

# Discover Nature

News and Programs  
from the ODC Network



Fall  
2022



The **ODC Network** is a collection of business divisions with the mission to advance outdoor education and conservation in West Michigan.



## FREE ADMISSION—Two Locations!

**4214 56th Street • Holland, MI • 49423**

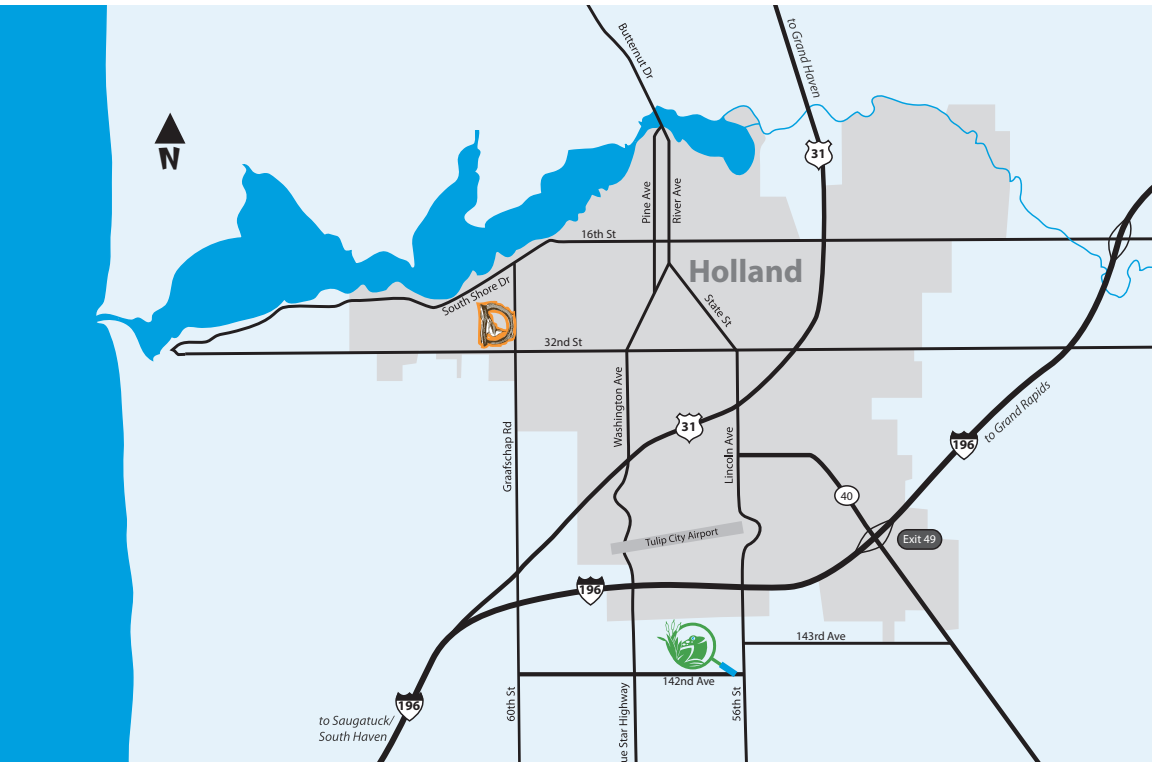


The Outdoor Discovery Center is 155 acres with about 3 miles of trails, located on the south side of Holland, just south of West Michigan Regional Airport. Admission is free! Trails open dawn to dusk—Visitors Center open 10 AM–3 PM, Tuesday–Saturday.

**600 Graafschap Road • Holland, MI • 49423**



DeGraaf Nature Center is 18 acres of forest and wetlands located within the City of Holland, just south of Lake Macatawa. Admission is free! Trails open dawn to dusk—Helen O. Brower Visitors Center open 10 AM–3 PM, Tuesday–Saturday.



## Discover Nature • Descubrir la Naturaleza

This summer ODC strengthened community partnership with **Lighthouse Immigrant Advocates**, a local nonprofit organization in Holland whose mission is 'bringing stability to West Michigan families and communities through legal services, education, and advocacy.' LIA works hard to make our region known as a welcoming and inclusive community for immigrant and refugee families.

