




CARING FOR OUR Watersheds®

Caring For Our Watersheds is a program that empowers students to imagine, develop and create solutions in their local watersheds. The program promotes watershed awareness and stewardship, values student ideas and offers support when turning theoretical ideas into action. Judges in the environmental field score student entries and the top ten projects are selected to compete in the final competition. \$10,000 in implementation funding (up to \$1,000 per project) is available to all participants, allowing each and every idea to be turned into a reality. This year because of COVID-19 closures, we were unable to hold a final competition, but students were still awarded the final prize money along with awards going to the winning schools as well. It is our hope that these projects will be able to be implemented in the future.



Caring For Our Watersheds is a joint program of the Hamilton County Soil & Water Conservation District, Nutrien Ltd, and the Nutrients For Life Foundation, with additional funding from the Ohio Soybean Council.



CARING FOR OUR WATERSHEDS FINALISTS

OUT OF OVER 130 ENTRIES submitted this year, these teams placed in the top 10 and will equally share the \$12,000 in awards for themselves and their schools. Learn more about our top 10 entries below, listed in no particular order:

Project: WE NEED A SOLUTION TO WASTE: PERIOD

Student: Marianna Dionysiou
School: Wyoming High School
Description: Realizing the amount of plastic waste generated from feminine hygiene products, Marianna began to investigate reusable solutions. Pairing up with the University of Cincinnati Environmental Club, she began to develop educational outreach programs to engage and encourage women on campus to shift their perception about reusable menstrual cups and pads. Marianna hopes to distribute Dot Cups as part of this programming so that others can begin to reduce their waste without breaking the bank.

Project: ELECTRONICS DRIVE TO A HEALTHIER LITTLE MIAMI WATERSHED

Students: Mia Prasinios, Rebecca Specht
School: Ursuline Academy
Description: Mia and Rebecca became aware of the lack of electronics recycled and reused in the Little Miami Watershed. The toxic waste that resulted from this upset them, so they planned to hold an electronics drive at school to benefit the Ohio River Foundation. The electronics collected will be sent to be recycled at EcoPhones, who will send back the money that will ultimately be donated to ORF's Adopt a Mussel Program.

Project: PEE IS NOW FREE

Students: Riley Lingen, Eli Meyung, Mason Allen
School: Wyoming High School
Description: Toilets and urinals, if not efficient, waste a lot of water. Riley, Eli and

Mason wanted to reduce the amount of water used at Wyoming High School and proposed to install waterless urinals. By doing this they would not only be saving water, they would be saving the school money too.

Project: HABITATS FOR BATS

Student: Clara Conover
School: Mount Notre Dame High School
Description: Bats are often thought of as pests, but Clara saw the need to protect them. By building small, clean habitats for bats, she is trying to ensure the livelihood of these creatures that increase pollination and reduce harmful insects. Preserving the little brown bats will ensure biodiversity within the Little Miami Watershed with a fairly simple solution.

Project: BUCKETS OF BLISS

Students: Sydney North, Shelby Kuhn
School: Wyoming High School
Description: In Cincinnati, there is a large population of people experiencing homelessness and they often use five gallon buckets to carry their items. Sydney and Shelby saw an opportunity to assist this group while also reducing waste, as painters use these same types of buckets yet they frequently end up in landfills. The duo planned to repurpose the old paint buckets, cleaning them out and filling them with small essential items to leave those receiving the buckets with a little more than they started with.

Project: BUILDING A SCHOOL RAIN GARDEN TO MANAGE RUNOFF

Student: Haomi Lee
School: John Marshall School of Engineering (Cleveland)
Description: Polluted runoff from parking lots and sidewalks getting into the Lake Erie Watershed is an issue that Haomi felt that she and the sustainability club at her school could begin to address. She planned to build this garden by an already

existing greenhouse, adding rain barrels and gutters and planting native species. To extend information outside of just the school, Haomi planned to educate the community about the importance of the new space as well.

Project: CARING FOR OUR COSMETICS

Students: Lexi Beke, Angelina Tran
School: Ursuline Academy
Description: Lexi and Angelina saw an opportunity to reduce the amount of cosmetic related waste going into their local landfill. To do this, they would hold a collection for empty skincare, haircare, and cosmetic packaging at their school to see which two homerooms could collect the most waste. The winning groups would receive stainless steel water bottles as a reminder to reduce the amount of plastic used in all aspects of life.

