

June 23, 2003

**San Juan River Basin Recovery
Implementation Program
Biology Committee
May 6, 2003
Meeting Summary**



Members Present:

Ron Bliesner Tom Chart Jason Davis (for Jim Brooks) Paul Holden Amber Kingsbury (for Dave Propst) Vince Lamarra Chuck McAda Bill Miller, Chairman Tom Nesler Tom Wesche

Others Present:

Rob Ashman Sarah Boyden Sara Gottlieb Marilyn Greenberg Steve Harris Julie Jackson Pat Page John Pitlick Steve Platania Steve Ross Dale Ryden Ron Ryel Ernie Teller Melissa Trammell Brent Uilenberg Steve Whiteman

Representing:

U.S. Bureau of Indian Affairs
U.S. Bureau of Reclamation
U.S. Fish & Wildlife Service Jicarilla Apache Nation NM Department of Game and Fish Navajo Nation
U.S. Fish & Wildlife Service Southern Ute Indian Tribe State of Colorado Water Development Interests

Representing

Public Service Company of New Mexico Utah Division of Wildlife Resources University of New Mexico
U.S. Fish & Wildlife Service Water Development Interests Utah Division of Wildlife Resources
U.S. Bureau of Reclamation Peer Review University of New Mexico Peer Review
U.S. Fish & Wildlife Service Peer Review
U.S. Bureau of Indian Affairs National Park Service
U.S. Bureau of Reclamation Southern Ute Indian Tribe

Introductions, Agenda Additions, and Approval of February Conference Call and Meeting Summary

Bill Miller welcomed the attendees, who then introduced themselves. The February 12, 2003 Conference Call Summary and the February 24 - 25, 2003 Meeting Summary were approved without changes.

Discussion of FY2004 Scopes of Work for Continuing Projects

Paul Holden stated that the Peer Review Panel is here for this meeting for the first time, and this is a unique opportunity to take a look at the monitoring that we have been doing in light of the new scopes. Are we getting everything that we need out of

our efforts, or do we need to incorporate new data sets?

Tom Wesche stated that he would like questions and concerns about individual projects incorporated into the minutes, and also have votes recorded. It was suggested that we have a list of the program elements and then link the scopes of work to these elements to make it easier to identify whether something is missing. It is intended that this will be incorporated in the new contracting process.

YOY/Small Bodied Fish Monitoring - Amber L. Kingsbury

There are no major changes in the operation of the small bodied monitoring. They are asking for a slight increase in funds. It was suggested that each habitat be preserved separately in a bag so when you go back and count fish, you know which and how many fish were in each habitat (like was done in 1999 - 2000). The Committee feels that this should be added to the protocol. Maintaining distinctions by habitat enables other researchers to compare their data as well. This fall's data needs to be collected this way. All data collected will be incorporated in a March 2004 report.

There are some discrepancies in Dave Propst and Amber Kingsbury's data compared to Bill Miller's data. Is this due to collection technique? Do we look for YOY pikeminnow and razorback separately or together in the small bodied monitoring? Dave and Amber, as discussed with Bill Miller, determined to do it all together with the small bodied monitoring. We want to make sure that the data represents the river as accurately as possible and be able to look at side by side comparisons to make sure that we are getting an accurate representation of the river.

It was suggested that mesohabitat be added to complement the monitoring that is already going on.

Paul Holden commented that Dale Ryden's electrofishing incorporates some of what

Bill Miller was doing, with discrepancies between the larger fish data between the two. The adult monitoring needs to be brought in as well.

It was suggested, as we go through integration, that we look at what we need in terms of additional methodologies to get a representative sample of the river. We have two years already (1999 and 2000). We can consider adding a gear type or whole new project.

Trophic Relationships -Amber L. Kingsbury

Last year was the first year that this scope of work was done. There is supposed to be a report at the end of the first year to determine whether to continue. The Committee has not seen any reports yet to determine what has been done, in order to determine whether to fund 2003 2004.

It was agreed that this was a multi-year project, and we could add a proviso stating that approval is dependent on progress that is shown in year one. If we don't put funding in place, we are going to essentially skip a year. This scope may need to be modified after year one is evaluated. It was recommended that the researchers come back after their summer work and last minute modifications could be made at that time.

It was observed that we are looking at monitoring efforts and special studies. Is a different review process needed for special studies? Dates need to be included as to when data reports will be ready and presented/evaluated - especially with these special studies.

