



Alabama  
Water  
Watch



# Annual — 2020 — Report

# A MESSAGE FROM THE DIRECTOR

Dear Friends,

First of all, we hope that you, your family, and friends have been able to stay healthy, both physically and mentally, throughout this extremely challenging time. In the Program Office, we have been encouraged by the resiliency AWW volunteers have demonstrated in the face of enormous obstacles. Understandably, some monitors had to take a break from monitoring. Others were able to carry the load, and surprisingly volunteers submitted MORE water data in 2020, than in the previous year. Many of you increased your involvement with AWW through special projects including the USDA Forest Service Partnership Project and the AWW Water Data Tools Webinar Series, or by becoming members of the Alabama Water Watch Association.

Every day, I am thankful for AWW volunteers and my wonderful coworkers for a myriad of reasons. Amidst the chaos of 2020, with a team spirit, we have pivoted, learned new skills, and found creative ways to educate others about the value citizen science brings to watershed stewardship. I feel that AWW is stronger because of the experience.

I hope that you will take a moment to read more about the year's highlights. We are all hoping for better days to come and can't wait until we can see you all in person!

Thanks for your dedication and passion.

*Mona Dominguez*  
AWW Program Director



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# ABOUT AWW...

Alabama Water Watch (AWW) is a citizen volunteer, water quality monitoring program covering all of the major river basins of the state. The mission of AWW is to improve water quality and water policy through citizen monitoring and action. With a "data-to-action" focus, AWW helps volunteers collect, analyze, and understand their water monitoring data to make positive impacts.

Established in 1992, AWW is a national model for citizen involvement in watershed stewardship, largely because of its three interrelated components: citizen monitoring groups, a university-based program, and a non-profit association.

AWW follows EPA-approved quality assurance monitoring plans with a community-based, science-based approach to train citizens to monitor water quality conditions and trends of their local waterbodies.



The AWW Program is part of the Auburn University Water Resources Center (AUWRC) in the Alabama Agriculture Experiment Station (AAES) and receives support from AAES, Alabama Cooperative Extension System (ACES), and external funding.

## THE AWW VISION: TO HAVE A CITIZEN MONITOR ON EVERY STREAM, RIVER, LAKE, AND COAST IN ALABAMA.



# We are thankful for our dedicated volunteers!

It would be an understatement to say that 2020 has been a challenging year. In spite of this, Alabama Water Watch Volunteer Monitors powered through and submitted more records in 2020 than 2019!

All of the AWW Program Staff would like to extend our thanks and gratitude to all of the monitors who continued to go out each month, collect samples, and submit valuable data.

Your work is appreciated and we are glad to have you as part of the AWW Team.

Keep up the great work!

*AWW Staff*



# BY THE NUMBERS | 2020 HIGHLIGHTS



44

Active  
Monitoring Groups



28

Certification Workshops  
Conducted



178

Waterbodies  
Monitored



358

Sites Monitored



117

Individuals Certified



1,570

Individuals Reached by  
Educational Programs



3,488

Data Records  
Submitted



6,663

4-H AWW Youth  
Participants



14,415

Hours of Monitoring  
by Volunteers

IN 2020, AWW VOLUNTEERS CONTRIBUTED **>14,415 HOURS**, COLLECTIVELY, AS WATER MONITORS, WORKSHOP PARTICIPANTS, AND VOLUNTEER TRAINERS, WHICH IS VALUED AT **\$339,029!**

