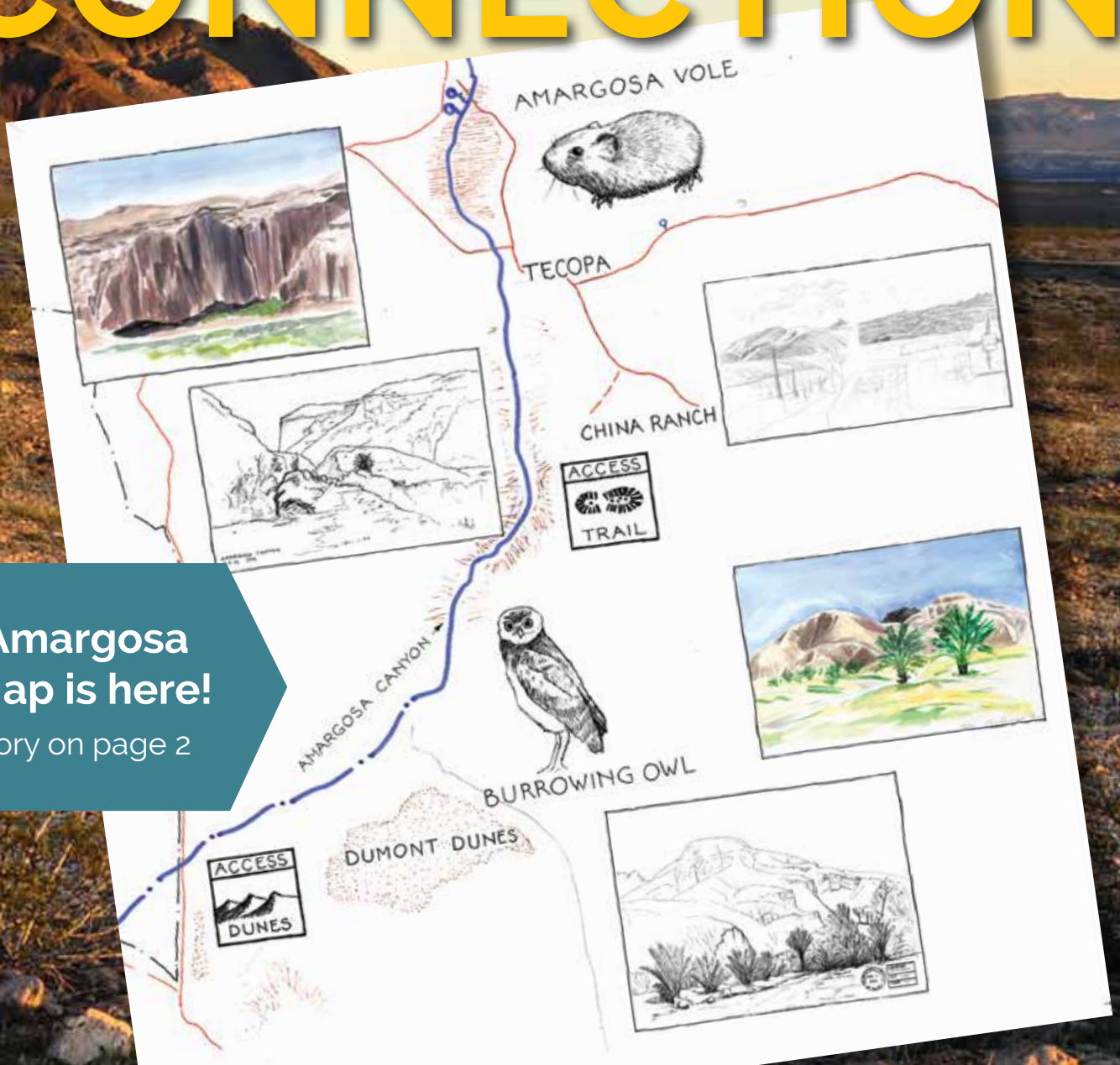




# CONSERVANCY CONNECTION



The Amargosa Art Map is here!

Story on page 2



## WHO WE ARE:

**Standing up for the wilds,  
waters, and communities of  
the Amargosa Basin and  
eastern Mojave.**

## STAFF

**Tanya Henderson**  
Executive Director

**Julie Vargo**  
Director of Finance and Operations

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# Monumental Thoughts

## Letter from the Editors

Dear Friends,

Heading into fall in the Amargosa Basin, we are preparing for another work season and working hard on our mental resiliency, hoping to not be discouraged by the broad-scale threats to public lands. As members of the Friends Grassroots Network, we are laboring to support the many organizations that are now fighting to defend their National Monuments. We are sure that the attack on the monuments, as illegal as it likely is, will not be the end of the attacks on our public lands. Already Congress is trying to write new legislation to make it legal to make changes to the scope of monuments after-the-fact. This is a major land grab from the public.

