

June 20, 2018

Documents:

Topics for Discussion

Meeting Minutes



Middle Rio Grande Endangered Species
Collaborative Program
Est. 2000

Population Monitoring Work Group
Proposed Topics for Population Monitoring Work Group Discussion

June 20, 2018, 9:00 AM – 12:00 PM

Location: WEST, Inc. - 8500 Menaul Blvd NE Ste. B-342, Albuquerque

Conference Call information:

Phone: (712) 451-0011 Passcode: 141544

1. Refinement of the Population Monitoring Work Group (PMW) discussion from the last meeting
 - How does the PMW want to engage on the recent Federal Register Notice regarding initiation of a 5 year review of the listing package for the Rio Grande Silvery Minnow (RGSM)?
 - Proposed presentation to the Executive Committee (EC) regarding the role of the PMW
2. Description and Discussion of the Science Panel Recommendations
 - Hubert panel (22 recommendations)
 - Noon panel (12 recommendations)
 - How do we prioritize and synchronize these recommendations?
 - How many of these recommendations have we already addressed or are in the process of addressing already?
3. RGSM Monitoring Program
 - The existing RGSM monitoring program has been designed around the need to address population dynamics associated with addressing the Biological Opinion (BO) and agency requirements. Does it provide that in its current form?
 - What type of additional information is necessary to be collected in order to accurately address the requirements of the BO and agencies?
 - Can the PMW develop a strategic game plan on what work needs to be done over the next 6 and 12 months to help refine the monitoring program to provide knowledge regarding RGSM population?
4. Discussion of completed analysis (initial discussion)
 - Noon Recommendation E3 - CPUE by mesohabitat
 - Noon Recommendation A1 - CPUE versus Population estimates
 - Noon Recommendation E1 - Age structure from fish lengths
5. Charles Yakulic
 - Identification of what specific tasks he could do that would benefit the PMW and addressing the BO.
6. Next Steps



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Action Items

WHO	ACTION ITEM	DUE DATE
Michael Porter	Send WEST, for distribution to the group, the timeline for manuscript in progress.	7/31/18
Dave Wegner	Will send panel recommendation priority sequence to Charles Yackulic.	7/13/18

Next Meeting

- The next PMW meeting is to be determined, but will be scheduled for early August.

Meeting Commenced with an Introduction by Dave Wegner, Science Coordinator for Western Ecosystems Technology, Inc.

Dave Wegner, the Science Coordinator with WEST, opened the meeting, and informed participants that the Executive Committee (EC) has requested the group more fully develop their charge in relationship to their position with Adaptive Management (AM). He reminded participants that at the last meeting, the PMW decided the Data Analysis Team (DAT) didn't have a function anymore and the PMW would subsequently absorb the DAT's functions.

Dave W. then summarized the ongoing AM efforts:

- The AM Work Group (AMWG) intends to have an AM structure, including details to assist in implementation, in place within 12 months. The AMWG agreed on a definition, and has begun to discuss and decide upon a process. They are now discussing what the AM structure will look like, and how work groups will function under it. In January 2019, the AMWG will ask the EC to approve the AM structure; after which, the AMWG will implement the AM. The AMWG plans to start soliciting feedback from the EC on the AM structure in October.
- The next step is identifying key elements of the existing Program that need to be kept and thus integrated into a new Program structure. This includes migrating some of the technical responsibilities to the AM program.
- In addition, we have spoken with U.S. Army Corps of Engineers (USACE) and Todd Caplan about the Geosystems Analysis AM Framework to integrate that under the AM umbrella. We will have to determine what USACE's expectations are, and discuss how we can meet the agency's three-year fiscal requirements.

- WEST is working to implement a consistent and transparent process to develop appropriate SOWs that tie into the triennial study plan.

Dave W. then added that he saw the PMW as one of the groups to serve as an example/pilot of how the MRGESCP work groups can function under AM.

Questions ~~from~~ for the Group:

- Do you see study plans in other programs and around monitoring programs? Do they need to be modified to be more effective? Does something need to be added to monitoring to make its protocol more effective? And lastly, does research add value or predictive modeling capacity for MRGESCP AM.
 - The challenge is looking forward to provide data for water managers to make better decisions, develop predictive models for the physical system-system transport, channel incision, etc., and resolving any scientific uncertainty question and some of the assumptions we've used.