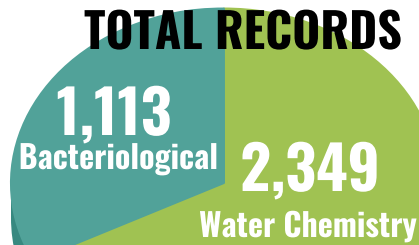
# CITIZEN TRAINING & DATA

## AWW VOLUNTEERS TRAINERS WHO CONDUCTED WORKSHOPS:

Bill Deutsch  
Jason Kudulis  
Jacqueline McGonigal  
Mimi Fearn

Judy Palfrey  
Eric Reutebuch  
Mike Shelton  
Jim Woodrow

## DATA SUBMISSIONS:



## 192 TOTAL CERTIFICATIONS

57



Water Chemistry

67



Bacteriological Monitoring

8



Training of Trainers

35



Recertifications

22



Trainer Refreshers

3

4-H AWW  
Training of Trainers

## Data Requests

Alabama Department of Environmental Management  
Dog River Clearwater Revival  
Lake Watch of Lake Martin  
Lay Lake HOB0  
University of Florida's West Florida Research Center

Logan Martin Lake Protection Association  
Marshall County RSVP  
Save Our Saugahatchee  
Smith Lake Civic Association

## NEW GROUPS

Biota Ecological Services  
USFS Bankhead NF  
USFS Conecuh NF  
USFS Tuskegee NF

## IN 2020, WE REACHED

9,257

CUMULATIVE DATA RECORDS!

# 4-H AWW HIGHLIGHTS

4-H Alabama Water Watch (4-H AWW) is the statewide youth water quality monitoring program created through a partnership between Alabama Water Watch and Alabama 4-H, the youth development program of the Alabama Cooperative Extension System (ACES).



4-H AWW increases environmental literacy by building capacity in volunteer trainer and educators to provide youth with awareness and understanding of watershed issues and tools that cultivate the critical thinking skills students need to identify and solve problems related to water quality.

## Virtual Lessons

The show must go on! Our 4-H AWW Educators found innovative ways to reach their students through virtual delivery methods.

The 4-H AWW Program developed several virtual online lesson plans to assist educators incorporate watershed education and stewardship in their class curriculum.



6,663  
Youth  
Participants

60  
New 4-H AWW  
Volunteer Monitors

74  
Water Data Records  
Submitted

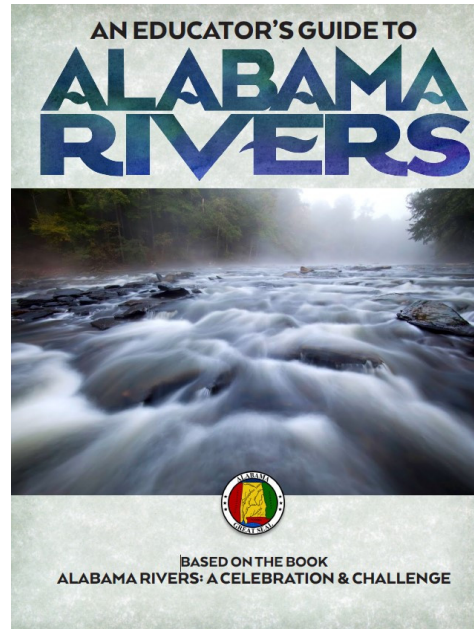
Participation and activities reported are from the 2019 - 2020 school year.

# ALABAMA WATER WATCH ASSOCIATION

## ***An Educator's Guide to Alabama Rivers, Second Edition***

The AWW Association secured grant funding from Midsouth RC&D to support the printing of the Second Edition of *An Educator's Guide to Alabama Rivers* which is a companion curriculum to the book, *Alabama Rivers: A Celebration & Challenge* by Dr. Bill Deutsch.

While in-person Alabama Rivers Educator Workshops were postponed in 2020, educators who participated in 2019 workshops found creative ways to incorporate Alabama Rivers activities in their classrooms virtually.



## **MightyCause Donation Platform**

Supporting the AWW Association is now more accessible through the MightyCause online donation platform.



Donations and memberships are the main source of funding for AWWA. Please consider making a contribution to the AWWA to ensure that they are able to provide support to the AWW Program for many years to come! Visit the Support AWW page on the AWW website for giving options.

Thank you!



