

Executive Committee Meeting
May 15, 2012

Meeting Materials:

Meeting Agenda

Meeting Minutes

Coordination Committee and Program Manager Update

Population Viability Analysis Work Group Consensus Replies to Questions from Middle Rio Grande Conservancy District and New Mexico Department of Agriculture



**Middle Rio Grande Endangered Species
Collaborative Program
EXECUTIVE COMMITTEE
MEETING AGENDA
Tuesday, May 15, 2012
9:00 am – 1:30 pm**

LOCATION: Bureau of Reclamation, 555 Broadway Blvd. NE, Albuquerque, NM

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| 1. INTRODUCTIONS AND REVIEW OF PROPOSED AGENDA* | <i>5 minutes</i> |
| 2. <i>DECISION</i> – APPROVAL OF APRIL 13 AND APRIL 20 EC DRAFT MEETING SUMMARIES* | <i>20 minutes</i> |
| 3. <i>DECISION</i> – APPROVAL OF COORDINATION COMMITTEE CHARTER CHANGES* (CC Co-Chairs) | <i>15 minutes</i> |
| 4. <i>DECISION</i> – APPROVAL OF 2012 WORK PLANS AND TASKS* (PMT) | <i>20 minutes</i> |
| 5. RECLAMATION AND HYDROLOGY UPDATE (M. Hamman) | <i>20 minutes</i> |
| 6. USACE SUMMARY OF ADAPTIVE MANAGEMENT DRAFT SOW (LTC Williams/S. Bittick) | <i>20 minutes</i> |
| 7. USFWS AND BIOLOGY UPDATE (M. Shaughnessy/L. Robertson) | <i>20 minutes</i> |
| 8. COORDINATION COMMITTEE/PROGRAM MANAGER REPORT* (R. Billings/Y. McKenna) | <i>30 minutes</i> |
| A. Expenditure Reports* | |
| B. FY2012 Budget Update | |
| C. CC and Workgroup Updates | |
| BREAK | <i>15 - 30 minutes</i> |
| 9. POPULATION VIABILITY ANALYSIS (PVA)* MODEL PRESENTATIONS 12:00 pm | |
| A. RAMAS-Based PVA Model (P. Miller) | <i>45 minutes</i> |
| B. FORTRAN-Based PVA Model (D. Goodman) | <i>45 minutes</i> |
| 10. PUBLIC COMMENT | |
| 11. NEXT SCHEDULED EC MEETING – May 29, 2012 from 9:00 am to 4:00 pm @ Reclamation | |

**Denotes read ahead material provided for this topic*

Members

ABCWUA
ISC
NMDA
Sandia Pueblo
UNM

APA
Isleta Pueblo
NMGF
Santa Ana Pueblo
USACE

CABQ
NMAGO
MRGCD
Santo Domingo Tribe
USFWS
Reclamation

Middle Rio Grande Endangered Species Collaborative Program
Executive Committee Meeting
Tuesday, May 15, 2012
9:00 am – 2:00 pm

Actions

- Yvette McKenna will email the Adaptive Management (Version 1) Appendix C: Uncertainties and Hypotheses List to EC members for identification of any additional items that need to be included.
- Kris Schafer will discuss the possibility of Dana Price filling one of the ScW work group co-chair positions.
- Susan Bittick will email the Corps' full Adaptive Management Scope of Work and the comment template to Janet Jarratt and Frank Chaves. CC members are able to access the scope on the Program's website with appropriate login and password; CC members are encouraged to provide a copy of the full SOW to their appropriate agency staff for review/input as well. All comments on the Corps' Adaptive Management Scope of Work and an email comment indicating whether the EC member supports the effort or not are requested by COB May 22 to Susan Bittick.
- EC members will review the Adaptive Management Appendix C: List of Uncertainties and Hypotheses for any topic omissions (anything missing) and submit comments to Susan Bittick or Michelle Mann by close of business on May 22nd.
- Lori Robertson will send the Critical Habitat Designation draft assessment link to Yvette McKenna and Ali Saenz once it is posted.
- Yvette McKenna will revise the May 29th EC agenda based on the comments today including:
 - Item #3 *Cooperative Agreement* discussion will be postponed until a later date;
 - Item #4 *Interim Sufficient Progress* needs to be a priority discussion; with possible placeholder time in the afternoon;
 - Item #5 *CPUE metrics and methodologies workshop* will be kept on the agenda, possibly as a sub-bullet as it pertains to Item #4;
 - Item #7 *RIP Management* needs to be another priority discussion;
 - New agenda Item #? *Scope of Coverage* is to be the third priority discussion.
 - Items #6 *Consultation update*, #8 *Program Document*, and #9 *RIP Action Plan* will remain on the agenda as quick updates only;
 - New agenda Item #? *Approval of Adaptive Management Scope of Work*.
- The Service will provide a draft “straw” document “report card” or table of potential sufficient progress criteria in preparation for the May 29th, 2012 EC meeting.
- The Service will review their list of PVA questions as captured in the February 29, 2012 letter and come up with the top five to further assist the PVA work group in informing Reclamation’s BA in a timely manner.

Decisions

- With quorum present and no objections, the EC approved the April 13th, 2012 Meeting Summary for finalization with the incorporation of the correction to Steve Farris’ name on page 8 and changing *facilitation* to *conflict resolution* on page 10.
- With quorum present and no objections, the EC approved the April 20th, 2012 Meeting Summary for finalization with no changes.
- With quorum present and no objections, the EC approved the proposed changes to the CC Charter.

- With quorum present and no objections, the EC approved the FY2012 Work Plans with a correction that Michelle Mann is the PMT liaison for SWM and Dr. Goodman will be listed as MRGCD's alternate member on the PVA.

Directives:

- The EC directed the PVA work group to determine during the remaining May meeting time, what could be accomplished by June 15th in order to inform Reclamation's draft BA including the possibility of modeling the baseline and proposed action(s) scenarios. The PVA work group was tasked to meet in early June in order to (1) review and discuss (internal review of) Dr. Goodman's *RGSM 2010 Revised Recovery Criteria in Relation to Population Monitoring Draft Report* dated May 1st, 2012 and (2) discuss and resolve the incorporation of hydrology/hydrologic scenarios into the PVA models. The PVA work group should also determine what can be accomplished by the Service's August 15th, 2012 information deadline and meet as often as necessary to accomplish this; additional PVA briefs to EC will also be scheduled.