At LIA's Strength In Stories outreach event in June, ODC had a presence for the first time by providing an interactive outdoor booth experience for the attendees. Children had the opportunity to see and touch a live turtle, play a "fishing" game, and feel the animal furs. Families learned about the ODC mission in English and Spanish while being encouraged to visit our admission-free nature center.

In July, we hosted LIA staff at the archery range for their team development activity. For the majority of the group it was their first time visiting ODC. Several staff members represent different nationalities, languages, and life experiences. ODC team members Vanessa and Andrea made sure it was a welcoming place while sharing about our cultural history center and ODC programming. The LIA team was new to the archery and atlatls experience. After receiving safety instructions and tips from our instructor Andrea they finally got to practice their target shooting skills. The staff were smiling as they got better each time practicing using different bows and arrows. ODC looks forward to continue bringing outdoor programming to diverse young professionals in our community.



This is a friendly reminder to keep visiting parks in your **2022 Park Passport**. Passports must be turned in to the **Visitor Center at ODC** or **DeGraaf Nature Center** by **Saturday, November 5** to receive a prize and the giveaway. *Prizes available while supplies last.*



## Join us for a Program!

In the following pages, you will find titles of our community programs available in the upcoming months. Look for more on our website or Facebook!

## Program Locations

Programs may be held at the **Outdoor Discovery Center**, at **DeGraaf Nature Center**, or at **various other parks** and natural areas in our community. Attend programs closest to you—or discover new places in our community. All locations are listed next to the program title—when necessary, the address and details can be found in *italics* beneath the program description.



Outdoor Discovery Center  
4214 56th Street  
Holland, MI 49423  
[outdoordiscovery.org](http://outdoordiscovery.org)



DeGraaf Nature Center  
600 Graafschap Road  
Holland, MI 49423  
[degraaf.org](http://degraaf.org)



Other Locations  
*Addresses listed beneath  
program description*

October 2022

November

December

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1
2	3	Women in Nature - Archery 4	5	Photography Walk & Journal Workshop 5 Family Fall Scavenger Hunt	Knee-high Naturalists 7 Night Hike	Collage and Coffee 8
9	10	11	Nature for Tykes - Fall Leaves 12	13	Knee-high Naturalists 14 VoLes Snake Snacks	15
16	Homeschool - MI Indigenous People 17	Explore A Story 18	19	Watershed Advisory Stakeholder Meeting 20	Knee-high Naturalists 21	Treats & Trails 22 VoLes <i>ODC &amp; DeGraaf Visitors Centers Closed</i>
23	24	25	26	27	Knee-high Naturalists 28	29
30	31	1	2	Animal Heroes of Conservation 3	Knee-high Naturalists 4	Migratory 5K Fun Run 5 VoLes
6	7	Explore A Story 8	9	10	Knee-high Naturalists 11 Snake Snacks	12
13	Homeschool - Insulate, Hibernate, Migrate 14	15	Nature for Tykes 16	Women In Nature - Greenery Workshop 17	Knee-high Naturalists 18 VoLes	19
20	21	22	23	24 <i>ODC &amp; DeGraaf Visitors Center Closed</i>	25 <i>ODC &amp; DeGraaf Visitors Center Closed</i>	26 <i>DeGraaf Visitors Center Closed</i>
27	28	Holiday Winter Walk with SCA 29	Greenery Workshop 30	1 Holiday Story Time	Knee-high Naturalists 2	3
4	5	Holiday Winter Walk 6	7	8 Holiday Story Time	Knee-high Naturalists 9 Snack Snacks	Pioneer Christmas 10
11	Homeschool - Homestead Holiday 12	Holiday Winter Walk with SCA 13	Nature for Tykes - Hibernation 14	15 Holiday Story Time	Knee-high Naturalists 16	Nature Holiday Craft 17
18	19	Holiday Winter Walk 20	Winter Solstice Celebration 21	22 Holiday Story Time	23 <i>ODC &amp; DeGraaf Visitors Center Closed</i>	24 <i>ODC &amp; DeGraaf Visitors Center Closed</i>
25	26	Live Birds of Prey Show 27 Holiday Winter Walk	Nature Puppet Show 28	Investigating Owl Pellets 29	30 <i>ODC &amp; DeGraaf Visitors Center Closed</i>	Christmas Bird Count 31 <i>ODC &amp; DeGraaf Visitors Center Closed</i>

**Women In Nature (ODC)** **Ages 0-99**

This program series is designed to motivate women to be more healthy, active and passionate about the natural world surrounding them.

