

**Middle Rio Grande Endangered Species Act Collaborative Program  
Species Water Management Standing Workgroup (SWM)**

02 June 2010 Meeting

**10:00 AM to 12:00 PM @ BIA**

**Actions**

- Amy Louise will forward DBMS meeting date and location information to Curtis McFadden. Amy will also elevate the DBMS attendance concern to the Coordination Committee (CC).
- Matt Martinez will email the revised “Use urban waste water outfall and rural irrigation delivery and tail waters for habitat restoration to expand habitat, favor native over exotic plants, and reduce fire potential” summary to the SWM workgroup.
- Chris Banet will talk to Subhas Shah and Janet Jarratt about the “MRGCD threshold analysis” LTP Future Activity.
- Hilary Brinegar will send information on the 2010 NM Water Shed Forum to Jenae Maestas to email to Program members.
- Matt Martinez will update the SWM workgroup on whether he will be able to extend his term as SWM Co-Chair.

**Meeting Summary**

- Chris Banet brought the meeting to order and introductions were made around the table.
- The Climate Change Presentation was moved to the end of the agenda.
- The approval of the May 5, 2010 meeting minutes was tabled for the July 7, 2010 meeting.
- All May Action Items were either complete or are ongoing with exception to “*Amy Louise will forward DBMS meeting date and location information to Curtis McFadden. Amy will also elevate the DBMS attendance concern to the Coordination Committee*”; this will be a June Action Item. The USGS Transect Study report is still in review at USGS, it’s estimated to be completed in late summer of 2010. Amy Louise is communicating with Steve Harris on getting the report that was referenced for his suggested Species Water Management (SWM) activity of Geomorphic Rehabilitation Project. The SWM workgroup was informed that the DSS project was removed from the Long Term Plan (LTP) Future Activity sheet. A date has not yet been scheduled for the presentation of the FWS/MRG Bosque Initiative funded study “Effects of climate change on MRG species”.
- The SWM workgroup reviewed a spreadsheet from the Database Management System (DBMS) workgroup listing data that will be included in the Program database. DBMS workgroup is requesting that all workgroups review the table and assign a Point of Contact (POC) for data that is still needed. The workgroup assigned POCs and made several suggestions for data that should be added to the Program database but was not included in the spreadsheet.
  - Several of the data are available on the Program website: “Southwestern willow flycatcher Habitat Surveys”, “Southwestern willow flycatcher Population Viability Analysis”, “Vegetation Classification Map (via Hink and Ohmart methods)”, “Biological Opinion (2003)”, “Program Activity Funding Documents”, “Program Financial Reports”, “Program Outreach Materials”, “Workgroup Meeting Minutes”, “Workgroup Summary Reports”, and “Workgroup Work Plans”

- Kathy Dickinson will be the POC for “RESPEC Silvery Minnow Project Data and Tools”
- Cyndie Abeyta will be the POC for “Middle Rio Grande Ecosystem: Bosque Biological Management Plan”, “Water Quality data – monthly and synoptic”, and “Water Quality (FWS)”
- Lori Robertson was the suggested POC for “Southwestern willow flycatcher Bird Surveys” and “SWWF survey data and nesting territories (not on Pueblo lands)”
- Jason Remshardt was the suggested POC for “Rio Grande silvery minnow Augmentation Data”
- Michael Porter and Peter Wilkinson were the suggested POCs for “Rio Grande silvery minnow Downstream Egg Drift Studies”
- Thomas Turner and Megan Osborne were the suggested POCs for “Rio Grande silvery minnow genetic data and analyses”; their publications are also available on the Program website.
- Someone at USACE or Reclamation may be the POC for “USGS Biomonitoring of Environmental Status and Trends for Rio Grande silvery minnow monitoring”
- Matt Martinez will be the POC for “MRGCD Facilities and Diversion Structures”, and “Real time ‘provisional’ and ‘final’ data from MRGCD for diversion amounts at all diversion dams, gaged flows in canals and drains, drain and wasteway return flows to the river”
- Nabil Shafike was the suggested POC for “Soil Survey Geographic Database (SSURGO)”
- Roxanne Candelaria-Ley and Dave Van Horn were suggested POCs for “Water Quality data - sonde @ 15 minute increments”
- Shann Stringer was the suggested POC for “Water Quality (NMED)”
- Data that should be added to the Program database:
  - Wetland Mapping – Cyndie Abeyta as POC
  - MRGCD Facilities and Diversion Structures; and Real time "provisional" and "final" data from MRGCD for diversion amounts at all diversion dams, gaged flows in canals and drains, drain and wasteway return flows to the river - data from ET Toolbox – Steve Bowser is the suggested POC
  - Biological Opinion (2001) – available on the FWS website
  - Biological Assessments (2001 and 2003)
  - Middle Rio Grande Bosque Initiative Video – Cyndie Abeyta as POC
  - Middle Rio Grande Bosque Initiative database and contacts – Cyndie Abeyta as POC
- The Population Habitat Viability Assessment/Hydrology (PHVA) workgroup met on May 18, 2010. The 2003 BO model runs are on hold; the model runs are currently set to be 10 year simulations but there is a possibility that the simulations could be more than 10 years.
- The Population Viability Assessment/Biology (PVA) workgroup will be having their next meeting on the 29th and 30th of June 2010.
- The LTP Future Activity summary for “Use urban waste water outfall and rural irrigation delivery and tail waters for habitat restoration to expand habitat, favor native over exotic plants, and reduce fire potential” has been revised. Matt Martinez will email the summary to the SWM workgroup.