Upcoming Dates and Deadlines:

- May 22nd – all comments on the Corps' Adaptive Management Scope of Work, an email comment indicating whether the EC member supports the effort or not, and identification of any omitted uncertainty or hypothesis are due
- June 15th – Reclamation's cut off for any new information to be potentially included in the next version of the Draft BA; this is not a guarantee that any new information received will be included
- June 30th – Dr. Miller's RAMAS PVA functional model due
- July 31st – Reclamation's intended submittal date for a complete final BA
- July 31st – Service requested date for any new information to be considered in the Draft BO. Information may be submitted up to August 15th. Beyond that date, the Service cannot ensure that information will be considered because the analysis will be well underway.
- August – training on RAMAS PVA model
- August – assumed target for EC's Demographic Criteria and CPUE "metrics and methodologies" workshop
- September 30th – Dr. Miller's RAMAS PVA report and documentation due
- October – assumed first Draft BO should be available

Next Meeting: May 29th, 2012 from 9:00 AM to 4:00 PM at Bureau of Reclamation

- Tentative agenda items include those listed in "Actions" above and: 1) discussion for AM and structure (AM work group?); 2) formal approval of the Adaptive Management Appendix C: Uncertainties and Hypotheses List and the Corps' Adaptive Management Scope of Work
- June or July Meeting: 1) Mark Brennan presentation to EC on reintroduction location research and top findings;
- Future agenda items: 1) Discussion/decision regarding 10(j) Reintroduction Biologist position;

Meeting Summary

Introductions and Review of Proposed Agenda: Brent Rhees brought the meeting to order and welcomed everyone. Introductions were made. The agenda was reviewed and approved with a

slight change to combine the PVA discussions into a single 90 minute session instead of 2 separate 45-minute sessions.

Approval of April 13th and April 20th, 2012 Meeting Summaries:

- *April 13th, 2012:*
 - With quorum present and no objections, the EC approved the April 13th, 2012 Meeting Summary for finalization with the incorporation of the correction to Steve Farris' name on page 8 and changing *facilitation* to *conflict resolution* on page 10.
- *April 20th, 2012:*
 - With quorum present and no objections, the EC approved the April 20th, 2012 Meeting Summary for finalization with no changes.

Approval of Coordination Committee Charter Changes

- The revised charter was provided as a read ahead. None of the changes were substantial – most edits were for clarification or specificity especially pertaining to the CC roles and responsibilities and performance evaluation. The CC approved the changes internally on May 2nd, 2012.
- Approval of accepting the changes to the CC charter was motioned and seconded. With quorum present and no objections, the EC approved the proposed changes to the CC Charter.

Approval of 2012 Work Plans and Tasks

- The work groups have been updating their work plans since November of 2011. The primary and alternate agency designations in the membership lists have been carefully updated; and any vacancies that need to be filled have been identified. It was pointed out that there are many additional tasks associated with the potential transition to a Recovery Implementation Program (RIP) that do not have known deadlines (listed on page 2 of the work plans read ahead). The work groups will be asked to complete these tasks as they come up.
 - There are currently only 2 PMT members and each one is assisting 4 work groups; the Program Assistant is assisting PIO. Work groups have been encouraged to meet only as needed and several have reduced their schedule to every other month.
- *Adaptive Management (AM) proposed work group:* Last year, the PM and CC were tasked with developing a proposed AM work group charter which was provided to the EC, however, there was no momentum to formalize an AM work group at that time. The Program needs streamlining or reorganizing in order to be able to successfully incorporate a new work group. There are several ad hoc work groups that can be discontinued upon completion of their objectives or they can be absorbed into one of the standing work groups during a restructuring of the Program. The EC will, at some point, have to discuss how to formalize the AM process(es) either through a working group or some other venue.
 - It was acknowledged that AM is very critical and there are a lot of questions on how to incorporate AM, how it will be functional within the Program, etc. Some members expressed the opinion that AM is too important to postpone until it is easy or convenient to implement. AM needs to be in place now in order to be functional for the proposed transitions to a RIP.
 - Others shared the opinion that an AM work group might not necessarily be the best approach. There needs to be a formal AM process for examination of Program activities and for working through a framework. As long as our work is done in a focused, organized way it doesn't necessarily have to be through the formation of a work group in order to be effective. This is an ongoing discussion within many levels of the Program, particularly the RIP Action Plan focus group, and the Corps will be giving an update on this topic today.

- *Database Management System (DBMS) ad hoc*: There will be training in July for the functional database. EC members were encouraged to prioritize staff participation at all levels. Training information will be widely distributed once available. As part of the ongoing database management, there will also be yearly trainings made available for new staff.
- *Habitat Restoration (HR)*: HRW is in desperate need of another co-chair to replace Rick Billings who is now a CC co-chair.
- *Population Habitat Viability Analysis (PHVA/Hydro) ad hoc*: The PHVA work group is idle at the moment. Their purpose was to support the consultation process.
- *Public Information and Outreach (PIO)*: PIO has some events coming up, such as Sandia's Earth Day/Environmental week. However, there are only 3 regular attendees (Reclamation, Corps, ISC) and 2 who occasionally attend when they can (Service, NMDGF). Support from signatories with regular attendance is needed. For the time being, PIO has been meeting in combination with the PMT.
- *Population Viability Analysis (PVA) ad hoc*: In response to a question regarding the designation of members versus contractors, it was explained that Rich Valdez (SWCA) is participating for ISC as a member and so he is listed in the regular membership. MRGCD then clarified that Dr. Goodman is participating as one of their alternate members and should be listed in the regular membership as well. Brooke Wyman will remain identified as an MRGCD alternate as well.
 - Concern was expressed that the contractors were identified as leads for specific tasks instead of the proponent who hired them. This concern stems from the EC needing to have some control over the responsibility for activities especially for the chain of accountability in the RIP.
 - It was explained that the work groups are not just signatory representatives and there is nothing in the charter that prohibits a contractor from assuming a lead responsibility for tasks or actions if it is an appropriate assignment. Also, it was pointed out that the PVA is a different work group compared to the others since there are 2 contractors hired to produce 2 model products with the support of the work group.
 - It was cautioned that as contractors, even though they are listed as participating members, contractors should not be participating in the budgeting or scoping of activities.
- *Science (ScW)*: ScW also has a long-standing need for co-chair replacements. Jen Bachus and Alison Hutson have served more than their designated time and the positions remain vacant. While Reclamation will have a new biologist by the end of the month, it was cautioned that this will be a new staff person who might not have the experience necessary to be an appropriate co-chair designee upon hire. It was acknowledged that the Science work group is very important especially considering the intended transition to a RIP. Every restructuring alternative that has been offered has proposed some kind of science committee – such a committee will play a key role in activities going forward with the RIP and AM. It would be acceptable to have 2 federal co-chairs if necessary.
- *Species Water Management (SWM)*: The SWM work plan will be updated with a correction that Michelle Mann is the PMT liaison.
- The approval of the 2012 Work Plans, with the corrections and changes discussed, was motioned and seconded. With quorum present and no objections, the EC approved the FY2012 Work Plans with the corrections and changes discussed.

