



Approved Summary
BIOLOGY COMMITTEE MEETING
10 May 2016
Fort Lewis College
Vallecito Room, Student Union Hall
Durango, CO

Attendees:

Biology Committee Members:

Bill Miller – Southern Ute Indian Tribe
Jacob Mazzone – Jicarilla Apache Nation
Brian Westfall – Bureau of Indian Affairs
Jason Davis – U.S. Fish and Wildlife Service Region 2
Mark McKinstry – U.S. Bureau of Reclamation
Benjamin Schleicher – U.S. Fish and Wildlife Service Region 6
Vince Lamarra – Navajo Nation
Harry Crockett – State of Colorado
Matthew Zeigler (alternate) – State of New Mexico
Tom Wesche – Water Development Interests
Dave Gori – Conservation Interests

Peer Reviewers:

John Pitlick – University of Colorado
Steve Ross – University of New Mexico
Wayne Hubert – University of Wyoming

Program Management:

Sharon Whitmore
Melissa Mata-Gonzales
Scott Durst
Nate Franssen

Other Interested Parties:

Mike Farrington – ASIR
Steve Platania – ASIR
Kathleen Callister – BOR
Tara Ashby – BOR
Brent Uilenberg – BOR
Tom Turner – University of New Mexico
Tracy Diver – U.S. Fish and Wildlife Service Region 2
Stephani Clark Barkalow – ASIR
Bobby Duran – U.S. Fish and Wildlife Service Region 2
T. Kim Yazzie – Navajo Nation Department of Fish and Wildlife
Pamela A. Kyselka – Navajo Nation Department of Fish and Wildlife
Stephen Saletta – PNM
Brian Hines – Utah Department of Wildlife Resources
Mike Greene – PNM
Carrie Lile – SWCD

Susan Behery – BOR

Dale Ryden – U.S. Fish and Wildlife Service Region 6

Tom Sinclair – U.S. Fish and Wildlife Service Region 2

David Tallman – Navajo Nation Department of Water Resources

Introductions/changes to agenda

- Mark McKinstry's presentation was moved earlier in the agenda to inform discussion of the annual work plan.
- Melissa Mata-Gonzales was introduced as the new Assistant Program Coordinator.

Approve draft summary from 23-24 February 2016 BC meeting

- Franssen incorporated comments from Yazzie, Mazzone, Wesche, and McKinstry. Wesche motioned to approve, Crockett seconded, the summary was approved unanimously. All action items from the summary were included on this meeting's agenda.

San Juan River waterfall update – McKinstry

- Historical data suggest the waterfall is inundated when Lake Powell is at or above 78% of full pool. Portable PIT antennae were placed below the waterfall in 2015 and 2016. A total of 744 unique tags was detected, 716 were Razorback Sucker and 16 were Colorado Pikeminnow. The majority of Razorback Suckers were detected in March and April and detections decreased through summer. Ninety percent of all individuals detected in 2015 were detected in the first seven days of operation. Fifty one percent of Razorback Sucker detected in 2015 were also detected in 2016. Razorback Sucker stocked in the Colorado and Green Rivers were also detected below the waterfall. Year classes of Razorback Sucker as far back as 15 years and 10 years for Colorado Pikeminnow were detected. A total of 169 Razorback Sucker was collected via electrofishing below the waterfall in 2016, 35% of those fish were not tagged. Ten Razorback Suckers collected below the waterfall were implanted with sonic tags and five control Razorback Suckers from Hogback were also tagged and released at Hogback. During the second trip in 2016, 115 Razorback Sucker were moved above the waterfall and 10 were implanted with sonic tags. There was complex habitat between the waterfall and Clay Hills. No sonic tagged fish that were moved to the river proper have been detected below the waterfall to date (n=23).

