



BIOLOGY COMMITTEE MEETING 30 November – 2 December 2021

BIOLOGY COMMITTEE (BC) MEMBERS:

Matt Zeigler, Chair
Harry Crockett
Ryan Besser
Stephen Davenport
AJ Keith
Vince Lamarra
Colin Larrick
Jacob Mazzone
Mark McKinstry
William Miller
Tom Chart
Benjamin Schleicher
Brian Westfall

REPRESENTING:

State of New Mexico
State of Colorado
U.S. Bureau of Land Management
U.S. Fish and Wildlife Service
The Nature Conservancy
Navajo Nation
Ute Mountain Ute Tribe
Jicarilla Apache Nation
U.S. Bureau of Reclamation
Southern Ute Indian Tribe
Water Development Interests
U.S. Fish and Wildlife Service
U.S. Bureau of Indian Affairs

COORDINATION COMMITTEE (CC) MEMBERS:

Dale Ryden
Tom Pitts
Michelle Garrison

U.S. Fish and Wildlife Service
Water Development Interests
State of Colorado

PROGRAM OFFICE (PO):

Melissa Mata, Program Coordinator
Eliza Gilbert, Asst. Program Coordinator
Scott Durst, Science Coordinator
Kayla Kelley, Program intern

U.S. Fish and Wildlife Service
U.S. Fish and Wildlife Service
U.S. Fish and Wildlife Service
U.S. Fish and Wildlife Service

OTHER INTERESTED PARTIES:

Colleen Cunningham, CC alternate
Adam Barkalow, BC alternate
Jill Wick, BC alternate
Dan Lamarra, BC alternate
Tracy Diver, BC alternate
Dave Speas, BC alternate
Ben Zimmerman, BC alternate
Carrie Padgett
Brian Hines
Katie Creighton
Steven Platania

State of New Mexico
State of New Mexico
State of New Mexico
Navajo Nation
U.S. Fish and Wildlife Service
U.S. Bureau of Reclamation
Southern Ute Indian Tribe
Water Development Interests
Utah Division of Wildlife Resources
Utah Division of Wildlife Resources
American Southwest Ichthyological Researchers

Stephani Clark Barkalow	American Southwest Ichthyological Researchers
Michael Farrington	American Southwest Ichthyological Researchers
Steven Mussmann	U.S. Fish and Wildlife Service
Melody Saltzgeber	U.S. Fish and Wildlife Service
Julie Stahli	U.S. Fish and Wildlife Service
Weston Furr	U.S. Fish and Wildlife Service
Nathan Franssen	U.S. Fish and Wildlife Service
Melissa Trammell	National Park Service
Mel Warren	Peer Reviewer
Susan Behery	U.S. Bureau of Reclamation
Aaron Chavez	San Juan Water Commission
Jamie Shockey	City of Farmington
Jerrod Bowman	Navajo Nation

Introductions and changes to agenda

Zeigler called BC role and introduced those in attendance. Mata asked if she could discuss the Drought Response Operations Agreement plan to release water from Navajo Dam prior to the nonnative fish symposium. Miller asked for an update on the annual Researchers Meeting. Both topics were added to the agenda.

Approve draft summaries from 6 July 2021 and 26 July 2021 BC meeting; review Action Item list

Gilbert received comments from Keith, Miller, and Zeigler on the draft meeting summaries. All comments were relatively minor and all were accepted. Miller motioned to approve the summaries, Mazzone seconded, no one was opposed and the meeting summaries were approved.

Action items from previous meeting:

1. *Cole will work with the contractors to implement option #4 for Phase III and the December BC meeting will include discussion on further project action.* This topic is on the meeting agenda.
2. *For stocking Colorado Pikeminnow, McKinstry will contact Sagboy, Araujo will scope out the sites and Durst will report back to the BC.* All tasks were completed and all age-1 Colorado Pikeminnow were stocked in McElmo Creek and at the Hogback Canal on October 13, 2021.
3. *Mata will organize a group to identify “field efficiencies”.* Mata had discussions with a small group of Coordination Committee (CC) members and plans to further conversations with Program Primary Investigators (PIs).
4. *Mata will communicate the Biology Committee’s (BC) recommendation on release of the additional 20,000 af to U.S. Bureau of Reclamation (Reclamation).* This topic is on the meeting agenda.

Water Users nomination of Tom Chart as BC member – PO

Zeigler noted the nomination of Tom Chart to the BC was originally requested to occur over email, however, several BC members wanted the action to occur during a regularly scheduled meeting. Chart gave a synopsis of his career and extensive previous work in the San Juan River and the entire Colorado River Basin. Miller asked if Chart was going to be able to provide as much input into committee business as the previous Water User’s representative (Tom Wesche). Chart responded that he understands the amount of time Wesche devoted to the Program and looks forward to being

involved, however, he is still working on the agreement with the San Juan Water Commission about specifics.