Over the last few years, the AC pushed to be sure that the Amargosa region received status as National Conservation Lands, and we aided in the development of the Desert Renewable Energy and Conservation Plan. The path forward on those designations and plans is a bit foggy at the moment. What does it mean now to have National Conservation Lands? Especially if the funding for the BLM is cut and they are not able to uphold the designation? Federal land agencies are already so starved for funding that they could hardly do their job well.

This is a dangerous trend to take lands designated as monuments, strip them of that designation and take them away from the public by gifting them to the private interests: Use them! Use them for gold mines! (Castle Mountains) Take all the water for profit! (Mojave Trails) Extract Everything! (Bear's Ears). The administration is calling monuments a "federal land grab." But the country can't "grab" lands that they already own. They also say they want to put control back into the hands of the local people. While we all can agree that local people and economies are important, the monument lands belong to the people of the entire nation.

If we are able to shift focus to the gains of a monument designation, we as the public gain protections on the land that preserve it from destructive use for corporate or commercial (ie private) interests. We gain the security of knowing our children and future generations will have the same access to beautiful, wide-open spaces as we have. We gain access and information about wonderful places that few gave much thought about before a designation. The communities in and around monuments gain tourism, development, funding, promotion -- a whole new sustainable economy!

We are glad to have your support as we work on projects large and small - protecting your public lands and restoring habitats. Please spread the word about public lands and do contribute to the effort to help protect these wonderful places. 🍀

Sincerely,

*Tanya Henderson*  
*Julie Vargo*



**Tanya Henderson and  
Julie Vargo**

## Cover Feature: Amargosa Art Map

Many talented artists are drawn to the Amargosa Region and inspired by its stark beauty. Janet Morgan and Gregory Frux of Brooklyn, NY, have created a six foot long illustrated map.

This unique artwork documents the Amargosa River-- Fed by groundwater, subterranean for much of its journey, it emerges as a ribbon of life through the Mojave Desert.

The hand drawn map incorporates paintings and drawings created by the artist couple during extensive explorations of the region. The **Amargosa Map** provides information for visitors to find hikes, wildlife, springs, marshes, and mountain peaks. It gives the traveler an overview of this precious and difficult landscape.

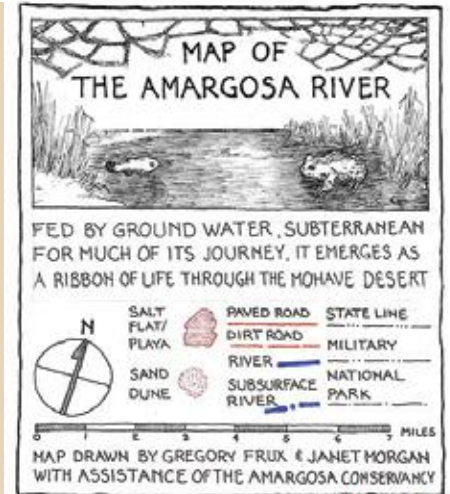
A copy of the Amargosa Map will be on exhibition in the Henry S. Hall Jr. American Alpine Club Library,

Golden, Colorado, and is being added to their permanent collection.

The map was created in collaboration with the Amargosa Conservancy, and the artists will donate a share of the sales as well as copies of the map to the Conservancy.

This map is created as limited edition print on fine matte paper stock and this is printed with pigmented archival inks. It is cut and scored, designed to fold into one foot square. Edition of twenty, signed and numbered.

**Janet Morgan and Gregory Frux** have painted side by side in such remote locations as Morocco, Peru, Bolivia, Patagonia, Antarctica, Arctic Norway, Central Asia (they were first Americans to show at National Museum of Art of Kyrgyzstan) & as Artists-in-Residence in Death Valley National Park, Weir Farm National



Historic Site, Joshua Tree and Glacier National Parks. They held a joint show of their work at the Death Valley Visitors Center in April 2012.

To purchase a copy of this map, please post a check for \$350 to G. Frux or Janet Morgan at 11 Sterling Place, Brooklyn, NY 11217-3269. We will cover insured shipping to your address. 🍀

## Partner Spotlight: EcoFlight

Last spring, we were contacted by EcoFlight, a small nonprofit out of Aspen, CO, that uses small aircraft to educate and advocate for the protection of remaining wild lands and wildlife habitat. Bruce Gordon and Jane Pargiter met us at the Death Valley airport with their small plane and took some of our staff, board, partners of the Conservancy and county supervisors Jeff Griffiths and Matt Kingsley up for low-altitude flights over the Basin.

