

**OUR PROTECT
AQUIFER**

2024 Annual Report

DEEP WORK

A YEAR OF STRATEGY, SCIENCE, AND STEWARDSHIP

Dear Friends of the Aquifer,

In a year when headlines surrounding xAI were loud, our work at Protect Our Aquifer was intentionally quiet, focused, and methodical. We leaned into what we're calling our year of Deep Work: asking tougher questions, digging deeper into systemic challenges, and building the long-term capacity our region needs to protect our most precious resource.

This was our fourth consecutive year expanding our team, welcoming a West Tennessee Organizer focused on outreach and education in the Recharge Zone. With every new role, we strengthen our commitment to safeguarding the aquifer and the drinking water supply for Shelby County and beyond.

People deserve to understand the aquifer—how it works, what threatens it, and how we can protect it together. In 2024, POA began to shift from a “whack-a-mole” approach—reacting to one threat after another—into becoming a torchbearer: a steady, guiding force that brings light to complex water issues and empowers the public to engage with them.

That meant showing up early and often: holding xAI & TVA accountable to build a recycled wastewater plant, empowering the Groundwater Board, and expanding out Water Warriors training to amplify community leadership. It's not flashy work, but it's foundational. And it's working.

This deep work is setting the stage for the future of our organization, and most importantly, for the future of groundwater protection in our region. Together, we are building the shared vision, knowledge, and action needed to create a real, lasting groundwater management plan. One that works for everyone, for generations to come.

Thank you for walking this path with us.

With gratitude and determination,

Sarah Houston

Executive Director, Protect Our Aquifer





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2024 by the Numbers

3,228

Individuals reached through interactive & educational aquifer presentations with community partners across Memphis and the region.

14

Water Warriors completed our new, 10-week intensive training

305

Sign-Ons to our Petition to the Shelby County Groundwater Quality Control Board

161,112

Viewers reached through our educational Water Wednesday video series

132

Volunteer Hours logged by 69 volunteers in partnership with Volunteer Odyssey at 14 community events around Memphis



1,657

Subscribers to our monthly educational newsletter about priority aquifer issues



125

Guests at Water Wednesday Happy Hours

313

Action Emails sent to legislators on both sides of the aisle for wetland protections protections

76

Mentions in local and national media outlets to keep our water top-of-mind & accessible to the public



14

Written Comment Letters submitted by POA and with our coalition partners on issues of contamination, local management, and environmental justice

2025 Goals

As we celebrate the progress made in 2024, we remain focused on the path ahead.

In a time of increasing demands on our water resources, Protect Our Aquifer is committed to deepening our impact and expanding access to knowledge, tools, and action. Our 2025 goals build on the strong foundation laid this past year and reflect our vision of a future where groundwater protection is guided by science and the people it sustains.

- 1. Continue to advocate for and participate in the TVA / xAI Water Reuse Plant,** ensuring it upholds high standards for aquifer protection and community accountability.
- 2. Expand our Water Warriors cohort** by making our community training program more accessible, flexible, and empowering for emerging leaders across Shelby County.
- 3. Release formal guidance on a Groundwater Protection Plan,** providing clear, science-based recommendations for how communities, industries, and local governments can safeguard our shared water source.
- 4. Create a GIS-based dashboard** that puts groundwater data and contaminated site information in the hands of the public, making transparency and access a cornerstone of aquifer protection.
- 5. Offer free Recharge Zone 101 presentations** in Fayette, Haywood, and Tipton counties, connecting residents with critical information about the aquifer and building community capacity to protect it.



We helped delay a harmful deregulation bill and shaped the state's vision for wetland protection and aquifer recharge.

In 2024, Protect Our Aquifer played a key role in opposing a proposed wetlands deregulation bill in Tennessee. We testified before the House to highlight the risks such a bill posed to groundwater, public health, and the long-term sustainability of the Memphis Sand Aquifer. Thanks to strong advocacy from POA and our partners statewide, the Senate chose not to pass the bill — sending it to summer study instead.