# VIRTUAL ANNUAL MEETING

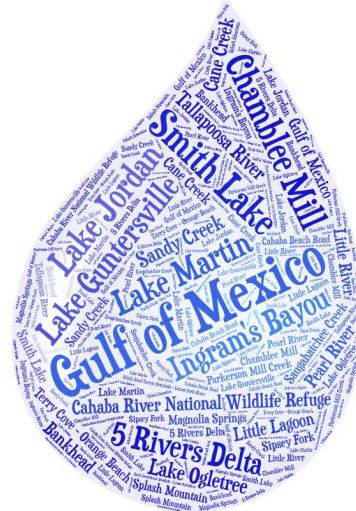
The 2020 AWW Annual Meeting was a little different this year, but no less fun! The meeting featured program updates, volunteer highlights, AWW Awards Ceremony, and more.

## 100,000 Data Records Campaign

We announced the goal of reaching 100,000 water monitoring data records by Annual Meeting 2021.

## Favorite water spots word cloud

Volunteers submitted their favorite water spots in Alabama!



## 2020 AWARD WINNERS





Several volunteers submitted photos, videos, and stories highlighting why they started monitoring, and what keeps them motivated. The highlights were featured during the Annual Meeting.

View the 2020 Volunteer Highlight Video on Facebook!

# SOUTHERN EXPOSURE FILM

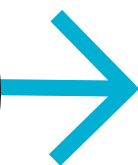
The Southern Exposure Film Festival is an annual event aimed at spreading awareness and appreciation of Alabama's environment.

AWW was featured in the film, *Barriers to Bridges*, directed by Southern Exposure Fellow Robin Crane. The AWW Program, along with the GWW Program and *Vamos a Pescar Project* were highlighted in the film.

*Barriers to Bridges* was part of the Environmental Justice and Diversity, Equity & Inclusion categories.



scan the  
barcode to  
see the  
video!



AWW staff pictured with Southern Exposure Fellow, Jess Lingle



# OUTREACH & RELATED PROJECTS

# MISSISSIPPI WATER STEWARDS

AWW staff worked with the Mississippi State University Extension Service to establish a statewide water monitoring program for Mississippi. They were able to adapt to COVID-19 challenges by developing online certification courses.

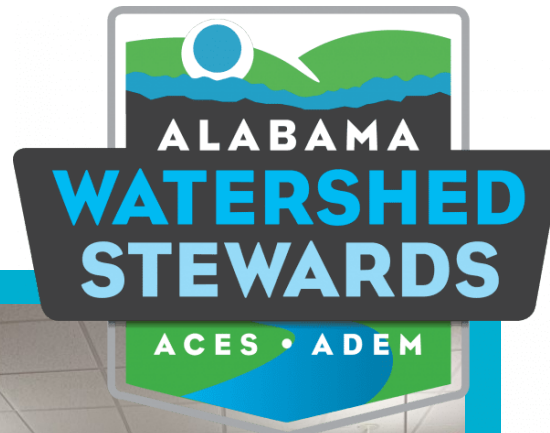


The long-term goal of this project is to improve public knowledge and stewardship at regional, state and local levels in Gulf of Mexico watersheds to protect and restore water resources and to increase transparency and public participation toward sustainable water management in support of EPA's strategic goals.

**FUNDED BY: EPA GULF OF MEXICO PROGRAM OFFICE**

# ALABAMA WATERSHED STEWARDS

AWW co-facilitated one AWS workshop in the Birmingham area before the pandemic moved the project to an online course. AWW worked with AWS on the Canvas Course development, and the course was piloted. A total of 118 people were certified as Watershed Stewards in 2020.



# USFS CITSCI PROJECT

The goal of this project is to establish a network of AWW citizen scientists in the National Forests of Alabama who can assist with the collection of water data in priority watersheds identified through the USDA Forest Service's Watershed Condition Framework.

Water data collected by volunteer monitors will be used to evaluate to what extent current management practices are resulting in clean water for the Forests, its ecosystems, and the public.

