

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

15 June 2010 Meeting – 9:00 AM-11:30 AM

Interstate Stream Commission

Decisions

- The May 18, 2010 Science workgroup (ScW) meeting minutes were approved with no changes.

Actions

- Jeanne Dye will incorporate suggested questions and changes made to the Genetics peer review questions and send back out to ScW members for review.
- Alison Hutson will compile recommendations from the last 3-4 years of genetics monitoring documentation for discussion at the July 20, 2010 meeting.
- All comments on the Fish Passage peer review questions should be sent to Stacey Kopitsch (stacey_kopitsch@fws.gov) by COB Thursday, June 17. Stacey will compile the comments and send to Kathy Dickinson on Friday, June 18.

Meeting Summary

- Jeanne Dye brought the meeting to order. Discussions on the Genetics peer review questions/comments and the San Acacia Fish Passage peer review questions were added to the agenda.
- The May 18, 2010 Science workgroup (ScW) meeting minutes were approved with no changes.
- All May 2010 action items were completed.
- The ScW workgroup was given an update on the Long Term Plan (LTP) Future Activity summaries. All the priority 1, 2, and 3 summaries have been submitted. The Coordination Committee (CC) is currently reviewing the priority 1 Future Activity summaries; they haven't finished reviewing the ScW Future Activities.
- In a Program update the ScW workgroup was told that the Executive Committee (EC) has decided to make San Acacia Fish Passage (Fish Passage) the number one priority for peer review. The CC has reprioritized the other items for peer review. Fish Passage and Population Estimation are probably going to be peer reviewed with funds from FY10. Other Program updates are that Brian Millsap is now the U.S. Fish and Wildlife Service (Service) EC representative and Dave Campbell is the new PVA Co-Chair.
- Copies of the list of Genetics peer review questions were distributed for discussion. It was asked if there was still going to be a peer review of Genetics. There will still be a peer review of Genetics but it may not happen with FY10 funding. The current prioritization for peer review is Fish Passage, Population Estimation, Population Monitoring, Genetics, and the Population Viability Assessment (PVA) models. There was no standard procedure for prioritizing projects for peer review but the CC is in the process of developing one. The following are suggested questions and changes to the peer review questions.
 - It was said that one of the goals of Genetics is to maximize retention of genetic diversity; the monitoring should have a way of accurately measuring retention or loss.

- It was thought that reviewers should give recommendations for achieving the goal of maximum retention and then the recommendations could be used to make changes to the RFP.
- Question 8 was generally agreed to be a good peer review question.
- It was generally agreed that questions should be focused on what is needed to move the project along.
- Monitoring should show if there is change in genetic diversity, and if so how much change.
- It was thought that question 2 should be focused on genetics and that habitat needs should be removed from the question.
- Question 4 should be rephrased to “Were *appropriate* statistical analyses, models and other techniques utilized? Were the data analyzed appropriately and well-based in quantitative and experimental approaches?”
- It was thought that Question 5 would be better if it was phrased “Are the conclusions made by the scientists supported by the results presented? *Is the interpretation* based on a sound reading of the science?”
 - It was also thought that the question “Are there alternative explanations supported by the results from monitoring?” could be integrated into Question 5.
 - Questions 5 and 6 could be combined and additionally it could be asked if there are alternatives or gaps to be considered.
- It was agreed that it was most important to verify that the monitoring plan does not have any fatal flaws and less important to worry about what other techniques could be used.
- Suggested questions to be added:
 - Is the monitoring that was asked for appropriate?
 - Is that what we are getting from the statement of work?
 - Based on the data we have how much monitoring do we need to do now? What is the appropriate frequency of monitoring?
 - Are the monitoring methods appropriate to answer the questions we have asked?
 - Are there additional studies that can be done to help monitoring?
 - Are there additional studies that should be done that can provide us with needed information for management?
 - Will this information help us to manage the population in the best possible manner?
 - Is information obtained through the genetics program sufficient to inform appropriate management of species?
- Jeanne Dye will incorporate suggested questions and changes made at today’s meeting and provide an updated set of questions to the ScW for review.
- The ScW workgroup would like to discuss the project reports and provide recommendations to the Program based on recommendations from its review of the reports. Alison Hutson will compile recommendations from the last 3-4 years of genetics monitoring documentation for discussion at the July 20, 2010 meeting.

