

Biology Committee Meeting Summary
December 7, 2012, Grand Junction, CO

PARTICIPANTS

Biology Committee: Harry Crockett, Melissa Trammell, Dave Speas, Dale Ryden, Krissy Wilson, Jerry Wilhite, and Pete Cavalli. Via phone: Tom Pitts, Ron Kegerries for Brandon Albrecht.

Others: Pat Martinez, Tom Chart, Angela Kantola, Kevin Bestgen, Joe Skorupski, Matt Breen, Tildon Jones. Via phone: Kevin McAbee, Tom Czapla, and John Hawkins (via phone).

CONVENE: 8:00 a.m.

1. Tusher Wash – Kevin McAbee met with the Canal Company prior to a mid-November scoping meeting and discussed permission for the temporary PIT antenna (approved unanimously after explanation and discussion). Kevin and Angela are drafting an agreement; once signed, installation of the antenna can proceed over winter. At the mid-November scoping meeting, they discussed alternatives and design components (similar to what Kevin presented to BC). The public comment period has just closed. The engineers are working on a design that will make sure water users' rights are met and fish components also have adequate water in dry years. The e-barrier was presented at the scoping meeting in general terms and questions were raised about safety (concerns, preventative measures) which we'll need to address in NEPA. Melissa suggested perhaps Smith-Root can help with this this (though we may need additional independent analysis). With regard to where to build the power house (for e-barrier, PIT antenna) (preferably not BLM because this would extend NEPA process). Thayne Hydropower has a BLM easement, so perhaps the power house can go on the easement (Bob Norman has supported this idea). Perhaps the Program could pay for Thayne's operation of electrical radial gates in return for this land use (\$30-\$50/month when in use). Melissa asked about the gates; Kevin said Thayne wants radial gates and they're leaning toward electrical. McMillen (the design engineering company) will meet with interested BC members to discuss design and engineering of the e-barrier late afternoon on January 16. A remaining point of negotiation on the e-barrier relates to reduced fishing opportunities (e.g., for catfish) in the canal. Kevin told them the e-barrier can't be turned off, but agreed to ask if the Program (UDWR) could translocate some catfish into the canal each spring. UDWR and other BC members didn't think this would be possible (Desolation has a mercury advisory for catfish), but it was suggested perhaps better river access could be investigated. >Krissy Wilson will check into nearby community fishing opportunities.
2. Colorado pikeminnow recovery team update – Tom Chart explained the most recent full plan was dated 1991 and it was supplemented and amended with recovery goals in 2002. The Service drafted revised goals in 2008, but these were not finalized. The objective now is to do a full recovery plan revision (including timelines and cost of recovery required by a legal action on the humpback chub goals). We have a writing team (Valdez, Muth, Martinez, Czapla, and Chart) in place. The Service considered not re-convening a recovery team, but was asked at Management Committee to do so. Regional Office personnel were consulted and they also promoted the role of a recovery team. The Recovery Team serves as an advisory group to the Service's Regional Director and members should be technical experts. The Colorado Pikeminnow Recovery Team consists of Kevin Bestgen, Dave Campbell, Kirk LaGory, and Doug Osmundson. The writing and Recovery Team met last week. They began by discussing process, roles, and timeline. The writing team provides the staff support needed to complete the plan in a timely fashion. The intent is to have the draft plan ready for notice of availability (NOA) by September 30. Recovery Team members will submit their first round of written comments by February 1, 2013. An internal Service review will proceed rollout of the draft plan to stakeholders (primarily Recovery Programs) prior to releasing the NOA. To accomplish this we will likely need to wrap up Recovery Team input ~June 1, 2013. Kevin

