



FINAL MEETING SUMMARY

May 17-18, 2007

Biology Committee Meeting

Farmington Civic Center

Thursday, May 17

Members Present:

Paul Holden
Chuck McAda
Ron Bliesner
Jason Davis
Mark McKinstry
David Propst
Tom Wesche
Bill Miller
Steve Ross (Peer Reviewer)

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
New Mexico Department of Game & Fish
Water Development Interests
Southern Ute Indian Tribe
University of New Mexico - Museum of Southwestern Biology

Members not in attendance:

Tom Nesler
Gregory Gustina
Vince Lamarra

State of Colorado
U.S. Bureau of Land Management
Ecosystems Research Institute

Program Management:

David Campbell

Program Coordinator
U.S. Fish & Wildlife Service, Region 2, NM Ecological Services Field Office
Fish and Wildlife Biologist
U.S. Fish & Wildlife Service, Region 2, NM Ecological Services Field Office

Anne Davis

Interested Parties:

Dale Ryden
Barry Wagener
Michael Farrington
Howard Brandenburg
Kevin Bestgen
Rob Dudley

Representing:

U.S. Fish & Wildlife Service, Region 6
U.S. Bureau of Land Management
University of New Mexico
University of New Mexico
Colorado State University
University of New Mexico - American Southwest Ichthyological Research Foundation
University of New Mexico - American Southwest Ichthyological Research Foundation
Bio-West
Soil and Water Conservation District
U.S. Bureau of Reclamation

Steven Platania

Mike Robertson
Steve Harris
Melynda Roberts

Approval of Feb 14-15, 2007 Draft Summaries – Paul Holden

Approved as to substance, some editing to occur

Discussion on Population Model (substantive comments on objectives, results, discussion):

Peer Review Panel recommendation – Steve Ross

Necessary Steps to make the model a useful tool:

1. First move to v.9 of Stella;
2. The Peer reviewers report was favorable, but the model needs to have the appropriate data sets (population estimates) to support it and make it a useful tool.
3. We need to develop a complete project description/cost estimate for updating model to include in the Long Range Plan (LRP). The model is a good evaluation tool and forecaster for San Juan River Basin Recovery Implementation Program [Program] management decisions/actions.

Ron Bliesner: Motion to include Model in LRP and to prioritize for implementation.

7 votes to approve; 0 votes opposed, Colorado absent

Add element to LRP with timelines and costs

Review of 2006 Draft annual reports:

- Peer Reviewers suggest the Executive Summaries need to be concise and focused. Reports should be shortened. The reports should contain only the specifics. The Biology Committee (BC) discussed the size of the reports, sequence of final reports with relations to the annual meeting, responding to reviewer's comments.
- Dave Propst suggested that the reviewer comments should be addressed with written responses from researchers. Researchers should be learning from year to year and that the annual reports should be improving in terms of quality and brevity. BC did not take action to have comments as a separate report but recommended to include changes in final report.
- The Program Monitoring Protocols currently provide guidance for what a report should contain and their format. Researchers need to stick to it.
- The BC would like to change the timing of the annual meeting. This is to be discussed at another BC meeting.

1. Hydrology, Geomorphology, and Habitat studies – Ron Bliesner and Vince Lamarra

- Chapter 3 Detailed reach analysis objectives need to be developed more clearly to reflect the purpose of the study.
- A number of areas need more discussion of the importance of the results.
- The different fish sampling crews need to use similar habitat nomenclature to identify habitats in the field. Crews will go through field habitat identification training.
- River wide habitat mapping needs to have objectives. What is the objective? How does this relate to recovery goals?

2. Large bodied fish monitoring – Dale Ryden

- What is the effect of flow on catch-per-unit-effort (CPUE)? Need interpretation of the effect of flow conditions on sampling efforts to allow for year to year comparison of results.
- Conclusions need to be based on results that are statistically valid.
- Dave Propst: suggestion – to just report numbers and reduce the subjective analyses. Do not over interpret the data.

- Ron Bliesner: feels that it helps reviewers and other researchers to have author report on what they think is 'going on' (a subjective analysis).
- Is a 95% CI appropriate? Other CI can be appropriate, just need to state it upfront.

3. Larval fish monitoring – Howard Brandenberg and Mike Farrington

- Report is too long; objectives need to be stated in the beginning of the introduction.
- Need to separate size/age classes.
- Habitat types need to be included with captures.
- Appendices are good.
- Need summary of what habitats were sampled and what was found.

