

The Oasis

Spring 2026

A Frog, a Fish, and a Desert Oasis

By Riley Rackliffe, Aquatic Ecologist, Lake Mead NRA.



Technician from Arizona Game and Fish adding sodium sulfite to Grapevine Spring. NPS / R. RACKLIFFE

Desert springs are inverse islands, small, green worlds adrift in a sea of sand. Grapevine Spring at Lake Mead National Recreation Area is one such oasis, a ribbon of life flowing through a slot canyon before drying up five miles short of the Colorado River. Just as islands harbor isolated species, this canyon holds one of the largest remaining populations of relict leopard frogs, marooned by the dams and invading species that long ago drove them off the Colorado River floodplain. These water islands act as refuge: safe harbors where marauding bullfrogs and the diseases they carry cannot easily reach.

In 2023, an unexpected castaway arrived, petstore goldfish released into one of the deep pools. They quickly colonized the pool, outcompeting and likely preying on rare tadpoles. Arizona Game and Fish and the National Park Service launched a multiyear removal effort using nets, traps, and even volunteer anglers to remove them, but it was never enough to eradicate them. So, we attempted an experimental pesticide, sodium sulfite, a chemical that strips oxygen from water and suffocates the fish. With 400 pounds of chemical the team attempted to scuttle the goldfish invasion. But goldfish have a survival trick; they can metabolize fat stores into oxygen and thus survive anoxic conditions.

Even so, the treatment brought 117 fish to the surface where they could be netted out, but left survivors.



NPS volunteer fishing for goldfish in Grapevine Spring. NPS / R. RACKLIFFE

We will try again this summer. The warmer water will hasten oxygen loss; we'll divert an oxygenating waterfall and add surfactants to speed anoxia. Although Grapevine Spring is just one small desert spring, albeit precious to a rare polliwog, the lessons we learn there may yet ripple out if sodium sulfite proves an effective tool for preserving other desert islands.

Staff Updates

Welcome

We have been joined in recent months by some new and familiar faces! Meet the new (and returning) folks who are helping us with our hydrology, vegetation, and bat monitoring protocols this spring, summer, and beyond.

Brandi Stevenson (Great Basin Institute)

Brandi joined us in January to lead our Bat Monitoring program and will be with us all year. Welcome, Brandi!



I began working with bats in 2019 and started work in the U.S. Southwest in 2022, primarily in the Chihuahuan and Sonoran deserts. Although I only moved to the Mojave region in 2026, I was immediately drawn to this ecosystem and knew I wanted to contribute to bat conservation efforts here. I'm looking forward to exploring new areas and spotting wildlife throughout the Mojave. In my free time, I enjoy hiking, birding, photography, camping, and reading.

Angela McTammany, Ecology Assistant (Conservation Legacy)

Angela joined us in February to assist with our Bat Monitoring program. Welcome, Angela!



This is my first season working with the Mojave Desert Network, as an Ecology Assistant through the Scientists in Parks Program. Although I am originally from Florida, I have lived and worked in Colorado, Hawai'i, Oregon, and California over the last five years before moving to the Mojave region in 2026. Through fieldwork with wildlife, I discovered my passion for bat conservation in 2024, and that work has taken me throughout the Western US—and all the way to Alaska—to help with projects involving capture, caving, telemetry, and acoustics. I am thrilled to get experience working at a more southern latitude, specifically in the Mojave Desert, because I get to encounter so many unique species and beautiful landscapes. I am fascinated by desert bats, and working here is a dream come true for me! When I'm not learning more about bats, I enjoy hiking, rock climbing, surfing, and exploring national parks.

Alexa Serrantes, Assistant Data Scientist (Great Basin Institute)

Alexa was hired into a 2-year position, assisting three networks (Sierra Nevada, Upper Columbia, and Mojave Desert) with data science.



