

# Population Monitoring Work Group Meeting

## *November 14, 2017*

### Meeting Materials:

Meeting Agenda

Meeting Minutes

Evaluation and Analysis of Science Panel Recommendations for the RGSM: Data Analysis Plan

Summary of Findings by the External Expert Panelists: RGSM Population Monitoring Workshop, Isleta Casino and Resort, 8-10 December 2015 [report not included]

Independent Science Panel Findings Report: RGSM Key Scientific Uncertainties and Study Recommendations [report not included]

Master- RGSM Population Monitoring Database 1993-2016 by Station [spreadsheet not included]

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Middle Rio Grande Endangered Species  
Collaborative Program  
*Est. 2000*

**Population Monitoring Data Analysis Technical Small Group  
Kick off Meeting**

*November 14, 2 PM – 4 PM*  
*Location: WEST, Inc. Office*

**Meeting Agenda**

**Conference Call information:**  
**Phone: (712) 451-0011 Passcode: 141544**

2:00-2:05	Welcome and Introductions ➤ Approval of Agenda	<i>Debbie Lee</i>
2:05-2:10	Review of October Population Monitoring Work Group Discussion and Scope of Work Task List	<i>Debbie Lee</i>
2:10-2:15	Update on Data Files <ul style="list-style-type: none"><li>• Next Steps</li><li>• Timing</li></ul>	<i>Jared Studyvin</i>
2:15-3:30	Work Plan – Timing and Tasks <ul style="list-style-type: none"><li>• Proposed Work Plan</li><li>• Review of Recommendations from Panels<ul style="list-style-type: none"><li>○ Separate out data analyses recommendations</li></ul></li><li>• Review of capabilities on team<ul style="list-style-type: none"><li>○ Do we have the right skill sets?</li><li>○ Are we missing any skills?</li></ul></li></ul>	<i>Rich Valdez</i> <i>Debbie Lee</i>
3:30-3:50	Review of Proposed Scope for Outside Support	<i>Debbie Lee</i>
3:50-4:00	Summary and Next Steps	<i>Debbie Lee</i>
4:00	Adjourn	



Middle Rio Grande Endangered Species  
Collaborative Program  
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**Population Monitoring Work Group Data Analysis Team  
Meeting Minutes**

**Tuesday, November 14, 2017 – 2:00 PM – 4:00 PM**

**Location: *Western Ecosystem Technology, Inc. (WEST) Office***

**Decisions:**

- The group decided to evaluate the overlap between the Hubert et al. and Noon et al. recommendations related to data analysis and decided what to do at the next meeting.
- The group decided one goal of the reanalysis task is to collect the available population monitoring data and evaluate what analyses they can support and conduct those analyses. The group will suggest future studies based on the analyses the data cannot support.
- The group agreed to break down the Data Analysis Team (DAT) into an external reviewer, and internal reviewer/coordinator, and the analysis team.

**Actions:**

Who:	Action Item
Rich Valdez	will evaluate the overlap in panel recommendations from Hubert et al. and Noon et al. for data analysis to present to the group.
Debbie Lee	will invite Robert Dudley, ASIR, to participate on the DAT.
Debbie Lee	will invite Eric Gonzales to join the DAT.
Debbie Lee	will contact Thomas Archdeacon about his availability to participate in the DAT.
Debbie and Jared	will investigate who at WEST to select for database management.
Joel Lusk and Rich Valdez	will work with Rich Valdez to QA/QC MASTER-RGSM Pop Mon Database 1993-2016-by Station.
Rich Valdez	will send WEST the Yackulic and Dzule 2016 paper to circulate to the group.
Rick and Debbie	will work together on an update presentation to the Executive Committee (EC) on the status of the four scopes of work.
Debbie	will redraft the proposed data analysis work plan and circulate to the group.
Rich and Jared and Moulson	will review and revise the Yackulic Scope of Work (SOW); WEST will circulate the revised SOW to the group.
Debbie Lee	will contact Yackulic regarding a bio to circulate to the group on Friday November 17.
Debbie Lee	is drafting a budget for the Yackulic contract.

**Request/Recommendations:**

- It was suggested that ASIR should be invited to participate in the DAT.
- The group requested WEST be used for database management for the reanalysis task while the DBMS is in transition.

**Next Meeting:**

**TBD**

# Meeting Notes

## Review of Population Monitoring Work Group (PMW)

- Task two (2) or the re-analysis of historical population monitoring data is part of the original charge to the PMW group from the EC. The DAT is a subgroup of the PMW which will be responsible for analyzing the historical population monitoring data for task two (2).
- The group discussed whether to focus on the Hubert et al. panel review or include the recommendations from the Noon et al. panel review as well. It was suggested that the group should only focus on the recommendations from Hubert et al. as that is what prompted the creation of the group. Some felt that the recommendations from Noon et al. should be included as they seem complimentary to the recommendations from Hubert et al.
  - The group decided to evaluate the overlap between the Hubert et al. and Noon et al. recommendations related to data analysis and decided how to proceed at the next meeting.
    - Rich Valdez was tasked with evaluating the overlap between the Hubert et al. and Noon et al. recommendations.
- Rick Billings will send the previously created prioritization matrix for the Hubert et al. recommendations to WEST for circulation to the group.

