

# MIDDLE RIO GRANDE ENDANGERED SPECIES COLLABORATIVE PROGRAM



Newsletter— June 2018

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## Letter from the Program Manager

We are all aware that the hydrology forecasts for 2018 have been grim due to the lack of snowpack this past winter. This summer has brought us the challenges of minimal snowmelt runoff, low water levels, and early river drying. But it has also brought us opportunities. In this hard year, I have seen those working in the basin, both signatories and non-signatories, come together to find solutions.

This year can teach us a lot about working together, as well as how to use adaptive management. As the Program continues to transition to a new structure and develop an adaptive management program, we can build on this years' opportunities in learning to be more collaborative; improving on scientific processes for data collection, monitoring, and evaluating actions; and moving toward making recommendations that support and enhance management actions.

Best wishes,

*Debbie Lee, WEST Program Manager*



View of Jemez Reservoir (Photo credit: Mike Marcus)

### *Second Year of 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 Ann Demint, U.S. Bureau of Reclamation**

U.S. 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 MRG BO. These include a number of projects in the planning, design, and/or compliance phases, such as the San Acacia Fish Passage Pilot and Long Term Projects, the Low Flow Conveyance Channel Improvements Project, the River Mile 60 Restoration Project, the Rhodes Property Bankline Habitat Project (RM 94), the Tiffany Fire Watershed Restoration and Management Project, and the Bosque del Apache (BdA) National Wildlife Refuge (NWR) North Boundary Infrastructure Project. During spring 2018, Reclamation worked with the BdA NWR to remove vegetation along the proposed new channel for the BdA Pilot River Realignment Project. Currently, Reclamation is constructing the Escondida Fire Habitat Restoration Project (river mile [RM] 104). Additionally, Reclamation and the 2016 BO partners have finalized the Lower Reach Plan, per the BO requirement for submission to the U.S. Fish and Wildlife Service (USFWS) in June.

With one of the lowest snowpacks on record, spring runoff conditions in 2018 were dismal.

Because of the low runoff and the limited amount of supplemental water available, Reclamation and the 2016 BO partners discussed how to best use the supplemental water at the Minnow Action Team (MAT) meetings. In conjunction with the MAT, BO partners decided not to use supplemental water to prevent drying in the San Acacia reach in the spring, as that could require the use of all available water. As a result, drying began in early April in the San Acacia reach. As of June 19th, the river was discontinuous in the San Acacia Reach for 19.5 miles. Thus far, the Isleta Reach had reached a maximum of 3.0 miles of drying just above the Peralta Wasteway on June 16th, but recent rains re-wet that distance.

In the absence of sufficient runoff to create a spawning pulse, the MRGCD and the Albuquerque Bernalillo County Water Utility Authority (ABCWUA) cooperated to modify operations at the diversion dams to produce four small pulse flows in May. The pulses allowed study of whether or not they stimulate Rio Grande silvery minnow (RGSM) egg production, as may have occurred during similar operations in the past. NMISC funded SWCA to support BioPark staff (funded by Reclamation) in monitoring and collecting RGSM eggs in conjunction with the pulses. ASIR, funded by Reclamation, monitored and

*(Continued on page 6)*



## CHANGE OF COMMAND

Command of the U.S. Army Corps of Engineers (USACE) Albuquerque District was relinquished by Lt. Col. James “Jamie” Booth on May 18, 2018. The Executive Committee (EC) presented Jamie with a letter of the appreciation for his service in the Program and wished him well with his new command.

The Program would like to welcome Lt. Col. Larry Caswell to the Albuquerque District and to the Program.

