Approved Summary
San Juan River Basin Recovery Implementation Program
Biology Committee Meeting – Public Lands Center, Durango, CO
15 May 2012

Attendees:

Biology Committee Members:
Bill Miller, Chair – Southern Ute Indian Tribe
Jicarilla Apache Nation – absent
Brian Westfall – Bureau of Indian Affairs
Jason Davis – U.S. Fish and Wildlife Service, Region 2
Mark McKinstry – U.S. Bureau of Reclamation
Dale Ryden – U.S. Fish and Wildlife Service, Region 6
Vincent Lamarra – Navajo Nation
Harry Crockett – State of Colorado
Eliza Gilbert – State of New Mexico
Gregory Gustina – U.S. Bureau of Land Management
Tom Wesche – Water Development Interests
Patrick McCarthy – Conservation Interests

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

Peer Reviewers:
John Pitlick – University of Colorado
Steve Ross – University of New Mexico
Ron Ryel – Utah State University
Mel Warren – USDA Forest Service, Southern Research Station

Interested Parties:
Steven Platania – American Southwest Icthyological Researchers
Brandon Gerig – Utah Division of Wildlife Resources
Dan Lamarra – Ecosystem Research Institute
Carrie Lile – Southwestern Water Conservation District
Bobby Duran – USFWS, New Mexico Fish and Wildlife Conservation Office
Weston Furr – USFWS, New Mexico Fish and Wildlife Conservation Office
Justin Barker – Ecosystem Research Institute
Brent Uilenberg – U.S. Bureau of Reclamation
Raymond Smith – BIA-NIIP

Bruce Jaquez – BIA-NIIP
Michael Howe – BIA-NIIP
Ryan Christianson – BR, Western Colorado Area Office
Susan Novak – BR, Western Colorado Area Office
James Morel – Navajo Nation Department of Fish and Wildlife

Tuesday 15 May 2012

Changes to agenda:

- The discussion on monitoring at the RERI sites should occur during discussion of the 2013 SOWs.

Approve draft summary for 23-24 April 2012 BC meeting and review Action Item list:

- Durst incorporated all the changes that were sent via email.
- Wesche motioned to approve the summary and Ryden seconded. The summary was approved unanimously.

Final preparations for Annual Meeting:

- The Program Office will give an overview to start the meeting, presentations will be given by Recovery Element, and Campbell will provide a wrap-up.
- There will be no presentation on habitat and temperature monitoring since this is the first year that Miller and ERI will be doing that work.
- The Program Office will take notes to distribute after the meeting.
- Ross suggested that questions that come up during the meeting should be addressed by any PI with appropriate expertise and not just the presenter.

Update on status of Navajo Nation and UDWR 2012 SOWs:

- There have been delays in getting Bureau of Reclamation money to Navajo Nation. Funds were obligated to Navajo Nation for FY2012 in September 2011 (FY2011). New agreements with the Navajo Nation require a presidential signature. Changes in the structure of the Navajo Nation Council have also slowed the process. Reclamation has five agreements with Navajo Nation, PNM and NAPI that had to be renewed because they expired. The Federal continuing resolution has also slowed the process. The PNM agreement still has not been signed. In the future Reclamation will get these agreements in place earlier in order to get Navajo Nation their funding.
- PNM was operated as a non-selective fish passage for 8-9 days in early April allowing non-native fish to pass upstream but has been operated as a selective passage 7 days a week since this time.
- Brandon Gerig has been hired by UDWR to replace Darek Elverud. UDWR is fulfilling their commitments to the Program.
- The work in Lake Powell is being covered by FWS-Grand Junction and UDWR. Navajo Nation is not contributing to this work. If Navajo Nation is not able to contribute to non-native fish removal later in the year, FWS-NMFWCO will cover those obligations. It is not clear what work is currently being done at NAPI. The tag retention study has been completed and everyone assumed that razorback suckers at NAPI are being fed.

Update on FY2013 funding and discussion of recently awarded contracts:

- FY2013 funding legislation is still not signed but Reclamation is committed to funding the Program at last year's levels.
- McKinstry reported that the new larval monitoring contract should be awarded soon. Larval monitoring work by ASIR is continuing.
- Per the Upper Basin Recovery Program, all new multi-year agreements need detailed budgets for each year. The San Juan Program should start detailing year-by-year budgets for new multi-year agreements in order to be ahead of the curve on this. Annual budgets in future years can still be adjusted. Current reporting requirements to Reclamation are not onerous but McKintry wants to be sure these requirements remain simple.