Bestgen recognized that this was an extremely aggressive timeframe; Chart agreed. The Team's discussion of the current draft focused on need for: 1) more focus and detail on 2002 goals recovery criteria; 2) considerable discussion of nonnative fish issues; 3) leading off with threat removal criteria so the focus starts there, followed by demographic criteria; 4) stressing the importance of various reaches/places within the basin; 5) describing the understanding of CPM as the top native predator in the system (carrying capacity per Martinez presentation); and 6) San Juan concerns that there be greater recognition of vegetation encroachment and heavy metals. Informally and in general, the team did not think downlisting was on the near-term horizon in light of the most recent preliminary population estimates in the Green River system (in particular a continued downward trend in the Yampa River) which has largely been attributed to remaining nonnative fish threats. Pat noted that he also emphasized the significant habitat component, which must include some semblance of a relatively intact native fish community (e.g., indices of fish community integrity, etc.). Kevin Bestgen said he appreciated what Pat presented to the Team and considers it very helpful. >Pat will send his presentation to the Recovery Team. Harry asked if we will need to conduct similar analyses for the other species; Pat said it would be much more difficult as they are not top predators. Dale said he's encouraged by this approach and noted that at the Lake Powell meeting, they also discussed approaches that may only be applicable to razorback sucker. Krissy asked if the plan will address the importance of tributaries, including importance of non-critical, but occupied habitat. Tom Chart said he thinks at minimum, those parts and the role they play in providing forage base will need to be recognized. Dave asked about including what monitoring, etc., the States will need to do post-de-listing. Chart referred to the 2002 Recovery Goals that call for the development of conservation plans as part of a delisting action – those plans should identify recommended levels of monitoring. Kevin Bestgen agreed tributaries are important and the question of whether to limit goals or numbers to critical habitat and take everything else as supplemental is one to be addressed.

3. Lake Powell update – Tom Czaplá said there will be extensive discussion on the importance of reservoirs at the researchers meeting. Also, Platania will present a paper on razorback scale microchemistry. The Service met last week (Regions 6 and 2) to discuss importance of Lake Powell to recovery. We used to think of these reservoirs as a “black hole” into which fish basically disappeared, but we're rethinking that. Service likely will draft a multi-year proposal that will start with a historical review of endangered fish collections / sampling in the lake, recognition of the SJR Program's microchemistry study, and incorporation of reconnaissance sampling in the Colorado and San Juan arms. Dale said that based on documented movement of razorback suckers in Lake Mead, Brandon Albrecht is convinced there may well be movement between the San Juan and Colorado river arms of Lake Powell, and as such this potential linkage needs to be investigated thoroughly. This could mean we have a metapopulation and our paradigm of recovering razorback as *just* a riverine species may be wrong – we may need to consider reservoirs as an additional part of the recovery picture. The group agreed that the next logical step is to look for razorback in the Colorado River arm. Tom Chart said we also will recognize the work UDWR is doing in the lake. Dale noted that for the San Juan, Lake Powell is their biggest “backwater” (since the San Juan doesn't have backwaters). Krissy said at minimum, their UDWR Lake Powell crew needs to have a scanner on their boats. Dale said they're having a conference call with UDWR next week. No field work is currently scheduled for 2013.

4. Nonnative Fish update

- Nonnative Fish Management Workshop follow-up – The group discussed workshop highlights:
 - Can we do rotational population estimates for nonnative fish (Ryden)? Maybe André can address? (Trammell). André has emphasized this question merits discussion among the quantitative experts, since this information has been so important (Martinez). Kevin Bestgen said the question is how the tag information will be used and what we'll miss if we don't have it; the quantitative experts aren't the ones to answer that. Chart suggested that 2013 may be a year