Our board member, Jane Gillam,

loved her flight, saying that it gave her a very different and amazing perspective on the land she loves so much. "From above, you can see how it flows, twisting and turning across the landscape. It's really a unique perspective and makes me appreciate even more just how special the river is!"

We are so grateful to have this view and collection of new photos of the area that we work to protect and maintain. Looking forward to the next time, Bruce and Jane! 🍀



Jane and Roy Gillam take in the view from above the Amargosa Basin.



# WATER IN THE BASIN

Just north of the town of Beatty, NV, the Amargosa River surfaces in the midst of a vast desert landscape. The river above ground is but a shallow, wandering trickle. Yet the surface basin that this river drains is 3,124 sq mi, and under the surface, the Greater Death Valley regional groundwater basin covers large portions of Nevada and California.

Since 2010, the AC has partnered with Andy Zdon, a professional geologist and hydrogeologist, to study the waters above and below the Amargosa Basin.

## What is a groundwater basin?

Most people are familiar with a river basin, or watershed. If you live in the Western US, and especially California, you have probably also heard a lot about groundwater basins. You might also hear of a catchment basin, aquifer, or water table.

A groundwater basin is a three dimensional, underground reservoir of water, often comprised of more than one aquifer and having a flow between one aquifer and the next. These reservoirs are not large

bubbles of pure water underground - rather the water is stored in porous material and filling the fractures and pores in or between the rocks.

## Why study the water?

For the last eight years, Andy has been making regular visits to the Amargosa Basin to study the underground flow patterns of the Amargosa Basin. The goal is to

gain a conceptual model of the basin, which would in turn inform management of groundwater drawdown in adjacent agricultural and urban areas. If people pump water out of the ground in Pahrump Valley, could the flow in the Amargosa diminish such that it no longer flows above ground? If so, that would have terrible effects for the wildlife living in and near the water basin-wide.



Andy Zdon at an Amargosa River monitoring site, Summer 2017



### What do we study?

Andy collects data on three main things: spring discharge (how much water does a spring put out in a given amount of time), seepage run (how long does the Amargosa stay above ground before seeping back into the ground), and groundwater level (how far below the ground surface is the water stored.)

Additionally, in some sites, the chemistry of the water can help us

model where the water came from, when it went into the ground, and how it is related to other water in the basin. For example, analysis of the water at Tecopa Hot Springs shows that it likely came from deep down, warmed at depth then circulated back to the surface through a fault. This water could be as much as 100,000 years old - meaning the last time that it fell as rain or was on the surface of the earth was one hundred thousand years ago!

### What is going on now?

Through the years, Andy has gathered just enough information to create a preliminary conceptual model of the basin. Further refinement and data is critical though. Through California Proposition 84 funds, we received a grant to install six new monitoring wells, perform several more years of spring, river, and groundwater monitoring, and partner with USGS on an evapotranspiration study. All of this new data will help expand our understanding of the water flowing underneath the Amargosa region. 🍃



Horsethief Spring monitoring site, Spring 2017

## QUICK FACTS

- The Amargosa River is primarily fed by groundwater via springs.
- 26.3 miles of the Amargosa are designated as Wild and Scenic River.
- The waters of the Amargosa provide vital habitat for many endemic and endangered species.



# AMARGOSA FIELD WORK

As we all know, the desert is a strange and wonderful place that operates on its own terms and in its own time. While the field work season for much of the country is spring through fall, in the Amargosa we start gearing up as others are winding down. Last winter, our Field Manager Celia Demers took our four interns from desert rookies/fledglings/cubs to desert champions. Together the team tackled our myriad of projects across the middle Amargosa Basin, executing projects in desert restoration, trail construction, and habitat development.

One of the main projects of the year was the restoration and protection of the area where Sperry Wash meets the Amargosa. With the help of our partners at BLM and many volunteers, the crew installed

over a mile of fencing to keep motor vehicle riders from accidentally ending up in the wilderness portion of the Amargosa River. Then they moved on to using vertical mulching and other restoration techniques to camouflage unauthorized vehicle tracks - discouraging responsible recreators from following false turns. This helps protect the Kingston Wilderness - a fantastic area to experience varied desert ecosystems, geology, and history.

If you are visiting the Amargosa region, visit some of our projects! We've been working with the Vole Team to re-create Amargosa vole habitat in Shoshone. Shoshone Village and the Amargosa Conservancy finished a small loop trail that borders the vole marshes and connects with the trail along the pupfish ponds. Come visit and see

for yourself!

