

Biology Committee Webinar Summary, Thursday, May 28, 2015

PARTICIPANTS

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

Others: Kirstin Holfelder, Kevin Bestgen, Katie Creighton, Brian Hines, Chris Michaud, Paul Badame, Tildon Jones, Tom Chart, Kevin McAbee, Jana Mohrman, Angela Kantola, Matt Breen, and Bob Schelly.

CONVENE: 9:00 a.m.

1. STReaMS (Species Tagging, Research and Monitoring System- www.streamsystem.org) database update – Kristin Holfelder provided a PowerPoint (Attachment 2) describing major updates since the January Researchers meeting, such as developing the website, uploading a large test dataset, and conducting a database workshop in Grand Junction in March. CNHP is holding monthly coordination calls, and the notes from those calls can be found on the database website. Kristin described features that will be added before the version 1 release in October 2015, such as antenna communication, a more attractive user interface, more security, and a full-scale, clean data upload. She then provided a walkthrough of the website, giving a tour of browsing by individual fish, study, and river reach. The committee appreciated this tour and was excited about the progress made since January. Melissa suggested it might be helpful if date and time were separate; Kirsten said she can do that. Dave asked if nonnative data will be in a separate part of the database; Kirsten said she'd planned to combine, but they can be filtered out at the interface with the option to include. Pete asked if you can download data summaries from the website into Excel. Kirstin said you will be able to download .CSV files once version 1 is released (.CSV files can be imported into a variety of software, including Excel). The database is the core product, but once it's done, it will be easy to construct analyses to generate summary statistics. Kirstin reminded the group that all data in the current database will be deleted before release of Version 1, so if you have uploaded real data, it will need to be included again. This year the plan is for PIs to submit data to Travis under the typical process and Travis will provide data to CNHP. We hope by 2016 the PIs can upload their own data into the website directly. Kevin McAbee reminded the Committee of the monthly database coordination calls; folks are welcome to join those calls (contact Kirstin if you're not on the e-mail list and would like to be).
2. Use of PIT equipment in Recovery Program research and monitoring – Dave Speas said we'll have access to 10 submersible PIT antennas (shared with the San Juan program). They're being deployed around the basin, but we need to develop a schedule to simplify the logistics of moving them around (especially as we near fall humpback chub population estimates). Desolation Canyon, Black Rocks, and other locations are in the works for deployment. Dave asked Committee members to spread word that we need to know who wants to use the antennas. We also have floating antennas that Tildon Jones had considered using in Yampa Canyon, but Peter McKinnon wasn't available. We probably can rotate 5 of the submersibles around; if more are needed, they'll need to be purchased (~\$5K/each). >Dave will send out an e-mail in the next month to develop a schedule. Dave also wants to begin moving forward on how we'll be using the data. Kevin Bestgen said they plan to look at the data for razorback sucker survival estimation and figure out how else the data can and can't be used. Brian Hines will use antennas in Desolation along with trammel nets and understands he can treat the data generated as though the antennas were a net, increasing the number of recaptures and capture probability. Kevin Bestgen said this also may help us look at net avoidance.
3. 2015 hydrology update – Jana Mohrman gave a PowerPoint presentation (Attachment 2). "Miracle May" has significantly improved inflow to Lake Powell.

4. Field updates

- a. Spring walleye removal – Chris Michaud said they removed walleye from March through mid-May. In 41.5h of effort they caught far fewer walleye (16, maybe ~5 ripe) than last year (~100). However, they were sampling at slightly lower temperatures and under very different hydrological conditions. Bob Schelly reported that UDWR-Moab walleye removal passes began on April 2. By April 24, they'd logged 56.6 hours of electrofishing effort and removed 58 walleye, for a CPUE of 1.02 fish/hr. (In 2014, 65 walleye were removed during 81 hours of spring effort for a CPUE of .80 fish/hr.) Most of the 2015 catch was removed from below Dinosaur National Monument downstream of Split Mountain, primarily from two cobble bars ~2 miles downstream of the boat ramp (many in spawning condition). During early to mid-April, large concentrations of ripe individuals (predominantly males) were removed from these bars (with up to 15 individuals captured per day). Capture rates dropped markedly after late April, and removal efforts stopped as flows increased the first week in May. A few additional walleye have been captured this week by tributary electrofishing in the vicinity of Jensen. The final CPUE for 2015 walleye removal is expected to be similar to 2014. Angler reports of walleye in spawning condition prompted Matt Breen to work with Gary Winterton on the Hooked on Utah show. Matt said anglers were hitting walleye hard before electrofishing began, but they said the catch dropped off after that. Dale Ryden said in their spring 2014 Colorado pikeminnow population estimate they caught 109 walleye in 4 passes (63 within the first 2 passes); this year, they've done 2 passes and have captured 48 walleye and expect numbers to increase in the remaining two passes. Most of these fish were concentrated from Cisco downstream (where we also have young razorback and pikeminnow). In the first two passes last year, they caught 42 adult and 82 juvenile pikeminnow, this year they caught 15 adults and 61 juveniles. Katie Creighton said Kevin Bestgen found two walleye larvae in one of their 2014 light trap samples; Matt reminded the Committee they caught an age-0 walleye in 2013 in the Middle Green River. Dale said they noticed a number of walleye in the upper sections of the Colorado arm of Lake Powell this year, along with many gizzard shad and more threadfin schools. The shad food source may keep some of the walleye in the lake, but walleye might move out of the lake if the shad decline.
- b. LTSP Floodplain management – Bob Schelly reported that with early detection of larval razorback suckers in USFWS light traps, the Stewart Lake inlet and outlet weirs were installed ahead of schedule. Five razorback larvae were light-trapped next to the Stewart outlet gate on May 9, and the outlet gate was opened mid-morning. Later that afternoon, flat plate PIT antennas were activated in the inlet canal ~50 feet from the gate, and the inlet gate was opened to allow additional inflow, anticipating an abbreviated fill period. As the Yampa River flows dropped, prior to arrival of the peak Flaming Gorge release, the Stewart outlet gate was closed temporarily on May 12, and then reopened on the morning of May 14. Equilibrium was reached at the outlet gate mid-morning on May 20 and the gate was closed based on a forecast of declining river flows. A surprise pulse brought the Green River level high enough to re-open the outlet gate the afternoon of May 21; equilibrium was reached and the outlet gate was closed the morning of May 22. The inlet gate stopped flowing and was closed May 28.

