



**February 20-21, 2008  
Biology Committee Meeting  
Farmington Civic Center**

**Final Meeting Summary**

**Members:**

Paul Holden  
Chuck McAda  
Ron Bliesner  
Jason Davis  
Mark McKinstry  
Vince Lamarra  
Gary Skiba for Tom Nesler (Feb. 20 only)  
David Propst  
Bill Miller  
Tom Wesche  
Absent

**Peer Reviewers**

John Pitlick  
Steve Ross  
Ron Ryel  
Mel Warren

**Program Management:**

David Campbell  
Sharon Whitmore

**Interested Parties:**

Marilyn Myers, Alternate  
Steve Harris, Alternate  
Yvette Paroz, Alternate (Feb. 20 only)  
Dale Ryden, Alternate  
Bruce Whitehead  
Viola Willeto  
Steven Platania  
Michael Farrington  
Howard Brandenburg  
James Morel  
Melissa Trammel  
D. Weston Furr  
Ernie Teller  
Darek Elverud  
Albert Lapahie (Feb. 21 only)  
Grant Webber (Feb. 21 only)  
Pat Page (Feb. 21 only)  
Rich Valdez (Feb. 21 only)

**Representing:**

Jicarilla Apache Nation  
U.S. Fish & Wildlife Service, Region 6  
Bureau of Indian Affairs  
U.S. Fish & Wildlife Service, Region 2  
Bureau of Reclamation  
Navajo Nation  
State of Colorado  
New Mexico Department of Game & Fish  
Southern Ute Indian Tribe  
Water Development Interests  
U.S. Bureau of Land Management

University of Colorado  
University of New Mexico  
Utah State University  
USFS Southern Research Station

U.S. Fish & Wildlife Service, Albuquerque  
U.S. Fish & Wildlife Service, Albuquerque

**Representing:**

U.S. Fish & Wildlife Service, Region 2  
Water Development Interests  
New Mexico Department of Game & Fish  
U.S. Fish & Wildlife Service, Region 6  
Southwestern Water Conservation District  
Navajo Fish and Wildlife  
American SW Ichthyological Researchers  
American SW Ichthyological Researchers  
American SW Ichthyological Researchers  
New Mexico State University  
National Park Service  
U.S. Fish and Wildlife Service, NMFWCO  
Bureau of Indian Affairs, NIIP  
Utah Division of Wildlife Resources  
Navajo Nation Fish and Wildlife  
Uvalde Nation Fish Hatchery  
U.S. Bureau of Reclamation  
SWCA

Ben Zimmerman (Feb. 21 only)  
 Mike Howe (Feb. 21 only)  
 Steve Whitman (Feb. 21 only)  
 Mike Japhet (Feb. 21 only)  
 Jim White (Feb. 21 only)

Southern Ute Tribe  
 Bureau of Indian Affairs, NIIP  
 Southern Ute Tribe  
 Colorado Division of Wildlife  
 Colorado Division of Wildlife

**August 2, 2007, Meeting Summary** was approved.

**Project Updates** - Holden reiterated that researchers were to provide a short discussion/presentation of preliminary results, avenues of synthesis, etc. on their projects so the Peer Review Panel and BC members could provide input before the draft reports and final presentations for the annual meeting are completed. Each presenter was asked to include: 1) brief background of project, 2) goals and objectives of project, 3) key findings, 4) outstanding questions and future direction. To provide an overall framework for the technical presentations, Dale Ryden started the session with a summary of 2007 stocking numbers, timing, and tag information. Presentations included:

Project	Principal Investigator(s)	PowerPoint File Name (presenter in parentheses)
<b>2007 Stocking Summary</b>	<b>Dale Ryden/Jason Davis</b>	<i>February 2008 - 2007 SJR Fish Stocking presentation (Ryden).ppt</i>

2007 Highlights (from presentation):

- 22,836 razorback sucker (RBS) stocked, 16, 687 from NAPI ponds, 6,187 from Dexter and Uvalde, stocked in several groups
- A number of RBS died trying to get them out of ponds, 5,937 stocked with no PIT tags to keep them from dying.

