

Annual Report 2026

Our Goal

The Alliance for Aquatic Resource Monitoring (ALLARM) is Dickinson College's community science center, located in Carlisle, Pennsylvania.

ALLARM educates communities to use science as a tool to investigate water quality health and to use findings to inform stream protection and restoration efforts. ALLARM achieves its work in collaboration with numerous non-profits, agencies, and community and volunteer partners. ALLARM also employs a staff of 9-13 Dickinson College student watershed coordinators who help advance the goals of the organization while providing them with opportunities to learn fundamental environmental, community engagement, science education, and non-profit skills.

Alliance for Aquatic Resource Monitoring
ALLARM
est. 1986

Dickinson



Note from the Director

Every day I have the privilege of witnessing the incredible work of the students and volunteers who partner with ALLARM.

ALLARM employs about a dozen students who are preparing to enter careers in environmental nonprofits, government agencies, and related fields. Through hands-on work in our laboratory, office, and the streams of Pennsylvania and New York, they develop practical skills and valuable experience. They are a bright, dedicated group of young people building the knowledge and confidence needed to tackle the complex environmental challenges that lie ahead. Most inspiring of all is their unwavering belief that positive change is possible. Their optimism and determination give me hope every single day.

The volunteers who work with watershed organizations and ALLARM's Stream Team are equally inspiring. They form the backbone of volunteer water quality monitoring across Pennsylvania and New York. As the director of one of the region's largest technical support providers for volunteer water monitoring programs, I have the opportunity to meet many of these remarkable individuals. Many are retirees who have been collecting data for years, quietly contributing their time and expertise with little recognition.

Month after month, often in difficult weather conditions, they head into the field to collect information that helps us better understand our waterways. A visit to an icy stream on a January morning may seem like only a few data points, but when those observations are added to the Chesapeake Monitoring Cooperative's Data Explorer or the Pennsylvania Department of Environmental Protection's Integrated Report, they become part of a much larger picture. Together, these contributions provide critical information that supports decision-makers and policymakers throughout the Mid-Atlantic region.

I may sound overly optimistic, and it's true that we face significant challenges in this line of work. But the students and volunteers who work with ALLARM prove every day that these challenges can be met. Whether it's a student-designed crowdsourcing app that helps communities visually assess water quality or the growing number of volunteers here in Cumberland County, the people we work with are creating innovative solutions and driving meaningful change.

Our most valuable resource isn't clean water. It's the people who are committed to protecting it. And because of them, I remain hopeful about the future.

Lane Whigham

40 years of ALLARM!

ALLARM was founded in 1986 by Dr. Candie Wilderman to assess the impacts that acid deposition had on Pennsylvania streams. Since then, ALLARM's programs and projects have shifted throughout the years. However, the core mission of working with communities and providing student Watershed Coordinators with real-world opportunities has remained the same.

Let's take a look at ALLARM's major programs over the years:

- Acid rain monitoring (PA)
- Watershed technical assistance (PA)
- Shale gas monitoring (PA, NY, WV)
- Stream Team and Chesapeake Monitoring Cooperative (PA, NY)
- Stream restoration monitoring (PA, NY)



4 decades of logos:

-1986-



-1996-



ALLARM would not have been able to carry out these important projects over the past 40 years without the hundreds of amazing ALLARMies that have contributed to and led these important initiatives. For years, Watershed Coordinators have played a direct, hands-on role with ALLARM projects, like:

- Acid rain data management
- Watershed education programs
- Letort monitoring and analysis
- Letort Stormwater Education Campaign
- Mully Grub restoration
- Tree plantings
- Quality control analysis
- Monitoring trainings

In the past several months, ALLARM has been busy planning a 40th Anniversary event, which will be held on campus on October 23rd. ALLARM staff and Watershed Coordinators have learned about ALLARM's history, created a story map to visualize ALLARM's programs, and created a social media campaign that highlights major events with photos from the past 40 years.

ALLARM will inevitably continue to evolve over time, addressing concerns of the volunteer water quality monitoring community, and we're excited to see what the next 40 years brings to this robust and important organization.



Technical Assistance

Partnerships through C-SAW:

ALLARM provided technical support and Quality Assurance/Quality Control for our Consortium for Scientific Assistance to Watersheds (C-SAW) partners this past year. C-SAW enables ALLARM to support groups across Pennsylvania, and this past year we worked with groups from Adams County all the way to Warren County. Notably, ALLARM provided QA/QC analysis to 7 different partner groups and over 50 individuals. Additionally, ALLARM took part in several different kinds of events, including a data interpretation event with the Watershed Association of Adams County (WAAC), a macroinvertebrate workshop with Antietam Watershed Association (AWA), and an onboarding training with C-SAW's newest partner group, the LEAF Project! The LEAF Project originates from Perry County and is an exciting local addition to our partners. As well as events, ALLARM continued to meet with volunteers to discuss equipment, improve data management, assist in compiling years of data into reports, and work to add to current protocols and procedures for the best quality of monitoring data.

