%. In the fall of 2009, they harvested ~1,000 fish over 300mm. They then stocked in 14,000 fingerlings, of which 8,000 (plus 500 from previously-stocked cohorts) survived into April 2010. They have been able to keep water levels above 3.5' to reduce bird predation. The fall 2010 capture begins on Monday.

The group next went to Johnson Bottom, which also has a fish kettle that can be used for inflow. Over time, a series of inflow channels has been created here. About 2' of sand has been deposited and spreads out into the wetland about 50', so the Refuge will be grading that back down over the next month. This site floods and holds water well at a good depth. It also can be drained and reset. The Refuge is planning on widening the breach to 300-400 yds by removing the existing dike down to natural grade level as recommended by [Heitmeyer and Fredrickson 2005](#).

The next site was Old Charley (aka Woods Bottom), a site owned by the Ute Tribe, but managed by the Refuge. It has one of the first fish kettles constructed, which also can be used to fill the site. The kettle does need to have the brush cleaned out. It's fairly easy to pump water into this large site and Aaron believes it would be an excellent site to use on a 2-year rotation, with the potential to harvest 10,000 razorback sucker for stocking into the river every other year.

At the Shepherd Bottom sites, Ryan said that S5 was formerly subdivided, but the levees were removed to reduce selenium loads. S3 also fills S5 and can be filled from the top or bottom or by pumping. S3 has open water and could potentially raise fish, though Ryan didn't know the depths or winter kill potential. S5 floods with the river and flooding has been frequent enough to eliminate much of the cattail. S5 has a more natural operation and is a productive waterfowl site. Shepherd hasn't been sampled for endangered fish. At the S2 "problem" site, the group observed the bank undercutting. A third of the road was lost last year and the Refuge is considering a massive breach that would flood all of the Shepherd sites. They've been advised to get input from a geomorphologist and are open to input from the Recovery Program also. The Program will need to review why this site ranked high in the Floodplain Management Plan, as well as Tim Modde's more recent recommendations.

### **Thursday, September 30**

***CONVENE: 8:00 a.m. @ Vernal UDWR, South Conference Room***

1. Continue discussion of floodplains from Wednesday afternoon)

- Discussion of GJ area floodplains (Patty Gelatt)

Proposed reclamation at Soaring Eagle – Soaring Eagle Co. has developed a reclamation plan for their gravel mining site downstream of Walter Walker to connect the gravel pit to the Colorado River with levee breaches (a condition of the biological opinion). The concept is to restore a beneficial floodplain for endangered fishes. Mark Wernke (BR), Bruce Smith (consultant), and Ed Settle (Grand Junction Pipe) joined the group by phone for this discussion. This is in an alluvial floodplain, and so is very different from the sites the group viewed yesterday. The site is between Grand Junction and Fruita, downstream of where larval razorback sucker have been captured. Grand Junction Pipe can't

complete their gravel mining (~5 years worth) until their reclamation plan is approved, so they are eager to finalize the plan. Patty reviewed the various agencies' regulatory requirements. One concern is that the reclamation not cause the river to recapture the site (but we want to draw in larval fishes, so hope to find a happy medium). Under the current reclamation plan, about 5% of the river would flow into the site at high flows. It will be 105 acres when completed, and so will be one of the larger floodplain sites. The consultants would like input on: 1) optimum pond level and optimum flow amount (and activation periods associated with each); and 2) apportionment of the 6' gradient between the inlet and outlet.

The group discussed nonnative fish concerns, recognizing that the site as currently proposed essentially will be a 100-acre 15-foot deep lake for the very long time it will take for sediment to begin to fill it. However, since we have very little floodplain habitat in the Grand Valley, we do need to be opportunistic. It doesn't seem like the site could be configured to reset it to control nonnative fishes, although Patty does think we will be allowed to manage the site. We may have to consider a very long-term management strategy since the site may not be of overall benefit to endangered fishes (due to nonnative fish concerns) until the site fills in over time. The Biology Committee needs a little more time to consider the options and so scheduled a conference call for 3 to 4 p.m. on October 7 to wrap up this discussion.