No NAPI ponds currently have fish in them. The Six-pack ponds will not be used in 2008. Plans for NAPI are to use three drainable ponds for single year class rearing, i.e., ponds will be drained on a yearly basis; all fish from spring planting will be stocked the following spring. Some fish from ponds were not tagged to reduce mortality and stress during pond draining and fish removal. Campbell explained high mortality is a primary reason why the Six-pack ponds (without drains) needed to be retired. He said the shift to using only the drainable ponds will minimize mortality. Ryden indicated bird predation might also be a cause for the high mortality. Ryden said the ponds will be monitored and maintained on a daily basis by the Navajos and the FRO-ABQ. He will only come down to help with harvest.

- 479,226 Colorado pikeminnow (CPM) were stocked in 2007 (the second largest number ever stocked; 500,000 age-0 CPM were stocked in 1999)
- Met stocking goal for the third consecutive year; tag types included:
  - 3,256 Age-1 fish with pit-tags when stocked
  - 33,402 Age-0 with VIE tags when stocked
    - 9,850 with pink VIE on left dorsal at RM 180.2-170.5
    - 11,778 with blue VIE on left dorsal at RM 166.6
    - 11,774 with orange VIE on left dorsal at RM 134.5
  - 442,568 Age-0 had no tag of any kind when stocked

Outstanding Questions/Direction (from presentation):

- In 2008, should all CPM be acclimated before stocking? Ryden reported acclimation efforts at PNM Weir were very effective. He recommends all stocked fish be acclimated.
- Does timing of stocking need adjusting to avoid fall fish monitoring trip? He emphasized the importance of timing of stocking and the need for coordination with other Program activities.

Project	Principal Investigator(s)	PowerPoint File Name (presenter in parentheses)
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- Should augmentation efforts for CPM be continued beyond 2009 (current schedule to end in 2009)? He explained that the 8-year augmentation effort is technically scheduled to end in 2009. Considering stocking goals were not met during the first several years of that time period, the Program needs to decide if the 8-year period should be shifted and extended.

Comments: Size distribution breakout should be included on summary slide (e.g., 200-300 size class).

<b>Larval Fish Monitoring</b>	<b>Howard Brandenburg/Mike Farrington</b>	<b><i>CPM and RB Larval Fish (Brandenburg).ppt</i></b>
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Six trips were conducted each month from April to September encompassing 43.8% of the downstream portion of Reach 5 through Reach 1, RM 141.5-2.9 (N=374 collections). Catastomid larvae caught before ascending limb of hydrograph and Cyprinid larvae caught on the descending limb. 181 Age 1+ and 3 Age 0 CPM were collected. Back-calculated spawning dates for CPM June 24-25 in 2004 (mean discharge 781 cfs; mean temperature 24.1° C) and June 27 in 2007 (mean discharge 2,120 cfs; mean temperature 22.9° C), both on the descending limb of the hydrograph. 3 Age 1+ and 200 Age 0 RBS were collected. Back-calculated spawning dates for RBS for 2007 were March 26-June 17, the broadest time period seen, to date. Higher flows (mean discharge 3,099 cfs; mean temperature 15.4°C) occurred during this time period.

Comments: General agreement among the peer reviewers that the presentation was improved.

<b>Small-bodied Fish Monitoring</b>	<b>Dave Propst/Yvette Paroz</b>	<b><i>Small Bodied Fish Monitoring-07 (Paroz).ppt</i></b>
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Conclusions (from presentation):

- Native fish density is variable; trend dependant on start date
- Red shiner density lowest in '06 and '07, negatively related to higher summer discharge; two years of summer flow events seem to have affected spawning
- CPM captures increased (52 total CPM; 27 Age 0 and 25 Age 1+); some fish had just been stocked directly upstream; YOY CPM found mainly in backwater habitat; Age 1+ CPM found in a variety of habitats, highest densities in secondary "shoal-run"
- No RBS captured

Discussion/Future Direction (from presentation): Continue CPM hunts? Reduce monitoring below Mexican Hat to every 3 years? Other?

