



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 ten projects are selected to compete in the final competition which was held on May 6th. \$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 reality. At the final event, students presented their projects and finalists received cash awards and matching grants for their schools.

Caring For Our Watersheds is a joint program of the Hamilton County Conservation District, Nutrien and Nutrients for Life.



Caring For Our Watersheds Finalists

Out of over 100 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.



Ladasia

Spencer Center for Gifted and Exceptional Students

Native Prairie Species Garden



Zachary and Ryan

Loveland HS

Community Based Clean-up Station



Hollis, Callie and Margot

Wyoming High School

Fashion in America: Fast and Forsaken



Project: Community-Based Cleanup Station in Polluted Parks
Student: Zachary & Ryan
School: Loveland High School

Trash build-up from littering is a problem in local parks, which can lead to the pollution of nearby waterways. Zachary and Ryan created a solution to this problem by setting up a "park cleanup station" in their community. This station includes a box filled with empty coffee bags and signs to encourage people walking on the trails to grab a bag, pick up trash they see, and throw away the bag on their way out. This community-driven cleanup process educates people on the negative effects of trash in their environment and provides them with the necessary means to help fix this problem.

Project: Vapes of Wrath
Student: Ethan & Cullen
School: Wyoming High School

Vaping has increased in practice in recent years, and many vapes today contain hazardous materials, like lithium batteries, which are rarely disposed of properly. Ethan and Cullen decided to raise awareness for this issue by setting up hazardous waste collection containers around their community so vapes can be easily and properly disposed of. They also distributed educational resources about the dangers of vaping throughout their school, this way people are aware of the ways in which vaping can affect both your health and local environment.

Project: Fashion in America: Fast and Forsaken (for the environment)
Student: Hollis, Callie & Margot
School: Wyoming High School

Fast fashion is a rapidly growing industry that is responsible for 10% of carbon emissions each year, having a huge impact on our planet. To combat this issue Hollis, Callie, and Margot decided to host a clothing drive and thrift event at their school. For every item donated, people received one credit to spend during the thrift event the next day. Their goal is to promote keeping as much as possible out of the landfill and encouraging their community to reuse! Along with this, the group aims to educate the community about how their personal choices can impact their watershed.

Project: Cloth Roll Towel Cabinets
Student: Lloyd
School: Spencer Center for Gifted and Exceptional Students

Paper towels are used in almost every public restroom, including in our schools. After disposing of these towels, people often don't think about their environmental impacts. Lloyd decided to spread awareness for this issue by creating an educational campaign, using both posters and presentations, to bring attention to paper towel waste and encourage air dryer usage in his school. He also set up a booth to distribute cloth paper towels to staff and students, providing people with a reusable alternative to paper towel use.

Project: Bee the Change
Student: Keira, Erin, Ian & Melia
School: Loveland High School

Single-use plastic takes a long time to break down, and when it does, it releases microplastics and chemicals that harm the local environment and watershed. To help reduce this problem, this group opted to hand out beeswax wraps- a reusable alternative to single-use plastic- as well as pamphlets to everyone in their school. The pamphlets encompassed lots of information, including plastic's harmful effects, why beeswax wraps are a great alternative to single-use plastics, and how people can help the plastic problem on their own.

Project: Native Prairie Species Garden
Student: Ladasia
School: Spencer Center for Gifted and Exceptional Students

Native plants are a great way to increase local biodiversity as well as reduce runoff from stormwater, which can carry harmful pollutants to local waterways. Ladasia decided to tackle the issue of low plant diversity on her school's campus by planting a native prairie species garden. The garden contains educational signs as well as a native prairie, with a path for students to explore. This garden helps to stop runoff that pollutes the local watershed, educates students on different plant species, and builds land diversity in her school environment.

Project: The Impact of Styrofoam Lunch Trays
Student: Olivia, Sophia, Wyatt & Jacob
School: Loveland High School

Styrofoam, which is used by many schools for disposable materials like lunch trays, can have many negative impacts on our watershed. At Loveland High School, around 48,750 Styrofoam trays are used each year. To address this large amount of Styrofoam waste, this team decided to switch out their school's old Styrofoam trays with paper lunch trays. Additionally, they created informational posters to help educate fellow students and faculty on just how much better this switch will be for their local environment.

Project: Sustainable Cooking
Student: Kendle, Maya & Audree
School: Mount Notre Dame High School

It can often be a struggle to find food that is both good for you and the environment. Kendle, Maya and Audree tackle this issue by creating a sustainable cookbook, including recipes that encourage readers to eat a plant-based diet and buy locally sourced produce. They decided to offer access to the book online, reducing paper use in the process. This cookbook encourages readers to develop an environmentally friendly diet, all while offering recipes that are both healthy and delicious!

