

San Juan River Basin Recovery Implementation Program

Biology Committee

February 17, 1999 Meeting Summary

February 22, 1999 Draft

A meeting of the San Juan River Basin Recovery Implementation Program Biology Committee was held on February 17, 1999, in Farmington, New Mexico. The following Biology Committee members were present:

Ron Bliesner

Jim Brooks

Larry Crist

Paul Holden

Vince Lamarra

Bill Miller

Tom Nesler

Frank Pfeifer

David Propst

Tom Wesche

Absent: Stephanie Odell, Joe Dowhan (Program Coordinator) David Galat, Clark Hubbs, Ron Ryel and Ellen Wohl of the Peer Review Panel were also present. A list of all attendees is attached.

BLM Biology Committee Nominee:

Paul Sawyer, the Bureau of Land Management (BLM) Biology Committee nominee, was present and distributed his resume to the committee for review. Paul briefly reviewed his background and answered a few questions about his experience and past involvement in the San Juan Basin. Since the committee members had not received the resume in

advance and did not have sufficient time for an adequate review, the discussion and vote was postponed. The matter will be added to the agenda of the next Biology Committee Meeting.

1999 Work Plan:

The BLM has submitted their 1999 work plan and budget for inclusion in the overall work plan. The budget summary page will be modified to show their contribution, as program funds are not used for this work. It will be edited into our format and added to the program work plan for 1999. (Note: In reviewing the information sent, Ron discovered that their sampling site locations were not identified and a request was sent to Dale Wirth to provide this information.)

We still have not received the revised work plan for the Program Coordination from Joe Dowhan. Ron Bliesner has sent him 2 e-mail messages requesting the information with no response. There has been no direct contact with Joe Dowhan since the October Biology Committee Meeting. The committee requested that Ron send a letter to Ren Lohofener requesting assistance in getting the revised statement of work and confirmation of U.S. Fish and Wildlife Service (USFWS) funding contribution for 1999.

The 1987-1990 data was discussed. Dave has submitted the electronic versions of the 1990 data. Steve Platania was to submit the 1987-89 data that he had electronically, but we were waiting for data entry of the remaining data from the field sheets for that period before compiling it. USFWS was going to use an AmeriCorp worker to enter the data in 1997 or 1998, but that apparently did not materialize. Steve will await committee direction on submission of the data he has. The issue was not resolved and will be addressed at a later time.

Flow Recommendation Report:

The latest draft of the Flow Recommendation Report (February 1998) along with a bound version of the various comments and responses have been mailed to the Biology and Coordination Committee members and the peer reviewers. Changes in the report from the December version are shaded for easy review.

The peer reviewers were pleased with the response to their comments for the most part. Ron Ryel did recommend that we add a descriptive sentence or two to Chapter 6 to clarify that the summary table (Table 6.1) was developed from collected data, literature data, and the best judgment of the researchers. Paul will add this language to the final version.

Ron also commented that there should be a reference for the statement that cobble is more productive than sand substrate. Vince will get the appropriate references.

John Whipple and Steve Harris indicated that the response to the New Mexico and Water Development Interest comments were appreciated and met their expectations. Although they may not agree with our approach in all cases,

they better understand our position and why it was taken and the record is made concerning their comments and our response.

Paul expressed that we are hopeful that the last of the questions have been answered and the way is cleared for Coordination Committee approval. However, no one knows when the Coordination Committee will meet again to address the issue.

Long-Term Monitoring Plan:

The latest version of the Long-Term Monitoring Plan was distributed to the researchers, Biology Committee and Peer Review Panel by Dave Propst the first part of February. This version of the plan was reviewed in some detail. In fact, the discussion was of such detail that the full document review was not by the time the meeting adjourned. Ellen Wohl will send her comments dealing with the abiotic monitoring to Ron by mail.

There was much discussion concerning the goals and objectives of the plan, as these form the basis for the actual monitoring elements. Ron Ryel suggested that more of the ecosystem should be monitored, particularly the lower trophic levels, so that cause and effect could be established. David Galat had a different view. While he agreed that an ecosystem approach is necessary to answer the why's, he felt it was beyond the scope of a monitoring program and should be addressed as a periodic research element.