Steering the State's Response

Following the bill's delay, the Tennessee Department of Environment and Conservation (TDEC) formed a stakeholder steering committee to guide the future of wetland protections. POA was invited to serve on this committee and contributed at every stage of the process. To ensure broad, equitable input, we:

- Completed a public and expert survey on wetland values and threats
- Elevated voices from rural communities and historically excluded groups
- Participated in the Tennessee Wetlands Summit alongside scientists, developers, landowners, farmers, and public officials

This work informed TDEC's October recommendation report and helped shift the conversation toward a shared vision for conservation grounded in science and public input.



Quiet Work, Loud Impact

While much of our advocacy was visible, POA also played a behind-the-scenes role supporting partner organizations. We provided:

- Drafts of public comments and talking points
- Science-based factsheets for legislators and advocates
- Visual and messaging tools to improve public understanding
- Aquifer-specific data and policy recommendations, many of which were reflected in TDEC's final report

Wetlands don't just support wildlife — they filter and recharge the water we drink.



Our advocacy led to public comment access, fee reform, and a path toward long-term accountability for aquifer oversight.

In early 2024, the Shelby County Groundwater Board was operating with minimal transparency — and no opportunity for public input. That began to change in February, when POA rallied 30 water advocates to attend a public hearing and shined a light on the department's lack of organization. When the board canceled its required March meeting, POA and our coalition partners submitted a formal letter urging the board to follow state law and add public comment to future agendas. And they complied.

Funding the Department that Protects Our Water

One of the systemic issues we have uncovered is the department's outdated funding model. The permitting fees that support the board's work were set in the 1980s and few have been updated in 35 years. This chronic underfunding left the board unable to fully carry out its mission. To address this, we:

- Delivered a petition with 305 signatures calling for equitable, updated permitting fees
- Presented research and recommendations at the August 22nd board meeting
- Developed a collaborative proposal with Health Department staff
- Drafted new fee language for an ordinance to be presented in 2025

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On June 13th, the board opened its meeting with public comments for the first time in its history — a pivotal win for accountability.

Building a More Capable Board

These financial reforms are not just technical fixes — they're foundational. By increasing transparency and strengthening the board's operational capacity, we're helping restore its authority as a true steward of the Memphis Sand Aquifer.

While the changes are incremental, each one brings us closer to a long-term vision: a well-funded, responsive, and community-informed Groundwater Board that can fulfill its mandate to protect the region's drinking water.

Permitting fees that fund the Groundwater Board haven't changed in decades. That's not sustainable — or fair.



After our intervention, MLGW now posts full board packets online — giving the public access to critical water decisions.

Throughout 2024, POA served as a steady watchdog at Memphis Light, Gas & Water board meetings — attending 70% of sessions and regularly offering public comment.

We monitored decisions related to drinking water and ensured the public interest remained at the forefront.

One major barrier we identified was a lack of transparency: meeting materials were not publicly posted in advance, making it difficult for residents and community groups to understand or respond to items on the agenda.

At the April 17 meeting, we formally requested that full board packets be made available to the public ahead of time — not only for our organization, but for the many Memphians who want to be meaningfully involved in decisions that affect their water.

Following that intervention, MLGW began posting full meeting materials online prior to each session — a policy shift that marks a major win for public access and accountability.

A man in a white button-down shirt and grey trousers is speaking into a microphone on a wooden stage. Behind him is a large wall made of stacked beer cans. To his left is a black speaker. In the foreground, the back of a person's head is visible, looking towards the speaker. To the left of the stage, a woman with blonde hair in a ponytail, wearing a black cap and a white tank top, is looking at her phone. The background shows a concrete wall and some outdoor furniture.

A Seat at the Table, A Step Toward Transparency

In 2024, MLGW launched a Community Advisory Council to bring more public perspective into utility decision-making. POA was invited to join the council, which includes faith leaders, neighborhood organizers, and community advocates from across Memphis.

