



# MIDDLE RIO GRANDE ENDANGERED SPECIES COLLABORATIVE PROGRAM

*December 2020 Newsletter*

## Letter from the Program Manager: What Happened at the 2020 Science Symposium?

As 2020 ends, I would like to celebrate the accomplishments of the past year. This year saw the Collaborative Program's science and adaptive management (AM) efforts kick off with the establishment of the Science and Adaptive Management Committee (SAMC) and finalization of the transition to the new Program structure under the Science & Adaptive Management Plan and Long-Term Plan. The virtual 2020 Science Symposium on December 1-3 served as the capstone for the year, as it introduced the Collaborative Program to the SAMC members and science and AM support tools.

Over 60 individuals attended the event, which featured three half-days of scientific talks split into three sessions:

- The Changing Bosque Habitat (Day One)
- Rio Grande Silvery Minnow: Biology and Life History (Day Two)
- Modeling a Dynamic System: Developing Hydraulic and Hydrologic Models for the Middle Rio Grande (Day Three)

The SAMC members opened the Symposium with an introductory lightning round, during which they discussed the biggest challenges facing the Middle Rio Grande and how the Collaborative Program can address them. Members of the Program Support Team presented on the AM Database, geospatial mapper, and conceptual ecological models.

Participants also watched virtual field tours of the Los Lunas Habitat Restoration site and Southwestern Native Aquatic Resources and Recovery Center. The symposium featured keynote speakers Laura Paskus and Dr. Cliff Dahm. While environmental reporter Laura Paskus discussed how to communicate science to different audiences, Dr. Dahm spoke on his experience as the lead scientist with the California Delta Science Program, and related lessons learned on incorporating AM into science plans. The symposium agenda, abstracts, and PDF versions of all presentations are available on the Program Portal. Presentation recordings will be uploaded in the near future.

The Collaborative Program should be proud of its work this past year; it hit major milestones and built momentum that will carry into 2021!

*Debbie Lee*, Program Manager

## FEATURED THIS ISSUE:

- ◆ Letter from the Program Manager
- ◆ Program Updates
- ◆ Welcoming the SAMC
- ◆ End-of-the-Year MAT Update
- ◆ Winter Outlook and ENSO Forecast
- ◆ What's Going on in the Basin?
- ◆ Exploring the Interactive Map
- ◆ Announcements and Deadlines

# PROGRAM UPDATES

## Newest Executive Committee Members



**Debra Hill** (top photo)  
Large River Recovery and Restoration Branch Supervisor, *US Fish and Wildlife Service*  
Alternate member of the Executive Committee

### Alyssa O'Brien

(bottom photo)  
Open Space Project Coordinator, *City of Albuquerque, Open Space Division*  
Alternate member of the Executive Committee



## Announcing the Rick Billings Memorial Award

In memory of Rick Billings, a former long-time member and supporter of the Collaborative Program, the US Bureau of Reclamation is sponsoring an annual Rick Billings Memorial Award. The award recognizes an individual's contributions to the success of the Collaborative Program. At the December 17, 2020 Executive Committee (EC) meeting, John Stomp from the Albuquerque Bernalillo County Water Utility Authority was honored with the first Rick Billings Memorial Award. John is the current Non-Federal EC Co-chair, and is retiring at the end of the year.

## Funding Opportunities

The US Bureau of Reclamation has funding opportunities open through various WaterSMART programs. More information about these opportunities can be found at [www.grants.gov](http://www.grants.gov).

### **Due by: January 6, 2021**

*WaterSMART Drought Response Program: Drought Contingency Planning Grants for Fiscal Years 2020 and 2021.* <https://www.grants.gov/web/grants/view-opportunity.html?oppld=322320>

### **Due by: February 17, 2021**

*Water Conservation Field Services; Upper Colorado Region.* <https://www.grants.gov/web/grants/view-opportunity.html?oppld=324924>

### **Due by: January 19, 2021**

*WaterSMART Cooperative Watershed Management Program, Phase I.* <https://www.grants.gov/web/grants/view-opportunity.html?oppld=329878>