"It was intersting seeing the intersection between sustainable agriculture and water quality. I like how LEAF plans to incorporate water quality monitoring into their larger goal."

- Ryan Mead '27



Collaboration with the CMC:

The Chesapeake Monitoring Cooperative (CMC) had much to celebrate in 2025, with the 10th anniversary of the partnership, and the milestone of 1,000,000 water quality samples in the CMC Data Explorer. The CMC celebrated with social media graphics that were shared by both the CMC development team and monitoring groups, gifs of Data Explorer growth, a conference presentation, and even a news story from Queen Ann's County TV!

2026 was also a productive year for the CMC. Between meetings, presentations, webinars, trainings, and several outreach events, the CMC provided assistance and education all across the Chesapeake Bay watershed.

The CMC also continued to work on increasing accessibility in monitoring programs by creating more and updating existing resources for folks to engage with water quality information. This included updating parameter factsheets that will be a part of an Engagement Packet, alongside the Community Connection Chart and CMC Case Studies. ALLARM also filmed the first two videos for an upcoming series about using existing data tools and ways to access water quality data.





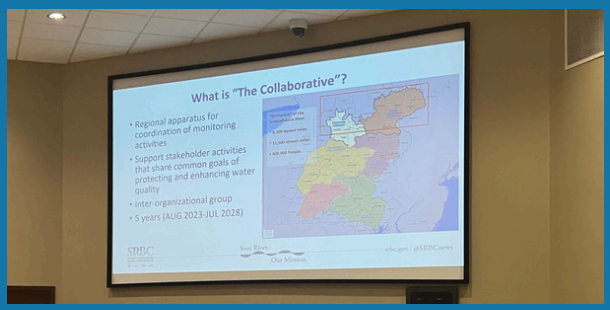


New York “The Collaborative”

This year saw increased work in New York thanks to our collaborative partnership with the Susquehanna River Basin Commission (SRBC) and our New York partners. The group’s goals are to increase monitoring in the Chesapeake Bay region of New York. ALLARM staff and students held trainings with our regional partners including the Otsego County Conservation Association.









Stream Team

While ALLARM has continued to host check-in meetings, QC, and provide support both in and out of the office, this year focused on restructuring and reconnecting for Stream Team.

In Fall 2025, we began the virtual Stream Team Open Call series. Each meeting focused on a different topic, including background on Stream Team's study design, common data use examples, and a CMC Data Explorer guide. Stream Team volunteers from across the state attended and participated in interesting discussions about monitoring, road salt, and general observations, and enjoyed the regular opportunity to connect. This initiative continues to engage our volunteers to this day!

In April 2026, we welcomed a new Volunteer & Outreach Coordinator, Joey Knouse, who jumped at the opportunity to work with our Stream Team volunteers!

In the first 5 years of this program, we focused on establishing consistent groups of volunteers within south central PA and surrounding communities, and we will continue to pour into these groups in the coming years. However, with the growing interest in water quality impairment due to industry across PA, we plan to expand Stream Team's reach. As always, accommodating our monitors' needs and concerns remains our first priority.

Stream Team Statistics 2025

- 62 active Stream Team members
- 38 sites
- 10 Counties



Restoration Monitoring

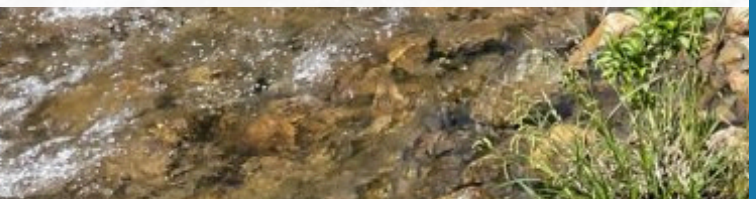
Since 2021, ALLARM has partnered with the National Fish and Wildlife Foundation (NFWF), the Chesapeake Monitoring Cooperative, and the Stroud Water Research Center to create and implement a community-based restoration monitoring program. The goal of this monitoring program is to assess the success of NFWF-funded stream restoration practices throughout the Chesapeake Bay watershed to ensure investments are meeting stream restoration objectives.

This past year ALLARM continued to monitor three restored creeks and successfully onboarded three more sites! We added two sites near Lancaster in south-central Pennsylvania and one site in the upper reaches of the Susquehanna River in upstate New York. ALLARM continued to co-create templates for reports that will detail the restoration progress at each site and share notable observations with landowners and project managers. We look forward to adding more monitoring sites in 2027 and to start evaluating and sharing the integrated results from our pilot restoration sites.



