



**San Juan River Basin Recovery Implementation Program  
Biology Committee Meeting – Durango, CO  
13-15 February 2012**

**Attendees:**

**Biology Committee Members:**

Bill Miller, Chair – Southern Ute Indian Tribe  
Paul Holden – 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  
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  
U.S. Bureau of Land Management – absent  
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  
Mel Warren – USDA Forest Service – Southern Research Station

**Interested Parties:**

Ernest Teller – U.S. Fish and Wildlife Service  
Daniel Lamarra – Ecosystem Research Institute  
Ben Zimmerman – Southern Ute Indian Tribe  
Steven Platania – American Southwest Ichthyological Researchers  
Carrie Lile – Southwestern Water Conservation District

James Morel – Navajo Nation Fish and Wildlife

W. Howard Brandenburg – American Southwest Ichthyological Researchers

Michael Farrington – American Southwest Ichthyological Researchers

Ben Scheicher – USFWS-Colorado River Fisheries Project

Kirk Patten – New Mexico Game and Fish

Bobby Duran – USFWS-Region 2

D. Weston Furr – USFWS-New Mexico Fish and Wildlife Conservation Office

Brandon Albrecht – Bio-West

Jim Brooks – U.S. Fish and Wildlife Service

Travis Francis – USFWS-Region 6

Monday 13 November 2012

**Approve draft summary for 15-16 November 2011 BC meeting:**

- Wesche motioned to approve and Davis seconded. The summary was approved unanimously.

**2011 Rare fish stocking summary – Furr:**

- All fish except those stocked on 18 May were soft released in 2011. Predatory fish were removed from release locations and stocked fish were held for approximately 24 hours.
- Stocked 214,720 - 2010 year class Colorado pikeminnow that were supposed to be stocked in 2010 as age-0 in May 2011 in addition to the requested 426,588 age-0 fish that were stocked in the fall. 2011 was the last year of multiyear class (age-0 and age-1+) stocking of Colorado pikeminnow (age-1+ stocking will be discontinued). A total of 3,743 age-1+ pikeminnow were stocked in 2011. At least 400,000 age-0 Colorado pikeminnow will be stocked annually into the future.
- A total of 18,830 razorback suckers were stocked in 2011. Uvalde started new management activities in 2011 in an effort to improve razorback sucker retention. This included using smaller trucks and smaller loads in an attempt to reduce stress to the fish. The result of these management actions will not be observed until 2012 sampling efforts in the river.
- Fish received by NAPI in 2012 will be tagged at Dexter prior to delivery in an effort to reduce fish stress and PIT tag loss.
- Extending monitoring efforts further upstream could be useful since T&E fish have been stocked further upstream.

**NAPI grow-out ponds and PNM fish passage – Morel:**

- 10,144 razorback suckers were received from Dexter and 7,452 were harvested and released into the San Juan (73% return). Fish were stocked at mean length of 345 mm after grow-out period of 126 to 187 days.
- Management activities at NAPI ponds included feeding, vegetation removal, and water quality monitoring. A mild case of Ich was detected at Avocet West.
- In 2011 PNM passage was operated from 1 April to 31 October; there were 12 days when the passage was out of operation. The largest numbers of native fish were captured in 2011 (27,507 native fish) and increased numbers of channel catfish (576) and Colorado pikeminnow (707) were observed. A total of 39 razorback sucker were detected.

### **Larval fish monitoring – Brandenburg:**

- The September monitoring trip was dropped in 2011. A total of 310 samples were collected. In 2011, 34 larval Colorado pikeminnow (including 5 from an associated project) and 1,065 age-0 razorback sucker were collected. Razorback sucker spawning has been detected for 14 consecutive years. Since 1999, the highest catch rates for larval razorback sucker have occurred in May and in Reach 1.
- Razorback sucker larvae have been collected near the upper ends of the study area (RM 141.5) so in 2012 the upper end of the study area will shift to Shiprock Bridge (RM 147.9) in an effort to detect larvae further upstream.
- Back calculated hatching dates for razorback sucker indicate hatching between 10 April and 5 June.
- Colorado pikeminnow were detected during the July and August sampling trip in meso- and meta-larvae stages. Back-calculated spawning dates indicate that Colorado pikeminnow have a short spawning period on the descending limb of spring runoff when water temperatures reach 20°C.
- Opercula deformities in late larval and early juvenile catostomids were observed in 6% of fish from July and August collections.
- 2 larval roundtail chub were detected in 2011.