Tuesday, October 4 • Archery

Thursday, November 17 • Greenery Workshop

6–7:30 PM • *Registration required • Fee: \$12 per person*

**Photography Walk & Journal Making Workshop (ODC)** **Ages 18-99**

Bring your smartphone or camera and join long-time friends and photographers, Kathy Odiorne and Heidi Quellet. We will photograph objects outdoors, then decorate a handmade journal to take home for yourself or as a gift, supplies included.

Thursday, October 6 • 6–8 PM • *Registration required • Fee: \$35 per participant, \$30 for members*

**Knee-high Naturalists (ODC)** **Ages 3-6** **Drop-off**

Introduce the natural world to young children through activities, books, snacks, live animals, and outside exploration.

Friday, October 7

Friday, November 4

Friday, December 2

Friday, October 21

Friday, November 18

Friday, December 16

10 AM–12 PM • *Registration required • Fee: \$10 per child, \$5 for members*

Find more program details and register at [outdoordiscovery.org](http://outdoordiscovery.org)

**Collage and Coffee (ODC)** **Ages 16-99**

Join Meg Shoup, Arts Outreach Educator at the Saugatuck Center for the Arts, on a morning walk, before creating a cut paper collage inspired by the themes and work of upcoming gallery artist, Molly Costello! Materials and coffee are provided.

Saturday, October 8 • 10–11:30 AM • *Registration required • Fee: \$20*

**Nature for Tykes (ODC)** **Ages 3-7**

Bring out your little tykes to learn more about nature. Please dress for the weather.

Wednesday, October 12 • Theme: Fall Leaves

Wednesday, November 16 • Theme: Turkeys

Wednesday, December 14 • Theme: Hibernation

10–11 AM • *Registration required • Fee: \$6 per child, \$4 for members*



## Successful Summer Camp Season

It was a busy season for the summer camp programs! Within the first two minutes of registration, every 4-6 year old slot was filled. After the first day of registration 86% of our camps were full, making it the fastest our camps have ever filled. In total, 309 out of 312 slots were filled by the end of the summer.

We also held our first bilingual Spanish/English camp to better serve the hispanic community in Holland. Because of the great interest in the camp, we will continue to offer this camp in the following summers. This camp also gave English speaking students important exposure to a culture and language different from their own which will lead to greater acceptance and understanding in our community.

Our Partnership with the Boys and Girls Club of GR expanded this year to include a program where our naturalist staff ran three weeks of afternoon summer camps with a different group of kids each week. During the camp, the naturalist staff and clubs would explore the different public parks in GR to encourage kids to explore their neighborhoods in new ways.

**Mark your calendars! Registration for 2023 Summer Camps opens February 1!**

Look for the 2023 offerings to be posted this winter at [outdoordiscovery.org/programs/camps](http://outdoordiscovery.org/programs/camps).



### Snake Snacks (ODC) Ages 3-99

Have you ever wondered what snakes eat? Come to the Visitors Center to watch our resident serpents enjoy a meal.

Friday, October 14      Friday, November 11      Friday, December 9

4–5 PM • Registration not required, but appreciated • Fee: \$6 per person, \$4 for members

### Homeschool Class (ODC) Ages 6-10 Drop-off

Monday, October 17 • Theme: Michigan’s Indigenous People

Wednesday, November 14 • Theme: Insulate, Hibernate, or Migrate

10 AM–12 PM • Registration required • Fee: \$10 per student



### VoLes (Various Locations) Ages 12-18 Drop-off

Our Volunteer League (nicknamed “VoLes”) is a service club for teens to experience what it takes to maintain a natural area and captive wildlife. Come work with ODC Network staff on a variety of indoor and outdoor tasks at the ODC and DeGraaf Nature Center. Past projects have included removing invasive species, cleaning enclosures, and adding nature play features. It’s also a great way to earn those community service volunteer hours!