Project: KEEPING OUR COMMUNITY SAFE FROM LEAD CONTAMINATION

Students: Jadiel Perez, Emeraude Katusavanako, Eh Thyu Say, Jasmin Garcia
School: John Marshall School of Engineering (Cleveland)
Description: Lead is an extremely harmful contaminant that has continued to be a problem for residents along the Cuyahoga River. Jadiel, Emeraude, Eh Thy, and Jasmin had practice testing lead levels in water during their chemistry class and saw an opportunity to help their community. They planned on passing out lead tests to residents in Cleveland with specific instructions to ensure accuracy and then they would double check results in their lab at school. This outreach would also be educational, as many residents may not fully know the impacts lead has on air and water.

Project: GOING GREEN WITH GREENER LAWN

Student: Joshua Parker, Elliot Wilson-Woodrow, Alex Rhodes

School: Wyoming High School

Description: The ideal lawn is thought to be green, short and free from anything besides grass, but Josh, Elliot and Alex saw how harmful this notion was to the environment. They collaborated with their Civic Center to hand out native seed packets and information on how to reduce the environmental footprint of your lawn. Josh, Elliot and Alex found that while they may not be able to convince their neighbors to let their lawns go wild, they could at least persuade them to better strategize fertilizer use and how and when they water them.

Project: THE FATBERG PROBLEM

Students: Mariah Jackson
School: Winton Woods High School
Description: When bathrooms at her school became unusable due to peers flushing the wrong things down the drain, Mariah knew she needed to do something. As non-biodegradable solid matter (like wet wipes and grease) are flushed down drains, fatbergs form that result in clogged pipes and floods. By creating an informative ad and collaborating with their surrounding naturalists and school community, Mariah hoped to raise awareness and create action so that the fatberg problem would be reduced.

HONORABLE MENTIONS:

Hawk Nesting Platform
 Breanna Bauer
 Mount Notre Dame High School

The Green Dress Project
 Cameron Coburn and Caroline Walsh
 Mount Notre Dame High School

Garden of Eden Recycling Program
 Kiana Bernard and Gabby Starks
 Wyoming High School

Garden of Eden Recycling Project

Recycling poses many distinct questions throughout different communities. It raises questions like, "Does it do more harm than good?" and "What even happens once you put everything into a recycling bin?" Gabby Starks and Kiana Bernard from Wyoming High School implemented a project through the Caring for Our Watershed contest to answer questions like these and others. Gabby and Kiana decided to create the Garden of Eden Recycling Program which focuses on teaching young students in low-income communities how to recycle and improve their local watershed overall.

The students plan to go to low-income schools in the Avondale and Bond Hill neighborhoods where they believe recycling is not a daily habit. Gabby and Kiana want to teach kids that recycling is one of the best ways to help their local watershed. With the help of their mentor Gwen Roth, Gabby and Kiana came up with a plan and developed an informative PowerPoint, hands-on games, pamphlets and posters that are all designed to advise

students in 1st - 3rd grade about the world of recycling and how they can be a positive advocate for the Ohio River watershed. Their proposal encourages students to be hands on and work productively throughout their sessions so they can use their new skills and abilities outside of the classroom and share with friends and family. This program will be able to give knowledge about recycling to over 200 students and allow them to be more active in helping their communities.

Many people ask why they specifically geared their project toward children and families in low-income communities. Gabby and Kiana believe that families in suburban areas already participate in recycling at a higher rate and current recycling statistics in low income communities are fairly low. Reports show that low-income areas like these are not getting the education and informative lectures on recycling that they need. Gabby and Kiana wish to change that and in turn increase recycling rates in these communities.



We Need a Solution to Waste: Period

Plastic has become a global problem. It has contaminated the water and it continues to be a menace to wildlife. Menstruation products are essential for women but they do not have to be the plethora of plastic that pads and tampons contain. Not only do these products contain plastic, but they often include cotton. As a water-thirsty crop, cotton can deplete local water supplies and often uses pesticides and insecticides. When it rains, these can run off into the water and cause pollution. One solution to the plastic problem is a reusable silicone cup that significantly reduces plastic waste and can last for ten years. With the average user throwing away 125-150 kg of menstruation products a year, this project would encourage an eco friendly solution for women so they can have the comfort they have with pads and tampons while protecting the environment.