Reclamation and Hydrology Updates

- *Hydrology Update:* The hydrology summary and bucket graphs were distributed. The May streamflow forecast ranges from 49% at El Vado Reservoir (inflow) down to 25% at San Marcial at the bottom of the system. There is not much snow left to contribute with the highest estimate of 13% for the Upper Rio Grande Basin. Total San Juan/Chama inflow for the year (to date) into Heron is 32,350 ac-ft. Currently 50 cfs of native water is being released. Article VII restrictions are still in effect. There is no number for usable water in Elephant Butte since there is no agreement on credit water at this time. Please refer to the actual handout for additional information.
- *Biological Assessment (BA) Update:* A Draft BA was submitted to the Service on May 7th; the original target was April 30th so the schedule had been shifted by 1 week. Reclamation expects to meet with the Service by the end of May in a continued effort to get a complete Final BA by July 31st. Submittal of a Final BA by this deadline provides enough time to complete the Biological Opinion (BO) process by the February 28th, 2013 expiration of the 2003 BO. In addition to the informal communication with the Service, Reclamation will also continue working with entities seeking inclusion in the proposed actions for coverage (ex. the State and MRGCD). Government to government consultation with the pueblos will also continue. Relative to the Program and RIP efforts, the RIP Action Plan and Program Document need to be complete drafts by mid-June if they are to be incorporated into the Final BA submission to the Service.
 - Attendees were informed that Reclamation did not include the proposed ISC actions in the current version of the Draft BA that was just submitted to the Service. Reclamation was unsatisfied with the level of detail and has asked for more information. The opinion was shared that Reclamation has been consistent in explaining that unlike the 2003 approach which was a depletions-based analysis, the current analysis is an action-by-action approach. This means that Reclamation needs sufficient information on the State's actions in order to analyze the effects to the appropriate level of detail. Since there was no agreement with the State prior to the submittal date, Reclamation made the decision to submit without ISC actions included.
 - In response, it was shared that ISC was disappointed with this approach. The opinion was shared that ISC has consistently expressed their opinion that support of a RIP or recovery program hinges on some level of broad coverage. They will develop appropriate level of detail on effects of their actions, but may scale back accordingly. This experience may cause them to reconsider some of their tentative commitments. In their response letter, the State questions whether or not they can in good faith go forward with support of the RIP as things currently stand.
 - Reclamation is proceeding [with the BA development] with the expectation that the RIP will be a conservation measure in the BA and that the RIP Action Plan and Program Document will be included (attached) as part of the conservation measure. However, these are not Reclamation documents so there is the need for official EC endorsement in May in order for Reclamation to proceed with the RIP as a conservation measure. Right now it is just an assumption that needs to be approved.
 - In response to a question on the conservation measure versus compliance, it was clarified that the compliance vehicle is the BO. The goal is to have a non-jeopardy BO. Thus the conservation measures need to be in the proposed BA to show the offsetting of actions.
 - Reclamation will be working closely with the Service for additional help with these issues.

USACE Summary of Adaptive Management Draft Scope of Work (SOW)

- Several months ago, in an attempt to help the Program fund important activities, the Corps agreed to fund the next step(s) for developing and pursuing AM processes.
- A draft scope of work (SOW) was developed and submitted to the Coordination Committee (CC); however, no comments were received by the May 10th deadline. Once the SOW and government cost estimate are completed/approved, it will take an estimated 5 to 6 weeks to get the contract out. The Corps is proposing to use the same contractors that completed the AM Version 1 Plan as they can be accessed through the existing ID/IQ contract by issuing new task orders. The Corps would like to have the first meeting between the contractor and the Program in August 2012. The Corps is proposing to utilize an outside facilitator so that the AM contractors won't be burdened with that piece of the process.
 - The intent is to define a potential suite of actions to apply AM. It would be optimal to build on the Adaptive Management Plan Appendix C which lists the original hypotheses and uncertainties developed through communication with the signatories. If there are any critical hypotheses or uncertainties that weren't identified in this list, they should be added now in order to be included in the SOW as it will cost the Program to try to add anything once the contract is in place.

USFWS and Biology Update

- *Minnow Update:*
 - In a quick review of the Catch Per Unit Effort (CPUE) data and presented in a table on the handout, it was shared that augmentation efforts occurred in November 2011; the December CPUE values increased in a likely response to the stocking event since it is slightly higher than the average range. By February, the catch rate had declined again and is comprised of 44% stocked fish (basically about half the fish out there are stocked fish).
 - A total of 39.8 unique river miles dried during 2011; of this, 12.5 miles were in the Isleta Reach and 27.3 miles were in the San Acacia Reach.
 - The incidental take limit is 7,923 individual silvery minnow greater than 30 mm standard length.
 - Mark Brennan finished his review of sites previously identified as potential reintroduction sites and 2 potential reaches repeatedly "rose to the top" during the analysis: (1) the Pecos River below Ft. Sumner and the Rio Grande below Amistad.
- *Southwestern Willow Flycatcher (flycatcher):*
 - Notice that the Critical Habitat Designation draft assessment is posted/available is expected soon. There will be a 60-day public review period upon posting to the Federal Register.
- *Candidate Species:*
 - The analysis for the NM meadow jumping mouse is under way. The target for a proposed ruling is April 2013 (which is a little less than one year). If warranted, the ruling would include the designated habitat. The yellow-billed cuckoo target date is February 2013. If warranted, this ruling would also include the designated critical habitat.

Coordination Committee (CC)/Program Manager (PM) Report

- *CC Report:* In light of the shrinking budget, the CC recognized the importance of prioritizing the genetics work. It will be issued as a contract instead of a grant. The CC also approved funding for some work in Santa Ana. There have been continued discussions on the synthesis of minnow data and obtaining missing data sets (identified by the PVA work group). The CC is beginning to consider next year's budget and will need guidance on prioritization.

- *Expenditure Reports:* Diana Herrera provides the Expenditure Reports quarterly. This report shows projects that still have money by entity. The 2013 budget is even worse than the 2012 budget. In the future, the amount remaining for a project will be considered when entertaining additional funding requests. Money already provided needs to be obligated before any additional funding will be considered.
- *FY2012 Budget Updates:* There is about \$17,000 that remain unobligated at this time as there is no actual activity that can go forward with so little. Ralph Monfort, who participated in the Program's AM sessions, wrote a paper on AM. There are some good recommendations in his report. It was free and unsolicited and it is hoped that the Program can utilize it.
- *Long-term Plan (LTP):* The LTP is populated with potential future activities for consideration. Implementing entities are currently limited to Reclamation, the Corps, or the Program itself. Other agencies are encouraged to submit potential activities for future consideration using the provided template; remember, this is not a commitment or agreement and no agency will be held liable to complete any of the suggested potential future work identified.
- *Work Group Updates:* The work groups are moving forward with usual business and some have reduced their monthly meeting schedule. Please be advised that both ScW and HR need co-chairs.

May 29th, 2012 EC Agenda Review:

- EC members reviewed the May 29th Draft Agenda.
 - In response to a question on whether or not the time allocations were appropriate for each discussion item, 3 priority topics were identified: (1) Interim Sufficient Progress with the CPUE metrics and methodologies workshop as a sub-bullet; (2) RIP Management; and (3) Scope of Coverage.
 - The report out on the Service's action regarding guidance on Interim Sufficient Progress from their solicitor is expected to be a brief 5 minutes.
 - It was suggested that the afternoon session could contain placeholders for continued discussions in response to the morning conversations.
 - Attendees were reminded that from a BA perspective, Reclamation needs the endorsement of the EC to be able to include the RIP Action Plan and Program Document as part of the conservation measure.