Proposal to remove sediment from Jarvis floodplain site – This site near the confluence of the Gunnison and Colorado rivers is owned by the City of Grand Junction. It's a depression site with a single breach on the downstream end in which we've captured adult Colorado pikeminnow and razorback sucker. Sediment was removed ~ 7 years ago and we need to do this again (Reclamation thinks they can do the job in about a day for \$3-5K). The Committee approved the sediment removal.

- Review/discussion of floodplain tour and direction of the Program's overall floodplain management – Subsequent to the basin floodplain management plans, Modde suggested developing plans for each site to use as: 1) growout ponds; 2) naturally-reconnecting floodplain sites that are periodically reset; or 3) research areas. Bestgen's floodplain synthesis report is in draft (final peer review will be in from LaGory in next week or two) and has implications for the Flaming Gorge flow recommendations. Dave Speas summarized highlights from the tour. In the short term, it seems we need to start sampling ponds that we haven't (not only for fish, but also for depth, dissolved oxygen, etc.), pump Stirrup this fall; and track Johnson Bottom activities. Over the mid-term, we may want to work on an outlet at Thunder Ranch; modify Stewart Lake operations; and look at Leota 4. Many sites aren't holding enough water to overwinter fish – the exceptions may be the Stirrup, Baeser, Thunder, and Johnson. We also need to learn more about the Refuge planning process and how and when Recovery Program should interact with that. Ryan said the Fredrickson and Heitmeyer report has been their primary guidance and that knowing the Program's interests will provide additional guidance. The Refuge plans their year each spring before runoff and would like to coordinate on an annual basis (and also look 3 - 5 years out). Tom Chart suggested Ryan provide an update each year at the researchers meeting. We have the ongoing C-6 Hydro project to evaluate floodplains, but work under that scope of work has been minimal over the last few years. Michelle suggested reviewing how we can potentially use some of these areas as growout ponds, but in the context of our propagation plan for

razorback. Specifically, do we get higher survival of fish from growout ponds as opposed to hatchery ponds? [The committee revisited the idea of sampling adult razorback sucker more directly to gather better data, perhaps through flat plate antennas on the spawning bar.] We also may need to manipulate hatchery pond output to answer some of these questions. How many growout facilities do we need? Tom Chart recommends using growout sites for larval fish. Bruce said a critical question is how we get larval fish into the wetland areas. We know where we catch larval fishes (e.g., Cliff Creek, various washes, etc.), i.e. non-flow through sites where relatively little water is entrained. Bruce has observed that that an eddy at the mouth of these sites may be important. For these reasons Bruce questioned the assumption that the amount of water entrained predicts the larvae entrained. Tom Chart also noted the potential need for fall sampling to determine how entrained larval fishes have survived. Aaron suggested Old Charley and Johnson and Melissa mentioned Thunder Ranch, also. Michelle suggested that perhaps we should capture the razorback from Baeser and then reset it to answer the question of whether larvae do better in a growout pond or a hatchery pond (and do the same with the growout ponds in the Grand Valley -- although they can't be reset).

- Discussion of Vernal CRFP floodplain SOW – The Committee discussed the draft scope of work. Salvage work for this fall is already covered with FY 10 funds. A 3-year rotation may be needed. The Committee supported the concept of stocking larval fish into floodplains per this proposal, but Krissy had concerns with doing this at Old Charley due to the potential difficulty of recapturing fish from the large wetland. Melissa also supported the concept, but thinks sampling natural production in the fall at Thunder Ranch, Johnson, and perhaps one of the Leotas or Shepherd may be a higher priority if we can only afford to do one or the other. Dave Speas agreed we need to accomplish both. The group agreed Thunder Ranch and Johnson Bottom are the highest priority sites for fall sampling. >Michelle will provide a revised SOW for using the existing 30K from FY 10 to remove fish from Baeser, reset it for next year, and sample Thunder (assuming permission) and Johnson. >The PD's office will make recommendations for overall direction given available funds. >The Biology Committee will review overall floodplain management using Tim Modde's draft plan in early 2011 (>PD's office will send Modde's plan to the BC), wrapping in the floodplain synthesis report. >The PD's office also will set up a work group for revising the propagation plan (Krissy and Michelle will assist).

