

Middle Rio Grande Endangered Species Act Collaborative Program Science Work Group Meeting

28 September 2010 Meeting – 9:00 AM-11:30 AM

Interstate Stream Commission

Actions

- ScW members will review the USGS progress summary to discuss at the October 19, 2010 ScW meeting.
- Jeanne Dye will check to see if temperatures are still a part of the RGSM Rescue/Salvage project.
- Jeanne Dye will contact the POC that works with Darrell Ahlers for guidance on the *Develop a Program Flycatcher management plan* activity.
- Jen Bachus will check on the status of Jason Remshardt giving an augmentation update to the CC and EC in November and will request that Jason also present at an upcoming ScW meeting (either in October or November)
- ScW members will read the the 2009 RGSM Genetics Management and Propagation Plan (document can be found on the Program website: Library → Reference Documents) and the summary that Alison Hutson wrote on the genetics reports (the summary has been previously circulated through email).

Decisions

- The August 17, 2010 ScW meeting minutes were approved with no changes.
- Alison Hutson has agreed, with workgroup concurrence, to accept the position of ScW Co-Chair with the limitation that she will be taking 6-8 weeks leave in January and February of 2011.

Meeting Summary

Introductions and Agenda Approval – Jeanne Dye brought the meeting to order. The agenda was approved with *EMP Research Questions* being tabled for the October Science Workgroup (ScW) meeting when Anders Lundahl or Ondrea Hummel will be available to attend.

Approve 08/17/10 ScW Meeting Minutes – The August 17, 2010 ScW meeting minutes were approved with no changes.

Co-Chair Election – Meeting attendees discussed nominees for non-federal Co-Chair. Current nominees are Alison Hutson, Andrew Monie, and Rick Billings. Since Rick Billings is currently the Habitat Restoration Workgroup (HRW) Co-Chair and Alison has more history with the ScW than Andrew it was suggested that Alison Hutson be the non-federal Co-Chair and the workgroup agreed. Alison has agreed to accept the position of ScW Co-Chair with the limitation that she will be taking 6-8 weeks leave in January and February of 2011.

USGS Quarterly Report – Bureau of Reclamation (Reclamation) has received a progress summary from USGS, a copy of the summary was distributed to meeting attendees. Jericho Lewis has made the request that the ScW review the progress report and the objectives of the project to see if all needs are being met. It is not known if the project is in its final phase but it is thought that the project is at a point where there is an opportunity to modify the contract if needed. ScW will review the USGS progress summary to discuss at the October 19, 2010 ScW meeting.

Prioritize FY 2011 projects and SOW development – This portion of the ScW meeting was spent as a working session to discuss which Priority 1 LTP Future Activities ScW would like to be funded

in Fiscal Year (FY) 2011. A packet of Priority 1 Future Activities and their summaries were distributed to meeting attendees. Several of the activities are requirements of the 2003 Biological Opinion and/or are on-going projects and will have priority for funding in FY 2011. Meeting attendees discussed the remaining activities and were able to narrow down 4 activities to potentially be funded in FY 2011.

- *Evaluate water quality in the MRG in relation to the RGSM* - The first phase of this project is to review and compile past water quality and toxicity studies. Since water quality data has been collected for multiple studies it is not known if there are potential data gaps; compiling all the existing data and reports would be a good starting point to focus studies. Temperature measurements that are potentially being taken as a part of other projects could also be compiled. It was thought that the most efficient way for this task to be accomplished would be to contract out a literature review to identify and compile related data. In the past temperatures have been taken as a part of the annual population monitoring but there is a new contract and it is not known if temperatures are still being taken; Jeanne Dye will check to see if temperatures are still a part of the contract.
- *Increase understanding of the RGSM life history and habitat needs through focused scientific studies* - This activity is comprised of several smaller activities. It was thought that *Conduct studies to determine characteristics and effects of nursery habitat on RGSM* and *Determine spawning habitat for RGSM* were similar enough that they could be combined as the same project; this would be a multi year study with high costs per year. It was thought that *Conduct studies and evaluate data to improve understanding of the physical habitat requirements for all life stages of RGSM (velocity, depth, temperature, substrate, cover)* should begin with data assimilation to identify gaps to further direct the study.
- *Research hatching success and related fecundity for all age class fish (RGSM Fecundity study)* – It was thought that this study could be carried out with a series of experiments including counting eggs pre spawning and controlled experiments with paired spawning. It was thought that it would be useful for this study to not only look at naturally spawned fish but to also look at hormonally-induced spawning. Experiments studying survival to first feeding would also be useful.