ISC Spawning Update

- The Los Lunas Silvery Minnow Refugium had a successful spawn with the first flooding event. A second flooding event will occur this week.

Population Viability Analysis (PVA) Model Presentations

- Reese Fullerton (facilitator) opened the afternoon session with a review of the PVA ad hoc work group's consensus answers to the EC questions provided in advance of the meeting. *Please refer to actual handout as Reese read the responses directly.*
- Dr. Phil Miller (RAMAS PVA modeler) then provided an update on the work group meeting yesterday and addressed the Follow-up Information and questions submitted by the Service in February 2012.
 - *Background and model development documentation:* The Service requested that background and model development documentation (including process of development, explicit use of data, data sources, data transforms, etc.) be provided for each PVA model that would (could) be used in the consultation. Additionally, the request included preliminary results of the model runs.

- Dr. Miller is contractually obligated to provide a functional model by June 30th, 2012. At that time, he will provide all the requested information on the process and background.
 - It was also shared that a list of PVA work group products and work history (including reports, documents, presentations, etc.) has been developed. The first RAMAS PVA model was developed back in 2007 and while simple, it is a tool that has been in evolution for a while and should be considered one of the products.
- **Question 1:** *What are the effects of the proposed action on population viability?*
- **Question 2:** *What do the extinction risks from the PVA models tell us about viability for the species?*
- **Question 3:** *What is the relative change in model output for the proposed action compared to (a) conditions under the 2003 BO management regime and (b) continuous flow year-round flow (i.e., no drying)?*
 - Unfortunately Questions 1, 2, and 3 (focused on the effects of actions and risks) are unanswerable at this time.
 - The baselines and development of quantitative descriptions of the proposed actions are still being worked on at this time. Thus these questions can be/will be evaluated at some time in the future but haven't been analyzed at this time.
- **Question 4:** *What are the effects on the population from: (a) fragmentation due to diversion dams?; (b) augmentation?; (c) fragmentation with and without augmentation?; (d) presence of fish passage at diversion dams (San Acacia, Isleta, Angostura)?; (e) presence of fish passage at diversion dams with and without augmentation?; and (f) restored habitats?*
- **Question 5:** *What is the relative change in the model output at different: (a) Base flows; (b) spring peak flows; (c) duration, timing and frequency of base flows; (d) duration, timing and frequency of recruitment flows; (e) duration, frequency (within and across years), and timing of inundation and extent of off-channel habitat; (f) water quality conditions under the various regimes; (g) catastrophic spill events; (h) exchange rates (of fish) between Reaches; and (i) which of the above is/are most significant?*
- **Question 6:** *What are the effects of river drying (duration, frequency, extent, timing) on population viability?*
 - Questions 4, 5, and 6 were originally discussed during the December 2007 PHVA work shop to develop the detailed list of questions. Remember, the PVA process is an ongoing activity with regular data (and parameter) updates as new research and studies are completed. The structure(s) within the models can be used to translate questions of timing and base flow into quantitative descriptions that can be run through the models. These structures are built into the model.
 - The river drying issues are long-standing questions. We are still attempting to gain insight into how drying impacts the long-term population viability and how to appropriately include it in the models.
- **Questions 1 through 6:** Questions 1, 2, 3, 4, 5, and 6 can be explicitly explored through the models once all the appropriate information/data is provided and the information can be appropriately “translated” to be used in the models. The PVA work group (including the modelers) needs guidance on the priority of these issues/questions in order to be able to “hone into” those that have management implications.

- **Question 7:** *What are the consequences of the proposed action on the Primary Constituent Elements (PCEs) of critical habitat, which provide for the physiological, behavioral, and ecological requirements essential to the conservation of the silvery minnow? These include sufficient flows, the presence of eddies and unimpounded stretches of river miles that provide a variety of habitats, sand and silt substrate, and appropriate water quality.*
Question 8: *Given the consequences of the proposed action on the PCEs of critical habitat, what are the effects of the proposed action on the function and conservation role of critical habitat?*
 - After discussing these questions, the work group came to the conclusion that Questions 7 and 8 are not in the purview of the PVA work group because this type of expertise is not represented in the work group, there have not been any discussions on this topic over the last 5 years, and the work group would be unable to address these with the sufficient depth required.
- **Question 9:** *How can the PVA models be used to compare management options or management tools that may be considered as conservation measures to include in the proposed action or potentially for the RPA and/or RPMs?*
 - The important thing to understand is that PVA is more than a model – it is a process of analyzing new and existing information to reach scenarios, hypotheses, and datasets that will be really informative to the long-term process for the management decisions. The verbal description of management scenarios are used to develop numerical “situations” for the model to simulate. This means that very clear descriptions of the parameters are critical. There will need to be continued dialog inside and outside the work group to get the appropriate descriptions of these management scenarios. The goal is to have the model structures developed so that we will be able to address these potential management scenarios and provide guidance based on the projected population responses.
- The remainder of the meeting was a question and answer period with the PVA work group and modelers.
 - In response to a question on the PVA process for dealing with (addressing) the hydrologic input and hydrology under different scenarios, it was shared these required inputs have to be provided from others outside the work group. This will need to be addressed as a process function in order to get the data: predictions and quantitative descriptions for the scenarios. The work group has not been handed specifications of what the proposed action is and what the baseline is. The work group has been able to analyze relationships using retrospective data to see how the hydrograph from one year to the next seems to correlate to spring reproduction and survival of that brood of fish. The work group has explored the relationship between the number of young-of-year fish and the amount of reproduction the next year. The work group has been analyzing these important relationships using historical data for inclusion in the PVA models.
 - In response to a question of the timing of the PVA models as it coincides with the RIP development (specifically in terms of how the PVA could be used to inform the metrics on sufficient progress), it was responded that the PVA models can be used to indicate the prospects for meeting any one of the stated recovery metrics (as defined in the recovery plan) under future scenarios. As new metrics are

defined, the PVA models can be used to determine how the metric correlates with the probability of extinction.