4. Small bodied monitoring – Yvette Paroz

- Good report, concise and to the point.
- Note that results and conclusions in the Executive Summary do not agree.
- Habitat information was useful, but would be more useful if habitat identification and descriptions were standardized.
- What portion of the habitat is being sampled? Are enough fish being caught to make conclusions?
- Clarify the title “Small Bodied Fish Sampling” because it does not reflect the study objective.

5. YOY Colorado Pikeminnow Monitoring – Mike Robertson

- Need to define and state how fish age and size was determined.
- Need to clarify why the elastomer mark is likely lost by July.
- How is growth related to size? How is this affected by stocked fish?
- How does growth curve affect wild fish?
- Suggestion: use the January 1st fish birthday.

Bureau of Reclamation contracting/data ownership – Melynda Roberts

- Equipment with depreciated value at the end of a project >\$5,000 will be retained by the Program.
- All data are owned by the Program; they are subject to the Freedom of Information Act (FOIA) and have to be made available to the public
- Program should be acknowledged in reports and should be a part of the reviewing process.

6. Augmentation of pikeminnow – Dale Ryden

(combined comments in #7)

7. Augmentation of razorback sucker – Dale Ryden

Dave Propst: suggests a need for a combined report that compiles all Colorado pikeminnow (CPM) and razorback sucker (RBS) data. Separate augmentation reports could focus on annual stocking numbers (when, how many and where), with the recapture info in the fish sampling reports or in a new, separate report.

- How is augmentation moving towards recovery? Needs to go in recapture report.

8. Nonnative removal in upper river – Jason Davis

- Need to provide clear, updated objectives.
- How does data support conclusions?
- More detail on size class descriptions.
- Sampling conditions may influence the variability in CPUE, primarily turbidity and temp.
- Do trends river wide support expanded removal efforts?

9. Nonnative removal in lower river – Darek Elverud (Not present)

- Author did some population estimates with mark and recapture.
- Some statements in the report contradict data (p.11).
- Need to relate to the native fish data.

10. Specimen curation – Howard Brandenberg and Mike Farrington

- No comments received

11. PNM Weir reports

- Get monthly reports from Albert to include in the Annual Report.

12. Temperature white paper – Vince Lamarra

- Is this the Final Report? Yes.
- The BC feels that the questions posed have not been fully answered, but data is presented to answer them.
- Is a temperature control device (TCD) necessary, especially at a huge cost with little return?
- The BC believes that a TCD is not warranted on Navajo Dam because temperature impacts on spawning and rearing appear minimal. Spawning is determined by time of year more than a temperature cue. A TCD may provide seasonal range expansion above critical habitat but it is unknown if range expansion above critical habitat is necessary for recovery.

Population estimate discussion –

Guest speakers:

Dr. Kevin Bestgen

Director, Larval Fish Lab

Colorado State University, Fort Collins, CO

Expertise: larval fish and fish population estimation techniques, ecology of large river systems

Lew Coggins

Fish Biologist, Grand Canyon Monitoring and Research Center, Flagstaff, AZ - USGS

Expertise: Fish population modeling, Bayesian modeling, fish population ecology in large river systems; currently pursuing a Ph.D. at University of Florida on fish population modeling.

Dr. Rob Dudley

Research Scientist, University of New Mexico; Ecologist American Southwest

Ichthyological Research Foundation

Expertise: fish sampling, population estimation techniques for fish in large river systems

Question: do we need to do population estimates on the endangered fish, and if so, what size classes, methods, etc?

- Needs:
 - 1) What questions are we asking? Need estimates of survival of stocked fish? Or estimates of adults?
 - 2) Do pop estimates improve our ability to analyze our management actions?
 - 3) What does it take to do a population estimate (time and effort)?

Kevin Bestgen:

- Population estimates can be exhaustive and expensive, but successful with lots of planning and requires adequate resources to plan for success.

- Large populations can be estimated with acceptable level of precision and bias, small populations are more difficult to estimate.
- The use of simulation modeling is useful to determine or evaluate potential for success.
- Environmental variables affect catch effort and can confound the results. How do current conditions influence CPUE information (abundance est.) ...and can you remove environmental influences/factors? Understanding heterogeneity in capture probability a big issue.
- Estimates for reaches may be difficult to extrapolate to other reaches. If you can't catch fish you can't get an estimate.