# WELCOMING THE SAMC

## WELCOMING THE SAMC

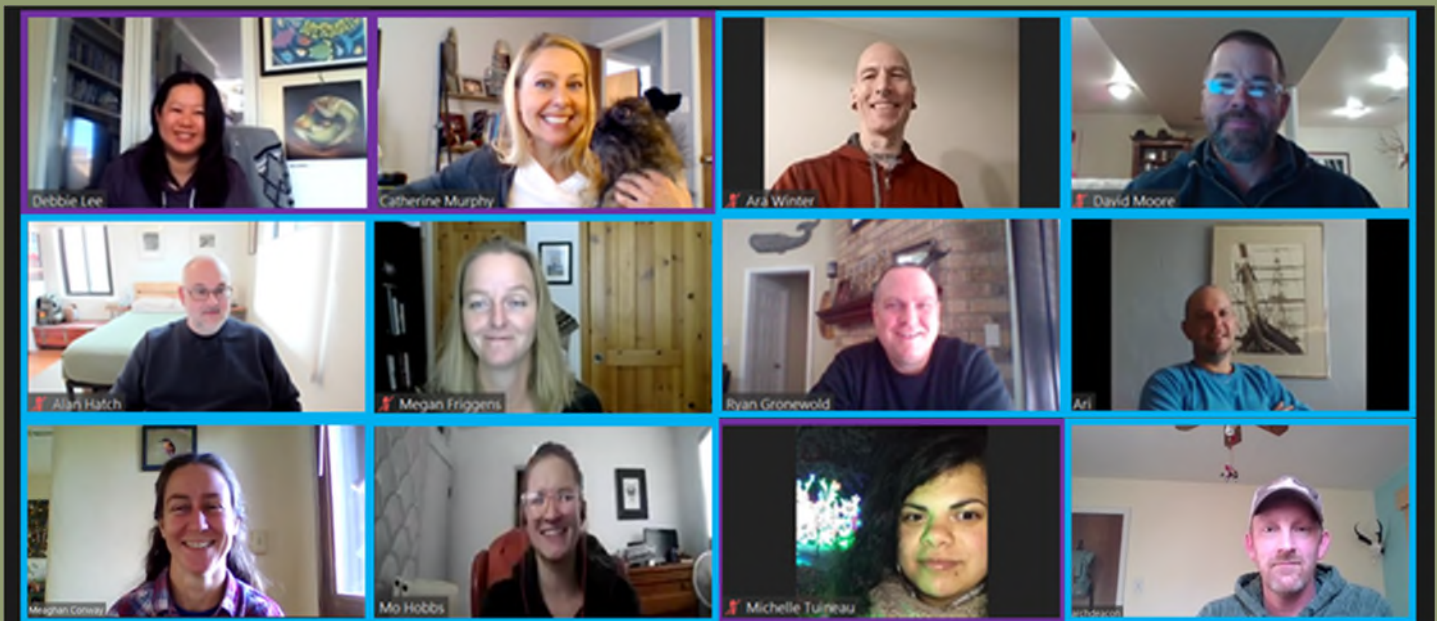
Provided by Catherine Murphy,  
Program Support Team

As we finally say goodbye to this very strange year (by wrapping it in single-ply toilet paper, dousing it with hand sanitizer and burning it in effigy), I am pleased to point out that the Collaborative Program has much to celebrate and anticipate in 2021. The decision to embrace adaptive management of the Middle Rio Grande (MRG), atop a foundation of sound science, set in motion an exciting series of structural and func-

tional changes for the Collaborative Program. The Science & Adaptive Management Plan describes these changes and places stewardship of the science program in the hands of the Science and Adaptive Management Committee (SAMC). As an interdisciplinary science panel, the SAMC strives to align the Collaborative Program's scientific endeavors with its mission and communicate research findings to ensure adaptive learning.

Members of the inaugural SAMC represent a diverse array of disciplines and bring a combined 138 years of experience, over half of which is specific to the MRG system. Thomas Archdeacon,

*Continued on page 4*



**Top Row (Left to Right):** Debbie Lee, Program Manager; Catherine Murphy, SAMC Facilitator; Ara Winter, S. David Moore. **Middle Row (Left to Right):** Alan Hatch; Megan Friggens; Ryan Gronewold; Ari Posner. **Bottom Row (Left to Right):** Meaghan Conway; Monika (Mo) Hobbs; Michelle Tuineau, Project Coordinator; Thomas Archdeacon.