- Concern was expressed that given the current timelines and schedules, PVA model results won't be available in time to inform the consultation process. However, there is a contractual deadline to have the RAMAS model delivered by the end of June – that model will be able to provide outputs; although the training is not until August and the final report with analysis of outputs is due in September. Attendees were reminded that the credibility, reliability, and scientific integrity of the model outputs rely on the credibility, reliability, and integrity of the inputs. The PVA models are expected to improve with time as new information is collected and uncertainty is reduced as a result of adaptive management.
 - The issue is that formal consultation will begin upon receipt of complete BAs from the action agencies and the expiration of the 2003 BO is on February 28th, 2013. That expiration date is driving this entire process. Backtracking the required comment and review periods, the Service has determined that everything to be considered in the development of the Draft BO has to be submitted by July 31st with some tentative flexibility of consideration if submitted by August 15th.
- In response to a question on the Biological Opinion “information closure” date, it was shared that the Service has to start their analysis by August 15th – that is their bottom line. The Service will use everything they have – including any PVA model outputs at that point. It was cautioned that there has to be a cut off in order for the Service to write the draft BO.
- Dr. Goodman encouraged any lawyers to research the data closure deadlines in relationship to best science and possible formal extensions as cited in the 50 CFR Part 402, Interagency Cooperation Regulations, pg. 888 *Item D: Responsibility to provide best scientific and commercial data available.*
- In response to a question on the models' ability to predict effects of proposed water transfer impacts, it was shared that the models don't distinguish where the water is coming from when delivered to the Middle Rio Grande (MRG).
- It was cautioned that the PVA work group and modelers have to trust that the hydrologic scenarios provided to them are realistic and appropriate and not volumes of water that cannot or will not be obtained. The hydrology component is being supplied and this is one reason the group is so anxious to have the dialogs with the hydrologists and hydrologic modelers in order to confirm that the water scenarios are credible.
- In response to a question on how the PVA could be used to inform key decisions of the EC regarding the transition to a RIP, it was shared that the PVA could have utility in measuring sufficient progress by tracking progress toward recovery in an AM context.
- PVA models can help identify particular metrics in the species life history that drive population dynamics. Those can be used to try to identify specific management strategies – including implementing and monitoring how well the true population is “tracking” the predictions made by the models. New insights should be included in a continuous loop to guide management changes for better population responses.
 - The PVA models are tools to evaluate certain management activities and inform potential changes. It is part of the overall AM process. PVA

- models could help to narrow the sufficient progress metrics through a process of regular refining as new information becomes available.
- The PVA models will be able to help identify which parameters are more important than others. Those parameters could then be “weighted” in the sufficient progress metrics. For example, the PVA models could indicate which metrics cannot be missed and others that are less critical so there is more flexibility or range because they are not “as big a deal.”
 - To address metrics of sufficient progress, it was shared that a *sample* is different from knowing the reality. It is simply a measurement at that point in time. For any measurements that will be used to inform water management one needs to know the noise and random sampling variability (uncertainty) surrounding that measurement in order to trust those measurements to give a reliable picture of the true reality. The PVA models can be used to determine if a proposed metric will truly indicate what it is proposed to indicate in terms of recovery (since the recovery criteria have already been defined).
 - This is the kind of analysis that the PVA work group has been doing - determining how much noise and random sampling variation there is in the current data reflecting the current procedures.
 - Dr. Goodman then offered his paper titled *RGSM 2010 Revised Recovery Criteria in Relation to Population Monitoring Draft Report* dated May 1st, 2012 as a starting point for continued discussions. It was pointed out that this document has not been officially reviewed or vetted through the PVA work group yet.
 - Dr. Goodman suggested that the Program read and “digest” his paper and consider the implications about the characteristics of the population monitoring. If accepted, the Program could discuss: (1) what are the indications (options) for changing the monitoring design; (2) how is the monitoring data being used by the PVA to infer relationships; and (3) how does the uncertainty in those relationships (owing to the uncertainty in the data) affect the predictions in the future.
 - The issue of understanding uncertainty is critical especially as it pertains to inferring and including relationships in the predictive models.
 - The EC then discussed the potential for some preliminary outputs from the PVA models by Reclamation’s June 15th cut off in order to inform the Draft BA.
 - It is clear that agencies need to move forward with the information available. There has to be a point of time where there are results obtained and communicated with the understanding they are preliminary.
 - A working version of the RAMAS model will be presented by June 31st. However, the correct inputs, including the hydrology, need to be supplied to achieve correct outputs. It was cautioned that preliminary results could potentially be provided (given all the inputs) but there needs to be full understanding as to the credibility and reliability of those initial results. Also, it was pointed out that the Service has a responsibility to inspect and examine the information to determine what is “best science.” Even if submitted by the requested deadlines, the Service might not have sufficient time for review and that could impact how comfortable they might be with using the “last minute” submissions.

- In response to a question on there being any chance that additional information could inform the Draft BO after the August 15th deadline, it was shared that the Service might possibly consider including new information during the Draft BO review process. It would be at the Service's discretion and would depend on the situation and the information.
- In response to a question regarding the use of CPUE data and whether or not it is the best monitoring methodology, it was responded that the model itself, as a tool, will elicit insight whether CPUE is the optimal data to use. The work group process could also give some assessment on the use of CPUE data in terms of the expertise and understanding.
 - The question is: *what kind of resolution is the CPUE monitoring data providing us? And what is the "noise" and accuracy?* In an example, it was shared that a car odometer is perfectly fine for driving, but would not provide a machinist with the correct measurements (resolution). The machinist needs a micrometer for accuracy.
 - Dr. Goodman shared his opinion that the population monitoring CPUE data that the Program currently has is the best tool for now – it is actually remarkably powerful with the accumulated 19 years of data in the record for comparison. He shared that he sees no problems with the CPUE as being valid in its own right; he then complimented that the Program kept at it this long for great consistency. Dr. Goodman did caution that the *use* of the CPUE data and how it is analyzed statistically to draw conclusions is where he would recommend a "second look." Given the data, what is the variability and what are the kinds of conclusions that can be drawn one sample at a time? What kind of conclusions need 20 -30 samples to get those results? What kind of conclusions need to be supported with a pool of the full 20 years of data? The point is to make sure that the conclusions drawn are scientifically defensible within the accepted error acknowledgement. How can the error be calculated so that it stands up to scrutiny? Dr. Goodman shared the opinion that it is possible to find the statistical methodology that provides the narrow error bars for the decisions that are to be made.
- In response to a question about who develops the scenarios for the models, it was responded that whoever is drafting the conservation measures should be integrating with the PVA team to capture the actions in specific terms. It is probable that the RIP Action Plan will also need to include the specifics.
 - It was shared that Reclamation hopes to be able to include the RIP Action Plan and Program Document in the Draft BA; Reclamation is not expecting to do a quantifiable analysis on them but collectively analyze the conservation measures through the consultation process. The scenarios could be defined in or all of the Program's (and other) documents: BA, RIP Action Plan, Water Management Plan, LTP, etc.
 - Concern was expressed that there is a "timeline disconnect" in terms of developing the scenarios and running them through the models in an iterative process in time to inform the consultation.
 - It was responded that the PVA models can be used over and over again as the Program works toward recovery. This process could (and should) be built into the AM process. Regarding the looming deadlines, it was shared that not everything is going to be "set in stone." Reclamation and the Service will have to do their analyses based on what is available. The intent is to write

the BA/BO(s) to allow for continuing future monitoring and management (the AM components). Even the sufficient progress can be updated with new research.