There was some confusion between the goals of the recovery program and the goals of monitoring. It was decided that the goals deal with just monitoring goals, but the document should include a statement to reference the recovery goals and where they are found.

The following language for goals and objectives was developed jointly by the committee and the peer reviewers:

Goal 1: Track trends of Colorado pikeminnow and razorback sucker populations:

Objectives:

- *Measure annual catch rates of larval and yoy fish.
- *Measure annual catch rates of sub-adult and adult fish.
- *Annually determine length and weight.

Goal 2: Track status and trend of other fish populations:

Objectives:

- *Measure annual larval catch rates incidental to efforts for Colorado pikeminnow and razorback sucker.

- *Measure annual catch rates of yoy, sub-adult and adult fish. (*Is this incidental?*)

Goal 3: Track response of geomorphology and habitat to flow manipulation:

Objectives:

- *Semiannually measure river cross-section geometry and characterize substrate.

- *Annually determine changes in cobble bar characteristics of suspected and potential spawning bars.

- *Annually measure quantity and quality of backwater habitats.

- *Annually measure habitat complexity.

- *Record daily water temperature.

Goal 4: Utilize data collected in goals 1 through 3 to help assess progress toward recovery of Colorado pikeminnow and razorback sucker.

- *Produce an annual summary of monitoring results.

- *Integrate results of other research studies with the analysis of monitoring data for production of the analysis reports. (*Needs some work on wording.*)

- *Provide a detailed analysis of the data collected to help determine progress toward endangered species recovery goals in 3 years and thence every 5 years.

- *Characterize population dynamics of the endangered fish using the following metrics:

- Reproductive success

- Recruitment success

- Size structure

- Growth

- Condition

--Species relative abundance and fish community structure

*Characterize changes in geomorphology and habitat and their relationship to flow manipulation:

--Trend and flow relationship in channel cross-section and substrate.

--Trend and flow relationship in spawning bar change.

--Trend and flow relationship in backwater habitat quantity, depth, sediment depth and distribution.

--Trend and flow relationship in channel and habitat complexity.

In addition to this revised outline of goals and objectives, the peer reviewers recommended establishing the criteria of assessment of change up front. For example, what change in catch rate is significant, what level of change will constitute a trend, how much change in channel cross-sectional area represents and effect attributable to the changed flow regime, etc. They believe that the program likely has sufficient data, given the seven years of research, to apply some statistical analysis to the data to make these determinations. It was pointed out, however, that while seven years of data may seem like a lot, for long lived fish and slow geomorphic change, seven years may be less than 1/5 of a full cycle. Even with this limitation, it was recommended that the statistics of the data be examined to see what could be determined.

Some discussion of why only 6 of the 8 geomorphic reaches are being monitored should be included.

Comments in each monitoring activity follow, although only a brief synopsis is included:

Ichthyofaunal Monitoring:

A general recommendation was made that a comparison table listing all monitoring activities be generated to allow a side-by-side comparison of what, how many, where, when, etc. for each monitoring activity.

Some reviewers felt that the methods described were not very repeatable in some cases, particularly the larval razorback sampling and yoy/small fish monitoring. Also, a lot of data are being collection that may not be needed. To the extent that they add cost without much benefit, they should be evaluated for removal. It was noted that when you have to handle every fish just to identify the target species, you might as well get the data on them as well. When

looking at counts of all species sampled, that is probably true. Collecting lengths and weights, especially for small fish that are not target species is questionable. It probably should be done by sub-sampling and applying the statistics to the full sample. Other similar conditions should be evaluated.

Larval Fish - Drift Sampling:

An illustration of the egg collector should be added.

