



CARING FOR OUR Watersheds™

Caring For Our Watersheds is a joint program of the Hamilton County Soil & Water Conservation District and Nutrien Ltd.

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 ten projects are selected to compete in the final competition which was held on April 27th. \$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. At the final event, students presented their projects and finalists received cash awards and matching grants for their schools.



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CONGRATULATIONS
2021
FINALISTS!

CARING FOR OUR
Watersheds[®]
Ohio

CARING FOR OUR WATERSHEDS FINALISTS

1st

First Place:
**West Holmes
High School**
Garrett

OUT OF ALMOST 130 ENTRIES submitted this year, these ten teams advanced to the Final Competition where students competed for \$12,000 in awards for themselves and their schools.

Project: LET'S CATCH THE RAIN!

Student: Morgan & Allison

School: Wyoming High School

Description: Acknowledging all of the rain Cincinnati gets in the spring paired with its combined sewage system, Morgan and Allison wanted to reduce the amount of runoff in their community. Working with their city manager, city representatives, and school district, they were able to install two rain barrels at a local elementary school and community garden that experience high precipitation in the spring. By bringing these rain barrels into a public space, more people in the area will be exposed to the benefits of reducing rain runoff and water consumption.

Project: THE BUTTERFLY OASIS

Student: Ava, Madeline & Becca

School: Mount Notre Dame High School

Description: Ava, Madeline, and Becca wanted to help improve air quality and increase pollination in the area around their high school, leading them to create a butterfly garden. This project will both beautify the grounds at their school while leading as an example pollinator habitat in the area. In collaboration with their school administration and environmental club, their butterfly oasis will remain for years to come.

Project: SALIX PHYTOEXTRACTION

Student: Clarke

School: Wyoming High School

Description: Growing up, Clarke grew a fondness for the creek behind their home, exploring it with their brother as often as possible. As they grew older, they

began to learn and see the impacts of heavy metals in the Mill Creek and wanted to develop a solution for it. A Salix, or willow tree, helps prevent erosion with its root systems while also removing heavy metals from soil and water. Clarke's project includes collaborating with local parks in order to plant willow tree along the Mill Creek.

Project: COMMUNITY THRIFTING EVENT 2nd

Student: Caitlin & Stefanie

School: Wyoming High School

Description: As avid thrifters and advocates for secondhand clothing, Caitlin and Stefanie wanted to create an event for their school to reduce the impacts of fast fashion. They will be collecting donations of used clothing a month in advance so that they have time to sanitize, mend, and sort the items they receive. The money collected at their thrifting event will be donated to their Community Green Team, allowing the embodiment of "think globally, act locally" in their project.

Project: GO 2 BAT FOR OUR WATERSHED 3rd

Student: Mark & Owen

School: Wyoming High School

Description: A healthy watershed is the key to a healthy community, and the animals that could help contribute to that are bats! Mark and Owen want to improve bats' reputation as pollinators and consumers of insects, so they plan to create an educational website and flyers to distribute in their community. With this new information, they hope to encourage people in their area to install bat houses to support the local population.

Project: LIGHTING OUR WAY TO A GREENER FUTURE

Student: Hannah, Brenna, Kayla & Sarah

School: Mount Notre Dame High School

Second Place:
Wyoming High School
Caitlin & Stefanie

Description: At Hannah, Brenna, Kayla, and Sarah's high school, excessive electricity consumption is a major problem. In an effort to reduce this, they are working to replace the outdoor lights around walkways and signs with solar powered ones instead. This simple switch will cut back on electricity consumption and open doors for new ways to rely on renewable energy sources.

Project: PRECISION CONSERVATION IN THE MOHICAN RIVER WATERSHED 1st

Student: Garrett

School: West Holmes High School

Description: Nitrogen runoff from agriculture is one of the major sources of pollution in the Mohican River Watershed. Garrett, working with the Ashland Soil and Water Conservation District, wants to provide farmers with access to data modeling and educational resources in order to implement the best fertilization methods on their land. With these tools, the amount of nitrogen runoff polluting the watershed will slowly decrease while also improving the efficiency of local farms.