2. Approve Biology Committee August 17-18 summary – The summary was approved as written.
3. Humpback chub genetic analysis preliminary results – Tom Czapla presented results from Dexter's analysis of 88 individuals, 16 microsatellite loci. The MCRTC are Muddy Creek, WY roundtail, the GRHBC are humpback from Desolation Canyon. The fish removed from Yampa Canyon and identified as humpback chub and roundtail chub show strong overlap in the markers that were looked at. The group agreed to maintain both the Yampa and Desolation humpback chub in captivity at Ouray at this time. >Tom will send out the briefing paper he received with these data to the Biology Committee. >At a future meeting, the Committee will discuss how this affects the Yampa River humpback chub captivity plan.



4. Dexter NFH – Tom Czaplá said largemouth bass virus was detected in two lots of fish at Dexter. They are under quarantine and are disinfecting. For Utah’s purposes, once Dexter is shown to be clean, waits 6 months and is shown clean again, then Dexter can regain its “A” rating (7-8 months total). If that happens, then we’ll still be able to get the bonytail we need for next year. Utah will hold bonytail at Wahweap, originally scheduled for release on October 26, until they have been tested and found to be clean. Mumma put fish out last week before the news broke, but they had been recently tested. Mumma and Wahweap are both being retested.
5. Discussion of research framework review – Tom Czaplá described the history of the research framework and some of the synthesis work the Program has begun since the project began. Environmental groups and now the Service and Utah (>Krissy will send these to >Tom Czaplá who will send both the Service’s and Utah’s to the Biology Committee) have submitted comments on the draft. >The PD’s office will meet with the environmental groups (and perhaps other commenters) prior to the Biology Committee discussion/review of the framework so that the Committee can have a fairly focused discussion. Melissa commented that much of the original intent of the framework has been met in the Green River Study Plan, and now the Aspinall Study Plan being drafted. Mike Roberts agreed the Program has started down the road contemplated by the research framework and that we are starting to get long-term datasets that we need. However, the Program is still faced with considerable uncertainty. Mike suggested that developing more formalized hypotheses might help. Michelle agreed and said she thinks this could help us get a better overview of where we are and where we need to go. Mike added that if we can lay out a strong framework with prioritized actions, we may be able to tap other funding sources, as well. Michelle thinks the RIPRAP helps in this regard, but perhaps revising the recovery plans is the place for the greater framework. Tom Chart agreed that such a framework can be helpful, but added that we also need to maintain our ability to respond quickly as we gather new information.
6. Update on nonnative fish strategy – Pat Martinez said the strategy will place considerable emphasis on prevention. Invasive species status and management strategies do apply to certain nonnative aquatic species in UCRB critical habitat. Pat’s first cut at least-wanted aquatic organisms would include smallmouth bass, northern pike, zebra/quagga mussels, crayfishes, Asian tapeworm, white sucker, and tamarisk. Pat described the concept of white/black (and gray or pied) lists to identify prohibited and permitted species. Pat compared a first-cut black list brainstormed by the Nonnative Fish Subcommittee with the Nonnative Fish Stocking Procedures. Several considerations will go into developing a white list for the Upper Basin and we must reconcile maintaining sport fisheries, fish stocking and protecting critical habitat with preventive invasive species and white list concepts. Krissy noted that Utah is mostly only approving stocking of brown and rainbow trout and that private aquaculturists are moving toward all triploids. Pat will continue working on the draft strategy for Nonnative Fish Subcommittee review (and the review group also may include some folks from the Management Committee, also).
7. Review previous meeting assignments – Briefly discussed; see Attachment 1.
8. Review reports due list – Angela distributed an updated list which the Committee will review on the conference call next week. Jana said USGS proposes to discuss the meaning of the sediment report at the researchers meeting, but the PD’s office is trying to move this up.

