

Biology Committee Meeting Summary
January 14, 2013, Moab, Utah
and
January 29, 2013 Webinar

PARTICIPANTS

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

Others: Tildon Jones, Aaron Webber, Dave Schnoor, Pat Martinez, Tom Chart, Angela Kantola, Kevin Bestgen, Joe Skorupski, Matt Breen, Katie Creighton, Julie Howard, John Hawkins, Tom Czapla, Ed Wick, and Dave Campbell.

CONVENE: 1:00 p.m.

1. Review/modify agenda (Wilhite, 5 min)
2. Modification of Stewart Lake SOW- - Joe Skorupski presented recommended (no cost) changes to this scope:
Purpose: Modify inlet and outlet sampling within the constraints of the contract to accomplish additional objectives. The PIT tag antennae use will be replaced with a two directional picket weir in the outlet, which will accomplish the original objective (determine tagged native fishes using Stewart Lake during floodplain connection) and additional points such as:
 - Large bodied fishes using the Stewart Lake floodplain will be quantified
 - All native fishes will be sampled, not just tagged individuals
 - All nonnative fishes will be sampled
 - Carp and other competitive and predatory nonnatives will be entering Stewart Lake will be minimized
 - Adult carp abundance was very high in Stewart Lake
 - Carp reproduction was very successful
 - Excluding adult carp and minimizing reproduction will reduce competition for razorback suckers
 - Determine if reduction of large bodied nonnatives can improve survival of age-0 razorback sucker in the Stewart Lake floodplain



UDWR will monitor this weir setup continuously during inflow. The weir structure also will aid sampling razorback in the fall. The Biology Committee approved the changes; >Joe will modify and submit the SOW. .

3. Stationary PIT detection system in the Green River Canal, Green River, UT – Dave Speas said the MOU has been signed and they hope to install the system at the end of March. >The Program Director's Office will post the scope of work to the web. With regard to the concerns local interests expressed about reduced fishing opportunities (catfish in the canal), Krissy said she confirmed that there is a community fishery in the area
4. Electrofishing Training Course: Boats and Rafts to be used for Field Trip at Highline Lake – Pat Martinez said that the Recovery Program electrofishing SOP that he and Larry Kolz are working on will be finalized soon. Reviewing the data, it's clear field folks are capably collecting data and the information is showing that the ETS units do appear to be more "fish-friendly." Pat's compiling a list of folks bringing boats and rafts to the training.
5. Sucker and Hybrids ID materials: common reference set for 2013 field season – Pat showed examples from the Fish and Wildlife Service Grand Junction CRFP office. The plan is for researchers to share these types of materials tomorrow evening and compile a document prior to the field season to will help everyone identify hybrid suckers.
6. Adjustments to 2013 nonnative fish projects – The Committee discussed 2013 priorities, additional costs, and potential funding sources. The Program Director's Office provided a draft for the Committee to begin identifying the highest priority modifications to FY 13 projects and the total cost of those modifications (see Attachment 2). The Committee discussed many of the projects, but did not have time to discuss them all. They will resume their discussion on a January 29 webinar (8 a.m. – noon), and also discuss costs and potential funding at that time. >By January 23, PI's will submit costs for recommended changes (including appropriate restoration of 2013 to 2012 levels and adding surge as recommended) to the Biology Committee via e-mail.
7. Consent Item: Review and approve revised December 7, 2012, Biology Committee meeting summary: approved. >Angela Kantola will post the revised summary to the listserver (*done*).

ADJOURN: 5:00 p.m.

Biology Committee Webinar
January 29, 2013

PARTICIPANTS

Biology Committee: Harry Crockett, Melissa Trammell, Dave Speas, Dale Ryden, Krissy Wilson, Jerry Wilhite, Brandon Albrecht, and Pete Cavalli. The water users were not represented.

Others: Tildon Jones, Aaron Webber, Tom Chart, Angela Kantola, Joe Skorupski, Matt Breen, John Hawkins and Tom Czapl

CONVENE: 8:00 a.m.

1. Nonnative fish activities – The Committee continued discussion of adjustments to 2013 nonnative fish projects (item #6, above). Please see Attachment 2 for this discussion. Harry Crockett said that Colorado is still working to determine whether it will be acceptable to discontinue translocation to State HQ pond (he'll have an answer by the March 7-8 meeting, probably before).
2. Hatchery production – Tom Chart said Tom Czapl and the group working on the Integrated Stocking Plan are considering producing larger (and perhaps more?) of bonytail and larger (but probably fewer) razorback sucker. This would result in an increase in production costs at the Mumma facility. Mumma provided a

proposed revised scope of work that would add ~\$55K for bonytail (larger fish and greater numbers). Tom Czaplak is looking at the big picture programmatically and >Program Director's office will bring that to the Committee by the March 7-8 meeting.

