

Biology Committee Webinar Summary**March 20, 2020 9:00 am - 2 pm MDT**

Attendees: Harry Crockett, Paul Badame, Dave Speas, Melissa Trammell, Dale Ryden, Pete Cavalli, Derek Fryer, Tom Pitts

Others: Tildon Jones, Kevin McAbee, Julie Stahli, Cheyenne Owens, Jojo La, Jenn Logan, Katie Creighton, Mike Mills, Matt Breen, Kevin Bestgen, Kevin Johnson, Chris Smith, Darek Elverud, Tom Chart, Chris Michaud, Don Anderson, Melanie Fischer, Kiera Peck, John Cleveland.

Comments submitted by: Kevin Bestgen

CONVENED: 9:02 a.m

1. COVID-19 and potential impacts to 2020 field sampling – Dave Speas referenced the variety of guidance documents from states and the federal government, which set some standards around how we move forward. Dave said Reclamation guidance has linked to the OMB memo (which other Federal agencies may have received as well) listing seven criteria that could still allow for travel. Dave said unless specific travel plans get approval, he and Mark McKinstry are unlikely to be able to travel for the foreseeable future based on those criteria. Dale said guidance from FWS has been murky. The first San Juan trip was supposed to be a three-week effort, they have condensed participation to just people from the GJ office to limit exposure. So the effort will be smaller, but will proceed as long as groceries can be purchased. Dale has checked with Navajo Nation who are not shutting down their borders at the moment. The next big trip will be Colorado pikeminnow estimation. Canyonlands has been shut down to most visitors and so they are not releasing permits. The GJ-FWCO can go down to Potash and FWS can put people in hotel rooms as long as it is only one person per room. FWS can proceed with field work as long as employees and supervisors all agree. Dale will bring back employees that have served with FWS before, but will not bring on new employees until at least mid-April. Dale asked if the offices can pay employees on reimbursable funds without doing the work they are contracted to do. Most of Dale's returning staff lives in the area. If FWS receives mandatory telework orders, that would change things dramatically. Dave said the agreements that are currently in place for the recovery programs are flexible and can be adjusted if needed. Pete asked if motors would be taken on all trips to facilitate evacuation if needed. Dale said plans are in place to get folks off the river very quickly if necessary. FWS has left a lot of this up to individual supervisors, so Dale is working hard to collect information as possible while keeping his employees safe. Melissa said things have changed very quickly and wonders whether all field work will end up being cancelled. Dale said the SJ trip is a one-off trip to document razorback sucker

reproduction; he is aware of the potential downfalls, but is struggling to find better situations than putting people out on the river away from all other humans.

Paul Badame said things are changing rapidly at UDWR. All Salt Lake staff are working from home as of Thursday night; field work is planned to continue as possible except for ones that require large groups of people (e.g. walleye spawning). Wes James, Reclamation, is still planning April 1 construction of the Red Fleet screen, which won't likely require field work from UDWR. UDWR is taking guidance from the governor without making individual employees feel uncomfortable. Katie Creighton said direction she has received has been minimal, so she is using the most conservative guidance she has which comes from the local health department and CDC guidelines. After discussion with her employees, they are anticipating they can complete field work. Katie has created a document outlining procedures for their office while out on their river. She agreed with Dale that field work does not seem more risky than anything else, but also agreed that things could change at any point. Katie had a few seasonals start a few weeks ago and a few others that are planning to start in early April. Katie has sent guidance to those employees to make sure they are being safe, both inside and outside of work. Katie will reassess based on additional information and may change their start date as necessary. Matt Breen said their seasonals are scheduled to start April 7 and will plan to continue with field work as possible. His seasonals are coming from out of state, and thus he is waiting for guidance from leadership in Salt Lake City, UT.

Harry Crockett said CPW employees should be teleworking until April 3rd and should not engage in non-essential travel until April 10th. Field work is considered non-essential travel, so field work will be delayed. Seasonal hiring has been delayed and there will likely be some ramp-up time after the restrictions are lifted. Harry said direction has changed rapidly over the course of the last week. Both netting in Mamm Creek and in backwaters were planned along with Kenney Reservoir northern pike removal, but Harry does not anticipate those activities will occur under current guidance. One state office is closed entirely due to a presumptive case for 14 days and Harry expects that is not the last closure they will deal with. Jenn said there are 4 technicians currently hired and she is working on keeping them busy. They can only do work that requires a single person.