# WELCOMING THE SAMC (CONT.)

*Continued from page 3*

a fish biologist with the US Fish and Wildlife Service, New Mexico Fish & Wildlife Conservation Office, will offer his expertise in aquatic ecology, along with Monika (Mo) Hobbs, who brings her skills as a water resource scientist for the Albuquerque Bernalillo County Water Utility Authority. Wildlife biologist Dave Moore of the US Bureau of Reclamation (Reclamation) Technical Service Center, Denver, Colorado, will weigh in on issues involving terrestrial ecology, while Dr. Meaghan Conway with New Mexico Department of Game and Fish will use her expertise in aquatic and riparian habitat to provide context for ecosystem function. As the Collaborative Program is beginning a long-term planning process, I am pleased to welcome Dr. Megan Friggen from the US Department of Agriculture Forest Service, Rocky Mountain Research Station, who brings extensive knowledge of climate science and disturbance ecology.

The physical sciences and modeling side of the SAMC is well-represented, starting with Ryan Gronewold, professional engineer and Chief of the Planning Branch at the U.S. Army Corps of Engineers, Albuquerque District, who

will consider issues of hydrology and hydraulics. In addition, Dr. Ari Posner at Reclamation brings valuable expertise in sediment transport and geomorphology. For dealing with statistical uncertainty and risk, Dr. Ara Winter, with the Bosque Ecosystem Monitoring Program, offers modeling skills and knowledge in ecostatistics and riparian ecology. Finally, Alan Hatch, Director of the Department of Natural Resources at Pueblo of Santa Ana, has graciously accepted the position of Executive Committee *ex officio* member and will serve in an important advisory capacity.

The Collaborative Program is fortunate to have this talented group of individuals serving on its first SAMC. As I get to know each of them better, I am discovering how well they function as a team, which motivates and excites me for the coming year. I look forward to the day when we can escape the confines of our Brady Bunch screen grid and meet in-person, but until then, the SAMC will work diligently to improve the state of science and science communication in the Collaborative Program and MRG.

# END-OF-THE-YEAR MAT UPDATE

## END-OF-THE-YEAR MINNOW ACTION TEAM UPDATE

Provided by Trevor Birt, New Mexico Interstate Stream Commission

The Minnow Action Team (MAT) began in 2012 as an ad hoc multidisciplinary work group tasked with providing an adaptive management focus to annual Middle Rio Grande (MRG) water and species activities. The MAT was formed to evaluate potential management actions based on the projected hydrologic year, and propose them to the Collaborative Program Executive Committee, with the purpose of improving habitat conditions for spawning, recruitment, and survival of Rio Grande silvery minnow (RGSM). The MAT provides a platform for entities to engage in exchange of information on the year's hydrology, coupled with knowledge on species status. The MAT informs resource management entities and the Collaborative Program through annual coordination, evaluation, and recommendations specific to water operations related to the RGSM. The MAT has also assisted with coordination of field activities such as spring runoff monitoring, RGSM egg collections for captive propagation, floodplain and channel data collection, and summer flow measurements. As the Collaborative Program's science and adaptive management efforts move forward, the MAT will continue to be an important resource.

Hydrologic conditions for 2020 were poor due to warm temperatures in late winter that affected snowpack. Flows in the mainstem of the Rio Grande were insufficient to meet the needs of the basin, and stored water

was used throughout most of the season to make up the difference.

The MAT met four times in 2020 and prepared recommendations to present to the EC. The actions conducted based on these recommendations resulted in tangible, beneficial results. In late May, the Middle Rio Grande Conservancy District conducted a 'jiggle' by stacking water upstream of the Isleta Diversion Dam, and then releasing it within a short period of time to temporarily increase flows to a sustained pulse of 300–500 cubic feet per second through the Isleta and San Acacia Reaches. This brief increase in flows successfully cued spawning, as indicated by observations of semi-buoyant RGSM eggs drifting downstream. RGSM egg collection was done by multiple entities to stock refuge populations in RGSM captive propagation facilities. Additionally, supplemental water was released throughout the summer to keep as much of the MRG as wet as possible. In 2020, 113,247 eggs were collected and RGSM persisted in low numbers throughout the summer, as evidenced by fish population monitoring.

With La Nina conditions forecasted for the coming winter, water supplies are expected to be tight once again. The MAT plans to meet early, and as frequently as needed, to discuss the water operations and species management options that may be available in 2021.