Update on PIT tag reader installation at McElmo Creek:

- McKinstry reported on the recent installation of a remote PIT tag reader in McElmo Creek near the San Juan River confluence. Peter MacKinnon from USU/BioMark led the installation. This system will detect directional movement (upstream and downstream). This system is solar powered and a cellular modem will be installed so data can be accessed remotely. This system detected a razorback sucker not detected since 2009 in the first night of operation.
- Plans are moving forward to install remote PIT tag readers at PNM, Hogback, and Mexican Hat. Installation for these new systems will start as early as this fall. Cost estimates for these installs are $233,000 for PNM, $65,000 for Hogback, and $147,000 for Mexican Hat (non-directional).
- The PIT tag reader at Mexican Hat should be directional and McKinstry will work with BioMark to get a quote for a direction system at this site.
- The group discussed long-term maintenance and data management for these systems.

Review habitat monitoring options for RERI sites – McCarthy:

- RERI funding for these restoration sites will be completed by June. A long-term monitoring plan to evaluate restoration activities at these sites still needs to be sorted out. The short-term plan for this year will be to conduct fish monitoring with the larval monitoring and small-bodied monitoring projects. Before and after aerial imagery is being compiled by Keller-Bliesner. Long-term monitoring will be used to determine if these sites need additional treatment.
- Non-native vegetation will encroach into these restored sites but it is not clear how much of this vegetation needs to be removed in order to provide appropriate fish habitat. Funding for long-term monitoring and O&M of these sites will need to be secured.
- A small group should be formed to develop a monitoring plan and strategy to identify the next restoration sites.
- Lamarra has mapped RERI sites and control sites. Lamarra suggested opening mouths of existing channels and building new channels as the means to create more low-velocity complex habitat. Videography can be used to identify sites that have the most likelihood for success. LiDAR could be used to develop a base layer that may be helpful to identify future restoration sites. Channels need to be opened so they are wetted at base flow conditions. Future restoration does not need to be limited to New Mexico like the RERI sites.

Review and discuss options in revised 2013 SOWs and finalize any changes to 2012 SOWs:

- The group discussed fish monitoring in the Animas River and in the San Juan River upstream of the Animas confluence. Additional upstream sampling in the San Juan River would take about three additional days for adult and small-bodied monitoring crews. Options were discussed of doing this additional work for "free" or cutting three days of sampling in the lower San Juan for this new effort. Would this effort be a one-time event or part of the long-term monitoring plan? How does this effort fit in with the revised monitoring plan and protocols? The group thought it was important to start this upstream sampling effort in 2012 in order to work out any kinks and also to collect data on the Program's management actions (especially stocking) as soon as possible. The group noted that there are numerous diversion structures in the Animas River. The total cost to adult and small-bodied monitoring to conduct this sampling is about $12,600. Since 2012 money has been obligated, it is not clear how this additional effort would be paid for. 2013 SOWs should include plans for sampling these expanded upstream areas.
- Miller suggested holding off on Lake Powell sampling in 2013 in order to conduct a more thorough analysis of how Lake Powell fits into the broader recovery of razorback suckers and determine how Lake Powell should be sampled in the future. Current funding for Lake Powell could be used to conduct this analysis and analyze scales from untagged razorback suckers to determine natal origin.
- The PIT tag reader at Mexican Hat should be installed to determine direction of fish movement. Ryden noted the importance of outlying areas like the tributaries, Lake Powell, and the San Juan River above the Animas confluence to the recovery of fishes in the mainstem San Juan River.
- It will be important to address razorback sucker recruitment in Lake Powell. If recruitment is occurring, does that start the clock on downlisitng and delisting? What is the role of Lake Powell in terms of recovery? Is there interchange in Lake Powell between the San Juan and Upper Colorado River Recovery Programs? The data being collected in 2012 will help address some of these outstanding questions.
- The temperature SOW has changed from 2012 to 2013. The thermograph at the base of the dam will be replaced by one at Lee Acres (CR 5500 Bridge). All thermographs in tributaries except the Animas River and McElmo Creek will be dropped.
- Habitat monitoring will include RERI sites. Lamarra will look into the cost savings of using commercial satellite data instead of aerial videography for 2012 and 2013. Mapping at RERI sites should be conducted at the same scale as larval fish monitoring. Are there options for using capital or NFWF funds to obtain LiDAR data?
- Campbell provided background on an integration SOW that would fund Nate Franssen as a post-doc. Specific questions related to endangered fish recovery should be developed to direct this integration. Franssen could be housed with the Program Office at NMESFO. The group discussed various options on developing Program reports versus peer-reviewed scientific publications. The group also discussed the importance of sorting out authorship of peer-reviewed paper in advance.
- The group discussed increasing the level of non-native fish removal effort in 2013.