These 4 activities will be presented to the CC as a read-ahead for the October 6th meeting. Based on the estimated costs for these projects and their predicted ability to produce tangible results it was thought the *Evaluate water quality in the MRG in relation to the RGSM*, *Conduct studies and evaluate data to improve understanding of the physical habitat requirements for all life stages of RGSM (velocity, depth, temperature, substrate, cover)*, and *Research hatching success and related fecundity for all age class fish (RGSM Fecundity study)* studies should be given priority over the *Conduct studies to determine characteristics and effects of nursery habitat on RGSM* and *Determine spawning habitat for RGSM* combined study for FY 2011 funding. ScW would like to develop Scopes of Work (SOW) for all 4 of these activities by November 2010.

In discussion on *Develop a Program Flycatcher management plan* it was determined that not enough information is currently known about the development of a Flycatcher management plan to determine if it should be funded in FY 2011. This activity was thought to be very important because the Program tends to focus more on silvery minnow than on Flycatcher activities. It was suggested that Darrell Ahlers be contacted for insight on developing a Flycatcher management plan for the MRG; Jeanne Dye will contact the POC that works with Darrell Ahlers for guidance on the *Develop a Program Flycatcher management plan* activity. Currently, ScW has this activity ranked as a #2, however the priority of this activity may be elevated based on Darrell's input.

Jason Remshardt has been requested to give updates on augmentation to the Coordination and Executive Committees (CC and EC) in November; Jen Bachus will check on the status of that request and request that Jason also present at an upcoming ScW meeting (either in October or November).

EMP Research Questions – This agenda item was tabled for the October meeting when Anders Lundahl or Ondrea Hummel will be available to attend. The agenda item is expected to include a discussion in which ScW will give feedback on the high intensity monitoring of the EMP.

Program update

- **EC update** – The last EC meeting was a closed session. It is not known if the notes will become available.
- **CC update** – The CC meeting on October 13 has been rescheduled to October 6. The CC will be discussing budgeting for FY 2011. There will be a kickoff meeting for the Adaptive Management Plan on October 13; at the end of November the contractor will be having one-on-one meetings with each signatory.
- **LTP update** – It's not known when the next meeting to work on the LTP will be. Some of the Priority 1 Future Activity Summaries will need to be revisited by the CC. Progress has been made with the text of the LTP.

Genetics Program Discussion – This discussion was tabled for the October 19 ScW meeting. The discussion will not be a critique of the genetics but a discussion on whether or not the Program is using the information that has been gathered and based on that there will be discussion on changes that may be recommended for the genetics program. ScW members will read the 2009 RGSM Genetics Management and Propagation Plan (document can be found on the Program website) and the summary that Alison Hutson wrote on the genetics reports (the summary has been previously circulated through email).

Next ScW Meeting October 19, 2010 from 9:00 am to 11:30 am at Interstate Stream Commission

- Possible agenda items: Genetics Program Discussion, EMP Research Questions, and USGS Progress Summary.

Middle Rio Grande Endangered Species Act Collaborative Program
Science Work Group Meeting
28 September 2010 Meeting – 9:00 AM-11:30 AM
Interstate Stream Commission

Meeting Minutes

Introductions and Agenda Approval

- Jeanne Dye brought the meeting to order. The agenda was approved with *EMP Research Questions* being tabled for the October Science Workgroup (ScW) meeting when Anders Lundahl or Ondrea Hummel will be available to attend.

Approve 08/17/10 ScW Meeting Minutes

Decision: The August 17, 2010 ScW meeting minutes were approved with no changes.

Co-Chair Election

- Meeting attendees discussed nominees for non-federal Co-Chair. Current nominees are Alison Hutson, Andrew Monie, and Rick Billings. Since Rick Billings is currently the Habitat Restoration Workgroup (HRW) Co-Chair and Alison has more history with the ScW than Andrew it was suggested that Alison Hutson be the non-federal Co-Chair and the workgroup agreed. However, Alison will be taking 6-8 weeks leave in January and February of 2011; there was agreement from the workgroup that this would not be an issue.

Decision: Alison has agreed, with workgroup concurrence, to accept the position of ScW Co-Chair with the limitation that she will be taking 6-8 weeks leave in January and February of 2011.