3. Reclamation funding agreements – Dave Speas said personnel creating and administering cooperative agreements has shifted. Instead of Melynda Roberts, Tim Wagner will be the contact in for the Upper Basin Recovery Program. Tim is currently working on completing FY13 modifications to existing agreements. Therefore, we need to complete any SOW revisions immediately. Some modifications may already have been made before SOWs currently under discussion are revised. Dave advised agencies to go ahead and sign any modifications that they receive and Reclamation will do second modifications for any further changes. Reclamation's deadlines are earlier this year: they can submit requests to modify existing agreements up until August 31 (not September 30); therefore, these requests must be SUBMITTED BY MAY. Requests for any new agreements need to be made IMMEDIATELY. Going forward (with new agreements), Reclamation will put all scopes of work for each agency under one (or a few) agreements (this likely will require some additional accounting on the part of the receiving agencies.) Dave also said Reclamation will be able to submit proposals *before* the beginning of the fiscal year, which should mean agencies will get their agreements before the end of the calendar year each fiscal year.
4. Assignment review (see Attachment 1).

ADJOURN: 10:52 a.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](#).

1. & White River report: 3/6/12 **Jana Mohrman** will provide a revised report to BC and WAC by December 31, 2012. 1/4/13: On Dec 10, 2012, representatives from the PDO, TNC, and water users (CO and UT) met in Boulder to review recent hydrologic analyses, which served as a preliminary response to water users' comments on the draft flow recommendation report. At that meeting, participants recommended development of a White River Management Plan (including some level of future water development + recovery actions to offset depletion effects). The Management Plan will likely entail some StateMod runs.
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 (which will aid the discussion in the biological opinion). Need to assign lead.
 - 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.
 - On January 16, 2013, interested Biology Committee members met with engineering design firm (McMillen) to discuss design and engineering of the e-barrier and passage.
 - 1/29/13: Dave Speas said that Kevin McAbee and Peter MacKinnon would like to try to install the PIT antenna on March 12-13 and need an extra hand (date might be slipped to March 28, but hopefully not). The canal opens for irrigation on April 1, so the installation needs to be done before that.
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. 1/17/13: the Program Director's Office will provide a revised draft by February 28, 2013.

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: 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). 1/17/13: Some comments received and incorporated; comments still pending from Trammell.

- 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. 1/17/13: *Program Director's Office will provide outline to Biology Committee by February 28, 2013.*
- 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 (timing will depend on hydrology). 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.

- 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.
 - **Dave Schnoor** is creating back-up broodstock for Wahweap from some of the excess razorback at Ouray.
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 early February. 1/29/13: Tom Chart will include some language in the Flaming Gorge flow request letter (which will be a repeat of last year's on the Larval Trigger Study plan, but not the Stirrup). Tom will send this to the Management and Biology committees for review, hopefully this week (and will set up a conference call to discuss, if needed). The letter will back away from releases above bypass, since that would be a long shot given the developing hydrology. Melissa asked if UDWR could include larval burbot sampling near the spillway in their current work in Flaming Gorge; Krissy thought they could. Tildon asked and Krissy said

they're not doing any sampling in the tailrace for burbot.

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. 1/4/13: Kirk La Gory is currently busy with a Lower Basin project but would like to try to start the sediment work this in late spring. Jana is working to set up a meeting in May.*
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:

- 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
- 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. *Done.*

From January 14 and 29 meeting/webinar:

- By January 23, PI's will submit costs for recommended changes (including appropriate restoration of 2013 to 2012 levels and adding surge as recommended) to the Biology Committee via e-mail. *Done.*
- Melissa Trammell offered to work with Travis and report other nonnative fish data (e.g. gizzard shad, nonnative fish captured during Colorado pikeminnow estimates to the Committee each year. The >Program Director's Office (Pat) will provide specific protocol for handling nonnative fish during other work like Colorado pikeminnow estimates (i.e., which species to target, measure, take otoliths from, etc.) and reporting the data. Walleye, pike, gizzard shad, and other anomalous fish all should be removed. The Committee will review the report Melissa provides in working with Travis and then discuss what further analysis may be needed.
- In 2013, population estimates for smallmouth bass will only occur in Project 125. The Committee will reconsider resuming the smallmouth bass population estimates throughout the current Yampa River population estimate reaches in 2014, based on an analysis from André.
- The Committee agreed to suspend all mark / release of northern pike Program-wide in 2013. They made a **firm agreement** to revisit this issue (northern pike population estimates) when results of the northern pike synthesis are available.
- John Hawkins will add 2 ETS units to his scope of work (\$15K) and Dale Ryden will add four generators (\$8K). *In process, though FWS request modified.*
- Harry Crockett will check to see if Colorado's Parks folks might be interested in administering a harvest incentive program.