AWW conducted Water Chemistry and Bacteriological Monitoring Workshops in the Bankhead, Talladega, and Conecuh National Forests. They certified 77 individuals water monitors, including High School students from Winston and Walker counties. Monitors were given access to monitoring materials that were available for check-out at the USFS Ranger District Offices.

USFS has been very pleased with the project outcomes and even submitted it to be included in a report by the White House Office of Science and Technology Policy under the authority of the Crowdsourcing and Citizen Science Act.



## 2020 Project Accomplishments:

72 Bacteria Records

69 Water Chemistry Records

141 Total Data Records

Submitted

15 Active Monitors

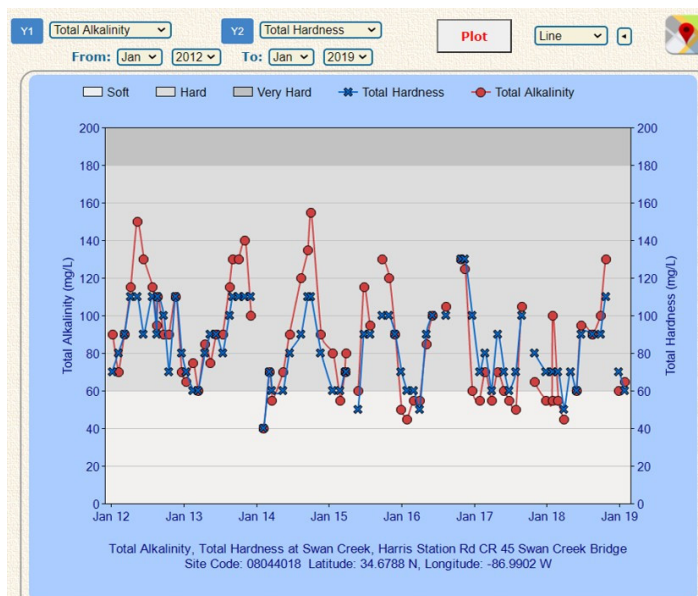
19 Sites Monitored

10 Waterbodies

Monitored

# DATA WEBINAR SERIES

The Data Tools Webinar Series featured video tutorials in a live webinar format to help volunteer monitors and the public navigate the various data tools available on the AWW website.



Site 08044018:  
Average Hardness 90 mg/L  
Average Alkalinity 100 mg/L



101 people joined, and participants ranged from experienced and new volunteers to people who had never been involved with AWW. The overall response to the webinar series was great, as reflected in a follow-up survey, where 100% of the respondents considered the webinar effective or very effective, and responded that it was very probable that they would utilize the Water Data Tools.

Following the webinars, it is more likely that volunteer monitors and other citizens will utilize the Water Data Tools in the future, which will further increase their understanding of water data, and their ability to use the data to make decisions in their watersheds.

Stay tuned for 2021 webinar dates!

## Beginner Webinar

- Select a Site by Map
- Select a Site by Table
- Water Chemistry Graphing Overview
- Graphing Bacteria Data

## Intermediate Webinar

- Graphing Water Chemistry Variables
- Temperature & Dissolved Oxygen
- D.O. Saturation
- pH, Alkalinity, Hardness
- Turbidity & Secchi Disk Depth
- Overlapping Chemistry & Bacteria Data

## Advanced Webinar

- Radial Search
- Site Comparison
- Atypical Values

## Map Layers Webinar

- Overview of Map Layers
- Watershed Layers
- National Hydrography Dataset
- ADEM 303(d) List
- Geology Map Layer

# GLOBAL WATER WATCH

GWW fosters and supports community-based, science-based watershed stewardship (CBWS) through the advance of long-term water monitoring of surface waters for the improvement of both water quality and public health in locations beyond Alabama. Coping with COVID-19, limited training happened in 2020 in the US states of Mississippi and Washington, as well as in Argentina, Bolivia, Chile, Costa Rica, Mexico and Peru. Yet, scores of citizens collected and submitted water monitoring data. Modules to conduct hybrid virtual and in-person monitoring training are in development since 2020 to expand GWW.