- There was concern about the wording in LTP Future Activity “MRGCD threshold analysis”. Chris Banet will talk to Subhas Shah and Janet Jarratt about the “MRGCD threshold analysis” LTP Future Activity.
- There was a Route 66 Ribbon Cutting at the Bosque last week.
- The 2010 NM Water Shed Forum will be September 28-30 at the Uptown Marriot. Hilary Brinegar will send information on the 2010 NM Water Shed Forum to Jenae Maestas to email to Program members.
- The end of Matt Martinez’s 2 year term as SWM Co-Chair is approaching in July. Because of the difficulty in finding volunteers for Co-Chair, it was suggested that Matt extend his term; Matt will check with his superiors to see if they will allow him to extend his Co-Chair term. Matt Martinez will update the SWM workgroup on whether he will be able to extend his term as SWM Co-Chair.
- The next regularly scheduled SWM meeting will be on July 7, 2010. There will be a Transect study presentation by USGS.
- The SWM workgroup was shown a presentation “*Downscaling Climate Projections: Motives, Methods, and Resources*” by Levi Brekke from Bureau of Reclamation Technical Service Center. The presentation discussed how planning interests motivate climate projection downscaling and bias-correction, the strengths and weakness of methods for downscaling, and several data resources available to support planning studies.

**Next Meeting: July 7, 2010 from 10:00 am to 12 noon at BIA**

### Meeting Minutes

#### **Introductions & Announcements**

- Chris Banet called the meeting to order and introductions were made around the table.
- It was announced that Cyndie Abeyta has no longer been receiving Species Water Management (SWM) emails and needs to be added back to the SWM distribution list.

#### **Agenda Approval**

- The Climate Change presentation was moved to the end of the agenda.
- It was suggested that electronic copies of presentations be distributed prior to meetings so that those attending through conference call can follow along.

#### **Approval May 5<sup>th</sup> Meeting notes**

- Not everyone received or was able to review the May 5<sup>th</sup> meeting notes; approval of the May 5<sup>th</sup> meeting notes will be tabled for the next SWM meeting.

#### **May Action Item Review**

- Amy Louise will forward Database Management System (DBMS) meeting date and location information to Curtis McFadden. Amy will also elevate the DBMS attendance concern to the Coordination Committee (CC).
  - This action item was not complete. Monika Mann is the Program Management Team (PMT) liaison to the DBMS; Curtis can contact her for more information.