Project: Sign for Change
Student: Riley & Gavin
School: Loveland High School

Idling cars release dangerous chemicals into the air like carbon monoxide and carbon dioxide that can have significant effects on our health and the local environment. Riley and Gavin decided to raise awareness for this issue by placing signs outside of their middle school drop-off line that asks people to turn off their car while waiting in line. These signs will not only help improve local air quality but also help to educate people on how their individual choices can affect the environment!

Project: Reducing and Removing Litter at School
Student: Gwendolyn (Gwen)
School: Spencer Center for Gifted and Exceptional Students

Littering is a problem in many communities, this trash can travel to storm drains and eventually end up in nearby waterways. In order to address this issue in her own school, Gwendolyn decided to install trash and recycling cans outside her school's campus to provide students with accessible and proper areas to dispose of their trash. She also created a litter club to meet monthly to help collect trash from outside of the school. This is a long-term solution to managing and reducing litter in her school and community.

Honorable Mentions
Clothing Swap: "When you shop, don't go over the top"
Grace, Wren, Megan & McKenzie (Ursuline Academy)

Watch What You Are Drinking Out Of
Ellie, Paige, Hannah & Shohjahon (Loveland High School)

Fashion in America: Fast and Forsaken (for the environment)

Fast fashion has risen tremendously in the past few years from increased internet usage and social media access. Places like Shein, Fashion Nova, ASOS, etc. are seeing dramatic spikes in sales over the past few years as online presence in society is as high as ever. According to Statistica, fast fashion was marketed at 91 billion dollars and expected to reach 133 billion dollars by 2026. With this comes the giant toll on our environment and watershed as a majority of these clothes are worn a few times then discarded into landfills and even end up in waterways. There is so much more purpose these items can hold, and so much more life left in them. As Sustainably Chic states, the dyes of textiles derived from clothing manufactures produce near 20% of water pollution we see today; as of 2020, 79 trillion liters of water are used annually by the fashion industry.

Hollis, Callie & Margot understand there is a growing issue with fast fashion in our community. They devised a plan to host a clothing drive/thrift event to tackle this issue. Their goal was to start/continue a cycle of clean shopping with members of their community. The students gave the opportunity for people to clean out their closets and donate anything they do not wear anymore, giving these clothes a second life. With everything they donated, people received a credit which would then purchase them an item the following day; the point system they established was encouragement for donations. If people did not have any items to donate, they were given an opportunity to donate canned goods and toiletries to be donated to Matthew 25 in order to receive points another way. This substantially increased our turnout on both days of the drive.

Implementation took weeks of deliberate planning and preparation. For an adequate turnout, the students took time to make sure their message reached several audiences, including making an Instagram page, hanging flyers around the school, school announcements, encouraging teachers to spread the word, making Facebook posts, making street signs and having the principal send out information. Their goal was to make sure everyone, not just high school students, heard the news. They acknowledged that the issue of fast fashion should continue to be prevented after the clothing drive. To do this, they printed posters with links of places both online and in person to continue the cycle of clean shopping as well as taking it up with Project Lead at their school to turn the drive into a yearly tradition. They then collected thousands of items of donations on April 15th which were sorted and set up for easy shopping the next day. Collecting clothes from a range of toddler clothes to maternity clothes to anything in between, they received tremendous amounts of donations. With no extra expense for community members, they were able to shop for all items with a provided tote bag. People from a range of schools and age groups showed up to take home a new, environmentally friendly wardrobe. With only a fraction of the donations they received left by the end of the day, all remaining items as well as the donated canned goods and toiletries were donated to Matthew 25 to make their impact global.

Bee the Change

It takes one day to use a plastic bag and throw it away, but after that, the average plastic bag takes around 1000 years to photodegrade. As it does, the plastic becomes tiny microplastics that are carried by runoff and wind to bodies of water. In a study by Tel Aviv University, researchers found that those microplastics absorb and concentrate toxic substances, increasing their toxicity 10-fold. Some scientists have also estimated that humans consume 5 grams of these microplastics per week.

Keira, Melia, Erin and Ian, four students and friends from Loveland High School, wanted to help reduce this problem to protect their watershed and all creatures who live in and use the water. So, they made a plan to hand out beeswax wraps to the people in their school and community. Beeswax wraps

are a sustainable alternative to Ziploc bags and plastic wrap. They can be used to cover bowls, wrap around food, and can be folded into a pouch that holds snacks. They can be cleaned and used for up to a year, and once the wraps cannot be used any longer, they will completely break down within a few months of being disposed of, with no harmful after-effects.

The group went to their downtown area and handed out Beeswax wrap kits to people walking by. The kits included a small and medium or large wrap; information on how to use and clean the wraps; and a pamphlet with information on the plastic problem, ways people can reduce their plastic waste, and links to their website as well as other resources. In one day, they gave out 100 kits. They also gave them out to staff and students at their school. In total, they gave away 250 kits to encourage others to use the sustainable wraps. Assuming everyone uses one bag per day, five days a week, they hope their project will save 62,400 plastic bags from being used the following year.