Discuss draft FY 2017 Annual Work Plan

- Whitmore stated this was the first cut and a rough draft of the annual work plan. Because the budget will be very tight again this year, she suggested the BC focus on new projects and the PO and Reclamation will figure out how to get high priority projects funded.
- Miller stated the Program's 2012 Monitoring Plan and Protocols contains hypotheses behind all monitoring programs and each SOW should state how these will be tested. Whitmore said this plan should probably be reviewed and updated.
- Wesche stated the nonnative fish removal SOW was funded for one year and will be reviewed this fall. He suggested putting a place holder for the nonnative fish removal SOW in the FY2017 budget. Durst asked if the BC should discuss the potential outcomes of the nonnative fish removal

experiment and how results will guide management decisions. Miller stated it was the CC that requested the workshop, not the BC. McKinstry noted that the BC will have to make recommendations after looking at results. Ross and Westfall both would like at least two weeks to review draft results before the workshop occurs. Whitmore said a placeholder for the workshop is currently in the AWP. The PO will develop a SOW similar to what was done in 2016 for the environmental flow workshop.

- Wesche asked about the status of the UNM integration SOW. Turner said Cathcart worked on PIT tag antennae data and waterfall data this year. They are currently working with the Program Office (PO) to refine the scope of the new data integration. Wesche indicated he would like to see more detailed questions outlined in the SOW. Turner will work on this with the PO.
- Ross asked if peer reviewers should look at SOWs. Everyone agreed this was a good idea.
- Whitmore discussed the FY 2017 draft budget. There were no substantial changes to Element 1 except the New Mexico Fish and Wildlife Conservation Office's portion of NAPI fish production was reduced because they won't be filling behind Ernie Teller, who retired.
- Element 2: because videography has not been conducted recently, those funds have been used to buy PIT tags and cover shortfalls in other projects from last year. PNM and Hogback O&M will have to be paid by base funds.
- Element 3: Nonnative fish removal workshop will be held this fall. The peer reviewers and CC members will be invited to this workshop. Data for the workshop will be analyzed in advance so results won't be a surprise to participants. Davis stated the results of the nonnative fish removal experiment would likely need at least three years to be evaluated. Wesche disagreed and stated it was too early to make a decision on continuing nonnative fish removal.
- Element 4: SOW 21a is the cost for the larval fish monitoring program to extend sampling upstream to Farmington, NM. PIT tag data will be placed into the STReaMS database.
- Element 5: Peer review SOW is still being developed among the PO, BOR, and the peer reviewers. Ross has a description of what peer reviewers have been doing that could guide the discussion. Adjustments will occur in FY 2017.
- Element 6: Davis asked what the "product" was for I&E in the budget, Whitmore stated the Program provides funding to the UCR Program who has a full time PR person on staff. They take the lead in producing combined I&E products such as the Swimming Upstream newsletter and the briefing book partners take to DC each year. They do a good job but the SJR Program needs a better I&E strategy. Mata has been tasked with developing this.

New proposed SOWs

- **Recruitment limitation and trophic dynamics of Colorado Pikeminnow in the Colorado River Basin.** Durst summarized the proposal to assess trophic relationships of Colorado Pikeminnow in systems where they recruit, unlike in the San Juan River. The work would involve a comparison of tissue samples from San Juan River and Upper Basin fish.
- **Using molecular techniques to determine effective number of breeders (N_b) for Razorback Sucker and Colorado Pikeminnow in the San Juan River.** Franssen stated Mike Ruhl had suggested using N_e (effective population size) to assess population sizes of endangered fish in the San Juan River. Tracy Diver (SNARRC) gave a quick overview of the proposal, noted that N_e could not be calculated because the populations lacked recruitment, but N_b (number of breeders)

could be calculated. The project will need to use ~50% of larval samples for this effort (partially destructive sampling). Seven years of Razorback Sucker (120 samples/year) and three years of Colorado Pikeminnow are available. There would be additional data collection needed to identify hybridization, or comparative analyses with Flannelmouth Sucker or Bluehead Sucker. Wesche asked how these numbers would relate to population estimates and what the numbers would mean compared to benchmarks (accepted levels for N_b).