While we welcomed the opportunity to participate, we also encouraged MLGW to broaden the council by including more groups focused on environmental justice and public health. That request was declined — but we continue to advocate for a more inclusive and representative council structure.

We organized pressure on xAI and TVA that helped secure a commitment to recycling water instead of draining the aquifer.

In June 2024, the Greater Memphis Chamber announced that xAI, a supercomputing company owned by Elon Musk, would open a new facility in Memphis — one requiring up to 150 megawatts of power and 1.3 million gallons of water per day. Just months later, the company revealed plans to expand its water use to 5.7 million gallons daily.

From the moment of the announcement, POA made our stance clear: **the Memphis Sand Aquifer should not be used to cool industrial data centers.** We released a joint statement with our partners at Memphis Community Against Pollution and Young Gifted & Green on day one, calling for alternatives.

From Pressure to Progress

Throughout 2024, POA played a lead role in organizing community response, conducting fact-finding, and directing public pressure toward both xAI and TVA. As a result of sustained advocacy, xAI announced plans to build a water reuse facility — a system that would clean and recycle treated wastewater instead of drawing from the aquifer. But our advocacy didn't stop there. We continued pressing TVA — one of the aquifer's largest industrial users — to follow suit and commit to recycled water use when the facility is operational.

Memphis needs innovation — but not at the expense of our drinking water.



Planting the Seed: How POA Led xAI to Water Reuse

2016

TVA drills wells into the Memphis Sand Aquifer across from coal ash ponds instead of using recycled wastewater for their new gas plant.

2017

Protect Our Aquifer is founded to stop the TVA wells from pulling arsenic into the drinking water supply.

2019

TVA is ordered to only use MLGW's Davis Wellfield farther from the coal ash ponds.

2022

Rolling blackouts leave TVA and Memphis residents competing for water.

2023

POA leads a public campaign urging the MLGW Board to support TVA using recycled wastewater.

2024

Memphis leaders inform xAI about the need for a water reuse facility, leading xAI to announce plans to build a new system to clean and recycle treated wastewater instead of drawing from the aquifer.

Why Water Reuse Matters

Today, xAI draws from MLGW's Davis Wellfield, the same drinking water source that serves communities in Boxtown, Westwood, and Mallory Heights — areas that have historically borne the brunt of industrial strain on the aquifer. With TVA and other heavy users already pressuring this vital resource, adding a high-demand facility like xAI only deepens the risk.

Since our founding in 2016, POA has consistently called for alternative water sources for industrial use in Southwest Memphis — especially in 38109, where residents' access to safe, clean water must remain the top priority.

The proposed water reuse facility would divert treated wastewater currently discharged into the Mississippi River, clean it further, and recycle it for industrial use. This is the kind of critical solution required to ensure long-term aquifer health.

Community Support: Loud and Clear

In partnership with Memphis Community Against Pollution and Young Gifted & Green, we conducted a Community Impact Survey to understand public opinion in the most affected areas. The findings reinforced our firm stance: the Davis Wellfield should serve people, not datacenters

Key Survey Findings

91%

of all respondents
support using
recycled water

77%

of residents in ZIP
code 38109 (Boxtown,
Westwood, Mallory
Heights) support
using recycled water



DEEP WORK

Elevating the Recharge Zone

Through research, outreach, and regional partnerships, we laid the foundation for aquifer-friendly development in West Tennessee.

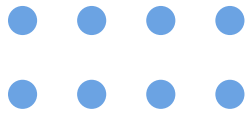
West TN H2O: A Growing Regional Coalition

Our West Tennessee H2O delegation continued its quarterly meetings in 2024, expanding its reach to include 26 organizations across local, state, and federal government, nonprofits, academia, and private industry. This coalition is working to share knowledge and build partnerships around sustainable water management in the region.



In 2024, West TN H2O...