Dave W. then added that the last two parts of the AM process will center on integrating scientific review and oversight into our scientific program. This includes linking contracted projects to the scientific panels. He also noted that including the Pueblos is integral, as they have cultural affinities to what lies around the river.

Update on Current Task and the PMW Charge

- The group was reminded that the PMW is still working under the task directed from EC in December 2012.
 - The question was raised: how does the new framework of AM cause a change in the assignment to this group? And, does that have to go through the EC?
 - Answer: It should not change the task. The EC asked the work groups to detail what they are working on over the next year, and the EC will eventually want to make sure that what the PMW is doing fits into the AM structure. The EC would have to decide if it's appropriate for the work group to fall under AM, or be treated separately.
 - The PMW's job is pretty broad: make recommendations on the panel recommendations and to identify what can be done by the group.
 - Dave W.: Part of the challenge is identifying what the PMW is doing and how it supports the Biological Opinions (BO's) as well as the AM structure.
- The EC has asked for a detailed charge from the PMW. We have been asked to add a timeline to the three tasks listed in the charge.
 - One participant commented that they thought the work group was on track, and working with Charles Yackulic of the U.S. Geological Survey (USGS) gives the group a "fresh set of eyes."
 - ~~We also supported~~The ~~the~~ hydrologic "jiggle" took place this spring and we've agencies are started starting to look at overbanking issues. For the April fish monitoring, the two new sampling locations had Rio Grande Silvery Minnow. Now ~~it was is~~ a matter of evaluateevaluating, modifyngy, and makeinge things work. That is what this group was put together to do. That is, to gather the ASIR and Bio Park data together in a database so we can start looking at the data in real time.
- How do actions fit under the recommendation? It is a matter of steps and sequences to determine the statistical analysis. We then need to determine if we do this in house, or get a fresh set of eyes. The Hubert et al. panel recommendations were prioritized, and this group agrees with that prioritization; however, they may need to be revisited in order to integrate

them with the Noon recommendations, and then reprioritize the entire set of recommendations.

Hubert et al. Panel Recommendations

After much discussion on what's been done and in trying to bring Charles Yackulic (and Dave W.) up to speed, it was decided that it was best to discuss the Hubert et al. recommendations. The update was led by Rich V. A brief run through by Recommendation Number follows; refer to the Consolidated Panel Recommendations for additional detail:

- 1 Separate life ages for analysis: part of this is complete.
- 2 CPUE is based on recommendation 1; however, this one is based on precision and statistical analysis. This is perhaps something Charles Y. or a few of us can do.
- 3 Two gear types: it may need a look, statistical analysis.
- 4 This one has been brought up previously and is for October only: statistical analyses may need to expand beyond October.
- 5 If the angle is to get to a predictive model, do we have the data to do that? Charles Y. could look at answering that. It's a matter of how do we look at the data and how do we separate it. The question would be what are the objects of interest? Is it the total number of RGSM in the system or in density?
- 6 The statistical analysis can be done by Ashley Tanner to support Charles Y's questions. (*A technical discussion continued and is not captured in this summary.*)
- 7 False zeros having to do with dry sites and is related to recommendation 4: it's an analysis question again. Michael Porter is working on a paper to address some of the false zero assumptions.
- 8 This will be what Charles Y. could look at.
- 9 This is an expansion of recommendation 6 and asks the same question. This will be what Charles Y. could look at. Charles Y. asked if there were records on this. Ashley T. answered that it's going to be difficult to place this data temporally. Mickey P. spoke to some of the data available (made available in his paper).
- 10 This is covered by same data set. Mickey P.'s is working on this. Goal is to publish. Timeline is to get the manuscript to Charles by mid-July
- 11 We need to be careful. This recommendation has to do with the recovery plan. Really a FWS issue. What we do is amend the CPUE data so FWS can use this information in their recovery plan. It would just be a report in the Program, but not specifically to support the recovery plan.
- 12 Charles could help mainly because were dealing with a complexity of covariates. (*Rich went into technical detail with Charles about mixture model and CPUE*). Charles Y. asked how much variation there was in effort at the haul scale. Mickey P. answered that variation was between 400 and 600 square meters for 20 sample areas. (*Charles gave some of his preferences on the technical detail*). This will be what Charles Y. could look at.
- 13 This will be what Charles Y. could look at. It was suggested the word "Complete" be removed from Status column of the compiled panel recommendations because we're tasked to look retrospectively and do some retrospective analysis.
- 14 This one is a question of precision. One of us could do this with Charles Y.'s help. If a long term predictive model is desired, the approach may require additional discussion and data development.
 - o Rich V. added that with a power analysis, we can determine cost and introduce this aspect to the analysis. Charles Y. suggested that the group think about quantifying availability of sites and the cost of that. He also suggested that scaling up will provide some insight.

