

MIDDLE RIO GRANDE ENDANGERED SPECIES COLLABORATIVE PROGRAM



Newsletter— January 2019

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A Year in Review

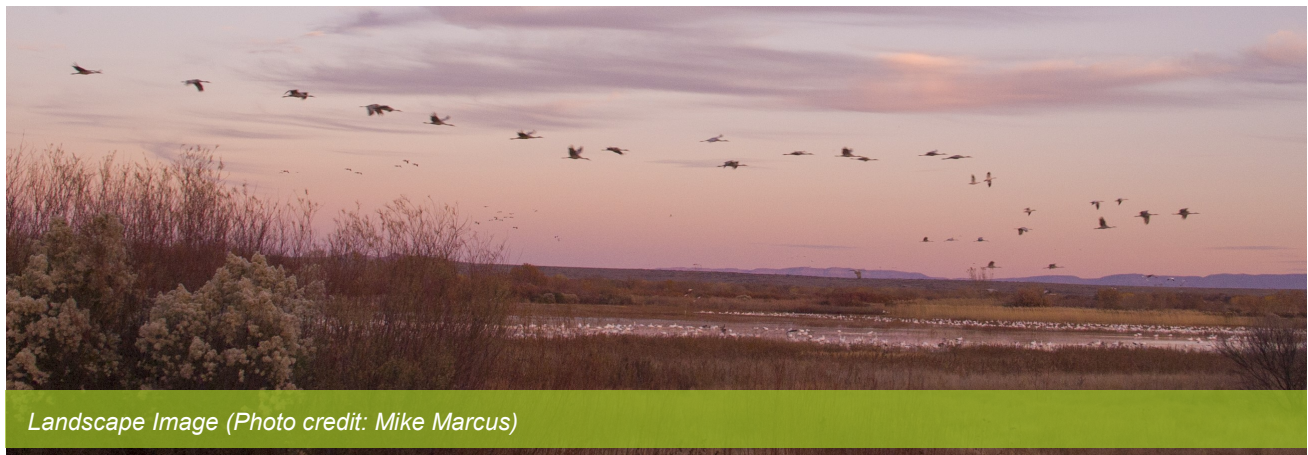
Debbie Lee, Western Ecosystems Technology, Inc.

Dear signatories, partners, and friends:

Happy New Year! I want to highlight some of the key accomplishments of the Program in 2018. It was a year full of difficult conversations, new ways of thinking, and regaining momentum. The work groups did a huge amount of work last year, including developing several scopes of work, compiling the first version of a projects GIS map, completing the Science/Habitat Work Group's 2018 Work Plan, and working toward developing a RGSM population model.

I believe 2018 marked a turning point for the Program. The Executive Committee decided on a new direction for the Program: to be the space for collaborative science, and to take a broader view beyond any one agency's purview. Additionally, the Executive Committee took great strides in fostering a healthy environment for discourse and dissent.

In 2019, the Program will continue to build on last year's successes and milestones. We remain in a time of transition, but the WEST team is committed to seeing the Program through and helping it develop and institute processes and procedures for long-term planning, which will lead to a more successful Program in the end. There will be points in 2019 where things might look a bit messy and rough. There are many moving parts that have to come together, and there will be some joint-learning and course correction. Please continue to work with us moving forward, and have faith that everything will come together.



Landscape Image (Photo credit: Mike Marcus)

PROJECT UPDATES

Implementation of the Final Biological and Conference Opinion of Bureau of Reclamation, Bureau of Indian Affairs, and Non-Federal Water Management and Maintenance Activities of the Middle Rio Grande, New Mexico

Update provided by Brian Hobbs, U.S. Bureau of Reclamation

Bureau of Reclamation (Reclamation), Bureau of Indian Affairs (BIA), Middle Rio Grande Conservancy District (MRGCD), and New Mexico Interstate Stream Commission (NMISC) are continuing to implement requirements under the 2016 Biological Opinion (2016 MRG BO). Following is an update on the status of some ongoing and completed projects.