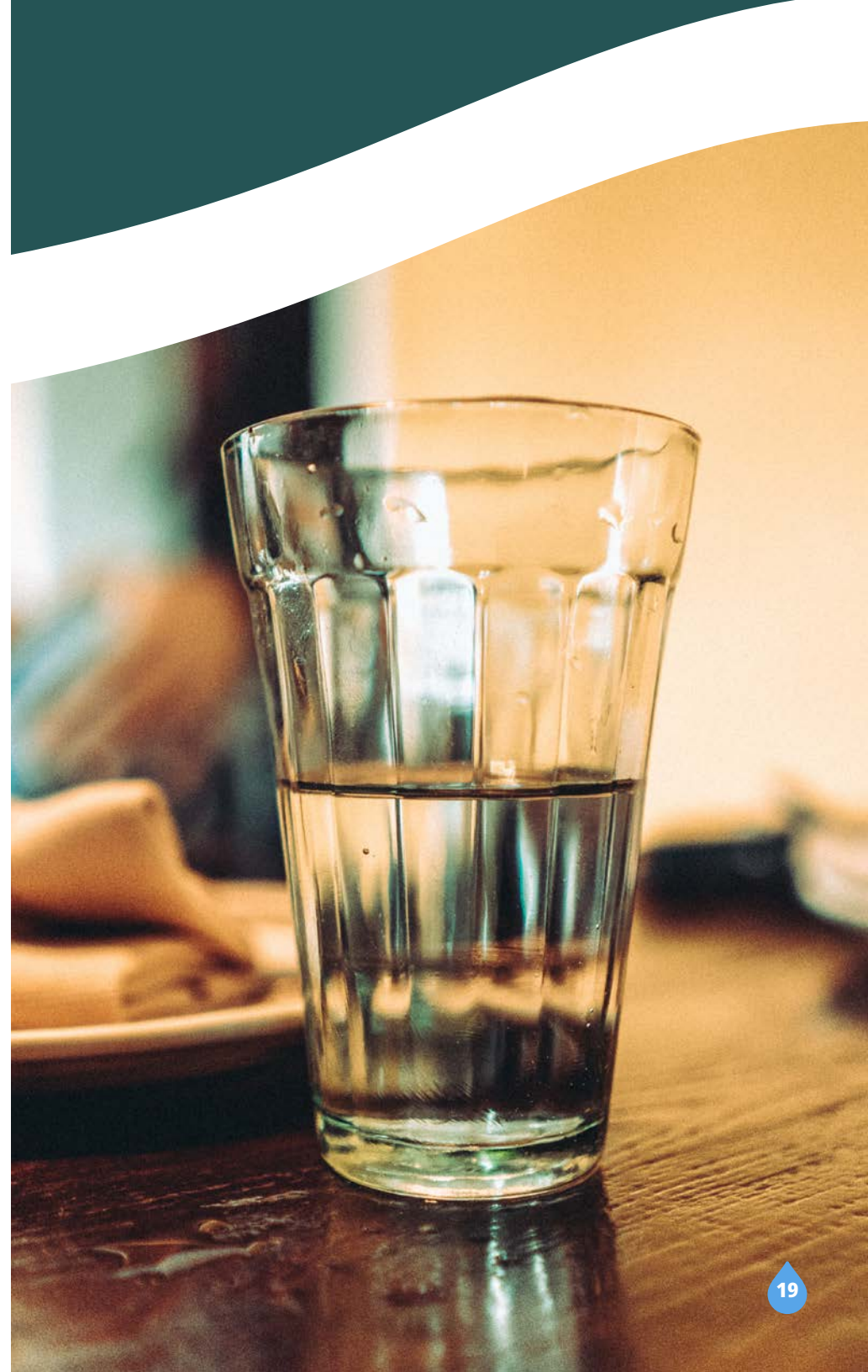
- Presented at the Groundwater Management District Association Conference in Nashville
- Explored how to expand the groundwater monitoring network in West TN
- Identified a critical gap in the lack of geological mapping in the region
- Set strategic goals for 2025 to advance the state's TN H2O recommendations



Eight New Monitoring Wells at BlueOval City

From POA's aquifer protection recommendations to the Megasite Authority, a major step forward in aquifer monitoring began at BlueOval City. The University of Memphis' Center for Applied Earth Science and Engineering Research (CAESER) partnered with Ford Motor Co. and the Megasite Authority of West Tennessee to install eight monitoring wells around and within the BlueOval campus — located directly atop the Memphis Sand Aquifer's recharge zone.