This year's early timing allowed us to benefit from the Yampa spring peak in addition to Flaming Gorge peak releases dictated by the larval trigger, and filling via the outlet gate was nearly continuous over a period of two weeks, supplemented by inlet gate flows that continued for nearly three weeks. Stewart Lake now has a substantial fill of 216 cm at the outlet gate, with extensive flooding of habitat throughout the wetland. Supplemental water will be requested today through the Burns Bench canal at a reduced rate of 2 cfs. A request for the maximum flow of 5 cfs will be made once water levels begin to drop, to maintain inundation of shallower habitats and preserve water quality.

Tildon Jones said Reclamation completed construction of the fish exclusion gate and related structures at Johnson Bottom on the Ouray National Wildlife Refuge. It already had a gate and kettle. The gates were opened May 11 after razorback larvae had been captured and Flaming Gorge releases had begun. The

wetland filled within ~1 week and they detected larvae in light traps there on three separate dates. The breach designed to connect ~13,000 cfs and they didn't anticipate that much water this year, so were pleasantly surprised. As flows rose, they block netted the breach, but had some issues with the net. Carp got in (and some may have over-wintered). CRFP crews are sampling today to see what other species are in the wetland. The gate is closed now, but water is draining through the breach and it's on the verge of disconnecting. The original plan was to operate the site similar to Stewart Lake, but since they're not remediating for selenium, we can experiment with draining it later or overwintering fish if we want to. Matt Breen recalled that at the Stirrup they used stocked razorback to determine when the fish would return to the river on their own; perhaps that experiment could be replicated with the wild fish in Johnson Bottom. Tildon said it could but it would render Johnson useless for next year because of the nonnative fish that would enter (e.g. fathead minnows). Tildon would appreciate feedback from the group. Refuge management goals include a variety of inundation scenarios, but they would like to maintain a semblance of natural conditions (e.g., don't want extended artificial high levels in a dry year.) They probably couldn't actively manage the site in a really wet year. Kevin McAbee said we primarily modified Johnson for use in these drier years when we have few available wetlands. Above Brennan was marginally connected this year (Tildon saw a few dozen carp stuck between the river and the body of water remaining from last year). Tildon doesn't know if razorback larvae might have drifted in, but there are nonnative fishes in the wetland. Escalante Ranch also connected (deeply), but it, too, has nonnatives that overwintered.

- c. Lake Powell– Dale Ryden said their work runs April 28 and through June 14 with 10 trips. They concentrated on two locations last year and found three razorback spawning areas (total of 811 razorback larvae captured). They started in the same locations this year, documented likely spawning and also identified a likely additional site down by Castle Butte. Fish numbers in upstream sections appeared to be dwindling somewhat last week. They have found that spawning locations move down-lake with the season, so they shift their sampling downstream as the season progresses. Dale believes many razorbacks are in locations too deep to sample. They've captured 214 razorback so far, 15 of which were untagged. They also captured 2 bonytail and 8 flannelmouth sucker. Mark McKinstry set a remote PIT reader for a couple of days and detected 370 razorback below the waterfall in the San Juan arm; ~4 of which came from Green or Colorado river stockings. We now have evidence of fish moving both directions. Katie said they'll take three PIT antennas to Lake Powell in their next sampling round.

- d. Others

Doug Roberts from Old Moe Guide Service told Jerry Wilhite and Ryan Mosley he found a ~18" burbot struggling on the surface in the eddy across from the Spillway launch, immediately below Flaming Gorge Dam on Tuesday, May 12th (the day after Reclamation opened the bypass tubes to do some annual maintenance to the powerplant). The same day, Gene Guateri from Trout Creek Flies told Ryan he found a 3" kokanee salmon dead on the surface, in an eddy, somewhere near Bridge Rapid (Ryan verified it was a kokanee, which likely was recently stocked). Jerry suggested we try to get the word out to anglers and guides to report these captures; Jerry can mention it to the guides when he talks with them each year, perhaps we also can mention it at the Flaming Gorge meeting. Jerry said he can send an e-mail to a few of the active folks and ask them to spread the word; >Kevin and Melanie will draft something for Jerry to share with the Green River Outfitters and Guides Association (GROGA), asking them to report burbot, northern pike, smallmouth bass, kokanee, and Colorado pikeminnow seen or caught in the A, B, and C sections. Krissy asked to keep Trina in the loop. Ryan's crew didn't find any burbot in their pre-spill sampling below the dam.