Kevin Bestgen said CSU is holding all classes online and campus is closed. Exceptions are possible for field work based on how many people are needed and how far travel is expected. Kevin said they are likely to be severely restricted in the near future. Technicians are not on board yet, but they do have some commitments out there to hire people. Kevin is determining whether field work should occur even if possible.

Chris Smith said the FWCO was planning to collect pikeminnow on the middle Green River in conjunction with UDWR next week, but was waiting on this discussion before moving forward. Chris said only local staff would be working together and there are currently no confirmed cases

in Uintah County. Beyond next week, they were anticipating starting netting on the Yampa, but Chris will likely cancel those efforts. Chris's seasonals have not started yet. In the meantime, if pikeminnow were collected in the middle Green, they would be maintained at the Randlett Hatchery isolation room and would not require travel (*Note: this effort was subsequently cancelled because of low catch rates on the Green*).

Kevin Johnson, USFWS – FAC, Geographic (UT, CO, and WY) Supervisor, reported that Ouray National Hatchery- both units will not likely be spawning razorback sucker including those requested for Kevin Bestgen's study, but should have plenty of fish to stock to meet stocking goals. Dale said if they do not spawn, they will likely have trouble meeting stocking goals a few years out.

Dave Speas said he is likely not anticipating any change in guidance soon, unless it becomes more restrictive. John Hawkins said the virus can spread from people who are not showing any symptoms and the restraint currently occurring in the big cities may soon impact the smaller communities. John is concerned that travel to smaller cities may just put those communities at risk. Paul asked for guidance from DOI as to what is acceptable from a funding agreement perspective to guide actions moving forward. Dave reiterated that agreements can be changed quickly, which could reduce or change duties for people as the Program sees fit. Kevin Johnson said FWS is recognizing that people will be on payroll who are not able to put in a solid 8-hour work day.

Tom Chart summarized that the goal of this conversation was to share guidance that everyone is getting from their agencies. Tom encouraged everyone to consider the optics as well as the science of this situation and said he is hearing pretty seriously that we should consider halting field work as a Program and working with BOR to implement what flexibility we can. Dave said BOR has guidance only from OMB, and reiterated that SOWs can be changed. Dave felt there was no problem supporting full-time employees, but was less certain of how we fund seasonal employees. Dale and Katie said they would do all they can to support the seasonals that are already online. The PDO and others have some ideas about how we could use this time effectively. Dave suggested reconvening in a week; the group agreed to meet Thursday morning 3/26/20, 9-11, Dave asked everyone with information to send it around.

2. GREAT Report Update – Tom Chart said the Larval Trigger Study plan and Flow-Spike Study plan have been developed and approved. The PDO and Kevin Bestgen, in a lead author role, have been working on the Base Flow Experimental Study plan. The plan is out for technical committee comments from both the WAC and BC.
 - a. Base Flow Experimental Study Plan – Kevin reviewed that this third study plan is to test the anticipated effects of revised base flows on pikeminnow recruitment. The Green River population estimate has been declining dramatically over time. Kevin said there is a strong relationship between age-0 pikeminnow and adults seven to 10 years later. Reach 3 is

important, but the focus of this study is on Reach 2 (the advantages of which should carry in to Reach 3). Kevin reviewed the modified recommendations (which are lower in high flow years and higher in low flow years). Nearly all of the good recruitment years occur when flows are 50-150 m³/s. No flows lower than that produced above average recruitment, meaning that if flows are not sufficient before larval pikeminnow show up in backwaters, recruitment is almost certainly minimal. There is a fairly narrow window of temperature to support recruitment (19-23°C). In addition, Aug-Sept flows affect recruitment and are most successful in a middle range (~50-75 m³/s) and not successful at all above those values. Kevin reviewed varying conditions (Table 2 in the report) based on flow patterns in the Green and Yampa rivers and predicted and observed patterns of spawning that would drive whether the study takes place. Table 3 in the report outlines what will be assessed during the study, including physical habitat and biological conditions. Multiple biological sampling points allow for assessment of multiple mechanisms that may be driving pikeminnow recruitment. Table 4 outlines the specific measurements under each criterion to assign a score between 0 and 1 for each; a cumulative score of 5/6 or higher constitutes a valid experiment; a total of eight experiments is recommended in the draft study plan. Kevin said they considered the punitive nature of that concept, but that the things being measured are very important in having a successful year class. Tom Chart reminded the BC that comments are due on 3/26, comments will be addressed, and the study plan will return to the BC and WAC for final approval.