The Committee wants to know: Has this been started and where are they? Are there some preliminary data sets? A presentation of what they have found, looked at, and seen so far would be beneficial. Some sort of schedule should be added as to when this will be presented to the Biology Committee for review and final approval of the budget.

At this time, we need a progress report from these researchers explaining what the current status of this project is. Secondly, we need a preliminary report on the field data in August. A decision needs to be made by the first of September. This can sit as a placeholder until then.

Peer Review for 2004 -Paul Holden

There has not been much change in this scope of work. The budget was bigger for 2002/2003. 2004 assumes just some basic meetings; we are not sure who we will have for a fourth member. This might have to be modified if the peer reviewers are going to be responsible for creating a peer review process.

Ron Ryel's contact information needs to be corrected.

Assessment of Colorado Pikeminnow Augmentation in the San Juan -Paul Holden

This is essentially the same scope of work that was started in December 2002. Is the lower river being looked at under this scope of work or Julie Jackson's scope of work; or under an entirely different scope of work.

It was suggested that it seems to fit best in the current scope of work. The justification is that we are finding pikeminnow in the lower river.

There was a discussion about retention and survival. Retention is where and survival is what? It was suggested that this scope be reworded using "retention" rather than "survival". How will you meet that objective of determining retention? How do we design this to reach the final product? The statistical design needs to be known and stated up front. These scopes of work have not been done with the statistical design defined up front; this has been more of monitoring with observations that indicate patterns.

We have to make sure that the right things are being monitored. How many physical parameters will be monitored along with the fish?

Water temperature and other physical factors are being measured. They are not sampling water temperature at every station, but taking daily water temperatures. It will be difficult to get cause and effect with this data. This will not matter unless we determine that we are getting no survival or retention.

The Committee asked Paul Holden to revise his proposal to incorporate the lower river sampling and to incorporate comparison of physical factors. If there are costs associated with this for Julie Jackson, it will be incorporated into Holden's scope.

Nonnative Species Control in the Lower San Juan River -Julie Jackson

2004 is the third year for this study. In the first pass, the channel catfish were floy tagged to determine a population estimate to evaluate our removal efforts in the lower section.

It was suggested that they create a population of marked fish and sample multiple times and put a statement in the proposal about how you will be doing the depletion statistic.

There was a question about how the capture removal numbers varied by sampling times. Jackson stated that they are not finding an even decline in captures; the capture rate is extremely variable throughout the trips.

There was a question about determining and eliminating the least productive times to sample. Julie Jackson stated that they are looking at when striped bass move up from the lake. Channel catfish removal is a secondary objective. They are trying to determine when striped bass move so that they can narrow their focus.

It was suggested that they cite “many” and make sure that this data gets incorporated with Dale Ryden’s data. Include figures about how many days equal a trip, and look at the per diem costs included in the scope of work.

Larval Razorback Sucker Survey -Steve Platania

This is a new sampling methodology begun in 2003 (reflected in 2004 proposals). Each trip will go top to bottom (in the past this was not the case). There will be less trips, with more coverage on each trip, because there was difficulty in comparing river reaches when the trips are offset by three weeks.

The first trip this year (12 days) had no larval razorback, but by RM 20 there were some flannelmouth sucker larvae.

At what point do we look at going further up stream? There were 13 adult razorbacks caught on Dale Ryden’s first razorback monitoring trip this year. With the lower flows this last year, the larger fish are starting to hang out right at the beginning of the sampling areas. It might be a good idea to start larval sampling up as far as Hogback. It may be wise to incorporate into the scope that the protocol will be that if we get fish high in the system, then we will move upstream and test that. It may be good to start higher than where we are seeing the sampling. UNM may want to add in extra time now to cover moving higher into the system.

For 2003, Steve Platania will do a pilot sample from Hogback on one of the trips. They do not want to add more days for 2004. They would like to just see what happens this year. If 2003 indicates that adding more days would be good idea, then Platania will work with the scope for 2004. It was suggested that it be included in their 2004 scope budget B - if an additional two days are appropriate.

Larval Colorado Pikeminnow Survey - Steve Platania

The researchers were asked to state their total number of trips (three for FY03) and the gear used (larval seines and light traps). It would be ideal to monitor Colorado

pikeminnow with light traps, when the population reaches that point. We are just taking them right now to see what is out there. It was noted that there are larval razorback statements in the pikeminnow scope of work.