Comments:

- Just-stocked fish should be highlighted in summary tables to distinguish them from fish that have been in the system longer
- General acknowledgement that coordination of stocking and monitoring is necessary to avoid catch of just-stocked fish
- Sampling effort between habitats should be shown to illustrate what happens to the fish after capture, e.g., where they are in a couple months; where they are "making a living." Propst indicated the larger fish are located in the main channel.
- Clarify size/number better
- General agreement to continue systematic sampling, reach by reach CPM distribution, and current sampling effort; incorporation of "CPM hunts" not a priority

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**Large-bodied Fish Monitoring**

**Dale Ryden**

*February 2008 - 2007 Adult Monitoring presentation (Ryden).ppt*

2007 Highlights (from presentation):

- T&E fish are becoming more common in Adult Monitoring collections; however, scaled CPUE has not changed significantly for either CPM or RBS the last five years
- CPM are not being collected after about four years post-stocking
- Catching a lot of young channel catfish, juvenile catfish were the most abundant juvenile fish collected in 2007
  - Carp are not common anymore

Outstanding Questions/Direction (from presentation):

- How do we get CPM to remain in the river in larger numbers past four years post-stocking?
- Will switching to stocking larger numbers of 300 mm TL razorback sucker from hatcheries lead to significant increases in CPUE in future years? Stocking large numbers of small fish in 2006 did not seem to lead to increased CPUE.
- Will nonnative removal efforts be able to crop off the large numbers of channel catfish that are currently in the river?
- Are the significant declines seen in both bluehead sucker and flannelmouth sucker CPUE between 2006 and 2007 cyclical? Low CPUE values were previously observed for these species, flannelmouth sucker in 1997-1998 & 2003 and bluehead sucker in 1998, 2001 and 2003, were followed by marked CPUE increases in intervening years.

Ryden reported that the no CPM are being caught that are older than 4 years. Possible reasons for this were discussed. Older/larger fish are caught in the Upper Basin. It is possible that sampling bias could be the problem (e.g., sampling location; older, stocked fish do not appear to be showing up in catch at a higher rate; few adult fish are caught in Reach 1). CPM stocked as Age-1 or older fish are seldom seen past 1 year post stocking. Peer Reviewers asked if RBS or CPM had been radio-tagged or sonic-tagged to get a handle on where the adults are. Mid-channel sampling was discussed. Furr caught a 709 mm CPM in the main channel; first old fish caught in the river in 11 years. Sampling techniques were discussed. "Scare and snare" has been done in past but the level of mortality was deemed unacceptable at the time when there were few fish in the system. It may be worth trying now that there are more fish in system. Increasing the catch of older fish could tell if those fish are in river or being lost to Lake Powell. The possibility of changing seasons (e.g., late summer) and night-time sampling was discussed. Peer Reviewers said sampling should be done when it is most effective and has the highest probability of catch.

Ryden reported 12 CPM were caught with catfish in their mouths. The possibility of electrofishing stunning catfish and making them ready prey for CPM was discussed. With catfish juvenile numbers on the increase, the need to adjust NNF removal efforts was discussed. Lack of removal in the middle stretch could be a problem. Catfish fecundity and susceptibility of gravid fish to electrofishing was also mentioned.

Comments:

- In graphs/tables, known, tagged fish should be separated out from untagged, unknowns
- The graphs with scaled number of RBS caught per year with length of reach only show that all year classes are caught. Peer Reviewers said showing scaled CPUE does not work if you have highly variable stocking rates as it lends too much importance to certain fish from small stockings. If the objective of the graph is to show year classes, should not scale. Could include a separate table/graph to show recent years where stocking rate was similar.

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- Peer Reviewers said they think population estimates are important and that there appears to be enough data for this purpose. It was mentioned that Kevin Bestgen is working on this.

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<b>Habitat Mapping, Geomorphology</b>	<b>Ron Bliesner/Paul Holden/Vince Lamarra</b>	<i>2007 Hydrology, Habitat, Geomorphology, Detailed Reach Habitat Use (Bliesner-Holden).ppt</i>
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There is an overall decline in island habitat and backwaters which will result in a simpler channel and declines in wetted width. Standard habitat mapping was compared to detailed habitat mapping for evaluating channel and habitat response to flow and habitat availability and use. Detailed Reach Analysis includes topographic surveys, habitat mapping, and fish sampling in two Detailed Reaches (DR 137 and DR 82). Because fish feed/ behave differently in day and night, is the wrong model being used? Need to get a handle on larval drift. Because the SJR lacks edge/roughness, need to know requirements of larvae.

24 Age-1 CPM were collected in the two complex reaches and significant habitat selection was shown for eddy and cobble shoal habitat. These two habitats typically have other habitats nearby, or the interfaces of these habitats with adjoining habitats were discussed as likely important.