As we wrap up the projects from the last few work years, we are looking forward to starting a new restoration project in the Amargosa Canyon, just south of Tecopa. The site lies below the iconic Palisades - cliffs of conglomerate with stunning geometric lines. A decade ago, a small wildfire passed through here, reducing the canopy of willow trees that provided excellent habitat for many bird species, including several migratory species that are at risk. Our project aims to create that habitat again, perhaps a little faster than nature would on its own, and keep out invasive plant species that would change everything. If this project interests you or if you have questions about it, think about coming out to visit for one our volunteer work days this winter! 🌱



Intern Sam Scherneck works on verticle mulching, a restoration technique to disguise illegal tracks

## QUICK FACTS:

- **Willow Creek Trail** - 7,200 sq ft of slash removed (equiv of over 35 pickup truck loads), over 1 mile of trail created, delineated or improved.
- **Shohone Vole Habitat** - 52 volunteer hours of cattail removal (thank you Las Vegas Audubon!), corridor cleared for Shoshone Village to install a boardwalk (thank you Shoshone Village!)
- **Sperry Wash Route** - 20 incursions restored, over 750 bushes planted, over 700 intern hours PLUS over 500 volunteer hours!



# WAYS YOU CAN HELP

## VOLUNTEER SPOTLIGHT



### Great Old Broads for Wilderness

In March, 2017, the Great Old Broads for Wilderness joined us for a BroadWork. Eighteen participants from across the country came together in Sperry Wash to help with our restoration project there. The Broads jumped into the work with enthusiasm, carrying buckets of rocks, gathering branches for vertical mulch, and decompacting the soil. All of this work is meant to both disguise the tracks and encourage regeneration of native plants. The Broads contributed nearly 600 hours of volunteer labor towards this project. We hope that it will help riders to stay on the designated and legal routes in the Sperry Wash area of the Amargosa, and allow the areas impacted in the past to recover.

## WINTER VOLUNTEER EVENTS

- This year, we will be hosting several volunteer days and events. Projects may include:
- Riparian restoration in the Amargosa Canyon south of Tecopa
- Trail maintenance at the Willow Creek Trail
- Desert Restoration to close illegal vehicle routes
- Vole Marsh Fire Recovery Efforts

We are also always looking for help spreading the word about the Amargosa. If you would like to help with our outreach efforts, please contact [outreach@amargosaconservancy.org](mailto:outreach@amargosaconservancy.org).

**Groups:** We have partnered with a number of groups to do restoration work in the basin. If you are part of a group that would like to spend a few days in the desert, camping, and doing volunteer work, please get in touch!

## CALL FOR BOARD MEMBER

If you really love our work and care to contribute, we are seeking another outstanding person to join our Board of Directors. Our greatest need is for someone willing to take on the role of Treasurer. The Board meets regularly by phone and once or twice a year in person in Shoshone. If you would like to learn more, please send a message to our Board Chair, Holly Alpert: [holly@amargosaconservancy.org](mailto:holly@amargosaconservancy.org)

## DONATIONS

Regardless of whether you can join us on the land for some restoration work, we'll be out there doing all of the things. We would love to have your smiling faces, but the face of George Washington (or Benjamin Franklin rather) would be much welcomed as well!

### How to donate to the Amargosa Conservancy:

- Become a Sustaining Member by donating a smaller amount monthly with our automatic payment tool. Go to [www.amargosaconservancy.org/support](http://www.amargosaconservancy.org/support)
  - Select the tab for Sustaining (Monthly) Membership at the top of the form.
  - Fill out the form, choose an amount and complete your donation with a credit or debit card.
- Prefer to give all at once? Use the same website to donate with your credit or debit card, but select One Time Gift at the top of the form.
- Or mail us a check at PO Box 63, Shoshone, CA, 92384.

The Amargosa Land Trust dba Amargosa Conservancy is a 501(c)3 Nonprofit corporation, FIN 87-0748171. This means 100% of your donation is tax deductible. 🍀



PROTECT  
DESERT WATER  
CALIFORNIA

As a friend of the Amargosa, we know you understand the importance of desert water. Because of the desert climate, groundwater (often very OLD groundwater) is the primary source of many Mojave desert springs and rivers like the Amargosa. Pumping desert groundwater to feed far away cities would devastate desert ecosystems on a large scale. This water could take hundreds of thousands of years to be replaced. That is why we support consistent scientific research to understand our groundwater sources before they come under threat, and react effectively if and when they do.

Photo by Michael Gordon



P.O. Box 63  
Shoshone, CA 92984