- b. Update on experimental flows physical effects monitoring plan – Melissa Trammell said the physical impact study plan is also out for review and comments are due on May 4th. Melissa reiterated that NPS has concerns about what physical impacts might occur from these flows. Encroachment of vegetation and simplification of channel habitat is of specific concern. The study plan outlines how long-standing methods could be applied to the target reach around Jensen. Melissa is working on response to comments from both the Recovery Program and an internal NPS group. Don Anderson said he sent the study plan to the WAC and BC on Wednesday (3/18) and plans to set up a webinar sometime in April to discuss. Interested parties, please respond to the doodle poll included in the email distribution.
- c. Update on the 2020 Flaming Gorge Technical Work Group (FGTWG) proposal and a report on the March 19, 2020 Flaming Gorge Work Group meeting – Dave Speas said the draft operations plan was released to the public this week. Average but below median conditions are expected in the Green River. The plan is to meet both LTSP and base flow experiments this year, and the goal of the latter is to get to base flow conditions before larval pikeminnow appear in the river. Tildon Jones confirmed that the draft was sent to the working group yesterday. Assuming hydrology forecasts hold, the peak flow is anticipated to be 14,000-18,600 for 7 days for LTSP. Yampa River is in slightly wetter than average conditions at the moment. Derek Fryer thanked all those who provided review and comments to the FGTWG proposal. Dave said feedback is still to be incorporated from FGTWG members, especially

on the Draft Operational Plan. Tom Chart said that during the FGWG meeting yesterday he did not hear any specific opposition to the FGWTWG proposal, which incorporates our Recovery Program flow request. Dave said one gate on the temperature control device at Flaming Gorge Dam is currently stuck at the lowest position (about 115' below the surface), releasing cold water through one turbine. Fixing it will be expensive and is not likely to occur any time soon. Reclamation can adapt by using 2 of the 3 units to deliver warmer water and Dave does not anticipate that operations to meet temperature recommendations will be affected.

3. Update on Flaming Gorge hydropower analysis – Derek is working with BOR to gather data needed for the analysis. Derek developed a SOW and submitted that to BOR for hydrologic modelling. He has not received a response, but will continue to work with Nathaniel Todea and Heather Patno to move that process forward in coming weeks. He does not anticipate the analysis taking a long time after the modelling results are received.
4. Tusher Wash fish passage update and O&M SOW Status – Tildon said Ryan Christianson is continuing to work with Green River Canal Co. to get electronic systems online for payment and determine what type of equipment might be needed. There are no major developments; progress is slow. The screen can easily be maintained with daily brushing by the canal company which will be funded by the Program once the O&M SOW is in place. Maintaining the fish passage is more complicated and may require heavy equipment. Maintenance of the screen is likely needed throughout the irrigation season as algae builds up when the river is low and not carrying much debris.
5. Update on Colorado pikeminnow – Tildon reviewed that calls are ongoing to determine how to most effectively collect pikeminnow for broodstock. UDWR - Moab and FWS Vernal agreed to try to collect age-1 pikeminnow this spring. Consultants from the American Southwest Ichthyological Researchers (ASIR) firm traveled to Moab to assist in those collection efforts. Katie said no fish were found on the Colorado River and 6 were found on the Green River during pilot sampling, which directed efforts to the Green River. Program PIs have struggled to communicate about sampling conditions on the lower Green River with San Juan PIs and so this effort was hugely beneficial to get everyone on the same page. Chris Michaud said the crew sampled Monday and Tuesday covering 90 miles from Green River State Park to Millard Canyon riffle. Crews sampled all habitats, even if they did not look especially promising. Flows on the Green were higher than they were last fall. Overall, crews collected 12 age-1 pikeminnow. Chris agreed that communication improvements were of great benefit. Chris Smith asked if there was anything the middle Green crews should be looking at. Chris Michaud said pikeminnow were found most frequently in smaller tributaries and little micro flooded tributary mouths. Melissa asked if spring collection was worth it. Chris Michaud said spring collections are typically lower in number and the fish are more dispersed; future efforts should be assessed based on pilot passes on both lower rivers. Tom Chart asked if temperature differences were seen between the main channel and backwaters. Chris Michaud said overcast conditions were prevalent during sampling

and temperature differences were not large; he noted that sunny conditions may be required to make the backwaters heat up.