The significance of habitat complexity and “edge” was discussed. The value of this study is that it looks at habitat at the micro-scale as opposed to the gross scale as in the past. A Peer Reviewer commented that this data will most likely just tell us where the fish are and show that the habitat is complex; however, there is value in having actual data as opposed to just assumptions. There was general agreement that the interface is most important, e.g., run/cobble shoal.

Bliesner mentioned there are inconsistencies in habitat categories being used by habitat mappers and fish people. There was general agreement that habitat types need to be standardized. The group discussed categorizing by depth and velocity. Propst said they tried categorizing this way in 1998 but it did not work well which is why they went to the categories they are using now.

Comments:

- Peer Reviewers said habitat categories need to be standardized.
- Peer Reviewers said low velocity habitats in detailed reaches should be targeted.

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<b>Nonnative Fish Studies - Upper River</b>	<b>Jason Davis/ Weston Furr</b>	<i>Non-native removal in the upper San Juan River (Furr).ppt</i>
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Key Finding (from presentation):

- Reduced efforts in upper reaches since 2003 have maintained and lowered abundance of channel catfish - Lowest CPUE recorded for both upper reaches. Is a “maintenance” level of effort achievable?
- Channel catfish most abundant from Shiprock to Montezuma Creek - No declining trend among trip comparisons. Need more data points before drawing conclusions, area of highest priority.
- Common carp uncommon riverwide
- Over 900 RBS and 600 CPM were collected, which drew considerable discussion since these numbers were much higher than the monitoring studies. One large adult (700+mm) CPM was captured in mid-channel during a “see if it works” sample.

Outstanding Questions/Future Direction (from presentation):

- Native Fish Response - How are they responding? What are our criteria for measuring a response? What could be done to facilitate a desired response (flow and/or habitat manipulation)?
  - Carp - Mechanical removal or poor reproductive years? Or both? Could complete removal of carp be
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possible? Consequences of elevated flows in 2008?

- Future Objectives of Mechanical Removal - maintenance of low abundance levels for non-native fishes; continue to focus on high priority reaches; monitor native fish abundance as response to removal efforts; provide catfish for tribal sport fish recreation;
- Need for Evaluation of Mechanical Removal - Initial objective was to remove as many fish as possible from high priority reaches. Rigorous study design lacking (difficult to completely evaluate removal efforts). Population estimates (capture probabilities, % exploitation). Use of exploitation models (determination of necessary amount of effort).

Peer Reviewers asked why the FRO's catch of native species during non-native fish removal is so much higher than monitoring crews. Furr responded that they do year-round work, some of which may coincide with stocking and make multiple passes. He said the catch was higher in 2007. Peer Reviewers suggested population estimates could be done using recaptures from non-native fish removal. Bestgen is working with those recaptures. They have seen a 14% reduction in catfish and are following collapse characteristics, i.e., 1) elimination of juveniles, 2) trend toward on size class, and 3) mortality (not seeing this one yet). A Peer Reviewer said that native fish response to non-native fish removal could be modeled (competition characteristics). Furr conveyed that 2008 elevated flows could negatively affect non-native fish and, if so, results in 2009 should be interesting.

Comments:

- Peer Reviewers commented they would like to see more detail about the fish in the Summary of Fishes Collected table and details on non-native fish caught should be displayed
- They emphasized that all data needs to be pulled together.

**Nonnative Fish Studies - Lower River**

**Darek Elverud**

*Non-native removal in the lower San Juan River (Elverud).ppt*

Conclusions (from presentation):

- Difficult to isolate removal effect vs. environmental factors on non-native and native fish response (likely due to a combination of factors, flow, habitat, stocking)
- Catfish – 2007 CPUE similar to 2002, 2004, and 2006; decreased mean total length
- Carp - Drastic decrease in catch rate, observed decrease in size of carp for the first year
- Increasing trend in CPUE of RBS, 171 collected.      • Similar to catch rate of CPM, 216 collected.

Elverud reported catfish are smaller in the lower reach (~200 mm). He said no adult CPM were caught in 2007 and no adults found in the lower reach for quite some time, mostly Age 2. In answer to how fish are aged, he said it is based on length and tags (if present). He commented that it is harder to do length/frequency histogram for fish older the 3 years. The Peer Reviewers said a standardized way to determine age/length is needed. Ryden indicated he came up with a method for doing this awhile back. Sampling bias against larger fish and the need to find out if adult fish are in the river were discussed. Elverud said there is 15 miles of river below the waterfall now. They collected 8 CPM and 2 RBS in a short trip. He asked about the possibility of doing a trip below the waterfall in 2008 and asked if there would be any value in getting that information.