RGSM egg collection following the May jiggle  
Photo: ABQ BioPark

# WINTER OUTLOOK AND ENSO FORECAST

## WINTER 2020 OUTLOOK AND ENSO FORECAST

**Provided by Catherine Murphy, Program Support Team**

NOAA's Climate Prediction Center, a division of the National Weather Service, predicts persistent drought for the southwestern United States through February 2021, with greater than 45% of the continental U.S. experiencing drought as of this October. The official three-month forecasts for northern and southern New Mexico are 50% and 60% probabilities of above normal temperatures, respectively. New Mexico's probability of below normal levels of precipitation over the next three months ranges from 40-60%.

A La Niña climate pattern is in place, which favors warmer, drier conditions in the southern tier of the United States. In terms of severity, Tom DiLiberto, a meteorologist with NOAA's Climate Program Office, notes that the November 2020 sea surface temperature anomaly for the tropical Pacific, the area used to determine El Niño-Southern Oscillation (ENSO) status, was the seventh lowest for all Novembers dating back to 1950. And it is worthwhile to point out that the cooler waters of this La Niña formed despite the fact that 2020 has secured a spot in the top three warmest years on record, according to the World Meteorological Organization.

While that sounds like yet more bad news, there is reason to be hopeful (tentatively, of course). According to an ENSO consensus forecast issued by the Climate Prediction Center and the International Research Institute for Climate and Society (Earth Institute, Columbia University), "La Niña is likely to continue through the Northern Hemisphere winter 2020-21 (~95% chance during January-March), with a potential transition during the spring 2021 (~50% chance of Neutral during April-June)." Weakening La Niña conditions could mean a return to more "normal" temperature and precipitation patterns, but larger factors are at play, as well, which could influence forecast precision and bias.

So we should try to remain hopeful, but vigilant and look for an update to the three-month seasonal temperature and precipitation outlooks to be issued on Thursday, December 17, 2020. These are conveniently provided on the MRGESCP Portal (<https://webapps.usgs.gov/MRGESCP/hydrology/nws-three-month-outlook>), along with the New Mexico Drought Monitor, River Basin Storage and SNOTEL maps.

# WHAT'S GOING ON IN THE BASIN?

## Publication Announcements

**Fish Rescue during Streamflow Intermittency May Not Be Effective for Conservation of Rio Grande Silvery Minnow.** Archdeacon TP, Diver TA, Reale JK. (2020). *Water* 2020, 12(12), 3371. <https://doi.org/10.3390/w12123371>

**Managed Spring Runoff to Improve Nursery Floodplain Habitat for Endangered Rio Grande Silvery Minnow.** Valdez RA, Haggerty GM, Richard K, Klobucar D. (2019). *Ecohydrology*, 12(7), e2134. <https://rb.gy/c70kls>

**Rio Grande Silvery Minnow Population Monitoring During August 2020.** Dudley RK, Platania SP, White GC. (2020). Report prepared for U.S. Bureau of Reclamation. <https://rb.gy/urwo6a>

**Rio Grande Silvery Minnow Population Monitoring During September 2020.** Dudley RK, Platania SP, White GC. (2020). Report prepared for U.S. Bureau of Reclamation. <https://rb.gy/x6a8ak>

**Rio Grande Silvery Minnow Population Monitoring During October 2020.** Dudley RK, Platania SP, White GC. (2020). Report prepared for U.S. Bureau of Reclamation. <https://rb.gy/miydmq>

**Rio Grande Silvery Minnow Reproductive Monitoring During 2020.** Dudley RK, Robbins TO, Platania SP, White G.C. (2020). Report prepared for U.S. Bureau of Reclamation. <https://rb.gy/wwlb4b>

**Use of Restored Floodplains by Fishes of the Middle Rio Grande, New Mexico, USA.** Valdez RA, Zipper SA, Kline SJ, Haggerty GM. (2020). *Ecohydrology*, e2262. <https://rb.gy/xb14st>

## ABQ BIOPARK CELEBRATES 20 YEARS OF RIO GRANDE SILVERY MINNOW CONSERVATION (full article at <https://rb.gy/jphn5q>)

On November 16, 2020, staff from the BioPark's Aquatic Conservation Facility released 34,000 Rio Grande silvery minnows (RGSM) into the Rio Grande in Albuquerque, and another release occurred later that month. The November releases mark 20 years of the BioPark's participation in the conservation of the RGSM.