USGS Quarterly Report

- Bureau of Reclamation (Reclamation) has received a progress summary from USGS; copies of the summary were distributed to meeting attendees. Jericho Lewis has made the request that the ScW review the progress report and the objectives of the project to see if all needs are being met.
- It is not known if the project is in its final phase but it is thought that the project is at a point where there is an opportunity to modify the contract if needed. The ScW will review the progress summary and then discuss it at the October 19th meeting to see if they should recommend that there be additional and/or different work.

Action: ScW will review the USGS progress summary to discuss at the October 19, 2010 ScW meeting.

Prioritize FY 2011 projects and SOW development

- This portion of the ScW meeting was spent as a working session to discuss which Priority 1 LTP Future Activities ScW would like to be funded in Fiscal Year (FY) 2011. A packet of Priority 1 Future Activities and their summaries were distributed to meeting attendees.
- Several of the activities are requirements of the 2003 Biological Opinion and/or are on-going projects and will have priority for funding in FY 2011.
- It was suggested that ScW have a discussion on augmentation and monitoring in the next couple of months; these projects could have the potential to be phased on in the next year or two.

- Jason Remshardt has been requested to give updates on augmentation to the Coordination and Executive Committees (CC and EC) in November; a request could be made that Jason also present his update to the ScW.

Action: Jen Bachus will check on the status of that request and request that Jason also present at an upcoming ScW meeting (either in October or November).

- There was brief discussion on *Continue Monitoring PIT Tagged RGSM*. It was suggested that the ScW discuss expansion of this project in the future. Another suggestion was that fish scanning be incorporated into *Continue RGSM Population Monitoring*. Additional PIT Tag work will be done in the spring, it would have been done this year but not enough fish of the right size were found. An update from Jason on PIT Tagging would be good in January or February.
- Meeting attendees discussed the remaining activities and were able to narrow down 4 activities to potentially be funded in FY 2011.
 - *Evaluate water quality in the MRG in relation to the RGSM*
 - The first phase of this project is to review and compile past water quality and toxicity studies.
 - Water quality data is collected as a part of a lot of different projects. It's not known if there has been a dedicated study to draw conclusions from the data that has been collected. Since water quality data has been collected for multiple studies it is not known if there are potential data gaps; compiling all the existing data and reports would be a good starting point to focus studies.
 - There is uncertainty of whether data is being collected to see if water quality issues are chronic. Maybe existing information on water quality could help to make a call if there are acute or chronic issues, then documentation could be made as to why it's thought that the issues are chronic or acute. This will help to focus resources.
 - It was thought that Joel had documentation of storm run off being an acute issue. Information like this should be documented and then ways to address these issues could be brainstormed.
 - The first step is identifying reports to look at. It was thought that the most efficient way for this task to be accomplished would be to contract out a literature review to identify and compile related data. There was agreement from the ScW that identifying reports should be ranked as a 1 for FY 2011 funding.
 - The ScW discussed another part of this project *Determine what temperatures exist at low flows*. It was thought that this study has merit but it was not known if it was currently relevant.
 - It was said that Jason Remshardt has been taking temperatures as a part of salvage. In the past temperatures have been taken as a part of the annual population monitoring but there is a new contract and it is not known if temperatures are still being taken; Jeanne Dye will check to see if temperatures are still a part of the contract.

Action: Jeanne Dye will check to see if temperatures are still a part of the annual population monitoring contract

- The combination of salvage with population monitoring temperature data might give enough information. If more data is needed it was

suggested to work with U.S. Fish and Wildlife Service to get temperature loggers out in the spring and then picked up in fall.

- There was general agreement from the ScW that gathering temperature data year round would be good. The advantage of temperature data being gathered with population monitoring would be a good distribution of sites that are visited on a regular basis.
- The temperature data that is needed might be currently being collected but not in a useable format and may never have been looked at. This information could also be identified using the literature review.

○ *Develop a Program Flycatcher management plan*

- This activity will be addressing a management plan that is specific to the middle Rio Grande. There is not a range wide management plan for the Flycatcher.
- The Program tends to focus more on Silvery Minnow with there not being a proactive approach for Flycatcher.
- It was suggested that Darrell Ahlers be contacted for guidance on developing a Flycatcher management plan for the MRG; it might be also be inquired if it is something he and his staff could do and how much it would cost.
- It was determined that not enough information is currently known about the development of a Flycatcher management plan to determine if it should be funded in FY 2011. Currently, ScW has this activity ranked as a 2, however the priority of this activity may be elevated based on Darrell's input.