- a. Colorado pikeminnow collection plan – Tildon said collections around Vernal are planned but will be continually assessed based on ongoing guidance (*Note: this was subsequently cancelled*). Moab has another week set aside for collection in April, which will also be assessed. Coordination of fall collections will occur over the next few months. Mark McKinstry has funds for ASIR to support collections if collecting is possible. Tildon will coordinate both within our program and with the San Juan program to outline more concrete goals around collection.
 - b. Update on recovery planning – A recommendation team meeting was held in early February for Colorado pikeminnow, following the conclusion of the pikeminnow SSA. The outcome of that meeting was a recommendation to not reclassify, i.e., downlist, the species but to revise the recovery plan. The Program is still working to schedule a briefing with the Regional Director for FWS legacy region 2, Amy Leuders. Amy has requested that briefing specifically. The Service is recommending that pikeminnow be the first species to launch into recovery planning since its regulatory process is essentially over. Tildon and Kevin McAbee are working to re-convene a recovery team in coming months.
6. HBC reintroduction plan update – Melissa reconvened the ad-hoc group to assess translocation. Rich Valdez is working at revising the white paper. Tom Chart sent an email out yesterday to the MC to approve NFWF funds to support Rich in that effort. Comments from the ad-hoc team were due last week on the general structure of the white paper. Rich included a matrix to assess both the source population and the target populations. Many of the members offered pros and cons to support that discussion which will be incorporated during future meetings. Melissa is anticipating adding geneticists and hatchery managers into those calls as needed in coming months.
 7. Yampa River northern pike estimate 2019 – Kevin McAbee posted the technical report to the list-server a few weeks ago to open it for review. The report was considered as an addendum to an annual report (not specified which one) and thus did not go through formal program review. Kevin McAbee said that over the last five years, a number of agencies have conducted gill-netting in backwaters. Tory Eyre from CPW recommended completion of an abundance estimate on pike to assess those efforts. Last year, Tildon coordinated a team to outline a northern pike estimate in the Yampa; effort was added to a variety of scopes. CSU compiled data, which was not available at annual report time, and analyzed it to determine whether more work was needed during the 2020 field season.
 - a. Results of study – Kevin Bestgen thanked all the PIs who have contributed to this effort. During Koreen’s original report, the conclusion was that we needed to do more to target reproducing populations. After gill-netting was in place, the visible trends of lower catch

rates needed to be confirmed. A single tagging pass, and recapture and removal sampling occurred in 2019 in both the middle Yampa and reaches surrounding it. The Larval Fish Laboratory analyzed the data and wrote the summary report. In all, approximately 90 fish were marked and released, recaptures were fewer and skewed slightly toward larger fish. The abundance estimate for 2019 is less than 1000 fish. The electrofishing and gill-netting data trends are compared. All three data sources (catch rates [electrofishing and gill netting] and abundance estimates) indicate decreasing abundance. Kevin Bestgen said reductions are supported by other management actions as well, like CPW's removal in Catamount Lake and Stagecoach Res. and John Hawkins' removal work upstream. Kevin Bestgen said another year of sampling was probably not necessary in 2020 but emphasized the need to continue to control this population. He encouraged everyone to read the report and adequately archive it because it documents this declining trend and represents a nonnative control success story.