### **Small-bodied monitoring – Gilbert:**

- There was no sampling of Reaches 1 and 2 in 2011. This was the first year where those areas will only be sampled every 5<sup>th</sup> year. There were 389 seine hauls in 2011 that collected 62 Colorado pikeminnow (thought to be the result of stocking efforts).
- Most Colorado pikeminnow were captured in Reach 5. Pikeminnow were collected from primary channel, secondary channel, and backwater habitats.
- Upstream Reaches have had a higher proportion of native fish over time.
- Based on work by Gido and Propst using the small-bodied dataset, they found that in general native fish respond positively to increased spring flow and negatively to non-native fish competition and predation while non-native fish respond positively to number of days when summer flow is less than 500 cfs.
- A block-seine technique with a 30 foot seine was used on an experimental basis in 2011. The catch rate of most commonly captured species was the same for standard (2.2 m) seines compared to the 30 foot seine.

### **Adult monitoring – Ryden:**

- Sampling in 2011 only covered RM 180-77 so comparisons to past years were truncated to those river miles. Sampling below RM 77 will occur every 5 years.
- There were 386 Colorado pikeminnow collected in 2011, most were juvenile fish but 2 adults were captured. 89 pikeminnow were captured upstream of PNM in 2011 (the most ever).
- Ryden pointed out the discrepancy between age and size of Colorado pikeminnow in the Recovery Goals. Fish in the San Juan become larger at earlier age classes. Is it age or size that is most critical to determine when a pikeminnow reaches adulthood?

Approved 23 April 2012

- 197 razorback sucker were captured in 2011. This consisted of sub-adult and adult fish but no juveniles. Because Adult Monitoring collects juvenile flannelmouth and bluehead suckers it seems likely that it would detect juvenile razorback suckers if they were present.
- Reaches 7 and 8 have not been recently sampled so it could be worthwhile to conduct sampling there because stocking has been conducted further upstream in the San Juan.
- The proportion of adult monitoring samples with at least one T&E fish has increased dramatically from 2000 to 2011

#### **Non-native species monitoring and control, upper river – Duran:**

- A mark-recapture study was implemented in 2011 for channel catfish. Overall channel catfish exploitation was 19.4% but was > 20% for channel catfish > 300 mm TL.
- Juvenile channel catfish catch rates increase downstream, especially after the Mancos and McElmo confluences.
- Common carp catch rates and populations continue to be low.
- Population estimate for adult channel catfish was 18,111 (95% CI 15,220-21,002) and 255 (95% CI 70-439) for common carp.
- There were 1,748 Colorado pikeminnow encountered in 2011 that included 731 fish < 150 mm TL that were too small to implant with a PIT tag and 27 individuals > 400 mm TL.
- There were 1,576 razorback suckers encountered that included 85 fish > 500 mm TL.

Tuesday 14 February 2012

#### **2011 Razorback sucker survey of Lake Powell – Francis:**

- The goal of this project was to determine the presence-absence and abundance of razorback sucker in the San Juan arm of Lake Powell after many years of minimal sampling. Because of the remoteness of the San Juan arm of Lake Powell the project faced logistical hurdles.
- Sampling was conducted in 4 trips from late March to mid June. The 4<sup>th</sup> trip was the only that was able to reach the upper section of the lake below the waterfall. Sampling included trammel netting, electrofishing, and larval light traps. Fin rays were collected to age untagged razorback suckers and sonic telemetry was used on 7 hatchery released fish and 8 fish collected from the lake in order to detect additional razorback suckers.
- Non-native fish dominated collections from Lake Powell but 103 flannelmouth sucker, 24 Colorado pikeminnow, 75 razorback sucker, and 2 razorback-flannelmouth hybrids were captured. Because ripe males and females were collected in addition to the collection of a metalarvae, there is evidence that razorback suckers are spawning in Lake Powell.
- Most razorback sucker captured with PIT tags were from the 2004 and 2007 stocking classes. 36% of razorback sucker captured in Lake Powell did not have a PIT tag, compared to 15.5% of those captured in the San Juan River. 13 of 27 untagged razorback sucker were aged using fin rays. Ages ranged from 1995 to 2005 year classes (6 to 16 years old).
- Most sonic tagged razorback sucker remained within 2-3 miles of capture site but 4 razorback suckers encountered in Lake Powell were later captured in the San Juan River indicating that they were able to move upstream of the waterfall while it was briefly inundated.