Action: Jeanne Dye will contact the POC that works with Darrell Ahlers for guidance on the *Develop a Program Flycatcher management plan* activity.

- It seems like there should be a management plan before there is construction of habitat. Even a priority list of sites for restoration would be beneficial.

○ *Implement a strategy for maintenance and construction of flycatcher habitat*

- This activity is dependent on the development of a Flycatcher management plan.

○ *Increase understanding of the RGSM life history and habitat needs through focused scientific studies*

- This activity was combined with several HR activities and will need to go back to the CC for approval.
- This is a very broad category and can be broken into several different studies. The ScW looked at the bullets in the project description to try to prioritize them.
 - *Complete evaluation of age class distribution within each reach*
 - This activity is already underway.
 - *Determine preferred spawning habitat for RGSM*
 - It was suggested that the bullet be reworded to “Determine spawning habitat.” Determining if the habitat was preferred would require controlled conditions.

- The ScW thought that the bullets *Conduct studies to determine characteristics and effects of nursery habitat on RGSM* and *Determine spawning habitat for RGSM* were similar enough that they could be combined as the same project. They would also be ranked as a 1 for FY 2011.
- It was thought that *Conduct studies and evaluate data to improve understanding of the physical habitat requirements for all life stages of RGSM (velocity, depth, temperature, substrate, cover, water quality, primary production)* should begin with data assimilation to identify gaps to further direct the study. This bullet was also ranked as a 1 for FY 2011.
 - Primary production and water quality should be taken out of this bullet. Primary production should be moved to the end of the bullet *Conduct studies to improve understanding of food habits for all life stages of RGSM*; that would provide better linkage between what is in the river and what the fish are eating.
 - This study will help in mapping out Silvery Minnow habitat to see how much habitat is in the middle Rio Grande.
- *Evaluate and apply modification to habitat management projects as necessary*
 - There needs to be initial results back from the monitoring to be able to do this project. There are some “lessons learned” from individual projects. This project was changed to a priority 2 for the LTP because it is sequential to the EMP.
 - The title should be changed to *Apply outcome from effectiveness monitoring and implement modification to habitat restoration as necessary* in order to imply that it will learn from other studies.
- *Publish larval fish key for the middle Rio Grande and develop and publish fish key for stream segments where reintroductions are likely*
 - Developing the fish key for the middle Rio Grande is under way but separate funding will be required to publish it. Developing the key is a different project and it’s not known how close it is to being ready to publish but it is thought that the key will not be ready to publish in FY 2011. This portion of the project is a priority 1 for the LTP.
 - Developing and publishing a fish key for stream segments where reintroductions are likely is dependent on the reintroduction work for finding sites. Multiple keys may be needed for the different stream reaches to be most effective. This part of the project is a priority 2 for the LTP.
 - There was discomfort with the word *reintroductions* in the title. The title should be changed to *Publish larval fish key for the middle Rio Grande and develop and publish fish key for stream segments where additional populations may be restored*.
 - A limited audience is expected for the fish key; only project managers and researchers are expected to use it.
- *Research hatching success and related fecundity for all age class fish (RGSM Fecundity study)*

- It is unknown how this would be done in the wild or how ages of wild fish would be determined. The fish could be classed based on size.
- To measure fecundity eggs could be counted pre spawning.
- This bullet was ranked as a 1 for FY 2011.
- It was thought that it would be useful for this study to not only look at naturally spawned fish but to also look at hormonally-induced spawning.
- There was brief discussion on how hatching success would be determined. In controlled environments the number of eggs is compared to the number of hatched individuals but it would not be possible to do this in the wild. Unless fertilization rates are different in captive fish than in wild there is no reason to think that wild fish in a captive situation would have a different hatch rate.
- Spawning in the fisheries has shown that larger fish have more eggs but a lower hatching rate than smaller fish. There is still the question of whether the lower hatching rate is due to the sperm or the egg. A controlled experiment with paired spawning could help to answer that question.
- Experiments studying survival to first feeding would also be useful; it's thought that this is where there is the most mortality in the wild. Cage studies could be conducted in different types of nursery habitat in the wild.
- *Develop and Implement Program-wide System Monitoring and Trend Analysis for Adaptive Management*
 - This is a multi workgroup type project and should be tied into Adaptive Management.
- ScW recapped which projects they will put forward to the CC as a read-ahead for the October 6th meeting and estimated costs for the projects.
 - *Evaluate water quality in the MRG in relation to the RGSM*
 - Compiling existing data
 - Ballpark cost estimate: 100,000
 - *Conduct studies and evaluate data to improve understanding of the physical habitat requirements for all life stages of RGSM (velocity, depth, temperature, substrate, cover)*
 - Compiling existing data
 - Ballpark cost estimate: 100,000
 - *Research hatching success and related fecundity for all age class fish (RGSM Fecundity study)*
 - Small study
 - Ballpark cost estimate: 100,000
 - *Conduct studies to determine characteristics and effects of nursery habitat on RGSM and Determine spawning habitat for RGSM combined study*
 - Large study