- At the last CC meeting questions for the peer review of San Acacia Fish Passage (Fish Passage) were created based on feedback from the Executive Committee (EC) and workgroups were asked to review the questions. Copies of the Fish Passage questions were distributed. The workgroup was notified that all documents related to Fish Passage have been moved to a Fish Passage library on the Program website.
 - There was general discussion about whether questions related to genetics (questions 3, 4, and 18) should be of a high priority in the list of questions.
 - One opinion was that all the questions could be condensed into 3: is it necessary; is this the most appropriate design in terms of the biology of the fish and economics; and what monitoring is needed to assess how valuable Fish Passage is? Another opinion was stated that just these three questions will not capture the diversity of opinions within the Program
 - One opinion was that the underlined topics were what should be given to the peer reviewers and not a specific list of questions.
 - It was thought that the workgroup should focus on determining which questions were important and not try to rewrite the questions.
 - All comments on the Fish Passage peer review questions should be sent to Stacey Kopitsch (stacey_kopitsch@fws.gov) by COB Thursday, June 17. Stacey will compile the comments and send to Kathy Dickinson on Friday, June 18.
 - There was concern about the project cost for Fish Passage; it was thought that the cost was very high especially since multiple structures will need to be built in order to maintain diversity. It was pointed out that other fish passage structures have been built for much lower costs. It was thought that information on who built the fish passage structure in San Juan should be made available to the Program. The Fish Passage documents on the Program website may provide details as to why the cost is so high.
- The ScW workgroup was given a brief update on the Sanctuary. There will be a pre-construction meeting for the security fence at the end of the month. It was thought that the fence should be going up shortly after that.

Next ScW Meeting July 20, 2010 from 9:00 am to 11:30 am at Interstate Stream Commission

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

15 June 2010 Meeting – 9:00 AM-11:30 AM

Interstate Stream Commission

Meeting Minutes

Introductions and Agenda Approval

- Jeanne Dye brought the meeting to order.
- Discussions on the peer reviews of Genetics and San Acacia Fish Passage (Fish Passage) were added to the agenda.

Approve 05/18/10 ScW Meeting Minutes

Decision: The May 18, 2010 Meeting Minutes were approved with no changes.

Action Item Review (see below)

- **Jeanne Dye will resend the draft peer review questions and grant agreement for Genetics out to the workgroup for review. Comments and suggestions should be returned by June 4, 2010.**
 - Completed
- **Jeanne Dye will email the DBMS spreadsheet to workgroup members.**
 - Completed
- **Jeanne Dye will send the list of standard peer review questions to workgroup members for review.**
 - Completed
- Stacey Kopitsch was thanked for completing the action items.

Future Activity Summaries Update

- The Science Workgroup (ScW) was updated that all of the ScW priority 1, 2, and 3 Future Activity Summaries have been submitted to the Coordination Committee (CC).
- Contributors were thanked.
- The CC has not reviewed all of the ScW Future Activity Summaries yet. It may be a while before the ScW gets anything back from review. There have been no changes to the project descriptions.

Program Update

- Fish Passage is the number one priority for peer review. The CC has reprioritized the other items for peer review and has redone the peer review budget, but that may be changing. Fish Passage and Population Estimation are probably going to be peer reviewed with FY10 funds. As the list stands, Genetics is number four.
- The ScW was also updated that Brian Millsap is now the U.S. Fish and Wildlife Service (Service) EC representative and David Campbell is the new Population Viability Analysis (PVA) Co-Chair.

Genetics Peer Review

- Copies of the Genetics peer review questions were distributed to the ScW and the workgroup discussed what changes should be made.
- It was asked if Genetics was still going to be peer reviewed.
 - Genetics is still on the list of items for peer review but the peer review may not happen with FY10 money. The list that the CC has approved based on workgroup recommendation is Fish Passage, Population Estimation, Population Monitoring, Genetics, and the PVA models. The PVA models still need to be approved for review by the PVA workgroup and peer review questions will need to be created. It's possible that the PVA models may move up in prioritization.
- It was asked what the standards were for prioritization.
 - It was explained that the prioritization comes from discussion at CC meetings. The CC had originally put forward Population Estimation to be first for peer review and then the Executive Committee (EC) directed that Fish Passage would be the first to be peer reviewed. The CC is working on a standard prioritization procedure.
- The peer review of the PVA models will be brought up as a discussion point at the next PVA meeting.
- It was asked who drafted the current Genetic peer review questions.
 - At a previous ScW meeting the workgroup took the questions that had been used for the San Acacia Reach A&R peer review and provided input and edits to the questions.
- Is the focus of the review the program and the types of genetics work that is funded?
 - The ScW could determine if that is what the peer review should cover. The CC just needs to be shown what the objective is.
- It was asked if the peer review would be a review of the necessity of genetics monitoring or the monitoring as is it currently being implemented. Additionally is this a review of genetic monitoring or is it a review of the reports?
- It was believed that genetics monitoring should continue. It was asked if the ScW would like to assess if they are getting the best information to meet their needs at this time. It was pointed out that ScW may be getting what they are asking for, but it should be evaluated if the right questions are being asked.
- It was thought that the ScW may need to go back to the RFP and ask if the RFP requests the appropriate studies to answer the questions.
- It was thought that the appropriateness was one aspect that could be reviewed. Are there gaps that aren't being looked at? Have the questions been answered and do they no longer need to be looked at? Could the focus be changed?
- One opinion was that one of the goals is to have retention of genetic diversity. It was thought that the monitoring should have a way of accurately measuring retention or loss. A suggested question was: "Is the monitoring asked for appropriate and is that what is coming from the scope of work?"
- It was thought that questions about the RFP may not be something that should be going to outside reviewers.
- One thought was that the peer reviewers should be told about the goal of maximum retention of genetic diversity and then changes could be made to the RFP based on recommendations from reviewers.