Review and prioritize outstanding data needs:

- There was consensus that the top three data needs for the Program are scale collection to determine natal origin, expanding fish monitoring into the Animas River and San Juan River upstream of the

Animas confluence, and monitoring RERI sites. Everyone agreed that scale analysis is the highest priority.

- The group discussed the importance of identifying limiting factors to recruitment and spawning. Where are spawning sites? Is there enough spawning habitat in the system? What role do contaminants (particularly selenium) play in limiting recovery and causing opercle deformities?
- The San Juan Program is working with the Upper Colorado Program to address some of these contaminant issues. Selenium is the main contaminant concern for razorback suckers and mercury is the primary concern for Colorado pikeminnow.
- Opercle deformities in larval fish are being tracked as the samples are processed in 2012.
- McCarthy talked about the need for an integrated assessment of flow, riparian vegetation, and river geomorphology to determine the interrelationships among these factors. This longitudinal assessment could be used to identify the potential for restoration and inform the revision to the flow recommendations.
- McKinstry suggested making an effort to address a limiting factor like non-native fish by expanding current removal efforts. However any expansion of effort to address one limiting factor should be balanced by other priority recovery efforts. Is it possible to determine the effects of non-native fish predation and competition on native fish? What are the effects of the removal effort?
- Remote sensing methods like satellite imagery and remote PIT tag readers should be used by the Program as a cost-effective means of collecting data into the future.
- It will be important to conduct fish monitoring as part of RERI monitoring to determine that restored habitats are being used by native fishes.
- How can BIA quarterly water quality measurements be correlated with other datasets? It is important to understand how contaminants move up the food chain. Controlled studies with selenium would be useful to determine how body burden in adult fish affects larval fish.

Prioritize and set timelines from Habitat Workshop peer reviewer recommendations:

- The RERI monitoring and habitat monitoring should be under the same monitoring program.
- Videography is already funded and is moving forward. In 2013 the source for imagery data will shift from videography to satellite. A sediment transport model will not be part of future habitat monitoring work. The Animas River should also be mapped to see how it has changed through time. Habitat mapping crews should float the river with larval and small-bodied monitoring crews to ensure the sites they sample are also being mapped. Pressure sensors could be used to determine the flows that inundate particular backwaters. A riverwide retrospective study on complex reaches could be useful to determine how to preserve, maintain, and create important habitats, as well as informing revision to the flow recommendations.
- Is it important to determine the sheer stress necessary to keep islands and bars clear of vegetation?

Overall prioritization for 2013:

- Element 1 (stocking) should continue unmodified.
- Element 2 (habitat) – Lamarra motioned to recommend to the CC that a feasibility study be conducted on removing barriers in the lower Animas River in order to provide additional habitat for T&E fish. Miller seconded and the motion was unanimously approved.

- Element 3 (non-native fish removal). Efforts are underway to focus removal efforts on periods with high catch rates and during channel catfish spawning. Non-native removal has been effective exploiting reproductive channel catfish and it may be important to consider expanding removal efforts. Channel catfish in the San Juan River are not reproductive until they reach 350-400 mm. In the future it may be possible to use the spring release to disrupt channel catfish spawning. Back-to-back removal trips might also be effective during the spawning period. Should calculation of exploitation rates continue since fish are returned to the river during the marking pass? Gerig will look into UDWR data to determine if changes can be made to removal efforts in the lower river that could remove more channel catfish.
- Element 4 (monitoring) should include priorities on scale collection and analysis, investigating larval opercle deformities, Lake Powell work, and a habitat retrospective study. Additional analysis of the work that has been conducted at Lake Powell should occur to determine the role of the lake in the recovery of razorback suckers. Durst could work with others to accomplish this. Ryden will look to NPS for support to continue Lake Powell work in the future. Funds set aside for Lake Powell could be used to do a summary analysis and report of the work at Lake Powel, scale analysis to determine natal origin, investigate opercle deformities, conduct a habitat retrospective study, and expand monitoring to upper portions of the study area (Animas River and San Juan River upstream of the Animas confluence).
- The integration proposal will move forward since this work is important to start.
- Workshop in 2013 should focus on revision to the flow recommendations.
- No discussion of Elements 5 and 6.