## GWW-Mexico: Embracing CBWS Countrywide

The GWW-Mexico 15th birthday in 2020 marked a very significant step as the National Water Commission officially embraced GWW to pilot community-based water monitoring nationwide. Laboratory and field side-by-side water testing is validating the GWW techniques against Mexico national standards. In addition to the traditional biomonitoring, bacteriological, and chemical monitoring, they are piloting citizen monitoring for arsenic, stream flow, total suspended solids, rainfall, and an alternative test for turbidity.



*Conducting side-by-side tests with standard methods.*



*Workshop participants conduct field sampling.*



*Workshops were also conducted in Chile and Costa Rica. GWW Trainer Omar Romagnoli instructs volunteers to collect water chemistry data.*



**COMING IN  
2021**



# EXPLORING PATHOGEN POLLUTION IN OUR WATERS

The 4-H AL Water Watch project, *Exploring and Mitigating Bacteria in Our Waters*, aims to provide formal and informal educators, volunteers, and 4-H agents with the training, materials, and support needed to engage students (ages 9-18) in coastal counties of Alabama, with Meaningful Watershed Educational Experiences (MWEEs) focused on understanding, detecting, and mitigating pathogen pollution in local waters.

The project is supported through the National Oceanic and Atmospheric Administration (NOAA) Bay Watershed Education Training Program (B-WET) Program.

**The goal of this project is to support educators as they help students:**

- Increase their awareness and understanding of watershed issues, including those related to pathogen pollution
- Gain certification as 4-H AWW Volunteer Water Monitors
- Cultivate critical thinking skills needed to identify problems related to water quality
- Engage in problem-solving that ultimately improves the health of their watershed

**Are you an educator in these counties??**

Baldwin  
Clarke  
Covington  
Escambia  
Geneva  
Mobile  
Monroe  
Washington

**Are you interested in involving your students in citizen science??**

**Alabama Water Watch**  
has an opportunity:  
**Exploring Pathogen Pollution in Our Waters**

Alabama Water Watch  
NOAA  
WETLANDS BAY RESERVE  
Alabama 4-H  
Alabama Cooperative Extension System

Find out more **SCAN ME**

Educators will receive a copy of the project curriculum, *Exploring Our Living Streams: Bacteriological Monitoring*, bacteriological monitoring materials and equipment to use with student monitors, Professional Development credit through PowerSchool, and more!

Project participation is limited to the following counties during this pilot phase: Baldwin, Clarke, Covington, Escambia, Geneva, Mobile, Monroe, and Washington.

# 12 MONTHS OF ALABAMA RIVERS

During each month of 2021, we will be publishing blog articles and social media posts that highlight the unique and interesting characteristics of each of the state's major river basins.



**12 MONTHS OF ALABAMA RIVERS**

**BASIN BLOG FEATURE SCHEDULE**

- FEBRUARY** - BLACK WARRIOR
- MARCH** - CAHABA
- APRIL** - CHATTAHOOCHEE
- MAY** - COOSA
- JUNE** - CONECH
- JULY** - ESCATAWPA & PERDIDO
- AUGUST** - MOBILE & TENSAW
- SEPTEMBER** - TALLAPOOSA
- OCTOBER** - TENNESSEE
- NOVEMBER** - TOMBIGBEE
- DECEMBER** - YELLOW, BLACKWATER, CHOCTAWHATCHEE



Do you have photos or video of waterbodies in Alabama?

Would you like to see them featured in the 12 Months of Alabama Rivers Campaign? Whether you're fishing, paddling, swimming, hiking, or simply have a beautiful landscape shot, share them with us!

scan the barcode to register!



*Basin Banter with Bill*



scan the barcode to submit a photo!



As part of this campaign, we are excited to share that Dr. Bill Deutsch, one of AWW's Program founders, will be giving an 8-part webinar series in 2021 featuring the major river basins of Alabama!