Tom Chart said the report is highly technical and will need someone else to take it the next step to say what it means for the Program and our flow recommendations (the PD's office has been talking with Bob Muth, George Smith, Paul VonGuerard and Kirk LaGory about this).

9. Discuss agenda items for conference call and next meeting – The Committee scheduled a conference call from 3-4 p.m. on October 7 to discuss Soaring Eagle and also the reports due list. The next meeting will be December 13-14 (1-5 p.m. on the 13<sup>th</sup> and 8 a.m. to 3:30 p.m. on December 14) in Grand Junction at the Holiday Inn Express. Agenda items will include: floodplain synthesis report, #138 (>Krissy will check with Trina), continuing floodplain discussions and Baeser SOW; and nonnative fish workshop debriefing and SOW revisions. >Pat will work on the agenda for the workshop and guidance for the PI's.

**ADJOURN by 12:45 p.m.**

#### Attachment 1: Assignments

1. **Sherm Hebein** said he **and Tom Nesler** hope to finalize the Yampa River Aquatic Management Plan by March 19. *4/7: Sherm and Tom Nesler reviewed 4/6; Sherm is incorporating changes, reviewing suggested changes that are policy-related within CDOW, and responding to suggested revisions they to which they can't respond. Tom says they expect it will be ready for signature by the end of April 2010 (the 98a synthesis report also will be completed by the end of April). 5/6/10: Sherm still needs to incorporate comments; the Plan will be finalized no later than July 1, 2010. On the 98a final report, CDOW comments are being incorporated and will come to the BC for final review no later than July 1, 2010. 7/28/10: CDOW has committed to provide the revised plan, with response to reviewer comments by 7/31/10. 8/17/10: Plan complete; CDOW completing transmittal letters. CDOW will incorporate comments and finalize the 98a report (in about a month in light of field season).*
2. The Program Director's office will work with CDOW and Aaron Webber on the potential for designing a permeable, hydrologically-stable (gravel?) berm to prevent northern pike access to the oxbow slough at RM 151 on the Yampa, and then clean it out once and for all. *10/30 CDOW has contacted the property owners of the RM 151 backwater, but hasn't been able to meet with them yet. Mark Wernke from Reclamation is willing to take a look at the property with CDOW. A fairly long berm would be required (>3,000') and we'll need to determine the best type (more permanent configurations could be very expensive). The funding source would need to be determined, with Partners for Fish and Wildlife, lottery funds, grant funds, etc. as possible sources to be explored. 1/15: Tom Nesler said they plan to get engineers develop specs/estimates this spring for something like a 10-year berm structure; the next step will be to find funding (perhaps as a habitat project through GOCO). This would be the first of three or four such projects. Tom Pitts suggested that if the Program provides some matching funds (annual or capital), it might improve the probability of getting GOCO money. Tom also suggested that if we have a project in the hopper, we might be able to compete for end-of-year Reclamation funds. 2/10: The PD's office considers this a high priority and will contribute funds, if available (see revised FY09 budget). 2/20: Recovery Program funds likely available; CDOW working to get engineers on the ground; Nesler considering different approaches (berm, fill the oxbow, etc.). 4/20: Tom Nesler said they've met with the landowner and Reclamation engineers will do an onsite survey as soon as the*

snow melts. 1/5/10: Project deferred indefinitely; Reclamation cautions that the lesson from the Butch Craig floodplain site is to be very cautious before considering modifying habitats. Based on the channel dynamics in this area of the Yampa River, it would be unwise to construct an impervious dike at the mouth of this backwater. 1/14/10: The Committee discussed other options to eliminate spawning in this area; the >PD's office will provide Mark's trip report to the BC and work with CDOW to outline options for Committee discussion at the next meeting (options could include: make the entrance too shallow for adults; a dike set back instead of right at the river; direct removal/net sets; piscicides, etc.) 2/22: PD's office provided Mark's report. 3/10: CDOW will work with Reclamation to flesh out their gravel proposal and also will review additional options (e.g., plant eradication, barriers, etc.). This will be on the May 6-7 Committee agenda. 5/6/10: Sherm Hebein said Reclamation will conduct a site visit with CDOW in July. 8/18: Sherm hopes to schedule a visit after the landowner cuts the grass in the next 2 weeks.