## LISTED SPECIES UPDATE

### Rio Grande Silvery Minnow

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

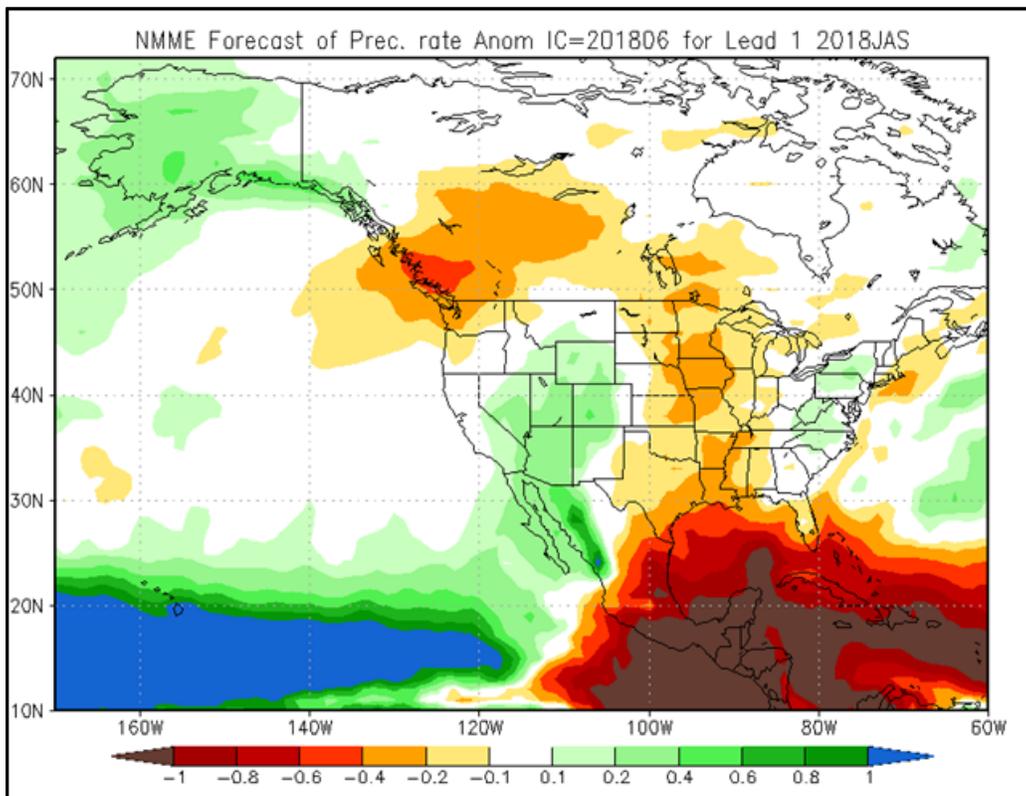
The RGSM Population Monitoring (PopMon) Program staff uses standardized seining techniques to catch RGSM along the Rio Grande during seven months per year (Dudley et al. 2018). During April 2018, the PopMon Program monitoring reported RGSM as the second most abundant fish species, behind red shiner, with an overall density at the 20 standard sites of 2.62 RGSM per 100 square meters ( $m^2$ ). April sampling across all 30 sites (an implemented peer review recommendation) reported an overall density of 2.78 RGSM per 100  $m^2$ . RGSM were detected at 70-80% of the sampling sites. May 2018 sampling reported RGSM as the third most abundant fish species, behind white sucker and red shiner. At the 20

*(Continued on page 5)*



# JUNE 2018 HYDROLOGY UPDATE

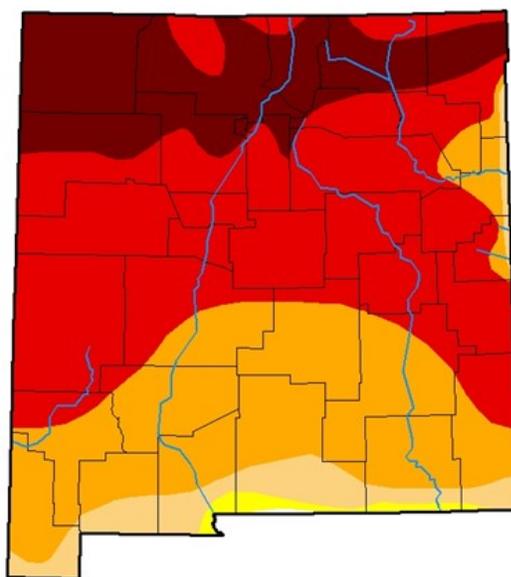
In late May 2018, the National Weather Service Forecast Office in Albuquerque released their June 2018 outlook (available here: <https://www.weather.gov/media/abq/Briefings/June2018Outlook.pdf>) for northern and central New Mexico.



Climate forecast models indicated that precipitation during June 2018 would most likely range from slightly below the 1981 to 2010 climatological averages. Early and current climate models have indicated that the North American Monsoon may begin earlier than normal, with a dry early June transitioning to a more active late June and early July. Over 60% of the state was experiencing an extreme drought as of June 14, 2018 (available here: <http://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?NM>). However, areas in Bernalillo county received between 0.11 (Canoncito) and 1.55 inches (Isleta Pueblo) in the most recent rain event June 15 through 17.