I began my career in natural resources doing botanical and ecological field work in the high deserts of Nevada, Oregon and California. Shortly after, I joined the Inventory and Monitoring Division (I&M) as a data management intern and spent two years working on a large scale data publication effort, collaborating with I&M networks across the country. I joined MOJN in January as a shared Assistant Data Scientist with SIEN and UCBN and will be working on building tools to streamline data workflows for shared protocols, as well as other projects where help is needed. I'm excited to be a part of the MOJN team and look forward to reconnecting with desert landscapes. In my free time, I enjoy exploring the outdoors through hiking, climbing and camping.

James Bardo, Vegetation Technician (Great Basin Institute)

James worked on our vegetation crew last summer and came back this March as the vegetation field lead. We're glad to have you back, James!



This is my second season with MOJN as a Vegetation Technician, through the Great Basin Institute. I have worked in the Mojave since 2022, doing a wide variety of things ranging from wilderness restoration work, to surveying for rare plants on public land from Bakersfield to the US-Mexico border, to collecting data for academics studying drought across southern California deserts. The Mojave is where I learned botany and a lot of my ecological knowledge, but I'm not always working there. I've also worked across the Sierra Nevada, Rocky Mountains, Great Basin, and the Chihuahuan and Colorado deserts for the Bureau of Land Management, National Park Service, and the US Forest Service. When I'm not looking for cool plants or traversing sky islands, I'm watching horror movies, reading natural history books, or looking for hot springs to visit.

Max Driscoll, Physical Science and Vegetation Technician (Great Basin Institute)

Max originally joined MOJN last fall to assist with our hydrology projects. He will be continuing his work with our hydrology team until the end of April, taking a short break, and then re-joining us at the end of May to help with vegetation monitoring projects for two months this summer. Thank you, Max!



Highlights From the Field

Angela and Brandi have been busy this winter and spring, deploying acoustic monitoring equipment and locating bats as part of the white-nose syndrome surveillance effort. They have shared a few fun photos of their work so far this season, from Death Valley, Grand Canyon-Parashant, and Lake Mead.



Brandi hikes with equipment to deploy an acoustic monitor in Lake Mead National Recreation Area. NPS / A. MCTAMMANY



Angela deploying an acoustic monitor near Titus Canyon in Death Valley National Park. NPS / B. STEVENSON



Western patch-nosed snake near Smithwater Canyon in Joshua tree National Park. NPS / J. BAILARD



Angela and Brandi locate bats roosting in a cave in Grand Canyon-Parashant National Monument as part of white-nose syndrome surveillance effort. NPS / E. MCINTYRE

The MOJN hydrology team members were pleased to see many “herps” (herpetofauna, includes reptiles and amphibians) out and about in Joshua Tree National Park during their fieldwork in Smithwater Canyon and 49 Palms Oasis in early April. Jenn Bailard (MOJN Physical Scientist) and Athena Lynch (MOJN Physical Science Technician) shared some photos of their recent encounters.



Desert tortoise taking its time crossing a dirt road just outside of the Joshua Tree National Park boundary. NPS / A. LYNCH



A fairly well-camouflaged southwestern speckled rattlesnake at 49 Palms Oasis, Joshua Tree National Park. NPS / A. LYNCH

A Retirement Celebration!

MOJN staff, both current and some from many years past, gathered in April to celebrate the retirement of our Data Manager, Mark Lehman. For over 11 years, Mark helped us with ensuring our standard operating procedures for collecting and managing data achieved the highest standards, conducting quality assurance and quality control of our data sets, and making them available to MOJN parks and the public. Since his retirement last May, Mark has been on an adventure, touring around the country in his camper van, visiting parks and NPS friends and colleagues along the way. It was a wonderful opportunity to honor Mark and convene friends, some of whom worked with us almost 10 years ago.