3. Within the next month, >the **Service and Program Director's office** will provide the Committee a draft addendum to the White River report that will present the measured flow requirements in a historical hydrologic perspective. The Program Director's office also will research where we left Schmidt and Orchard's draft report on peak (channel maintenance) flows and recommend whether to have it reviewed by the geomorphology panel. The Program Director's office will use the information currently available to >develop a position paper on Price River flow recommendations for Committee review. 10/16 Pending; out by the end of ~~November~~ 1/5: February 2009. 2/20: Bob Muth said he's making good progress on this and he'll have a draft to the Committee by ~~early March~~ end of April. 7/8: Mohrman and Chart expect to provide drafts of this and Price River report by the end of August 2009. 7/13: Dave Speas said the goal for the Narrows EIS is to get it out for public review in the fall, so the above schedule should work. The PD's office will keep the Service's SLC-ES shop in the loop on Price River. 9/21: Chart and Mohrman have made good progress on this, but other priorities have so far prevented completion. 1/14/10: still pending and the PD's office will continue to communicate with Reclamation re: Narrows. 3/3/10: PD's office is communicating with SLC-ES to determine the best way to move this position paper forward. 5/6/10: The Program Director's office will complete a position paper (or similar construct) on Price River endangered fish flow needs and submit it for Biology Committee review by September 1, 2010. The Program Director's office will complete the addendum to the White River report and provide a status update and recommendation on the draft Schmidt and Orchard report on peak (channel maintenance) flows for Biology Committee review by December 31, 2010.
4. Melissa believes an Environmental Assessment of the impacts of the Humpback chub captivity management plan (also addresses how to deal with captured roundtail chub) will need to be written; Krissy will work with Melissa on the EA. 7/13: Melissa needs to coordinate with the NPS if this is the case and she intends to do that in the next few weeks. 10/6: John Reber reported that **Melissa Trammell** will do the EA for this. 5/6/10 Melissa said she would have a draft for the park by ~~the end of May~~ September 6.
5. **Krissy Wilson** will provide Utah's Health Condition Profile to **Tom Czapl**. 4/20: Krissy has asked for a formal write-up from their hatchery folks. 7/13: Krissy will condense relevant information gleaned from hatchery managers and consider organizing workshop(s) in the future. 10/6: Krissy provided this information to Tom Czapl and will work with Tom to

*determine if we'll host a workshop for hatchery personnel (pending, will schedule after new hatchery manager is in place at Ouray NFH). 3/10: Workshop on condition measurement for hatchery folks will be scheduled in late summer or early fall, probably in Grand Junction (to allow someone from the Mumma Hatchery to attend); >Tom Czapla will also invite San Juan Program hatchery managers. 9/30/10: Scheduled for Oct. 5 in Grand Junction.*