The goal is to establish a baseline for water quality before production begins and track any changes over time. The wells will collect groundwater samples twice a year and continuously monitor water levels and temperature every 15 minutes.



Community Perspectives in the Recharge Zone

In partnership with POA, Sabrina Taylor, a University of Memphis graduate student, conducted her Master's thesis on community perceptions of water and development in the Recharge Zone.

Sabrina's work highlights the need for ongoing public education and culturally rooted engagement around groundwater protection. She has since joined POA as our full-time West TN Field Organizer, continuing her work to advocate for sustainable development across the region.

Sabrina Taylor's two key findings:



Wide-ranging viewpoints
about growth and development
around Blue Oval City



A general lack of awareness
about the Aquifer and its Recharge
Zone among local residents



*Sabrina Taylor is an
environmental anthropologist
and a life-long Memphian.*



Aquifer-Informed Development: From Research to Blueprint

To support responsible growth, POA contracted a team of regional experts — including DT Design Studio, LRK, and Malasri Engineering — to create an Aquifer-Informed Development Guidebook.

The guidebook will provide actionable best practices for:

- Aquifer-conscious development
- Water management strategies
- Groundwater quality protection

This work is focused on high-growth areas in East Shelby, Tipton, Fayette, and Haywood Counties, especially near the future site of Ford's BlueOval City. In 2024, the team was assembled and began a community-driven process to inform the guidebook's development in 2025.

**PROTECT
THE
AQUIFER**

Aquifer-Informed Development Guidebook

From Alcy Ball to North Memphis, our Water Warriors are equipped to monitor, educate, and lead on aquifer protection.

Community Science at the Memphis Defense Depot

One of the largest Superfund sites in the region, the Memphis Defense Depot sits beneath Black, working-class neighborhoods — like Alcy Ball — where toxic pesticides and even mustard gas were once dumped into the soil. Residents have long carried justified mistrust of the land beneath their homes.

In 2024, POA sponsored two Water Fellows from Alcy Ball to explore water advocacy and contamination threats in their community. One of them, Sharon Dorse, led a community-driven environmental testing initiative. Drawing on what she learned through POA's training, Sharon conducted soil and water sampling on a block immediately downgradient of the Depot's dumping site.

But Sharon didn't stop at data collection. In July 2024, she presented the results to 35 neighbors at a public meeting hosted by the Alcy Ball Development Corporation. Her work sparked new interest in further testing and built momentum for neighborhood-led environmental education.

Looking Ahead

In 2025, Sharon's initiative will expand — gathering more data to either validate residents' concerns or help restore confidence in the safety of their backyards, where many dream of planting gardens and letting their children play.

Launching the Water Warriors Training Program

To deepen this kind of frontline leadership, POA launched our first Water Warriors training program in October 2024. The 10-week course equips up to 20 community members each year with tools to understand, monitor, and advocate for clean water and aquifer protection. Participants received a stipend for their time and developed community-based water advocacy projects as their capstone work.

Our first Water Warriors cohort highlights:

14

participants completed the training

10

participants live in frontline communities in North and South Memphis

Training topics included:

- Hydrogeology fundamentals
- Local groundwater governance
- Citizen science practices
- Advocacy and organizing strategies

Project Spotlight

One group's idea, Aquifair, was selected to receive a \$15,000 subgrant from POA. The event will take place on Juneteenth 2025 in North Memphis, raising awareness of aquifer issues through education, celebration, and collective action.