Comments:

- Peer Reviewers said on summary table to use “-“ for symbol as opposed to “0” if pass not done
- Peer Reviewers said they thought it would be worthwhile to know if fish are going over the waterfall and out of the river. Any fish recaptured could also be relocated back into the river.

Holden recapped management questions. Timing of stocking was discussed. There was general agreement that stocking immediately prior to monitoring in 2007 was an isolated event and any stocking will occur after small-bodied monitoring. Reducing small-bodied monitoring below Mexican Hat to every 3 years and adding CPM hunts was discussed. No changes were made to the current methods. Increasing efforts to capture adult fish was discussed. Determining retention of stocked fish is worthwhile (e.g., age of CPM stocked) but do not have enough information yet. Current data should be “mined” before major changes are made to current methods. There was general BC support for sampling below the waterfall. To standardize age/length determinations, Ryden will send a method he developed to researcher for their review. Should the Program develop a more specific adult CPM sampling program or study? This question was discussed and was put off until the May meeting for further discussion and a decision.

The need for mechanical methods for long term maintenance of river habitat was discussed. Flows alone may not be sufficient to maintain river habitat due several factors including establishment of invasive plant species and limitations on Navajo Dam releases. Removal solely by flow may not be viable; mechanical methods may be needed. Holden asked how the BC should pursue getting mechanical means considered as a potential management option. There was general agreement that this should be analyzed along with flow during the flow recommendations revision process. Data and 15-17 years of mapping will also be integrated during that process. The cost of incorporating mechanical methods into management was discussed. The Program is not currently set up with mechanical maintenance as part of management. Since it could be an ongoing Program activity, a funding mechanism will be needed, possibly capital funds. It was agreed that use of mechanical methods for habitat maintenance is still several years away. The concept that mechanical methods may be needed in conjunction with flows management and should be analyzed during the flow recommendation revision process will be introduced at the May meeting.

A Peer Reviewer recommendation in 2007 was to have a summary of all rare fish captures for the Program Meeting. It was decided that the Program Coordinator’s office and the Biology Committee Chairman would work together to develop such a summary from the draft annual reports due March 31 and present it at the Program meeting.

**Peer Review Assessment** - To begin the February 21 session, the Peer Reviewers provided comments on the previous day’s presentations. They were pleased with the progress made since the last meeting they attended. They said the presentations were good, told a story, and were tied to objectives. They emphasized that information presented should be tied to recovery goals to inform the audience. They said habitat categories and terminology need to be standardized among researchers. There are currently too many habitat categories to be consistent and they suggested simplifying them. They recommended continuing with the complex reach study to determine the importance of mesohabitats. For example, if the edges are key habitats then hard data is needed to illustrate this and inform management. They emphasized the need to also sample simple reaches for comparison purposes. They said attention needs to be directed toward deciding what measurements should be taken to best characterize habitats types (e.g., depth, velocity, substrate). They expressed concern about over-simplification of channel habitat and a trend toward channelization. They said habitat use by various life stages, especially adults, needs to be determined. They said the number of adults in the river needs to be assessed/estimated.

**Database Management** - Campbell reported that the pit tag data has been consolidated. P.I.’s should send RBS/CPM stocking/capture/recapture data to the Program Office by end of each calendar year. Ryden said he, Davis, and Elverud had standardized their capture information and that anyone else who catches tagged fish or tags fish needs to do the same. The standard format will be sent out. The timeline is for final draft reports to be presented at the May 8 annual meeting with final reports due June 1. Campbell said the Program office will produce a consolidation report annually and distribute on a CD.

**May '08 Annual Meeting** - Time will be allotted for each P.I. to present final reports, for Hatchery Reports, and for a Hydrology Committee report. The need for an introductory overview/summary of BC activities was discussed. This summary would compile RBS/CPM data and illustrate how activities are tied to recovery goals and overall Program goals/objectives. Campbell said the Program Office will work with Holden to develop an outline for this report and provide to the BC for review. To accomplish this, Campbell emphasized the need for the P.I.'s to have their draft final reports to the Program Office by the end of March. The one-day meeting format will include the overview/summary (Program Office), technical presentations with focus on the listed species (P.I.'s; 15 minutes), and recap/summary (Program Office).