- 2012 efforts will attempt to document recruitment in Lake Powel and also increase larval sampling effort. Remote readers can be used to detect sonic tagged fish. Telemetry equipment in sonic tagged fish from 2011 will still be active in 2012. If sonic tagged fish are detected downstream of Neskahi Canyon sampling efforts should expand in those areas. Sampling efforts should not be constrained by critical habitat designation.

**PIT tag summary – Durst:**

- PIT tag information was integrated across all sampling and stocking efforts in relational Access databases for both T&E species. Queries of these relational databases were built to produce summaries.
- Most Colorado pikeminnow captured in 2011 were stocked as age-0 (without PIT tags). Most pikeminnow stocked without PIT tags are detected 1-2 years post stocking but most pikeminnow stocked with PIT tags (at age-1+) are only detected in the same year that they are stocked. The majority of pikeminnow are detected near stocking locations or in Reach 2.
- Most razorback sucker recaptured in 2011 were from the 2010 stocking class but there are many cases of multi-year persistence. Most razorback sucker detections occur in the vicinity of stocking locations. There were some fish detected in 2011 from Uvalde stocking events but the effects of revised management should be evaluated based on data collected in 2012. There was no difference in the return rates of passively versus actively harvested razorback sucker stocked from NAPI.
- Many razorback sucker were detected without PIT tags. This could be an indication of tag loss, the capture of untagged fish stocked from NAPI (2006 and 2007), recruitment, or some combination of these. The data from the past 3 years could be used to update the survival analysis completed by Bestgen.

**Water temperature and habitat monitoring update – LaMarra and Miller:**

- Temperature loggers have been deployed. There are duplicate loggers at each site and data is scheduled to be collected four times per year. Questions include: if loggers should continue to be placed in tributaries since we do not manage flows or temperature on those tributaries, moved upstream of the Animas in the San Juan to get water temperature closer to the confluence with the Animas, and removed from the base of the dam due to problems with changes in release gates and duplication with data from Archueleta?
- Work is moving forward to obtain older NAIP and videography data.
- Are commercial or government sources of imagery data or aerial photography available? The Earth Data Analysis Center at UNM is one option to explore (EDAC).

**General discussion of 2011 project reports, results, and data; overall assessment of what was accomplished; progress toward recovery; questions to be addressed for annual meeting:**

- Are channel catfish reproducing at smaller size classes? Bahram Farokhish (USGS-MSU) is looking into this but anecdotally it does not appear to be happening.
- Data suggest that electrofishing does not efficiently sample juvenile channel catfish. Exploitation rates may need to be higher to control channel catfish populations.
- Can channel catfish spawning be targeted? Can males be disrupted from nests? The Upper Basin uses a “surge” to accomplish this on smallmouth bass.