Project: REDUCE, REUSE, SHAMPOO!

Student: Megan & Meredith

School: Mount Notre Dame High School

Description: Shampoo and conditioner bottles so often find their way into landfills, creating waste instead of being recycled or reused. Megan and Meredith want to reduce this waste in their school and will be creating solid shampoo and conditioner bars. Their classmates will be encouraged to bring in three empty shampoo or conditioner bottles in exchange for these low-waste alternatives, allowing more to try out a plastic-free option while the traditional bottles are diverted from the trash.

3rd

Third Place:
Wyoming High School
Mark & Owen

Project: INCREASING CLEVELAND'S DEPLETED TREE CANOPY

Student: Ehtyu & Emeraude

School: John Marshall School of Engineering

Description: With the urbanization of the Cleveland area, many trees have been removed, leading to increased runoff with heavy rain and an urban heat island effect in warmer months. Ehtyu and Emeraude, in looking to find a solution to these problems, proposed to plant red oak trees in the surrounding community. These native trees can absorb up to 50 gallons of water a day and will provide shade as they grow, creating a more habitable urban space.

Project: SCOOP THE POOP

Student: Kk (Calyn)

School: Mount Notre Dame High School

Description: Winton Woods Park is popular in its area for its walking and hiking trails with many bringing their dogs along for an adventure. Kk found that despite its popularity, there were no stations in the park for pet waste. In collaboration with park staff, the duo is working to install and maintain waste stations with biodegradable bags.

HONORABLE MENTIONS:

Educating the Future of Our Watershed

Jake, Chris & William (Wyoming High School)

Pollution Cleanse with White Pine Trees

Arishta, Faith, Izzy (Wyoming High School)

PRECISION CONSERVATION IN THE MOHICAN RIVER WATERSHED

Most high school students have enough on their plates as they juggle school and extra-curricular activities, especially in light of the COVID-19 pandemic. Writing and submitting a proposal on their own to improve the health of their local watershed is not normally at the top of their to-do list, but that's exactly what West Holmes High School sophomore Garrett Houin did.

Houin developed a proposal that would reduce nutrient loss from farm fields into the streams and rivers of the Mohican Watershed. "My dad works in precision agriculture, and my mom works for Ashland Soil and Water, so we have a lot of very nerdy conversations in our house about how precision agriculture can be an important tool to address water quality concerns," Houin said.

Houin's research found nutrient runoff from farm fields and bacteria from failing septic systems and livestock manure are the biggest threats to water quality in his watershed. His

proposal helps area farmers use computer modeling tools to make better nutrient management choices.

Houin's proposal includes 100 percent cost-share for farmers to use the Adapt-N nitrogen model as well as Winfield United's R7 Field Forecasting tools. The tools provide an in-depth look at current nitrogen availability in farm fields as well as a forward-facing, predictive model of what nutrient levels will look like weeks and even months into the future. "Using these crop modeling tools, producers can see how the four Rs, right rate, right time, right source and right place, can benefit the bottom dollar for farmers, all while managing nutrients to reduce the risk of nutrient runoff," Houin said. "That's good news for farmers, good news for the environment, and good news for those of us who live and work in the watershed."



INCREASING CLEVELAND'S DEPLETED TREE CANOPY

Trees play an important role in our environment. They provide oxygen, shelter, improve air quality, water quality, and can do more. One tree can produce nearly 260 pounds of oxygen each year, so many trees can really help to create a safer environment. That's why we have decided to focus on trees. Planting more trees would mean, increasing Cleveland's tree canopy, which has massively decreased over the last 80 years, and reducing stormwater runoff, which has also become a huge issue in our community.

