

FY 2024 IMPACT REPORT



Friends *of the*
VERDE RIVER

Letter From the Director

To all of our Verde River friends,

Having just joined the Friends of the Verde River only a few months ago, I was very pleased on reviewing this report to see how much work has been done to protect and restore the Verde River. Whether through removing invasive species, restoring upland habitat, supporting wildlife corridors, monitoring water quality, supporting water conservation or promoting community stewardship, much work was done to keep the Verde River healthy and flowing.

However, Friends hardly acted alone. I have equally been impressed by the broad coalition of partners among nonprofits, foundations and government entities from the local to state and federal level that are dedicated to preserving the Verde River. The Yavapai-Apache Nation in particular continues to play a central role in protecting the river. The theme of the recent State of the Verde Watershed Conference emphasized the importance of sustaining these partnerships. I look forward to further supporting and strengthening our working relationships with all partners.

Despite progress made so far, the river remains fragile and continues to face many challenges. These challenges include strengthening the protection of the Upper Verde River, enhancing water quality monitoring, as well as identifying mitigation measures for the proposed raising of the Bartlett Dam on the Lower Verde River. Without vigilant monitoring and follow up action, invasive species will return and once again choke out native riparian species. We have barely started the immense work required for upland restoration. Wildlife corridors remain incomplete. There is still much work to be done.

One of the most crucial challenges will be to ensure that we have developed a new generation of water stewards for the Verde River. That means enhancing our work with children, teenagers and young adults so that they too learn to appreciate and value a healthy, flowing river. Our Board of Directors has asked that Friends takes up that challenge in the coming year.

Finally, I must thank our dynamic Board of Directors who continues to provide strong and clear guidance under the leadership of our president, Jeanne Swarouth. I also must thank the great staff of the Friends, without whose dedication and determination we would not have seen the success described in this report. By sustaining this spirit, we will continue to see a healthy and flowing river for generations to come.



W. David Gressly

Executive Director of Friends of the Verde River



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Watershed Report Card

The 2025 Verde River Watershed report card update is in progress. The initial report card was published in 2020 to provide a transparent assessment of the health of the Verde River watershed. The report card is updated every five years. Friends of the Verde River and our partners, including The Nature Conservancy, are in the middle of the update for 2025.

During Fiscal Year 2024, we hosted stakeholder workshops to re-engage partners and discuss updates to the report card. In October 2023, partners met to review the 2020 report card and provide feedback on indicators and data sources used to calculate scores. Based on the initial feedback, we reviewed what updates are necessary to existing indicators and the potential development of new indicators.

In February 2024, several stakeholder meetings were held to continue the discussion regarding the report card update. Participants were able to provide feedback on potential changes to indicators and assist staff with identifying data sources and other resources for the update.

In addition, we discussed the utilization of the Verde River Watershed Report Card. Stakeholders identified the utility of the report card in filling data gaps for agencies, having measurable data instead of opinions on watershed conditions, and showing areas of improvement in the watershed. The report card also helps to identify opportunities for implementing projects to improve watershed conditions based on community priorities.

We continue to work on the 2025 Verde River Watershed Report Card update, which will be released in the spring of 2025.



Restoration

Arundo Free Oak Creek

Friends of the Verde River (FVR) received funding from the Arizona Department of Forestry and Fire Management's (AZDFFM) Invasive Plant Grant program and the Forever Our Rivers (FOR) 4Rivers Fund to remove riparian invasive plants along Oak Creek. Over the last two years, FVR has contracted with Arizona Conservation Corps and Verde Earth Technologies to work on this project.

This project has focused on removing giant reed (*Arundo donax*), salt cedar (*Tamarix* spp.), and tree of heaven (*Ailanthus altissima*) from private and public land along lower Oak Creek.

One of the major landowners and partners of this project is the Oak Creek Valley Property Owners Association (OCVPOA). Since 2019, FVR and OCVPOA have partnered to remove giant reed from the riparian area of Oak Creek in the Oak Creek Valley neighborhood. Volunteers from the neighborhood worked with our crews to restore this habitat. We are very proud of this partnership!