McKinstry noted that previously the BC has asked nominees to recuse themselves while members discuss the nomination. Chart complied and left the meeting. McKinstry mentioned he had notified his supervisor about the potential for conflicts of interests with Chart working for the Water Development Interests given his involvement in the Upper Colorado River Recovery Program. However, McKinstry mentioned that Chart has received clearance from his Ethics Officer and therefore McKinstry has no issues. Mata stated that as federal employees, there are restrictions on how they may be employed after retirement to avoid conflicts of interest.

Zeigler called the vote, all BC members voted “yea” and Chart was unanimously elected to the BC.

Discussion on BC process for voting on nominations – BC

Based on BC members concerns about the requested email vote on Chart’s nomination to the BC, Miller drafted a proposal outlining a process for future online voting. Miller recapped the proposal and stated he was not opposed to voting via email but wanted a process in place. The proposal was as follows: 1) Poll the BC to assess if an email vote was acceptable, 2) if an email vote is found acceptable to the majority of the BC, allow for a question and comment period (will need to be realistic), and then 3) conduct the vote via email. If an email vote is not found to be acceptable, the vote will then occur during the next scheduled BC meeting. All BC members voiced support for the proposal. Schleicher asked if the proposal could be added to the Program Document. Mata noted that the process will need to be approved by the CC first and she will add a few missing details before passing it to the CC for review. Crockett moved to approve the proposal for CC review, Schleicher seconded, no one was opposed and the motion passed.

Nomination and selection of BC Chair for 2-year term (vote) – PO

Zeigler started the discussion by stating he was not interested in another term. Crockett asked if there were any restrictions on any Program Partners as serving as chair. Mata responded that any member of the Program Partners can serve as chair. Miller mentioned that the State of Colorado has not had a representative serve over the life of the Program. Crockett responded that he was going to nominate Chart. Chart replied he supported Crockett as serving as chair. Crockett responded that he has a limited capacity to increase his workload and may not have time to take on the task, in addition, if nominated he would need to get approval from his supervisor. Miller asked if Keith was interested? Keith responded that he would be interested but would need to check with TNC if they could provide the extra funding needed to support the additional workload. McKinstry stated if TNC was not able to support the extra work, McKinstry suggested Crockett could serve as chair and McKinstry would help if needed. McKinstry motioned to nominate Keith as BC chair and Miller seconded. No other discussion or objections, motion approved. Keith will check with TNC and report back to Mata.

Drought Response Operations Agreement (DROA)

Mata discussed options for the potential DROA releases. The original 20,000 af release was supposed to occur the last week in December and the first week in January. However, given recent model projections predicting a potential water shortage in 2022, Reclamation has postponed the release until the December forecast can be completed. Mata is requesting a BC recommendation for this potential release after the end of the year. Mata had sent an email asking for BC recommendation on the

following questions: 1) if they would like the release to be held until spring, and 2) if so, what type of hydrograph would be recommended, and 3) if the release needed to occur prior to spring, what type of hydrograph would they recommend. Responses from that email indicated everyone was in favor of holding the water until spring if possible, but opinion on the shape of the hydrograph was diverse. Miller stated that if the release occurs in December, keep the prior suggested hydrograph but if we wait until spring, then the release should be as high as possible for as long as possible. He also stated he didn't want to see flows higher than 1,300 cfs in winter as those could displace fish. Davenport, Miller, Crockett, and Besser were all in favor of releasing the water in spring to help mimic a more natural hydrograph. Keith asked if there was a hard deadline for when the water needed to reach Lake Powell. Behery responded that originally the deadline was Dec. 31 but with recent modeling predictions that date may change with changing forecasts. She was also unaware of the criteria that Reclamation was using to make those decisions. Keith stated the release in spring would be a better option and we should follow the Navajo Operations Decision Tree. Mata interjected that the decision tree would likely not direct a release due to lack of available water but the DROA water would likely be released anyway. Behery noted that it is not impossible to have a spring release, but it is highly unlikely given the lack of current storage that would be hard to overcome. McKinstry stated the release should not coincide with work that is being conducted at the waterfall in March and April. Chart agreed with McKinstry and would like to push the release to spring. He also asked what the plan was to recover storage in the reservoir to ensure this release won't impact our ability to meet flow recommendations in the future. Behery replied that Reclamation is currently working on a plan for the reservoir recovery and the Program will have a chance to review that document prior to it being finalized, however, this release will undoubtedly impact our ability to have future releases. Lamarra stated he was in favor of the fall release but releases later in the winter could be problematic for the juvenile endangered fishes. He recommends the release be held to match the Animas River runoff in spring. Behery noted that when making releases above 1,300 cfs, the power plant is maxed out and any higher releases would require the hollow jets to be used. Once those are maxed out, the auxiliary 4x4s need to be used and this will cause some sediment to be released, which may be counterproductive if we are trying to move sediment from downstream reaches. She also noted that given the amount of water needing to be released (20,000 af), the peak flow could only reach 4,500 cfs for 4 hours due to ramps at each tail of the release. Mata summarized the BC recommendation as 1) hold the water until spring if possible, and if so release the highest peak to match the Animas, 2) if the release needs to occur in the winter, do not exceed 1,300 cfs. Mata will pass this recommendation on to the CC for their review before sending it to Reclamation.