- Larval channel catfish were abundant in 2006 and 2007 and their spawning window appears narrow, however, that may be an artifact of sampling methodology. Drift net sampling may better represent channel catfish reproductive effort compared to current larval seine method.
- Small channel catfish could affect Colorado pikeminnow recruitment in multiple ways including competition for resources and as a choking hazard.
- The electrofishing settings for optimal channel catfish removal could be different than those used to collect a representative sample from the fish community.
- There have been documented cases of channel catfish predation on T&E fish but no protocol in place to rigorously examine this.
- No targets for non-native fish removal have been developed. Are there strategies that could be employed to target specific channel catfish life stages (particularly juvenile life stages)? Any attempt to disrupt channel channel catfish spawning should take the risk of disturbing Colorado pikeminnow spawning into account; however these fish spawn in different locations as channel catfish are cavity nesters.
- NMDGF is investigating competition between catfish and pikeminnow using stable isotopes.
- The Upper Basin is moving toward ETS electrofishing units. These units appear to collect fish under a wider range of environmental conditions so they could be more effective removing channel catfish. Are there settings with the current units that would be more effective removing channel catfish while not causing harm to the native fish community?
- Is there a way to get at the risk that channel catfish pose to Colorado pikeminnow in terms of a choking hazard? What effects do channel catfish have on the native fish community? How has the non-native fish removal program affected channel catfish? In the most upstream reaches there are fewer channel catfish and there have been changes in the size structure of remaining channel catfish remaining in the river.
- If there are any changes to the non-native fish removal protocol that target channel catfish spawning, care should be taken not to accidentally “target” Colorado pikeminnow.
- Older reports and data should be reviewed to determine if there are means of targeting channel catfish more efficiently. Are there habitat improvements that could be made to limit spawning habitat for channel catfish?
- The conclusion of the non-native fish workshop addressed these same issues that are being discussed. The non-native fish workshop conclusions should be reviewed to see if there were suggestions that could be applicable to current SOWs.

#### **Channel catfish food habits study – McKinstry:**

- Out of 1,120 channel catfish stomachs, there were 92 with fish or fish parts in them and larger channel catfish had more fish or fish parts. Speckled dace and Colorado pikeminnow have some overlap in pharyngeal teeth numbers but there are other morphological differences. There was no evidence of channel catfish predation on Colorado pikeminnow based on the stomachs analyzed. This lack of documented predation on Colorado pikeminnow was discussed and may be a result of proportional availability of prey. Speckled dace are more common and may be more available to channel catfish compared to Colorado pikeminnow. One of the sampling trips to collect channel catfish was conducted following Colorado pikeminnow stocking in an effort to document channel catfish predation on young Colorado pikeminnow.

- Similar results on fish consumption rates were documented in earlier studies.
- Use of pharyngeal teeth was effective identifying and distinguishing channel catfish fish prey.
- An experiment is underway to determine prey retention time in channel catfish stomachs.
- Additional questions remain on the role that Russian olive plays in the diet of channel catfish. An experiment is underway to determine the growth rate of channel catfish fed a diet increasingly dominated by Russian olive fruit.

**Using elemental analysis of San Juan River razorback sucker to determine their natal origin – Platania:**

- Determined that scales could be used to correctly assign natal origins of razorback sucker. There was no sign of recruitment from wild spawned fish in 7 samples analyzed.
- Discussion of collecting additional scales to conduct this analysis in future. The method has applicability in identifying the origin of untagged razorback sucker and the origin of fish captured in Lake Powell to determine if they are wild recruits.
- BC recommended that Platania give this presentation to the CC after the Annual Meeting.

**RERI project update – McCarthy and Westfall:**

- Goal of this project was to create low velocity complex habitat intended to be wetted at base flows. Work began 24 October 2011 and ended 23 November 2011. Permitting took much longer than anticipated but construction work went smoothly.
- Remaining work includes smoothing and grading sites, planting willows, seeding spoil piles, spraying non-native vegetation sprouts, and collecting pre and post high flow imagery.
- Next phase will be to assess the success of this management through physical and biological monitoring, to strategically identify new sites for additional work, and to look for non-SJRIP funds to implement these projects.
- Outstanding issues and questions include: Does this project address limiting factors to the T&E fish species? How can a strategic integrated approach be developed to restore backwater sites and increase channel complexity in areas that are self-maintained by existing flows?
- Capital funds could be used to carry out this kind of work.
- It is important to note that local site characteristics will determine the success or failure of the restoration efforts at each site so an assessment should occur before new restoration is conducted. Is it possible to remove non-native vegetation from the main channel that would allow the river to do the work of creating these habitats by causing erosion rather than doing the work with heavy machinery?