No prior experience or participation is required to sign up.

Fri, October 14 • 3:30–5 PM

Sat, November 5 • 12–2 PM

Sat, October 22 • 2–7 PM

Fri, November 18 • 3:30–5 PM

Registration required • Fee: FREE



### Treats & Trails (ODC) Ages 0-99

Bring your entire family out for a safe and fun walk along the trails of the Outdoor Discovery Center. There will be wildlife encounters, games, and candy. Children are encouraged to wear their costumes. All the nature trails are wheelchair, stroller, and wagon-friendly. You must walk a total of 1.2 miles to see the entire event.

Saturday, October 22 • 2–7 PM • No registration necessary; No new admissions after 6 PM • Fee: \$10 per family

142nd Avenue and 56th Street will be converted to one-way streets for the event, with angled parking along one side.

If traveling from Holland, be prepared to detour around the property to approach from 142nd.

### Animal Heroes of Conservation (ODC) Ages 0-99

Heroes can be everywhere we look, even animal heroes! Meet some of our animal heroes from stories of conservation and learn about the difficult journeys they have had to endure. We will be able to see these live animals up close and learn how we can start to be conservation heroes ourselves!

We are partnering with the Little Read Lakeshore (<https://neabigreadlakeshore>) for this conservation program to go along with the book *Last Stop on Market Street* by Matt de la Peña.

The first 15 families to sign up receive a free copy (one book per household).

Thursday, November 3 • 6–7 PM • Registration appreciated • Fee: FREE



### Live Birds of Prey (ODC) Ages 7-99

What makes a bird of prey different from other birds? Using our collection of live birds, you will learn the life history of several species including hawks, owls and falcons. There will be a chance to get an up-close look at the birds and explore artifacts including skulls, wings, talons and feathers.

Tuesday, December 27 • 1–2 PM • Registration appreciated • Fee: \$6 per person, \$4 for members



# Holidays with the ODC Network

Create family memories and traditions with us during these winter programs!

## Holiday Winter Walk with Saugatuck Center for the Arts (ODC) Ages 0-99

Enjoy an evening stroll on our lantern lit trails during the Holiday season. Bring your friends and family out for this self-guided walk on our Sensory trail to enjoy the evening sky. Warm beverages will be available for your group. Flashlights are welcome and dress for the weather!

Tuesday, November 29

Tuesday, December 13

3:30–5 PM • No registration required • Fee: FREE

## Greenery Workshop (ODC) Ages 16-99

Make your own wall decoration or table arrangement and leave the mess behind. We'll provide fresh greens and other natural materials; bring your own gardening gloves, ribbons, or accessories, if you wish to use them.

Wednesday, November 30

6–7:30 PM • Registration required • Fee: \$20 per person

## Holiday Story Time (DeGraaf) Ages 0-8

Join us for a cozy story time in our Pioneer cabin decorated for the holidays. We will have a warm beverage and snack for your enjoyment as special guest speakers read some of our favorite holiday stories.

Thursday, December 1

Thursday, December 15

Thursday, December 8

Thursday, December 22

4:30–5 PM • No registration required • Fee: FREE

## Holiday Winter Walk (ODC) Ages 0-99

Enjoy an evening stroll on our lantern lit trails during the Holiday season. Bring your friends and family out for this self-guided walk on our Sensory trail to enjoy the evening sky. Warm beverages will be available in the pavilion for your group. Flashlights are welcome and please dress for the weather.

Tuesday, December 6

Tuesday, December 20

Tuesday, December 27

5:30–7:30 PM • No registration required • Fee: FREE

## Pioneer Christmas (DeGraaf) Ages 3-12

Happy Holidays! Experience some of the ways that pioneers prepared for their winter holidays as we visit the log cabin freshly decorated for the season. Children will learn about Christmas trees in Michigan, hand-dip candles, and make a practical pioneer craft to take home! Guardians must stay with the class.

Saturday, December 10

10–11:30 AM • Registration required • Fee: \$6 per child, \$4 for members

## Nature Holiday Craft (ODC) Ages 5-12

Join us and make a nature based craft made from found materials. We will go for a walk and find what we need for our craft and come back together to assemble it. Nature is the best inspiration for beautiful crafts!