for all-out SMB removal, because adult densities appear low in many places and André's analysis indicates that capture probability of the Age 1+ 2012 cohort may not generate a good estimate. Tildon noted that we weren't happy with the earlier, individual analyses of mark/recapture estimates (e.g., Lincoln-Peterson estimates), thus we hired André to do the synthesis. Tildon agreed with Kevin that we need to clarify our goals. Harry agreed that on an individual project basis, the information is not nearly as useful as it was in the synthesis. Tom Chart noted that we should consider season length (i.e., perhaps not mark in dry years when our sampling season is truncated). Kevin Bestgen suggested using the model to "game" some scenarios of what's given up in terms of removal when marking passes are done. Dale would like to know if it's better to mark all reaches in one year or pick one reach to do every year, etc. Kevin said he thinks we should select one reach to do every year and then sometimes mark all reaches. Harry said he doesn't anticipate Colorado will insist on tagging every year as a condition of collecting permits. Melissa said this will be helpful and gives the Program needed flexibility. Pat asked Kevin about the implications of excluding larger nonnatives from tagging (and thus, analysis). Kevin said in the case of pike, this likely would eliminate about half of the catch from analysis in some years. SMB: only mark fish in LYC in 2013? Hawkins agreed it's critical to get a really good estimate in 2013, and that might require two marking passes. Hawkins also agreed LYC is a bellwether reach. >Kevin will ask André to model some of these questions about marking and >the BC will discuss this during their meeting the afternoon before the researchers meeting.

- Krissy – André said if we really want to impact the populations, we'll have the most impact at the YOY age-class. How can we do that? Answer: the Surge. Melissa agreed that we need to see where else this and other techniques should be applied.
- The Committee discussed how to review workshop outcomes and develop recommendations for any shifts in our approach in 2013. The Committee will discuss this further on January 14 before researchers meeting. >The PD's office will send out the workshop summary and list of suggestions to the BC and interested parties. PIs can provide any clarifications to this to the BC before the January 14 meeting. Dale said it really helped that we gave PI's flexibility to make changes as needed in 2012 depending on hydrology. FY14-15 SOWs will include a caveat about flexibility (e.g. "Note: methods and timing of this work may require adjustment to hydrological conditions as the season unfolds."); >Angela will add a note to the FY14-15 SOW format in this regard.
- Upper Yampa northern pike – Harry said he thinks CPW would entertain Program funding for work in the upper river reach. Tom Chart said he'd like to use 2013 to: 1) accomplish the programmatic work required to shift more work in the upper reaches in 2014 and beyond; and 2) work out the next steps for Elkhead. Harry said he thinks many understand that it's not viable to have pike in Stagecoach in the long-term, but it probably makes more sense to work on Elkhead first (meanwhile, Bill Atkinson's work will help keep the Stagecoach problem at bay). Addressing Elkhead also addresses both SMB and NP. The group agreed Elkhead is at the top of the list (though we certainly don't want to lose sight of Stagecoach). As we work toward the Elkhead solution, we will need to develop a solution for a replacement sportfishery. Part of that will be revising the lake management plan. Harry Crockett said CPW may be able to help deal with the question about stocking trout and the District's concern that this will trigger a water quality reclassification of the reservoir. Tom Pitts agreed that will be necessary and said he appreciates CPW's efforts on this and reducing the burden on the District. Harry said we'll also need to work with the District on a long-term plan in case nonnatives are re-introduced (e.g., illegally). Tom Pitts noted and the Committee agreed that their conversations on a potential Elkhead solution are at this point informal and non-binding.
- How to provide a mechanism to conduct otolith microchemistry as needed – Pat said if Brett had multi-agency funds to retain a technician or a part of a technician in-house, they could provide

quick-turnaround on samples for just the cost of travel and per-diem to the lab. Additional avenues for the short-term include that Steve Platania is using Woods Hole, as is a graduate student of Dana Winkelman. Kevin Bestgen said LFL might be able to cross-train one of their staff (i.e., Zelasko) and keep Brett integrally involved.