SJRIP BC nonnative fish management symposium

Durst presented a review on the following topics:

- Pre-2016 removal summary
- 2016-2017 treatment and control reaches experiment
- 2018 Channel Catfish exploitation and population modelling
- 2018-2019 Channel Catfish diet study and model extrapolation
- 2020-2021 winter Channel Catfish removal
- 2021 extrapolated Channel Catfish diet model

The BC discussed the effectiveness of nonnative fish removal to date, potential effects of Channel Catfish on recovery, and potential paths forward. All BC members, except Schleicher, voted in favor of taking a 3-5 year hiatus from conducting electrofishing as has been done in the past to manage Channel Catfish and increase the abundance of juvenile Colorado Pikeminnow. However, the BC

expressed the importance of developing other projects that will either increase the efficiency of Channel Catfish exploitation or increase the numbers of juvenile Colorado Pikeminnow during the hiatus.

Recordings of the symposium can be found at the following link: [Catfish Symposium Discussion](#)

Infrastructure improvements at SNARRC and/or NAPI– PO

Mata stated the CC was given an update at their last meeting about conversations among the Program Office (PO), Manuel Ulibarri, and Jason Davis about potential infrastructure improvements at the Southwestern Native Aquatic Resources Recovery Center (SNARRC) in Dexter, NM. A brief outline of possible improvements with general estimates of costs were shared. The primary goal of the improvements would be to increase the facility's capacity to implement and investigate hatchery enrichment practices to increase survival of stocked fish, increasing the efficiency of these management actions. Specific improvements included 4 quarter-acre lined ponds, 4-8 flow conditioning raceways, and 1 standalone building. This proposal was sent to the CC to inform them of our planning and make them aware of a potential future scope of work for their review. Mata was asked at the CC meeting if they had coordinated with the Upper Colorado River Recovery Program about their potential needs, and that had not been completed at that time but there were plans to do so. Mazzone asked if there were any estimates of how much hatchery enrichment could improve survival. Franssen replied in the affirmative and presented results from the Razorback Sucker flow-conditioning study that was recently published. In that paper, they demonstrated a doubling of first year survival of flow-conditioned fish compared to control fish. Mata ended by stating the PO and SNARRC would work to provide a more detailed SOW for the BC to review.

Budget update – McKinstry

McKinstry reported we are currently in a Continuing Resolution (CR) until this Friday so there could be a government shutdown or they could extend it. If a budget is not passed, and we have a Continuing Resolution until February or March the San Juan Program would not be funded because last year we operated using power revenue and the CR only applies to appropriated funds from the previous year. Overall, no news but FY2021 went pretty well in spite of COVID. Hopefully most PIs will have some funds leftover from FY2021 to continue to fund projects in FY2022 until a budget is passed.

Assessment of Razorback Sucker hybridization from museum archived fish – ASIR/SNARRC

Farrington reported that the Museum of Southwest Biology has located all juvenile Razorback Sucker specimens from ASIR collections from 2009 onward and are going to send tissue samples to SNARRC for analysis. There are a total of 325 individuals.

Mussmann then reported on results of genetic work on larval fish collected in 2020. Of the 113 visually-identified larval Razorback Sucker, 27 were of hybrid origin (25 were F₁ Razorback Sucker X Flannelmouth Sucker, 1 was Razorback Sucker X Bluehead Sucker, and 1 was F₂ Razorback Sucker X Flannelmouth Sucker). These were substantially higher rates of hybridization compared to years previously analyzed. However, the 2020 larval samples were not collected over the entire river as they have been in the past. Schleicher suggested the frequency of hybrids based on visual determination has been increasing in older fish as well. The entire river was sampled for larval fish in

2021 and those individuals are yet to be analyzed. It is currently unclear what the implications are from these new data.