- A small group meeting with Ashley T. to move a recommendation to the group may be appropriate.
- 15 *(There is no 15 in the Hubert Recommendations)*
 - 16 Historical availability of mesohabitats, which will wrap into recommendation 12.
 - 17 This one is related to the previous question about the mixture model, and is one of the areas we thought Charles Y. could help the PMW the most. He could determine if there are alternative analytical approaches. Charles Y. responded he would want to understand what is going on in some of the earlier factors, such as capture probability and etc., first.
 - 18 Mick P.'s paper may speak to this, but it may be useful to get feedback from Charles Y. in the fall.
 - Mick P. will put together a timeline for completion of his manuscript.
 - 19 This one comes under task #3 of the PMW charge rather than what we are doing now, or at least is subsequent to what we are doing now. This would be a PMW and AM recommendation
 - 20 *(There is no 20 in the Hubert Recommendations)*
 - 21 This is a stock recruitment framework. It was suggested that Charles Y. look at what Mike Hatch (of New Mexico State University) is working on; sequenced after other work.
 - 22 Fecundity, and is something identified as a potential for field study. May be a literature review task first. (There will be the Mike Hatch model, referenced above, coming out as well.) Rich V. has done much of this, and his work may provide a good starting point for Charles Y. to work from.
 - 23 This is outside this group's purview, belongs to Genetics.
 - 24 This is something the work group could do. This is a reach by reach analysis, simple correlations, or categorical analysis. Can be a Rich V. or WEST analysis; a lot of data assimilated for this but it also has a low priority.

"Observations Beyond the Scope" (BTS) were additional recommendations made by the Hubert et al. science panel. A brief run through is provided by BTS number; refer to the Consolidated Panel Recommendation for detail:

- BTS 1: The work group agreed this one could be skipped.
- BTS 2: This may be a starting point the work group may want to look at.
- BTS 3: This seems to be the same as some of the above and also deals with hatcheries.
- BTS 4: This may be outside the scope of this group (not necessarily out of AM or Genetics).
- BTS 5: This is an action agency dialogue down the road.
- BTS 6: This is an AM task.
- BTS 7: This is an AM task.
- BTS 8: This is an AM task.
- BTS 9: This is an AM task, including a discussion about how we are going to use the data
- BTS 10: This is a final, peer-reviewed report

- The Noon et al. Panel Recommendations can be reviewed in much the same way by the PWM and by Charles Y., with interactions with work group members individually to get an understanding of what Charles himself can do, what WEST with Ashley T. can do, and then what the group can do.
- Dave W. will send panel recommendation priority sequence to Charles Y.

Additional Comments

- It was commented that there was not full participation from members of the group; many were absent due to schedules during field season. This was mentioned because some

members wanted to discuss the need to develop a constructive way to give feedback and wanted a dialogue with more members present.

- One member recommended using four-point review for comments, which addresses an issue, the type, and recommendation to accompany review comments. Another member suggested something less formal would be sufficient.
- Ashley T. offered to facilitate feedback between Charles and the various members of the group. Another member agreed that before getting together to discuss analyses, it may be more helpful to talk to a person for informal feedback.

Present:

Participant

Organization

Rick Billings	Albuquerque Bernalillo County Water Utility Authority
Lynette Giesen	U.S. Army Corps of Engineers
Eric Gonzales	U.S. Bureau of Reclamation
Grace Haggerty	New Mexico Interstate Stream Commission
Shay Howlin	Western Ecosystems Technology, Inc.
Debbie Lee	Western Ecosystems Technology, Inc.
Mike Marcus	Assessment Payers Association of the MRGCD
Anne Marken	Middle Rio Grande Conservancy District
Lana Mitchell	Western Ecosystems Technology, Inc.
Michael Porter	U.S. Army Corps of Engineers
Dale Strickland	Western Ecosystems Technology, Inc.
Ashley Tanner	Western Ecosystems Technology, Inc.
Rich Valdez	SWCA Environmental Consultants
Dave Wegner	Western Ecosystems Technology, Inc.
Matt Wunder	New Mexico Department of Game and Fish
Charles Yackulic	U.S. Geological Survey
Bill Pine	University of Florida