- Pike in the Colorado River, reservoirs, and adjacent ponds and gravel pits – The Committee discussed the complexity and severity of this problem. >Pat Martinez will talk to Patty Gelatt and let her know the Committee believes the Service should reconsider requesting levee notches on gravel pits.
 - Basinwide Strategy – In revision. In August 2012, the MC directed the PD's office to incorporate a more 'RIPRAP-friendly' component into the Nonnative Strategy with the intent of revising the RIPRAP accordingly in 2013. The second draft of the Nonnative Strategy due by late December 2012, and will include the 'RIPRAP-friendly' tasking element the MC requested. Revision will convey the Program's sense of urgency on nonnative fish prevention / control and the role of this Nonnative Strategy. The MC asked that they get a chance to respond to the revised draft of the Nonnative Strategy before meeting with the State's Fish Chiefs. A meeting with the Fish Chiefs will be scheduled as soon as the MC is ready – likely mid-February 2013 at the earliest. The PD's office will work with the committees to revise the RIPRAP and finalize the Nonnative Strategy as soon as possible in 2013. This is Pat's top (and practically only) task until Christmas. The workshop provided important information that Pat will include in the Strategy.
 - Reservoir projects:
 - Paonia – was rotenoned in late October (pike).
 - Miramonte (illegally stocked smallmouth bass) – Reclamation is planned for 2013.
 - Red Fleet (illegally stocked walleye and smallmouth bass) – UDWR is providing a 1-page proposal for reclaiming Red Fleet next fall and the PD's office will use that to make the cost-share request of the Management Committee (with a copy to the Biology Committee). Tom Chart clarified that whereas the Program fully supports treating the sources of nonnative fish, we are not in a financial position to cost-share every reclamation project carte-blanche. Melissa asked if some of the Red Fleet water that's drawn down can go into Stewart Lake; Krissy said she thinks that's an option and will >get more information to the Committee. >UDWR, the Service, and Reclamation also will discuss Stewart selenium issues.
5. 5-year budget requirements in FY14-15 scopes of work – Angela reported that Melynda affirmed that SOWs can have 2-year budgets with 3% added to each year to fill out the 5 years. USBR reviewers need to be able to see how PIs derive their numbers (e.g., x hours * y rate = z\$). Generalized equipment budgets are no longer permitted, so the more detail the better. For example "Equipment (gas cans, tools) \$x (note: amount based on previous years' costs or cost estimates/quotes...)." Reclamation NO LONGER has a \$1K cut-off below which you don't need to describe and justify costs. Reclamation will review the FY14-15 SOW format before the PD's office sends it out.
6. Approve revised report review and flow recommendation approval process – The Management Committee recommended revisions to clarify: 1) how flow recommendations are approved; and 2) that the technical report review process applies to both the Biology and Water Acquisition committees. Tom Chart sent the recommended revisions to the technical committees for their review and approval on November 14, 2012. >Dave Speas said he has some editorial comments that he'll send to Tom, but substantively, he doesn't think the implementation of flow recommendations really reflects what happened with Flaming Gorge and Aspinall. Tom Chart said he thinks this speaks more to how we revise and reevaluate flow recommendations as we get new information. Tom will clarify this so it's clear we're referring to flow recommendation reports, not biological opinions and NEPA documents. Dave also suggested the process

should reference the DOI Scientific Integrity Policy. >Tom Chart will incorporate these revisions and send it back to the Management and technical committees for final approval.

7. Review reports due list – Kevin Bestgen is reviewing cyprinid key (#149) and SMB synthesis (161) reports. Doug plans to submit the Colorado pikeminnow population estimate report (#127) to Tom Czapla by the week of 12/18. The #158 (assessment of larval CPM presence/survival in middle Green backwaters) report will depend on FY13 funding decision. >Kevin Bestgen will provide a revised due date on the smallmouth bass synthesis.
8. Review previous meeting assignments (see Attachment 1)
9. Designation of 2013 BC chair (Jerry Wilhite) and vice-chair – The Committee nominated Dave Speas as the new vice-chair for 2013.
10. Schedule next meeting: January 14 1-5 (>the PDs office will arrange meeting room with Moab Valley Inn), primarily to discuss shifts in nonnative fish work in 2013. March 7-8, 2013, near DIA (>the PD's office will arrange a meeting room), beginning at 10 a.m. on the 7th to and adjourning at noon on 8th. Agenda items will include review of RIPRAP revisions & FY14-15 Program Guidance.
11. Consent Item: The Committee approved the revised October 16, 2012 Biology Committee webinar summary; >Angela Kantola will send the revised summary to the listserver (*done*).
12. Other: Harry said CPW's revised Master Angler awards guidelines for western Colorado will be reflected in their new brochure soon to be posted on their website.