- Amy Louise will ask Valda Terauds for the status of the U.S. Geological Survey (USGS) Transect Study Report.
  - Complete. The USGS Transect Study Report is still in review at USGS; the review is estimated to be completed in late summer.
- Amy Louise will bring copies of the Program video to the June SWM meeting.
  - Complete.
- Tetra Tech will locate the WAM plan on the Program website and send the link to Page Pogram.
  - Complete.
- Amy Louise will get the report that Steve Harris referenced regarding specific project guidance for his future SWM activity suggestion of Geomorphic Rehabilitation Projects.
  - Ongoing. Amy Louise in the process of communicating with Steve Harris.
- Chris Banet will write an activity summary for future LTP activity on page 15, line 63 “review existing geomorphic studies and groundwater monitoring sites and connect to habitat maps project” after receiving additional information on the activity from Amy Louise.
  - Complete.
  - The SWM workgroup was informed that the DSS project was removed from the Long Term Plan (LTP) Future Activity sheet.
- Cyndie Abeyta will send the SWM workgroup information regarding an upcoming presentation on the FWS/MRG Bosque Initiative funded study “Effects of climate change on MRG species” conducted by the U.S. Forest Service.
  - A date for the presentation has not yet been scheduled.
- Amy Louise will send the SWM activity summary table with those activities that are still in need of prioritization called out by Friday, May 7, 2010. SWM members will assign a one, two, or three ranking to each activity and return to Amy by Friday, May 14, 2010.
  - Complete.
- Hilary Brinegar will downsize the soil moisture activity summary and return to Amy Louise by May 21.
  - It was clarified that Hilary would be revising the soil moisture activity summary. This action item was complete.
  - It was pointed out that the soil moisture activity summary may mention the DSS project which was removed from the Program future activities. There also needs to be consideration of how the soil moisture activity will be used without the DSS project.

**DBMS Data**

- The SWM workgroup was informed that a spreadsheet was put together by the contractors creating the Program database. It is a list of data that they know exists. Program workgroups were asked to review the spreadsheet and list a Point of Contact (POC) for data that still needs to be collected and to suggest data that should be in the Program database but is not on the spreadsheet.

- It was asked if the contractors building this database have coordinated with RESPEC.
  - The data from RESPEC is included in the database.
- Will the database include reports also or just data?
  - Both reports and data will be included in the database.
- The SWM workgroup reviewed data without a POC to see if one could be established.
  - “RESPEC Silvery Minnow Project Data and Tools”
    - Kathy Dickinson will be the POC.
  - “Middle Rio Grande Ecosystem: Bosque Biological Management Plan”
    - There is more up-to-date information available; Cyndie Abeyta will be a POC.
  - “Southwestern willow flycatcher Bird Surveys”
    - It was thought that the POC should be someone at U.S. Fish and Wildlife Service (Service).
    - Lori Robertson was a suggested POC.
  - Data on “Southwestern willow flycatcher Habitat Surveys” and “Southwestern willow flycatcher Population Viability Analysis” are available on the Program website.
  - “SWWF survey data and nesting territories (not on Pueblo lands)”
    - Lori Robertson was a suggested POC.
  - “Rio Grande silvery minnow Augmentation Data”
    - Jason Remshardt was a suggested POC.
    - It was also thought that this information was available on the Program website.
  - “Rio Grande silvery minnow Downstream Egg Drift Studies”
    - Michael Porter and Peter Wilkinson were suggested as POCs.
  - “Rio Grande silvery minnow genetic data and analyses”
    - Tom Turner and Megan Osborne were suggested as POCs.
    - It was pointed out that publications from Tom and Megan are available on the Program website.
  - “Rio Grande silvery minnow population summary”
    - The SWM workgroup was not able to establish or suggest a POC.
  - “USGS Biomonitoring of Environmental Status and Trends for Rio Grande silvery minnow monitoring”
    - It was thought that someone at U.S. Army Corps of Engineers (USACE) or Bureau of Reclamation (Reclamation) might be an appropriate POC.
  - “Topographic Surveys”
    - The SWM workgroup was not sure what data this is referring to.
  - “MRGCD Facilities and Diversion Structures”
    - Matt Martinez will be the POC.