2023-2024 treatment season	2022-2023 treatment season	2021-2022 treatment season	2018-2019 treatment season
5,952 Giant reed stalks	3,600 Giant reed stalks	7,113 Giant reed stalks	3,891 Giant reed stalks



OCVPOA Stand 1 Before (2019)



OCVPOA Stand 1 After (2019)



OCVPOA Stand 1 After (2021)



OCVPOA Stand 2 Before



OCVPOA Stand 2 After

AZDFFM and FOR have awarded FVR funding to continue this work in the Oak Creek corridor. We are so grateful for our partnership with AZDFFM and FOR. We appreciate the continued support of our restoration work!

Restoration

Lower Fossil Creek

Friends of the Verde River has been working hard to preserve Fossil Creek, one of two Wild and Scenic Rivers designated in the state of Arizona. Friends and our crews have focused on the 9.3 mile lower section of Fossil Creek, designated as "Wild", to remove invasive species including salt cedar (*Tamarix* sp.) and giant reed (*Arundo donax*) from its banks. The photos to the right show the conditions before and after removal of giant reed.

Fossil Creek is one of the most biodiverse ecosystems in all of Arizona - hosting over 30 species of trees and shrubs, and over 100 species of birds (www.rivers.gov). While few people venture into the Wild-designated section of this Wild and Scenic River, the upper section of the creek is a popular recreation spot for locals and outdoor enthusiasts who are drawn to its crystal clear spring-fed water and travertine waterfalls.

In collaboration with the Coconino and Tonto National Forests, and with funding from the National Forest Foundation, Arizona Water Protection Fund, and Coconino National Forest, Friends of the Verde River is proud to have been able to remove over 50,000 stems of the invasive giant reed from this critical habitat in the last year - but there's still work to be done! Our efforts will continue this fall as we work our way upstream from its confluence with the Verde River, clearing out invasive species as we go.

This area is extremely remote and difficult to access but our crews are ready for the challenge!

FY 2024 Accomplishments on Lower Fossil Creek

.63 river miles

5.98 acres

**50,252 stems of giant
reed removed**

**13 stems of salt cedar
removed**



Lower Fossil Giant Reed Before



Lower Fossil Giant Reed After



Lower Fossil Giant Reed Before



Lower Fossil Giant Reed After

River Friendly Living

Reducing Domestic Water Loss at the Verde River Headwaters

Recognizing the critical importance of conserving groundwater, Abra Water Company, located at the headwaters of the Verde River in Paulden, has taken a proactive stance in reducing domestic water loss. In 2023, the company embarked on a leak detection project in partnership with Friends of the Verde River and The Nature Conservancy to serve as an example of groundwater Best Management Practices (BMPs) in our region. Groundwater BMPs are an indicator of river health on the Watershed Report Card for the Verde River system.

Facing a reported
15% water loss

—above the state’s minimum acceptable loss rate—
Abra Water Company was looking for a solution.

This loss, often referred to as non-revenue water, represents water that is drawn from the groundwater aquifer but never reaches a beneficial use due to system inefficiencies like leaks.

The first step in the collaboration was to hire GHD Engineering to analyze historical leak data. By focusing on routes with higher water pressure, which were more prone to significant leaks, GHD was able to strategically prioritize the areas most in need of attention. This approach laid the groundwork for deploying leak detection sensors. The data was collected and analyzed to create a repair plan.

The repair plan focused on addressing a major leak that was found at a fire hydrant. The hydrant had been losing approximately one million gallons of water each year. Once identified, Abra was able to quickly repair the leak, reducing its water loss immediately. Also included in the findings, was that the water meters were inaccurate. This indicates that some of the measured losses may have been caused by faulty metering. Abra was then able to secure funding to upgrade the system.

Abra Water Company’s partnership in this project not only demonstrates its commitment to protecting the Verde River system but also sets an example for other utilities across Arizona.

Stats

1 Year

4 Partners

**1,000,000 gallons
saved annually**



An installed leak detection sensor



A flow monitor installed on the ABRA Water Company Water Pump



Contractor installs an acoustic leak detection sensor

River Friendly Living

Offsetting Water Use: Sycamore Vista Apartments and Water Conservation in the Verde Valley



As the Verde Valley continues to grow, innovative approaches to water conservation are more important than ever. Sycamore Vista Apartments, a new housing project in Camp Verde, has taken a proactive stance by voluntarily pursuing the River Friendly Living certification program. This program, designed to inspire a voluntary culture of river conservation, supports new developments in their efforts to protect the river system.

