Middle Rio Grande Endangered Species Collaborative Program Newsletter: December 2017

Letter from the Program Manager

Dear Collaborative Program participants, partners, and friends-

As 2017 draws to a close, I find myself reflecting on the past year-the first full year that WEST has been the third-party Program Manager for the Collaborative Program. This has been an interesting year, both challenging and very rewarding for me. We started off with one full-time person, and we are now on the verge of four full-time Albuquerque staff to support the Collaborative Program.

While this first year has focused on learning relationship-building, I want to shift the focus for 2018 to more actionable goals and objectives. After the April retreat, the Program signatories reaffirmed their commitment and developed high-level agreements on goals and tasks. I want to take the next step and build on that foundation over the next year, with a clear direction and specific goals for the Program to work towards.

Moving forward, we will increase our science support to the Program. Our Science Coordinator, Dave Wegner, has begun working on developing an adaptive management process for the Program, and that effort will ramp up next year. WEST statisticians have begun working with Program technical experts on data analysis and will continue to do so. Additionally, we have plans for scientific workshops and conferences where Program scientists can more fully engage in how science can inform management in the Middle Rio Grande, and how that will all inform an adaptive management program. We will remain aware of the regulatory requirements and limitations we have to operate within throughout the development of the adaptive management program, and will acknowledge those in the scientific decision-making process.

Over the past year, as I have come to know the Program and all of you, I hope that you have also come to know me and the rest of the WEST team. I welcome any feedback you may have for the past year, and thoughts on how we might do better.

There are many exciting things to come in 2018. I look forward to working with all of you further.

Sincerely,

Debbie Lee
Program Manager

If you missed sending us an update there will be another opportunity to submit your update for the next newsletter. In the meantime, if you have any important updates or comments on the newsletter feel free to send them to Luc Moulson at lmouslon@west-inc.com.

In This Issue

Upcoming Dates:

Executive Committee Meeting:
Tuesday, December 12,
9:00 AM - 3:00 PM
One Executive Center,
8500 Menaul Blvd. NE
Albuquerque, NM 87112
Room A 125
(Working Lunch)

Adaptive Management Work Group Meeting:
Tuesday, December 19
9:00 AM - 4:00 PM

Basic Fish Identification

Army Corps of Engineers

Phase I - DBMS Migration and Hosting has been initiated! The current database and web application will be migrated to a USGS public, Secure Sockets Layer (SSL) web server and released as-is to insure continuity of service. A development environment that includes an internal development database, web application, and source code repository will be set up to prepare for future work. The DBMS data structure and application code will not be modified during Phase I.

POC: Lynette Giesen (Lynette.M.Giesen@usace.army.mil)

Bosque Ecosystem Monitoring Program (BEMP)

BEMP is currently working with the U.S. Bureau of Reclamation (Reclamation), U.S. Army Corps of Engineers Corps), and the U.S. Fish and Wildlife Service (Service) at Bosque del Apache National Wildlife Reserve to help monitor the Pilot Realignment Project area with two new BEMP sites. The Bosque del Apache Realignment Pilot Project, as outlined in the 2016 Biological Opinion, entails moving approximately three miles of the active river channel. Our goal is to help understand the potential impacts of river realignment as a restoration process, and the benefits of restoring river function. With funding from the Corps and Reclamation, BEMP will establish two new sites within the northern section of the project area, likely with one site on each side of the current river channel. One site will be in the saltcedar removal area that is currently east of the river and will be west of the realigned river. The second site will likely be to the west of the river in an area that is not scheduled for vegetation removal. These will be full BEMP sites that will include monitoring of depth to groundwater, vegetation cover, litterfall, precipitation, and woody debris/fuel load. Depending on how often the sites are inundated, surface-active arthropods (monitored by using pitfall traps) may not be included. BEMP is working with Dr. Jennifer Rudgers at UNM to include inoculating half of the vegetation plots with fungi so we can investigate the potential legacy effects of saltcedar on cottonwood and willow recruitment. These two paired sites will provide valuable information on system responses to implementation of the BdA Realignment Pilot Project, guiding future maintenance of the

Workshop:
December 20-21
9:00 AM - 12:00 PM
Contact Luc Moulson to reserve a seat
(Space is limited)

List of Current Committees and Work Groups

Executive Committee

Coordination Committee

Adaptive Management Work Group

Bylaws ad hoc Work Group

Science and Habitat Restoration Work Group

- Early Life History SOW Subgroup
- Tamarisk SOW Subgroup

Rio Grande silvery minnow Genetics Work Group

Population Monitoring Work Group

- Data Analysis Team

Minnow Action Team

View the Program website here

Pilot Project site as well as guiding design for the Upstream Realignment Project. In particular, understanding vegetative response in saltcedar areas will help Reclamation design more effective vegetation management/restoration projects. By setting up sites now, we will have the opportunity to collect data from pre-project, during construction, and post-project, which will contribute valuable information to the decision-making processes of water resources managers.