The BioPark has been part of the recovery program for the RGSM since 2000. Each spring, staff from the BioPark's Aquatic Conservation Facility collect eggs from the Rio Grande to raise in tanks at the BioPark. They also breed additional minnows from previously collected broodstock. Later, juvenile fish that are destined for release are "tagged" with a small colored mark so biologists can monitor the success of the program. Tagging also allows biologists to monitor some aspects of the minnows' behavior and how long the fish are surviving in different parts of the river.

To date, the ABQ BioPark has released more than 800,000 silvery minnows in cooperation with the Middle Rio Grande Endangered Species Collaborative Program. This year, 17,000 fish were released in Albuquerque near Central Bridge and another 17,000 were released at a site near Los Chavez, NM. Staff released more fish on November 30, 2020 near Bosque del Apache National Wildlife Refuge.



#NMBIOPARKSOCIETY

ABQ BioPark staff releasing RGSM into the Rio Grande

Photo: New Mexico BioPark Society

# WHAT'S GOING ON IN THE BASIN?

## PUEBLO OF SANTA ANA'S NOVEMBER FISH ADVENTURES

(full story at <https://rb.gy/rmr4gt>)

The Pueblo of Santa Ana (Pueblo) had a productive month in November related to the fish community and especially the Rio Grande silvery minnow (RGSM). During the first week of the month, the Pueblo completed the fall fish survey with help from the US Fish and Wildlife Service (USFWS) and Bureau of Indian Affairs.

In the middle of the month, the Pueblo received a shipment of 50,000 to 70,000 Rio RGSM from the Southwestern Native Aquatic Resources Recovery Center. These fish were carefully bucketed from the delivery truck down to the river by USFWS Southwest Region staff.

The Pueblo would like to remind all Federal agency staff that they are required to bring donuts whenever they collaborate with the Pueblo. It seems some collaborators aren't taking this rule seriously enough, and the Pueblo (Nathan Schroeder) would definitely like this remedied!

(top) USFWS bucketing RGSM into the river, (middle) fish haul during monitoring, (bottom) RGSM  
Photos: Pueblo staff



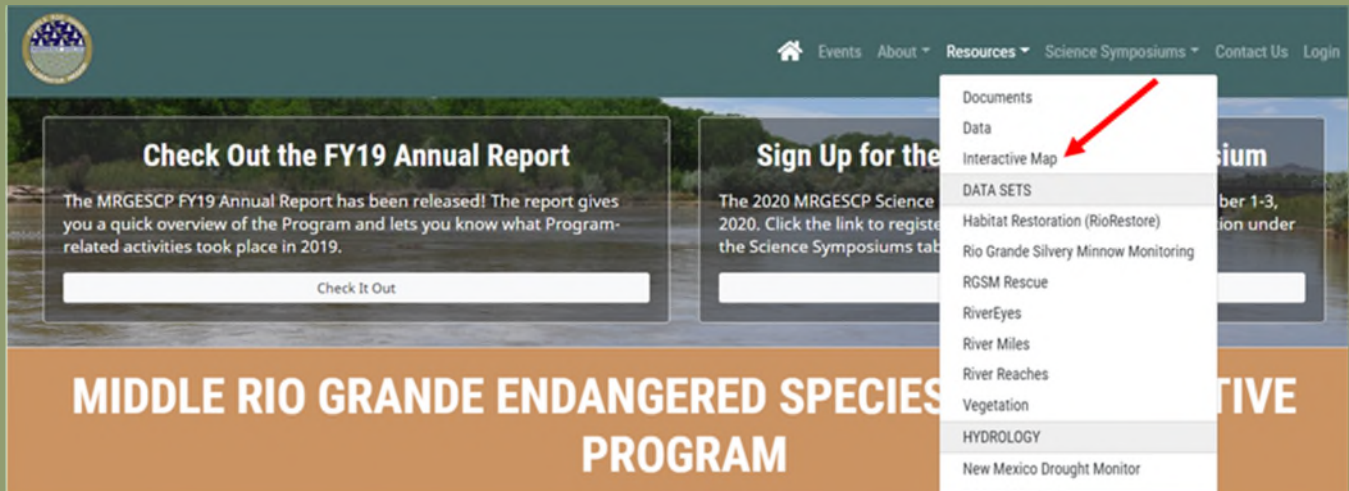
## FROM OUTSIDE THE BASIN: PEER-TO-PEER NETWORK

The Internet of Water's Peer-to-Peer (P2P) Network is a community of practice designed to connect members from across the nation who are working on modernizing their agency's water data infrastructure.