- 98c & Upper Yampa: Potential PIs and the Biology Committee will discuss possibilities for 2014 and make a recommendation for consideration during the 2013 nonnative fish workshop. Colorado Parks and Wildlife will review landowner permission for access. Meanwhile, Harry also will see if by any chance Billy could add an electrofishing pass from Steamboat to Hayden to the 98c work they've been funding (in 2013)
- Harry Crockett will find out if Billy Atkinson is still translocating fish from Catamount to Yampa State HQ ponds. (*Done. Billy is no longer translocating fish to this pond.*)
- Pat Martinez will confirm whether Brett's work will address analyzing previously-collected otoliths to determine if Duchesne River & Starvation Reservoir sources of smallmouth bass or walleye.
- Matt Breen will provide proposal for FY14-15 that they believe would monitor native fish response (e.g., sampling fish through time throughout the summer).
- Matt Breen and Tildon Jones will provide the Program Director's office with an FY14 budget estimate for #158 final report writing.
- The Program Director's office and Vernal-CRFP will work to develop a proposal for a smallmouth bass harvest incentive program on the White River.
- Colorado can spend up to two weeks removing bass from the White River and will develop a minimal sow like 126b (and add it to 126b or 98a to avoid new agreements) at a cost of ~\$17.5K for this work.
- Colorado will provide a cost estimate to add a certain number of days of work for northern pike removal above Grand Valley (including above Rifle Creek and in ponds). Locations and timing will need to remain flexible depending on landowner access, etc.
- Principal investigators will revise scopes of work based on final recommendations from Program Director's office provided with this meeting summary (needed by February 14).

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 1/29/13: or webinar (perhaps more likely given travel restrictions). Tildon said this is on the radar of BLM's Vernal office with regard to the Wolf Den fire. Tom Chart said we might pitch monitoring impacts of some of these fires to the SRLCC. Tom and Dave Campbell are discussing this with Kevin Johnson and John Rice, so he will bring this up with them and include Dave Speas.*
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 2 weeks before the March meeting (February 21).*
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 Czapl**a will provide protocol for the scope of work format (or other appropriate venue) for how Program PIs will consistently document significant fish captures with photos, etc. (E.g., new nonnative species, information from fish kills after fires, 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 (*done*). **Tom Chart** will incorporate these and the revisions discussed, above, and send it back to the Management and technical committees for final approval (*pending*). *1/29/13: After Water Acquisition Committee approval, we'll incorporate Dave Speas' editorial suggestions for cleaning up the document and will let the committees know when it's final and posted to the web.*
13. Joe Skorupski will modify the Stewart Lake SOW (FR-165) and submit it to the Program Director's Office to post to the web. *1/29/13: Pending later this week.*
14. The Program Director's Office will post the SOW for the stationary PIT detection system in the Green River Canal to the web. *Pending.*
15. Angela Kantola will post the revised December 7, 2012, Biology Committee meeting summary to the listserv (*done*).

Attachment 2

Revised January 31, 2013

2013 Proposed Changes to Nonnative Fish Field Work & Scopes of Work

Highest priorities: Yampa River, White River, Colorado River above Grand Valley.

General:

- \$0: Report large-bodied predator sizes in 2013 & future annual reports.
- \$0: Do not release large-bodied predators, even for population estimates (northern pike > 450, smallmouth bass >325, walleye >375, and *no* burbot would be released). In the Yampa River, this would amount to ~1/3 of the nonnative predators handled in critical habitat. With this method, abundance can only be estimated for fish below these sizes (with some complications due to growth). The probability of capture decreases after the first capture/release. This may not apply if we only do periodic nonnative fish population estimates.
- \$0 savings: begin alternate or every third year for mark-recap? Harry said Colorado Parks and Wildlife permits will not require population estimates on any of the projects in Colorado this year. However, Harry said he does have concerns about not doing population estimates in light of the difficulty of knowing whether or not we're making progress. Pete Cavalli and Dave Speas said they think the idea would be to do population estimates in some, but not all years. Kevin Bestgen agreed that population estimates are difficult to make with small "treatment" reaches due to fish movement, and he supports reach-wide consistency. John Hawkins added that in years when we do smallmouth bass population estimates, we may need to commit to more than one marking pass in difficult reaches so that an adequate number of fish are marked to make a population estimate (this may also apply to northern pike). John Hawkins said he does want to get a population estimate for smallmouth bass in Little Yampa Canyon in 2013. Tildon said John is in one reach for a lengthy period (as perhaps are Matt and Joe in the Green), but this is different from what Aaron and Tildon are doing, where they're only in each of several reaches for a short time. Pat suggested discontinuing northern pike estimates all together; Harry expressed concern about not knowing what progress we've made without them. Dale and Melissa endorsed discontinuing population estimates for a couple of years. Tildon asked again if the level of measurements they're making on a project-by-project basis will be adequate (we didn't think so in the past), or if we'll need another synthesis (or continuation of running André's model). In light of Colorado pikeminnow status in the Yampa River, Tom Chart suggested not releasing any pike until after we have the northern pike synthesis (fall 2013). Melissa agreed. Jerry suggested that if we take this approach, we need to commit to getting a solid estimate (i.e., release even the large fish, potentially conduct more than one marking pass) in the years we do make estimates. Dale supported periodic estimates (estimates two years in a row so we get more than one data point). Dave Speas suggested skipping a year of marking while we do a power or similar analysis to determine how frequently we need to make population estimates. **The Committee agreed to suspend the Yampa River northern pike population estimate in 2013, with the firm agreement that they will reconsider the question for 2014 based on the results of the northern pike synthesis.** For smallmouth bass, Melissa suggested suspending population estimates (currently occurring in the CSU-Colorado Parks and Wildlife reaches) for 2013 *except* for Little Yampa Canyon where John Hawkins will continue a population estimate (releasing all sizes of smallmouth bass) to maintain the long term dataset. **>The Committee agreed to suspend smallmouth bass population estimates in all reaches with the exception of Little Yampa Canyon in 2013. The Committee will reconsider resuming the smallmouth bass population estimates throughout the current Yampa River population estimate reaches in 2014, based on an analysis from André Breton.** The Committee agreed. 2014-2015 scopes of work should *include* the marking passes for population estimates as they have in the past, and then the Committee will discuss how to proceed in 2014.