Saturday, December 17

10–11 AM • Registration required • Fee: \$6 per child, \$4 for members

## Winter Solstice Celebration (ODC) Ages 6-14

The winter solstice has been a special day in some cultures for 1000's of years. We will dig into what the significance of the solstice is while having some fun celebrating the start of winter with crafts, games, and a snack over a warm fire. Dress for the weather as some of the program will be outdoors.

Wednesday, December 21

10–11 AM • Registration required • Fee: \$6 per child, \$4 for members

## Christmas Bird Count (DeGraaf) Ages 3-12

The Christmas Bird Count is in its 122nd year as the longest running citizen science project on the planet. Help staff of the ODC Network tally all the birds in the Holland count circle. No experience is required other than a willingness to be outside! Binoculars are available for lending. Email Jamie Krupka for more info or to sign up - [jamie@outdoordiscovery.org](mailto:jamie@outdoordiscovery.org)

Saturday, December 31

8 AM–1 PM • Registration required • Fee: FREE





## Evening with the ODC at Dragonflies Discovery Preschool

On Thursday, September 8th, we had our annual Evening with the ODC event where we celebrated the grand opening of the new Dragonflies Discovery Preschool site. Over 270 ODC Family and Friends were in attendance and we were able to raise \$620,000 for our next large project: the Herb Eldean Education Center at the ODC Nature Preserve.



## First Day of School at Dragonflies Discovery Preschool

The Dragonflies Discovery Preschool opened its doors this fall for the first time to welcome 174 new students. During the school year, these students will receive a high quality early childhood education while understanding and creating a lifelong connection to the natural world.



The new building has four different classrooms where sessions will be held. Each class will have a total of 20 students and three teachers. The preschool also has a fifth room designated for wrap around care, which can provide working parents a great option for childcare while they work.





## THANKS TO:

all of our **attendees, supporters, and sponsors** for investing in the ODC Network's mission of advancing outdoor education and conservation in West Michigan.

### EAGLE SPONSORS



# Volunteer Group Update

Corporate volunteer groups are crucial to helping our teams get projects done throughout our properties. This year we were able to bring in 13 different groups to get projects completed.

**DISHER Design, Lakewood Construction, MillerKnoll, Innotec, BVW Property Management, Koops Automated Systems, Tennant Co., GMB A&E, AVI-SPL, EnvizionIT, and Yanfeng** planned community service days with the ODC Network.

Some of these groups helped build docks, boardwalks and windbreak features while others helped stain, landscape, and lay sod at our various sites.

Many of them helped at **Dragonflies Discovery Preschool** to ensure the site would be ready for the upcoming school year.

**Thank you to all of our wonderful corporate volunteer groups, we are excited to see what projects are in store for 2023!**

*If you're interested in scheduling a volunteer opportunity for your team, please contact **Ashley VanZee**, [ashley@outdoordiscovery.org](mailto:ashley@outdoordiscovery.org) or 616-368-9289.*

There are nine different class options offered on varying days of the week both in the morning and the afternoon. The classes range from one day a week to five days a week, with some classes offered as half days and others as full days. While most of the classes are divided by age, there is one class comprised of both three and four year olds.

One of the classes for four year olds is offered five days a week for full days. This program qualifies for Michigan's Great Start Readiness Program and therefore provides tuition assistance to qualifying families. Transportation is also offered for this program.

Because the curriculum encourages students to connect with the natural world, the classes themselves are aptly named Maple, Sycamore, Cedar, Pine, Hemlock, Oak, Walnut, Elm, and Sassafras.



## Migratory 5K Fun Run (ODC)

If you are looking for a unique run, the ODC Nature Preserve is a great place to go. The Migratory 5K Fun Run will be approximately 3.1 miles and take place throughout our trail system. Depending on registration numbers, we will hold staggered start times to help alleviate the number of people in one area at a specific time. End your run with water, Biggby Coffee, and Hot Chocolate. There will also be an opportunity for a picture with one of our live birds of prey.