Through the River Friendly Living program, Friends of the Verde River conducted an assessment to estimate the annual water use of the Sycamore Vista development. The goal? To offset 100% of the increased groundwater demand for the first five years of the development's existence. Achieving this ambitious goal requires a series of on-the-ground water conservation projects that save an equivalent amount of water.

One of the most impactful of these projects is a collaboration with the Red Rock Ditch Association. Friends of the Verde River provided the association with a \$4,000 grant to remove a large Cottonwood tree that was causing significant water losses. The removal of this tree, which was responsible for roughly 80 acre-feet of water losses each year, is expected to offset the equivalent of 2.5 years of the water demand of the Sycamore Vista Apartments.

This project is an example of how creative collaborations can lead to effective resource conservation. By working together, Sycamore Vista Apartments and local partners like the Red Rock Ditch Association are demonstrating what it means to be River Friendly. This effort also supports the base flow and surface water Best Management Practices indicators in the Verde Watershed Report Card, a critical measure of the health of the Verde River system. As more developments arise in the Verde Valley, this model of offsetting water use through conservation projects could serve as a blueprint for future growth.

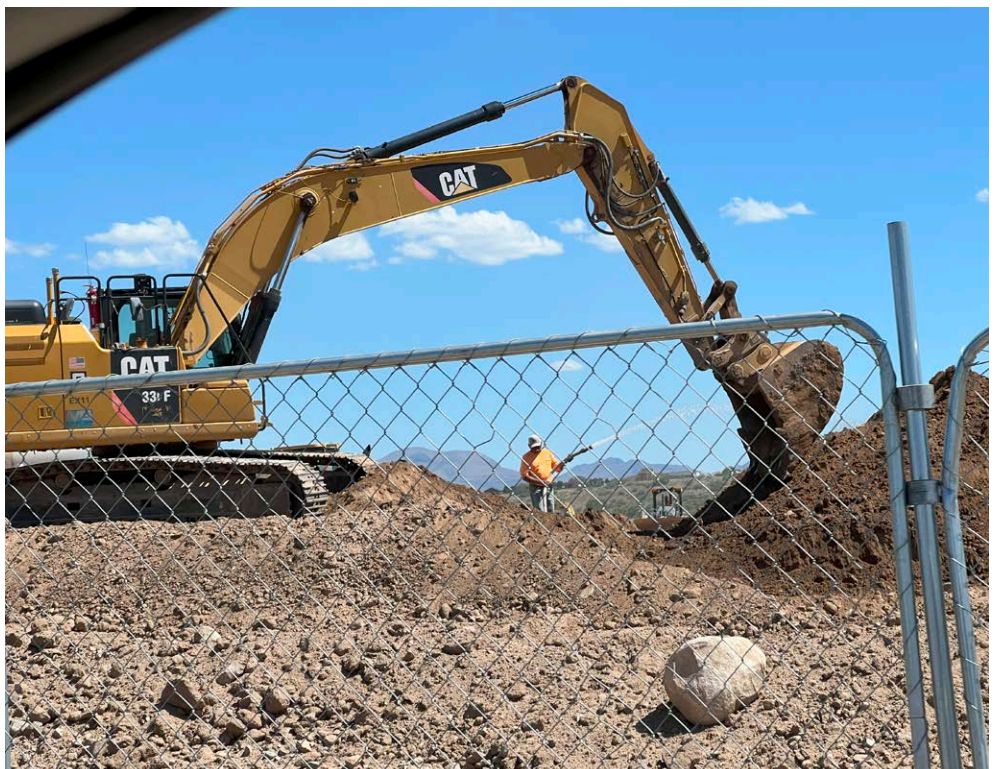


Stats

160 unit housing development

3 partner organizations

50 million gallons offset by 2027



Community Science

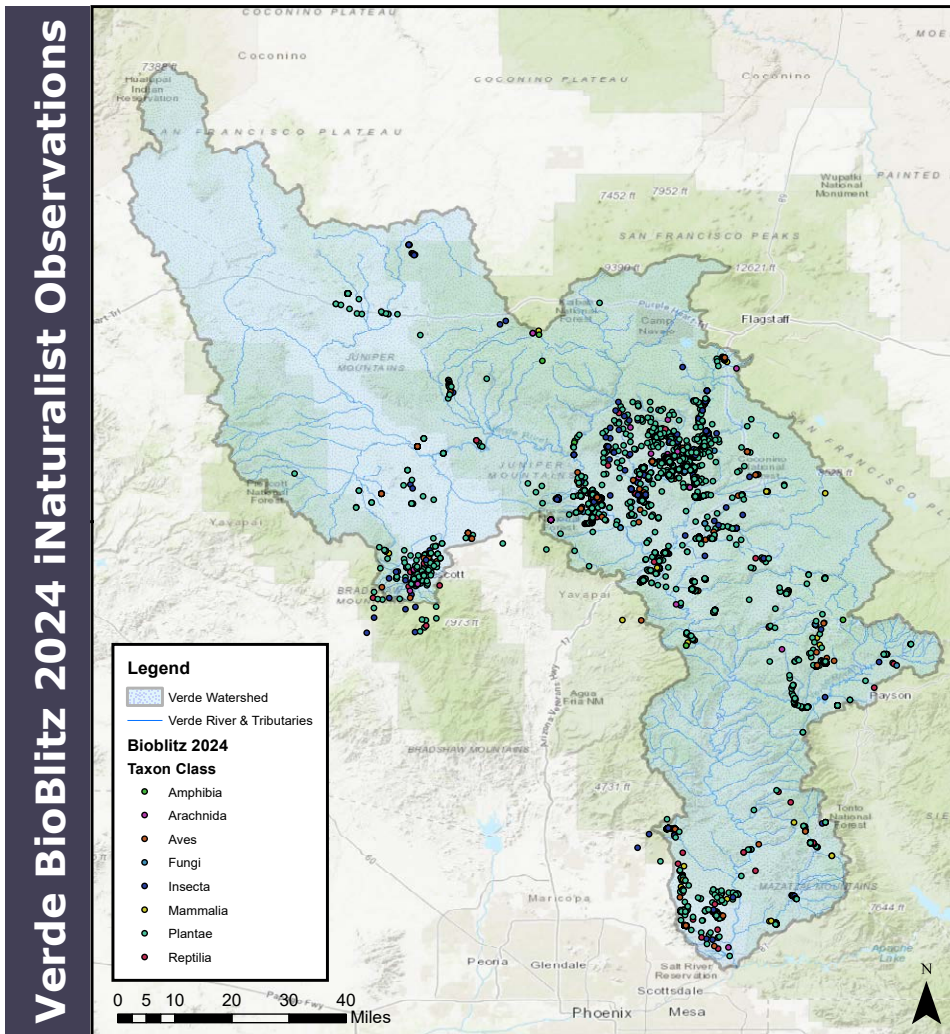
Verde BioBlitz

Friends of the Verde River and our partner Science Vortex host the annual Verde BioBlitz each spring. 2024 was the fourth annual event held during the Verde Valley Birding and Nature Festival. This BioBlitz engages fifth grade students throughout the Verde Valley by hosting field trips and in-classroom lessons. This BioBlitz also engages community scientists from the general public in utilizing iNaturalist to make identifications and observations of all types of living organisms they encounter.