The group wants to make an impact, but they know they can't do it alone. "We hope other students will be inspired by our project and help the environment in their own way," says Erin. "It's all a ripple effect," Melia adds. "Someone might see our project and make their own project, or if one person just enjoys sustainable products, they can pass that enthusiasm to another person. We're making a difference beyond what we directly do." Less plastic in the trash means less pollution in the water, and this group is set to "Bee the Change" in plastic pollution.

Native Prairie Species Garden

When you take a shower, drink water before gym class, or brush your teeth before school, you are using water from the Ohio River. The Ohio River is our closest major watershed and over 5 million people use it every day. Runoff waters from heavy rains travel over our land, carrying pollutants into the river and causing issues for organisms that use it. Creating a garden, especially one with species that are native to the land, reduces runoff and erosion. The plants create deep root systems that absorb the heavy rain waters, naturally removing pollutants and helping the healthier soil to remain in place. A garden also increases plant biodiversity to better support more native animal species.

Ladasia Faulkner, a junior at Spencer Center for Gifted and Exceptional Students, thought about how bad the vegetation biodiversity at her school is (the students calculated an average diversity score of 0.0765 and 0 means no diversity). She learned more about the importance of biodiversity to watersheds and decided to start a native prairie garden at her school. Through research for this project, she learned about the importance of the garden for health, education and aesthetics as well.

Her two-part garden features both a wild restoration area and an educational garden so that visitors can see individual species. She created informational books for visitors to use and learn more about each plant featured in the garden. Ladasia used volunteers to build the garden barriers, weed, pour gravel, till, spread the seeds, design and create mosaic stepping-stones and more. By using lots of volunteers, she taught many people how to create a garden, potentially encouraging them to build their own. She even put excess seeds in custom seed packets and distributed them to students, staff and community volunteers who were interested in starting prairie restoration gardens at home. Ladasia hopes that, even after she graduates, this garden will flourish on and increase the health of the campus, the watershed, and the students and staff that attend the school for years to come.

PARTNERS IN EDUCATION

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

Nutrien, Nutrients for Life and The Hamilton County Conservation District 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 Conservation District has partnered with Nutrien and Nutrients for Life to establish Caring For Our Watersheds in Ohio, a unique program that enhances classroom learning through the practice of environmental research, writing skills, public speaking and hands-on stewardship. The program, which is funded by Nutrien and run by Hamilton County Conservation District, asks high school students to propose ideas on how to improve local watersheds. Students with strong proposals 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 the state of 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 Conservation District (HCCD) 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. HCCD 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 develop and distribute 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
Mary Brown - John Marshall School of Engineering
Kelly Dye - West Holmes High School
Tracy Majors - Wyoming High School
Bret Miller - The Summit Country Day School
Tonya Nkhata - Loveland High School
Monika Nuñez - Ursuline Academy
Mary Beth Rieth - Mount Notre Dame High School
Kira Rucker - Spencer Center for Gifted & Exceptional Students
Kat Sickinger - The Summit Country Day School
Thomas Smith - Batavia High School
Karen Stautberg - West Clermont High School

JUDGES, MENTORS AND VOLUNTEERS

Ellen Allen - Greenacres Foundation
Penny Borgman - Fernald Nature Preserve
Pat Bruns - Former OH Dept of Education Board Member
Holly Christmann - Hamilton County Assistant County Administrator
Dennis Clement - Ohio Environmental Protection Agency
Rachel Cranmer - Volunteer
Lori Dorn - Greenacres Foundation
Mary Dudley - Civic Garden Center
Sara Fehring - Hamilton County Conservation District
Mallory Fox - Greenacres Foundation
Gia Giammarinaro - Cincinnati Parks
Cory Gonya - Nutrien, Inc.
Mendi Hartley - Hamilton County Conservation District
Emily Horne - Greenacres Foundation
Emily Hoskins - Hamilton County Conservation District
Scott Huber - Hamilton County Conservation District
Kylie Johnson - The Ohio Environmental Council
Sharon Johnson - Volunteer
Sarah Kitsinis - Advanced Testing Laboratories
Heather Lauer - Ohio Environmental Protection Agency
Jason Laughlin - Nutrien, Inc.
Christen Lubbers - Architectural Foundation of Cincinnati
Anne Lyon - Retired Educator
Niki Marengo - Clermont Park District
Sarah Meadows - Hamilton County Conservation District
Elise Roalef - Hamilton County R3Source
Tony Staubach - Hamilton County R3Source
Emily Storm - Architectural Foundation of Cincinnati
Fia Turczynewycz - Guide Us Green, Simply Zero
Claudia Zaher - Volunteer
Kat Zelak - Clermont Soil and Water Conservation District