Lew Coggins:

- Simulation exercises are essential to determine how violations of assumptions will bias estimate; you also need to have a population that will support high capture probability. Programs MARK or CAPTURE can be used to run some of these simulations.
- Must have adequate resources to do a population estimate study.
- Need to consider time and geographic "enclosure" of sampling
- Pre planning can help you determine 1) initial estimate of population size, 2) capture probabilities, and 3) number of passes necessary.
- Open model vs. closed models. Open models less reliable oftentimes requiring 4-5 or more passes.
- Catch-curve analysis using pit tag data can provide useful information.

Rob Dudley:

- Need to identify exactly what you want (need) and what you are willing to spend to get the data. What level of effort are we willing/able to provide? Need to consider the level of effort of post processes will require.
- Preplanning necessary; need to focus on species and age class.
- Estimating initial population size is required for simulation exercises.
- Probability of capture?
- What life stages?

Other notes on Population Estimate Discussion:

- Where does the Program go from here?
- Capture recapture passes 7-10 days apart (resource commitment)
- Needs to have a project leader that has the experience to design a successful pop estimate
- Tom Wesche: it would work well for RBS and possibly for 150mm+ CPM; may be able to contract with panel members to provide project oversight.
- Target FY08 for data "mining" and project planning?
- Need to evaluate and analyze existing data, compare with information from upper basin, before starting off with pop estimates.
- Site-occupancy models: developing an encounter history based on presence-absence data (McKenzie et al.) could be looked at with existing data, or an alternative to population estimates.

Friday, May 18

Members Present:

Paul Holden
Chuck McAda
Ron Bliesner
Keith Lawrence for Vince Lamarra
Jason Davis
Mark McKinstry
David Propst
Gregory Gustina
Tom Wesche
Bill Miller
Steve Ross (Peer Reviewer)

Representing:

Jicarilla Apache Nation
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Bureau of Indian Affairs
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New Mexico Department of Game & Fish
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Tom Nesler

State of Colorado

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Anne Davis

Interested Parties:

Steve Harris
Marilyn Myers

Yvette Paroz
Michael Farrington
Howard Brandenburg
Mike Robertson
Ernie Teller

Viola Willetto
Dale Ryden
Rob Dudley

Steven Platania

Michael Howe

Steve Lynch

Representing:

Soil and Water Conservation District
U.S. Fish & Wildlife Service, Region 2, NM Ecological
Services Field Office
New Mexico Department of Game & Fish
University of New Mexico
University of New Mexico
Bio-West
Bureau of Indian Affairs - Navajo Indian Irrigation
Project
Navajo Fish & Wildlife
U.S. Fish & Wildlife Service, Region 6
University of New Mexico- American Southwest
Ichthyological Research Foundation
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Project

Population estimate model demonstration

Lew Coggins ran a demonstration of a population model using probability of capture and mark/recapture information to show how a simulation model could be used to look at variables associated with pop estimates.

Discussion of Monitoring protocols, implications for 2008 Scopes of Work (SOW)

- Bill Miller noted the difficulty of integrating monitoring data and that we need to do a better job of making sure the data are collected and presented in a way they can be integrated.
- Need to have a Workshop with Peer review panel to review fish monitoring protocols. Target Nov – Dec timeframe. Ron Ryel would be asked to rerun analysis he did for the last report on the precision of the fish monitoring studies. Need to update Monitoring Plan to reflect changes that have been implemented, such as with the geomorphology monitoring and small-bodied fish monitoring.
- Do we continue large scale habitat mapping (river wide) or expand complex reach mapping to replace? We may be able to do river wide mapping on a once every five years schedule if we can develop a relationship between the complex reach and river wide mapping.
- We need to look at the frequency of fish monitoring. Is it necessary to sample annually?
- We have an integration report project scheduled for 2009. Need to develop work plan for SOW/RFP. Use lead contractor approach.
- Monitoring Objective: Track trends in abundance of CPM and RBS and fish communities.
- Target changes for monitoring protocols for FY08. Addition of block seining to small bodied monitoring will be looked at in 2007.
- Dave Propst will work on implementing necessary changes to the Monitoring Protocol.
- Ron Bliesner will complete white paper on what the process is for recommending changes to the flow recommendations. This will incorporate the biological changes associated with the proposed flows (will be done for the late summer meeting). Ron provided a draft memo with recommendations for adopting configuration G3-250(b) changes to the Flow Recommendations for the BC to review. The memo will go from the BC to the CC. We will schedule presentation for the June 26th CC meeting.