Progress toward fish passage at San Acacia and Isleta diversion dams continues. Fish movement using PIT-tagged RGSM is currently being studied by NMISC for the pilot project at San Acacia Diversion Dam (SADD). Reclamation also has plans for a fish movement study in the Isleta and San Acacia reaches that will begin as soon as February 2019. For the long-term fish passage project at SADD, alternatives are being evaluated.

Reclamation recently completed the Escondida Fire Habitat Restoration Project (RM 104). This project was initiated due to a wildfire that burned along the bosque near Socorro. The 2016 MRG BO conservation measures include efforts to improve habitat where feasible. The fire and stability of the river were two factors that made this project a preferred restoration site. The existing arroyo fan and a relict river side channel were evaluated for river connectivity at 300 cfs, and modeling suggested that excavation of the arroyo fan, side channel inlet and outlet, and side channel embayments, would provide suitable habitat for the silvery minnow. In addition, the main side channel was designed to completely inundate with water at 2,000 cfs, effectively providing a side channel flow-through during above average run-off events. The excavated, wetted areas are expected to become hydric through successional ecological processes, which should develop into southwest willow flycatcher (SWFL) and/or yellow-billed cuckoo (YBCU) habitat over time. Once the earthwork was completed, the arroyo, side channel slopes, and unimproved levee road were seeded with a native herbaceous upland seed mix.

(BO Update continued on page 7)

LISTED SPECIES UPDATE

Rio Grande Silvery Minnow

Update provided by Jennifer Bachus, U.S. Bureau of Reclamation

Note: The following species update was provided for the November 2018 EC newsletter; there are currently no updates to provide.

The RGSM Population Monitoring Program uses standardized seining techniques to catch RGSM along the Middle Rio Grande (MRG) during seven months of the year (Dudley et al. 2018).

The preliminary data from October 2018 monitoring indicated an overall density at the 20 standard sites of 0.1 RGSM per 100 square meters (m^2). October sampling also incorporated peer review recommendations to add 10 additional sites, plus replacement sites, for any dry sites encountered. This resulted in 31 sites sampled during October, and an over all density of 0.11 RGSM per 100 m^2 . Three age classes were detected (Young-of-year, Age-1, Age-2+), similar to prior months in 2018. Mixture model estimates of density for October will be calculated for the annual report, which will be available in early 2019.



Yellow-billed Cuckoo

Update provided by Jennifer Bachus, U.S. Bureau of Reclamation

According to preliminary data, the numbers for 2018 are similar to 2017, with only a slight decrease in YBCU detections. Reclamation's Technical Services Center is still double-checking the database and conducting territory delineations. Reclamation has not yet received the draft reports for review so all numbers are preliminary and still subject to change.

LISTED SPECIES UPDATE

Southwestern Willow Flycatcher

Update provided by Lori Walton, U.S. Bureau of Reclamation

Overall it appears to have been a good year for SWFL's on the Rio Grande, though much of the habitat upstream of the Narrows is still suffering from drought, age and/or salt cedar beetles. Reclamation Technical Services Center biologists are working to finalize survey and nest monitoring forms, crunch nest numbers, and write the annual reports.



Even though much of the habitat upstream of the Narrows is still struggling, there was an increase in the number of SWFL territories in 2018. In large part, this increase is due to the growth observed in the southern San Marcial sites. According to preliminary numbers, there were approximately 99 territories documented in EB-15,16 and 17 alone in the MRG. This is almost 1/3 of the territories on the MRG. Reclamation has not received the draft reports for review yet, so all numbers are preliminary and still subject to change.

New Mexico Meadow Jumping Mouse

Update provided by Jeff Sanchez, U.S. Fish & Wildlife Service

Note: The following species update was provided for the November 2018 EC newsletter; there are currently no updates to provide.

During the mid-summer months, Bosque del Apache (BdA) National Wildlife Refuge (NWR) continued to have difficulty maintaining enough water within the Riverside Canal to support quality NMMJM feeding and day nesting habitat. Localized rain events began in mid/late July, which assisted with maintaining only intermittent or moderate soil moistures needed for the NMMJM within these limited sites.