Update and Maintenance of San Juan River Basin Recovery Implementation Program GIS Database and Development of a Web-Based Interactive Interface - Sara J. Gottlieb

2004 is the 2nd year for migration from Bliesner's database to the UNM database. UNM does not yet have their funding. They have been making progress with getting the data transferred over. They have physical possession of the data. An additional staff member needs to be hired to integrate the data and a consultant needs to be hired to do the programming. The 2004 funding will be less because the incorporation will be complete, and they will be working with researchers to get feedback on the data. They will be using a new suite of ARC GIS products. The fields that are incorporated into the database changes from study to study.

River mile (RM) geo-referencing may require GPS units in addition to RM documentation. Species codes are pretty standard. River miles are not a true measured unit. All of the data collected and mapped have been using the non-standard river miles. The 1988 and 1998 maps are different. Ron Bliesner stated that those maps are digital and they are correctable. ***Keller-Bliesner Engineering will look at them and work on correcting them. The 1988 map was from Hogback down.***

It was suggested that the Program make sure that everyone is using the same map in the future. Using the river miles, and adding the GPS geo-referencing, will be a good idea.

Interim Holding Facility for Larval Razorback Sucker -Steve Platania

In 2003, the decision was made to not spawn and hold razorback larvae. The systems have been broken down and the filtering has been increased so as to be able to increase the feeding and grow larger fish. Nothing is new in the 2004 proposal. The years that certain fish were put in certain ponds did not seem to match. Dale Ryden has those records as well. ***Dale will send Steve a copy of his stocking tables.*** Steve Platania will correct and incorporate Dale's data. How do you track growth and survival and determine mortality? It is so variable between ponds and years. UNM does a count on the mortalities that they get.

San Juan River Specimen Curation -Steve Platania

Steve Platania explained that they have observed a need to try to switch some emphasis and get more front end work done on curation rather than just reporting how many fish are taken in on the various projects.

In 2004, they have decided to start taking collections from the New Mexico Department of Game and Fish's monitoring activities. UNM will get and process the samples as they return so that they can more quickly have access to them for identification. The field notes and locality information will be entered into their database as well. UNM has talked to the Service to see whether they have a need for this service as well. This will keep us more up-to-date. ***This proposal needs to be rewritten to incorporate this***

change. Correct the formalene to ethelene process.

There will be no extra costs to the Program. They have received some new institutional support in the way of students.

Razorback Sucker Augmentation and Monitoring -Dale Ryden and Chuck McAda

New handouts were passed out with new budget information. There is an increase in pond work. The number of ponds has tripled. The time required has tripled or quadrupled. The rest of the budget items have remained the same. They could remove the pump rentals and add the purchase of fike nets (\$400 each, purchase 4 or 5 more with ½ inch mesh). ***Dale Ryden will make this change and get it back out to the Committee quickly.***

It may not be feasible to do pond seining. The Committee is recommending that fike nets be purchased to cover the ponds in order to be able to harvest them. It was suggested that on page 4, in support of objective 4, that the criteria be clarified - that fish will be in the river at least a year before being radio tagged.

There is value in having a couple of times a year to observe where the fish go into the river, how they behave after spawning, and how they are doing further into the season. We are still trying to look at where they are spawning.

Searching for razorback spawning areas is still a very big component of this scope of work. This could be highlighted as more of an objective, as opposed to just being out there tracking the fish. This will address “is this working” or “is there another way to do this”? The fish have to first be found in a group. Unless several radio tagged fish are found in the same spot, you cannot find them unless you are out there searching for them.

How will finding new spawning areas change the way we operate? At some point in time we need to decide when we are done with this segment of the monitoring. We are still trying to define what is important to the fish and how can we make that more available to them. It is great that they are recovering, but how do we discover the linkages, such as, how much water is needed for them to recover? Last year we did learn that a spring peak is not required to facilitate spawning.

Why are all fish being released at the same point? Initially there were four stocking points, but the fish stocked at the lower points were going straight into the lake. Then we started stocking at the highest point of critical habitat below the diversions. Does weed control need to be added to this scope? Yes, for West Avocet and Hidden Ponds.

Stocking of Fingerling Colorado Pikeminnow -Dale Ryden and Chuck McAda

They put two crews on the river, spread the fish out into habitats, and then write a short summary report.