6. The **PD's office** will communicate with Gary White to determine how many and which of the questions from the HBC workshop to focus on. *Pending.* **Derek Elverud** will provide the database for Westwater for Gary White to combine with Black Rocks, which will require a separate SOW. 10/6: **Travis Francis** said they plan to complete the reports, then revisit a SOW for assistance from Gary White. 3/10: pending. 4/28: Derek Elverud has finished compiling the Westwater data to send to Gary White. Travis Francis is going to combine his Black Rocks data set with the Westwater data and his report (when he has time after he gets out of the field). 8/18/10: Michelle said we can get this to Gary White this winter.
7. The **Program Director's office** will review the 121a report recommendations (as well as the Gunnison PBO) and determine what items need to be included in the RIPRAP. 2/22: PD's office recommended this be incorporated into the Gunnison River Study Plan.
8. **CDOW** will review the Loudy-Simpson escapement data and make a recommendation for where to translocate fish prior to the field season. 3/10: Sherm said their preliminary work indicated that less than 1% of the fish stocked into Loudy-Simpson 2007-2008 escaped back to the river (p-hat analysis resulted in an estimate of 3 to 8 fish), so they think escapement very minimal. CDOW will continue to evaluate and will defer stocking northern pike into Loudy-Simpson until after the river recedes and Loudy-Simpson is no longer connected (the same will apply to Yampa R. SWA). In light of likely overwinter survival, Tom Chart asked CDOW to continue to focus on Headquarters (Kyle's) Pond as long as it will sustain the number of fish being stocked (which so far doesn't appear limiting).
9. The **Program Director's office** will prepare a list of issues to be resolved regarding Tusher Wash screening (e.g., what levels of mortality are acceptable for what size classes, potential O&M costs, etc.) to help move this decision forward (and provide that to the Biology Committee and the Service). *Done.* 5/6/10: **A small group (Melissa, Kevin McAbee, Dave Speas, Tom Pitts, and Tom Czapla)** will work with **Kevin Bestgen** to review/build on the risk assessment, focusing on understanding existing impacts and what could be gained by various screening options. Tentatively, it would seem the best choice would be fish friendly runners with a screen on the irrigation ditch (contingent on further analysis). *BC to submit proposal to MC by 12/31/10.* 8/18: **Tom Czapla** will take the lead to get a conference call scheduled. 9/30: *Pending; should include Kevin McAbee. Kevin Bestgen has done additional work on the risk assessment which >the PD's office will get out to the working group.*
10. **Angela Kantola** will add a reminder to future annual report requests about the importance of PI's supervisors' reviewing recommendations to be sure that they are grounded in the data and that the Program takes these recommendations seriously. *Pending in 2010 annual report request.*
11. **Michelle Shaughnessy** will provide cost comparisons for O&M of the proposed new Grand

Valley fish rearing ponds versus existing ponds as soon as the value engineering study is completed. *Pending; Michelle anticipates ~\$30K increase in total costs (primarily fish food). 8/18: Current est. is an increase of \$30K to the FY 11 SOW. If a new vehicle is needed, another \$11K would be needed. All of this will depend on actual construction/completion dates.*

12. The **Program Director's office** and **Kevin Bestgen** will work with **PI's** to identify sampling shortcomings and remedies for Green River Colorado pikeminnow population estimate and report back to the Biology Committee prior to the 2011 sampling season. *Pending.*
13. The **Program Director's office** will post the revised 2008 and 2009 nonnative fish workshop summaries to the web. *Done.* **Dave Speas** is working to tabulate the recommendations from the 2008 and 2009 workshops and outline how to implement them and the NNFSC will meet to discuss this on June 30. *Done.* In the future, the **PD's office** will quickly complete these workshop summaries and the recommendations included as part of the annual and final report summaries.
14. The **Service (GJ-CRFP and the Program Director's office)** will make recommendations for how/where to manage the fish spawned this year at the Grand Valley facility and bring those back to the Biology Committee. *8/18: Will be discussed during the health condition profile meeting. The PD's office needs to schedule discussion//revision of the integrated stocking plan. 9/30: >The PD's office will set up a work group for revising the propagation plan (Krissy and Michelle will assist).*
15. The **Biology Committee** will work on prioritizing their list of potential additional capital projects at a future meeting. *Ongoing.* By September 22, **Committee members and others** who suggested capital project ideas will provide short explanatory/descriptive text (preferably just a paragraph), and then the **Committee** will decide when to take the next steps (individual ranking, group discussion of combined ranking, etc.). *UDWR comments submitted; next BC discussion likely not before December.*
16. By June 1, the **Program Director's office** will provide a review package for Aspinall Study Plan Ad Hoc Group participants, to include: Gunnison River PBO, flow recommendations, floodplain mgmt plan, LaGory's geomorphology report, recent reports (e.g. #121 Gunnison River larval sampling), and a list of uncertainties identified in the flow recommendations, PBO, and draft EIS. *Done; ad hoc met in early June, study plan drafting is underway; next ad hoc meeting September 1-2.* The **Program Director's office** will post the summary of the June Aspinall Study Plan meeting to the fws-colorriver listserver. *Done. 10/5: Web conference held October 5; next webinar November 15.*
17. **Sherm Hebein** will provide the Committee a copy of the output/report on CDOW's Gunnison River work (e.g., wherein they captured seven razorback last year in sampling half of the river) as soon as he receives it. *8/18: Sherm will send to Angela this week to distribute to the Committee.*
18. **Angela Kantola** will modify the final report format document and put a note in future scope of work formats specifying that authors are to provide electronic versions of draft final reports which can be commented on directly (via track changes or through Adobe, but