Camera trapping efforts within known jumping mouse localities began in late June and continued into mid-October. Jumping mice typically go into hibernation by

(Listed Species Update continued from page 4)

November. During this year's active period, 22 observations were confirmed at 12 different camera sites. These observations occurred within five different units where vegetation/feeding habitat was considered good to acceptable for this species. These numbers were slightly lower than last year's 26 observations at 19 locations.

BdA NWR began several habitat creation and habitat restoration efforts focused specifically on the NMMJM. This included creating four NMMJM swales adjacent to occupied habitat and implementing disking prescriptions within two Moist Soil Units, thus setting back the successional plant community to favor jumping mouse feeding habitat.



Administrative Updates

Update Provide by Julie Dickey, Western EcoSystems Technology, Inc.

FY18 Non-Federal Cost Share Request

WEST has distributed cost share spreadsheet templates to the non-federal signatories. If your organization has not submitted cost share, please do so as soon as possible. If your organization does not have a cost share contribution for FY18, please let Julie Dickey know. If you have any questions or need assistance, please contact Julie at jdickey@west-inc.com or (505) 382-2614.

FY18 MRGESCP Annual Report Requests

WEST is continuing work on the FY2018 Annual Report and has been contacting signatories for content. Please send FY18 project updates and any new project content to Julie Dickey at jdickey@west-inc.com. Also please send in your high resolution photos for use in the report.

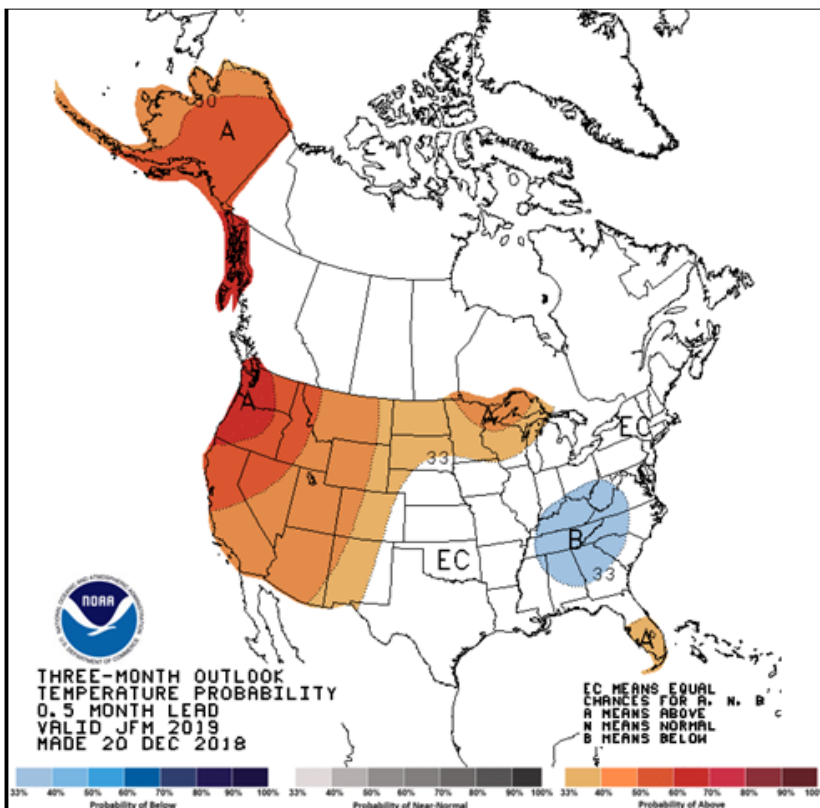
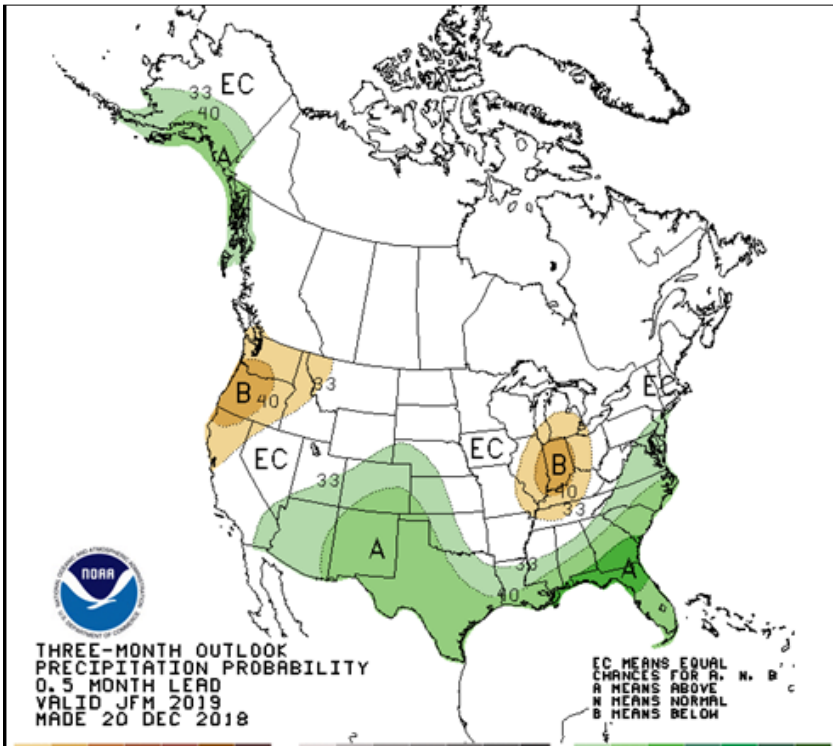
2019 Winter Hydrology Update