Survivorship estimates are coming from the time that the fish are marked. What about estimating survivorship with other approaches? They are not really trying to get at survivorship after stocking. They are just trying to figure out how many fish at each age group and size are surviving.

You are currently using a marked population, which can also be used to estimate populations/ survivorship.

Adult/Juvenile Fish Community Monitoring -Dale Ryden and Chuck McAda

They are proposing to change methodologies to track species over time. In objective 1, changes due to management actions, instead use “correlate to management actions.” Where it states Lake Powell fish, specify Lake Powell predatory fishes.

Colorado Pikeminnow Fingerling Production -Manuel E. Ulibarri

It is suggested that personnel costs be listed out further.

Non-native Species Monitoring and Control -Jason E. Davis

This is the same as the scope of work from the last couple of years, focusing on more effort between Hogback and Shiprock. This is due to declines in the number of fish in the PNM to Hogback reach. Additional money has been requested for a distribution truck to stock catfish out to tribes in the Rio Grande basin. They are trying to include the Southwest Tribal Fisheries Council in the monitoring trips, and purchasing the truck for Dexter will be a good public relations move.

It was suggested that this is non-native species control more than monitoring and that “monitoring” be removed from the title.

Ninety percent of the catfish were removed in three trips in 2002; 70% of the trips removed only 10% of the catfish. When do we focus on the most effective trips, and limit impact on the system? The trips start in late February/early March, with relatively high capture rates initially, the captures then taper off until after spring runoff.

We are stretching out to focus on another section of the river; as we get the upstream area controlled, we are moving downstream.

What is the native fish’s response to our efforts? We should be having an impact on reproductive output. It was suggested that the method and the benefits of the process be spelled out.

There is a lot of reinvasion from neighboring river sections, so it makes sense for them to begin moving downstream with their sampling. A fairly consistent frequency over time has been seen in the lower part of Reach 6. There needs to be more than 6 months without catfish invading that reach to determine the impact on native species.

It was recommended that evidence be cited that shows that non-natives are predatory to native species. Non-natives tie up resources, and provide competition for space and food. This could be spelled out as well. Is anything happening other than catfish size being reduced in the system? We may only be changing the impact from one of predation to one of competitive impact. Competition is harder to prove than predation. It is important to evaluate for success within a timeline in order to consider whether we want to continue this. Is the catfish population being significantly affected? If the method is effective, we will see a response. If we do not see a response, and the method is not effective, then what are some other methods of meeting the objectives or achieving a response?

It is hard to determine the cause and effect because so many other things are changing at the same time. The integration process will help us to answer these questions.

Catfish removal is considered a recovery action. We can look at the surrogate species for impact, because we cannot determine with the endangered species because we are changing so many different things. **Reword the scope to indicate what is being**

learned from what we are doing and to include that researchers are moving downstream when maximum results have been achieved upstream. We must show two things in the objectives: Are we affecting the catfish population, and are we benefitting the native populations as a result?

There has been a huge change in the number of catfish being captured over the last ten years. If we can continue to have an impact 5 - 10 miles downstream, there will be an even greater impact. Then we can look to address the second objective - seeing a response in the native species. The catfish have to be removed before you can address the benefit to the native population.

Jason Davis will reformulate the scope of work to show how the success of catfish removal can be evaluated.

Assessment of Fish Movement at Hogback Diversion -Jason E. Davis

This is the second, and last, year of this study. It is a presence absence study. No native fish that we have tagged have been recaptured below the diversion. We are trying to document whether the fish are using the fish ladder, or have we created a native barrier, non-native ladder?

Tom Wesche is not supportive of this effort - this year or last year. It is not showing us something that we don't already know. Paul Holden agrees. Others stated that it is important to know whether this design works as well as we had hoped it would. If fish are currently being collected below the diversion, they may want to consider collecting some fish from above the fish passage, transport them below, and see if they go back up.

Population Model Maintenance, Development of User Interface and Population Model Runs -Bill Miller and Vince Lamarra

This work has been delayed. There was no work done on the model in 2002. Work resumed in March of 2003. The parameters of the model are currently being updated and a run time model is being developed. They will meet in May to finish up the model, and will be ready for a Biology Committee review in June. Ft. Collins would be an ideal meeting place since that is where all the data is.

This model will answer our questions about non-native removal impacts. We could hold this as a budget placeholder until the next meeting when the model will be demonstrated for the Committee.