- Concern was expressed about the early years and the transition period. Even though there has been an existing Program for over 10 years, basing the future on the past “dooms” us. In response, it was acknowledged that there needs to be a clear process on how to go forward. One opinion was that as long as there is a good platform for the dialog and tough decisions, especially with the AM process, then there should be no reason for issues not to be resolved.
- Attendees then revisited the upcoming dates and deadlines.
 - Reclamation has a June 15th cut off receiving any additional information to inform the Draft BA. This date is back-calculated from the July 31st submittal date and allowing for the appropriate comment period.
 - The Service has a requested date of July 31st for any new information to be considered in the Draft BO. Information may be submitted up to August 15th. Beyond that date, the Service cannot ensure that information will be considered because the analysis will be well underway. It is assumed that the first draft BO will be available in October.
 - The formal consultation period does not begin until there is a complete BA. However, everything has to be done by the February 28th, 2013 expiration of the 2003 BO. There is the possibility that between July 15th and the beginning of December that more information could be included. However this is up to the Service’s discretion based on the situations at the time. The bottom line is that everything has to be formalized and finalized before the 2003 BO expires.
 - Attendees then discussed the feasibility of the PVA models informing the Draft BA and Draft BO by the deadlines. It was explained that if given all the necessary information (scenarios, hydrology, baseline), there is a possibility that the PVA work group and models could have some preliminary outputs that could be considered. However, it was cautioned that there might not be time for the appropriate review/analysis of those outputs and that the preliminary conditions need to be considered in determining the scientific credibility.
 - A motion was made to direct the PVA work group to determine during the remaining May meeting time, what could be accomplished by June 15th in order to inform Reclamation’s draft BA including the possibility of modeling the baseline and proposed action(s) scenarios. The PVA work group was then tasked to meet in early June in order to (1) review and discuss (internal review of) Dr. Goodman’s *RGSM 2010 Revised Recovery Criteria in Relation to Population Monitoring Draft Report* dated May 1st, 2012 and (2) discuss and resolve the incorporation of hydrology/hydrologic scenarios into the PVA models. The PVA work group should also determine what can be accomplished by the Service’s August 15th, 2012 information deadline and meet as often as necessary to accomplish this; additional PVA briefs to EC will also be scheduled. The motion was seconded and approved.

Public Comment: There was no public comment.

Next Meeting: May 29th, 2012 from 9:00 AM to 4:00 PM at Bureau of Reclamation

- Tentative agenda items include: 1) discussion for AM and structure (AM work group?); 2) formal approval of the Adaptive Management Appendix C: Uncertainties and Hypotheses List and the Corps' Adaptive Management Scope of Work
- June or July Meeting: 1) Mark Brennan presentation to EC on reintroduction location research and top findings;
- Future agenda items: 1) Discussion/decision regarding 10(j) Reintroduction Biologist position;

**Executive Committee Meeting Attendees
May 15th, 2012, 9:00 am to 1:00 pm**

Attendees:

<i>Representative</i>	<i>Organization</i>	<i>Seat</i>
Brent Rhees	U.S. Bureau of Reclamation	Federal co-chair
Estévan López (P)	NM Interstate Stream Commission	ISC, Non-federal co-chair
Michelle Shaughnessy (P)	U.S. Fish and Wildlife Service	Service
Kris Schafer (A)	U.S. Army Corps of Engineers	USACE
Steve Farris (P)	NM Attorney General's Office	NMAGO
Subhas Shah (P)	Middle Rio Grande Conservancy District	MRGCD
Rebecca Houtman (A)	City of Albuquerque	COA
Jim Wilber (A)	U.S. Bureau of Reclamation	BOR
Janet Jarratt (P)	Assessment Payers of the MRGCD	APA of the MRGCD
Hilary Brinegar (P)	NM Department of Agriculture	NMDA
Rick Billings (A)	Albuquerque/Bernalillo County Water Utility Authority	ABCWUA
Matt Wunder (P)	NM Department of Game and Fish	NMDGF
Alan Hatch (P)	Pueblo of Santa Ana	Santa Ana
Cody Walker (A)	Pueblo of Isleta	Isleta
Frank Chaves (P)	Pueblo of Sandia	Sandia
Jonathan Garcia (A)	Santo Domingo Tribe	Santo Domingo

Others

Yvette McKenna – PM	U.S. Bureau of Reclamation
Jennifer Faler	U.S. Bureau of Reclamation
Ali Saenz	U.S. Bureau of Reclamation
Ann Moore (A)	NM Attorney General's Office
Liz Holmes	NM Department of Agriculture
Christopher Shaw	NM Interstate Stream Commission
Grace Haggerty	NM Interstate Stream Commission
Amy Haas	NM Interstate Stream Commission
Deb Freeman	for NM Interstate Stream Commission

Susan Bittick	U.S. Army Corps of Engineers
Michelle Mann	U.S. Army Corps of Engineers
Danielle Galloway	U.S. Army Corps of Engineers
Lori Robertson	U.S. Fish and Wildlife Service
Mike Oetker	U.S. Fish and Wildlife Service
Jim Brooks	U.S. Fish and Wildlife Service

Janet Bair (A)	U.S. Fish and Wildlife Service
Gina Dello Russo	U.S. Fish and Wildlife Service
Brooke Wyman	MRGCD
Jessica Tracy	Pueblo of Sandia
Matthew Zidovsky	Representative Heinrich's Office
Ariel White	Representative Heinrich's Office
Rick Carpenter	City of Santa Fe/BDD Board
Reese Fullerton	GenQuest (Facilitator)
Marta Wood	Tetra Tech (Note Taker)

PVA presentation – Additional Attendees

Dr. Phil Miller	CBSG (PVA Modeler)
Dr. Dan Goodman	MSU for MRGCD (PVA Modeler)
David Gensler (A)	MRGCD
Brooke Wyman	MRGCD
Patrick Redmond	LRPA/MRGCD
Stacey Kopitsch	U.S. Fish and Wildlife Service
Jason Remshardt	U.S. Fish and Wildlife Service
Mick Porter	U.S. Army Corps of Engineers
Dana Price	U.S. Army Corps of Engineers
Ondrea Hummel	U.S. Army Corps of Engineers
Peter Wilkinson	NM Interstate Stream Commission
Alison Hutson	NM Interstate Stream Commission
Douglas Tave	NM Interstate Stream Commission
Rich Valdez	SWCA for NM Interstate Stream Commission
Yvette Paroz	U.S. Bureau of Reclamation

**Coordination Committee and Program Manager Update
Middle Rio Grande Endangered Species Collaborative Program
Executive Committee Meeting
May 15, 2012**

Coordination Committee

FY12 Budget Update/Work Plan

In March, knowing the final Collaborative Program funding level of **\$2,089,290**, the CC approved the FY2012 Planning Spreadsheet with the exception of the Monitor Rio Grande silvery minnow (RGSM) Genetics, Synthesis of Existing RGSM Literature/Data, and Continue RGSM Population Estimation activities which were still under consideration. The Synthesis of Existing RGSM Literature/Data activity could include acquisition of data sets that the Population Viability Analysis (PVA)/Biology ad hoc Workgroup has been interested in, however, the CC agreed that the decision to acquire this data needed to be elevated to the EC. In April, the CC approved funding for: the Santa Ana Rio Grande & Rio Jemez Biological & Habitat Survey in the amount of \$142,306 and the Monitor RGSM Genetics activity in the amount of \$185,000. The CC was unable to approve FY2012 funding for the Synthesis of Existing RGSM Literature/Data activity as its priority was reduced and the FY2012 funding allotment is insufficient. The remainder of the budget (\$17,694) was placed in the Continue RGSM Population Estimation activity (see attached work plan). The EC will be informed that due to lack of funding, the ongoing tasks with the consultation, Recovery Implementation Program (RIP) transition, and the lack of available staff to support an internal synthesis effort, the Synthesis of Existing Literature/Data activity will be put on hold until the next funding cycle.