Mojave Desert Network staff honoring Mark Lehman's retirement in Boulder City, Nevada. Pictured (left to right) are David Gundlach (former MOJN GIS Specialist), Goeff Moret (former MOJN Hydrologist), Janel Brackin (former MOJN Science Communicator), Kyle Smith (former MOJN Vegetation Technician), Jenn Bailard (MOJN Physical Scientist), Sarah Wright (MOJN Data Scientist), Mark Lehman (former MOJN Data Manager), Jeff Galvin (MOJN Vegetation Ecologist), Carissa Wilkerson (former MOJN Hydrological Technician), Athena Lynch (MOJN Physical Science Technician), Allen Calvert (MOJN Program Manager), Alison Gause (former MOJN Vegetation Intern), and Ayden Kelly (former MOJN Vegetation Intern).

MOJN Planning for I&M Strategic Triage

The Inventory and Monitoring Division (IMD) announced new guidance for networks in February, intended to address and plan for implementation of the program in FY 2026 and 2027, given a more than 35% vacancy rate in I&M positions across the NPS. These vacancies stem from a combination of the hiring freeze, the Deferred Resignation Program and other buyouts, and retirements. The "[Strategic Triage](#)" is the framework to re-establish network priorities and re-distribute duties so that networks can achieve IMD's vital signs monitoring [Core Expectations](#) in the face of greatly reduced capacity.

Integral to this Strategic Triage is developing a network-level "Impact Rubric," that will help IMD identify core

monitoring priorities for FY 2027. IMD Central Support Office (CSO) staff will work with individual networks by hosting "launch meetings" in which vital signs are ranked. The process is designed to help us take an objective, transparent approach to identifying network priorities and including an appropriate level of park input.

MOJN is scheduled to have a launch meeting with the CSO staff sometime between mid-April and the end of May. Park engagement in the process may include calls with park resource managers, surveys sent to technical committees, and other mechanisms for park feedback. The network will complete its Impact Rubric in this same time period.

To achieve this, MOJN will need to have thoughtful discussions, with all staff as well as park resource managers, on which monitoring projects are providing the

most useful information and of greatest need to park managers and consider whether others may require scaling back—or redesign—to remain sustainable. This includes evaluating the capacity to analyze data and assess potential trends. This may mean a pause in data collection so analysis can be completed. Considerations during these evaluations will include both temporal and spatial relevance in delivering impactful scientific information to parks, the scientific community, and the public.

Once all the networks have completed their Impact Rubrics, the IMD Leadership Team will use them to facilitate capacity sharing and division-wide monitoring priorities for FY 2026, where possible, and for FY 2027. Emphasis will be on collaboration across networks and regions, with desired solutions promoting stability and aligning capacity to the identified monitoring priorities.

Spring and Summer Monitoring Schedule—2026

Park	April	May	June	July	August	September
DEVA	Desert Springs	Bats ¹	Bats ¹			
GRBA		Streams and Lakes	Integrated Uplands, Aspen, Bats ¹	Aspen, Pine, Bats ¹		Streams and Lakes
JOTR	Selected Large Springs, Bats ²	Stream Vegetation, Bats ¹	Selected Large Springs			
LAKE		Bats ¹	Selected Large Springs, Bats ¹			
MANZ						
MOJA	Desert Springs, Selected Large Springs, Integrated Uplands, Bats ²	Bats ¹	Selected Large Springs, Bats ¹			
PARA	Desert Springs, Bats ²	Stream Vegetation	Selected Large Springs, Bats ¹			

¹Bat Acoustics

²Bat Capture

More Information

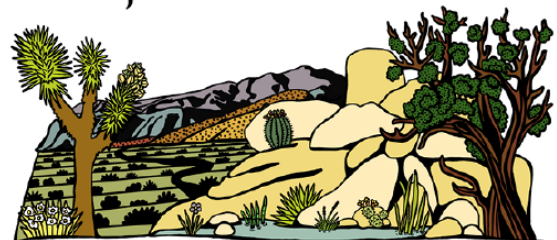
Allen Calvert, Mojave Desert Network Program Manager

Email: allen_calvert@nps.gov

Phone: 970-267-2190

<https://www.nps.gov/im/mojn/index.htm>

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