The intent is to do ongoing monitoring and modifying of the model parameters, and ultimately identify links. The developers need to be intimately involved in the initial analysis to identify what kinds of links may be occurring.

Steve Ross commented that this model can be used to test the responses that are being seen in the field. This model stands as a major integrator of all the research that is being done, and as such, it is very important. It was suggested that those things that the model can be useful for be identified and documented right up front. Bill Miller stated that the Program should be clear that Program funds did not fund the majority of the original model work.

The Committee agreed to keep this as a placeholder for now until the results of the June meeting. They recommended further justification of the model, such as how is this going to be used, especially in support of other researchers, and the things that will be done with current data collection.

Long Term Monitoring / Channel Morphology -Ron Bliesner

This is the same thing they've done in the past. They have found that item 4, backwater perturbation monitoring, is difficult to do as it was initially described. They tried to monitor backwaters in the same areas, but it is difficult to even find the same backwater twice because of the change in flows.

Some questioned what process caused the backwater to be lost, and stated that this is still part of the monitoring. We are down significantly in both count and depth, and will have to go backwater by backwater, not just look at the overall picture.

Total backwater is what the fish care about. Backwater loss does not appear to be due to just filling in with sediment. From this monitoring observation, there is now a new element to look at in terms of why is this happening. The river basin has gone from 243 backwaters to 53. We have the data to track cause and effect, although most monitoring is not done to determine that. There is very little change in quality. Being able to detect an effect and being able to trace it back to cause and effect are two different processes. Is this having a biological effect? Retention of the pikeminnow is down. In March 2003, most fish were found in the low velocity portions of runs. Are antecedent conditions as important as we thought, and did we pick the correct antecedent conditions?

Why doesn't the program fund USGS to collect more data, such as frequent sediment samples, to show the connection between storm events and backwater loss? This could provide back-up data to determine clarity on changes in the river. Could money be used more efficiently by getting USGS to take more frequent sediment samples, if we are assuming that sediment redistribution is contributing to the reduction in backwaters? ***Should we complete the data integration before we approve the final scopes of work in order to modify or add to the monitoring efforts to make them more effective and useful? Then this could be re-evaluated in July, once we get through a couple more integration meetings.***

Habitat Mapping -Ron Bliesner and Vince Lamarra

This is the same process, no discussion or changes were suggested.

Water Temperature Monitoring -Ron Bliesner

This is the same process, no discussion or changes were suggested.

Water Quality Monitoring -Ron Bliesner

This is the same process, no discussion or changes were suggested.

Razorback Sucker Ponds Limnological Study -Vince Lamarra and Ernie Teller

Vince Lamarra explained that the BIA involvement in pond operations has changed. Navajo Nation staff are now being trained to take over responsibility for the management of the ponds from BIA. This person would also manage the PNM Fish Passage - should this be added to this scope?

This scope should cover only the training; the BIA person could be placed in another scope of work for 2003. For 2004, put the Navajo labor from this scope into the PNM Weir operations scope for 2004. Have Jeff Cole submit the scope of work on his letterhead.

Do we want an intensively managed system? The ponds that have clear water and no cover are producing fish that are being eaten by birds. Ponds that have cover and clear water are producing well. Should we create cover rather than treat the weeds? Mike Baker indicated that weeds are probably good for fish growth. You could treat only areas of the ponds. We may need to stock the ponds after the mergansers have migrated. Edgevegetation in some of the ponds has helped fish have a place to escape to. We need to create a comprehensive pond management process, and need until the middle of the summer to get the data analyzed to complete it.

Vince Lamarra will have a draft pond management plan available for a 2004 request for proposal (RFP) for pond construction by the end of 2003. It can then be approved by the Committee and ready to implement in 2004.

Discussion of Razorback Ponds, Site Visit, Harvest, and Recommendations. RFP for Pond Construction for FY03.

Dale Ryden reviewed the pond management suggestions from Mike Baker and Manuel Ulibarri

It had been thought that there would be about 10,000 age one fish available from 24 Road Fish Hatchery. There are really only about 5,500 8-inch fish. Mergansers will not be able to get too many 8-inch fish.

The Committee is in favor of taking these fish since there are three ponds that are now almost empty. Dale Ryden will bring the fish down and stock them next weekend (May 17, 2003).

Hidden Pond is loaded with little fish that could be moved to East and West Avocet. This would thin out Hidden Pond.