April 11 Meeting

The CC discussed Additional Tasks for Collaborative Program Technical Workgroups to Transition to a Contemplated Middle Rio Grande RIP and the 2012 Workgroup Work Plans. The CC requested that the Science Workgroup (ScW) develop a statement of work (SOW) for a Genetic Monitoring and Analysis Program that would include cross-laboratory validation of a representative number of samples and would be as close to the current Monitor RGSM Genetics effort as possible (excluding publication activities) by May 31, 2012. The level of effort is not to exceed the existing annual cost of the current activity (~\$185,000); the draft SOW will be provided to the CC for review. Ken Cunningham was introduced as the alternate CC member for the NM Department of Game and Fish (NMDGF).

May 2 Meeting

The CC was informed that the deadline for the draft SOW for the RGSM Genetics activity may be changed from May 31 to May 15 according to new regional acquisition guidance. The ScW and Jericho Lewis will meet to refine the Genetics SOW to ensure that all comments/edits are included and any contracting issues are resolved. Unless there are issues that cannot be resolved, the SOW will be considered final when it meets the approval of Jericho and the ScW members. If necessary, questions on the SOW could be heard during a special CC session. The CC was also given the opportunity to review and comment on the draft SOW for the Adaptive Management activity to be funded and contracted by the U.S. Army Corps of Engineers (USACE). Susan Bittick was requested and agreed to present a summary of the Adaptive Management activity SOW at the May 15 EC meeting for their awareness. CC members received a copy of Ralph Monfort's Masters level project report entitled "Adaptive Management for the Middle Rio Grande Endangered Species Collaborative Program: Analysis and Issues" for optional reading (attached). The CC agreed to accept the recommended updates/changes to the CC Charter which will be provided to the EC for approval.

The next CC meeting is June 6, 2012 from 12:30-4:00 pm at Reclamation.

Reminders

Cost Share

All non-federal signatory entities were reminded to submit their **cost share reports** through FY2011 (including any back years not reported) using the template posted. As of March 2012, five non-federal entities had submitted cost share reports [NM Attorney General's Office (NMAGO), NMDGF, Pueblo of Santa Ana (Santa Ana), Albuquerque Bernalillo County Water Utility Authority (ABCWUA), and NM Department of Agriculture (NMDA)].

Long Term Plan (LTP) Future Activities

CC members were reminded to identify and submit any possible future actions/activities that could contribute to recovery for inclusion in the LTP using the template (attached).

Program Management Team

The PMT is understaffed by two positions (the non-federal and the Reclamation PMT members). PMT liaison support for workgroups is as follows: Michelle Mann, USACE, for the DBMS and San Acacia Reach (SAR) ad hoc workgroups, and the Habitat Restoration (HR) and Species Water Management (SWM) workgroups; Stacey Kopitsch, U.S. Fish and Wildlife Service (Service), for the ScW, Population Viability Analysis (PVA)/Biology, Population Habitat Viability Assessment (PHVA)/Hydrology, and Monitoring Plan Team (MPT) ad hoc workgroups; and Ali Saenz, Reclamation, for the Public Information and Outreach (PIO) workgroup.

The PMT continues to support the Program to the best of our abilities and keep the workgroups updated on the status of the contemplated transition of the Collaborative Program to a RIP. Some workgroups are meeting less frequently during the review of the Biological Assessments (BAs) and draft RIP documents to ensure adequate PMT support. The PMT will soon begin work on the FY2010 and FY2011 biennial report to include information on USACE funds and activities and a list of CORs by project.

Jericho Lewis, Contract Supervisor for the Contracts South Team, continues to assist with Albuquerque Area Office and Collaborative Program obligations while training new staff members, taking on additional responsibilities and contract oversight on major projects. Diana Herrera continues to work on: Program cost share updates, expenditure reports, water leasing obligations, and FY2012, FY2013, and FY2014 Program budgets. Chip Martin, Edward McCorkindale, Reese Fullerton, and Lisa Freitas, GenQuest, and Christine Sanchez and Marta Wood, Tetra Tech, continue to assist the Program in meeting support and summaries.

Habitat Restoration Workgroup

The HRW held a regularly scheduled meeting on April 17, 2012. Meeting attendees have discussed the possibility of having a "blanket" annual permit for Program activities on Bureau of Reclamation (BOR) and Middle Rio Grande Conservancy District (MRGCD) lands - further discussion with BOR and MRGCD is needed. Meeting attendees used the San Acacia Reach (SAR) GIS products to view several areas of interest including the levee setback area, areas on the Bosque Del Apache National Wildlife Refuge with concentrated flycatcher nesting, and the Rhodes property. Meeting attendees also worked on developing questions for the contractor to create queries from to help the workgroup pinpoint areas of interest in the reach. The HRW will continue to manipulate the SAR GIS products and discuss potential areas of interest.

Science Workgroup

The ScW held a regularly scheduled meeting on April 17, 2012. At this meeting, the data synthesis plan that the CC directed the workgroup to draft was approved and the plan has been forward to the CC for discussion. A subgroup of the ScW also met to discuss the continuation of RGSM silvery minnow genetic monitoring and analysis, as the current grant for this work is due to expire at the end of September. In the interim of a peer review being conducted on the genetic monitoring program, the CC directed the ScW to draft a new SOW for the continuation of genetic monitoring and analysis similar to what has been done in the current grant. It is anticipated that a new contract will be in place for the fall of 2012. **Jen Bachus (Service) and Alison Hutson [Interstate Stream Commission (ISC)] have completed their terms as Co-Chair and have stepped down**

from this role. No nominations for new Co-Chairs have been received. The next ScW meeting will be on May 15 at Reclamation.

Monitoring Plan Team ad hoc Workgroup

The MPT held a regular meeting on March 20, 2012. The 2010 effectiveness monitoring report has been finalized and the workgroup has begun drafting the 2011 report. Due to the low flow conditions seen last spring, limited fisheries monitoring data was collected from the habitat restoration sites sampled in 2011. As 2012 will again be a low flow year, the MPT will not be conducting any fisheries monitoring this year, however vegetation, hydrology, and geomorphology sampling will occur in the fall. The next MPT meeting has not yet been scheduled.

Species Water Management Workgroup

The SWM met on May 2, 2012 where Ed Kandl gave an update on the groundwater/surface water data. The workgroup was given an informal update that they may be reabsorbed into another workgroup. They also discussed several possible fieldtrips (MRGCD, Price's Dairy and Isleta SWFL Habitat). A Program update was given discussing the MPT's desire for new members, updates on the DBMS, and an update on the EC meeting schedule to accomplish tasks by May 29.