*Trails are stroller-friendly. Dogs are not permitted on this run, the route will go through the De Witt Birds of Prey Center and dogs are not permitted in that area of the nature preserve.*

T-shirt sizes are not guaranteed on registrations after October 8th, 2022.

**Saturday, November 5 • 10 AM–12 PM**

Registration required • Fee: \$30 per participant, \$20 for 12 yrs and younger  
Prices increase October 16

### Thank you to our First-in Sponsors and Supporters!



CL Construction | Back to Health Chiropractic  
Sponsorships are still available, contact Ashley VanZee  
(ashley@outdoordiscovery.org) for more information.



## Nature Puppet Show (ODC)

**Ages 0-7**

You're invited to join us for a puppet show! Let's learn about wild animals and their habitat homes.

After the show, stick around to meet some live Michigan animals up close. Please dress for the weather.

**Wednesday, December 28 • 10–11 AM** • Registration appreciated • Fee: \$6 per child, \$4 for members

## Investigating Owl Pellets (ODC)

**Ages 8-16**

Have you ever wondered what an owl eats? Find out first hand as you become a real forensic scientist and extract bones from an owl pellet to discover the prey consumed. Examine all sorts of bones up close and try to reassemble a skeleton!

**Thursday, December 29 • 2–3 PM** • Registration required • Fee: \$6 per child, \$4 for members



# Reimagining School: Supporting the Transformation of Education through Partnerships

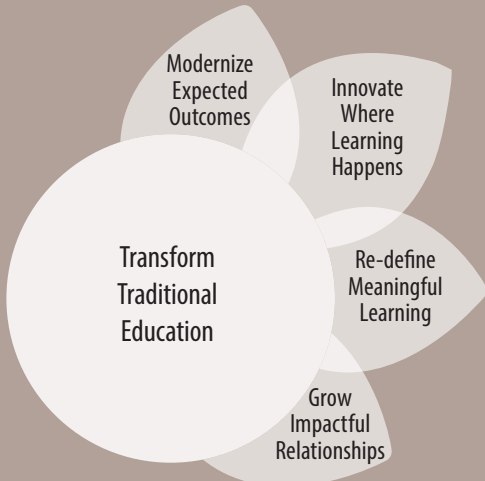
**How do you Reimagine School?** First, the ODC Education Network builds relationships and are actively involved in the system of school beyond training and consulting. Our systems approach that creates a mutually beneficial relationship between community partner and school system builds the backbone of our reimagine school project.

### Project Timeframe:

- **September 2022:** Begin Implementation of Project 1 at Holland Public Schools
- **November 2022:** Evaluation of Projects 2-4
- **August 2023:** Implementation of Projects 2-4

Second, we develop a scaffolded approach to moving students, teachers, buildings and districts forward together in the pursuit of meaningful learning beyond the classroom. The nature of the long-term relationships fosters implementation, change acceptance, and continual growth and reflection through all levels of our system.

**Why Reimagine School?** By supporting educators through transformative processes, the ODC Education Network is able to innovate traditional education practices and beliefs.



## Fall Family Scavenger Hunt (Keppel Forest) Ages 5-99

Get the family and explore outside on a fall scavenger hunt. Join one of our naturalists and hike the trails of Keppel Forest in search of colors, bugs, birds, plants and more. You're sure to find some fun as you search and learn about how plants and animals are getting ready for winter. All materials are provided.

**Thursday, October 6 • 6-7 PM** • Registration required • Fee: FREE - sponsored by Park Township  
Program Location: Keppel Forest, Lakewood Blvd & 168th, Holland

## Night Hike (Huyser Farm) Ages 8-99

Take a walk through the woods at night. Use your senses along the walk to find out how much you can feel, touch, hear, and see at night. Learn how nocturnal animals use their other senses to survive in the evening.

**Friday, October 7 • 7:30-8:30 PM** • Registration required • Fee: FREE - sponsored by Laketown Township  
Program Location: Huyser Farm Park, 4184 64th Street, Holland

# A Very Wet Macatawa Water Festival

On Saturday, August 13th, we held the Macatawa Water Festival on Windmill Island. It was a very wet day giving the "water" portion of the Macatawa Water Festival new meaning, but that didn't stop community members, partners, and sponsors from having a great time learning about our watershed.