Path forward with Phase III wetland –PO

Franssen had sent an email to the BC regarding a prioritized list of actions to take at Phase III and asked for BC input. He only received comments from Miller, Westfall, and Crockett. Of the list of tasks, Miller and Crockett were in favor of everything except the construction of a backwater at the bottom end of the structure as they thought it would not persist for any substantial amount of time. There was a lot of discussion about whether the island was actually overtopped by the high flows or if the new road access site had lowered the berm at the island's edge that allowed water to enter the wetland from the side. The general consensus was that the original inlet was not overtopped and that structure likely failed due to the fine sediment eroding from around the concrete blocks. In addition, the second inlet source that entered the pond from the side likely came from the road crossing. Because Navajo Nation used some of the remaining funds to pay for some work at Navajo Agricultural Products Industry (NAPI) ponds, there is only about \$80,000 left to pay for work at the Phase III site. McKinstry motioned to conduct the following tasks at the Phase III site with the omission of #5:

1. Remove all existing construction debris unless otherwise used in the below actions.
2. Berm off the original inlet by filling in the existing channel (~ 50 yards) to the historical grade. In addition, stack and cover some of the existing concrete blocks at the downstream end to prohibit head cutting back up the inlet channel.
3. Berm off the inadvertent inlet created by the access road to the island to its historical grade.
4. Build up a berm to connect the existing berms where river flows reached the wetland from the road access inlet.
- ~~5. Excavate the lower end of the wetland below the original outlet structure such that a backwater habitat may be present during base flows. The backwater would retain its original width but be excavated to a depth of 3 ft at base flows, upstream to the base of the original outlet structure.~~
6. Flatten and smooth existing berms to levels that would still prevent some moderate over-island flows from reaching the wetland.

Miller seconded, no other comments or discussion. The motion was approved. The PO will contact Navajo Nation and provide the BC's recommendation to complete the provided list of tasks.

Finalizing diversion prioritization exercise – Durst, Franssen, Gilbert, Mazzone, Miller, Zeigler

Zeigler informed the group that the CC approved the diversion prioritization document during their last meeting on November 9, 2021. Zeigler thanked Mazzone for writing and giving a powerpoint presentation to the CC, as well as the other small group members who provided help on the document.

Post-2023 field efficiencies – Mata

Mata reported that she met with a small group of CC members at their request and stated they asked if there could be ways to combine field efforts or data collection and analysis to be more efficient. She plans on asking the people associated with field activities to meet as a small group to discuss some

potential ideas. These people would likely include Navajo Nation, New Mexico Fish and Wildlife Conservation Office, Grand Junction Fish and Wildlife Conservation Office, American Southwest Ichthyological Researchers (ASIR), and the States. This subgroup of the BC will likely meet after the first of the year.

Nonnative Fish Cooperative Agreement – Mata

Mata stated the Nonnative Fish Cooperative Agreement (NFCA) is a long outstanding task. New Mexico Game and Fish conducted a lot of work on it and have pushed it to the point where it is today. However, all of the Program signatories have signed the agreement except for Navajo Nation, Jicarilla Apache Nation, and Ute Mountain Ute Indian Tribe. The main reasons for these tribes not signing were concerns about infringement on their tribal sovereignty and causing potential delays to their fish management. Mata is going to continue discussions with Navajo Nation to see if she can work with them to get their signature on the agreement. Mata was just keeping the BC informed of the process and will continue to work with these entities and the CC to find a path forward.

Nonnative fish management path forward- Zeigler

Zeigler asked if the group could circle back for a planned path forward for nonnative fish management. As a path forward, the PO agreed to assemble a small group of BC members to help plan the details for the hiatus and develop an adaptive management plan for the coming years. Moreover, this group would also conduct a literature review to accumulate basic ecology information on Channel Catfish to aid the development of alternative exploitation techniques. The PO will provide an email in the next week or so asking for participation.

Wrap-up-Schedule upcoming meetings/calls/webinars

The Researchers Meeting will occur January 25 & 26, 2022 and will be virtual. Abstracts need to be submitted by January 14th to Tilden Jones.

The next BC meeting will occur in February 2022 and the PO will send out a doodle poll to BC members to settle on a specific date.

Recap decision points and assigned action items

Action items:

1. Mata will continue to work on a path forward for the Nonnative Fish Stocking Cooperative Agreement and report back to the BC and CC.
2. The previous meeting summaries will be finalized and uploaded to the website.
3. The BC roster will be updated and uploaded to the website.
4. The process for email voting will be edited and presented to the CC for their consideration.
5. Keith will confer with TNC about his possible role as BC chair.
6. The BC recommendation in regards to the DROA releases will be passed to the CC for their review.
7. The PO will pass along the BC's recommendation for tasks to be completed at the Phase III site to Navajo Nation.
8. The PO will provide an email to seek participation for a Nonnative fish management group.
9. Mata will create a post-2023 efficiency team after the New Year.

10. The PO will send out a doodle poll to BC members for the February BC meeting.