The 2024 Verde Bioblitz was a great success! Friends and Science Vortex partnered to engage students from ten schools across the watershed. Nineteen classes of fifth grade students participated in the BioBlitz through field trips where they went on nature walks to record observations of plants, animals, birds and more. Following the field trips, Friends and Science Vortex visited each classroom to analyze the BioBlitz data and learn more about what was observed on the field trips. 418 students participated in the Verde Bioblitz this year.



	Observations	Observers	Classes Engaged	Students Engaged
2021	1028	31	5	122
2022	4951	466	7	201
2023	5928	584	18	476
2024	6862	411	19	418



Community Science



Volunteer Greg collecting water samples for *E. coli* testing at Angel Valley.



Elaine, Restoration Project Manager for FVR, and Erin from The Nature Conservancy take a moment to smile while collecting Water Quality Monitoring data at Oak Creek above the confluence with the Verde River.

Water Quality Monitoring

Friends of the Verde River (FVR) has partnered with the Arizona Department of Environmental Quality, through a program called Arizona Water Watchers. This is a community science program, where volunteers visit the river and collect water samples throughout their watershed. The samples collected provide information about biological and chemical changes that contribute to water pollution. Impaired water conditions not only affect the health of the riparian and aquatic ecosystems, but also the recreators and users of the Verde River Watershed. Committed community scientists have contributed to filling in data gaps that will provide a baseline for understanding the Verde Watershed stream and river conditions so that we can inform land management decisions in the future.