## U.S. Drought Monitor New Mexico

**June 12, 2018**  
(Released Thursday, Jun. 14, 2018)  
Valid 8 a.m. EDT



### Intensity:

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

### Author:

Brian Fuchs  
National Drought Mitigation Center



<http://droughtmonitor.unl.edu/>

## LISTED SPECIES UPDATE - continued

standard sites, density was 5.19 RGSM per 100 m<sup>2</sup> mostly of age-1 (n=430) and some age-2 (n=23). In May, one sampling site was dry and a replacement site was used, representing continued implementation of the peer review recommendations for replacement sites during drying. Overall density was 5.34 RGSM per 100 m<sup>2</sup> also mostly age-1 with some age-2 fish. Across all sites, four of the RGSM were tagged fish. RGSM were detected at 60-62% of the sampling sites. Monthly RGSM sampling has been conducted in June 2018 and results will be available soon.

### Southwestern Willow Flycatcher

Update provided by Chris Grosso, U.S. Bureau of Reclamation

There were 302 southwestern willow flycatcher (SWFL) territories based on data from Reclamation surveys on the MRG (selected sites from Bandelier National Monument to Elephant Butte) during the 2017 breeding season. Fifteen SWFL territories were detected within BdA NWR (west of the levee), and 16 SWFL territories were detected within the NWR east of the levee in the active floodplain. Surveys were also completed near Albuquerque, Corrales, Bandelier, and Taos and yielded some migratory flycatchers of unknown subspecies, but no territories.

### Yellow-Billed Cuckoo

Update provided by Chris Grosso, U.S. Bureau of Reclamation

There were 412 yellow-billed cuckoo (YBCU) detections, of which 98 of those are estimated to be breeding territories from Reclamation surveys on the MRG (from Los Lunas to Elephant Butte) during the 2017 breeding season. Additional surveys conducted outside of the active floodway in BdA NWR resulted in four detections, but no estimated breeding territories. Reclamation surveys in the BdA NWR active floodplain resulted in 43 YBCU detections and 10 estimated breeding territories. Surveys near Albuquerque resulted in one detection and no estimated territories.



### New Mexico Meadow Jumping Mouse

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

BdA NWR has been maintaining water levels within the refuge's Riverside Canal to favor herbaceous plant germination, which sup-

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collected eggs, and volunteers from various agencies helped with egg collection and fish salvage.

Eggs were collected at various locations, most notably the power line crossings in Albuquerque, Jarales, and Sevilleta. Egg collections/ observations varied over time, ranging from a few eggs to very large numbers. Large numbers of eggs were observed on June 6th near Sevilleta (potentially >100,000's), following an operational pulse enhanced by precipitation. Also, 92,000 eggs were collected on May 23rd near Jarales, possibly in response to rain or the produced pulse. Post-monitoring analysis will assess the RGSM response to the produced and natural pulses. Also, the USFWS is conducting a study on survival rates of RGSM rescued before and during drying events, as well as to protect genetic diversity.

With good spring runoff conditions in 2017, Reclamation and the 2016 BO partners met the Incidental Take Statement (ITS) for the RGSM, with mixture-model estimates of  $E(x) = 23.17$  in October 2017. The ITS for the SWFL and YBCU also complied with take of two SWFL territories and one YBCU territory. In 2017, 13,413 acre-feet of supplemental water was released for endangered species purposes, entirely composed of leased San Juan-Chama water.

## REMINDER

Please fill out the survey to inform the development of the new DBMS platform.

<https://www.surveymonkey.com/r/ZJ7MJ8T>

(Listed Species Update; continued from page 5)

ports New Mexico meadow jumping mouse (NMMJM) feeding and day nesting activities. The NWR begins establishing this habitat component during the spring and early summer months, so it will be available to the NMMJM upon emergence from hibernation. The area of focus for this prescription tends to be adjacent to the Riverside Canal where the most consistent surface water exists on the refuge. With that said, USFWS also prepares for a water-limited season in which the water levels within the Riverside Canal have already fluctuated below critical levels for the NMMJM on the refuge. USFWS will continue to work with the MRGCD and Reclamation to limit water flow deficiencies within the Riverside Canal.

Currently, USFWS is preparing for the upcoming monitoring season on the NWR, and will set camera traps within the next few weeks. The NWR will monitor NMMJM activities using the camera trap method until mid-October, when the NMMJM typically goes back into hibernation. In addition, USFWS is in the planning process of conducting a NMMJM habitat creation project adjacent to the Riverside Canal in hopes that funding becomes available.