Update provided by Ashley Tanner, Western EcoSystems Technology, Inc.

It is expected that New Mexico will continue to experience weak to moderate El Niño events this winter. Climate forecast models indicated that precipitation during January, February, and March 2019 would most likely range from near to above climatological averages. The final week of December 2018 was extremely active with a winter storm sweeping across much of the state. As of January 1, 2019, the Taos Powderhorn SNOTEL site was reporting the greatest snow depth in the state at 42 inches, well above the site's average of 30.33 inches. Climate model forecasts and recent temperature trends indicate that January, February, and March will range from average to above average temperatures.

While over 74% of the state is experiencing at least abnormally dry conditions, only 19% of the state is now in an

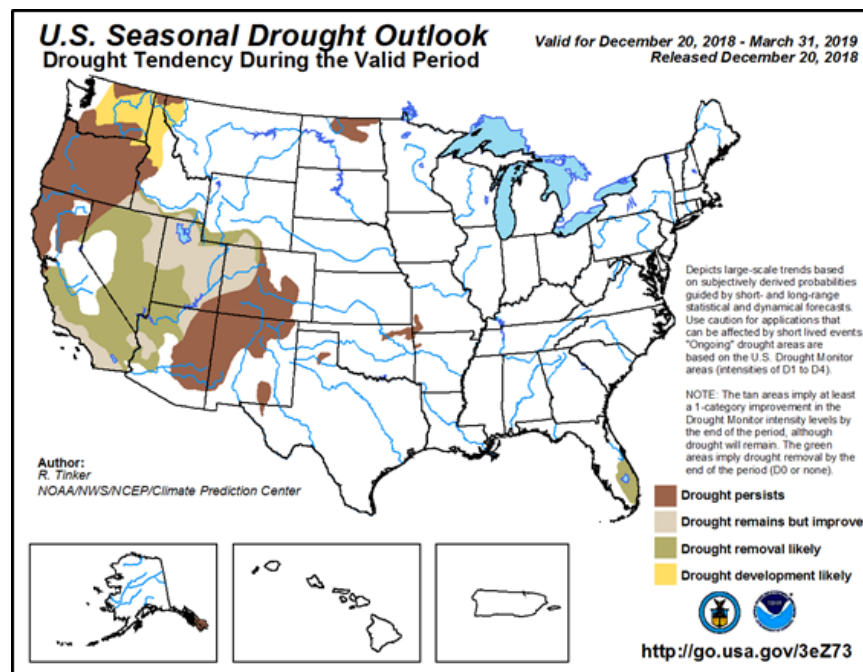
(Hydrology Update continued on page 7)



UPDATES

Hydrology Update continued from page 6)

extreme drought, down from 31% of the state in mid-September, 2018 (available at <https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?NM>). The National Weather Service's Climate Prediction Center estimates that drought conditions will improve or will likely be removed for over half of the affected areas of New Mexico this winter (available here: <http://www.cpc.ncep.noaa.gov/index.php>).