- **Population size, mobility, and early life history of Razorback Suckers in the San Juan River – Lake Powell complex.** Wesche was concerned the proposal lacked sufficient manpower to complete the work, given the logistical constraints of working below the waterfall, and recommended the effort be expanded. McKinstry noted that he intends to fund work to sample fish in the San Juan River arm of Lake Powell which could help with sampling below the waterfall and would be integrated into this project.
- **Waterfall passage evaluation** – McKinstry said he is not in support of doing this; there was general agreement. Miller said it should be conceptual not a detailed engineering assessment. Uilenberg asked if the BC is willing to support a nonselective fish passage at the waterfall. Wesche said truck-and-trap may be the better solution but the problem appears to be access. He asked if the road could be improved. Since no SOW was submitted for work at the waterfall in 2017, this project would be the only work conducted there if it is funded.
- **Habitat and temperature monitoring.** Videography flight would cost ~\$50,000. Bliesner said we need to get away from calling it videography and instead call it digital imagery. The SOW included evaluation of Navajo Dam temperature depression. Miller indicated he doesn't need to do the annual summary of temperature data anymore since it is available to everyone on USGS's website. Davis said he wasn't sure about the menu concept yet. Pitlick indicated habitat monitoring should occur at different spatial and temporal scales and should be specified in the SOW. Miller said detailed SOW's would be developed for each task selected. Their recommendation for 2017 is to do tasks 2E and 2A, at a minimum, and 2G.
- **Determining larval razorback sucker daily growth rates in the San Juan River.** Farrington gave a brief overview of the SOW and noted it would provide more resolution in regard to San Juan River spawning and hatching dates. Current growth rate calculations are being made using data collected by Kevin Bestgen on the Green River. Durst asked how the additional resolution would affect management decisions.
- **Determining natal origin of Razorback Sucker in the San Juan River.** Due to the lack of many smaller fish that are suspected to be new recruits, and the fact that there has only been one fish identified to date (and that fish would have likely been identified as a natural-spawned fish due to its size), there was general agreement that doing this may be premature at this time.
- **Population estimates of endangered fishes in the San Juan River.** Franssen outlined a possible process of conducting estimates of the number of endangered fish in the San Juan River as well as mentioned the pros and cons of conducting these efforts. Franssen will write a brief SOW for estimating the numbers of fish in the river.

Biology Committee members and Peer Reviewers are going to make comments on SOWs to Principle Investigators (PIs) and the PO by June 15th. The SOWs will be revised at the PIs discretion and will also respond to individual comments.

Additionally, all BC members will provide the PO a ranked list of SOWs they think are important for recovery of endangered prior to or during next BC call.

The Program Office will schedule a conference call late June or early July to discuss revised SOWs.

Navajo Dam 2016 spring release

Behery described the procedure for the 2016 spring release. The release is scheduled to start on 18 May with a five day ramp up, a maximum days at 5,000 cfs (between 21 and 31 days or until the Animas River is spent, and a 12 day ramp down).

Razorback Sucker augmentation plan

Davis reported the plan now uses survival estimates calculated specifically from fish in the San Juan River whereas previous estimates came from the upper basin. New Mexico Game and Fish, Wesche, and Ross gave comments on the new draft plan and Davis encouraged others to make comments. *Comments to the NMFWCO should be in by mid-June and the document will hopefully be completed by this fall.*

2015 analysis of selenium in San Juan River Razorback Sucker tissue

Westfall stated selenium was quantified in muscle tissue of 127 Razorback Suckers in 2015. Concentrations in 2015 were compared to fish sampled in 2009 and 2010. Selenium concentrations increased moving downstream, but no differences were found between the 2009/2010 samples and samples from 2015. However, the range of selenium among fish increased over time.

Preferred alternative for work at Fruitland Diversion Dam

David Tallman reported boulders in the river are occasionally pushed up to create flow into the diversion. Objectives of the project include: provide reliable water supply to Fruitland Canal water users, reduce annual maintenance costs, provide consistent upstream fish passage (SJRIP identified capital improvement), and provide fish entrainment protection (SJRIP identified capital improvement). Currently, the head works are unsafe and there are no fish deterrents. The plan includes replacing concrete and radial gates on the sluiceway and adding a safety fence, storage building, trash screens with automatic rake, log-boom, and automated canal control gates.

Bliesner stated the diversion dam will be a two-step design (1.5 ft drop across each step, 3 feet total). Water velocities seem reasonable for fish passage based on other studies. Fish entrainment protection will be located in the canal downstream at an existing canal sluiceway. The structure will be a long-crested weir similar to the one constructed at Hogback, but this one will be shorter and less complicated. Predicted cost to SJRIP will be \$972,000 capital and \$28,000 annually for O&M.