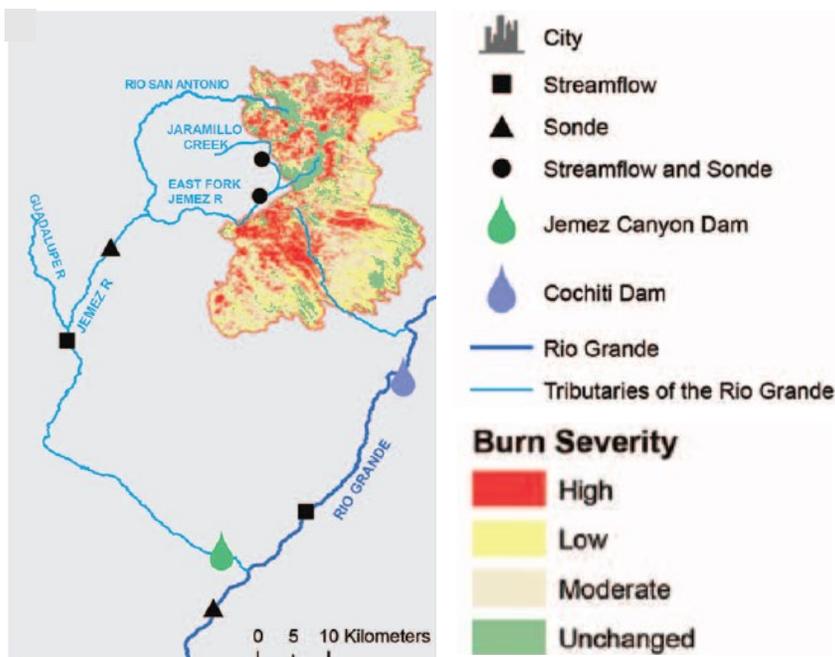
## BROWN BAG SUMMARY

### Evaluating the effects of catastrophic wildfire on water quality, whole-stream metabolism and fish communities

A Presentation by Justin Reale, U.S. Army Corps of Engineers, at the MRGESCP Science/Habitat Restoration Work Group Brown Bag on May 29, 2018

A series of studies investigated the initial and multi-year effects of the catastrophic 2011 Las Conchas wildfire on adjacent and downstream aquatic ecosystems in comparison to pre-fire conditions. Specifically, 1) multi-year water quality responses along the river continuum using data collected before, immediately after, and multiple years post-fire, 2) differential water quality and whole-stream metabolism responses of paired headwater catchments over multiple years after disturbance, and 3) fish communities at two sites on a larger river downstream of the region impacted by the wildfire.

Overall, this research highlights the importance of long-term ecological data collection using advanced instrumentation that can be used to evaluate effects of a changing climate and climate-mediated disturbances on water resources. Secondly, these studies emphasize the need to collect water quality and biological data at temporal and spatial scales that more effectively capture hydrology and water quality dynamics of landscape-scale disturbances that are becoming more common and more destructive with climate change and growing human impingement on forested lands. Thirdly, this research high-



Burn severity map of 2011 Las Conchas fire in relation to monitoring locations

lights the importance of evaluating streamflow pathways, geomorphology, physiochemical properties with biogeochemical processes, and watershed-specific hydrologic connections within their landscapes prior to and following landscape-scale disturbance.

*At the MRGESCP Brown Bag presentation, Justin Reale shared his work on the effects of the 2011 Las Conchas fire on aquatic ecosystems*



*John is a Professional Engineer who holds a Bachelor of Science degree in Civil Engineering from State University of New York at Buffalo and a Master of Science in Environmental Engineering degree from New Mexico State University.*

### John Longworth, PE

John Longworth is the Director of the NMISC. He has an extensive technical and policy background from working for the New Mexico Office of the State Engineer and the NMISC in many high level capacities since 1998.

John's experience in multiple disciplines within the agency includes interstate compacts, complex adjudication strategies within state and federal courts, expert agency representation at the New Mexico Legislature, water policy and water rights administration, and staff and budget management.

Prior to his appointment as Director, John served as Director of the Water Resources Allocation Program (WRAP) Technical Division. As an executive level manager, he governed three technical divisions; Hydrology, Dam Safety, and Water Use and Conservation. Chief among John's responsibilities were establishing agricultural irrigation water requirements, evaluating subdivisions for water availability, and publishing New Mexico's statewide Water Use Inventory Report.

## UPCOMING DATES

### **Executive Committee Meeting**

Thursday, June 28, 8:30 AM—12:30 PM  
U.S. Fish & Wildlife Service  
2105 Osuna Rd NE, Albuquerque, 87113

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*Scenic view of the Middle Rio Grande (Photo credit: U.S. Bureau of Reclamation)*