(BO Update continued from page 2)

Progress continues on vegetation removal at BdA NWR for the pilot realignment project. The next phase will be excavation, but compliance is still needed before that activity can begin. Reclamation is hopeful that excavation can begin in early 2019.

Environmental Flow Analysis of Hydrograph and Population Parameters for Rio Grande Silvery Minnow Recruitment

Michael D. Porter, U.S. Army Corps of Engineers, gave a presentation at the American Fisheries Society Conference in August 2018. The following is his abstract for the presentation.

ABSTRACT

The Rio Grande silvery minnow (*Hybognathus amarus*; RGSM) was a formerly widespread endemic fish species, now restricted to 170 miles of the Rio Grande in New Mexico. Water management on the Rio Grande over the past 100 years has changed the hydrology and channel geomorphology. Determination of appropriate flow parameters supporting floodplain inundation provides important information for fish nursery habitat, including RGSM. Water management and drought have reduced the magnitude of the spring snowmelt hydrograph and the associated connectivity between the river and the floodplain. The availability of inundated floodplain habitat can have important implications for fish reproduction, recruitment, and population viability.

The objective of this study is comparing different analytical techniques to better understand annual RGSM spawning and recruitment in response to environmental flow parameters. A functional data analysis approach is compared to another data mining technique using R statistical software to evaluate the relationships of hydrograph parameters (magnitude, frequency, duration, timing) with RGSM life history parameters (recruitment rates and population indices). This analysis will support adaptive management by refining recruitment flow parameters to better inform water management strategies.

Kate Mendoza **Albuquerque Bernalillo County Water Utility Authority**



Ms. Kate Mendoza is the Water Resources Specialist for the Albuquerque Bernalillo County Water Utility Authority (Water Authority) and has five years of experience in watershed restoration and water resources. Ms. Mendoza supports a variety of water resources projects, including managing the Bear Canyon aquifer storage and recovery project. She also assists with managing the source water protection program and development of the Water Authority's

Environmental Plan. Outside of attending MRGESCP meetings, Ms. Mendoza assists with technical and statistical analyses to better understand the fisheries and hydrology of the MRG.

Prior to joining the Water Authority, Ms. Mendoza worked as a wildland firefighter with the U.S. Forest Service for four years, followed by two years working on watershed restoration projects and water rights for the Cibola Nation Forest.

Ms. Mendoza earned her Bachelor of Science in Natural Resources with an emphasis in Watershed Management and Hydrology from the University of Arizona and her Master of Water Resources from the University of New Mexico. For her master's research, Ms. Mendoza evaluated diatom populations in travertine springs of the Sandia Mountains to determine water chemistry impacts to diatom assemblages.

In her spare time, Ms. Mendoza enjoys hiking, skiing, and spending time outside with her husband and her dog, Mesilla.

UPCOMING DATES

Science/Habitat Restoration Work Group Meetings

Tuesday, February 12, 2019, 9 AM—12 PM

Tuesday, March 12, 2019

Tuesday, April 9, 2019

Population Monitoring Work Group Meeting

Thursday, March 12, 9AM—12PM

Joint Annual Meeting of the AZ/NM Chapters of the Wildlife Society and America Fisheries Society

February 7—9, 2019

Albuquerque, NM

Executive Committee Meetings

Wednesday, March 27, 2019

Wednesday, May 22, 2019

BEMP Crawford Symposium

Friday, February 15, 2019

3:30 PM—7 PM

UNM Student Union Building

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FOR COMMENTS AND INQUIRIES, CONTACT:
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Scenic view of the Middle Rio Grande (Photo credit: U.S. Bureau of Reclamation)