- \$23,000 (now included in #126 & #125): Complete fleet conversion to ETS electrofishers in 2013. Tildon said their office has 4 remaining on order; Harry said Colorado has 6 on order, and UDWR has 2 on order. Dale said his office will be ordering 4 more (Dale later said they will only purchase 2 units in light of other 2013 station priorities). John Hawkins said they have no back-up units and folks who help out with the surge may bring GPPs; Pat asked John to get the 2 units he needs right away. >John Hawkins will add 2 ETS units to his scope of work (\$15K) and Dale will add four generators (\$8K). Additional units will need to be included in some 2014 SOWs.
- \$0: standardize criteria/photos for field ID of suckers and their hybrids.
- \$0: Improve reporting of other nonnative fishes (e.g. gizzard shad, etc.). What about nonnative fish captured during Colorado pikeminnow estimates? Some of these data are submitted to the database, but consistency may be a problem. The data need to be reported and someone needs to compile and report it to the Committee. >Melissa Trammell offered to work with Travis and report the data to the Committee each year. Katie asked the >Program Director's Office (Pat) to provide specific protocol for handling nonnative fish during other work like Colorado pikeminnow estimates (i.e., which species to target, measure, take otoliths from, etc.) and reporting the data. Walleye, pike, gizzard shad, and other anomalous fish all should be removed.
- \$0: Begin project or synthesis for other nonnative fishes (e.g. gizzard shad, etc.)? Defer. The Committee will review the report Melissa provides in working with Travis and then discuss what further analysis may be needed.

98c & Upper Yampa:

- (Colorado Parks and Wildlife & UYWCD): discontinue Colorado Parks and Wildlife's northern pike marking study in Stagecoach. Harry said that for this and the next item, Colorado will first need to get something in writing amending the current MOU that came out of the FERC process that raised the dam at Stagecoach. They are looking into this for 2013. The MOU also commits the District to consult with the Service annually to consider operations (releases) to disadvantage northern pike.
- \$?: Begin mechanical removal of northern pike in Stagecoach. See above; Colorado Parks and Wildlife will discuss with parties to the MOU. Harry thinks that if they were to do this work, it would require an additional crew. Another alternative would be to move effort up from downstream (Fish and Wildlife Service). Harry said Colorado Parks and Wildlife will require all northern pike and walleye to be kept from this year's ice fishing tournament.
- \$20K seed funds for administrative support and harvest incentive: Must-kill & harvest incentive for northern pike and walleye. With regard to must-kill, Harry said Colorado Parks and Wildlife has tried and repeatedly failed to get this through regulatory review. He doesn't believe funding will help this problem. Colorado did lift possession limits for burbot (you can possess as many as you want, as long as they're dead). With regard to harvest incentives, Harry doesn't think Colorado has the resources to run a program like this, but they're open to proposals for how it could be administered and funded independently. However, >Harry will check to see if their Parks side might consider it.
- ~\$50K? (but might be a partial shift of already-funded 98b work from downstream) CRRP crews assist reconnaissance & removal above Hayden. From the west end of Steamboat down, Harry said he thinks (but needs to confirm) that Colorado would be comfortable with assistance from Recovery Program crews. Harry did not recommend moving Colorado Parks and Wildlife resources upstream from the 98a (critical habitat) reach. Concerns with this include: 1) whether anyone has people and equipment (likely rafts) available at the time this work would be conducted; 2) landowner permission for access (probably more of a concern upstream of Steamboat, however); and 3) hydrology and habitat access. The Vernal Fish and Wildlife Service office would have more flexibility to do this work in 2014 and 2015 when they're not doing Colorado pikeminnow population estimates. >The potential PIs and the Committee will discuss possibilities for 2014 and make a recommendation for consideration during the nonnative fish workshop if not sooner. >Colorado Parks and Wildlife will review landowner permission for access. >Meanwhile,

Harry also will see if by any chance Billy could add an electrofishing pass from Steamboat to Hayden to the 98c work they've been funding (in 2013) \$?

98b Yampa Buffer:

- ~\$500 savings: Discontinue northern pike translocation to any waters (Yampa State HQ ponds). The Committee recommended discontinuing translocation pending Colorado Parks and Wildlife's decision (they are considering this). Although it provides recreation, it can stir interest in fishing for northern pike (and there's also a mercury concern). Total savings to discontinue this over the three projects would be ~\$1,500-\$2,000; however the message may be more important than the money. No changes affecting budget unless CPW approves the cessation of translocation to State Park. Melissa asked if Billy is still translocating fish from Catamount to this pond; Harry said CPW has discontinued translocating northern pike.
- \$0: Conduct passes early to focus on northern pike & shift remaining passes later to hit smallmouth bass. The Committee agreed.
- \$?: Initiate process to remove smallmouth bass and northern pike from Elkhead Reservoir (Potential FY 13 costs: purchasing rotenone, growing hatchery fish for re-stocking, public involvement, other?) Harry said Colorado Parks and Wildlife is beginning these discussions and is waiting to learn if the River District supports it, but the conversation is happening. However, it's not likely this would occur in 2013 (the District will want to be sure water is available to refill the reservoir once it's drained). Some concerns are: will the District support removing the fish again if they come back and are their sources upstream of the reservoir. The Committee supports these efforts.