- b. Recommendation for 2020 – Kevin McAbee agreed that this trend is exciting and important to document. He and Kevin Bestgen agreed that additional sampling was not needed in 2020 as the data was sufficiently robust to make conclusions based only on the 2019 data. Kevin McAbee thanked all the field crews who altered their typical strategies to support this work and thanked CSU for their quick analysis to support making this decision. Melissa commended everyone for pulling this data together from the disparate sources and noted the value of repeating it periodically. Kevin Bestgen is accepting comments on that document if the BC has anything to add. Tildon said a memo went out to PIs about field procedures, but wanted to remind everyone that there may be northern pike marked with Floy tags and PIT tags and asked that PIs pay attention if pike are captured in the Green River system. The BC supported not conducting northern pike population estimates in 2020.
8. STReaMS update – Dave Speas is interested in convening a workshop, potentially in spring of 2021. He asked if others thought that effort could be valuable. There was general support. Chris Michaud introduced Program “R” as a possible method to analyze data on a comprehensive scale. R is open-source software that has become powerful through contributions of programmers around the world. He and Julie Stahl's goal is to link STReaMS to R dynamically. One of the important components is the ability to reuse analyses over and over again, in PDF, doc, or html formats. R allows for data visualizations in maps, tables, and graphs. In addition, R has the ability to pull out and identify issues in the dataset. With both nonnative fish and site-effort data, the data structure is not very robust and more QA/QC is needed. Annual reporting may be another opportunity to simplify and automate, allowing PIs to engage more effectively with their data. R can also support visualizing data on a Program scale including identifying blind spots, making sampling more uniform across a larger landscape or assist in designing studies more effectively. Chris is working on bonytail stocking and resight data visualizations, basin-wide smallmouth bass reports and will work on tag antenna data analyses. He is also doing a lot of QA/QC work in STReaMS.

Chris reviewed the smallmouth bass annual report for 2017. He noted you can run the same analysis for different years very easily. Chris also ran through the bonytail analysis for 2018. Paul thanked Chris for the tools he provided. Melissa asked how these could be wrapped in to work for people who cannot do field work this year. Melissa asked how the maps are made. Chris said they are generated out of R using a widget, so they are created adaptively. Dave did caution that we do need annual reports to detail what sampling occurred in a given year and reiterated the importance of the PI's interpretation of that data. Chris agreed and noted that we are trying to be thoughtful about how to standardize annual reports. Dave said this would be useful to ensure that we are providing the same level of reporting with each group. Tildon said we do synthesize this data for the Researchers' Meeting and the use of R may facilitate creation of reports to accompany those efforts. Dave said it may be useful for a nonnative fish workshop or a PIT tag workshop as well. Chris said the learning curve to build the reports is pretty steep, but it could be a lot easier to use existing reports to produce new ones rather than build them from scratch. If the approach is adopted by PIs, Chris would likely need to support their efforts moving forward. Tom Chart said he sees Chris' R reports as added value to our annual reporting, especially as a means of communicating the scope of our Program efforts to folks interested in, but not intimately aware of our Program. Dave concurred that this work is very valuable. >Julie and the PDO will think through how these efforts may be furthered if field work is cut off or delayed.

9. Bonytail stocking locations update – Cheyenne said the information she will present is a general concept around where bonytail will likely be stocked this year and thanked Chris for the analysis he provided, which supported these efforts. Mumma is planning on stocking 500 bonytail into Salt Creek (Mack Wash), 2750 into the Yampa at Deerlodge and 2500 into the Colorado River in August (RM 208.4 near DeBeque). Wahweap has 11,500 bonytail to stock in April and an additional 14,050 bonytail to stock later. They are planning on Lake Powell at North Wash or Farley Canyon, Dolores at Rio Mesa, the Price below Woodside, or San Rafael as desired by partners. Ouray-Randlett has about 4,000 fish to stock this spring. Matt Fry will plan to stock about 2,000 at the White River at Enron and splitting the other 2000 in tributary mouths. Cheyenne is asking that one site be stocked half during the day and half in the evening (Willow Creek) to compare success rates. Bonytail have been picked up moving more frequently on antennas at night. Ouray-Randlett may stock at Green River State Park, Rainbow Park, and/or Swasey's boat ramp later in the year. The hatchery would try to use "aqui-s" (a new drug currently being tested to reduce stress levels in fish) to help bonytail survival if stocking at Green River State Park. Ouray-Grand Valley has been very consistent with their stocking location over time, which can allow for comparison of success between stocking events. 10,000 fish are ready to go in June or early July. Dale and Brian will focus on stocking 1200 fish or less in each event in the upper Colorado near Rifle, the Colorado near Grand Valley 183.6-157.1, and the Gunnison.

