

Population Monitoring Work Group Meeting
February 1, 2018

Meeting Materials:

Meeting Agenda

Meeting Minutes



Middle Rio Grande Endangered Species Collaborative Program

Est. 2000

Data Analysis Team Meeting Meeting Agenda

February 1, 2018 1:00 PM – 3:00 PM

Location: WEST, Inc. 8500 Menaul NE Suite B-342

Conference Call Information:

Phone: (712) 451-0011 Passcode: 141544

1:00-1:10	Welcome, Introductions and Agenda Review	Jared Studyvin
1:10-1:20	Review of November 29, 2017 Population Monitoring Work Group meeting and November 14, 2017 DAT meeting: From Population Monitoring Work Group: <ul style="list-style-type: none">• DAT will prioritize recommendations by information gained for management decisions• DAT will provide a work plan, schedule, and possibly a budget before proceeding• Concerns about DAT members tight schedules• How will the DAT be held accountable?• DAT will evaluate who has sufficient time and skills• Jared Studyvin will serve as the chair of the DAT	Jared Studyvin
1:20-1:25	Purpose of the DAT <i>“The Data Analysis Team (DAT) is a subgroup of the PMW which will be responsible for analyzing the historical population monitoring data ...” – DAT meeting on November 14, 2017</i>	Jared Studyvin
1:25-1:35	Communication and analysis transparency <ul style="list-style-type: none">• What should our communication structure look like?• Can decisions be made outside of meetings?• How will analyses be documented and shared?	Jared Studyvin
1:35-2:30	Review panel recommendations <ul style="list-style-type: none">• Prioritize recommendations• Assess the skills required	Jared Studyvin
2:30-3:00	Overview of RGSM Population Monitoring Data	Ashley Tanner
3:00	Next Steps and Adjourn	

Time
Permitting

- Review of DAT members
- External reviewer
 - Skill sets
 - Time availability

- Review and update DAT plan and schedule
- Schedule
 - Deliverables

Jared Studyvin



Middle Rio Grande Endangered Species Collaborative Program

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**Data Analysis Team (DAT)
Meeting Minutes
February 1, 2018, 1:00 PM–4:00 PM
Location: WEST, Inc. -8500 Menaul Boulevard NE Suite B-342**

Action Items:

WHO	ACTION ITEM	BY WHEN
Ashley Tanner	Send out flat file (Excel) and Access versions of the processed data set to the group along with the metadata Word document.	ASAP
All	Provide feedback to WEST on Ashley Tanner’s processed version of the data set based on the metadata Word document.	ASAP
All	Provide additional questions for ASIR to WEST regarding specific data set fields.	ASAP
Jared Studyvin Ashley Tanner	Incorporate questions from 2/1/18 DAT meeting and other questions they receive from the group in their list and discuss those questions with ASIR when WEST meets with them.	ASAP
Ashley Tanner	Send out to the group a version of the data set with fish species rows transferred to columns and Null values changed to 0.	1 week before next DAT meeting
Jared Studyvin	Develop a proposed timeline for the work of the DAT.	Next DAT meeting (2/20/18)
Jared Studyvin Ashley Tanner	Bring the list of panel recommendations to present at the next DAT meeting, including suggestions for how they should be prioritized.	Next DAT meeting (2/20/18)

Next Meeting:

- February 20, 2018, 9:00 AM–12:00 PM, at WEST Inc.
- The agenda for the next DAT meeting will focus on:
 - The list of peer review panel recommendations.
 - What analyses are possible with the current data set?
 - Identifying “low-hanging fruit” and prioritizing the recommendations.

A discussion about covariates. This topic may be tabled until a future DAT meeting that can focus solely covariates and potentially including hydrologic information in analyses. **Welcome, Introductions, and Agenda Review**

- The agenda for this meeting is focused on developing specific goals for the DAT with endpoints, methods for communication, consensus on the data set that will be used, and how

the work of DAT members will be transparent. This includes looking at the original questions posed by the peer review panel and determining whether they can be answered with the data set.

Review of 11/29/17 Population Monitoring Work Group meeting and 11/17/17 DAT meeting, and discussion about DAT purpose, communication, and analysis transparency

- The last Population Monitoring Work Group meeting tasked the DAT with coming up with a plan for analysis once it is comfortable with the data set. Specifically:
 - The DAT will prioritize recommendations by information gained from management decisions.
 - The DAT will provide a work plan, schedule, and possibly a budget before proceeding.
 - The DAT will consider the ways in which it can be held accountable.
 - The DAT will evaluate who has sufficient time and skills to do analyses.
 - Jared Studyvin (WEST Inc.) will serve as the Chair of the DAT.
- From the November 14, 2017 DAT meeting: “The Data Analysis Team (DAT) is a subgroup of the PMW which will be responsible for analyzing the historical population monitoring data...”
- What is the end product of the DAT?
 - The group wants to move fast enough to meet the timeline and develop deliverables, but it wants to move slow enough to make sure everyone is on the same page.
- Concerns:
 - The DAT will spend too much time on determining processes rather than doing analysis.
 - The DAT will limit the work that the data analysts can do if they filter the data set too much. DAT members with this concern note that the analysts will want to look at the full data set, discuss what other data should be included in the data set, and determine what can be done with the data before this type of filtering takes place. This sets the foundation for the individual analysts to go off on their own to do analyses, because they have a common understanding of what can and should be done.
 - The group does not want the analysts or any single analyst to run away with the data and make changes, additions, and associations on their own without their process and findings being transparent. The group does not want to have to do these analyses a second time because there are questions about how analyses were done.
 - All data should be provided to the analysts, so there are not any perceptions about outside influence or uncertainty about what has been done.
- Rich Valdez posed 3 questions that should be considered during the DAT’s work:
 - Is the sample design appropriate to monitor RGSM?
 - Are the metrics the most appropriate for monitoring RGSM, and are the analyses appropriate for those metrics?
 - What is the power, precision, and utility of this particular monitoring program?
- Several panels have already considered Rich’s questions (which come from Task 2 of the July 13, 2012 “Approval of the 1st Task for Review of the Collaborative Program Fish Monitoring Program for the Rio Grande Silvery Minnow, A Proposal for a CPUE Metrics