98a Middle Yampa:

- \$ minimal savings: Discontinue northern pike translocation to any waters (see discussion under 98b).
- \$0 savings: Discontinue mark-recap on northern pike (see above)
- \$41,095 Repeat (extended) Surge. Committee agreed. >PI's (for this and other projects) need to provide budget numbers for restoring projects to 2012 levels and adding surge costs. Harry said that the surge is covered with current FY13 funding, but the extended surge requires going back to the FY12 level.

125 Middle Yampa:

- Minimal savings: discontinue northern pike translocation to any waters (see discussion under 98b).
- Stop marking and releasing of northern pike for abundance as requested by BC
- \$18,520 + 17.5% overhead for 2 ETS electrofishing units, generators, and parts- to replace GPP units currently used during the Surge: extend intensity and range of surge. (See 98a). Extend the Surge primarily by ensuring that we receive assistance from CPW.
 - Requesting adequate commitment and funding for CPW to conduct bass removal in South Beach and Lower Juniper reaches through the entire spawning period (including the extended Surge). Assistance from CPW is most critical because their crew will have prior experience working in those targeted locations. Experience is important for maximizing catch rates and for safely navigating with jet boats at low flow during spawning.
 - Request same level of support from FWS-Vernal in 2013 as they provided in 2012. We expect 2013 to be a normal or low water year with a relatively short sampling season and Vernal's current plan to shift from pike removal to bass removal for the second half of their sampling passes should adequately cover their reach. After their normal sampling is finished we request they spend an additional 2 weeks on the Surge, as they did in 2012. FWS-Vernal is critical because of their knowledge of navigating the Craig reach, its access points, and landowner contacts.
 - Request the same level of support from FWS-Grd. Junction which is three people and either jet boats or rafts for 2 weeks.

- It is important that each crew provides not only equipment, but also people knowledgeable in the operation and maintenance of their boats and electrofishing equipment and the ability to operate autonomously.
- Continue marking and releasing SMB at least once in Little Yampa Canyon prior to their removal to obtain an abundance estimate for monitoring population trends.
- Discontinue marking and releasing SMB in Lily Park.
- Neutral: discontinue control/treatment for carp and white sucker – expand removal to other reaches.
- \$3,450 + overhead Recovery Program assistance (Hawkins' and a crewmember) to WY G&F northern pike reconnaissance & removal in Little Snake River in WY. Pete said Bobby Compton is planning to sample in the spring for adults and in the fall for young fish, but doesn't yet know what help he may need. The Committee supported funding this, if needed. One two-day trip in spring to assist with fyke netting in spawning areas and a four day trip in the fall to assist with sampling isolated pools for YOY or adult pike.

140 Yampa Native Fish Response:

- Investigate base flow supplementation (Elkhead releases). Tom Chart said they'll keep this in mind as they communicate weekly about flows with the River District.

110 Yampa Canyon:

- Incorporate hoop nets for sampling chubs. The Committee agreed. Tildon said this project is scheduled for 4 passes (20% cut), but unless the hydrology improves, more passes are unlikely.

115 Green - Lodore, Whirlpool, Browns Park:

- ~\$12K? PIT antenna at Vermillion Creek (for Colorado pikeminnow, where they've been caught 2 years in a row); the three 10' antennas that were at Stirrup may be available. Kevin Bestgen reminded the Committee that the majority of Colorado pikeminnow captured in this area in the past were untagged. He suggested that perhaps increased field sampling would be more effective and economical. Kevin will make a recommendation about this for 2014; the Committee agreed.

123a Green – Echo, Split:

- \$?: Restore passes to 2012 levels for smallmouth bass?. Currently scheduled for 10 passes in Echo and none in Deso. \$16-18K covers one pass in Deso or two passes in Echo. Julie recommended leaving the scope of work as it is for 2013 (since Tildon's pikeminnow pop estimate crew will be in there anyway) and reconsider in 2014; the Committee agreed. To address widespread SMB reproduction in 2012 and the feasibility of SMB control addressed by Haines and Modde, we propose increasing passes from 10 planned (after 20% reduction in 2011) to 12, 6 FWS-Vernal and 6 UDWR-Moab. FWS will conduct 3 Deso passes for pikeminnow estimates this spring during which SMB will be removed, therefore UDWR will forego smallmouth bass passes in Deso in summer for this year. Total cost for this year's SOW with modifications = \$159,077. The currently approved SOW is funded for \$144,684. FWS could do 2 additional passes beyond these (14 total) if the BC feels it is important to address last year's spawning success. This would add another \$14K and potentially address the recommendation of a "surge" in this reach, where reproduction occurred in 2012 and 2007, and potentially could occur this year under favorable hydrology. Tildon said he could go either way on the additional two passes, but they weren't very effective when they were doing a total of 16 passes and staying on the river into September; however, they can catch a lot of young of year in the later period, which could be important if this year's hydrology is like last. Melissa said she'd support the total of 14 passes, but would leave flexibility to the field office depending on conditions.