# VIRTUAL OPPORTUNITIES



*Mona uses food coloring to demonstrate pipetting technique for bacteria monitoring during a virtual workshop.*

## Virtual Workshops

We are excited to offer new opportunities for certification and recertification workshops. Through virtual and online learning platforms.

*Interested in becoming a certified Volunteer Monitor through AWW? Fill out the Workshop Interest Survey and we will notify you of virtual and in-person training opportunities when they become available.*



## Other Virtual Offerings

Data Tools Webinars

Data Interpretation Webinars

Lunch & Learns

***Check out the Events Page and make sure you are subscribed to the AWWareness Newsletter for updates on these opportunities!***

# PROGRAM STAFF

## MONA DOMINGUEZ AWW DIRECTOR

Mona's favorite things to do are play in the creek, chase around her two wild daughters, and enjoy a cup of good coffee on her porch! One highlight of this strange COVID Year was that she had the chance to emulate Mr. Wizard and Bill Nye during the creation of the 4-H AWW Virtual Lessons. She is still waiting on her Oscar to arrive.



## SERGIO RUIZCORDOVA DATA COORDINATOR

On Saturdays when Sergio is not doing AWW, he is running. His reasons for running are to provide time for himself, connect with nature while feeling the wind and observing the surroundings, and to feel the sense of freedom and happiness that makes it running worth. Plus, it means he can eat and drink anything he wants. He is eager for the "Marathon Covid-19 Halt" to stop, so he can continue toward his goal of running in every US state.



## SYDNEY SMITH VOLUNTEER COORDINATOR

Sydney enjoys spending time outside snapping photos of wildlife, backyard bird watching, and playing with her new kitten, Freddie! If it were possible, she would be a turtle. COVID has made Sydney the video producer of the AWW Office, where she gets to work with stars like Mona Dominguez. She is also waiting for her Oscar to arrive.



# PROGRAM STAFF

## CAROLINA RUIZ ADMINISTRATIVE ASSISTANT

Carolina enjoys kayaking and spending time outdoors with her pets and her plants. She also loves baking, especially pies and cookies. Carolina also helps around the office by keeping most of the plants and fish alive. She has visited 10 different countries and cannot wait to begin planning her next international excursion once it is safe enough to travel again!



## RACHEL MCGUIRE COMMUNICATIONS COORDINATOR

Rachel enjoys spending time outside - hiking, paddling, birding, botanizing, and searching for outdoor treasures (old bottles, fossils, wildlife skulls, etc.). In 2020, she took advantage of additional free time at home to finally turn the corner on her quest to find her “green thumb”. She is obsessed with dogs (particularly her three spaniels) and dreams of the day she acquires enough land to expand her pack to 10.