Obviously these fish are making through the bypass tubes, but they are not in good condition after their descent. Melissa will include this information in the burbot risk summary. Melissa noted that the literature indicates fish survival through bypass (worst-case scenario) of 50% mortality and therefore a

minimum of 50% survival. The 'struggling' fish are the ones seen; the ones that make it through aren't seen. Melissa suggested we consider this in relation to the drought contingency/extended operations discussions (designed to keep reservoirs above levels needed for power generation). If drought conditions continue and extended operations (ExOps) were to occur, Flaming Gorge reservoir levels would drop and more fish could be expected to escape. Tom Chart and the Park Service have expressed this concern in the ExOps meetings and said we would need additional monitoring and perhaps "emergency" control efforts. An MOA is being developed, but is still in draft with a number of major issues to be resolved; the MOA is now expected to *implement* as opposed to just *develop* an ExOps implementation plan. Tom said water temperatures and water quality would also be concerns if Flaming Gorge levels dropped appreciably. And we should expect a subsequent impetus to recover lost reservoir storage again as quickly as possible, which could affect our fish flows. Tom recognized, however that Reclamation has committed to conduct both ExOps and operations during storage recovery to comply with the Flaming Gorge Record of Decision. Biology Committee members may want to contact their Management Committee members and/or representatives in the negotiations to learn more.

Harry Crockett reported that CPW's Yampa backwater netting is complete. CPW and the Service netted 7 days a week throughout April. The catch was lower than 2014 despite expanding to 16 backwaters (only 6 or 8 last year) and running nets longer. They removed 451 northern pike (596 last year). Harry doesn't know if that's due to lower numbers or hydrological conditions. Of the 451 pike, 140 were in the RM151 backwater. Work on the Yampa River is just beginning; they sampled 7 days in South Beach and upper and lower Maybell last week, removing 92 northern pike (205 were removed over the course of the project last year). They caught most northern pike on the rising limb of the hydrograph. Most fish last year were in pre-spawn condition; this year, they captured many more ripe and spent fish. Harry thinks the netting could be expanded further next year. CPW's new biologist, Cory Noble (replacing Kyle) starts June 1 (he came from Krissy Wilson's office at UDWR).

Tildon said total numbers of fish are down in 98b reach compared to last year. They caught a northern pike with an orange CPW tag and are working to track its source.

Kevin Bestgen said John Hawkins has been sampling in Steamboat reach and been surprised at the small numbers of fish caught. The northern pike in Brown's Park are spawning late; they seem more keyed to hydrology than temperature.

Tildon said their White River bass removal has been delayed a bit due to hydrology and access. They are monitoring temperatures and will begin sampling as soon as they think it will be productive. Harry said Jenn Logan is holding off in their White River reach, also.

5. Nonnative fish

a. Reservoir updates

Elkhead – Kevin McAbee said the net is scheduled to be installed before 2016 runoff. They met with Pacific Net Products, a net installation company, about a month ago to discuss engineering and schedule; Ray Tenney is expecting a proposal from them soon (which may be less than we estimated). The heavy equipment portion of installation can occur this fall, then the reservoir will be drawn down and the net installed in the spring prior to runoff. Sherman Hebein sent Kevin a rough draft Lake Management Plan and Kevin will be working more with Sherman on that (he doesn't see any red flags at this point). Tom Pitts asked about the timeframe and process for finalizing the plan and Kevin said they hope to complete a good draft by fall, and then it may need to go through internal CPW review before States and Service review. Kevin didn't know if Sherman plans to circulate the plan among the nonnative fish work group and/or when/if public review will occur. Both Kevin and Harry thought the

document could be completed and approved before the net is installed. Tom Pitts suggested that the plan should be completed before we sign a contract for the net; Tom Chart said the plan is part of the agreement. Harry said they anticipate having a draft plan out by July 31, 2015. Tom Pitts will ask Sherman Hebein to put this on the agenda for Monday's nonnative fish work group meeting. Kevin will send this section of the summary to PIs so they have the latest information.

Red Fleet Reservoir – Appears on track for an October rotenone treatment. UDWR has drafted a lake management plan that they'll be sending to States and the Service for approval (expected to go smoothly). Trina Hedrick and her office have done a great deal of outreach and are beginning to purchase supplies and equipment (recent precipitation may increase amount of rotenone needed, but it's still within estimates). Krissy thinks UDWR's portion of rotenone will be funded, but doesn't have confirmation yet, so there is a little uncertainty.

Rifle Gap – CPW submitted draft lake management plan last year that has been reviewed by the Service and the States; CPW submitted revised plan a couple of months ago which the Service approved, so it should be finalized soon. CPW will remove fertile walleye over the next two years concurrently with stocking sterile walleye. They will maintain a 100% triploidy rate for stocking walleye (they have fish in their hatchery system ready to stock).

