

STREAM SAMPLES: Updates on Delaware Basin Science

THE ACADEMY
OF NATURAL SCIENCES
of DREXEL UNIVERSITY

ansp.org

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January 6, 2015

Happy New Year from the ANS team. We're back at work analyzing samples in the lab and synthesizing results, while our partners prepare for the next round of restoration funding in mid-January to review the new projects developed by the cluster groups.

All of the hard work put into the DRWI is generating positive attention. Recently, Collin O'Mara, president and CEO of the [National Wildlife Federation](#), published an [opinion piece in the Philadelphia Inquirer](#) highlighting the importance of a shared vision for improving water quality in the Delaware River Watershed.

We're looking forward to the All-Cluster Meeting in mid-January, organized by our partners at the [Institute for Conservation Leadership](#). After the past year's work in the DRWI it will be a great opportunity for cluster groups to share ideas and experiences and begin to ramp-up efforts to continue to improve our regional waters in 2015.

We hope you had a relaxing, happy holiday season and we look forward to what the new year will bring for our watershed!

- Roland Wall

Upcoming Events

DRWI All-Cluster Meeting

January 15-16
Inn at Pocono Manor
Pocono Manor, PA
Contact: [Kathryn Christopher](#)

Tapping our Watershed

ANS' Seminar Series
January 19, 2015
at 6 p.m.
[National Mechanics](#)
22 S. 3rd St.
Philadelphia, PA
*See below for more information.

2015 Delaware Estuary Science and Environmental Summit

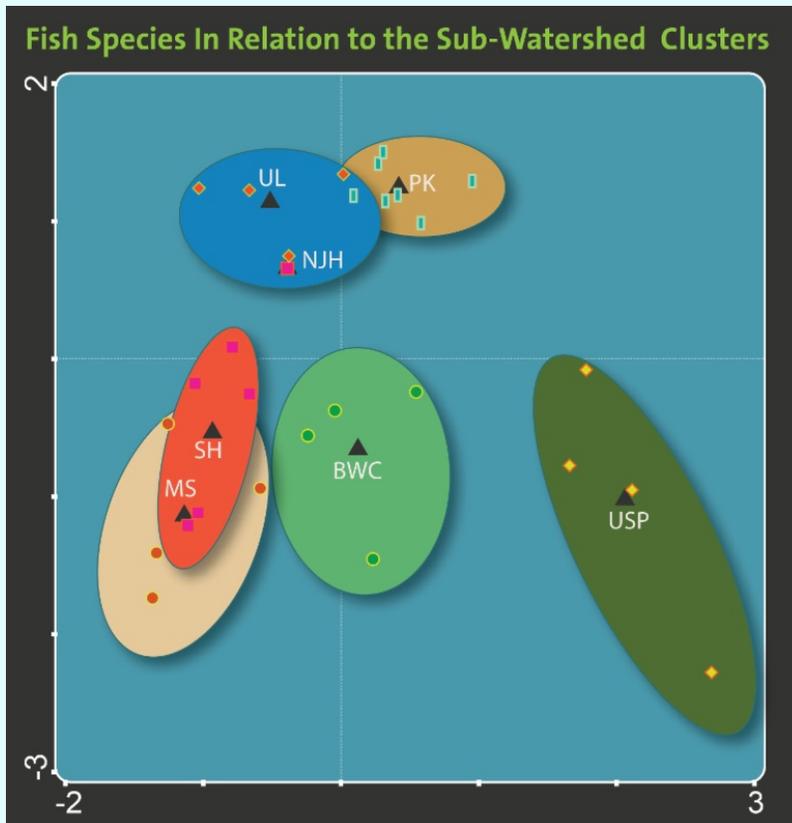
Balancing Progress and Protection - 10 Years of Science in Action

Fish Findings

With this issue of *Stream Samples* we begin a series of short reports on **emerging findings** from our cluster analyses. Many of these results will be shared in Session 18 (*How Do You Evaluate Success? - Monitoring and Assessment for the Delaware River Watershed Initiative*) of the [Partnership for the Delaware Estuary Science and Environmental Summit](#) (see details at right).