- It was thought that this is what was essentially asked in Question 8.
- It was thought that the focus should be on what is needed to move genetics monitoring forward.
- It should be asked how much and how frequently monitoring should be done based on the data that has been collected.
- It was said that Question 8 really gets to the essence of what the ScW workgroup is after. The question assumes that the ScW has accepted that monitoring is necessary. The next questions should be: Are the methods good; is it appropriate to answer the questions we ask; and are there any gaps that aren't being answered?
- It was brought up that everything is being based on very few markers. It was thought that it would be good to have an outside panel make recommendations on improvements.
- It was agreed that Question 8 was a good peer review question.
- Another question to consider: are there additional studies that would provide information to contribute to overall monitoring? Such as identifying additional markers that may have larger diversity than microsatellites. That wouldn't be a monitoring study but it would contribute to monitoring. These types of pilot studies would be useful to monitoring.
- It was asked if there are any lab studies being done to see if markers are showing identifiable responses to environment, like water temperatures and turbidity?
 - Expression can be measured under different conditions and it would be valuable to see. If the fish is put under different conditions there will be change.
 - There was one opinion that it would be valid to ask the peer reviewers to identify these types of studies that should be done.
 - It was another opinion that these types of questions should be kept separate from monitoring. It's not that it wouldn't be valuable but at this stage it would be better to ask if the monitoring is accomplishing what needs to be accomplished.
 - One thought was that the peer review shouldn't be bogged down with extra questions but that it should be asked if there are additional studies that should be done that could provide ScW with needed information.
 - It was thought that monitoring may need to be refined to see if there was information to go forward with that type of exploratory research.
- It was thought that habitat needs should be removed from Question 2 in order to focus the question on genetics.
- It was said that it was not understood why the effective breeding number is as small as it is. There is something going on there and it would be important to examine.
- It was thought that it should be asked if low genetic diversity could be due to things like the founder effect. There may not be a way to answer that but it is an alternative for low genetic diversity.
 - That is a question that may need to be answered by an integration of monitoring information and other studies. It could perhaps be a spin off that will make use of monitoring information.
 - It was one opinion that conclusions are being drawn about monitoring while other alternative explanations are being ignored.
 - Question 5 may get to that issue. It might be good to combine Question 5 with Question 6 and ask if there are alternatives or gaps to be considered.

- It was thought that most of the questions are essentially good but that the wording is an issue. The reason is that when questions were originally put together they were made to be generic to any peer review.
- It was thought that it would be better if Question 5 read “Are the conclusions made by the scientists supported by the results presented? *Is the interpretation* based on a sound reading of the science?”
- There can be sound science with different interpretations of the analysis. “Identify alternative explanations for genetic results from monitoring” could be mixed with Question 5.
- It was asked if Question 4 should say “best applicable analyses used”.
 - It should say “appropriate”. “Best applicable” was thought to be too arbitrary.
 - Question 4 should be rephrased to “Were *appropriate* statistical analyses, models and other techniques utilized? Were the data analyzed appropriately and well-based in quantitative and experimental approaches?”
- One thought was that peer reviewers should be asked to include examples of what they consider to be ideal fish monitoring studies.
- It was pointed out that each person has their own particular techniques and statistical packages that they prefer.
- It was one opinion that it was more important to make sure that the current monitoring plan doesn’t have a fatal flaw and not to worry about what other techniques could be used. No monitoring plan is perfect.
- There was agreement that making sure there is not a fatal flaw was important.
- It was suggested that Question 3 be broadened “Is the genetic monitoring plan sufficient to meet the objectives of the study?” It was also asked if the objectives of the genetics program or of the scope of work should be used.
 - It was thought that questions should be focused on the genetics program objectives because the scope work can be changed.
- It should be asked if the information will help us to manage the population in the best possible manner. Genetic monitoring should be used as a tool for the management and recovery of the population. “Is information obtained through the genetics program sufficient to inform appropriate management of the species?”
- It was stated that the information that is being obtained from genetic monitoring is not being used in the genetics program. It was suggested that the ScW start using data to move in the direction of increasing genetic diversity. Genetic monitoring is fine but the data that has been collected needs to be used.
 - It would be a genetics program review to ask if the program is using the data that has been acquired. It was said that it’s arguable that the data is not being used.
- It was suggested that for the next meeting ScW could discuss recommendations from genetic monitoring documents.