Cheyenne is working to consolidate and update guidance documents into a single document and may be asking for information from the hatcheries in the future. Dave asked if the Lake Powell fish would be tagged. Cheyenne confirmed that they would be. Dave said the Utah State group is supportive of stocking 1000 bonytail into the San Rafael, 500 above and 500 below the identified habitat reach. Pete asked about the two stocking events at Willow Creek. He encouraged putting those events as close together as possible. Melissa asked if the fish can be stocked under the current COVID requirements. Dale said they are scheduled to move fish from the hatchery to the grow out ponds soon. They could feed them a maintenance diet and keep them for a long time outside. If they are kept inside, growth is substantially limited. Spawning fish or transfer of young bonytail will become real pinch points in the future. From Utah's perspective, stocking will likely be one of the last things to stop as they can occur independently. CPW is delaying stocking into Salt Creek until clearance to travel is provided. Hatcheries will continue to evaluate the situation and will update the BC as needed. Melissa asked that Cheyenne distribute the genetics management plan that she has [done].

10. Canal salvage in the Grand Valley – Tildon is still in conversations with CPW and GJ-FWCO about what makes the most sense for canal salvage in the future. Tildon will continue these discussions and bring a proposal back to the BC in July. CPW is committed to canal salvage, but will likely need support. The effort in 2020 may be impacted by seasonal hiring. Dave asked if a SOW would likely be available in July. Tildon said that is likely after more conversations between CPW and GJ-FWCO. Dave appreciated the group's efforts in continuing discussion. Tildon asked interested BC members to provide any specific requirements they may have to inform those discussions. Dave said right now the scope will include about 2 weeks of effort. Tildon is especially interested in opinions regarding prioritizing hot spots that are publicly visible or a more comprehensive evaluation of entire canals.
11. Fin ray analysis – Chris Smith spoke with Mark McKinstry at the Researchers' Meeting in Durango about determining natal origin of razorback sucker in the San Juan. In 2016, they caught a fair number of untagged razorback sucker on the White River and they do periodically encounter them in the Green. Steve Platania is willing to take any fin ray samples the Program can collect and analyze the data, at no cost to the Program. This is an initial effort to see if they can differentiate between the Green River and the Ouray hatchery to support further efforts. Earlier water sampling suggested the hatchery and river could be differentiated isotopically. Mike Partlow has agreed to collect samples this year. Darek said collections are occurring on the Colorado. The BC thanked Chris for pulling this effort together.
12. Status of Aspinall Unit study plan – Dave Speas is looking at the status of projects listed in the Aspinall Unit study plan which appear in the RIPRAP. He will bring more information back to the BC in July.

13. Stewart lake cattail control update – Mike Partlow reviewed that the Marsh-Master treatment occurred last fall. The plan was to flood water over the broken stalks which can reduce carbohydrate storage and impede regrowth. Construction started on the canal that would normally flood the wetland and thus water was not easily available. Mike has been working with the Vernal-FWCO to pump water from the river with a diesel pump. Supplemental water from the canal may still be available on April 1st. The cattails all appear to still be dormant, but little point shoots are starting to form on the roots. Rubber on the inlet gate has worn down substantially and Mike will start conversations with Reclamation and the habitat unit of UDWR to make sure those parts get fixed. Dave asked when the water was desired. Mike said March 1st would have been ideal. Mike also submitted a proposal to the Utah Watershed Restoration Initiative for an herbicide treatment that would occur later this summer if needed.
14. 2018 – 2019 Sufficient Progress memo & 2020 RIPRAP review updates – Tom Chart said the sufficient progress memo was published earlier this year which has been distributed and posted on the website. Coordinators in the Program Office have conducted their review on the 2020 RIPRAP and Tom is currently reviewing the documents. He is aiming to distribute those documents for committee review by the end of the month. He is asking that technical committees work with their Management Committee reps to submit one set of comments via email. Unless substantial comments are seen, the PDO will likely create a response to comments and revise the documents, finalize the RIPRAP and then move on to drafting our 2019-2020 Sufficient Progress memo.
15. Review reports due list and the timing of PDO review in our technical report review process – Reports due list was revised and updated. Tom said that at the BC meeting in Durango in January there was a proposal raised to conduct BC review and PDO coordinator review simultaneously. Tom emphasized that the coordinator reviews are intended to bring an overarching programmatic perspective and ultimately streamline BC review. He acknowledged that the PDO workload has been unusually heavy the past couple of years, but he felt that the coordinators are still providing their reviews in a timely fashion. Tom supports the coordinator’s comments to PIs and recommended a continuation of the current report review process. Dale reiterated his concern about trying to get things done in a compressed “off-season” but supported the coordinators continuing in their current role.
16. Reminder – next in-person meeting July 8-9 in Grand Junction (at BOR), pending travel opportunities. Webinar scheduled for May 27th from 9-1.