- “Soil Survey Geographic Database (SSURGO)”
  - Nabil Schafike was the suggested POC.
- “Habitat Restoration Projects”
  - It was thought that this was too broad to establish a POC
- “Southwestern willow flycatcher Habitat Hydrology Studies”
  - The SWM workgroup was not able to establish or suggest a POC.
- “Southwestern willow flycatcher Habitat Monitoring”
  - The SWM workgroup was not able to establish or suggest a POC.
- “Southwestern willow flycatcher Habitat Monitoring - Invasive Species Treatment”
  - The SWM workgroup was not able to establish or suggest a POC.
- “Southwestern willow flycatcher Habitat Monitoring - Vegetation Planting”
  - The SWM workgroup was not able to establish or suggest a POC.
- “Vegetation Classification Map” – Hink and Ohmart methods
  - This data is available on the Program website
- “Vegetation Classification Map” – via other methods
  - The SWM workgroup was not able to establish or suggest a POC.
- “Wetland Mapping” data should be added to the database.
  - Cyndie Abeyta will be the POC.
- “Real time "provisional" and "final" data from MRGCD for diversion amounts at all diversion dams, gaged flows in canals and drains, drain and wasteway return flows to the river.”
  - It was the SWM workgroups understanding that Middle Rio Grande Conservancy District (MRGCD) did not want this data to be included in the Program database.
  - Matt Martinez will be the POC.
  - It was suggested that this data from the ET Toolbox should be in the Program database. Steve Bowser was the suggested POC.
- “Biological Opinion (2003)”
  - This is available on the Program website.
  - It was thought that the 2001 Biological Opinion (BO) and the Biological Assessments should also be added to the Program database
  - The 2001 BO is available on the Service website.
- It was stated that the idea for the Program database was to pull in key documents so that they will always be available. Links will be provided to documents that are frequently updated to ensure that the current version of the document is always available.
- “Program Activity Funding Documents”
  - This data is available on the Program website.
- “Program Financial Reports”

- This data is available on the Program website.
- “Program Outreach Materials”
  - This data is available on the Program website
- It was thought that Middle Rio Grande Bosque Initiative video should be added to the Program database.
- “Workgroup Meeting Minutes”
  - This data is available on the Program website.
- “Workgroup Summary Reports” and “Workgroup Work Plans”
  - This data is available on the Program website
- “Water Quality data – monthly and synoptic”
  - Cyndie Abeyta will be the POC.
- “Water Quality data” (Service)
  - Cyndie Abeyta will be the POC.
- “Water Quality data - sonde @ 15 minute increments”
  - Roxanne Candelaria-Ley and Dave Van Horn were suggested as POCs.
- “Water Quality data” (not already provided to STORET)
  - Shann Stringer was a suggested POC.
- It was thought that the Middle Rio Grande Bosque Initiative database might have projects that would be relevant to the Program.
  - Cyndie Abeyta will be the POC.

### **Program Coordination**

- **PHVA/Hydrology Updates –**
  - The SWM workgroup was updated that the Population Habitat Viability Assessment/Hydrology (PHVA) workgroup met on May 18, 2010. The 2003 BO model runs are on hold until the workgroup receives firm direction that the models will be running 10 year simulations. The Executive Committee (EC) had previously given direction that the simulations should be for 10 years but there has been a request from non-federal Program signatories to extend the simulation.
  - Dan Goodman sent out a series of PDF files that compared water flow at various gauges against Rio Grande Silvery Minnow (minnow) density counts from 1992 to 1998. Dan Goodman posed questions as to why the variables were so different and if there were any anomalies during those years. PHVA will put together a subgroup to address Dan Goodman’s questions. Solicitors in the Office of the Interior in conjunction with Reclamation and the Service are reviewing the request to make sure that it can be done.
- **PVA Updates**
  - The next Population Viability Analysis (PVA) workgroup meeting will be on the 29 and 30 of June, 2010.
- **Joint Workgroup Activities (DBM updates; MPT updates)**
  - The MPT Monitoring Plan Team (MPT) will be monitoring into June 2010.

- The joint activity was to look at the IDIQs. No comments had been provided.
  - It was asked if only 1 contractor could bid.
  - Each bidder would have to come in a team if they did not have all the expertise. Teaming is common.
  - It was explained that that they tried to make a vehicle that can be used to accomplish tasks. Once the vehicle is in place one or two contractor teams issue task orders against that vehicle. The goal is to have modeling and data collection done within the same team.
- **PMT Liaison Needs**
  - It was asked if the activity summary for “Use urban waste water outfall and rural irrigation delivery and tail waters for habitat restoration to expand habitat, favor native over exotic plants, and reduce fire potential” has been revised.
    - The summary has been revised and was sent to Amy Louise.