**Remote PIT tag readers – McKinstry:**

- McKinstry and others recently reviewed possible sites along the San Juan River for the placement of stationary PIT tag readers. Sites reviewed included the fish weir at PNM, the to-be-constructed fish deflection weir inside Hogback canal, just downstream of the Four Corners Bridge, and just upstream of the Mexican hat boat launch.
- Cost per unit ~ \$150,000.
- Sites upstream of PNM should be explored given that so little monitoring occurs there.

- The small group reviewing these sites recommended moving ahead with this type of concept because the potential rewards in terms of data collection. There was some discussion about data management for this system. Durst would likely pick up the data responsibility for this system. A proposal is being developed so this concept can move forward.
- A PIT tag reader will also be placed near the mouth of McElmo Creek with funds outside the Program that will complement the existing readers further upstream in McElmo Creek and Yellowjacket Canyon.

**Funding update – McKinstry:**

- The Program is fully funded for FY2012. The non-native fish projects received their money early.

**Update on non-native fish stocking policy – Crockett and Gilbert:**

- Colorado is evaluating revisions proposed by New Mexico. New Mexico made revisions per exceptions on stockings that already have section 7 consultation. The document details that all states will review stockings in other states in addition to the required Federal review. Colorado requires both other state and Federal review. Crockett and Gilbert will develop a cover letter to Utah and Tribes to get their feedback on the document.

**Reporting requirements – McKinstry:**

- Reports must be received to process additional funding for projects.
- PI's need to include cooperative agreement number on title page of reports in addition to any collaborators for the project and appropriate fiscal year.
- McKinstry will distribute these requirements to the Program Office for distribution to the group.

**Review and discuss Long Range Plan; peer reviewer comments/input; proposed revision to larval razorback sucker and Colorado pikeminnow SOWs; appropriate number of fish to stock; recommended priority projects for 2013 program of work:**

- Priorities were developed during the November BC meeting for discussion:
  1. O&M of existing facilities for ESA compliance.
  2. Augmentation, including production, stocking, and evaluation.
  3. Efforts to document recruitment of juvenile endangered fish.
  4. Non-native monitoring and control.
  5. Data integration of Lake Powell work, integration in association with upcoming revision to flow recommendation, and integration of general biological data.
  6. Fish monitoring (in order of priority: larval, small-bodied, and adult).
  7. Habitat monitoring.
  8. Peer review.
- Initial effort to collect scales for origin analysis is a small component of the overall effort. The analysis (where most of the cost and effort lies) can occur later. An SOP for collecting scales for this field season (including Lake Powell fish) will be developed. Platania will develop a proposal so there is some idea on price.
- The Program previously looked at PIT tag loss with calcein but it was not effective because it was difficult to detect these secondary tags.

- Some criteria should be set to signal when more intensive efforts to detect recruiting T&E fish should begin.
- Bio-West submitted an unsolicited proposal to conduct small-bodied sampling downstream of Sand Island to look for juvenile razorback suckers. However, the lower canyon should not be sampled with any seining techniques until it is scheduled as part of the small-bodied monitoring protocol. This is based on the recommendation of the recent monitoring protocol workshop.
- As part of the Three Species Agreement, NMGF will conduct additional work including the mini-Missouri trawl and sampling secondary channels between the last larval monitoring collection and the fall monitoring trip to possibly detect juvenile suckers that have not been detected with the existing protocol. Since annual sampling of the lower Reaches with the small-bodied protocol was recently removed it does not seem reasonable to start sampling there before the next scheduled time. Additional work by NMGF will be conducted in conjunction with UDWR and NNFW and will occur outside of the Program although any information on T&E species will be shared with the Program. This work will be in addition to NMGF commitments with small-bodied monitoring or it could be part of this effort in the future. These techniques will be explored in 2012 and then reported back to the BC for further direction. Funding for this extra work will be from source outside the Program.
- Miller suggested coming up with a small group that would prioritize the Program's data gaps (including at least scale collection, Lake Powell, recruitment, and monitoring in the upper river) and come up with a draft list before the May meeting. Small group to address outstanding Program data needs includes Miller, Gilbert, Davis, Holden, and Crockett.