Ridgway – Colorado implemented unlimited bag and possession limits and conducted a trial harvest incentive they plan to repeat. They are discussing the possibility of using some of the recently-approved Species Conservation Trust Fund (SCTF) money for a Ridgway net and harvest incentives.

- b. LaFarge (and other) ponds – Harry said they've discussed filling the notches in the reclaimed gravel pit ponds by Rifle that have northern pike; however, it's become clear that's not feasible because the notches were included to keep hydraulic pressure on either side of the levee within specific bounds. Lori Martin has been gill-netting the ponds since ice-out and installed a big trap net a month ago near the outlet to trap or obstruct fish trying to leave the pond once it connected. Pete Cavalli asked if notches can be netted going forward, but Harry said we may not be able to install anything permanent. Long-term solution(s) will need to be considered further. Rotenone might still be an option (since pike are not abundant in the Colorado River and Rifle Creek has been screened, the chances of re-invasion are reduced), but would be complicated by proximity to the City of Rifle.

Walton Creek rehabilitation project engineering feasibility study status – Harry said the Program funded a feasibility study on habitat improvement; a draft report is pending and may propose a phased approach with the first phase addressing the bulk of the problem.

- c. Draft revised list of species compatible and not compatible with endangered species recovery (Appendix C to the Basin-wide Strategy) - Kevin received comments from Melissa and Pete. Krissy said she hasn't had a chance to review and would like to provide approval via e-mail after confirming with UDWR. Melissa suggested: 1) adding back the scientific names to the list (some dropped off when we grouped species); 2) noting that any nonnative species not on this list should be considered non-compatible but they could be considered on a case-by-case basis; and 3) including both quagga and zebra mussels. The group agreed. Krissy had suggested adding sterile smallmouth bass to the list. Kevin McAbee asked if sterile smallmouth bass have been successfully produced? Apparently they have not, so Kevin would prefer to wait until we know if sterile smallmouth are possible and at what triploidy rate. Krissy said she could agree to that. Krissy asked if State/Service review and approval will still be required of plans to stock species on the compatible list; Kevin said, yes, those lake management plans still would go through review, but he expects that would go pretty smoothly. Pete Cavalli asked about green sunfish/bluegill hybrids (proposed by someone in WG&F); Harry suggested that would be one to consider on a case-by-case basis; Kevin agreed, and Pete thought that would be an acceptable approach.

The group also agreed to add grayling and nonnative cutthroat trout to the list, also. Kevin will send a track changes and a clean version to the Committee requesting e-mail approval within 1 week (non-response indicates approval) (*done*). Upon approval, this Appendix will be replaced in the Strategy on the web and an additional link will be added just for this Appendix as a standalone document.

6. Green River Flow and Temperature Recommendations Evaluation update – Kevin Bestgen said this approved SOW is designed to assess the recommendations based on operational characteristics and biological and physical information collected since the ROD. The group has met once and outlined what the evaluation will look like and identified the core documents. The group will review progress monthly by webinar and every other month in person. The preliminary draft report is expected May 2016, and the final by November 2016.
7. Recovery plans update
 - a. Colorado pikeminnow population viability analysis – Tom Chart said we've held two webinars with stakeholders from the Upper Basin and San Juan programs and written comments are due to Seth Willey and Tom Czaplá by June 30. Stakeholders asked that the Service complete a PVA before finalizing the recovery plan – the Service agreed. The PD's office is developing a scope of work for a PVA. The Service wants to include the Recovery Team in approval of the SOW for the PVA and in helping a contractor conduct the PVA. The PVA likely will be funded with Section 7 funds.
 - b. Humpback chub –This team will take a little different format based on the Service's new approach to recovery planning. There will be a science advisory subgroup, writing team, and an implementation subgroup. The plan will follow the Service's new process with three components: a species status assessment, a recovery plan, and an implementation plan. Letters of invitation have been sent. The next step will be to convene a meeting of the entire team (all the subgroups).
 - c. Razorback sucker species status assessment (SSA) – Service will have an SSA developed, hiring a contractor to lead the effort, compiling and summarizing available information. Hopefully, this will be a 12-month process once a contractor is hired (which will probably take a couple of months). Meanwhile we'll also be developing razorback population estimates for the Colorado and Green rivers. Krissy asked if the SSA will address how razorbacks in Lake Powell will contribute to recovery and Tom Chart said he thought it would.
8. Update on MC discussion of budget for FY16-17 work plan – Angela Kantola recalled that projects listed in FY16-17 Program Guidance significantly exceed anticipated available budgets. The Management Committee asked the Program Director's office to identify ongoing and other costs that the Program is committed to cover ("non-discretionary") versus projects for which the Program may have discretion not to fund ("discretionary"). The PDO provided a spreadsheet to the Management Committee (copying the technical committees) on April 9, to be followed by an updated spreadsheet in advance of the May 27 Management Committee webinar. These spreadsheets categorized as non-discretionary most all ongoing O&M (operation and maintenance), Program management/outreach, monitoring, and nonnative fish management projects. The PDO found very few projects they thought could truly be considered discretionary. Angela noted that we're at the beginning of the work-planning process, using estimates (costs and available funds) that aren't yet near final, but it is clear that we have more work to do than funds to do it. On the Management Committee webinar, Brent mentioned that Reclamation had a 2016 request for supplemental appropriations that Dave and Mark responded to; Dave said he asked for about \$900K. We may have to develop draft work plan that identifies what projects we'll implement at different funding levels. Melissa suggested that the Biology Committee may want to prioritize work that exceeds likely available funds.