**Fish Capture Data Evaluation** - McKinstry reported on the population estimate work to be done by Kevin Bestgen and Gary White. Part of their contract will be to explore the available data to determine what can be done with it. McKinstry indicated an update can be provided at the May BC meeting. He will send the Scope of Work to BC members.

**Uvalde NFH Largemouth Bass Virus** - Grant Webber gave a PowerPoint presentation on Uvalde NFH. He provided background information on hatchery operations and said largemouth bass virus (LMBV) was first detected in July 2007 in YOY Guadalupe bass spawned there. All other species on station including RBS stocked into SJR tested negative at a 95% confidence interval. He indicated that not a lot is known about the virus and it is not known if other species could be carriers. Uvalde lost its Class "A" status but is not quarantined and they are taking all precautions to insure the virus is off the station and will remain that way. All Guadalupe bass were taken off the station on February 8. He described how he would like to proceed with RBS production for the SJRRIP:

- No stocking of any RBS in 2008
- Retain 2007 year-class RBS (~12,000 fish)
- Receive fry shipment in 2008 to continue production goals (~12,000 fish)
- From Annual Fish Health Inspections, obtain "Suspect" status in the Summer 2008 and Class "A" status in the summer of 2009
- Holdover/grow 2007 and 2008 year-classes (~24,000 fish)
- In October 2009, stock 12,000 300-450mm 2007 year-class RBS (2008 SJRRIP commitment) and 12,000 300mm 2008 year-class RBS (2009 SJRRIP commitment)

The group discussed these plans. Concerns were voiced about stocking 24,000 RBS into the river at once. Multiple stockings would be needed to avoid overwhelming the habitat. Utah will not agree with stocking from Uvalde in 2008 with only a "Suspect" status. RBS production at NAPI Ponds was discussed. For 2008, 3,500 fish will be stocked in East Avocet and Hidden ponds. If West Avocet is ready, it will be stocked; otherwise, Dexter will hold those fish over. Retrofitting West Avocet has not occurred yet because of a delay with Colorado's contribution to the National Fish and Wildlife Foundation (NFWF) account. The work could occur if New Mexico's NFWF contributions can be used now. With Uvalde out in 2008, there was general agreement that getting the third pond on-line is critical. The NFWF funding issue will be addressed at the CC meeting the next day.

**Long Range Plan (LRP)** - Campbell described the background on the LRP revision/contract. He said the Program Office put a stop-order on the SWCA contract because no progress was being made and the P.I. left the firm. Shortly after, Rich Valdez, SWCA, contacted Reclamation and the Service and said that SWCA, with him in the lead, wanted to complete the project under the existing contract provisions, i.e. same costs. The decision was made to rescind the stop-order.

Valdez said that after reviewing Program documents and the draft LRP, he recommends some changes. The current LRP does not track with the recovery elements in the 1994 Program Document. It was pointed out that some activities were removed in the 2006 version because they had been completed. Valdez explained

that elements completed also need to be included because they provide overall Program structure. He said the LRP should be an accountable document for tracking sufficient progress toward recovery. He added elements for Information & Education and Program Planning and Support and changed the categories from Element-Sub-Element-Task to Element-Goal-Action-Task (project-level). He displayed a draft flow chart (conceptual model) depicting the Program's organizational structure. Valdez will put a Gantt-type chart in the LRP for 1992-2023 which will step-down to the Annual Work Plan. He will need BC and Program Office help. He said he would like BC endorsement of the approach before proceeding.

The BC said Valdez's approach was similar to a draft LRP they did in the past but that the CC wanted something different hence the last version. BC members indicated that they did not have any technical problems with the approach. They said to present it to the CC and let them decide. Harris emphasized that the LRP needs to be a "living document." Valdez showed the group his anticipated schedule which would hold a meeting with BC members in Logan on April 3 and have a draft LRP to the BC for review April 15, 2008.

**CC Meetings on SJR Hydrology Model/Flow Recommendations Review/Revision** – Campbell told the group that the CC wants them to start on the flow recommendations revision and they want to review the BC's planned process for doing the revision. The group said they could use the outline Bliesner put together awhile back as a start. He will re-send to the BC for review. The group discussed the role of the SJRB model in revising flow recommendations. There were varying opinions on the model's role in the process. Wesche emphasized that the BC should not expend too much time and effort developing flow recommendations, i.e., keep it simple. The group discussed issues that should be considered during development of revised flow recommendations including: making them dynamic to react to antecedent conditions, providing management tools necessary to achieve biologically-based flow needs including Navajo Dam releases, using mechanical manipulation in conjunction with flows to manage habitat, using a complex reach approach, and considering impacts of global warming.