### Wednesday 15 February 2012

#### **Historic photos – Platania:**

- Platania shared various historic photos of the San Juan River and will distribute these to the Program Office so others have access to them.

#### **Discussion of 2013 priorities:**

- Proposed revisions to larval razorback sucker and Colorado pikeminnow SOWs (for 2012): (1) razorback sucker otolith analysis to better inform spawning biology and (2) addition sampling during larval Colorado pikeminnow survey.
- The otolith study would focus on analyzing otoliths from past years and could be important to inform the flow recommendation revision process because of the data it could provide on spawning related to the hydrograph. The BC supports this proposal if funding is not an issue and no resources from existing projects are sacrificed for this project. However the BC assigned a lower priority to this project than the following additional larval Colorado pikeminnow sampling study.
- The increased Colorado pikeminnow sampling effort would allow continuous sampling for larval Colorado pikeminnow over a 4 week span in order to detect larvae that could be missed because of Colorado pikeminnow's short spawning window. The BC supports this project if funding is available and it does not divert funds from other sources. The BC considered the Colorado pikeminnow project to have higher priority than the otolith study.

- Should non-native fish removal efforts be focused on times that have more potential to remove non-native fish? Is it possible to shift current effort to more productive removal times?
- Since all 2012 funds are obligated, any proposals that have additional costs should be considered in the priority list for 2013 so they could possibly be covered in that fiscal year.
- Should the non-native fish mark-recapture study occur every year to determine channel catfish population estimates and exploitation rates? Exploitation rates are the only tool to evaluate non-native fish removal. Should estimation of exploitation rates occur in conjunction with revised management actions? The July non-native fish removal trip will be moved to an earlier time to remove during channel catfish spawn. Davis will work with ASIR in determining when this trip will be conducted to disrupt channel catfish during their nesting building and spawning.
- Should monitoring occur in Reaches 7 and 8? These areas have not been sampled for a long time and many fish are now being stocked upstream of PNM so they have more access to these areas. If adult monitoring occurs in these Reaches it would take an additional 4 days.
- The BC will meet in April to review Peer Reviewers recommendations from Habitat Workshop and additional changes to 2012 or 2013 SOWs. Navajo Operations meeting is 24 April 1-3pm (Farmington); The BC will meet 23-24 April (1pm on the first day to noon on the second) preferably in Farmington or Durango as a back-up. The small group formed to discuss the Program outstanding data needs will also draft their recommendations by this meeting.

**Peer reviewer input on meeting:**

- Commended presenters, meetings, and efforts of Recovery Program. Presentations and quality of science is very good and encouraging in terms of progress toward recovery. The external peer reviewers also had high praise from the habitat workshop.
- The Lake Powell effort has been important in answering critical questions.
- The food habitat study has shed important light on that issue.
- The natal origin study is very important and should be presented at Annual Meeting.
- Additional stocking should occur in upstream Reaches and these areas should be monitored as well.
- The Peer Reviewers thought work on the RERI project has been encouraging but it will be valuable to assess the outcome of this effort before moving ahead with additional restoration sites.
- The larval data could be used in part to inform the revision to Flow Recommendations to help identify optimal flow and temperatures of Navajo Dam releases.
- Given Colorado pikeminnow's nocturnal patterns, would it be feasible to sample this species at night?
- The result of the monitoring projects should be tied together to the extent possible.
- Peer reviewers reminded the PIs to tailor their presentations to the appropriate audience during the Annual Meeting and highlight key findings since members of the CC are not biologists or scientists. They offered to review presentations prior to Annual Meeting.
- The channel catfish food habits study should be presented at Annual Meeting too.