## DR. BILL DEUTSCH CO-FOUNDER (RETIRED)

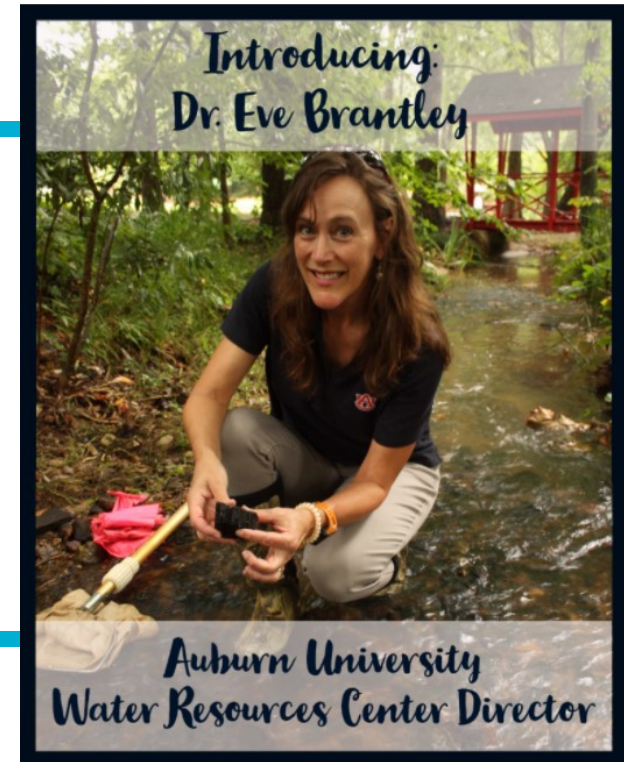
Bill is an aquatic ecologist who directed the AWW program for 20 years. In 2018, he published, *Alabama Rivers: A Celebration & Challenge*, and traveled Alabama for over 50 book talks at conferences, public libraries, AWW groups, and other nonprofits. He continued part-time work for AWW through 2019, assisting with workshops and the curriculum, an *Educators Guide to Alabama Rivers*. Bill is active in the Osher Lifelong Learning Institute at Auburn University and teaches two courses: *Rivers of Alabama* and *Birding Basics*. He also enjoys hiking, birding and float trips on Alabama streams.



# PROGRAM STAFF

## **DR. EVE BRANTLEY** **WRC DIRECTOR**

Eve is the new Director of the Auburn University Water Resources Center! She is also a professor in the Department of Crop, Soil, and Environmental Sciences. Eve was an AWW trainer from 1998 - 2003. Her favorite aquatic critters are juvenile hellgrammites and mayflies. Her love for Alabama's waters runs deep as she enjoys hiking around the waterfalls of the Sipsey, headwater Piedmont streams, blackwater rivers in South Alabama and the exploring the Tensaw Delta.



# ALABAMA WATER WATCH ASSOCIATION

The Alabama Water Watch Association (AWWA) is a 501(c)(3) non-profit organization that exists to support and strengthen the efforts of the AWW Program. Volunteer training workshops and the production of associated publications is supported in part by AWWA.

## 2020 BOARD OF DIRECTORS

**Michael Freeman**  
President



**Michael Mullen**  
Vice President



**Patti Hurley**  
Treasurer



**James Lowery**  
Board Member



**Dana Herren**  
Board Member



**Francine Hutchinson**  
Board Member At-Large



**Bill Deutsch**  
AWW Founder



**Mona Dominguez**  
AWW Program Liaison



# NEW ADDRESS, NEW WEBSITE, SAME AWW!



**WE'VE  
MOVED**



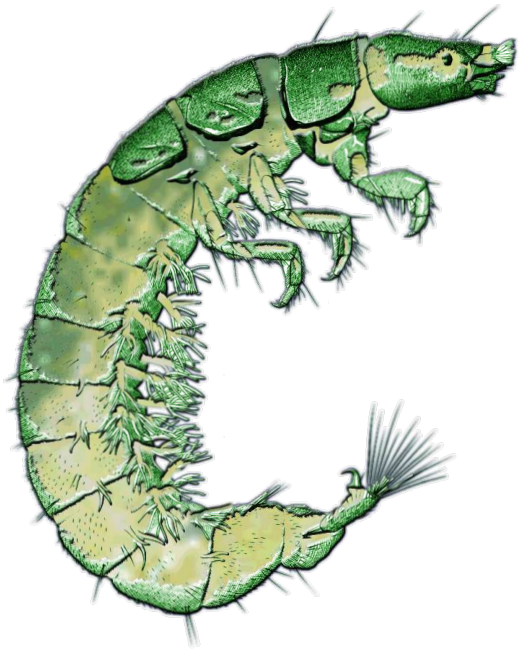
**ALFA Building  
961 S. Donahue Dr  
Auburn, AL 36849**

**Our email, phone  
number, and website  
address remain the  
same!**

**NEW  
AWW  
WEBSITE**



# Connect with us!



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@alwaterwatch



Channel: Alabama Water Watch

Alabama  
Water  
Watch



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