Wyoming High School student Marianna Dionysiou developed a plan to target University of Cincinnati students.

She developed a poster that promoted the reusable menstrual cups and showed the benefits that it provided for the environment. The Dot Cup Company agreed to provide the silicon cups and even offered to reduce the price so that more could be bought. This project would benefit more than UC Students because, for every cup bought, another one is donated to a female in a third world company.

Marianna planned to distribute the reusable cups to any interested student. In addition, she planned to email a survey to encourage recipients to describe their experience with the reusable cup. Marianna also planned to record a YouTube video showing the environmental and economic benefits that come with reusable menstruation products. Unfortunately, COVID-19 hindered the ability to implement the project this spring, but she hopes to implement it later this year.



A Solution to Fatbergs

Fatbergs are a huge problem in the Mill Creek watershed that many residents don't know anything about. When people flush or dump the wrong things down the drain, blockages can occur. A fatberg is a congealed mass in a sewer system formed by the combination of flushed non-biodegradable solid matter, such as wet wipes, and congealed grease or cooking fat. Fatbergs are a problem because grease and fat blockages can cause sewer overflows and stoppage resulting in raw sewage being discharged into the environment without treatment. Fatbergs occur around the world and can cost thousands of dollars to clean out and fix.

Mariah Jackson, a Winton Woods High School senior, was challenged by her teacher to develop a solution to a local watershed problem. As part of the Caring For Our Watersheds contest, Mariah chose to tackle the fatberg problem in the Mill Creek Watershed. She developed and presented a survey to local residents and found that 53% of respondents said they often put grease in the drain.

Mariah worked to develop a campaign, including flyers and pamphlets, to show local residents the harmful effects of fatbergs and encouraged people to stop flushing improper materials down the drain. She also developed a website with information about fatbergs and ways to help reduce the problem and save local communities money and resources. Mariah believes that once people understand the problem, they will work to implement alternative ways of disposing grease, fats and other items, so that they don't end up causing issues in our sewer systems.

Without fatbergs there will be fewer clogs in drainage pipes. Breaking up a fatberg is like breaking up concrete; it is hard work and it takes time and money to break up. In the span of five years, New York City spent \$18 million fighting fatbergs. The education campaign Mariah developed has great potential to educate people on fatbergs and she can't wait to begin the process.





PARTNERS IN EDUCATION

Organizations dedicated to creating the next generation of land stewards in Ohio

Nutrien, the Hamilton County Soil and Water Conservation District and the Nutrients for Life Foundation understand the importance of protecting our watersheds and conserving natural resources. But it's equally important to cultivate future land stewards and tomorrow's advocates for the environment. That's why the Hamilton County Soil and Water Conservation District and the Nutrients for Life Foundation have partnered with Nutrien to establish Caring For Our Watersheds, a unique program that enhances classroom learning through the practice of environmental research, writing skills, public speaking and hands-on stewardship. The program asks high school students to propose ideas on how to improve local watersheds. Students with strong proposals will then have the opportunity to put those ideas into action. As projects are planned and implemented, students develop strong leadership skills, learn sustainable practices and contribute to creating a healthier ecosystem. Students also have opportunities to connect with environmental professionals who volunteer and mentor the students as they learn new skills and develop deeper connections with the community in which they live. Caring For Our Watersheds is open to all high school students who live in or go to school in Ohio.



Caring for Our Watersheds is sponsored by Nutrien, a worldwide producer and retailer of fertilizers and other agricultural products and services. As the world's largest provider of crop inputs and services, Nutrien plays a critical role in Feeding the Future by helping growers increase food production in a sustainable manner. With nearly 20,000 employees, operations and investments in 14 countries, Nutrien's crop inputs and services reach every major growing region of the world.



The Hamilton County Soil & Water Conservation District (HCSWCD) is responsible for the conservation of natural resources within Hamilton County, Ohio. They have a special emphasis on soil and water with a focus on assisting landowners in planning and applying conservation practices on the land. HCSWCD is dedicated to the sustainable use of our natural resources and to encouraging positive behavioral changes that produce a higher quality of life for our citizens. The District assists all Hamilton County residents, schools, and jurisdictions through their services and dynamic partnerships that continually provide innovative solutions for the challenges of our region.