Who's With Us: POA Partners

Our advocacy work is only possible alongside our growing coalition of partners. If you are interested in joining either group, please reach out to us. New, diverse partnerships are always welcome in the pursuit of a clean water future for all.

Aquifer Advocacy Coalition

Established in 2019 to stop the Byhalia Pipeline, our Aquifer Advocacy Coalition includes legal, community, and environmental experts.

Members

Southern Environmental Law Center
Young, Gifted, & Green
Memphis Community Against Pollution
Tennessee Sierra Club

West TN H2O Delegation

In 2022, we began convening a group of 5 regional water stakeholders to find sustainable water management solutions as the region grows. Since then, that group has grown and continued to meet quarterly to share information and strategize.

2024 Members

Protect Our Aquifer
West TN River Basin Authority
MLGW
The Nature Conservancy
TDEC
TN Farm Bureau
Jackson Electric Authority
Ducks Unlimited

TN Association of Utility Districts
Young, Gifted, & Green
University of Memphis–CAESER
U.S. Geological Survey
TN Municipal League
TN Soybean Association
TN Wildlife Federation
Ford Motor Co.



Thank you to our 2024 contributors:

\$100,000 Water Protectors

The Assisi Foundation of Memphis
Amy P. Goldman Foundation
Hyde Family Foundation
Kevin & Melissa McEniry
Anonymous Contributor

\$25,000 Remediators

Robert Baird
George & Bena Cates
Christian Community Foundation
PolicyLink
Pam & McNeal McDonnell
Margaret Turley

\$10,000 Capacity Builders

John Buford
Andy F. Cates
First Horizon Foundation
Henry M. Turley Jr.
The Kemmons Wilson Family
Foundation
Anonymous Contributor

\$500 Aquifer Advocates Circle

LaTricea Adams
Ward Archer
Walter Battle
Scott Baum
Emily Bishop
Wight F. Boggs
Charles Brashear
Ruth Brucker
Frank Cantrell
Deborah Carington
Stephanie Chalonga
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Tyler Tapley
Mr. and Mrs. Michael Turley
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Molly & Jason Wexler
Jan Young
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POA Staff & Board

POA Staff



Sarah Houston
Executive Director



Mersadies Burch
Operations Director



Scott Schoefernacker
Science Director



Daniel Lynn
*Outreach & Logistics
Coordinator*



Sabrina Taylor
West TN Organizer

POA Board

Ward Archer, *Officer*
Jimmy Lewis, *Officer*
Hite McLean, *Officer*
LaTricea D. Adams
John Basek
Walter Battle
Deborah Carington
Liz Gilliland
Milton Howery III
Margot McNeeley
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Carl Richards
Ritchie Smith



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**NO OIL
IN OUR
WATERS**

**OUR CHILDREN
DESERVE TO LIVE
AND
HAVE FRESH WATER
AND CLEAN AIR
NEIGHBORHOODS MATTER**

**PROTECT
OUR AQUIFER**
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Financials

2024 Income

Annual Fund	\$69,404
Grants	\$274,882
Major Gifts	\$280,185
Fundraising Events	\$51,288
Sponsorships	\$5,296
Net Investment Income	\$29,326
Total Revenue	\$710,381

About Our Revenue

Annual Fund revenue reflects a mix of gifts from board members, monthly donors, and one-time gifts that were not solicited.

- 100% of POA Board Members Gave in 2024, totaling \$11,046
- 20 Monthly Donors with an average gift size of \$28

Major Gifts reflect gifts from individuals that were solicited — gifts range from \$10K to \$150K. Fundraising Events include:

- Acoustic Sunday Live: \$40,076
- Grind City Coffee Xpo: \$9,000
- Earth Month Sponsorships include:
- Pavo Salon: \$4,895
- Wiseacre: \$401

Grants includes funding from local and national family foundations, including Hyde Family Foundation, Assisi Foundation of Memphis, Amy P Goldman Foundation, PolicyLink, First Horizon Foundation “Grants for Good,” Shelby County Commission Grant, Kemmons Wilson Family Foundation Innovation Grant, Lichterman Loewenberg Foundation, and Harpeth Foundation.