POC: Kim Eichhorst (keichhorst@unm.edu)

Bureau of Reclamation

2016 Biological Opinion Adaptive Management Framework

As required under the 2016 Biological Opinion (BiOp), Reclamation is moving forward with developing an Adaptive Management Framework. There are three inater-related categories in the 2016 BiOp that fall under the umbrella of Adaptive Management: Water Management, Habitat Restoration, and River Connectivity. These categories are related through River Integrated Operations (RIO), which refines the Hydrobiological Objective, focusing on maximizing benefit to listed species while meeting water demands. Currently, the implementation schedules for each category are at various stages of development and all stages are still in draft.

The draft concept of RIO was introduced to the BiOp Partners in September and Reclamation has continued to refine the concept by identifying potential management actions and relating those actions back to Conservation Measures in the BiOp. Starting in early 2019, Reclamation and the BiOp Partners will introduce the RIO process to the Minnow Action Team (MAT) and request their assistance with developing hypotheses about the best use of available water for conservation and using the results to reduce uncertainty around management actions, in addition to the MAT's usual activities (recommending spring flows, and coordinating monitoring).

To maintain the Adaptive Management cycle, results will be incorporated into a series of system models developed through a collaborative process that will assimilate the knowledge gained from previous predictions and measured outcomes. Improving these predictive models over time will allow the MAT to make recommendations on endangered species management with more certainty. To assist with refining the Hydrobiological Objective, Reclamation is contracting a biometrician to work through the RIO process. This individual will collaborate with the Service, the BiOp Partners, and the Collaborative Program's scientists and statisticians throughout the data analysis process. The biometrician will present all

analyses to the MAT and provide model results to help inform the next year's recommendations.

Reclamation will continue to work with the BiOp partners, the Collaborative Program, and the Service through the development of the Adaptive Management Framework to ensure our process meets the requirements under the BiOp and corresponds with applicable science performed by others. Reclamation plans to present the draft BiOp Adaptive Management Framework to the EC in the spring.

POCs: Ashlee Rudolph (arudolph@usbr.gov) and Steve Raugust (jraugust@usbr.gov)

Lower Reach Plan Update

As part of Reasonable and Prudent Measure #9 under the 2016 BiOp, the Lower Reach Plan (LRP) will help coordinate habitat restoration and river maintenance activities from the southern boundary of Isleta Pueblo to the Elephant Butte Reservoir headwaters. The LRP is a living document and will be updated to provide project level information as it becomes available. Currently, the draft LRP is being revised to reflect the comments received from the BiOp partners, and technical editing will begin in December 2017. Next steps include another round of review from BiOp partners, a public forum (coordinated through Save Our Bosque Task Force), finalizing comments, and submitting the LRP to the Service prior to the June 2018 deadline.

POC: April Fitzner (afitzner@usbr.gov)

Hydrology Update

Spring flow in the Middle Rio Grande (MRG) in 2017 was higher and of longer duration than it has been since about 2008. Flow into New Mexico from Colorado was good, but the Rio Chama had the sixth highest spring runoff volume since 1956 (367,550 ac-ft at La Puente).

San Juan-Chama Project contractors received a full allocation this year for the first time in four years. Heron Reservoir currently holds approximately 148,300 ac-ft, up from 84,000 ac-ft at this time last year.

As with many previous years, the year began with Article VII storage restrictions in place, those restrictions were lifted for a time during the spring and early summer, then re-imposed later in the year. As a result, water went into and out of storage at El Vado throughout the spring. Ultimately the Middle Rio Grande Conservancy District (MRGCD) stored 114, 372 ac-ft of Rio Grande water at El Vado reservoir, and Reclamation

(Re stored 15,000 ac-ft of Rio Grande water as a reserve for any potential shortages for "Prior and Paramount" lands of the Pueblos. Storage of Rio Grande water was carefully managed to minimize impact on Rio Grande silvery minnow (RGSM) spawning conditions. During the month of May, Rio Grande water was only stored in El Vado when Abiquiu dam was in flood ops, preventing any reduction in peak discharge due to El Vado storage. In June the MRGCD began bypassing a portion of native inflow to El Vado to minimize storage impacts on spring flow duration. Neither MRGCD or Reclamation stored any water using Rio Grande Compact relinquishment credits.