**Operation of Public Service Company of New Mexico Fish Passage Structure** - Albert Lapahie provided a PowerPoint presentation (*2007 PNM Fish Passage Ops (Lapahie).ppt*). He reported that in 2007, they operated the passage from March to October; 21,722 total fish used passage; 21,570 native and 158 non-native; 4 CPM, 4 RBS, and 1 roundtail chub. From 2003-2007, 28 CPM, 21 RBS, and 2 roundtail chub used the passage. Lapahie mentioned the sediment deposition problem at the passage. He is working with PNM and the COE to use a hydraulic method for dealing with sediment. He also emphasized the importance of outreach activities at the passage. Their plans are to continue with operations as scheduled, coordinate with Reclamation and PNM on routine maintenance of sediment issues, and continue with outreach activities. The group asked that he include more details in his presentation about the RBS and CPM that used the passage.

**Warm Water Fish Stocking in the San Juan Basin** – McCada said the Upper Colorado River Program has a non-native fish stocking plan and introduced Mike Japhet and Mike White from Colorado Division of Wildlife to give an overview of the State's new Lake Management Plans for the San Juan Basin. CDOW has a dual mission to protect native species and provide angling opportunities to the public which includes warm water sportfishing. They gave an overview of their management plans for SJB reservoirs including McPhee, Narraguinnep, Totten, Denny Lake, Summit, Puett, Pastorius, Echo Canyon, and Ridges Basin Reservoir (aka Lake Nighthorse). Their plans for Ridges Basin include stocking of LMB, BLG, SAG, and RBMxKOK and they classify the escapement risk as low due to various reasons including use of sterile predators and a Bass-o-matic. Campbell mentioned that stocking warm-water fish in Ridges Basin was not considered in the Animas-La Plata consultation. There was general BC agreement that there should be better assurances and redundancies to insure escapement will not occur because CDOW's provision to revise the plan if problems occur, would be too late.

McCada said the Upper Basin's non-native fish stocking procedures were recently revised but that the SJR Basin is not included. He said the Upper Basin's plan could be adopted by the SJRRIP and asked if the SJRRIP wanted a non-native fish stocking plan. Propst answered in the affirmative but wants to hear what other members think. McCada will take the lead in pursuing this.

**Contracting Issues, IDIQ, 2008** – McKinstry reported Bliesner's contract was modified and that the process should be easier in the future once an Indefinite Delivery/Indefinite Quantity contract (IDIQ) is in place for the SJRB. He expects the IDIQ contract to be in place by next year. He emphasized to the group that the extent of HC and BC costs associated with doing the flow recommendation revision be considered for the 2009 AWP budget. HC expenses to do model runs are anticipated but they may not be needed until later in the process.

**Hogback Diversion Construction Issues** – Bliesner said no repairs will be possible until after the high flow this year. There was some damage to the structure from 2005 flows. It took two years to plan but everything is in place now except for high flows. He said there is also a problem with the fish screen as it never worked properly without provisions for cleaning. The irrigation company raised it so no screening is occurring. Bliesner said it needs to be modified but no solutions have been decided upon yet. They originally went with a non-selective screen but may prefer a selective passage. There was general agreement that a selective screen would be too expensive and screening is occurring at PNM.

**Navajo Operations Update** – Pat Page reported that snowpack in the SJRB is 160% of average and the reservoir is 1.3 maf and climbing. He explained limitations to releasing water: at 3,200 cfs or more the Main Outlet Works (rebuilt in '02) experiences cavitation and requires inspection every 30 days and the 4X4 Auxiliary Gates (rebuilt in '04) have to be inspected every 14 days. He said Reclamation coordinated with the Service on an operational scenario and came up with releasing 3,000 cfs from the Main Outlet Works from February 11 to mid May (no inspection required) then 5,000 cfs for 21 days plus 9 days. He said that if flow recommendations were followed stringently, they would have to start releasing 3,400 cfs on March 1 which brings safety issues into play. He said 5,000 cfs is accomplished by releasing 3,400 cfs through the Main Gates (inspection required) and 1,600 cfs through the auxiliary gates.