Finalizing and implementing the Verde River Watershed Water Quality Monitoring Plan

Through the development of the 2020 Verde River Watershed Report Card, we found gaps in our knowledge about where water is polluted and where it is clean. Where we had enough data, water quality was relatively good. However, many areas of the Verde River Watershed were undersampled. Without enough information, we can't locate problem areas to address issues harming water quality.

To address this finding, FVR and our Verde Watershed Restoration Coalition partners developed a Water Quality Monitoring Plan (WQMP) for the Verde River Watershed. Development of the WQMP was a collaborative effort. Once fully implemented, the data collected through the program will fill in data gaps. Better, consistent data will help us to identify areas of concern not meeting state standards and implement restoration projects to improve water quality in the Verde River and its tributaries.

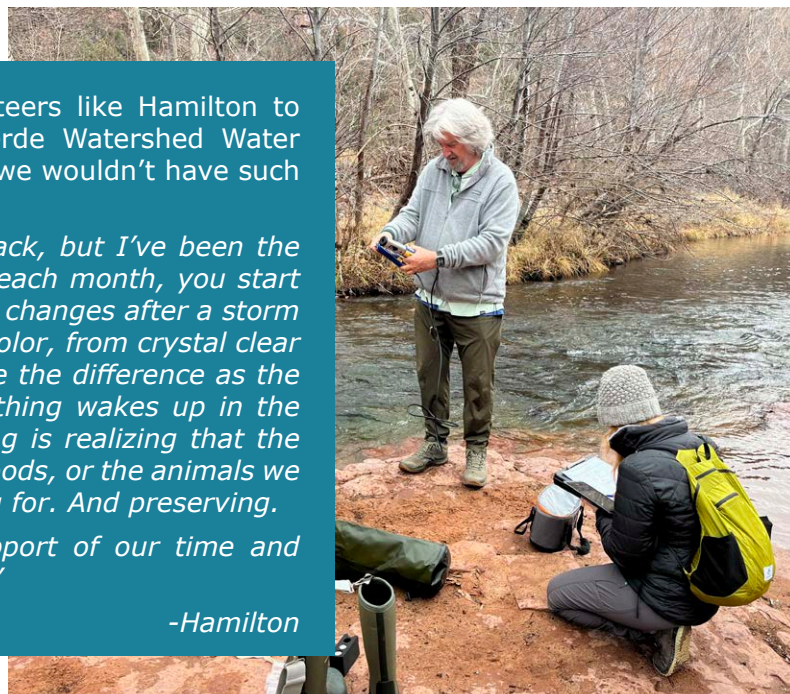
The Arizona Department of Environmental Quality identified 75 reaches within the WQMP area and, when fully implemented, water quality samples will be collected from each reach based on certain timeline (annually or quarterly). This will allow FVR and our partners the ability to assess water quality throughout the entire watershed and better identify concerns.

Friends of the Verde River relies heavily on volunteers like Hamilton to regularly collect water quality samples for our Verde Watershed Water Quality Monitoring Plan. Without dedication like his, we wouldn't have such a great program.

"I began testing water hoping to give something back, but I've been the one who's benefited most. Going to the same spot each month, you start to form a relationship with the river. You hear how it changes after a storm or a month without rain. You see the water change color, from crystal clear to green, blue-gray, and silver, to brown. You notice the difference as the trees drop their leaves in the Fall and when everything wakes up in the Spring. The most satisfying thing about volunteering is realizing that the river is a living thing, not that unlike us, the Cottonwoods, or the animals we share the Verde Valley with. It's a thing worth caring for. And preserving.

There are many local organizations worth the support of our time and money. Friends of the Verde is at the top of the list."

-Hamilton



Hamilton (Left) and Aspen (right) preparing to monitor stream conditions on Oak Creek at Lower Chavez using a multi-parameter probe.

Community Science

Otter Spotter

As you may know, we're excited to continue our Otter Spotter initiative in collaboration with The River Otter Ecology Project. Whether you're already familiar with Otter Spotter or hearing about it for the first time, we invite you to join our effort to collect river otter sightings along the Verde River and its tributaries.

What is Otter Spotter?

Otter Spotter is a community-driven project aimed at tracking river otter populations to understand more about the health of the watershed. River otters are an indicator species, meaning their presence signals good environmental conditions, such as abundant prey and healthy vegetation.