There are salamanders in all the ponds now, especially in the Avocet ponds. Chicken wire buried around the ponds would keep new salamanders from getting in, but will not get rid of the salamanders already in there. Maybe this could be done when we build new ponds – transfer fish to the new ponds and then fix the old ponds before restocking. Could the salamanders be coming in through the water supply? Pipe filters would cost \$2000 - \$3000. Larger fish could be placed in the ponds to stir up the water to keep the mergansers out, and noisemakers could be added to keep the mergansers too edgy to do much damage.

Pond construction considerations would be size and depth of shelf around the edges. They also need to be drainable so that they can be seined while draining. Can we create an RFP with design parameters this summer, so that we can build new ponds before 2006?

RFP for Pond Construction for 2003

This is a draft. The RFP should not include operation and maintenance. The Navajo Nation, the Southern Utes, and a private individual have all expressed interest and we need to demonstrate a competitive process. What does the Committee want? It was suggested that a small group get together to work on this, rather than rely on the entire Committee: Dale Ryden, Mike Baker, Manuel Ulibarri, Bob Norman. Vince LaMarra and

Ron Bliesner could meet with them in Grand Junction.

The goal would be to complete the scope of work in May in order to put out an RFP in June. Existing ponds would be a less viable option for including the above factors that are being considered for effective pond management. Steve Harris is aware of an old raceway rearing area that could also be considered.

New Peer Review Panel Member

Paul Holden presented the two nominations for the peer review panel.

Mel Warren is with the Forest Service Hydrology Lab in Mississippi. He has a range of aquaticsystems expertise, and extensive experience in biostatistics and bioanalysis. He is knowledgeable of endangered fishes.

Wayne Hubert is with the U.S. Geological Survey, Wyoming Cooperative Fish and Wildlife Research Unit. He is the Professor of Fisheries and Assistant Leader of the University of Wyoming's Cooperative Fish and Wildlife Research Unit, and has broad fisheries management experience. He has authored over 2000 peer reviewed articles. He is a solid scientist and he is personable. He has spearheaded native fish conservation work in Wyoming.

Seven votes are needed out of 11 members. The Biology Committee voted and Wayne Hubert received 8 votes (a majority). We need to get him up to speed as soon as possible so that he can begin attending meetings.

List Server Additions and Use

The Committee discussed how the membership for the listserv should be determined. Two options were suggested: a general listserv option versus an email list (a group of individual committee members) on personal distribution - for votes and confidential information.

The Committee decided to use the general Biology Committee listserv for meeting announcements and meeting summaries. This listserv will include researchers, peer reviewers, and Committee members. They also decided to set up personal email lists of the Biology Committee members for voting and confidential discussions and information. Bureau and Service people who are not researchers will continue to be added to the Combined listserv upon request.

Discussion of FY2004 New Start Projects and RFP Process

The budget subcommittee has a proposal. It has to be approved by the Coordination Committee, and should be ready to implement by FY05.

FY04 is a transitional year. The new starts that were identified at the February meeting need input from the Biology Committee, the peer reviewers, and the Coordination Committee to determine how to handle them for this year. Bill Miller will ask request some guidance when he is on the Coordination Committee conference call.

Shortage Sharing Update, Schedules for Integration

There have been discussions with contractors since September 2002. The forecast was 43 percent of normal inflow as of mid-April. The May forecast is a bit lower than that. Ten parties to this process developed a recommendation for the operation of Navajo Dam and management of the San Juan River. They will limit their diversions to less than historic usage for this year. In the event of a shortage, they agreed to share

equitably in the shortage. The Navajo Nation endorsed it with the stipulation that the forbearance language would be stricken. That was then removed from the recommendations. The power plants want to remain whole in the event of a shortage.

Based upon the April forecast, there would be a 14% shortage based upon the minimum probable inflow. The shortage to the fish would mean flows of 420 cfs in the critical habitat.

They hope to hear from the Navajo Nation by Friday of this week. They are going through their approval process. Bill Ostheimer will be doing the section 7 consultation for this process. The rest of the endorsing parties seemed to indicate their approval. If the recommendations are not endorsed by all parties, the alternative is to go back to the least probable scenario, and Reclamation would implement a shortage sharing plan with the contractors and the fish. Reclamation plans to meet the target base flow this year by using the three gage method proposed in 2002 by the Biology Committee. The Hydrology Committee determined that this year (2003) represents an extreme condition. ***Arrangements for the next meeting will be handled by Bill Miller via email.***