

This is Wisconsin Water News, a production of the University of Wisconsin Sea Grant Program. I'm your host, Marie Zhuikov. Today's episode is:

Plastics learning kit educates and enthralls

When Anne Moser began her librarian career in Seattle in the early 1990s, one of her first experiences was a tour of the city's wastewater treatment plant.

"It made a really big impression on me, watching the operation there and what great, amazing miracles can happen with things that had come in, how they treat it, and how clean it is when they send it out. I feel like I've gone full circle."

The Wisconsin Sea Grant's senior special librarian and education coordinator has now learned enough about wastewater treatment to create "[Plastic Panic](#)," a grab-and-go kit that formal and nonformal educators can use to teach about plastic pollution in the Great Lakes, specifically, microplastics.

Unlike larger plastic containers and pieces, microplastics (which are particles 5 millimeters and smaller) are too tiny for wastewater treatment plants to filter. What goes into the plant comes right back out into the environment. Fish and other animals can mistake microplastics for food. A belly full of plastic can make them feel full without providing any nutrients. In addition, heavy metals and other pollutants tend to stick to plastics. These can harm animals that eat the plastic, and the pollutants can work their way up the food chain.

The kit got its start after a plastic awareness-raising exhibition at the University of Wisconsin-Madison's Chazen Museum of Art in 2019 called, "[Plastic Entanglements](#)." That led to a prototype learning kit, which has been updated this year. Information in "Plastic Panic" is based on research by Derek Ho, biological systems engineering Ph.D. student at UW-Madison. Artwork is by Chelsea Mamott, Wisconsin Energy Institute digital media specialist.

Although the curriculum is designed for fourth- to fifth-graders, Moser said the kit has wide appeal.

"Since we presented it at a nonformal place, we saw from the littlest learners, maybe four or five, all the way up to the older learners, the grandparents. The tabletop's pretty eye-catching, so it catches people's attention, so they come over. It's just kind of fascinating to think about -- I don't think you think much about your wastewater coming from your house or from a plant. It kind of demystifies this weird building that treats wastewater."

She said the colorful artwork and plastics both enthrall and teach.

"We have included a sample jar that has different plastics. You get different densities, different weights, so they can experience the way plastic behaves in water. Some of it sinks, some of it floats, some stays in the middle. You get to filter, and you get to sanitize. So, it's kind of high-level thinking that kids get to enjoy without even kind of realizing it."

Moser said the kit is "grab-and-go" for educators.

"You'll get the kit and you'll be ready to do the teaching right away. It comes with a guide that has really clear instructions."

It also provides questions to ask students, background information for educators and worksheets for classroom use.

“So, hopefully, they can just grab it and do it.”

Content is aligned with Sea Grant’s [Great Lakes Literacy Principles](#) but not yet aligned to specific state educational standards.

With the help of Great Lakes Restoration Initiative funding, 23 kits were produced by Sea Grant’s Center for Great Lakes Literacy and distributed to Sea Grant programs around the Great Lakes Basin. Five are available free of charge in Wisconsin, and the kit is shipped via UPS.

To order “Plastic Panic,” fill out the form on Wisconsin Water Library’s website, found at: go.wisc.edu/uwi5v7.

That’s it for this episode of Wisconsin Water News, just one of the ways that Wisconsin Sea Grant promotes the sustainable use of Great Lakes resources through research, education and outreach. Listen and subscribe to us through I-Tunes and Google Play or at seagrant.wisc.edu. Thank you to Anne Moser for the interview, and thank you for listening.