9. Review previous meeting assignments – See Attachment 1.
10. Review reports due list – Angela Kantola sent an updated list to the Biology Committee with this agenda. Comments should be submitted to Kantola via e-mail.
11. Schedule next meeting and outline agenda – The next meeting (will include review of the draft FY16-17 work plan due from the Program Director’s office on June 19) will be July 28-29 (starting at 8:30 on the 28th and adjourning about noon on the 29th). Dave Speas arranged for a meeting room at Reclamation’s office; >the Program Director’s office will secure a block of rooms at a hotel downtown. The 2016 Researcher’s meeting has been scheduled for Tuesday and Wednesday, January 12-13 in Durango and the Committee scheduled meeting for Thursday, January 14 (at the Student Union, a hotel, or BLM’s public lands center). The Committee scheduled the nonnative fish workshop for December 8 - 9 in Grand Junction (likely at the Clarion due to meeting size).
12. Consent item: Review and approve June 6, 2014 webinar summary – The Committee approved the draft revised summary that Angela sent with the agenda.

ADJOURN: 2:40p

Attachment 1: Assignments

(Asterisked items are on the meeting agenda; items preceded by a “-“can be deleted after this summary)

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. Tusher Wash Screening:

- **Brent Uilenberg** and **Bob Norman** will contact the Program Director’s office regarding input from biologists on the Tusher Wash weir wall design. 5/28/15: *Kevin McAbee said Reclamation has begun work on design.*

2. Humpback Chub (population estimates)

- & Humpback chub combined population estimate from Gary White. 6/28/13: *Three reports are pending: a 2011-2012 Black Rocks report, a 2011-2012 Westwater report, and a 1998-2012 combined analysis report. Previous discussion indicated the combined analysis would be provided by LFL and tacked onto the Black Rocks report, but it doesn't fit neatly into either the 2011-2012 Black Rocks or 2011-2012 Westwater reports because it has data from both. Further, Grand Junction CRFP's SOW only covered writing a Black Rocks report, not a combined report. 1/16/14: What Kevin Bestgen presented was the joint report and parts of it will appear in the individual reports. A young-of-year sampling effort may need to be added back to the fieldwork (included in draft FY16-7 SOW). Czapla said we have new due dates of January 2015 for the Black Rocks and Westwater reports. 5/28/15: Travis was working with Kevin Bestgen on the methods section; Kevin has provided revisions and Travis anticipates completing a draft by the end of June. Brian Hines said he's on a similar schedule and will have something by the end of July or August.*
- **Dave Speas** will look into getting/transferring equipment to deploy submersible antennas to help get some humpback chub data in 2015, since the Black Rocks and Westwater humpback chub population estimates will be deferred until 2016. 3/4/15: *Dave thinks they have 5-6 antennas available; PIs should let Dave know if they're interested. Dave would like to try them in Desolation and Gray canyons again.* >5/28/15: *Dave will work on a schedule.*

& Humpback Chub (broodstock development / genetics)

- As identified in the 2012 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. *After Wade’s report is received, a workshop should be held to include discussion of when and where fish would be stocked. Tom Chart recommended outlining questions for a workshop, conducting the workshop, and then finalizing the action plan. 2/21/14: No deliverable on Upper Basin fin clips; cost would be ~\$37K (Committee considering, but not our highest priority; see 2/21/14 meeting summary). 8/26/14: Reclamation is working on the funding agreement (may inform index of effective population size different than that for the Grand Canyon population). Tom Czapla said Moab handled at least 25 Deso and WW humpback chubs during smallmouth bass removal and got fin clips from all of them. Tom Czapla said he thinks the priority for analysis should be the Desolation, Westwater, and Black Rocks fish. Moab may still collect some more in Westwater this year. The roundtail chub would be a lower priority. 10/27/14: Reclamation awarded contract to SNARRC for analyzing remaining fin clips and completing report (including lower basin data). 1/15/15: data on upper basin chubs will be written up within about a year. The subgroup developed a list of questions for Wade to address (Tom Czapla sent to BC 1/21/15); >**Melissa Trammell will find and send the plan development proposal document to Tom Czapla by January 21 and Tom will send it to Wade with a courtesy copy to the Biology Committee and Kevin Bestgen. (Done).** Wade said he will revise the scope of work (pending).*

3. & Nonnative fish management follow-up:

- Walleye: >**Kevin McAbee and Paul Badame** will work on organizing a “walleye summit” with appropriate outside expertise. *Pending. 10/27/14: Still trying to get some outside funds to support this effort.*
- & Private (LaFarge, aka Snyder) Pond near Rifle: **Harry Crockett** will find out if the landowner will allow and if CPW can reclaim the pond before spring runoff (considering a seismic gun option); >**Tom Chart** will coordinate with **Harry** and **Brent Uilenberg/Bob Norman** on repairing the notches after runoff. *6/11/14: Sampling ongoing and Reclamation will work with CPW on filling the old notches. Harry said rotenone is still an option (and more likely than a seismic water gun approach at this point). 8/26/14: Harry said they couldn't arrange a site visit (CPW, Reclamation) before spring runoff, but that could happen now that flows have receded (>Tom Chart will contact Brent about this). Harry Crockett will contact Jackson Gross and let him know the Committee appreciate Smith-Root's interest in the Snyder Pond work (and willingness to bring considerable cost-share) (done), but would like to see a proposal that includes evaluation of success and a report. 6/11/14 Jackson indicated that the availability of hydraulic pumps had been a problem this spring, but that pumps are now available from Smith Root. 8/26/14: CPW is more interested in the rotenone option at this point. Dave said sonic water guns might be useful in the Yampa wetland areas. 10/27/14: **Reclamation** will review plans for filling the notches with the city of Rifle, which has a nearby water intake. 5/28/15: Filling the notches is not feasible since it turns out they maintain the hydraulic pressure on either side of the levee within specific bounds. Lori Martin has been gill-netting the ponds since ice-out and installed a big trap net a month ago near the outlet to trap or obstruct fish trying to leave the pond once it connected. Long-term solution(s) will need to be considered further. Rotenone might still be an option (since pike are not abundant in the Colorado River and Rifle Creek has been screened, the chances of re-invasion are reduced).*
- **Dave Speas** will talk to Rob Clarkson regarding what support he may be seeking for the novel piscicide study. *3/4/15: Dave said the work is being done at a USGS facility in Wisconsin; Rob reports that the PI estimates testing Suprverm at ~\$10K per additional species. Wisconsin likely has walleye, bass, and pike readily available and they believe they could get endangered fish from Arizona. Rob told Dave he did not expect to see any difference in test results among Gila species. 5/28/15: Kevin McAbee pursued Service funding for adding species to the Suprverm study, but USGS then said they didn't believe Suprverm was proving as selective as initially thought. Paul Badame, Kevin McAbee and Harry Crockett will find out if Utah and Colorado have regulations similar to the one that David Ward in Arizona that allows temporary use of ammonia as a piscicide. Kevin McAbee 2/25/15: David had indicated he acquired a 24(c) Special Local Needs pesticide registration from the state of Arizona. 24(c) references a section of the Federal Insecticide, Fungicide, and Rodenticide Act that gives ALL states the ability to "register an additional use of a federally registered pesticide product". Both Utah and Colorado (and I assume all other states) maintain a list of pesticides registered in this way. (Kevin e-mailed the Committee a summary from various state and federal websites describing this regulation). Kevin concluded if someone devoted the time and energy, the Recovery Program should be able to try to apply for a 24(c) registration for ammonia, just like Ward et al. did (likely going through the state's department of agriculture). However, approval requires a lot of specific planning and paperwork, and is not guaranteed. Committee to discuss ramifications of this conclusion. 3/4/15: Krissy suggested some of the ponds that Dale suggested would be good tests. Kevin asked if it might be used at LaFarge Pond if Rifle is concerned about rotenone; Sherman said potential impacts would need to be carefully investigated, but it could be considered. Krissy recommended that both Utah and Colorado begin investigating the process and required lead time. Sherman Hebein contacted Laura Quakenbush, Pesticide Registration Coordinator for Colorado's Division of Plant Industry and forwarded the subject email and attachments to her. Laura and John Scott, Pesticide Section Chief, will review the situation and advise what options are open to use ammonium hydroxide as a piscicide in Colorado. 5/28/15: Kevin McAbee again asked if ammonia might work at LaFarge and if we should pursue permitting for its use at this site; >Kevin will discuss with Lori Martin and >Harry Crockett will let Laura Quakenbush know we're still interested.*