- Ballpark cost estimate: 300,000 per year. Project duration is estimated to be at least 2 years.
- Based on the estimated costs for these projects and their predicted ability to produce tangible results it was thought the *Evaluate water quality in the MRG in relation to the RGSM, Conduct studies and evaluate data to improve understanding of the physical habitat requirements for all life stages of RGSM (velocity, depth, temperature, substrate, cover), and Research hatching success and related fecundity for all age class fish (RGSM Fecundity study)* studies should be given priority over the *Conduct studies to determine characteristics and effects of nursery habitat on RGSM* and *Determine spawning habitat for RGSM* combined study for FY 2011 funding.
- ScW would like to develop Scopes of Work (SOW) for all 4 of these activities by November 2010.

EMP Research Questions

- The Effectiveness Monitoring Plan (EMP) looks at the effectiveness of habitat restoration projects. The EMP is 1 year into a 2 year pilot with the first year consisting of high intensity monitoring with lots of fish handling. The plan was developed by bringing together people with different views of how the monitoring should be done; the plan ended up being a hybrid of low and high intensity monitoring.
- It's being questioned if the high intensity monitoring is something that should continue and/or should it be its own project. Does the high intensity monitoring provide additional information that cannot be acquired from the low intensity monitoring? The ScW has been asked to help provide information for these questions.
- This discussion will be tabled for the October ScW meeting when Anders Lundahl and Ondrea Hummel will be able to attend.

Program update

- **EC update**
 - The last EC meeting was a closed session. It is not known if the notes will become available.
- **CC update**
 - The CC meeting on October 13 has been rescheduled to October 6. The CC will be discussing budgeting for FY 2011.
 - There will be a kickoff meeting for the Adaptive Management Plan on October 13; at the end of November the contractor will be having one-on-one meetings with each signatory. It is not known who from each signatory the contractor will be having the one-on-one meetings with. There was the question of how information from the one-on-one meetings will be relayed to the public.
- **LTP update**
 - It's not known when the next meeting to work on the LTP will be. Some of the Priority 1 Future Activity Summaries will need to be revisited by the CC. Progress has been made with the text of the LTP.

Genetics Program Discussion

- This discussion was tabled for the October 19 ScW meeting. The discussion will not be a critique of the genetics but a discussion on whether or not the Program is using the information that has been gathered and based on that there will be discussion on changes that may be recommended for the genetics program.

Action: ScW members will read the 2009 RGSM Genetics Management and Propagation Plan (document can be found on the Program website) and the summary that Alison Hutson wrote on the genetics reports (the summary has been previously circulated through email).

Next ScW Meeting October 19, 2010 from 9:00 am to 11:30 am at Interstate Stream Commission

**Science Work Group
28 September 2010 Meeting Attendees**

NAME	AFFILIATION	PHONE NUMBER	EMAIL ADDRESS
Jeanne Dye	Reclamation	462-3564	jdye@usbr.gov
Stacey Kopitsch	FWS	761-4737	stacey_kopitsch@FWS.gov
Alison Hutson	NMISC	841-5201	alison.hutson@sate.nm.us
Michael Porter	USACE	342-3264	michael.d.porter@usace.army.mil
Jen Bachus	FWS	761-4714	jennifer_bachus@fws.gov
Mark Brennan	FWS	761-4756	mark_brennan@fws.gov
Rebecca Houtman	COA	248-8514	rhoutman@cabq.gov
David Propst	NMDGF	476-8103	david.propst@sta.nm.us
Christine Sanchez	Tetra Tech	881-3188 x. 139	christine.sanchez@tetrattech.com