However, if could fit in a couple of late-season burbot passes, Melissa thinks this would be a worthwhile tradeoff.

- Incorporate “Surge” effort for smallmouth bass? Tildon said this would likely mean sampling with motorized craft in the upper portion of Island Park, which would be problematic with the NPS. CRFP and UDWR crews will sample during spawning, but logistically it wouldn’t make sense to be in there every day.
- \$?: Sample for burbot. Pete Cavalli suggested trammel or hoop netting or angling in fall or early spring likely would be more effective, but Aaron’s crew can see what they can do during their sampling season to better document burbot presence. (See above.)

123b Middle Green:

- \$16,830: Restore FY13 funds to previous levels before 20% reduction
- Neutral: Shift 2-main channel passes for NOP to focus on tributaries (e.g. Stewart Lake Drain, etc.)
- Neutral: Discontinue mark-recap for smallmouth bass
- Continue adaptive management approach to allocation of field sampling
- \$10.2K for replacement boat & trailer
- \$9,198 Exploratory pass for northern pike by Brown’s Park (anglers have caught several northern pike upstream in the Utah portion); scouting trip to determine fyke-netting locations and one electrofishing pass in combination with pulling nets (staggered trips).
- Duchesne River & Starvation Reservoir sources of SMB or WLY? Tom Chart said he thinks this is scheduled to be addressed under Brett’s work (or LFL back-up) with previously collected samples. >Pat Martinez will confirm. Tildon said they learned anglers were catching quite a few walleye by Jensen last fall.
- \$4,162: White sucker age/growth/maturity fin ray study. Dale and Melissa and Harry asked how we’ll use the information in managing white sucker. Matt said it will help us look back at specific year classes, relate growth rates to environmental factors, etc. Most of the fin rays have already been collected (2011, 2012, 2013), so the expense is low (travel, sample prep, and use of USU lab equipment). Matt said he sees this as a one-time effort to gain baseline information, although it could be repeated in the future. Joe said he thinks the results will tell us whether or not 275mm is a true length for maturity, which might affect our target removal size. Dave asked how we’ll relate to environmental factors; Matt said they did collect some fish produced in the year of collection. Even if they don’t have a fish from a given year, they can go back and look at growth rates several years before the fish was collected. The Committee agreed this would be worthwhile.

138 Green Native Fish Response:

- Transfer CPM larvae into blocked backwaters (this belonged under 158). PI’s don’t recommend
- Neutral: no changes in project proposed but PDO needs to consider value of native fish response in this reach (not possible as in Yampa River experimental section). Matt asked if we should discontinue trying to gage native fish response as part of this work. Melissa recommended continuing the work for FY13, but asked >Matt Breen to provide proposal for FY14-15 that they believe would monitor native fish response (e.g., sampling fish through time throughout the summer). We’re trying to find out when we’re losing Colorado pikeminnow. Tom Chart said he thinks monitoring age-0 Colorado pikeminnow is what this project does well, and that is critically important.

- Won't continue field work until review results in final report; >Matt and Tildon will provide the Program Director's office with FY14 budget estimate for report writing. (Samples won't come back until mid-field season in 2013 and so they won't have opportunity to work on them until FY14.)