and Methodologies Workshop). Ultimately, the DAT needs to follow the recommendations and questions provided by the Population Monitoring Work Group. The DAT should start with these questions and keep track of new questions that come up through analyses (in a “Parking Lot”). It would be too large of a task to start with additional questions, seek out new data, etc. In the process of understanding this data set, this group will come to understand its shortcomings.

- J. Studyvin’s overall plan for the DAT: The group comes to a consensus about who the analysts will be, he will manage them to do the work of the DAT (i.e., what they’ve been tasked to do by the Population Monitoring Work Group), and their work will be fully documented and transparent in a report at the end of the process.
- J. Studyvin (WEST Inc.) will develop a proposed timeline for the work of the DAT to present at the next DAT meeting.
- J. Studyvin and Ashley Tanner (WEST Inc.) will bring the list of panel recommendations to present at the next DAT meeting, including an assessment of whether the historic population monitoring data can address each recommendation.

Overview of RGSM Population Monitoring Data

- Original files from Reclamation, as were provided by ASIR following their QA/QC:
 - Query1Samples
 - Query2Habitats
 - Query3Species
 - Query4Combined
 - RGSMPopMon_Monthly_Haul_2014-2016
 - RGSMPopMon_Monthly_Station_2014-2016
- Ashley Tanner processed these data by combining them into one table with a single format: RGSMPoPMon_1993-2016.
 - Individual ASIR projects were filtered out to contain only records from the ‘Hybognathus Amarus Population Monitoring’ project.
 - The data for previous years (1993-2003) is in a different formation from 2014-2016, so they were put into the newer format.
 - Ashley documented how this was done, including fields that were deleted, field names that were changed, fields that were added, as well as other adjustments to the data.
- Egg/spawning data are reported by reach and are structured differently, so they are not part of this database. This is something that A. Tanner has questions about for ASIR before those data can be processed.
- Discussion regarding “haul” data
 - Just looking at “by station” data may not be able to explain all the variability.
 - Some questions require “by station” data. These questions can be identified at the next DAT meeting.
- Haul data from before 2002 does not exist. When .CSV files are exported from Access for analyses (e.g., with R), they will include all of the manipulations and filtering that are done in Access. The group needs to be careful about what is included and not included prior to exporting data.
- Feedback on the data set:

- In the late 1990s, some station names/numbers changed, so the group may need to plot these on a map using the UTM coordinates to determine which ones are the same.
- Where there is not a recorded number for a species, a cross-tab query function can be used to change “Null” to “0” for data points where no fish were recorded.
- As soon as possible, A. Tanner (WEST Inc.) will send out flat file (Excel) and Access versions of the processed data set to the group along with the metadata Word document.
- The group will provide feedback to WEST on the processed data set.
- 1 week before the next DAT meeting, A. Tanner (West Inc.) will transfer the species rows to columns, change Null values to “0,” and send the updated data set to the group.

Questions for ASIR

- Why are dry sites noted in both “Mesohabitat” and “NotSampled” fields?
- The 118 records that were dropped records that weren’t sampled: What are these? They appear to be aggregate numbers or XXXX.
- Confirm whether the “ReportingDateRaw” field corresponds to the date that sampling occurred or the reporting date that it was applied to for analyses.
- As soon as possible, the group will provide additional questions for ASIR to WEST regarding specific data set fields.
- J. Studyvin, A. Tanner (WEST Inc.) will incorporate the above questions and other questions they receive from the group in their list and discuss those questions with ASIR when WEST meets with them.

Analysis “Parking Lot”

- November repeated monitoring data (Project 3) are still separated from this data set, because those data are also separated in ASIR’s annual report. ASIR does not include November in the annual data graphs.
 - These data may be important for understanding impacts on the data for December from fish stocking done in November. Should these data be combined with the larger data set?
 - Sampling Month/Sampling Period (which may be equal to the reporting month) can be used to determine if the data is from repeated November monitoring.
 - Some of these data may actually be part of the population monitoring data, but the project number is different. Which of these data under other project numbers should be combined with the larger data set?

Meeting Participants

Participant		Organization	
Rick	Billings	Albuquerque-Bernalillo County Water Utility Authority	
Lynette	Giesen	U.S. Army Corps of Engineers	
Eric	Gonzalez	U.S. Bureau of Reclamation	
Grace	Haggerty	New Mexico Interstate Stream Commission	
Mo	Hobbs	Albuquerque-Bernalillo County Water Utility Authority	
Joel	Lusk	U.S. Fish and Wildlife Service	
Mike	Marcus	Assessment Payers' Association	
Ed	McCorkindale	Western Ecosystems Technology, Inc.	
Kathryn	Mendoza	Albuquerque-Bernalillo County Water Utility Authority	
Michael	Porter	U.S. Army Corps of Engineers	
Jared	Studyvin	Western Ecosystems Technology, Inc.	On phone
Ashley	Tanner	Western Ecosystems Technology, Inc.	
Richard	Valdez	SWCA Environmental Consultants	