Action: Alison Hutson will compile recommendations from the last 3-4 years of genetics monitoring documentation for discussion at the July 20, 2010 meeting.

Action: Jeanne Dye will incorporate suggested questions and changes made to the Genetics peer review questions and send back out to ScW members for review.

San Acacia Fish Passage Peer Review Questions

- Peer review questions for Fish Passage were passed out to the ScW. After feedback from the workgroups these questions will be reviewed at the next CC meeting.
- All the documents that are related to Fish Passage have been uploaded to the Program website. Library → Fish Passage.
 - The actual DEC Review is not available but the presentation on the DEC Review that was provided to the Program is on the Program website.
- Discussion on questions 3, 4, and 18. There was confusion about what Questions 3 was asking. It was also said that there is not genetic diversity between reaches.
 - It was pointed out that this is due to augmentation. These questions are evaluating in the absence of augmentation.
- It was asked if there was any available data on the percentage of Rio Grande Silvery Minnow populations predicted to use the passage. It was not known if there was data available to answer that.
- If there is a level of difference between reaches, what is the number of fish that is needed to move between reaches to homogenize. One of the reasons for the passage is to have movement among the meta population in order to homogenize.
- With the absence of augmentation the most genetic diversity is found at the bottom. This is what was found prior to augmentation. There is no way of answering some of those questions.
- It was thought that just a few hundred fish moving up through the passage would be sufficient for homogenization from a genetics standpoint.
- It was said that the questions concerning genetics shouldn't solely influence decisions on the applicability of Fish Passage.
- One opinion was that the peer reviewers should not be given questions but should instead be told that the purpose of Fish Passage is to allow free movement to achieve genetic security among reaches. The reviewers could then say which parts are contributing to the goal.
- It was said that in the past peer reviewers have been comprehensive about the feedback they give, they don't just answer the questions that are asked.
- One thought was that the questions could be boiled down to three: is it necessary; is the most appropriate way in terms of the biology of the fish and economics; and what monitoring is needed to assess the value of Fish Passage?
- Another thought was that the peer reviewers be given the underlined topics and not the list of questions.
- It was thought that the focus should be on what questions are important and not to rewrite the questions.

Action: All comments on the Fish Passage peer review questions should be sent to Stacey Kopitsch (stacey_kopitsch@fws.gov) by COB Thursday, June 17. Stacey will compile the comments and send to Kathy Dickinson on Friday, June 18.

- The ScW discussed the projected costs for Fish Passage.
 - It was thought that the projected costs seemed high and that additional structures in other reaches might be needed.

- It was said that it may be valuable to see who did the cost analysis for the fish passage structure in San Juan.
- It was asked if it was known how many fish were using the structure in San Juan.
 - A lot of native fish are using the passage and some non-native fish have also been removed from the passage.
- It was thought that structures with more complicated design than the San Acacia Fish Passage were being built for less.
- It was explained that the structure in San Juan operates March through October and that if the San Acacia Fish Passage will operate year round this could explain the high cost projection.
- It was said that the documents posted to the Program website for Fish Passage might answer some of the questions about the cost projection.
- It was asked if there are any issues with land ownership.
 - It was not known if there were issues with land ownership but there are constraints on where the Fish Passage structure could be located on the dam.
- There was confusion as to whether or not the current projected cost for Fish Passage was for the life time of the structure or just for its construction. If the cost is just for construction then annual operations and maintenance would also need to be considered. It was pointed out that once the structure is complete the costs of hatcheries and augmentation will go down.
- It was asked if there was any consideration given to rebuilding the diversion structure so that it still functions for diversion but has a slope that fish can use.
 - It was thought that this had been considered but the height of the structure was an issue.
- The ScW was briefly updated that the Sanctuary will be having a pre-construction meeting at the end of this month. The fence should go up shortly after that meeting.

Next ScW Meeting July 20, 2010 from 9:00 am to 11:30 am at Interstate Stream Commission

**Science Work Group
15 June 2010 Meeting Attendees**

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