Recap of the environmental flows workshop #2

Durst briefly discussed the status of reviewing the flow recommendations. The new decision tree's main attributes is it doesn't have look backs, it doesn't have 'type' releases but rather maximum days at 5,000 cfs, and it has flexibility to increase base flows when water is available AFTER prioritizing for spring releases. The path forward for revising the flow recommendations will be for the PO to write a

descriptive narrative of the workshops, details of the decision tree, identify the hypotheses outlined in the workshops, and develop monitoring needs to test the hypotheses.

Update on improvements for operation of NAPI ponds and PNM fish passage

Yazzie stated NAPI ponds received water about a month late this year and Razorback Sucker arrived from Southwestern ARRC about two weeks ago. The ponds are experiencing algal growth but they plan to use herbicides once a month from now until October. The aeration system is old but seems to still be working fine. The Navajo Nation received a grant from BIA to update the aeration system and Yazzie plans to start that after the ponds are drained this year.

The fish ladder still doesn't have handrails, which raises concerns of safety. However, once the PNM contract is finalized, they may be able to install one. A log-boom to minimize sediment buildup is available for installation but it first needs to be retrieved from other side of the river.

Update on any 2016 sampling in the Animas River

Schleicher indicated the flows in the Animas River were not conducive to electrofishing via raft; therefore, sampling was not conducted.

Update on proposal to stock endangered fish in the Animas River

Durst reported he received comments on the Animas stocking memo sent out back in August. He modified the memo and did a point-by-point response to comments and sent it to the BC on May 3. McKinstry asked Durst why the Service would not consider giving fish stocked in the Animas a different status (i.e., experimental population). Durst stated this was discussed internally and the Service concluded giving fish a different status in the Animas would be a "slippery slope" so decided it was not a viable option. Moreover, similar stockings have occurred in upstream reaches of the San Juan River for several years without objections or different status designations.

Comments on the response to comments on the stocking plan should be provided to the PO by June 15th.

Update on LRP

Whitmore is working on updating LRP and still has some outstanding updates from people to incorporate. The most recent draft is posted on the website.

Comments on the draft 2016 LRP should be provided to Whitmore by June 15th.

Update on non-native fish stocking procedures

Zeigler has a written narrative derived from the flow charts of the stocking procedures presented previously. They are still working on comments from the State of Colorado; he is going to send out the procedures once those comments have been incorporated.

BIOLOGY COMMITTEE ACTION ITEM LOG						
(Updated 18 May 2016)						
Item No.*	Action Item	Meeting/O rigination Date	Responsible Party(s)	Due Date	Revised Due Date	Date Completed
1	Provide RBS/CPM stocking/capture/recapture data		P.I.'s to the Program Office	Annually before Jan. 1		
2	Provide Preliminary Draft Report Presentations		Project Leads (authors)	Annually at Feb. meeting		
3	Review LRP		BC	Annually at fall meeting		
4	Review Peer Review Comments from the February and May meetings		BC	Annually at fall meeting		
5	Provide Draft Reports		Project Leads (authors) to Program Office	Annually by end of March		
6	Scopes of Work		Project Leads to Program Office	Annually by end of March		
7	Provide Final Reports		Project Leads (authors) to Program Office	Annually by end of June		
8	Annual Data Delivery		PIs to Program Office	Annually by June 30		
9	T&E Species Data		BC to Program Office	Annually by Dec. 31		

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10	Annually compile T&E data and Program progress into summary to address overall Program recovery goals/objectives for presentation at annual meeting		Program Office/BC	By Annual Meeting in May		
11	Distribute Consolidated Data and list of annual data collected and available in the Program's database		Program Office to BC	Annually by Jan. 31		
12	Recapture analysis on PIT tagged fish		Durst	Annually by March		
13	Coordinate CPM stocking closely with Reclamation to avoid negative impact due to high flows/releases		Project Leads	Annually		
14	SOW to monitor habitat	2/22/15	Miller and Lamarra	5/3/16		5/10/16
15	Prepare a proposal on a geotechnical review of management options at the waterfall	12/2/15	McKinstry and Wesche	2/23/16	5/10/16	5/10/16
16	Prepare a Navajo Dam temperature depression proposal	12/2/15	Miller	2/23/16	5/10/16	5/10/16
17	Estimate cost of videography for habitat in 2016	2/22/15	Lamarra to Whitmore	5/10/16		5/10/16
18	SOW to assess trohpic ecology of CPM in the upper basin	2/22/15	Durst	5/3/16		5/10/16
19	Memo to Reclamation on 2016 Navajo Dam releases and procedures	12/2/15	PO to BR	2/23/16		5/10/16