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

- Update on monitoring plan and protocols – Durst/Platania

- Durst sent an updated version of the monitoring plan and protocol document on 10 February. The BC and PIs should provide comment and any further discussion on this topic could occur during the April meeting.
- Recap/follow-up of January 2012 habitat monitoring workshop
  - Discussion of the habitat workshop is the primary purpose of the April meeting. Bledsoe's report should be finalized in the next two weeks and Ross' compiled report will also be available.
- Revision to positive population response criteria
  - The positive population response criteria need to be revised. Should the revised criteria be solely based on population estimates? Should they be based on results from monitoring efforts? Since progress toward recovery is based on demographic criteria, it makes sense that these criteria be consistent. The Program Office will work with FWS partners to develop an outline for the approach for proceeding with the revision by the May BC meeting.
- Roundtail chub information – could the Program act as a storehouse for this information in the Basin?
  - The Three Species database housed at UDWR is the most appropriate location for this kind of information. Program data related to roundtail chub should migrate to this database through NM or CO since they are partners in the Three Species Agreement.
- Discussion of program data consolidation. Data needs to be in consistent format across projects.
- The Program Office should develop a list of all data the Program has and what it doesn't have in an effort to be sure that all Program related data is housed in one location.
- Who will present lower San Juan non-native fish data during the Annual Meeting? Vice Elverud or Durst?
- Should there be a presentation on the tributary work during the Annual Meeting? Possibly include this in the PIT tag summary presentation. How should progress toward recovery be presented?
- A meeting to follow up on the peer reviewers input to the Habitat workshop will occur in Farmington 23-24 April 2012 (noon-noon). The Annual Meeting will be held in Durango 15-16 May 2012.

**BIOLOGY COMMITTEE ACTION ITEM LOG**

(Updated 23 February 2012)

Item No.*	Action Item	Meeting/O rigination Date	Responsible Party(s)	Due Date	Revised Date	Date Complete d
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 23 February 2012)

Item No.*	Action Item	Meeting/O rigination Date	Responsible Party(s)	Due Date	Revised Date	Date Complete d
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	

**BIOLOGY COMMITTEE ACTION ITEM LOG**

(Updated 23 February 2012)

Item No.*	Action Item	Meeting/O rigination Date	Responsible Party(s)	Due Date	Revised Date	Date Complete d
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	Redo monitoring protocols and integration analysis document by including all background info. and completed data integration section – get comments from BC and distribute to peer reviewers	3/24/10	PO	5/10/10	11/30/11 12/31/11	2/10/12

**BIOLOGY COMMITTEE ACTION ITEM LOG**

(Updated 23 February 2012)

Item No.*	Action Item	Meeting/O rigination Date	Responsible Party(s)	Due Date	Revised Date	Date Complete d
22	Prioritized integration analysis – Platania will distribute to group	11/10/10	Integration sub-group	1/31/11	11/30/11	1/12/12
23	Southern Ute funding of Population Model	5/10/10	Miller	11/2010	ongoing	
24	Work with I&E Coordinator to determine feasibility of brochures and signs	11/10/10	PO	2/24/11	Ongoing	
25	Habitat-Flow Workshop Planning – distribute agenda	7/27/11	BC comments on Habitat-Flow Workshop outline to PO	8/25/11	12/15/11	11/28/11
26	Compile info. on current knowledge of habitat response to flows and other factors (e.g., veg. encroachment) for Habitat-Flow Workshop	8/25/11	LaMarra will put together SOW	11/15/11	12/2/11	1/11/12
27	Revised positive population response criteria	11/15/11	PO and FWS to BC	2/13/12	5/14/12	
28	Investigate feasibility of using stable isotopes to distinguish natal origin of San Juan fish	11/15/11	Platania	11/15/11		2/13/12
29	Group to prioritize Program’s outstanding data needs	2/15/12	Miller, Gilbert, Davis, Holden, and Crockett	4/23/12		
30	List of missing data and data in hand	2/15/12	Program Office	5/14/12		

\* 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 <ul style="list-style-type: none"> <li>Identify questions for annual data integration</li> <li>Review data integration results from previous year</li> <li>Discuss Program priorities</li> <li>LRP review and provide recommendations (pros and cons) to Program Office</li> </ul>	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 <ul style="list-style-type: none"> <li>Prepare for Annual Meeting</li> <li>Provide preliminary results; draft report presentations</li> <li>Review updated LRP</li> <li>Review annual data integration priorities</li> </ul>	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 <ul style="list-style-type: none"> <li>Program overview</li> <li>P.I. presentations</li> <li>Review preliminary draft AWP</li> <li>Committee reports</li> </ul>	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			