Discussion of March 22 Peer Review Panel comments except for those related to February meeting – Paul Holden and Peer Reviewers

- Look at stock assessment and site assessment models. Use available data to address some of the outstanding questions that we have discussed related to pop estimates.
- Continue to assess the monitoring program. Are we getting what we need?
- Database needs to be designed to exist into the future, timelines and data protocols.
- More use of mini-workshops and workshops to address critical issues.
- Participants in the Program need to have expertise on hand or available for data analysis, study design, higher level of statistical understanding, etc...
- Better organization and higher quality presentations at annual meetings. The Program needs to publish more of its findings in peer review journals. Recommendation for pool of funding to support publication of results.
- The quality of presentations and science are improving. Keep it simple principle should apply for presentations and graphics used. Your message needs to reach the audience for communication to have occurred.
- The peer review summary report is helpful and valuable; Steve Ross' written reviews are very helpful and appreciated.

Program Coordinator report

LRP contract – Dave Campbell

- Contract is in place with SWCA to finalize LRP document. Responsibilities include creating a more quantitative document to aid the Program in measuring successes.
- Draft for review July 9th, 2007; Comments from BC to Program Coordinators office by July 23rd with Final Draft Report due August 6th.

Program Assessment – Dave Campbell

- On hold for this year due to funding. Will go out to RFP.
- Suggested format to follow U.S. Fish and Wildlife Services Migratory Bird Assessment. Suggestion provided by Coordination Committee chairperson Brian Millsap.

2007 Work Plan and budget – Mark McKinstry

- Geomorphology contract: Only one response to RFP. Price proposal exceeds available budget. One solution would be to fund the bulk of the work in 2007, with 40K funded for habitat data analysis in 2008.
- Equipment purchases accounted for the spending of the majority of FY 2007 excess funds. Approximately ½ of the money spent to purchase equipment for expanded nonnative removal in FY 2008 and ½ the funds for equipment replacement.

Lake Powell elevation discussion – Mark McKinstry

- How big of problem would it be?
- Potential disruption of nursery habitat. Selective fish passage could be constructed at Mexican Hat. Ecology of the lake species may or may not be an issue.
- There is the probability that the Lake will inundate the waterfall for some period of time in the next ?? years. Program Coordinators office to produce white paper on issue for CC; BC to review. Include information on nonnative fish abundance prior to inundation of waterfall to post inundation.
- (1995-2000 waterfall inundated)

Constructed Backwaters report discussion – Ron Bliesner

Acclimation and soft release discussion – Jason Davis

- Review report and provide comments/feedback by June 11 to Ron.
- Acclimation has value, what is the best way and appropriate time frame (eg. 24 hrs vs. 7 days) for it; only data suggests more than 48 hrs needed.
- Need multiple sites to avoid catastrophic loss.
- Site costs: \$150,000 for top three sites above Hogback; for Hogback and below, use Hogback (\$50,000) and identify two additional sites for \$50,000 each.
- FWS -Region 2; NMFRO will develop Colorado pikeminnow stocking protocols specific for the Program. Based on recommendations in protocol will determine partial feasibility of implementation in FY 2007 with full implementation in FY 2008.

NAPI Ponds

- There are pond design issues with the Six Pack ponds and East Avocet that are making converting to a single cohort strategy difficult. The Program would need to retrofit the ponds with drains, kettles, and gravel bottoms so that they can be successfully drained and fish can be harvested.
- Keller-Bliesner has provided the BC with estimated costs (~\$250K) retrofitting the Six Pack ponds if the Program wants to continue with the single cohort strategy.
- Because of the difficulties encountered this spring only passive netting will be used until issues are resolved.

Options

- 1) Move away from single cohort strategy, and continue passive netting. Possibly a higher frequency of sampling.
- 2) Retrofit the ponds with drains and kettles and gravel bottoms so that we can successfully drain them.
- 3) Move all RBS production to federal hatcheries. Make a decision at next meeting.

Capital Projects update – Mark McKinstry

- Hogback fish screen: cost is significantly more than estimated; contact is not final and there may be alternatives to implementing this project. It will continue to move forward.

Schedule Next Meeting: June 25, Farmington

2:30 PM Adjourn

BC To Do List (Action Items)

1. Paul Holden to draft a memo to the CC regarding a TCD at Navajo Dam and BC's position on it.
2. Ron Bliesner to draft memo concerning the protocols for changing the flow recommendations.
3. The Program Coordinators Office to draft a white paper on the risk of inundation of the waterfall and outline why the BC isn't recommending a barrier at this time.
4. Comments to Ron by June 11 on Constructed Backwaters draft report.
5. Workshop to review fish monitoring protocols.