- To get the word out to anglers and guides to report fish captures below Flaming Gorge, **Jerry Wilhite** will mention it to guides when he talks with them each year, and we will mention it at the Flaming Gorge meeting, also. Jerry also will e-mail a few of the active folks and ask them to spread the word; >**Kevin McAbee** and **Melanie Fischer** will draft something for Jerry to share with the Green River Outfitters and Guides Association (GROGA), asking them to report burbot, northern pike, smallmouth bass, kokanee, and Colorado pikeminnow seen or caught in the A, B, and C sections.
4. **Brent Uilenberg** and **Harry Crockett** will be working with CPW and Reclamation engineers to evaluate the potential for a permanent barrier downstream of Ridgway Reservoir. *6/11/14: Harry said Brent would like to define the sideboards before committing time to this. The **Program Director's office** will begin the conversation on this and Elkhead with Brent. Meeting/conference call was held on August 6th in Glenwood Springs. 8/26/14: a meeting is scheduled September 4. Dale Ryden said they sampled from Delta to Redlands and didn't find any bass, so that's good news. 3/4/15: CPW, CWCB, and Reclamation have talked to Tri-County and they will attempt to avoid spilling again this year. 5/28/15: Kevin McAbee is working on setting up a stakeholder meeting in July. We will keep reservoir updates as a standing agenda item.*
 5. Regarding white sucker hybrids, **Harry Crockett** will talk to **Kevin Bestgen** about any further work needed subsequent to the identification guide that Pat Martinez distributed last year. *8/26/14: Ongoing (very complex issue that really deserves a combined genetics and morphological study). This could be put into the next round of Program Guidance (**PD's office** did) and we should be considering potential outside funding sources, as well, since this relates to more than listed fish.*
 6. Related to the peak flow study plan, **Jana Mohrman** will look into cost estimates for additional aerial photography analysis. **Committee members** will continue their review of the draft plan and provide comments by the end of September (the same will be requested of the WAC). >Within two weeks, **Tom Chart et al.** will prepare a short background outlining the genesis of this work and restate the objectives (*done*). ***PDO** sent revised plan to BC & WAC for review; comment deadline extended to January 23; revisions and review pending. 5/28/15: Jana said the study plan is still being revised and more tightly connected with the Green River and Aspinall study plans. The 2011 aerial photos will be posted on the internet by the end of this summer (but not georeferenced).*
 7. **Krissy Wilson** will find out if PIT tag data from the San Rafael and Price rivers are being submitted to Travis. *3/4/15: Some has been submitted in past years, but not the most recent year or two; UDWR will submit to Krissy who will submit to Travis by March 15. 5/28/15: Krissy submitted a partial list, but will submit more once the antenna data is available.*
 8. **Tom Czapla** will coordinate an inventory of PIT antenna equipment and potential installation locations, and then convene a conference call to prioritize and determine when and where the equipment could be installed. *5/28/15: **Dave Speas** is working on this (will e-mail folks in the next month and develop a schedule for equipment use) and will coordinate with Tom Czapla.*
 9. **Kevin McAbee** will follow up with **Julie Howard** regarding impacts of wind speed on sampling efficiency and potentially safety. *5/28/15: On hold until Julie returns.*
 10. The **PD's office** will talk to Steve Platania about otolith microchemistry as they investigate options to have USGS analyze otoliths. *5/28/15:– Pending, but meanwhile we're submitting a proposal for FWS funding to have additional walleye otoliths (and potentially other tissues) analyzed for strontium and maybe other isotopes. This is a bit of a pilot study to work with the USGS lab here in Lakewood which has all the needed equipment here. Focus on lower Colorado and lower Green river walleye otoliths. Kevin said they've mentioned Steve Platania's work to USGS and if the study is funded, they will be in touch.*

11. As the time to stock bonytail approaches, **Tom Czapla** will seek the Committee's approval of stocking locations via e-mail. *5/28/15: Wahweap bonytail went to locations identified in the plan (Green River at Jensen Bridge and Green River State Park and Dewey Bridge on the Colorado). Dale would like to add a site near Rifle (this year or later) for about a fourth of the fish they stock (~2,500). In light of anglers around Rifle, Dale will check on planned stocking dates. Harry wondered if downstream around Rulison would be better; Dale will check truck access. Tom Chart asked if hits on the Price-Stubb antenna might provide information; Dale thought it could help, but wouldn't be definitive. Harry asked if we could more formally analyze what's working in terms of stocking locations; others endorsed this idea. The Committee concluded this won't happen until we have someone in the database position to do the analysis. Meanwhile, Tom Chart said he has no objection to trying other sites. Krissy Wilson recalled the bonytail that went into Stewart a few years ago and left as flows receded; therefore, we should continue to work to find low velocity habitats from which bonytail can leave of their own volition. Dale said one difficulty has been that low velocity sites are often quite inaccessible for safe transport of fish. Another option is to stock fish far enough upstream of low velocity habitat so they can drift in. Dale will stock at previous locations for now and further explore low velocity habitats in this area and discuss sites with Harry.*
12. The Committee endorsed an experiment to tag smaller hatchery razorback and bonytail; >**Tom Czapla** will investigate which hatchery could do this. **Tom Czapla** will check the BO written for recovery actions to see if any change in permitting would be required.
13. The **Program Director's office** will secure a block of rooms at a hotel downtown for the July 28-29 meeting in Grand Junction; meeting and hotel rooms (likely at the Clarion) for the December 8-9 nonnative fish meeting; and a meeting room for the January 14 meeting after the 2016 Researcher's meeting.

Attachment 2 STReAMS Update

The STReAMS Team Has Grown



 Kirstin Holfelder PI Lead Developer, Development Manager 970-491-4628	 Michael Meneleve Server Manager, Tester
 Amy Lavender Greenwell Co-PI Project Manager, Lead Tester 970-491-2847	 Greg Newman User Interface Design, Graphic Artist, Developer (See CItSci.org)
 Rob Schorr Tester, Zoologist	 Buss Scarpino Developer

Progress to Date

- Database built, test dataset imported
- Basic website features completed:
 - Core user management
 - User profiles, password reset, security
 - Fish
 - Encounters
 - Add new records by PIT Tag
 - Studies
 - Sampling Events

Progress to Date (cont.)

- Database administration website features:
 - Rivers, Critical Habitats, Reaches of Interest
 - People
 - Preliminary role management
 - Organizations
 - Manage people at an organization
 - Manage studies at an organization

Schedule: Before Oct. 2015

- Antenna Management
 - Conditions at antennas
- Tag distribution/Tag lots
- Canned data downloads
- Advanced role-based security
- UI enhancements
- Re-import a cleaner, complete dataset
- Documentation
 - FAQs, basic online help

Documentation

- All available online, without a login:
 - streamsystem.org/webAdmin/webUpdateLog.php



The screenshot shows the STReAMS website documentation page. It includes a navigation menu, a 'Website Development Documents' section with a date of 5/05/2015, and a 'Release Notes' section for the year 2015. The release notes list several updates, including 'New Database Model', 'API Release Notes', and 'Webinar Minutes & Presentations'.