167 White:

- Neutral: Shift/increase passes to upstream for SMB below Taylor Draw Dam (Vernal CRFP)
- Savings of \$5,296 (Vernal UDWR); additional cost of \$17,500 (CPW): Vernal UDWR will drop to a single pass downstream (RM 72.1 to 24.0). 167—White River SMB control—2012 SOW was written to include two 4-day passes from Taylor Draw Dam to CO/UT line. In light of very high catch rates in the uppermost reach during the first full pass, Aaron took the remaining days and devoted them to the top reach. CPW did some additional work in reach 2. We suggest focusing on the uppermost segment between the dam and Hwy 64. Currently USFWS has 8 days funded for SMB removal, on top of any removal that occurs during three full passes (dam to Green River confluence) during spring pikeminnow sampling. CPW has indicated interest in adding resources to this reach. One concern is continual electrofishing in a reach that harbors high numbers of large (700-800mm) adult pikeminnow, roundtail chub and native suckers, so we would like some input on whether to stagger passes or hammer this reach daily. Tildon said the highest number of bass is below the dam. If CPW were to also do passes, would it make more sense for them to do the reach just downstream? Aaron said if the objective is to remove as many bass as possible, then it makes sense to work only in the upper reach just below the dam. Aaron said they saw gravid female and spawning Colorado pikeminnow throughout the season. Tildon said past radiotelemetry data also suggest Colorado pikeminnow don't leave the White River to spawn every year. Aaron said the majority of the Colorado pikeminnow are found a mile or two below the dam. Tom Chart asked if this information has been captured somewhere (other than in Kevin's population estimate); Tom would like to know how many Colorado pikeminnow they're seeing up there. Tildon said four pikeminnow expressing gametes were caught June 6 & 7, then decreased in later passes. Matt added that UDWR also found tuberculated Colorado pikeminnow somewhere near RM50, so spawning Colorado pikeminnow also in this lower reach, as well. The Program Director's office will add drift stations in the White River to FY14-15 Program Guidance. Melissa said she's still in favor of hammering the bass in the White River when we can. Harry asked if more electric seining (which would have less impact on Colorado pikeminnow) might be useful once flows drop. Aaron didn't think would help reduce adult smallmouth bass. Tom Chart asked about angling (as sampling and as an incentive program); Aaron said he thinks we should consider it. Harry said there's now no angling limit on smallmouth bass or any other nonnative species from the base of the dam down to the State line. Harry said he'll point out the overlap between Colorado pikeminnow and smallmouth bass in this reach and suggest that if Colorado were open to trying any kind of harvest incentive, this would be the place to do it. A proposal from the Recovery Program would be helpful. Aaron suggested they could pit tag 10 bass, with each tag worth some dollar amount. Then anglers could freeze their fish (however, not everyone would have resources to freeze large numbers of fish, so this might not work) and Aaron could go to Rangely once a month or so and meet with anglers to scan fish to determine if any were tagged. Costs will include: getting the word out, administering the reward funds, etc. (John noted that this may set precedent among anglers for other areas.) >The Program Director's office and Vernal-CRFP will work to develop a proposal. Harry said Colorado could spend up to two weeks removing bass from the White River and >will develop a minimal sow like 126b (and add it to 126b or 98a to avoid new agreements) at a cost of ~\$17.5K. Harry asked if we might translocate the Colorado pikeminnow out and keep them out for a few days. Aaron said it's an interesting idea, but translocation might be more detrimental than the shocking. Tom Chart added that we don't want to move the Colorado pikeminnow away from a potential spawning area. Tom recommended funding this work and give the PI's flexibility as to where and when to sample.

- \$?: Otolith microchemistry. Tildon said they have 2012 samples collected. The Program Director's office should address overall otolith microchemistry in Program Guidance.
- \$?: Must-kill & harvest incentive for SMB & NOP

126a Upper Colorado:

- \$39,472: Restore SMB/LMB removal passes back to 10. PI's recommend 8 removal passes through the Grand Valley (six done in 2012). Restore SMB/LMB removal reach from Loma to Westwater. PI's recommend 2 removal passes each through the Loma to Salt Creek & Salt Creek to state line sections, which includes Black Rocks (none done in 2012). In the last Colorado pikeminnow population estimate, they started getting large numbers of walleye (and are concerned they could move up in to Black Rocks); also last year in Black Rocks, Travis used sunken hoop nets and captured a fairly large number of largemouth bass. So, they want to check up on what's going on in this reach. Also, GJ CRFP will move farther along getting their electrofishing fleet updated, hopefully purchasing 2 more ETS boxes and 2 more Honda generators, which would cost around \$15,200. This work should be doable at the same level as in FY-2012 (i.e., \$167,855). An additional \$15,200 would cover 2 more ETS boxes and 2 more Honda generators. (However, ETS has told Dale they're 6-8 months behind with orders). Dale recommends maintain CPW working upstream and the Service downstream, which prevents a need to juggle field schedules.
- \$0: Halt installation of notches to restore gravel pits
- \$?: Verify lack of connection between Harvey Gap and Colorado River
- \$?: Begin mechanical suppression of NOP in Rifle Gap
- \$0: Remove protective regulations for SMB in Rifle Gap
- \$?: Treat Lafarge pond to eradicate NOP. (And perhaps other ponds; however, depending on landowner cooperation.) Tom Chart encouraged a focused effort as early in the spring as possible (before potential connection). Colorado knows of one pond with many pike, one with just a few, and has not yet sampled a number of other ponds. See next item.
- ~\$15K? (126b): Increase recon/removal efforts for NOP above Grand Valley, including above Rifle Creek and in ponds. Last year, Harry said they just moved effort upstream. The scope currently covers ~9 days of work. Harry said he thinks targeted block-and-shock efforts in backwaters are more effective than just increasing passes; Dale agreed. >Colorado will provide a cost estimate to add a certain number of days of work for this and pond work (locations and timing will need to remain flexible depending on landowner access, etc).
- \$?: Otolith microchemistry for NOP origins

The Committee agreed that the Program Director's Office would review the overall budget situation and provide final recommendations with this meeting summary within a couple of days. Principal investigators will then revise scopes of work.