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Item No.*	Action Item	Meeting/O rigination Date	Responsible Party(s)	Due Date	Revised Due Date	Date Completed
20	Investigate options for making endangered fish stocked into the upper Animas River exempt from some ESA regulations	12/2/15	PO	2/23/16		5/10/16
21	BC members to supply PO with ideas on how to conduct population estimates	2/22/15	BC to PO	4/1/16		4/1/16
22	Revise RBS Augmentation Goals (based on the outcome of experimental stocking and analysis by Franssen and Durst). What is the appropriate numbers of fish to stock?	5/10/10	FWS Fisheries/Program Office	5/2011 – provide update and extend as needed	6/15/16	
23	Pursue Non-native fish stocking procedures	11/5/09	Crockett and Ruhl	2/23/16	6/15/16	
24	Pursue effects study on Hg/pikeminnow with other groups/programs	1/14/10	Program Office lead	ongoing		
25	Include benchmarks for recovery in LRP	12/5/14	Whitmore	1/5/15	9/30/16	
26	SOW to conduct population estimates for Colorado pikeminnow and razorback sucker	2/20/15	PO	5/12/15	6/15/16	
27	Status updates for the LRP	12/2/15	Pls to Whitmore	2/23/16	6/15/16	

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28	Investigate Upper Basin requests for STReAMS database funding	12/2/15	Whitmore	3/31/16	9/30/16	
29	BC comments on RBS augmentation to Furr	2/22/15	BC to Furr	5/3/16	6/15/16	
30	BC and Peer Reviewer comments on SOW to Pls and PO	5/10/16	BC and Peer Reviewers	6/15/16		
31	BC send ranks list of FY17 SOW to PO	5/10/16	BC to PO	6/15/16		
32	BC comments to response to comments on Animas Stocking proposal	5/10/16	BC to PO	6/15/16		

* Items were re-numbered after changes were made

Yellow highlight indicates annual action items

Green highlight indicates new action items

Red highlight indicates completed action items that will be removed from the next iteration of the Action Item Log

Date	Annual Tasks	PO	CC	BC	P.I.
Oct.	Reclamation administers contracts	X			
Nov.	BC Meeting (peer reviews typically do not attend this meeting) <ul style="list-style-type: none"> Review data integration results from previous year Identify questions for annual data integration Discuss Program priorities LRP review and provide recommendations (with pros and cons) to PO Appoint new BC Chair (every two years) 	X		X	
Dec. 31	RBS/CPM stocking/capture/recapture data to Program Office				X
January	Notification/update of Program rosters/mailling lists	X			
January	Executive meeting (Program Office; Reclamation Fund Manager; CC and BC Chairs) to do preliminary planning for upcoming year	X	X	X	
January	Updated LRP to BC and CC for review	X	X		
January	Reclamation provides a determination of perturbation for BC Review.	X			
Jan. 31	Distribute consolidated PIT tag data and post other data	X			
February	BC Meeting (peer reviewers are expected to attend this meeting) <ul style="list-style-type: none"> Prepare for Annual Meeting Provide preliminary results; draft report presentations Final review of updated LRP Review annual data integration priorities 	X		X	X
Feb/Mar	Final updated LRP to CC (with explanation of input included/not included)	X			
March	CC approval of LRP				
March	Annual guidance/solicitation for SOWs based on LRP/list of prioritized projects	X			
March 31	Draft final reports and SOWs due to Program Office			X	X
April	Preliminary draft Annual Workplan and Budget	X			
May	Annual Meeting <ul style="list-style-type: none"> Program overview P.I. presentations Review preliminary draft AWP Committee reports 	X	X	X	X
May	Annual hydrology meeting to review and solicit information regarding the San Juan River Basin Hydrology Model	X			
June/July	Draft Annual Workplan and Budget	X			
June 30	Provide final reports and data sets to Program Office				X
July	Final reports posted on website	X			
August	Tech review of draft AWP; recommendations with pros and cons to Program Office			X	

August	Revise AWP based on input and transmit final draft to CC with documentation of all input	X			
Sept.	Review and approve final AWP		X		
Sept.	Post final AWP to website	X			