Consent agenda –BC approved the January 2020 Biology Committee summary – *The summary was sent with this agenda.*

ADJOURNED: 1:52 p.m.

Attachment 1: Assignments

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. Floodplain follow-up assignments:
 - a. The Program Director’s Office will discuss terms of the Escalante wetland and Lamb property leases with Ouray NWR (Dan Schaad, Sonja Jahrsdoerfer, and Andrew Pettibone) to ensure the Program really benefits from them. Tildon noted that the easements may be protecting these floodplains from other development. Tildon said there are two easements being proposed to be open to oil and gas leasing though the BLM - Pariette and Escalante Ranch. Pending.
 - b. PDO will develop a prioritization strategy for both the Colorado and the Green by the end of August and will schedule a call (Sept-Oct) to continue discussion. *10/27/17 - Draft discussed by Committee; comments due within two weeks to the Program office. Tom Chart will then take it back to Brent and Ryan and see about next steps. 1/25/18: Prioritization now dependent on elevation surveys and larval information. 9/17/18: Tom expressed support for moving forward with the Stirrup on the Green River and noted the Matheson may be the best option on the Colorado River. The PDO expects to make progress on this issue as soon as we get additional staff online. 2/11/20: Tildon is prioritizing based on post-2023 information and this item will be removed from the next summary.*
2. Exploration of using alternative methods of nonnative fish control in systems where traditional mechanical control is ineffective/infeasible. Kevin/Tom/Don will start the discussion with relevant parties and bring agenda items back to the BC as necessary for both the White and the Duchesne. Kevin will talk to Jenn, Chris Smith and Matt Breen to get more information around the White and Kenney Reservoir. *9/17/18: Don and Tom discussed releasing water in the White for algae control, which might also have benefits of removing nonnative fish. Tom said they released water in early July to control cladophora. CSU field crews were on site and the PDO will check back to determine the effects on the fish population. Kevin Bestgen confirmed sampling occurred pre- and post-flow. The data has not been worked up yet, but will be in the off season. Kevin Bestgen thinks the event occurred pretty late in the spawning season and may not have had a large effect. Tom noted that Alden said it may need to occur on an on-going basis for algae control.*
3. The hatcheries need new guidance from the PDO which will incorporate HCP protocols. Julie Stahl will provide as time allows. Guidance will include collection and reporting of

environmental data. Stocking discussions will happen earlier in the year and be more comprehensive. *11/8/18: Julie and Cheyenne will convene a group of BC members and hatchery managers to develop a plan forward for bonytail. 3/12/19: The bonytail group met on 3/7/19 to discuss options for a food study. Future meetings will be scheduled to support the propagation element as needed.*

4. PDO will figure out how best to distribute spill contact information (potentially on the website). *Pending.*
5. The PDO will develop a plan to have in depth conversations on nonnative fish issues and inclusion of PIT antenna data in analysis and will schedule workshops or meetings as appropriate.
6. PDO will start conversations around a razorback sucker monitoring plan, including revisiting the 2012 report for recommendations.
7. Tildon, Julie and Kevin Bestgen will use STReAMS data to explore signs of pikeminnow avoidance to electrofishing. *5/13/20: Julie provided information from the White River antenna to K. Bestgen in fall 2019 to pair with the White River pop. estimates. No estimate of avoidance was possible, Kevin Bestgen will bring this back to the BC if anything is found. This item will be removed after this summary.*
8. Julie will distribute RefWorks information. *1/24/20: USFWS has run into some major implementation challenges with RefWorks and will continue to seek collaborative tools to share resources.*
9. Kevin McAbee will work with PIs familiar with the White River to suggest potential management actions in concert with the White River Basin Management Plan.
10. Future BC agenda items:
 - a. Inclusion of canal salvage in future work plans.
 - b. Discuss options for a walleye synthesis report.