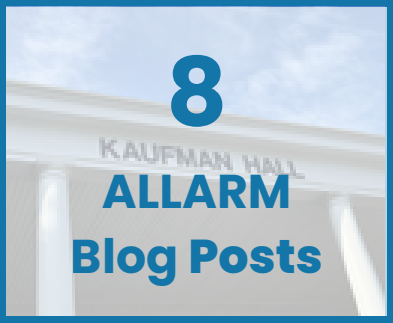








82
Social Media Posts



8
ALLARM Blog Posts



7
Tabling Events



3
Podcast Episodes

Communications

Much of our work at ALLARM involves education and volunteer training, and we're grateful for the many opportunities we've had this year to share our knowledge with both Dickinson students and community members. We were invited to give presentations across Dickinson's campus and at several community events and workshops. We also held tabling events on and off campus where we showcased the fun aspects of water quality monitoring while highlighting the value of community science. Most recently, we were invited to participate in Carlisle's *Farmers on the Square* event in June 2026.

While most of our work is done in person, we have also seen extreme growth in our digital presence. Between July 2025 and June 2026, our social media content was viewed over 59,000 times! In addition to our social media, our blog has remained active, offering students the space to share their projects while providing a great way to highlight the important work happening at ALLARM.

This year marked the end of an era as we published our last print edition of our annual newsletter, *The Stream of Consciousness*. In March 2026, we transitioned and celebrated the launch of *The Stream of Consciousness* podcast, a digital journal to highlight our students and their incredible work with ALLARM.



Fall 2025:

(From Left to Right)

Bottom: Katelyn Pequeno ‘27, Max Carfrey ’26, Amiya Payne ‘28, Sophia Evans ’27, Kacie Wood. **Middle**: Ryan Mead ‘27, Isabel Ruff, Priya Chamber ’28, Charlotte Durietz-Bourdain ‘28, David Marsh ’26. **Top**: Lane Whigham, Jill Arriola, Marja Barrett ‘26, Crosby Wilkin ’26, Ayako Ogawa ‘28, Kristin Houston ’27.

Not pictured: Olive Stern, Ben Connors ‘27, Naisha Gaur ‘27

Spring 2026:

(From Left to Right)

Bottom: Charlotte Durietz-Bourdain ‘28, Marja Barrett ‘26, Sophia Evans ’27, Max Carfrey ’26, Olive Stern. **Middle**: Ayako Ogawa ‘28, Amiya Payne ‘28, Ben Conners ‘27, Crosby Wilkin ‘26, Jill Arriola. **Top**: Ryan Mead ‘27, Priya Chambers ’28, Joey Knouse, Lane Whigham, Kacie Wood.

Not Pictured: Kristin Houston ‘27, David Marsh ‘26, Naisha Gaur ‘27, Katelyn Pequeno ‘27



Meet our Newest Staff!

Anna Horn
Water Quality Technician



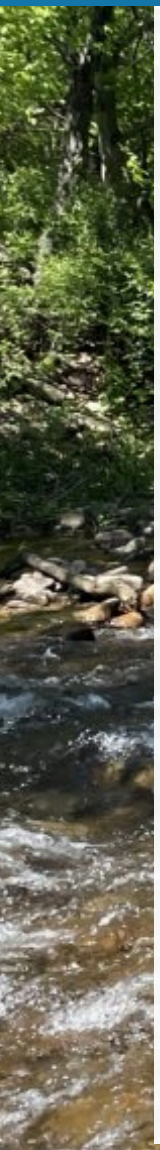
As ALLARM's water quality technician, my role is to manage the Community Aquatics Research Lab (CARL), including QA/QC for volunteer monitoring groups. I also work with our statewide partners in the Consortium for Scientific Assistance to Watersheds (C-SAW), providing support to their community monitoring efforts. Outside of work, I spend my time running, weightlifting, hiking, pickle balling, reading, managing my gardens, and working on sewing projects.



Joey Knouse
Volunteer & Outreach Coordinator

As ALLARM's Volunteer & Outreach Coordinator, I am tasked with managing ALLARM's volunteer monitoring programs by recruiting, educating, and maintaining relationships with communities conducting water quality assessments, and volunteers participating in Stream Team. When I am not at work, you can find me trail running, bow hunting, fly fishing, playing music, or petting someone's dog.

