

Student Name and Classroom Grade

Emeline Hanna, Grade 12

Teacher Name, Telephone Number, and Email Address

Pete Doubek, 989-358-5200, doubekp@alpenaschools.com, Advanced Biology

Nominator: Meag Schwartz, 989-916-9146, meag.nemiglsi@gmail.com, Northeast Michigan Great Lakes Stewardship Initiative

School Name, Address, and City

Alpena High School

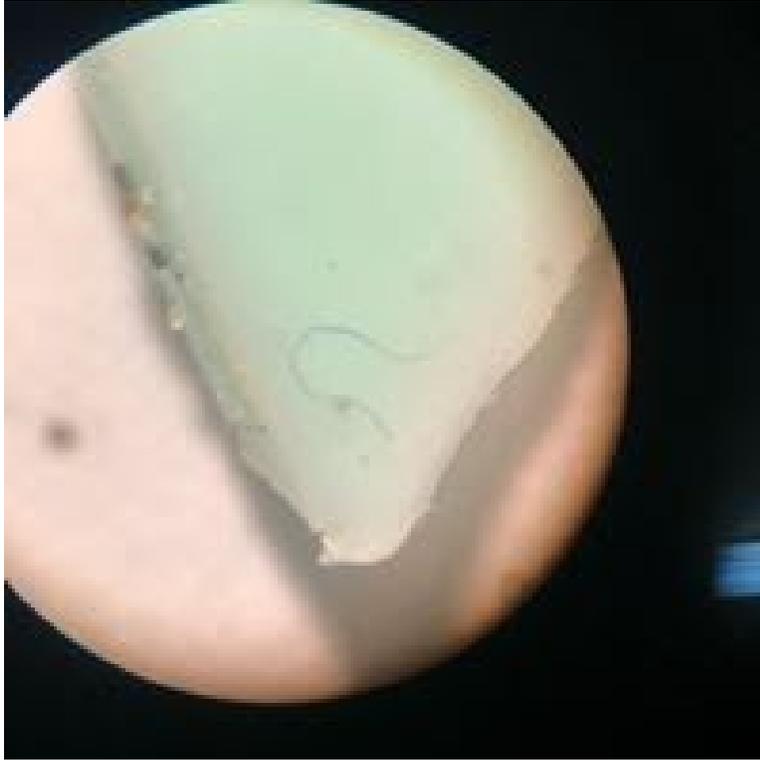
3303 S. Third Ave

Alpena, MI 49707

Project description with basic detail such as project goal, step-by-step instructions, length of project, before and after photos of the project, and beneficiary (school, wildlife, etc.)

Emeline Hanna, along with co-researchers, Maddy Saddler and Tayler Hansen-Bates researched microplastic and microfiber presence in sand samples collected from Lake Huron and Lake Michigan beaches. They used a Microplastic Filtration Screen System that uses static charged filtration (SCF) technology to collect microplastics as small as 100 micrometers in size (the size of a grain of sand). The research team also collected sand samples to bring back to the high school lab for further analysis. In the lab, they added water to the samples to allow the less dense microplastics and microfibers to separate from the sand, then poured the liquid through a vacuum pump filtration system. As a follow-up to their findings, Emeline was so motivated by what she discovered that she composed an outreach film for the [2020 Thunder Bay International Film Festival Student Film Competition](#). The film, titled "[Microplastics: The Looming Crisis](#)," details her appreciation for the Great Lakes, her team's microplastics discoveries and a call to action. In accordance with the rules of the Student Film Competition, the film was produced entirely by Emeline with all original audio and video content. Creating and submitting a film to the competition was not part of the assigned research project but Emeline went above and beyond to spread awareness about protecting the Great Lakes from plastics.

Link to video: "[Microplastics: The Looming Crisis](#)"



Plastics under the microscope



Beach sand sample

Visible plastics found on Great Lakes beaches.

