As you may know, the Academy of Natural Sciences of Drexel University (ANS) is responsible for supporting the ecological monitoring and scientific research portion of the Delaware River Watershed Initiative (DRWI). To better connect with the valued partners of the DRWI, ANS is pleased to launch *Stream Samples*, a regular email update on science and monitoring.

In this first update we introduce the Academy's interdisciplinary DRWI team members, many of whom you may already know. Below the team profiles you'll find information for key staff whom you can contact with particular questions.

We look forward to working with all of you as the DRWI progresses. Please feel free to contact us as questions arise on monitoring or watershed science and to provide any feedback on how we can make our communications with you more useful.

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**Roland Wall**

**ANS DRWI Team Members**

**Management/Coordination**

Senior Director for Environmental Initiatives

**Project roles:** Oversee all elements of ANS involvement with the DRWI, including strategic and project planning.

**Tools you'll find me using to get my job done:** All the tools you need for networking, collaboration, team building, and communications. A computer, a phone, a meeting room, a SEPTA pass, and a full tank of gas.

**Come to me if you have questions about:** Any big-picture questions about the Academy's relationship to the larger Delaware River Watershed Initiative and its relationship to other participating organizations.

**A favorite project experience so far:** Meeting so many people working to make a difference in the basin in various ways.

Senior Advisor for Watershed Management and Policy

**Project roles:** Serve as the project government liaison, to inform government agencies and officials about the value of the initiative and how it ties into their programs.

**Tools you'll find me using to get my job done:** Integrated Water Resources Management, to look holistically at water and how the DRWI...
Carol Collier
can use the goal of improved water quality to protect other critical watersheds features; my numerous contacts from previous jobs (e.g. Executive Director of the Delaware River Basin Commission).

*Come to me if you have questions about:* Contacts in different levels of government; what project ideas government agencies might be interested in.

*What most excites me about the Delaware project:* The fact that there is an organization dedicated to improving water quality in a basin where government funds are so limited; the opportunity to work with so many organizations to make a difference.

Project Science Director

*Project roles:* Design a monitoring plan that provides information on project conditions and contributes to research around the initiative; provide outreach to cluster group organizations to interconnect their monitoring with ANS.

*Come to me if you have questions about:* Coordinated research and monitoring plan development.

*Ask me about:* Aquatic insects I'm a really big bug fan and the importance of water.

*What most excites me about the Delaware project:* The connection between on-the-ground work and ecological effects, the scale of the project, and the potential for others to pick up the approach and use it.

Chemistry

David Velinsky

VP for Academy Science & Department Head, Biodiversity, Earth and Environmental Science

*Project roles:* Oversee ANS chemistry monitoring, from collecting data through its

Kathryn Christopher

Staff Scientist

*Project roles:* Provide overall organizational support, lead outreach to cluster organizations, conduct field work, and support project communications.

Fisheries

Richard Horwitz

Professor, Department of Biodiversity, Earth & Environmental Science; Senior Scientist, Fisheries Section Leader, Ruth Patrick Chair of Environmental Sciences
analysis; Interface with outside watershed groups and work to ensure quality of chemistry data.

What I'll probably be doing if you see me in the field: Collecting water and environmental samples. You can distinguish me from the other people in waders by my yellow BEES hat and red backpack.

Come to me if you have questions about: Water quality, analytical chemistry, nutrient analysis.

A favorite project experience so far: Meeting and interacting with various watershed group members and learning about how they approach the project in different ways.

Melissa Bross
Biogeochemist

Project roles: Perform chemistry analyses on all water samples and some algae samples.

Tools you'll find me using to get my job done: De-ionized water, filters, auto-titrators, magnetic stir-bars, beakers, pipettes, balances, safety glasses.

Come to me if you have questions about: Monitoring, who's who in the Initiative and I'll direct you to the right person at ANS if I can't answer your question.

A favorite project experience so far: Bonding with the crew my first field season, dubbing ourselves “Al-gals” and “Guy-atoms” (rhymes with “diatoms”).

Meghan O’Donnell
Staff Scientist

Project roles: Coordinate data for open-source database, lead macroinvertebrate research project, organize monthly seminar series (PubTalks), coordinate field research teams and train crew members, conduct field sampling.

Tools you’ll find me using to get my job done: RiverSurveyor and

Come to me if you have questions about: Fish, natural history, statistics, restoration (warning: idiosyncratic views), general ecological advice.

Ask me about: Environmental history, boats, rivers, music.

A favorite project experience so far: Meeting with loads and loads of people around the table and appreciating the variety of perspectives on this project.

David Keller
Project Coordinator, Fisheries

Project roles: Coordinate fisheries assessment for water quality purposes; sample salamanders, fish, and crayfish at sites and analyze/interpret data as it relates to water quality; provide guidance as necessary on fisheries monitoring methods.

Project roles: Assisted WPF in developing indicators and identifying project clusters; serve on OSI technical advisory group; oversee ANS fisheries work; develop data analysis approaches; serve on ANS research agenda steering committee.

Come to me if you have questions about: Fish, natural history, statistics, restoration (warning: idiosyncratic views), general ecological advice.

Ask me about: Environmental history, boats, rivers, music.

A favorite project experience so far: Meeting with loads and loads of people around the table and appreciating the variety of perspectives on this project.
Come to me if you have questions about: Water chemistry, including how to properly test samples and what to test for in a lab.

A favorite project experience so far: As a side project, looking at chloride levels in the watershed over the winter to assess the effect of road salt on water chemistry.