The MRGCD delivered 5000 ac-ft of San Juan-Chama (SJC) water from El Vado to Abiquiu in late April, as part of a continuing effort to retire its debt to the Albuquerque Bernalillo County Water Utility Authority (ABCWUA). This debt originated from exchanges between MRGCD, Reclamation, and what was then the City of Albuquerque to secure water to provide flows for RGSM between 2000 and 2002. This water movement was times to produce a flow spike on the Rio Chama for geomorphology/sediment/riparian vegetation benefits.

Due to concerns about El Vado dam, the MRGCD released 31,669 ac-ft of SJC water from El Vado in late May. With the assistance of the ABCWUA, this water was temporarily stored at Abiquiu reservoir, being exchanged back upstream to El Vado at the end of September. Temporary storage at Abiquiu decreased to maximum reservoir pool elevation at El Vado through the spring and summer, and assisted Reclamation efforts to provide Brown Trout fishery flows on the Rio Chama by minimizing the amount of ABCWUA SJC water required to be moved to Abiquiu in the fall.

Natural flows entering the MRG valley remained relatively high throughout June. Reclamation began supplementing flows in July with SJC water released from Abiquiu, and a managed recession began. MRGCD began releasing supplemental storage in mid-August. By late August natural inflow to the MRG had dropped less than 200 cfs at times. Reclamation and MRGCD water releases limited total river drying in 2017 to slightly over 20 miles. MRGCD outfalls were used to augment flows in the Isleta reach at select locations. Storm inflows increased flows in late September, rewetting the entire river through the MRG valley. In early October MRGCD began releasing Rio Grande water from El Vado for delivery to Elephant Butte, again assisting Reclamation Brown Trout fishery flows on the Rio Chama by minimizing the amount of Rio Grande water required to be moved from El Vado to Elephant Butte in Nov/Dec.

El Vado Reservoir 112,905 ac-ft in storage at the end of October, as compared to 45,000 ac-ft at the same time in 2016. This included 63,183 ac-ft of Rio Grande water, and

29,811 ac-ft of SJC water for MRGCD; and 13,967 ac-ft of unused "Prior and Paramount" reserve. Some of this water is currently being released to Elephant Butte Reservoir to meet New Mexico's compact obligations. The release will include nearly 14,000 ac-ft of unused Prior & Paramount water, stored while under Article VII restrictions, and additional MRGCD Rio Grande water at present, MRGCD expects to end 2017 with between 40,000 and 50,000 ac-ft of Rio Grande water remaining in storage at El Vado.

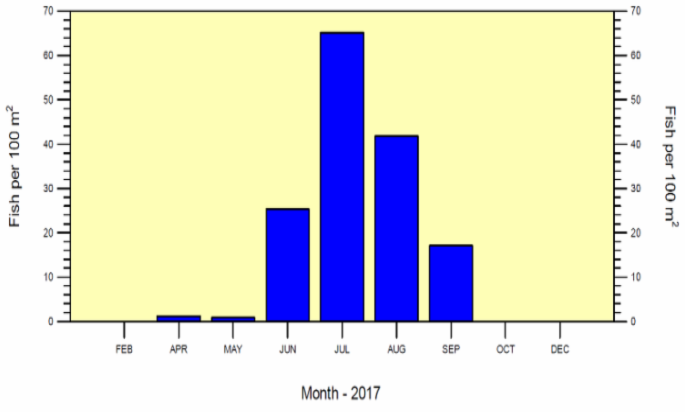
Abiquiu Reservoir does not store native Rio Grande water, however, due to the high spring runoff on the Rio Chama, Abiquiu reservoir was in flood operations for the period from April 14 to June 10, 2017. Current releases from Abiquiu reservoir includes about 16,000 ac-ft of ABCWUA SJC water to offset its river impact (letter water). Cochiti Reservoir is currently bypassing inflows.

Combined Rio Grande Project storage is expected to rise above 400,000 ac-ft in early December. Storage of native water in El Vado will begin on January 1, and 2018 P&P reserve will likely be from Rio Grande water stored normally at El Vado when Article VII restrictions are not in place, meaning any unused P&P reserve will revert to MRGCD during the 2018 season.