Data management for remote PIT tag readers:

- As more remote PIT tag readers are installed in the San Juan River the amount of data these systems collect will continue to grow. At some point sorting and cleaning up this data could be a substantial workload. For the near-term Durst will take on this task as part of his regular duties. In the future should this task be a separate SOW?
- PITAGIS could be a good model for handling this data. Durst will have discussions with McKinstry and Travis Francis to move forward with this. There could be programming solutions to deal with this data.

Review tasks assigned in Action Item list and any outstanding discussion:

- Work plans for high priority data needs and any revised SOWs should be submitted to the Program Office by 2 July 2012. These include scale analysis, opercula deformities, Lake Powell, and habitat retrospective. The summary analysis for Lake Powell should be part of the integration effort.
- Next meeting will be a conference call to review CC input on 2013 SOWs. Conference call is scheduled for Monday 9 July 2012 from 9:00am - 12:00pm.

BIOLOGY COMMITTEE ACTION ITEM LOG (Updated 31 May 2012)						
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		

BIOLOGY COMMITTEE ACTION ITEM LOG (Updated 31 May 2012)						
Item No.*	Action Item	Meeting/Origination Date	Responsible Party(s)	Due Date	Revised Date	Date Completed
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		
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	

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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	5/14/12	
18	Pursue effects study on Hg/pikeminnow with other groups/programs	1/14/10	Program Office lead	ongoing		
19	Blank database structure for data integration	1/13/10	Durst	3/23/10	2/24/11	
20	Discussion of what is the appropriate number of fish to stock	3/23/10	BC	ongoing		
21	Southern Ute funding of Population Model	5/10/10	Miller	11/2010	ongoing	
22	Work with I&E Coordinator to determine feasibility of brochures and signs	11/10/10	PO	2/24/11	Ongoing	

BIOLOGY COMMITTEE ACTION ITEM LOG (Updated 31 May 2012)						
Item No.*	Action Item	Meeting/Origination Date	Responsible Party(s)	Due Date	Revised Date	Date Completed
23	Revised positive population response criteria	11/15/11	PO and FWS to BC	2/13/12	5/14/12	
24	Prioritize extracted list of recommendations for Habitat workshop	4/24/12	PO - extraction and BC - prioritization	5/15/12		5/15/12
25	Submit revised SOWs with options the reflect prioritized outstanding data needs	4/24/12	PIs to PO for distribution to BC	5/4/12		5/15/12
26	Workplan for scale analysis and opercula investigation	5/15/12	ASIR	7/2/12		
27	Workplan for habitat retrospective	5/15/12	Lamarra	7/2/12		
28	Workplan for Lake Powell summary analysis	5/15/12	Ryden	7/2/12		

* 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

Annual SJRRIP Cycle (Oct. 1 –Sept. 30) ***January 2011 version***

Date	Annual Tasks	PO	CC	BC	P.I.
Oct.	Reclamation administers contracts	X			
Nov.	BC Meeting • Identify questions for annual data integration • Review data integration results from previous year • Discuss Program priorities • LRP review and provide recommendations (pros and cons) to Program Office	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		
Jan. 31	Distribute consolidated PIT tag data and post other data	X			
February	BC Meeting • Prepare for Annual Meeting • Provide preliminary results; draft report presentations • Review updated LRP • Review annual data integration priorities	X		X	X
February	Final updated LRP to CC (with explanation of input included/not included)	X			
Feb/Mar	Approval of yearly LRP		X		
March	Annual guidance/solicitation for SOWs based on LRP/list of prioritized projects	X			
March 31	Draft reports due/SOWs 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
June/July	Draft Annual Workplan and Budget	X			
June 30	Provide final reports and data sets				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			