ADJOURN: 12:15 p.m.

Attachment 1: Assignments

Note: the order of some assignments has been changed to group similar items together.

For earlier history of items preceded by an ampersand "&", please see [previous meeting summaries](#).

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1. & White River report: 3/6/12 **Jana Mohrman** will provide a revised report to BC and WAC by December 31, 2012.
2. & Tusher Wash Screening: 1/26/12: **Tom Czapla, Dave Speas and Kevin McAbee** will draft a Tusher Wash mortality study and literature review RFP (or similar) for review by folks who would not be submitting a proposal. 7/12/12: *no proposals were submitted in response to the RFP, >the ad hoc committee will work on completing the literature search portion of the mortality study.*
 - 6/26/12: **Reclamation** is developing a cost estimate for a coffer dam that would allow installation of an electrical barrier.
 - Tom Pitts suggested **Reclamation** work with **Smith-Root** to put all the Tusher Wash electrical barrier installation costs (barrier, coffer dam, construction, etc.) in a report for the Committee's review. **Tom Czapla** will work with Smith-Root and Reclamation to produce that. 8/21/12: *Recommended strategy sent to Biology Committee and approved via e-mail.*
 - When the final engineering designs are provided (**Kevin McAbee** will send the Biology Committee any plans he receives), **key Committee members** should make another site visit.
 - In response to concerns expressed about the loss of fishing opportunities in the canal if an e-barrier is installed, Krissy Wilson will check into other nearby community fishing opportunities.
3. & Revise the Integrated Stocking Plan (ISP) and related issues. **Tom Czapla** is convening a group to revise the ISP.
 - 5/13/11: *Cost-benefit analyses should be included in the revised ISP; Tom Chart said he thinks the Program Director's office can initiate this analysis. Results of the health condition profile meeting held at Dexter in March should be incorporated into the revised stocking plan.*
 - 9/27/12: *Revised draft ISP sent to ad hoc group by 9/27/12; comments will be due by the end of October. 12/7/12: PD's office will provide a date by which they'll send out a revised plan.*

Humpback Chub (population estimates)

- 5/13/11: *Black Rocks and Westwater data have been transferred to Gary White; **Program Director's office** will check to make sure we've got this analysis covered. 3/6/12: Done and 131 SOW revised accordingly (\$20K provided to LFL in FY12); report due in 2013.*
- After the ad hoc group meets, Melissa Trammell will draft an Environmental Assessment of the impacts of the humpback chub captivity management plan (also addresses how to deal with captured roundtail chub); **Krissy Wilson** will work with **Melissa** on the EA. **Melissa Trammell** will review Dexter's new plan to see if it may impact this (also will talk to Tom Czapla). 3/6/12: *This is on hold (if even necessary) until the humpback chub ad hoc committee finishes their plan. If fish are not removed from the Yampa River, an EA won't be needed.*

Humpback Chub (broodstock development / genetics)

- 11/22/11: *Conference call to discuss humpback genetics and potential refugia/propagation held 11/2/11; draft action plan materials sent to group from Tom Czapla.*
- 3/6/12: **Tom Czapla** will remind the humpback chub genetics ad hoc group to submit comments (7/13/12 comments still pending).

- As identified in the sufficient progress assessment and requested by the Management Committee, the **Program** will develop an action plan for establishing refugia for humpback chub (avoiding getting bogged down in genetic analysis). Mike Roberts has recommended building in limiting factor/life history studies to better understand what's going on in the system that's affecting humpback chub populations.
- *10/16/12: Age-0 Gila from Westwater were going to be brought to the Horsethief Canyon ponds this fall, but river conditions won't allow safe transport until spring. Tissue samples from those humpback and fin clips collected from humpback in the field in 2012 will be analyzed by Wade Wilson to provide information needed to determine if we can use local humpback chub for broodstock development, if needed, or if we will need to incorporate fish from the backup broodstock at Dexter NFH (from the Grand Canyon).*

Razorback Sucker

& **Dale Ryden** and **Dave Schnoor** will summarize Ouray hatchery needs (water source for Randlett and generator for Grand Valley) and submit it to the Program via Tom Czaplá. **Dale** also will seek Service funding. The report will include discussion of the relative risks of power outages at Grand Valley. Melissa suggested that for the long-term, we need a feasibility study for alternative water sources for Randlett.