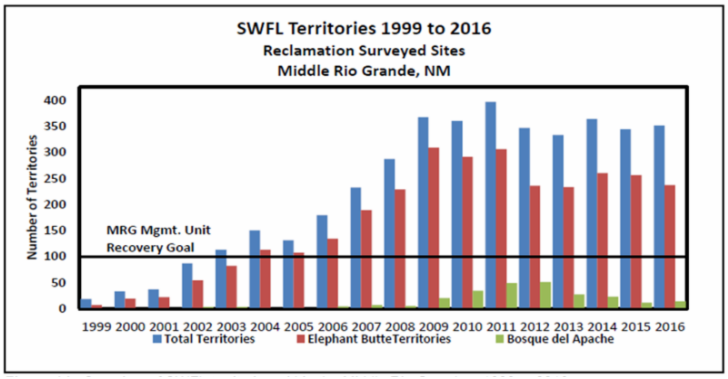
Listed Species Update

Rio Grande Silvery Minnow: The RGSM Population Monitoring Program monitoring reported an overall density of 17.1 RGSM per 100 m^{2*} during September 2017 at 20 sites. Densities of age-0, age-1, and age-2+ RGSMs were 16.9 (n=1,652), 0.3 (n=27), and 0.0 (n=0) individuals per 100 m^2 sampled (all unmarked)*.

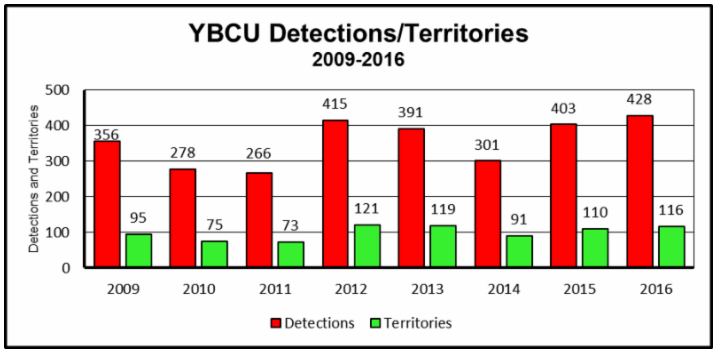
(*Source: Dudley, R.K., S. Platania, and G. White. 2017. Rio Grande Silvery Minnow Population Monitoring Results from September 2017. Reclamation Contract R17PC00028, American Southwest Ichthyological Researchers, Albuquerque, NM).



Southwestern Willow Flycatcher (SWFL): There were 302 SWFL territories based on preliminary data from Reclamation surveys on the Middle Rio Grande (from Isleta Pueblo south boundary to Elephant Butte). 15 SWFL territories were detected within Bosque del Apache NWR (west of the levee). Surveys were also completed near Albuquerque, Corrales, Bandelier, and Taos and yielded some migratory flycatchers of unknown subspecies, but no territories. (Figure source: US Bureau of Reclamation).

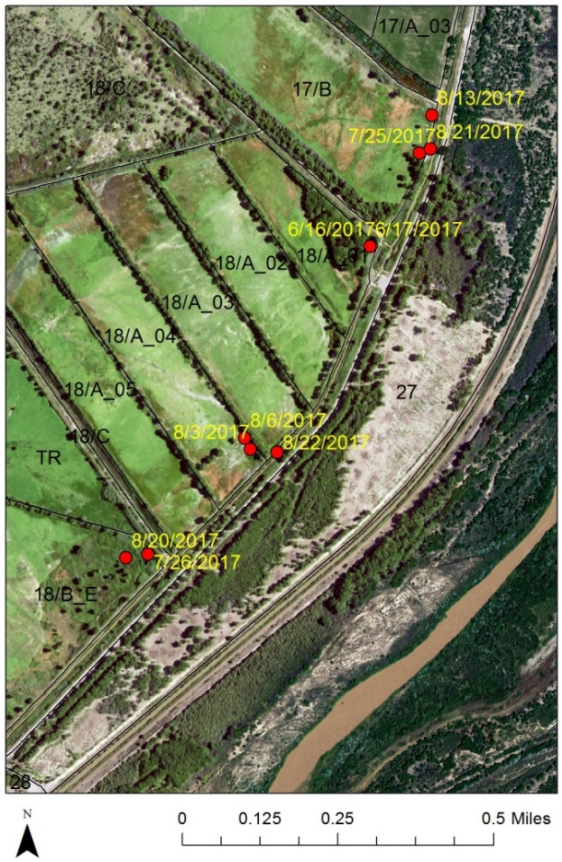


Yellow-billed Cuckoo (YBCU or cuckoo): There were 412 cuckoo detections, of which, 98 are estimated to be breeding territories from Reclamation surveys on the Middle Rio Grande (from Isleta Pueblo south boundary to Elephant Butte). Additional surveys conducted outside of the active floodway in Bosque del Apache NWR resulted in 4 detections, but no estimated breeding territories. Surveys near Albuquerque resulted in 1 detection and no estimated territories. (Figure source: US Bureau of Reclamation).