- **Restricted Grants** included funding from Kemmons Wilson Family Foundation (matching the Water Warrior Training), Hyde Family Foundation Capacity Building Grant (for the Board Retreat & Succession Planning), and Harpeth Conservancy (for Lead Service Line Replacement outreach).
- **Conditional Grant:** Assisi Foundation granted POA \$150,000 over 3 years with a match challenge for each year. In 2024, the challenge was to raise \$25,000 to unlock their \$75,000 match. In 2024, through a combination of grants, pledges, and individual gifts, we raised \$58,183, exceeding the match challenge for the year. In 2025, we will need to raise \$50,000 to unlock a \$50,000 match.

2024 Expenses

Personnel	\$341,301
Professional Development	\$6,292
Program Direct Costs	\$8,185
Office & Admin	\$23,520
Auto & Travel	\$11,396
Fundraising	\$39,191
Education & Outreach	\$47,570
Contractual Labor	\$67,165
Total Expenses	\$544,620
Net Operating Income	\$165,760

Note on Operating Reserve

We ended 2024 with a surplus. That surplus helps us reach our goal of increasing our Operating Reserve to reflect at least 6 months of our current operating budget (\$818,060 total — meaning our Operating Reserve goal is at least \$400,000).



About Our Expenses

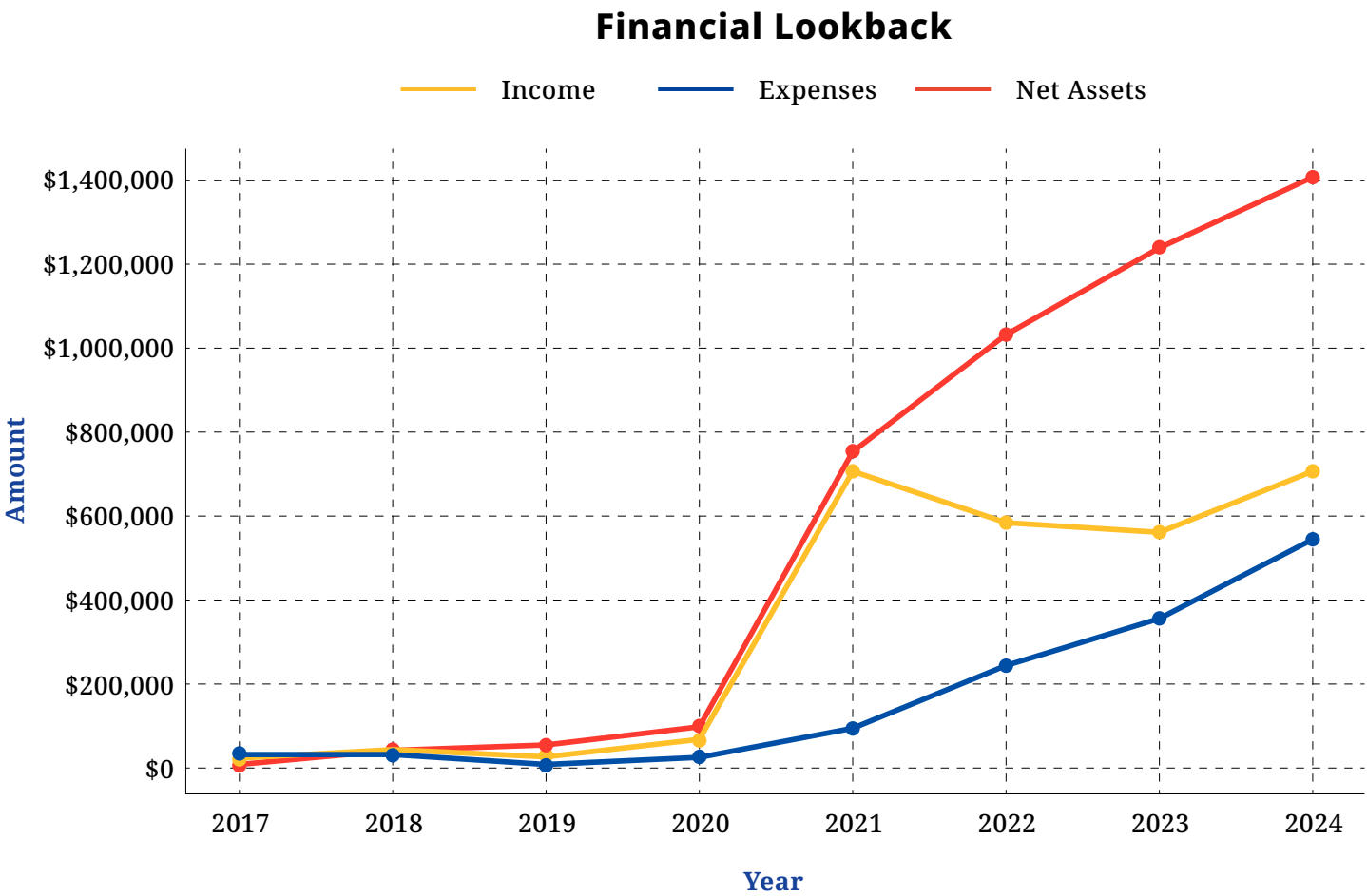
- **POA Personnel** grew to four full-time staff members, hiring our West TN Field Organizer in October 2024, Sabrina Taylor to join Executive Director Sarah Houston, Operations Director Mersadies Burch, and Science Director Scott Schoefernacker. Our Outreach & Logistics Coordinator, Daniel Lynn (and longest-running POA employee), also increased his role from a contractual position to part-time.
- **Professional Development** reflects use of a \$2,000 stipend per employee for professional development each year.