- *5/13/11: Dale said Reclamation says alternative water sources would have a \$10M price tag. The Service has been discussing the manganese problem and will convene a group to discuss (Program Director's office, hatchery folks, Reclamation, etc.).*
- *9/30/11: Proposal for **contractor** review of alternatives for remediating manganese approved by Management Comm. 5/4/12: Contractor has recommended two options in a preliminary report; likely the selected option will be to install one more bank of filters/BIRM. 6/27/12: contractor made recommendations and Ouray ordered the filter bank and has been replumbing the facility. Contractor may provide report after the install and recheck. 7/13/12: Some additional well electrical problems at Ouray are being worked on.*
- **Tom Czaplá** said Dave Schnoor is working on creating back-up broodstock for Wahweap from some of the excess razorback at Ouray.

Bonytail

- **Dave Schnoor** will write up his thoughts on bonytail stocking and temperature (*3/6/12: draft provided to Tom Czaplá, Dave Schnoor revising and will send to BC*). The **Mumma and Wahweap hatcheries** will compile their records of stocking temperatures and provide that to **Tom Czaplá** for consideration as part of the integrated stocking plan. *Done; Tom Czaplá included Dave's recommendations in the draft ISP. Krissy attempted to get river temperature at stocking prior to 2008; but this information was not on the data sheets. 10/16/12: Zane stocked ~6,000 bonytail last week. Krissy said Julie captured 8 bonytail only 2 of which had PIT-tagged; Tildon reported catching an untagged bonytail, also. 12/7/12: Tildon Jones said that initial recaptures in Echo Park reach indicates (several weeks post-stocking) suggest that changes in stocking methods have been helpful.*
4. Hybrid suckers: The **Program Director's office** will follow up on establishing a process to track percentages of hybrid suckers using standardized protocol for identification of hybridization at fish ladders and in monitoring reaches. *Pending. 1/11/12: Discussed on 1/5/12 NNFSC call; process pending from **Pat Martinez** (lower priority). 10/16/12: Pat will check with LFL about offering a course on sucker identification. 11/14/12: LFL has developed a preliminary, hypothetical matrix to aid in identifying hybrid catostomids. 12/7/12: discussed at the December 5-6, 2013, Nonnative Fish Workshop; key folks will review materials at the researchers meeting in hopes of providing a guide to "standardize" identification of hybrid suckers by agreeing to use a common set of identification aids (pictures, meristics, etc.), so we can be more efficient and confident in identifying sucker hybrids basinwide as a means of tracking the incidence or increase in this genetic threat by nonnative suckers to native and endangered catostomids.*