New Mexico Meadow Jumping Mouse (mouse): To date (September 2017), the mouse was detected within 36 photographs taken at 10 locations on Bosque del Apache NWR. Monitoring continues until mid-October when hibernation activities begin. (Source: I&M-BdANWR; Note; only 9 of 10 locations of mouse detection are depicted on the map below).

NM Meadow Jumping Mouse 2017 Locations
(updated September 8, 2017)



POCs: Joel Lusk (joel_lusk@fws.gov) Vicky Ryan (vicky_ryan@fws.gov)

New Mexico Interstate Stream Commission

The New Mexico Interstate Stream Commission (NMISC) has completed the installation of 8 new raceway tanks at the Los Lunas Silvery Minnow Refugium and looks forward to increasing its contributions to production for augmentation in the Middle Rio Grande and providing opportunities to conduct scientific studies for adaptive management. The NMISC and the U.S. Fish and Wildlife Service (Service) entered into a Memorandum of Agreement in May 2017 to improve our coordination and collaboration on important ESA projects, including conducting fish passage pilot studies at the San Acacia Diversion Dam and investigating the importance of restoration sites during spring runoff. We are also working with WEST to further develop the tasks to address the recommendations of the Population Monitoring Workshop that was conducted in December 2015.

POC: Grace Haggerty (grace.haggerty@state.nm.us)

Program Manager Updates

Deputy Science Coordinator - Ashley Tanner

WEST is excited to welcome our new Deputy Science Coordinator Ashley Tanner. Ashley grew up in Pennsylvania, where she developed a love for the outdoors on the Allegheny River. She received her bachelors in Animal Biotechnology and Conservation from Delaware Valley University in Doylestown, Pennsylvania. While pursuing her bachelor's, she spent her summers working as a natural resource instructor in Vermont, as a river management intern in Alaska, and as a white-tailed deer technician in Tennessee. She continued her education at the University of Tennessee, where she studied northern bobwhite habitat selection on a reclaimed surface mine and received her Master's degree in Wildlife Science. She then moved to Oklahoma to pursue her Ph.D in Rangeland Ecology and Management. Her dissertation focused on the effects of anthropogenic development on lesser prairie-chicken habitat selection and movement.

Ashley will be moving to Albuquerque full time December 18.

Spotlight Interview with Rick Billings

Rick M. Billings has been with the Water Authority since 2009. Prior to that, most of his career has been in environmental consulting. His primary responsibilities have been to work within the Program and provide technical support and leadership to several work groups, the Coordination Committee and the Executive Committee. Successes have included the Population Monitoring Workshop and two years' service as the non-fed co-chair for the Executive Committee.

Rick is a fisheries biologist with the MS degree from the University of Arizona. He has two children, and two step-children, but they are all adults now! The kids are an electrical engineer, a plumber, a commercial property manager and an accountant. He has two grandchildren. His wife, Cathy, is now retired, but both stay very busy with the pups at home; Papi, Baby and Bami. In addition to working with the Program, Rick is working with Water Authority management to prepare compliance documents and processes for additional storage and supervises the mitigation work required for the San Juan - Chama Drinking Water Project.

Rick has been a student of the martial arts for over 35 years. He is a third Dan in Tae Kwon Do and has the first Dan in Judo and Kendo. But after suffering a brain aneurysm in 2013 that has slowed down a little! He enjoys walking now, some hiking, and swimming (but still trying to learn how to push off the end of the lane in the pool!). Reading is one of his favorite

activities. He is presently completing reading a biography of each president, and the Aubrey-Maturin novels of Patrick O'Brien.

The Program faces some challenging times as it moves to Adaptive Management, and Rick is excited to help with that and other Program activities. He appreciates the many friends and professional relationships that have been a part of working in the Program. "Now, let's get cranking!"

If you are interested in being out next spotlight interviewee please email Luc Moulson at lmoulson@west-inc.com.

WEST, Inc. | (505) 554-3708 | lmoulson@west-inc.com
8500 Menaul Blvd. NE, Suite 342
Albuquerque, New Mexico 87112

west-inc.com