Why is this Project Important?

Arizona river otters were reintroduced in the 1980s after being driven to local extinction in the late 19th century. However, little is known about their current range and population. By collecting otter sightings, we can gather crucial data to support watershed conservation and ensure a thriving ecosystem for all.

How You Can Get Involved

We need your help to reach our goal of 50 otter sightings by the State of the Verde Watershed Conference in September. Sign up to add your otter sightings at our FieldScope project page: arizonariverotter.fieldscope.org

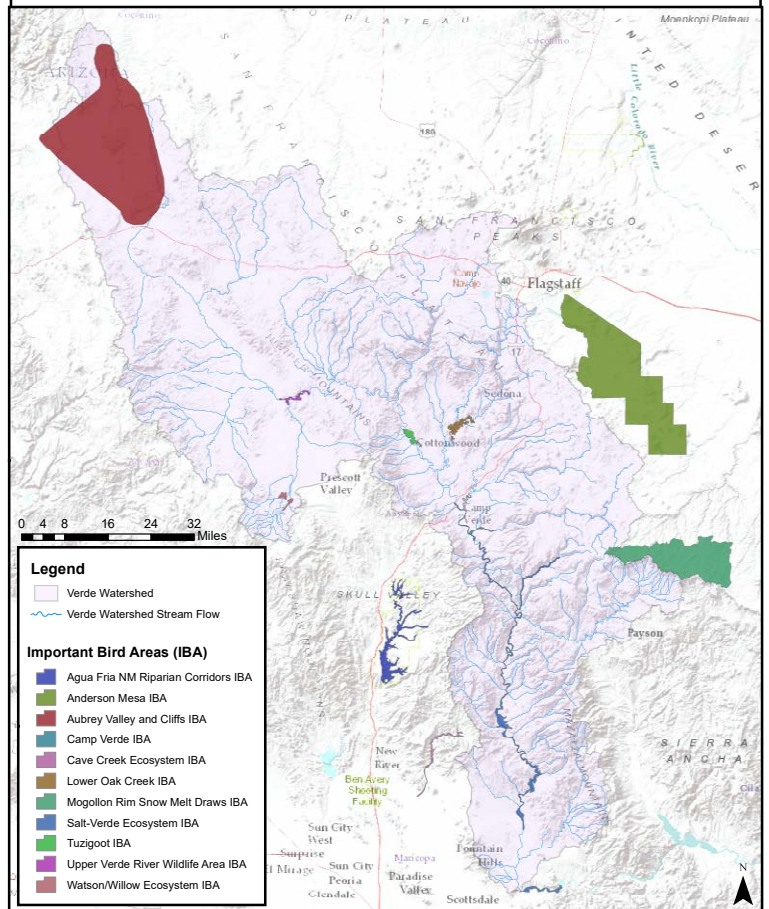


Important Bird Area Surveys

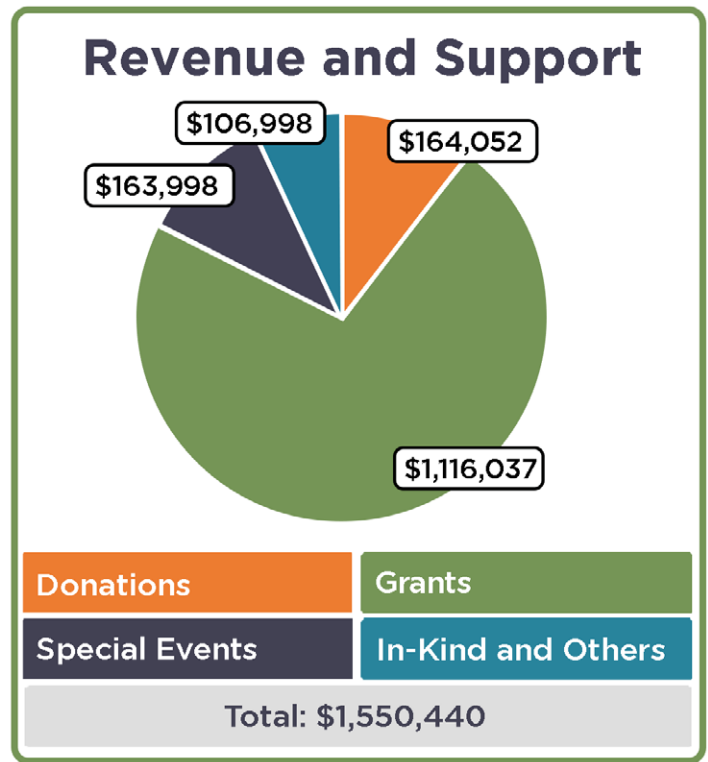
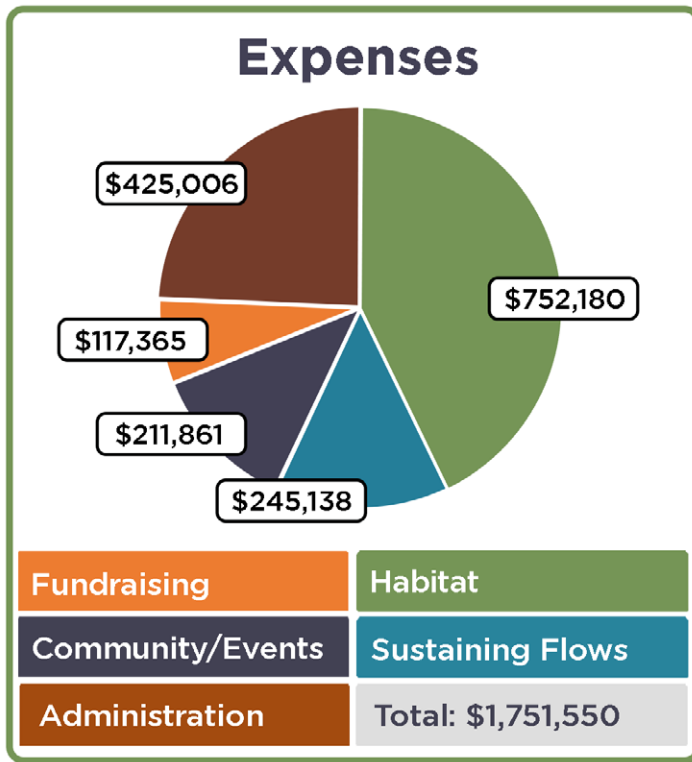
Friends volunteers work to conduct bird surveys in the Important Bird Area in Dead Horse Ranch State Park. By collecting species observations we can understand the health of the ecosystem in this area.



Important Bird Areas of the Verde Watershed



Financials



Arizona Forward Award

We're excited to announce that our Mingus Union groundwater recharge project has been honored with the prestigious Arizona Forward Environmental Excellence Award in the category of Buildings, Structures, and Landscape Design!

This groundbreaking project, part of our River Friendly Living initiative, demonstrates our commitment to sustainable water practices and environmental stewardship. By collaborating with Mingus Union High School, The Nature Conservancy, and the Nina Mason Pulliam Charitable Trust, along with partnerships with the City of Cottonwood and the Yavapai County Flood Control District, we've successfully addressed critical drainage issues and implemented innovative solutions.





Letter From the President