Final Recommended Scope of Work Revisions

Principal Investigator	Project #	PDO's Approved 2013 Budget Revisions (not including FWS overhead)	Approved 2013 Project Budget Total (not including FWS overhead)	Brief Description of Change
Battige	98a	+ \$41,095	\$196,073	Restore surge funding.
Jones, Creighton	123a	+ \$14,393	\$159,077	USFWS \$97,067, UDWR \$62,010; 6 passes conducted by each office for 12 total passes
Skorupski/Breen	123b	+ \$36,228	\$225,132	Restore previous 20% reduction; \$10.2K to replace boat & trailer; \$9,198 exploratory pass for northern pike by Brown's Park.
Hawkins	125	+ \$21,761	\$316,740	\$15,070 + overhead for 2 ETS units, generators, and parts to replace GPP units; \$3,450 + overhead to assist WYG&F northern pike recon/removal in Little Snake River in WY.
Ryden/Francis	126a	+\$38,322	\$167,855	Add 2 removal passes through the Grand Valley; restore SMB/LMB removal reach from Loma downstream
Martin	126b	+\$15,000	\$30,638	Additional effort in recon/removal efforts for northern pike above Grand Valley, including above Rifle creek & in ponds.
Skorupski/Breen, Jones	158	- \$99,855	\$0	No work in 2013; report write-up in FY2014 (FY14 cost estimate pending from PI's).
Jones/Webber, Breen/Skorupski, CPW	167	+ \$12,204	\$46,587	UDWR savings of \$5,296 by dropping to a single downstream pass; \$17,500 additional for 2 wks CPW assistance to remove smallmouth from the White R. (CPW portion to be added to their 126b or 98a SOW)
Webber	C-6 Baeser	- \$17,366	\$19,511	Retain PIT array at Razorback Bar (\$5K); maintain funding for pumping wetland (likely moving this to Old Charley) (\$14,511).

Potential Funding Sources for Additional Costs of Proposed Changes

Note: This was provided for the Biology Committee's information, but not discussed. The Program Director's office has updated information on some of these items.

The Program Director's Office reviewed the FY13 work plan and considered other potential funding sources and developed the following laundry list of all the sources of possible additional funds we could think of. They are not in particular priority order, some are fairly far-fetched ideas, and the Program Director's Office doesn't necessarily support all of them, but they are meant as conversation starters.

"Non-Project" Funding Sources

- √\$177,000 from reduction of indirect cost recovery rate (from 11% to 3%) on funds transferred from Bureau of Reclamation to Fish and Wildlife Service due to passage of H.R. 6060. (Fish and Wildlife Service and Bureau of Reclamation have determined this will apply to FY13 agreements already in process.)
- ~~\$100,000K may be available for habitat improvement as part of mitigation for Green River salinity control. Instead of vegetation control, would project proponents consider nonnative fish management activities, instead? The presence of nonnative fish is, in fact, currently a very serious negative component of native fish habitat (Needs discussion with Kevin McAbee and Uintah WCD)~~
- ~~\$250,000 Bureau of Reclamation Lake Powell survey funds (Needs discussion with Reclamation - Speas)~~
- Carry-over: No additional Fish and Wildlife Service carry-over funds. Any anticipated carry-over for Utah (Speas, Wilson)?

Currently Funded Projects (Wherever possible, the goal would be to keep funds at current targets (offices), just shift work to the higher priority additional nonnative fish activities.)

- Nonnative projects - Defer all or most marking (nonnative population estimate) passes in nonnative fish projects (at least 6 such passes are scheduled) and do removal-only in FY13. No savings.
- ~~#PIT TAGS - Based on 2012 EOY purchase, can we reduce the \$120K planned for PIT tags in FY13? (Needs discussion with Dave Speas, Travis Francis)~~
- √#C-6 Baeser (Fish and Wildlife Service-Vernal) - Plan was to stock with larvae following 2012 reset; reconsider need for this intensive study in light of recent focus on larval trigger. Only the remote PIT array for razorback bar and funds for pumping the wetland (now Old Charley) will remain in this scope of work for FY13.
- If 2013 is a very low water year:
 - Consider deferring floodplain studies if no floodplains connect in 2013:
 - #164 \$38,433 (Middle Green floodplains) (Fish and Wildlife Service-Vernal) (However, in light of timing of this information, funds may already be transferred, so options may be limited to carrying it over, using for advance equipment purchases, etc.).
 - ~~#165 \$43,424 (Stewart Lake floodplain) (UDWR Vernal)~~
 - Reduced expenditures on Redlands & GV passage operation (Fish and Wildlife Service-GJ might be able to shift some effort into nonnative fish work)
 - Reduced expenditure on GV fish passage/screen O&M (irrigators) (Unknown if funds could be decreased; would need discussion with Reclamation-Uilenberg/Wernke and irrigators)

- ~~• 128 \$420,322 (LFL, Fish and Wildlife Service Vernal, UDWR Moab, Vernal) If the 2013 water year is too low to obtain an adequate population estimate, would the overall effort in some reaches be better spent on nonnative fish control in 2013? (Determine by April.) Needs discussion with Kevin Bestgen, et. al.~~
- #FR-115 Focus on Brown's Park northern pike and reduce frequency of remainder of SOW to every 3 years. Total cost of study in FY 13 is \$86,720; northern pike work is one of four trips; needs discussion with Kevin Bestgen. If cost savings were realized in this way, PD's office recommend it go toward synthesis report on Green & Yampa smallmouth bass otolith analysis.
- ~~• #127 \$231,568 (Fish and Wildlife Service GJ) defer beginning of next 3-year Colorado River Colorado pikeminnow estimate until FY14. However, FY13 is the one in five years we would otherwise be doing Colorado pikeminnow estimates in both the Green and Colorado rivers. The Colorado pikeminnow population estimate work also monitors razorback sucker. Needs discussion with Dale Ryden, Biology Committee.~~