Distributed by UW News Service, September 2, 2024

Link to original story: <https://www.uwrf.edu/News/Research-in-the-river-UW-River-Falls-led-program-provides-valuable-hands-on-learning-opportunities.cfm>

Research in the river: UW-River Falls-led program provides valuable hands-on learning opportunities

Students’ work to be used to improve Kinnickinnic River conditions

Written by Julian Emerson, UW-River Falls

Standing nearly waist deep in water, Vincent Lamantia dipped measuring equipment under the surface of the [Kinnickinnic River](https://www.rfcity.org/397/Kinnickinnic-River), then lifted it out and studied the amount of sediment in it.

The answer? Not much, a good sign of water clarity and ecological health at that point of the river.

“The clarity is greater than 100,” Lamantia exclaimed to Natalie Beyerl, a fellow member of the Dam, Analysis and Monitoring (DAM) Crew, a group of seven students overseen by University of Wisconsin-River Falls faculty who are conducting an ecological study of the river well known for its pure water, its Class 1 trout designation, and its recreational opportunities.

“OK,” Beyerl responded before asking, “Greater than 120?”

“Yes, greater than 120,” Lamantia answered back.

DAM Crew members continued to communicate as they collected data along the river on August 8. A moment later two students pushed poles through the water to the river’s bottom, testing the makeup of the sediment there. They discussed their findings – mostly sand with a few rocks – with Beyerl, the team leader who was recording the team’s results. Group members took other readings, including water temperature, the extent of aquatic plants providing fish habitat, and what was growing along the river’s banks before moving to measure the waterway’s next segment.

DAM Crew is a two-week student experience funded by the [Freshwater Collaborative of Wisconsin](https://freshwater.wisconsin.edu/) in which water science faculty and professionals train undergraduates in waterway monitoring techniques and research. In its third year, the program not only provides participating students with hands-on, real-time research opportunities but their work will be used to inform the decisions of officials in charge of removing the Junction Falls and Powell Falls dams along the river.

Students’ research data will also be used to educate the [Wisconsin Department of Natural Resources](https://dnr.wisconsin.gov/) and other conservation groups about river conditions with the two dams in place and how removal of those structures will affect the stream’s ecological health.

This summer’s DAM Crew participants include Beyerl, a UWRF junior from Evansville majoring in ecology; Lamantia, a UWRF junior from West Chicago, Ill., majoring in ecology; Robert Boss, a UWRF junior from Hayward majoring in conservation; Cody Helriegel, a UW-Eau Claire sophomore from Big Lake, Minn., majoring in environmental public health; Leo Pierce, a UW-Eau Claire junior from Farmington, Minn., majoring in biology; Aurora Figard, a UW-Whitewater senior from Lake Geneva majoring in environmental science; and Alex Kiesler, a UW-Whitewater senior from Wind Lake majoring in environmental science.

Dams cause water to pool into lakes, which can allow them to heat up and alter their ecology. The Kinnickinnic River is a clean, cold-water stream known for its trout fishing and other recreational opportunities. For years the community has debated the benefits and consequences of the dams, with many individuals and groups advocating for removal of the two dams to preserve and improve the river’s ecological health.

In 2018, the city of River Falls decided to remove the dams and restore the riverway to its natural state. Three years later the Kiap-TU-Wish chapter of [Trout Unlimited](https://www.tu.org/) and [Inter-Fluve](https://interfluve.com/), a firm that specializes in river restoration, developed an extensive 10-year monitoring plan for the project to meet the city’s goal of monitoring the dam removal process.

The initial plan relied on volunteers to conduct river monitoring, which resulted in challenges related to how often monitoring would occur and the reliability of data over time. Organizations involved with the project then partnered with UWRF to devise a river study team that could provide consistent, reliable data while offering learning opportunities for students.

Jill Coleman Wasik, UWRF environmental science professor, and Heather Davis, lab manager in the Plant and Earth Science Department, successfully received grant funding from the Freshwater Collaborative of Wisconsin to create the DAM Crew. This year’s student team is building on research from the past two years and adding to data about the impacts of the city’s dams and stormwater discharges that has been measured by Trout Unlimited since 1992.

After spending a week in early August studying in the river, students spent the next week compiling the data they gathered, comparing it to existing data, and working with other stakeholders involved with the health of the Kinnickinnic.

Coleman Wasik, who leads DAM Crew students each summer, smiled as she watched crew members work diligently compiling and recording data of all sorts about the Kinnickinnic River as it flows through River Falls.

“It’s so much fun to work with these students,” Coleman Wasik said. “They’re so excited about the work they’re doing, about learning and adding to this important project. They know what they’re supposed to do, and they’ve really taken ownership of it.”

Donning waders as they made their way from one section of the river to the next, recording data all the while, students exhibited enthusiasm for their work. They said their hands-on data collection helps bring their classroom lessons alive.

“Out here, we’re seeing what we’ve learned about in class and putting all of that together and making a lot of connections,” Pierce said. “Now I can see how these different concepts work in real time.”

DAM Crew members said they’ve enjoyed getting to know other science students from Universities of Wisconsin schools. Knowing that their work will be used by scientists and conservationists to work toward improved water quality in the Kinnickinnic was motivating, students said.

“You realize that this is a really big deal, and we are having an impact on something that matters,” Lamantia said. “If we can do our part to help make this river healthier and more accessible, that benefits everybody.”

Other students said their research experience in the river helped reinforce that they want to work in a science field. Figard said she hadn’t done much field research previously and jumped at the opportunity to participate in DAM Crew.

“It was important for me to try this to see if it’s what I really want to do, and now I know that it is,” she said with a smile. “To know that our work is having an impact on this river, it is a very cool feeling.”