The Nutrients for Life Foundation is a global organization consisting of members and collaborative partners that develops and distributes science-based materials to improve plant nutrient literacy, soil health knowledge and promotes fertilizer's role in sustaining a growing population. Plant nutrients, especially nitrogen, phosphorus and potassium, are also required to keep our parks, gardens, playgrounds, sports fields and golf courses green and healthy in communities from coast to coast.

CARING FOR OUR WATERSHEDS is dependent on community support. Teachers, parents, government, business and non-profits come together to support students in their quest to improve their local watershed. Thank you to everyone who made this contest year successful and for adapting when the unexpected happened! A special thank you to Emma Brandt, Katie Nainiger, Gwen Z Roth and Chloe Sprecker.

CARING FOR OUR WATERSHEDS PARTNERS

PARTICIPATING TEACHERS AND SCHOOLS

- Deborah Brookbank** - Winton Woods High School
- Mary Brown** - John Marshall School of Engineering
- Sunitha Chiluka** - School of One
- Bill Crow** - Perry High School
- Mary Dennemann** - Archbishop McNicholas High School
- Mary Dudley** - James N. Gamble Montessori High School
- Kelly Dye** - West Holmes High School
- Melissa Harlow** - Milton-Union High School
- Nate Hatton** - Miamisburg High School
- Purnima Jaiswal Cheruvu** - Cleveland School of the Arts
- Dr. Anees Khanam** - MC2STEM
- Melissa Kowalski** - Put-In-Bay High School
- Dr. Vivian Lee** - Davis Aerospace & Maritime High School
- Kirsten Mahovlich** - Cleveland Metropolitan School District
- Tracy Majors** - Wyoming High School
- Monika Nuñez** - Ursuline Academy
- Deep Paul** - Max S Hayes High School
- Mary Beth Rieth** - Mount Notre Dame High School
- Anthony Rodgers** - Rhodes School of Environmental Studies
- Juana Sanchez** - Max S Hayes High School
- Michelle Shafer** - Indian Hill High School
- Kathryn Sickinger** - The Summit Country Day School
- Bridget Sparks** - Princeton High School
- Taylor Richardson** - Rhodes School of Environmental Studies
- Akshayaa Venkatakrishnan** - Dater High School

JUDGES AND VOLUNTEERS

- Cassandra Anderson** - Cleveland Metropolitan School District
- Jim Bader** - Case School of Engineering, Case Western Reserve University
- Chris Cann** - TRC Solutions
- Phil Conley** - Greenacres Foundation
- Rachel Cranmer** - Keep Cincinnati Beautiful
- Rita Duda** - Cleveland Metropolitan School District
- Gayle Gadison** - Cleveland Metropolitan School District
- Nancy Ellwood** - CDM Smith
- Elise Erhart** - Cincinnati Zoo & Botanical Garden
- Sara Fehring** - Hamilton County SWCD
- Kevin Harrison** - NE Ohio Regional Sewer District
- Ebony Hood** - NE Ohio Regional Sewer District
- Sarah Kitsinis** - TRC Solutions
- Adam Lehmann** - Hamilton County SWCD
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- Kara Luggen** - Keep Cincinnati Beautiful
- Dr. Terri Lyles** - Cleveland Metropolitan School District
- Anne Lyon** - The Mill Creek Alliance
- Heather Mayfield** - FORE
- Sarah Orlando** - OH Sea Grant
- Brad Owens** - Architectural Foundation of Cincinnati
- Emily Pickett** - Greenacres Foundation
- Samantha Plante** - Cincinnati Zoo & Botanical Garden
- Marcia Roach** - Cleveland Metropolitan School District
- Francine Scharver** - Chagrin Valley Engineering
- Ella Sedacca** - Greenacres Foundation
- Dorothy Smith** - Robert Bosch Automotive Steering
- Mike Spooner** - Architectural Foundation of Cincinnati
- Emily Sustin** - West Geauga Local Schools
- Dr. Dennis Taylor** - Learning Streams International, Professor Emeritus Hiram College