- **Program Direct Costs** includes event catering, rentals, and supplies for our fall 2024 Water Warriors cohort, as well as supplies and environmental testing for an event held by POA Fellow Sharon Dorse in summer 2024 about Memphis Defense Depot in Alcy Ball.
- **Office & Admin** includes sublease of Teach for America shared office space at Crosstown Concourse, alongside miscellaneous insurance, meals & entertainment, software, US Water Alliance membership, and more.
- **Auto & Travel** reflects increase in travel to the Recharge Zone (across Tipton/Fayette/Haywood Counties)
- **Fundraising** includes contract with fundraising consultant Kim Caldwell, as well as miscellaneous fundraising event expenses
- **Education & Outreach** includes \$18,000 with Remember Media for social media services, \$3,500 in design and printing costs, miscellaneous advertising and marketing, and finalizing our new website.
- **Contractual Labor** includes \$17,500 to a facilitator for our board retreat (The Fifth Floor), \$9,106 to an Anthropology Consultant (Sabrina Taylor, prior to full-time hire), \$15,000 to Science Study Contractors (Hydrogeologists from University of Memphis working on Sole Source Aquifer application), \$7,500 in communications consulting (The Fifth Floor), \$7,500 for our annual audit, and \$8,500 paid to Water Warrior trainees (in the form of a \$100/training stipend for each trainee).
- **Minority-owned businesses** represented 42% of our eligible vendor and consultant spending in 2024 — \$74,461 of a total \$178,091 — exceeding our 30% target for the year.

Financial Health Metrics & Lookback

Financial assets available to meet general expenditures within one year: \$917,651

Open Receivables
Pledges Receivable: \$155,338
Grants Receivable: \$245,065

Fundraising Effectiveness Ratio
For every \$1 spent on fundraising, we raised \$18.
FY23: \$18; FY24: \$32



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