Approved Summary
San Juan River Basin Recovery Implementation Program
Biology Committee Conference Call
5 August 2014

Attendees:

Biology Committee Members:
Bill Miller, Chair – 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
Vincent Lamarra – Navajo Nation
Harry Crockett – State of Colorado
Eliza Gilbert – State of New Mexico
U.S. Bureau of Land Management – absent
Tom Wesche – Water Development Interests
Dave Gori – Conservation Interests

Program Office – U.S. Fish and Wildlife Service, Region 2:
David Campbell
Sharon Whitmore
Scott Durst

Interested Parties:
Mike Farrington – American Southwest Icthyological Researchers
Stephani Clark-Barkalow – American Southwest Icthyological Researchers
Brian Hines – Utah Division of Wildlife Resources
Nate Franssen – University of New Mexico
Mike Ruhl – New Mexico Game and Fish Department
Carrie Lile – Southwestern Water Conservation District
Chris Cheek – Navajo Nation Fish and Wildlife
Susan Behery – Bureau of Reclamation
Mike Greene – PNM
Stephen Saletta – PNM
Ron Bliesner – Keller Bliesner Engineering

Approve 21 May 2014 draft meeting summary and review Action Item list:

- Durst incorporated previous comments.
- Gori provided some clarification on the difficulty of funding monitoring activities related to Phase 2 of habitat restoration with the grants monies obtained for that project. McKinstry indicated that the RERI habitat restoration did include a monitoring component that was covered with existing monitoring protocols. McKinstry also detailed the PIT tag antennas to be installed in some of the Phase 2 restored channels will provide some level of monitoring.

- Wesche moved to approve the revised meeting summary, Davis seconded, and the revised summary was approved unanimously.

Discuss revised SOWs and 2015 AWP:

- Whitmore distributed a revised 2015 AWP that included existing SOWs, SOWs that were revised based on earlier comments, and new SOWs. Whitmore indicated that future SOWs will need to include relevant LRP tasks and provide their link to recovery.
- Miller asked if the schedule for non-native fish removal trips could be included in the SOWs because concerns of electrofishing during Colorado pikeminnow spawning. Davis and Hines plan trip dates during the winter so they can be reviewed during the February meeting.
- There was no further discussion of existing and revised SOWs in the 2015 AWP.

Balancing razorback sucker stocking locations to remove confounding effects:

- Franssen reported that this plan was developed to structure the stocking program in order to evaluate hard versus soft releases and location and source effects. Previously it has been difficult to evaluate these factors because they were confounded or ambiguous because of their unbalanced nature. With this plan in place it will be easier to evaluate these effects in the future.
- Wesche asked if this plan incurred additional costs. There is no change to any budget based on implementing this plan but Davis suggested adding these objectives into the augmentation SOW along with references to the relevant study partners.
- Gilbert asked how stocking at PNM will affect analysis (because of its affect as a barrier). Franssen indicate we will have to be cautious with the interpretation of the analysis.

Need for additional entrainment studies:

- McKinstry developed an RFP to identify sites where entrainment could occur that is being reviewed by the Program Office and Weston Furr. The RFP will also identify factors like diversion structure, flow, and timing (season) that could increase the probability of entrainment. Once this RFP is completed, the Program can investigate the magnitude of entrainment that is occurring at any identified site through another RFP.
- The expected cost for this project is $50,000 - $100,000 and will be paid for with FY2015 funds. McKinstry expects to award the proposal by January.
- Whitmore will include a brief description of this RFP in the 2015 AWP.

Maintenance work at PNM to maintain flow:

- Cheek distributed a report describing options to maintain flow at the PNM fish passage. The report identified a submerged vane and a self-cleaning trash rake as the best options.
- Capital or NFWF funding will be used to pay for this work. Additionally, Cheek received a BIA tribal grant to improve passage screens that could be applied to this project to off-set costs to the Program.
- Cheek, McKinstry, and the Program Office will continue discussions to move this project forward.
- Wesche asked if the passage will open earlier than 1 April as currently stated in the SOW. Cheek said that based on data provided by the PIT tag antenna at PNM Fish Passage, the facility should be operated from 1 March to 31 September rather than 1 April to 31 October. Whitmore will update the 2015 SOW for the passage.

Videography alternatives:

- McKinstry reported that the Reclamation helicopter used in the past is no longer available and it might not be possible to conduct a videography flight in 2014. However, on-the-ground field mapping will occur in 2014 and it will be possible to use the 2014 LiDAR and 2013 videography as a base layer for that effort.
- McKinstry will work with Lamarra to follow up with Reclamation staff to understand the technology, camera, and protocols used for videography in the past and look for new sources for obtaining videography in 2015. Lamarra indicated it might be possible to do this work with a fixed-wing aircraft if the camera could be obtained.