I have the incredibly rewarding experience of joining and then leading a very high functioning nonprofit board for the Friends of the Verde River (Friends). What I found when I joined the Board was an organization with leadership and staffing providing a strong and well-thought-out series of responses to the wide ranging varieties of environmental and ecological challenges of the entire watershed of the river. Not only has the leadership provided a strong base for the present but also the basis for the future challenges facing the Verde River watershed in a changing climate. The Friends along with important partners have established significant baseline data sets for habitats for mammals, aquatic species, and flora as well.

All of this scientific work to date structures directions for future work as evidenced in the upcoming 2025 Watershed Report Card update. The key factor noted in the report is the essential nature of partnerships and collaborations from Flagstaff to Phoenix and well beyond geographic boundaries. These partnerships include other nonprofits, private and public entities, and state and federal players. While these partnerships provide extraordinary results, they also provide a mutual sense of vision and satisfaction. Partners become friends and the work becomes more than work but actually fun.

So if you share the passion for the Verde River and its watershed, please consider joining us as a volunteer, a partner, a donor, or simply a cheerleader. We salute all who who share the vision and work toward a flowing river, its environment including those blue herons, otters, nesting eagles and fisheries. When there is passion and vision, work becomes a fulfilling sense of joy.

Jeanne Swarthout
President of Friends of the Verde River

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