More specificity in the description of the sampling period (beginning and ending dates) and duration of sets (how many sets and how many hours each set) is needed. A reference for "sampling protocol for drift nets" on page 7 is needed. Water quality parameters should be simplified. There is no point in recording "salinity", when it is based on electrical conductivity. The list of required water quality parameters was reduced to water temperature and turbidity, taken during sampling. The hourly temperature thermograph record is not needed since there is a monitoring item for water temperature. The incidental notes should include just weather. Turbidity should be recorded as a primary water quality parameter.

Larval Fish - Seining (Razorback Sucker):

It was acknowledged that the methods described formulate a fish hunt program and are not standardized. The document explains that the final protocol will be developed from the results of this multiple method approach. The peer reviewers understood and acknowledged that the approach was appropriate, given the small number of target fish. However, it should be recognized that the ability to establish a trend or see change from year to year may be compromised by the limited repeatability of the approach between years.

The comments on water quality parameters follow from the previous section.

Young-of-Year and Small-Bodied Fishes:

This section was heavily discussed. Galat commented that it appeared more as a fish hunt program than as a repeatable monitoring program. Given the rare occurrence of the endangered species, that may be the most appropriate approach, but comparability from year-to-year may be sacrificed for not just the target species but for all species. It may be best to use this first year of monitoring to define the methods so they are more repeatable and not as dependent upon an individual's ability to "find the fish". It may be advisable to sacrifice some catch efficiency for repeatability. Substantially more detail would be required to be able to have even an experienced fisheries biologist read the document and begin sampling the river with the same approach and results as another individual.

Tom Chart expressed concern that this protocol would not represent the yoy suckers very well because the other habitats listed in the main channel are hard to sample and we have no historic data to compare to or to just sampling effectiveness from. The committee members acknowledged that there were tradeoffs in going to this approach, but

sampling more of the habitats in the system, all at the same time, would provide a better picture of the fish community and would eliminate an extra trip each year. Tom conceded that by blocking and shocking the riffles, a better picture might be obtainable that he anticipated.

It was generally concluded that these methods would be followed for this year and that repeatability and adequate description of the methods would be the goal of the program as the sampling is conducted.

One specific comment that was made was that the habitats should not be sampled in the same proportion as they exist but should be considered a "stratified random sample" whereby each habitat sampled would have a target sampling density, limited by availability.

The same changes in the water quality parameters were noted for this section.

Sub-Adult - Adult/Large-Bodied Fish: This section was not discussed in detail.

Geomorphology and Habitat Monitoring:

This section was not discussed in detail. It was decided that water quality monitoring would be removed from the monitoring program and the data accessed from other sources as needed. It was further noted that this section deals primarily with response of the system to the implementation of the flow recommendation while the ichthyofaunal sections deal with the response to all recovery actions. Ellen Wohl will provide more detailed comments in writing.

Any further discussion on the monitoring plan was postponed until the next meeting due to lack of time.

Synthesis Report Discussion: This was postponed to the next meeting.

Fish Passage: Discussion of the Hogback and San Juan Generating Station fish passages was postponed to the next meeting.

Next Meeting:

Due to the amount of time spent on the monitoring plan, a meeting was scheduled for March 8-9 to finish the monitoring plan discussion, discuss the nature of the synthesis report and deal with fish passage issues. The meeting will be held in Grand Junction, Colorado to allow inspection of two types of fish passage. The meetings will begin at 10:00 am on March 8 at the Fish and Wildlife Service Office. The fish passage issues will be discussed on March 9 and then visits to the existing structures will follow.

Biology Committee Meeting

February 17, 1999

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* Paul Holden	Bio/West	(435) 752-4202
* David Propst	NM Game & Fish	(505) 827-9906
* Tom Wesche	HabiTech	(307) 742-4902
* Bill Miller	Miller Ecological Consultants	(970) 224-4505
* Vince Lamarra	Ecosystems Research Institute	(435) 752-2580
* Ron Bliesner	Keller-Bliesner Engineering (BIA)	(435) 753-5651
* Frank Pfeifer	US FWS	(970) 245-9319
* Tom Nesler	Colorado Division of Wildlife	(970) 472-4384
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* indicates member of Biology Committee