San Acacia Reach ad hoc Workgroup

The SAR ad hoc workgroup met on April 26, 2012. Workgroup members continue to review, edit, and comment on the draft white-papers for the low flow conveyance channel and agricultural sustainability topics. SAR members will develop deadlines for review of the white-papers so that they can be finalized at the next SAR meeting. SAR workgroup members were invited to participate in the formation of a group to develop a toolbox for water managers to use in the SAR and give suggestions of anyone else who might like to participate. It's anticipated for the group to begin meeting at the end of May. Some of the things that the group will be working on are continuing development of the decision support system for the SAR and a plan for maintaining the species in a worst case scenario (i.e. third year of drought, running out of reservoir water).

Population Viability Analysis (PVA)/Biology ad hoc Workgroup

The PVA ad hoc workgroup will meet on May 14, 15 and 16, with a primary focus of discussing development of the RAMAS- and FORTRAN-based PVA models in relationship to the BAs and Biological Opinion(s), and to compare the similarities and differences between the models that could influence differences in output. This meeting will include a presentation to the EC on May 15 from 12:00 – 1:30 pm at Reclamation.

Population Habitat Viability Assessment (PHVA)/Hydrology ad hoc Workgroup

The PHVA ad hoc workgroup will schedule their next meeting as needed via email. The workgroup sent the response letter to the PVA's August 2011 data request on December 7, 2011. Dagmar Llewellyn, BOR, is the newly appointed Federal Co-chair. The workgroup plans to schedule a joint meeting with PVA to discuss the response letter after PVA has had an opportunity to review and discuss it.

Database Management System ad hoc Workgroup

The DBMS workgroup held a regularly scheduled meeting on April 9, 2012 and a joint PMT/PIO/DBMS meeting on May 9, 2012. DBMS trainings are tentatively scheduled for July. The trainings will be offered on two days. The actual days of the training should be confirmed within the next month. DB Stephens has introduced Lloyd Dewald as the database administrator for the next phase of the contract.

Public Information and Outreach Workgroup

The PIO workgroup continues to meet with PMT and DBMS regarding needs, training, and transition of the Program website to the database. PIO members continue to provide new releases pertaining to the Collaborative Program to Ali Saenz to be included in the MRGESCP website. PIO & PMT will be hosting a booth at the Pueblo of Sandia Earth Day on June 29, 2012. PIO encourages Program members to contact Mary Carlson or Ali Saenz regarding public/educational events in which the Collaborative Program may participate. The following are potential participation events for 2012:

- Environmental fairs;
- Sandia Pueblo Birthday Celebration (week-long event);

- Service’s Endangered Species Day;
- Habitat Improvement Celebration;
- New Mexico State Fair (September);
- Bosque del Apache Festival of the Cranes (November);
- Other events or activities as requested.

Website Updates

The following documents have been posted since the end of March 2012:

Document Title/Description	Date Received	Location posted
Hydrologic year_take 2012	4/11/2012	Library >> Regulatory & Tribal Information
2011 Pop_Mon final	4/11/2012	Committees & Work Groups » ScW - Science Work Group » Projects
RGSM Health Study (draft for review)	5/1/2012	Committees & Work Groups » ScW - Science Work Group » Work Group Documents » ScW draft documents
News Article/Press Release	Date Published/Posted	Location Posted
DFHP 2011 Report	4/17/2012	Newsroom>> Articles

PVA WORKGROUP CONSENSUS REPLIES TO QUESTIONS FROM MRGCD AND NMDA FOR MAY 15, 2012 EC MEETING

Report from PVA workgroup meeting 5/14/12

MRGCD 1) Will a PVA model (either or both) be ready for use by the Program as per contracted schedule (functional model 6/30/12, training workshop 8/31/12, results report 9/30/12)?

Yes. Ready for use, with appropriate caveats.

(The users need to be ready to understand proper use.)

NMDA 1) What can the EC do to facilitate a timely completion of PVA models to ensure their maximum benefit for use in analyzing Biological Assessments and preparing Biological Opinion(s) in the MRG?

Schedule regular PVA meetings and workshops to obtain scientific review and wider understanding within the Program.

Continue to work on data availability issues.

Note: PVA will never be "complete" in the sense of "final." PVA will continue to be updated as the science progresses (monitoring, AM reduction of uncertainties).

NMDA 2) How can EC members have meaningful participation in this complex process? Now and in the future?

Attend PVA workgroup meetings; communicate through your organizations PVA representative; participate in PVA workshops; send written questions to PVA workgroup requesting answers by specified date.

MRGCD 4) What must the executive Committee be aware of when PVA is used in a regulatory or management context?

The process of PVA serves to bring together the best scientific information.

Need to be aware of the relation between characteristics of input scenarios (statistically driven by data, or hypothetical, or expert opinion) and the scientific status of the results.

Need for updating as new information is obtained.

MRGCD 7) Knowing the limitations on existing data, can the PVA models produce reliable and scientifically justifiable results?

Yes. PVA provides an uncertainty analysis which includes a report quantifying the uncertainty and showing the amount of uncertainty owing to data limitations.

NMDA 5) What is the PVA's role in peer reviews conducted by the EC, and can it be cited as a tool for MRG peer reviews?

The model itself is not a peer review tool, but it is the appropriate tool to reveal the implications of new or revised information.

Discussion in the PVA workgroup can be a step in the internal peer review process (and will help get information to PVA quickly).

It is anticipated that the PVA models used by the Program will be submitted for external peer review.

MRGCD 2) Is PVA "best available science," and is it defensible should it wind up in court?

NMDA 3) Do regulatory agencies consider PVA models the "best available science" during the BA/BO process and for evaluating progress on recovery of the species?

PVA, done correctly and used responsibly, is recognized "best science" for: assessing risk to population, threats analysis, and synthesis of pertinent information. (National Academy of Sciences 1995; Murphy and Weiland 2011; 4,000 journal publications)

The Service considers the PVA models to be among the best available scientific and commercial information, ie, part of the body of knowledge of best science.

MRGCD 3) What information will the PVA provide that can be used by the Program and Federal Agencies while preparing the 2013 Biological Opinion?

Assessment of current status; risk posed under baseline; risk posed under proposed action; risk reduction and relative risk reduction by proposed RPAs and RPMs and conservation measures; uncertainties that need to be addressed by adaptive management.

MRGCD 6) Can PVA be used for adaptive management, in particular when justifying difficult decisions and new water management ideas?

NMDA 4) What is the PVA's role in adaptive management of natural resources in the MRG, and can it be formally utilized within an adaptive management plan for the MRG?

PVA is a critical formal component of adaptive management.

PVA can identify critical uncertainties, evaluate the potential of proposed experiments to reduce the uncertainties, provide a risk assessment for the experiment itself, re-evaluate population status and management strategy after the results of the experiment are analyzed.

MRGCD 5) If the Program does transition to a Recovery Implementation Plan, why is PVA important?

Propose and validate indicators of progress toward recovery.

Carry out assessments of progress toward recovery.

Build adaptive management into the planning.