**Action:** Matt Martinez will email the revised “Use urban waste water outfall and rural irrigation delivery and tail waters for habitat restoration to expand habitat, favor native over exotic plants, and reduce fire potential” summary to the SWM workgroup.

- It was mentioned that the CC discussed the “Human Population Growth” project future activity summary. Some CC members thought that it might not be applicable to the Program but it was not removed as an LTP Future Activity.
- It was asked if the CC discussed the “MRGCD threshold analysis” project.
  - No, the CC only reviewed the priority 1 LTP Future Activity Summaries.
  - It was said that the wording in the table for Future Activities regarding this project is pretty sensitive. It was suggested that Subhas Shah and Janet Jarrat be contacted.

**Action:** Chris Banet will talk to Subhas Shah and Janet Jarratt about the “MRGCD threshold analysis” LTP Future Activity.

#### **Agency Updates (5 min)**

- There was a Route 66 Ribbon Cutting at the Bosque last week.
- The 2010 NM Water Shed Forum will be September 28-30 at the Uptown Marriot.

**Action:** Hilary Brinegar will send information on the 2010 NM Water Shed Forum to Jenae Maestas to email to Program members.

- The SWM workgroup was informed that Matt Martinez’s 2 year term as Co-Chair will be ending in July 2010. Matt will still be attending SWM meetings.
  - Given the difficulty in establishing a new Co-Chair it was suggested that Matt extend his term as Co-Chair pending approval from his supervisors

**Action:** Matt Martinez will update the SWM workgroup on extending his term as SWM Co-Chair.

- An EC approved change would have to be made to the SWM Charter.

**Next Meeting: July 7<sup>th</sup> from 10:00 am to 12 noon at BIA**



- USGS Transects Project presentation.
- Christ Banet will not be attending the meeting; Matt will lead the meeting.

### **Climate Change Presentation (60 min, 11:00 am)**

- The SWM workgroup was shown a presentation “*Downscaling Climate Projections: Motives, Methods, and Resources*” by Levi Brekke from Bureau of Reclamation Technical Service Center. The presentation discussed how planning interests motivate climate projection downscaling and bias-correction, the strengths and weakness of methods for downscaling, and several data resources available to support planning studies. *For specific details please see the attached presentation. Below are questions and discussion regarding the presentation.*
  - Slide: Preview
    - Bias-corrections are just as important as downscaling
  - Slide: Planning Interests
  - Slide: 1. CMIP3 Climate Projections
    - CMIP means Coupled Model Intercomparison Project.
      - Coupled atmospheric and ocean
    - 3 means that its phase 3.
  - Slide: displays flow chart
  - Slide: Making a single “Projection” required multiple GCM simulations
    - 3 stage simulation done by 16 modeling centers
    - In the 3<sup>rd</sup> state they used different green house gas (GHG) types.
    - Question: What is coming out of the centers?
      - Reply: 23 models
    - Question: Do the models agree?
      - Reply: With continental to regional temperature trends there is consensus; they all warm. It becomes more of a challenge when storm track simulations are done.
    - Question: Are global circulation models mathematical models?
      - Reply: Yes. The vertical resolution is fine, the spatial is pretty coarse. The show time boxes and grids.
    - Question: What was the criteria for choosing the 23 models?
      - Reply: Only 23 models were created.
  - Slide: 2. Motives for Bias-Correctign and Spatial Downscaling outputs from GCMs
  - Slide: Why do we need to bias-correct?
    - Models being too wet is an example of bias
  - Slide: Why do we need to bias-correct?
  - Slide: Why do we need to spatially downscale?