Don Charles

Professor, Department of Biodiversity, Earth & Environmental Science; Senior Scientist and Section Leader, Phycology Section

Project roles: Oversee ANS Phycology Sections role in analysis and interpretation of algae-related data.

Come to me if you have questions about: Algae as ecological indicators and how to determine the ecological status of a site based on its algae assemblages; how to analyze algae samples.

Ask me about: Stream ecology; ecological databases, data storage, and data management; the North American Diatom Ecological Database (NADED).

What most excites me about the Delaware project: How expansive and collaborative the project is; that my work is so hands-on; that I’m part of a project that’s ultimately going to serve a lot of communities.

Amanda Chan

Research Assistant

Project roles: Assist in the field, mostly with algae, water chemistry, and discharge monitoring; organize fieldwork trips; lead social media for the Academy’s project work; organize project-related Academy events.

Tools you’ll find me using to get my job done: Twitter (@ANSStreamTeam), computer, phone, range of stream monitoring tools.

Jerry Mead

Assistant Teaching and Research Professor, Drexel University; Lead, Watershed and Systems Ecology Section

Project roles: Direct spatial modelling and mapping activities performed in GIS lab; lead development of GIS-based tool to find paired locations.

What I’ll probably be doing if you see me in the field: Electrofishing, to temporarily stun fish and crayfish so they can be collected, identified, assessed for any abnormalities, measured, and released; turning over cover to collect and take similar data on salamanders.

A favorite project experience so far: Tackling the challenge of sampling the large Brodhead site in the Poconos cluster, with a crew of 12 people using 5 backpack shockers simultaneously: a rare sight.
ecosystem-level coordinated approach to looking at how everything fits together, and a commitment to making sure that coordination happens; the potential for bringing all data together in a single, accessible database that can help illuminate the big picture.

Frank Acker
Phycologist

**Project roles:** In the field, take algal collections and help to ensure that the right procedures and protocols are in place for algal monitoring; in the lab, identify and enumerate algae and analyze data.

**Ask me about:** The neat algae that we find in the Delaware River basin; how to use algae in your study.

**What most excites me about the Delaware project:** The uniqueness of the Delaware Valley and the project connection from headwaters to estuary.

**A favorite project experience so far:** Finding out that communities of algal species were unique for the different subwatershed clusters.

Come to me if you have questions about: Social media, water quality and algal monitoring trips and sampling.

Lia Domico
Research Assistant Co-op

**Project roles:** In the field, assist with any and all work, with a focus on algae, water chemistry, and habitat assessment; in the office, line up fieldwork (e.g. site permissions), and data entry.

**Come to me if you have questions about:** Data collection and entry.

**Ask me about:** My Drexel co-op experience, and how it has helped to prepare me for life after college.

**A memorable project experience:** Getting caught in the middle of a hailstorm when we were finishing up stream sampling; the hail was huge (1/4”) and we had to drop our equipment and take shelter in the van.

Alex Waldman
GIS Manager and Watershed Modeler

**Project roles:** Use spatial analysis, programming, and watershed simulations to inform decisions and monitoring strategy and restoration investments.

**What most excites me about the Delaware project:** That its a basin-wide, standardized effort to guide activities to improve water quality; most previous efforts have been piecemeal and lack standardization.

**A favorite project experience so far:** Integrating the project with my teaching, and helping students in my watershed course to see themselves as important contributors to the larger project.
Alison Minerovic
Phycologist

**Project roles:** Lead collection and identification of diatoms, assist with soft algae monitoring and identification.

**Tools you'll find me using to get my job done:** Toothbrushes and other scrubbing tools, spatulas, petri dishes, Zeiss Axioskop microscope.

**Come to me if you have questions about:** Monitoring protocols, different types of algae, algae blooms or other water quality problems related to algae.

**What most excites me about the Delaware project:** I'm brand new to Philly, so I'm most excited about starting this field season and seeing the sites/watershed firsthand. I'm also looking forward to analyzing last years algae data and hopefully seeing trends and patterns among the watershed clusters.

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Scott Haag
Database Administrator

**Project roles:** Build a relational database system to organize data collected by the Academy and partners, to consistently store and process data sets across space and time.

**Tools you'll find me using to get my job done:** Computers, open-source programming languages (R, Post GIS and Python).

**Come to me if you have questions about:** Monitoring protocols, different types of algae, algae blooms or other water quality problems related to algae.

**Ask me about:** Why a properly designed database is important (and why having a bunch of great data isn't good enough).

**What most excites me about the Delaware project:** The fact that it goes beyond an administrative unit to encompass a whole watershed; the challenge of building a new database system from scratch; to work with lots of different partners.

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Lin Perez
GIS Analyst

**Project roles:** Make maps for a range of audiences and uses, run geospatial analyses for project scientists, design graphics, translate modelling outputs to ArcGIS Online.

**Tools you'll find me using to get my job done:** ArcGIS, Adobe Illustrator and InDesign, Python, PostgreSQL, Leica GNSS RTK Surveying System

**Come to me if you have questions about:** Maps! Or anything else GIS-related.

**Ask me about:** Agent-based modelling and simulating human decision-making.

**What most excites me about the Delaware project:** Being part of a team that does detailed research from the micro to macro scale, ultimately supporting an exciting movement towards a
Who to Contact

**Monitoring**: Kathryn Christopher, kac388@drexel.edu
**Data Access**: Meg O'Donnell, 215-299-3789
**Project Science/Research**: Stefanie Kroll, 215-299-1106

Follow us on Twitter: [@ANSStreamTeam](https://twitter.com/@ANSStreamTeam)

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