The group asked if the system has the flexibility to make releases for an extended peak because the flow recommendations fully anticipated extending peaks. Propst said flexibility seems more limited than it used to be. Campbell asked what type of funding it would take to get rid of the limitations at the dam. Page said the modeling was done as if more water was allocated than it actually is so it is difficult in reality to get rid of the extra water. Propst said that if there is actually more water in the system, we should be able to release peaks. There was agreement that an extended spring peak is preferable to a fall peak. Page reported the next Navajo Operations meeting is April 22 in Farmington. He encourages BC members to attend.

**Next Meetings:**

- May 7, 2008 – BC Meeting in Durango, CO
- May 8, 2008 – SJRRIP Annual Meeting in Durango, CO
- May 9, 2008; 8-12 – CC Meeting in Durango, CO

**BIOLOGY COMMITTEE ACTION ITEM LOG**  
**(Updated February 20-21, 2008)**

<b>Action Item</b>	<b>Meeting/ Origination Date</b>	<b>Responsible Party(s)</b>	<b>Due Date</b>	<b>Revised Date</b>	<b>Date Completed</b>
TCD memo??	05/18/07	Paul Holden	done		
Provide RBS/CPM stocking/capture/recapture data		P.I.'s to the Program Office	Annually before Jan. 1		
Provide Preliminary Draft Report Presentations		Project Leads (authors)	Annually at Feb. meeting		
Provide Draft Final Reports		Project Leads (authors) to Program Office	Annually by end of March		
Provide LRP Draft	05/08/07	SWCA to Program Office, BC, CC	07/09/07	4/15/08	
Comment on Draft LRP	06/25/07	BC to Program Office	07/23/07	5/9/08	
Provide Final Reports		Project leads (authors) to Program Office	Annually by end of June		
Provide Final LRP	07/23/07	SWCA to Program Office	08/06/07	5/23/08	
Program data exchange??	08/02/07	BC to Program Office	08/31/07		
Pit tag data exchange??	06/25/07	BC to Anne Davis	08/31/07		Done
Distribute Data Consolidation Report	2/20-21/08	Program Office to BC	Annually		
Develop Razorback production and stocking plan for NAPI ponds	06/25/07	Program Coordinator's Office with FRO and Navajo Nation	09/15/07		
Complete waterfall inundation whitepaper	05/18/07	Program Coordinator's Office	12/07/07		
Develop work plan for upgrades to East Avocet Pond	06/25/07	Ron Bliesner to USBR			Done

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<b>Action Item</b>	<b>Meeting/ Origination Date</b>	<b>Responsible Party(s)</b>	<b>Due Date</b>	<b>Revised Date</b>	<b>Date Completed</b>
Develop 1-year RFP for Geomorphology, habitat mapping, temperature monitoring, and fish-habitat use project.	09/07/07	Mark McKinstry and Sharon Whitmore	10/1/07		Done
Develop SOW and contract with Kevin Bestgen at CSU for analysis of PIT Tag data	9/07/07	Mark McKinstry, Anne Davis, and Sharon Whitmore	10/30/07		Done
Compile all RBS/CPM data into summary to address overall Program recovery goals/objectives for presentation at May annual meeting	2/20-21/08	Program Office/Holden			
Complete write-up on need for analysis of mechanical management as part of flow recommendation revision process to introduce concept at May meeting	2/20-21/08	Bliesner			
Comment on Bliesner's flow recommendations revision procedures. based on BC for review. Comments back to Ron by After revision, back to BC prior to May meeting.	2/20-21/08	BC to Bliesner	March 14		
Modify flow recommendations revision procedures based on BC review for discussion at May meeting.	2/20-21/08	Bliesner	Prior to May Meeting		
Provide description/recommendations for alleviating current limitations to releasing peak flows from Navajo Reservoir Operations	2/20-21/08	Pat Page			
Distribute Standard format for recording fish capture data	2/20-21/08	Ryden to P.I.'s			
Pursue NNF Stocking Procedures for SJR Basin	2/20-21/08	McCada lead			
Provide update on Bestgen's population estimates work at the May meeting. Send scope of work to BC members.	2/20-21/08	McKinstry			

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Coordinate CPM stocking closely with Reclamation to avoid negative impact due to high flows/releases in 2008.	2/20-21/08	Project Leads			