Watershed Coordinator Reflections



"I truly enjoyed being able to experience and bond at [the Chesapeake Bay Watershed Forum] with the rest of the ALLARM group, while also networking with others that are new. The opportunity to network and see some beautiful scenery in West Virginia made me feel appreciative of ALLARM, and I am excited to return next year!" **- Amiya Payne '28**

"I get to research fun types of macroinvertebrates and find fun facts to write about them. Then I get to be creative and create the actual story using Canva. I didn't just want people to read the slides but to also engage with the posts. I came up with surveys and other "games" people can click on so that there's more to do with each post!" **- Katelyn Pequeno '27**

"I ran the macroinvertebrate ID station for the campers in East Pennsboro. Easily my favorite moment was when a damselfly landed on my hand and sat still long enough for me to show the campers and to show them a picture of their nymph form." **- David Marsh '26**

"One of my favorite tasks was monthly LeTort monitoring. We stopped at seven sites from upstream to downstream of LeTort Spring Run and collected water samples and data at each site. Each outing took around half a work day, but it was interesting to see the difference between each site along the same stream." **- Ayako Ogawa '28**

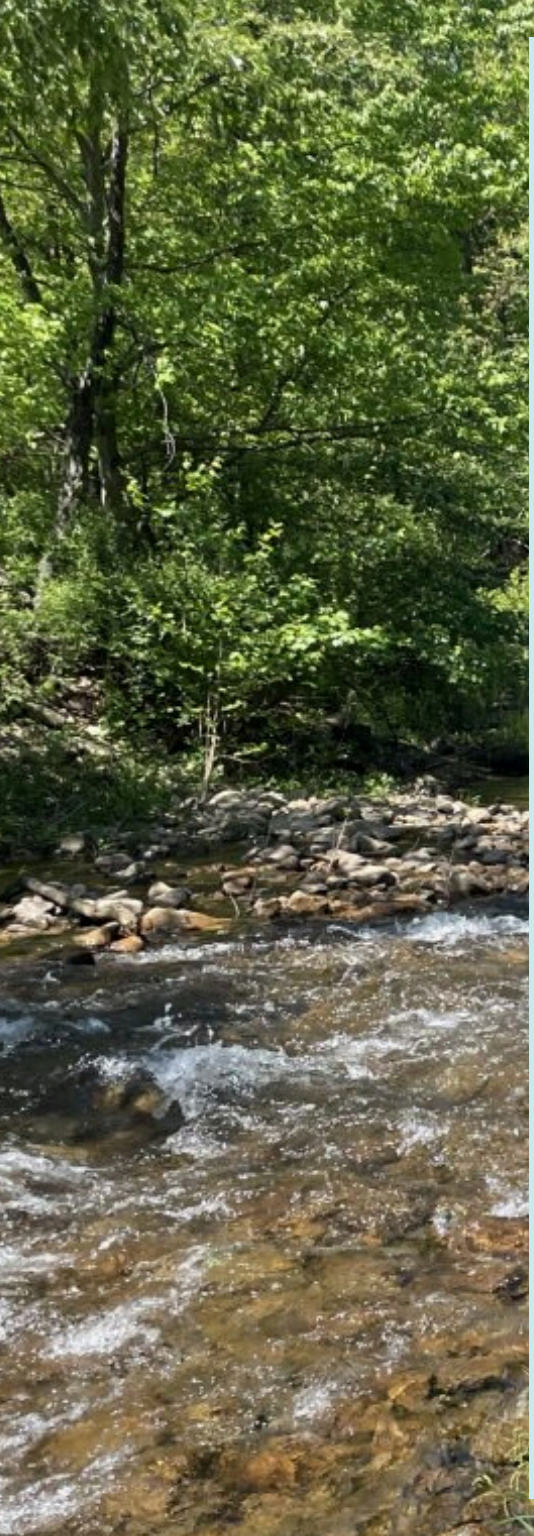
"I have enjoyed working on the data reminders guides. This project combines research and outreach while helping me engage with our volunteers. I like having a finished, tangible product that goes directly to our volunteers and that I can refer to when mentioning my work." **- Marja Barrett '26**

Funding Sources

ALLARM would like to thank all the organizations that support our work, including:

- Dickinson College
- Chesapeake Monitoring Cooperative
- National Fish and Wildlife Foundation
- Campbell Foundation
- Consortium for Scientific Assistance to Watersheds
- Susquehanna River Basin Commissioners
- Lower Susquhanna Riverkeepers Association
- Letort Regional Authority

Thank you for helping support healthy streams!



ALLARM

BY THE NUMBERS

- **10** Workshops Run
- **7** Community Partner Groups Supported
- **10** Community Meetings Attended
- **128** Water Samples Tested
- **274** Volunteers Reached
- **2,687** Lab Tests Performed
- **1,232** Hours Monitoring