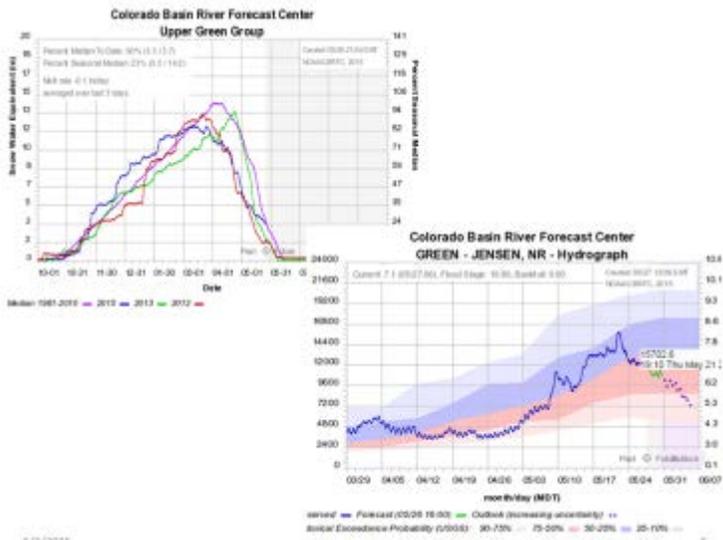
Website Walkthrough

The caveats:

- Data: Neither clean nor complete
- Website: Not finished

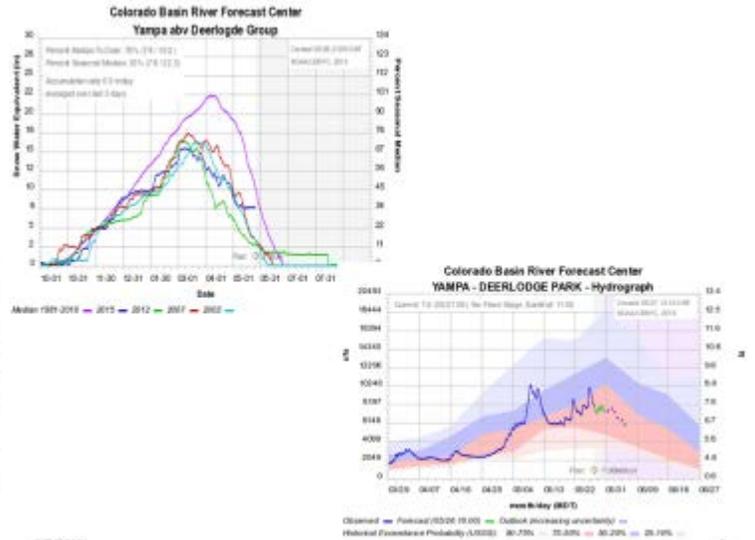
Register with us!
streamsystem.org

- Request permission by email



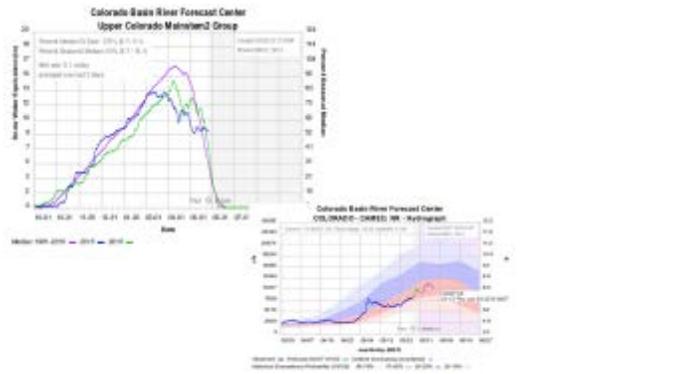
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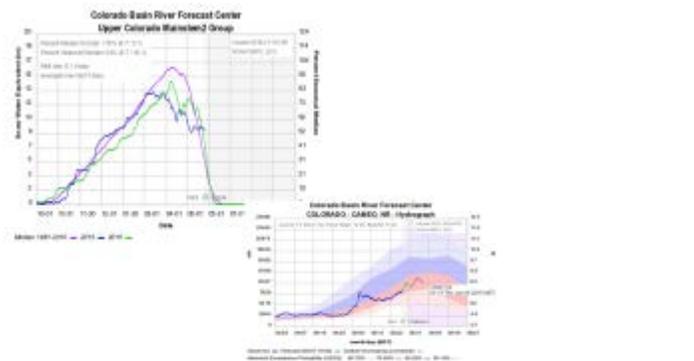
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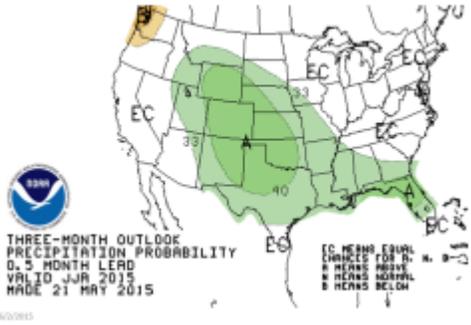
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6/2/2015

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June - August Precipitation Model Prediction



August - October Precipitation Model Prediction