Monitoring Phase 2 restoration sites:

- Gori summarized the overview that was previously distributed. There are four questions to address with the monitoring at the Phase 2 restoration site: (1) how do restored channels function, (2) how do larval and small-bodied fish use restored habitats, (3) how do high flows affect restored channels, and (4) how are habitats within restored channels affected by high flow events?
- Monitoring at the Phase 2 site will be considered a stand-alone effort integrating protocols for fish, habitat, and flow covering three years.
- Monitoring efforts include on-the-ground habitat mapping, surveying channel cross-section transects, collecting remote data on restored channel status with pressure sensors and field cameras, and fish monitoring. Gage data will be linked to pressure sensors and field cameras in order to understand the flow conditions necessary for these restored channels to be wetted. The relative elevations of the sensors will be surveyed and a relationship between gaged flows (USGS 0936000, San Juan at Farmington) and the pressure sensor in the main channel just above the target reclaimed channel as well as the sensors in the secondary and tertiary channels will be established.
- The group discussed the risk of pressure sensors being buried in fine sediment and the risk that they would not collect meaningful data. Perhaps pressure sensors can be linked with field cameras to monitor on-the-ground conditions. Other means of addressing this sediment issue could be using USGS technology or InSitu sensors. Miller will work with Lamarra to ensure the appropriate technology is being used.
- Fish monitoring will occur at the same time as on-the-ground habitat mapping. Fish monitoring outside Fall Monitoring could shed light on fish habitat use in other seasons.
- Total cost estimate is approximately $100,000 per year ($73,000 for habitat monitoring, $10,200 for fish identification, and $15,000 for fish collection). There may be options to reduce the fish collection portion of the budget.
- Wesche asked how representative the intensive monitoring at the Phase 2 site will be compared to the limited monitoring that has occurred at the RERI sites. Is such a detailed effort at one site the best use of resources when so little is known about the previous RERI sites? Would a more equitable distribution of effort across all restoration sites provide us with more insights regarding function and response of restoration treatments? Monitoring over the year at the Phase 2 sites will help us learn what is happening at these sites under multiple flow conditions. Phase 2 monitoring could also help address questions that come up in the review and revision of the flow recommendation. The fish sampling at the Phase 2 sites will be more extensive than what occurs at RERI sites.
- The group discussed the choice of control sites for the Phase 2 monitoring. There is difficulty in choosing an appropriate control. Monitoring at control sites does not greatly affect costs.

- Gori will develop a full SOW based on this discussion following the outline he provided.
- Westfall provided an update on Phase 2 restoration progress. Campbell and Durst completed the wetland delineation. Cultural surveys have been completed but Navajo Nation Historical Preservation Department concurrence still need to occur. TNC is planning to use crews from the Southwest Conservation Corps for non-native vegetation clearing but they are not available until 29 September. This will delay construction by one month (from1 September to 1 October). Everything else is moving forward as expected.

Microchemistry study:

- Clark-Barkalow detailed the shift to use fin rays rather than scales for analysis. She is currently working on a written protocol to distribute to the various field crews.
- Elemental analysis will be used for future work in order to tease apart signals from different sources and more confidently determine hatchery versus wild produced fish.
- There have been 12 razorback suckers of unknown origin collected on non-native fish removal trips this year.

Thermal modification of Navajo Dam:

- The BC should continue this discussion and review the report by Cutler. It will be important to determine if temperature depression is negatively affecting recovery of the endangered fish.
- It would be useful to conduct further modeling to address concerns of temperature suppression.
- Miller will outline questions that further modeling could possibly address. McKinstry will follow up with Cutler to determine if she would pass along her model or if she would be interested in conducting additional model runs. Miller and McKinstry will work together to explore options to conduct the necessary modeling (Cutler, Reclamation's Denver Technical Center, or an RFP). Temperature modeling could also be important in the Animas River to determine if its thermal regime is appropriate for different life stages of the endangered fish.

Update of Service/Reclamation proposal to modify San Juan River Navajo Reservoir Flow Recommendations and flow effectiveness workshop:

- Reclamation is revising the proposal based on earlier comments and additional analysis. A revised draft should be completed by 20 August. The Reclamation proposal only intends to change how the amount of available water is determined. This would not replace the decision tree in the current flow recommendations only how the available water for a release is calculated. In the interim, until the flow recommendations are reviewed and potentially revised, the current flow recommendations will be used for the 2015 spring release.
- The workshop being planned for 2015 will address the protocol for annual releases detailed in Reclamation's proposal including the appropriate target reservoir elevation. Future workshops will review and revise the flow recommendations.
- Bliesner indicated that the decision tree and flow recommendations are linked. The decision tree is based on statistics in the 65 years of modelling that have been implemented in the flow recommendations. If interim flow releases are made before new flow recommendations are developed, how will the Service determine if the flow recommendations are being met? Should small flow releases that are part of the existing flow recommendations be abandoned because they appear to be detrimental?
- A small workgroup should be convened to lay out these workshops and move this process forward. Bliesner, Miller, Wesche, Gilbert, Davis, Behery, and Gori volunteered to serve on this small group.