preferably through track changes in Word [if a Word file like this is too large, the embedded Excel files can be compressed]).

19. Requirements/process for the next round of synthesis reports should be discussed by the **Nonnative Fish Subcommittee** and at the upcoming **nonnative fish workshop**. 9/30: Pat will work on the agenda for the workshop and guidance for the PI's.
20. **Jana Mohrman** will make sure the BC received Tom Pitts' and Dan Luecke's comments on the sediment report. *Done*. **Jana** also will contact Bob Muth and George Smith about how they see the report results and how those can guide us in future evaluation of flow recommendations. *In progress*.
21. **Pat Martinez** will schedule a conference call among the signatories to the 2009 Nonnative Fish Stocking Procedures to discuss clarifications. *Pending*. 9/30: *Pat is first working to address the private sector concerns and issues regarding Rifle Gap management*.
22. Annual reports will be due November 15; the **Program Director's office** will get the updated report templates posted to the fws-coloriver listserver and on the Program's website. *Pending*.
23. **Pat Martinez and the PD's office** will work with the PI's to determine ETS electrofishing units to be ordered and where they'll be deployed. *In progress*. **Pat** will capture the essence of his electrofishing powerpoint presentation with Larry's paper to document the rationale for our decision and share that with the San Juan Program (recognizing, of course, that only rafts, not aluminum boats, are used on the San Juan). *Done?*
24. **Angela Kantola** will modify the work plan budget table to reflect the changes to UDWR's scopes of work (#128 and #138). *#138 done; awaiting PI's approval to replace #128 SOW*.
25. **Dave Speas** will ask **Peter McKinnon** to estimate the cost for a PIT tag system with two antennae and satellite uplink and multiplexer (prior to the meeting Tom Chart and Tom Pitts have with the Maybell Ditch owners). Patty Gelatt has suggested that the Service would like to see two years of data, with the hope that different hydrologic conditions might be observed. **Tom Chart** will check on this with **Patty Gelatt** and also will ask her about using two antennae versus one. >**Dave** will ask **Peter** to make a presentation on his techniques at either DFC, the Researchers Meeting, or both.
26. The **Committee** will consider the proposal for fixed weirs at Ashley Creek and Stewart Lake drain a contingency at this time, get any comments on the scope of work to the PD's office, and have more discussion at/after the nonnative fish workshop.
27. **Michelle Shaughnessy** will provide a revised SOW for using the existing 30K from FY 10 to remove fish from Baeser, reset it for next year, and sample Thunder (assuming permission) and Johnson. >The **Biology Committee** will review overall floodplain management using Tim Modde's draft plan in early 2011, wrapping in the floodplain synthesis report (>**the PD's office** will send Modde's plan to the Committee -- *done*).
28. **The PD's office** will make recommendations for overall FY 11 contingency projects given

available funds.

29. **Tom Czapla** will send out the briefing paper he received with the humpback chub genetic data to the Biology Committee (*done*). >At a future meeting, the **Committee** will discuss how this affects the Yampa River humpback chub captivity plan.
30. **Krissy Wilson** will send Utah's comments on the research framework to >Tom Czapla who will send these and the Service's to the Biology Committee. >The **PD's office** will meet with the environmental groups (and perhaps other commenters) prior to the Biology Committee discussion/review of the framework so that the Committee can have a fairly focused discussion.
31. **Krissy Wilson** will check with Trina on the status of the #138 report for the Committee's review in December.