5. & Flaming Gorge/Green R burbot: **Melissa Trammell and Pat Martinez and Krissy Wilson and Jerry Wilhite** will work on a Flaming Gorge burbot risk assessment. 10/16/12: *They held a conference call August 30 and October 15; will have another call November 20, and Melissa will present something to the nonnative fish workshop and provide a draft by January 2013. UDWR is funding two studies (food web and early life history). Late this season, Tildon tried baited hoop nets and other methods in the Green River and did not capture any burbot. 12/7/12: Melissa will provide a draft to the ad hoc committee members in January.*
6. Sediment monitoring: **Tom Chart and Jana Mohrman and Kirk LaGory** will convene fish biologists involved in developing flow recommendations and geomorphologists (e.g., John Pitlick and Cory Williams) to identify logical next-steps (e.g., is MD-SWMS modeling the best way to proceed) to evaluate flow recommendations, particularly on (but not limited to) the Gunnison where sediment transport is so important. *Pending. 12/7/12: Dinosaur National Monument has a project running the MD-SWMS process on the Yampa above Deerlodge.*
7. Nonnative fish management follow-up: 10/16/12: **Dave Speas** convened a conference call in August to discuss reconnaissance for future nonnative fish work on the Dolores River and decided against it due to access and other difficulties. Jim White is collecting otoliths and will provide them to Kevin Bestgen. Dave said Peter MacKinnon and Jim White have been working on a PIT-tag antenna at Disappointment Creek and also have identified a site on the lower river (Rio Mesa Center). 10/16/12: Colorado conducted additional northern pike removal passes on the Colorado River this year. **Harry** asked CPW Regional and Aquatic staff if Colorado's view regarding a smallmouth bass bounty on the White River might be different if Colorado weren't responsible for the bounty dollars/management. If someone has a proposal to administer a smallmouth bass bounty on the White River, Colorado would consider it.

2012 Workshop items:

- **Pat Martinez** will send his presentation to the Recovery Team.
- Kevin Bestgen will ask André to model some of these questions about marking and the BC will discuss this during their meeting the afternoon before the researchers meeting
- The PD's **office** will send out the workshop summary and list of suggestions to the BC and interested parties. PIs can provide any clarifications to this to the BC before the January 14 meeting.
- FY14-15 SOWs will include a caveat about flexibility (e.g. "Note: methods and timing of this work may require adjustment to hydrological conditions as the season unfolds."); **Angela Kantola** will add a note to the FY14-15 SOW format in this regard.
- Pat Martinez will talk to Patty Gelatt and let her know the Committee believes the Service should reconsider requesting levee notches on gravel pits.

Red Fleet: **Krissy Wilson** thinks water drawn down from Red Fleet can go into Stewart Lake and will get more information to the Committee. **UDWR, the Service, and Reclamation** also will discuss Stewart selenium issues.

8. Fire impacts: **Dave Speas** will invite the SRLCC Science Coordinator, John Rice, to come and discuss this with the Biology Committee (or at the Researchers Meeting) ways agencies might coordinate to prevent or mitigate impacts of wildfire on endangered fishes. 12/7/12: *Dave said John is interested (but can't make the researchers meeting) and will continue to work with him to get him to a meeting.*
9. Database Management: The **Program Director's office** will work to define the overall problem/need to improve data management in light of the increased PIT antenna data, draft an overall schedule, and bring that back to the Committee in advance of the December meeting for discussion. *In progress, but not yet*

fully defined; PD's office will provide update.

10. Reports: For the Elkhead escapement report, **Kevin Bestgen** will send the Committee revised verbiage related to the lake management plan, get that approved, and revise the report, also addressing other comments discussed; *pending*. **Kevin Bestgen** will provide a revised due date on the smallmouth bass synthesis.
11. Protocol for documenting fish captures: **Tom Czapla** will provide protocol for the scope of work format (or other appropriate venue) for how Program PIs will document significant fish captures with photos, etc. Krissy suggested the protocol also should include checking for ripeness and noting if fish are tuberculated. *12/7/12: The PDs office will provide a due date. The Committee discussed how to document in the database things like fish kills, oil spills, etc. Access software allows linking to all kinds of information (including photographs). Information on mortalities may include things like PIT tags. Our existing database can clearly handle information on mortalities; we need to emphasize that these data need to be collected and submitted.*
12. Revised report review and flow recommendation approval process: **Dave Speas** will send Tom some editorial comments. **Tom Chart** will incorporate these and the revisions discussed, above, and send it back to the Management and technical committees for final approval.
13. Next meeting: The **PDs office** will arrange meeting room with Moab Valley Inn for January 14, 1-5 p.m. and with a hotel near DIA (likely the Country Inn and Suites) for March 7-8, beginning at 10 a.m. on the 7th to and adjourning at noon on 8th.