Ever since Cleveland's tree cover has begun to decrease, the Lake Erie watershed has become exposed to many harmful pollutants that enter through stormwater runoff, which leaves our environment unsafe. In order to keep this from happening, we have decided to plant trees and encourage people to plant trees as well, so that we can create a healthier environment. We are planning on

teaching a lesson on trees to fifth graders so that they can know how crucial they are in our environment. We also plan on distributing red oak seedlings and brochures to 190 fifth-grade students on the East and West side of Cleveland and planting trees on our campus ground.

We made a brochure that contains information on native trees, how to plant and care for trees, and are planning on distributing them throughout the community to spread awareness. We are also planning on partnering up with a neighborhood organization called the Bellaire-Puritas Development Corporation and Dominion Gas, which will use our brochure to spread the word and keep people more informed of this issue. Our goal and hope are to increase Cleveland's tree canopy, by planting more trees, which will have a huge impact on the environment in the city of Cleveland and keep the Lake Erie watershed healthy for all.



CARING FOR OUR WATERSHEDS – COVID EDITION

As with everything else this past year, Caring For Our Watersheds changed a lot to account for the coronavirus pandemic, adhering to all CDC and statewide mandates. While some students remained in person for most of the school year, some districts were mostly remote, and others had hybrid schedules, changing back and forth based on the current community spread. This is most definitely not the ideal way to learn, but students, teachers and parents did an amazing job adapting to this 'new normal.' We all did our best to learn, teach, adapt, stay connected while staying apart and hopefully finding time for some self-care.

The Caring For Our Watersheds contest was no different. We switched all of our presentations to virtual zoom presentations and helped students and teachers through online chats, email

and phone calls. We had seven new schools participate in the contest this year for the first time and we truly hope they enjoyed their experience and will be back to participate next year, with all being well, in-person.

All of the top 10 students deserve an extra shout-out. They did an amazing job adapting their projects to comply with current safety standards, finding ways to be creative and educate people in a virtual world and adjusting to the ever-changing deadlines we threw at them because we had to change our finals to a virtual event. Everyone did such an amazing job and deserves all the praise (and cash prizes). It has been a pleasure working with you and I hope our paths cross again someday. IN the meantime, do everything you can to stop the spread.





PARTNERS IN EDUCATION

Organizations dedicated to creating the next generation of land stewards in Hamilton County

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 PARTNERS

PARTICIPATING TEACHERS AND SCHOOLS

- Jeff Bakunas** - Rutherford B. Hayes High School
- Deborah Brookbank** - Winton Woods High School
- Mary Brown** - John Marshall School of Engineering
- Joe W Carstensen** - Clay High School
- Ashley Chorba** - John Marshall School of Engineering
- Kelly Dye** - West Holmes High School
- Taylor Freeman** - Port Clinton High School
- Maggie Little** - Valley STEM
- Tracy Majors** - Wyoming High School
- Monika Nuñez** - Ursuline Academy
- Mary Beth Rieth** - Mount Notre Dame High School
- Tony Riley** - Athens High School
- Tricia Schoen** - Genoa Area High School
- Kat Sickinger** - Summit Country Day School
- Shannon Thomas** - Twinsburg High School

JUDGES AND VOLUNTEERS

- Emma Brandt** - CFW Intern
- Pat Bruns** - former OH Dept of Education member
- Rachel Cranmer** - Keep Cincinnati Beautiful
- Lori Dorn** - Greenacres Foundation
- Sara Fehring** - HC Conservation District
- Gia Giammarinaro** - Cincinnati Park Board
- Cory Gonya** - Nutrien
- Scott Huber** - HC Conservation District
- Sarah Kitsinis** - Coyle SWPPP Professionals
- Christen Lubbers** - Architectural Fdn of Cincinnati
- Kara Luggen** - Keep Cincinnati Beautiful
- Anne Lyon** - Mill Creek Alliance
- Sue Magness** - Office of Environment & Sustainability
- Katie Nainiger** - Nutrients for Life
- Fia Turczynewycz** - Guide Us Green