- Wesche motioned to recommend the AWP, with the changes discussed, to go to the CC for their approval at the 27 August 2014 conference call, Gilbert seconded, and it was recommended unanimously. The Program Office will forward the 2015 AWP to the CC for their approval.

Update on remote PIT tag readers, future installation, operation at PNM, test of Hogback Fish Weir:

- McKinstry reported that PIT tag antennas will be installed as part of the Phase 2 habitat restoration. McKinstry will coordinate timing of this to make use of heavy equipment during construction activities.
- McKinstry is working with Furr to identify possible sites for PIT tag antennas in the Animas River.
- Temporary PIT tag antennas at suspected spawning sites near Four Corners Bridge detected 21 large Colorado pikeminnow that were previously captured as adults. A recent test of the floating PIT tag reader picked up 500 unique tags. McKinstry will provide future updates on these systems.
- McKinstry provided an update on efforts to test the effectiveness of the Hogback Fish Weir. The drives that run the pumps interfere with the PIT tag antennas that were installed to monitor fish moving through the fish weir. The pump operators are reluctant to turn off the pumps to allow for a test of the fish weir. Plans are being made to test the fish weir effectiveness in November after irrigation ceases. McKinstry is looking for additional funds to fix the issue with these drives so the PIT tag reader would be able to operate continuously. There has been lots of interest in the effectiveness of this system since it might be a better way to prevent entrainment at diversion structures across the nation.
- When entrainment was detected into the Hogback Canal earlier this year the facility was not being operated correctly. Reclamation is training irrigation operators to utilize the facility correctly so it can function as intended.

Distribution plans for "Native Fish of the San Juan River" posters and brochures:

- These posters and brochures are currently housed in the Program Office. Posters and brochures can be distributed at future in-person meetings. Program partners should request the number of poster and brochures they want. The Program Office is keeping a database to track how many and where these posters and brochures are being distributed.

Schedule next meeting:

- A tentative call was scheduled for 15 September at 9 am to review and discuss the revised Reclamation flow proposal. Prior to the call the Program Office will conduct a poll to see if this call is necessary.
- The November BC meeting in Durango will be held sometime during the weeks of 17 November or 1 December. The Program Office will initiate a Doodle poll to select dates for this meeting.

BIOLOGY COMMITTEE ACTION ITEM LOG (Updated 14 August 2014)						
Item No. *	Action Item	Meeting/Origination Date	Responsible Party(s)	Due Date	Revised 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	Waterfall Inundation Whitepaper – review past meeting summaries, determine what is needed, and provide report at the next meeting.	05/18/07	Program Office	12/07/07	Not a current priority	
15	Revise RBS Augmentation Goals (based on the outcome of experimental stocking)	5/10/10	FWS Fisheries/Program Office	5/2011 – provide update and extend as needed	ongoing	
16	Develop a detailed outline for San Juan River Recovery Program case history manuscript	11-5-08	Propst/Miller			On hold
17	Pursue Non-native fish stocking procedures	11/5/09	Crockett and Gilbert	12/1/09	1/2/14	

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18	Pursue effects study on Hg/pikeminnow with other groups/programs	1/14/10	Program Office lead	ongoing		
19	Discussion of what is the appropriate number of fish to stock	3/23/10	BC	ongoing		
20	Southern Ute funding of Population Model	5/10/10	Miller	11/2010	ongoing	
21	Work with I&E Coordinator to determine feasibility of brochures and signs	11/10/10	PO	2/24/11	Ongoing	
22	Prepare memo to CC conveying BC recommendation to conduct a feasibility study on removing fish barriers in the lower Animas River	7/9/12	PO	8/20/12	3/31/14	
23	NNF workshop recommendations to Davis	2/21/13	BC	3/18/13		
24	Complete Threats Assessment draft	5/7/13	TNC	6/28/13		
25	Schedule maintenance work at PNM	8/5/14	BR. NN, PO	12/31/14		
26	Explore videography alternatives	8/5/14	McKinstry, Lamarra	10/31/14		
27	Develop questions related to thermal modification of Navajo Dam and explore methods of addressing these questions	8/5/14	Miller, McKinstry	10/31/14		

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28	Plan workshop to develop a protocol to implement replacement for "decision tree" to make releases from Navajo Dam	8/5/14	Program Office	ongoing		

* 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) • 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/mailing 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) • 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 • 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			