- Slide: 3. Methods
- Slide: Method Categories
- Slide: Dynamical – Spatially Distributed
  - North American Regional Climate Change Assessment Program (NARCCAP) is probably the biggest downscaling effort
- Slide: Statistical – Location-Specific
  - Menu of atmospheric states
- Slide: Empirical – Spatially Distributed
  - “simple” downscaling
  - Bias-Correction Spatial Disaggregation (BCSD) is applied extensively
  - Bias-Correction Constructed Analogs (BCCA) just came onto the scene last year
- Slide: 4. Method Contrasts and Potential Applications
- Slide: Pros/Cons
  - The “ + ” means pro
  - The “ - ” means con
- Slide: Potential Applications
- Slide: 5. Resources
  - Reclamation has been a collaborator to Downscaled Climate Projections (DCP) Archive
- Slide: Empirical, Spatial Dist’d Example: BCSD (Bias Correction Spatial Disaggregation)
- Slide: DCP Archive with BCSD data
- Slide: BCSD: Bias Correction part 1
  - Comparison of black to red is quantile map
- Slide: BCSD: Bias Correction part 2
- Slide: BCSD: Spatial Downscaling - 1. Get reference historical pattern
  - Period mean pattern guides the downscaling
- Slide: BCSD: Spatial Downscaling - 2. Compute Factors
  - 2 way interpolation scheme
- Slide: BCSD: Spatial Downscaling – 3. Disaggregate Factors
- Slide: BCSD: Spatial Downscaling – 4. Merge Factors and Historical Pattern
- Slide: BCSD Uncertainties
  - GCM outputs can have any resolution; all have to be converted to the common 2
- Slide: 5. Resources

- Archive of dynamically downscaled information
- Slide: NARCCAP
  - Using 6 RCMs
- Slide: NARCCAP – Unique Opportunities
- Slide: DCP Archive vs. NARCCAP: Assessing Projection Uncertainty
  - Red is temperature and blue is precipitation. It can show a range of potential changes. NARCCAP doesn't necessarily do that. If you look for period changes you get a different type of overview.
- Slide: On Assessing Flood Risk... DCP Archive vs. NARCCAP
- Slide: New Method in DCP Archive, FY2010: BCCA (Bias-Correction Constructed Analogs)
- Slide: Image
- Slide: New Method in DCP Archive, FY2010: BCCA (Bias-Correction Constructed Analogs)
- Slide: On Assessing Flood Risk... DCP Archive (w/BCCA) vs. NARCCAP
- Slide: 5. Resources
- Slide: Regional Resources
- Slide: 6. Summary
- Slide: Questions?
  - Question: How do models relate to changes in La Nina or El Nino frequency and magnitudes?
    - Reply: All the models simulate something but it's hard to detect. Given warming expected an El Nino effect is going to be more common. The models have different expressions of ocean cycles. Some exaggerate the cycles and some are very muted. Some express lots of variability in temperature and precipitation trends.
  - Question: When you say there are 2 resources available, are these archives of work that has already been done? Let's say we wanted to look at Rio Grande downsizing has that been done? Would we just have to apply the models?
    - Reply: The downscale data is there to use.

<b>Species Water Management Work Group 02 June 2010 Meeting Attendees</b>					
<b>Name</b>	<b>POSITION</b>	<b>AFFILIATION</b>	<b>PHONE NUMBER</b>	<b>EMAIL ADDRESS</b>	<b>PRIMARY, ALTERNATE, OTHER</b>
Cyndie Abeyta	SWM Member	FWS	761-4738	cyndie_abyeta@fws.gov	P
Amy Louise	PMT	ISC	383-4057	amy.louise@state.nm.us	O
Matt Martinez	SWM Member	MRGCD	730-6474	mmartinez@mrgcd.us	P
Andrew Lieuwen	SWM member	ABCWUA	768-2570	alieuwen@abcwua.org	P
Chris Banet	SWM Member	BIA	563-3403	chris.banet@bia.gov	P
Page Pegram	SWM Member	ISC	383-4041	page.peggram@state.nm.us	P
Hilary Brinegar via phone	SWM Member	NMDA	(575) 646-2642	hbrinegar@nmda.nmsu.edu	P
Curtis McFadden	SWM Member	USACE	342-3351	Curtis.M.Mcfadden@usace.army.mil	P
Valda Terauds	SWM Member	Reclamation	462-3584	vterauds@usbr.gov	P
Kathy Dickinson		Reclamation	462-3555	kdickinson@usbr.gov	O
Levi Brekke	Presenter	Reclamation	(303) 445-2494	lbrekke@usbr.gov	O
Christine Sanchez	Admin Support	Tetra Tech	881-3188	christine.sanchez@tetrattech.com	O