Our first focus is on **fish**. Forty-six species of fish, crayfish and salamanders have been collected across all the integrative sites. The ordination diagram below plots sites (small symbols within ellipses) based on their similarities and differences in fish communities. Ordination plots do not explicitly describe quality, but they do show strong relationships with the clusters (represented by ellipses).



Upstream Suburban Philadelphia (USP) stands out from the rest, while the Upper Lehigh (UL), Poconos-Kittatinny (PK)

January 25-28, 2015
Cape May, NJ
www.delawareestuary.org

[Society for Freshwater Science - Mid-Atlantic Chapter Annual Meeting](#)

January 30, 2015
The Academy of Natural Sciences of Drexel University

Tapping Our Watershed

*On January 19 at 6 p.m. we look forward to hearing **Christopher Crockett**, deputy commissioner of planning & environmental services at the Philadelphia Water Department, speak on "Green Cities, Clean Waters: What's Been Achieved and What's to Come in the Future." Come learn about implementation of the most ambitious green infrastructure program in the U.S., right in our back yard.

and New Jersey Highlands (NJH) have similar fish communities. The Schuylkill Highlands (SH) and Middle Schuylkill (MS) are also similar in terms of the fish community, which shows that their proximity overrules any differences in quality or strategy, and the fish community found in the Brandywine-Christina (BWC) is similar to those found in the Schuylkill clusters.

More results from ongoing surveys by regional agencies can be found in the **cluster characterization report**, which you can download from our [website](#).

We'd like to know how you can use data like these in outreach to potential partners, funders, and community members. Would fish species, stream quality ratings using Indices of Biological Integrity (IBIs) or chemistry information from your cluster be useful in outreach materials? Please contact [Meg O'Donnell](#) with any data requests.

Stream Samples Wants You!

Would you like your **cluster group monitoring** to be highlighted in an upcoming newsletter?

If so, please contact [Kathryn Christopher](#) and help us spread the word on how cluster groups are collecting data and reaching out to community members in connection with conservation activities.

Winter Water



Intrepid DRWI team members will be bundling up and wading in streams this chilly month. They'll be making their quarterly visits to ANS integrative sites to collect water samples for **chemistry monitoring**.

Specifically, the water will be analyzed for nutrients (related to sources like agriculture) and major ion fluctuations (related in



[Tapping Our Watershed](#) lectures aim to engage students, scientists, and interested citizens in discussions about issues pertaining to the Delaware River Watershed and other aquatic ecology topics. Contact [Allison Stoklosa](#) with questions or suggestions for future speakers.

Congratulate Carol!

ANS' [Carol Collier](#) has been appointed to to Governor-elect Wolf's [Environmental Protection Transition Review Team](#).

DRWI Mapper



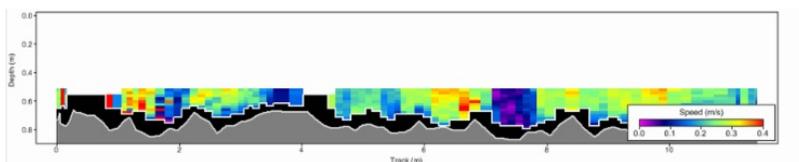
Quick Link

The [DRWI Mapper](#) is available whenever

part to wastewater discharges, road salt, and local geology). These data will add to our understanding of baseline conditions of clusters downstream of DRWI projects.

Crews will be hoping the streams aren't frozen over so that they can also measure **discharge** with our SonTek RiverSurveyor, a device that uses acoustic frequencies to measure the stream channel profile and water velocity. See a video of the RiverSurveyor in action [here](#), and an example of an output from the device below.

The discharge allows for calculating the loads for different chemicals, or the actual amount of each chemical component analyzed. For more information about water chemistry and discharge monitoring, contact [Stefanie Kroll](#).



RiverSurveyor-produced depth-velocity profile for Pequest River site, NJ Highlands, Nov. 2013. Colors represent different water velocities.

you need it. Contact [Lin Perez](#) with any questions or comments.

Stream Samples Archive

Miss an issue?

Access past *Stream Samples* updates on the [newsletter page](#) of our website.

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