## Population Monitoring Data Acquisition Update

- WEST has a call with American Southwest Ichthyological Researchers (ASIR) on November 21<sup>st</sup> to discuss getting the historical population monitoring data. WEST would like to get the whole relation database so that the group can do its own queries, but this seems unlikely as it is not in ASIR's contract.
- In lieu of the relation database the group would like to get a file from ASIR that integrates the by station and by haul data to reduce errors caused by reintegrating the data manually by the group.
- It was suggested that ASIR should be invited to participate in the DAT.
  - Debbie Lee was tasked with inviting Robert Dudley, ASIR, to participate in the DAT.

## Proposed Work Plan

- The proposed work plan is as follows:
  - Acquire historical data files.
  - Clean the data.

- Merge files if the group cannot acquire integrated files from ASIR.
- Replicate ASIR's and validate ASIR's average October CPUE density.
- It was proposed that the primary reanalysis task should be collecting the available data and evaluating what analysis the data can support and what questions it can answer. Based on what the current population monitoring data can support the group can suggest future studies.
  - The group approved the proposal.

### **Data Storage and Management**

- During the interim period, while the Database Management System is being transferred to the U.S. Geological Survey (USGS), WEST would like to hold the data as a neutral party. The group agreed and requested using WEST for data storage and management
  - Debbie and Jared will discuss who at WEST can be the database manager for this project.
- A concern was raised that non-direct management decisions will arise from the reanalysis of the data.

### **Suggested Group Breakdown**

- It was suggested that the group be broken down into an external reviewer who will not be directly involved in the analyses, an internal reviewer who coordinates the group and maintains consistency, and the people doing the analyses. The group agreed to the break down and began discussing the assignment of roles.
  - External Reviewer: Senior WEST Statistician TBD
  - Internal Reviewer: Jared Studyvin
  - Analysis Team: Rich Valdez, Charles Yackulic, Mike Marcus, Mick Porter, Eric Gonzales, and Rick Billings. (Joel Lusk and Thomas Archdeacon will participate as time permits)
- Data analysis task will first be assigned to volunteers with the remained assigned by the team.

### **Other Data**

- The group discussed other, possibly useful data sets, such as the fish monitoring data sets kept by SWCA, USBR, and U.S. Fish and Wildlife Service.

## Meeting Attendance

Attendee		Agency
Rick	Billings	Albuquerque Bernalillo County Water Utility Authority
Debbie	Lee	Western Ecosystem Technology, Inc.
Joel	Lusk	U.S. Fish and Wildlife Service
Mike	Marcus	Assessment Payers Association
Luc	Moulson	Western Ecosystem Technology, Inc.
Jared	Studyvin	Western Ecosystem Technology, Inc.
Rich	Valdez	NM Interstate Stream Commission

Evaluation and Analysis of Science Panel Recommendations  
For the Rio Grande Silvery Minnow

Data Analysis Plan

Kickoff Meeting – November 14, 2017 (2:00 – 4:00 pm)

**1.0 Introduction**

**2.0 Purpose**

- To evaluate and analyze data associated with the Rio Grande silvery minnow to better inform management decisions of the Middle Rio Grande Endangered Species Collaborative Program (Program)

**3.0 Objectives**

1. Address the recommendations of the Population Monitoring Science Panel (Hubert et al. 2016), and recommendations from the Independent Science Panel for Key Scientific Uncertainty (Noon et al. 2017) where complementary with Hubert et al,
2. Perform additional analyses, as necessary and appropriate, to better inform the demographic characteristics of the silvery minnow, and linkages to environmental variables, and
3. Identify studies and related analyses that address uncertainties and unknowns and may be incorporated into a science plan to move forward with adaptive management.

**4.0 Strategy**

1. Assimilate Small Team of Analysts
2. Reconcile Science Panel Recommendations
3. Procure Population Monitoring data:
  - a. by Station
  - b. by Haul
  - c. Occupancy
  - d. Population Estimation
4. Assign Analyses to Team Member with Assistance from MRG Scientists



## 5.0 Preliminary Schedule

1. November 14, 2017: Kickoff Webinar for Data Analysis Team (verify data sets needed, reconcile and prioritize recommendations, assign analyses to Team members)
2. November 21, 2017: Meeting between WEST, Reclamation, and ASIR on data sets
3. November 30, 2017: Pertinent data sets are procured and made available to the Team
4. December 12, 2017: Introduce Team Purpose and Objectives at EC Meeting
5. January 19, 2018: Webinar for Data Analysis Team Update
6. February 1-2, 2018: Data Analysis Workshop (Team member presentations)
7. March 2, 2018: Preliminary Report
8. March/April, 2018: Presentation to EC
9. May, 2018: Final Report

## 6.0 Resources

1. Data Analysis Plan, Draft 1, October 17, 2017
2. Hubert, W., M. Fabrizio, and R. Hughes. 2016. Summary of Findings by the External Expert Panelists: Rio Grande Silvery Minnow Population Monitoring Workshop Isleta Casino and Resort, 8-10 December 2015. Prepared by the expert panelists on behalf of the U.S. Bureau of Reclamation, and submitted by Atkins. U.S. Bureau of Reclamation, Albuquerque, NM.
3. Noon, B., D. Hankin, T. Dunne, and G. Grossman. 2017. Independent Science Panel Findings Report: Rio Grande Silvery Minnow Key Scientific Uncertainties and Study Recommendations. Prepared for the U.S. Army Corps of Engineers, Albuquerque District on Behalf of the Middle Rio Grande Endangered Species Collaborative Program. Prepared by GeoSystems Analysis, Inc. Albuquerque, NM. June 2017. Contract No. W912PP-15-C-0008.
4. 1993-2016 Population Monitoring Data (by Station in Excel)

### *Supplemental Resources:*

5. SWCA Data
6. Reclamation Data
7. FWS Data