Are you an active employee of a state, local, or tribal government agency? Do you work for a water utility or river basin commission? Learn more and register for the P2P at <https://internetofwater.org/state-agency-p2p-network/>.



# EXPLORING THE INTERACTIVE MAP



## Exploring the Interactive Map

Provided by Shay Howlin, Program Support Team

### The Interactive Map

The Interactive Map went live on the Program Portal in November. This tool was developed by US Geological Survey with funding from the US Army Corps of Engineers, and is a great way for Program participants to see up-to-date Program-related data that is not available on other websites. The image above shows how users can access the Interactive Map through the Portal home page. The following four sets of data have visual displays on the Portal: Rio Grande Silvery Minnow population monitoring, River Eyes drying, Habitat Restoration, and the Hink and Ohmart vegetation. Each dataset has a page on the Portal where you can read about and download the data and any associated metadata.

### Rio Grande Silvery Minnow Population Monitoring:

Data is displayed for each survey from 1993 to 2019 at three station types (standard, additional, and replacement). Filtering by date and year is available, as well as water quality data

sampled concurrently with the population monitoring data.

### River Eyes Drying:

Provides dry reaches by date and number of dry days per year, compiled across datasets from 2002 to 2019.

### RioRestore (Habitat Restoration):

A new resource funded by New Mexico Interstate Stream Commission and created by GeoSystems Analysis Inc. This data layer provides the spatial extent of habitat restoration projects constructed to improve and create habitat for listed species in the Middle Rio Grande. Habitat restoration attributes available include target species, construction elements, funding, and monitoring.

### Hink and Ohmart Vegetation:

Classifications made from 1984 to 2016 following the US Bureau of Reclamation survey protocol developed by Hink and Ohmart. The mapper allows visual inspection of habitat polygons, with additional information about canopy cover in the spatial file download.

**Check out this new Program resource at your fingertips!**

# ADMINISTRATIVE ANNOUNCEMENTS AND UPCOMING DATES AND DEADLINES

## UPCOMING MEETINGS

Science and Adaptive  
Management Committee  
Meeting

January 13, 2021

1:00 PM—4:00 PM

Objectives Workshop

February 10–11, 2020

8:00 AM—12:00 PM

Executive Committee  
Meeting

March 25, 2021

9:00 AM—12:00 PM

## PROGRAM DEADLINES

Pre-Workshop Survey

January 14, 2020

FY20 Annual Report  
Write-Ups

January 15, 2021

FY20 Non-Federal Cost  
Share Reports

January 22, 2021

## Administrative Announcements

### FY20 Non-Federal Cost Share Reporting

A Fiscal Year 2020 (FY20) cost share template was emailed to all non-Federal MRGESCP signatories. The due date for FY20 cost share reporting has been extended to Friday, January 22, 2021. Please email your completed cost share report to [jdickey@west-inc.com](mailto:jdickey@west-inc.com).

### MRGESCP FY20 Annual Report Write-ups

This year, the FY20 Annual Report write-ups will be used to inform the Adaptive Management Database. MRGESCP signatories are asked to submit write-ups through a Google Form (<https://rb.gy/ro2osp>). A Word version is available for those who cannot access the form. Please evaluate your FY20 activities and decide which should be included in the MRGESCP FY20 Annual Report. Submit one form per write-up. The due date for the FY20 Annual Report write-ups has been extended to Friday, January 15, 2021. Please contact [mtuineau@west-inc.com](mailto:mtuineau@west-inc.com) with any questions.



The information in this newsletter should not be attributed to the MRGESCP or its Executive Committee, but to the organization from which it was submitted.

For comments and inquiries, contact:

Program Support Team | (505) 362-1251 | [jdickey@west-inc.com](mailto:jdickey@west-inc.com)

Photo: Scenic view of the MRG; Photo Credit: Mike Marcus, APA