### THANK YOU TO

Partners and Volunteers for making the event engaging and memorable for all attendees.

Watershed Sponsors



River Sponsors

**Velo City Cycles & Holland Litho**



**Explore a Story (DeGraaf)**

Tuesday, October 18

Tuesday, November 8

10–11 AM • *No registration necessary • Fee: \$6 per child, \$4 for members***Knee-high Naturalists (DeGraaf)**

Friday, October 14

Friday, November 11

Friday, October 28

Friday, December 9

10–11:30 AM • *Registration required • Fee: \$10 per child, \$5 for members*

The 2022 Nature-Rich Business Spotlight will be available this Fall! Scan the QR code to view an electronic copy!



## Supporting Our Watershed

**Cultivating Resilience Farm Field Day**

The third annual Cultivating Resilience Farm Field Day took place on August 18th. Farmers of all experience levels came out to Shady Side Farm to learn about the sustainable practices they could implement on their own farms. The day highlighted composting, no till farming, and rotational grazing, all of which preserve water quality, soil structure, and protect the watershed. Over 130 people attended the event, making it a big success.

**West Michigan Green****Stormwater Infrastructure Seminar**

On August 25th the West Michigan Green Stormwater Infrastructure Seminar was held at the Pinnacle Center. At the seminar, engineers, conservation professionals, and municipal employees discussed and learned about the importance of managing stormwater to protect the watershed. The specific green infrastructure techniques that can be used to manage stormwater, like bioretention ponds and rain gardens, were also discussed. With approximately 60 people attending the seminar, it was an educational day for all.

**Watershed Advisory Committee****Stakeholder Meeting (DeGraaf Nature Center)**

Join us for our bi-monthly stakeholder meeting where the public is invited to come learn about the progress being made on existing grant projects and participate in group exercises to understand the current conditions of the watershed.

Thursday, October 20 • 1:30–3 PM • *Registration recommended • Fee: FREE*

# My Seasonal Experience: the Watershed Interns

*A perspective on an ODC internship and seasonal employment from Eric Bauder, Izzy Hammond, and Sydney Quillian!*

These interns were very active this summer! Each week they completed secchi disk readings, chloride testing, bank erosion assessments and stream inventories to monitor water quality within the Macatawa watershed.

They also completed Projects to improve water quality. These projects included planting and maintaining rain gardens, streambank restoration projects, and native plant cultivation. The interns also assisted in macroinvertebrate sampling and river cleanups.

Sydney, Eric, and Izzy also assisted in community outreach events. At the Macatawa Water Festival, they ran a learning based game



Sydney, a junior at Grand Valley State University, is studying environmental and sustainability studies and communications.

Eric just completed his degree in environmental biology at Cornerstone University.

Izzy, a senior at Grand Valley State University, is studying biology with an emphasis in ecology and evolution.

and talked about fish and the watershed. At the third annual Cultivating Resilience Farm Field Day, the interns assisted in event preparation and running the event. They also had the opportunity to talk about different water quality measurements at the Green Stormwater Infrastructure Seminar.

The trio quickly became best friends, making the time they spent together in the office and in the field the highlight of their summer.



*Driving down College Avenue, you might have noticed the rain garden they planted in May.*



*The interns helped volunteers pull approximately 136 pounds of trash out of the Macatawa River at Window on the Waterfront.*

## Visiting artist, Jason Wesaw

In August CultureWorks & Outdoor Discovery Center welcomed back indigenous ceramicist & artist Jason Wesaw, member of the Pokagon Band of Potawatomi, in a day program at ODC's cultural history center and an evening program - artist seminar at the Herrick District Library in Downtown Holland.

During the day CultureWorks students and guests at the ODC participated in learning about the process of building a pit fire for the locally harvested "wild clay" pieces created by the students.



In the evening, a group of 30 community members gathered at the Herrick Library where they learned about Jason Wesaw's traditional and contemporary art pieces, which are inspired by the native connection to the land and water. The public is encouraged to enjoy his work being showcased at museums and exhibits around the country and also internationally.



# Peters Creek Restoration



Our efforts to minimize the amount of sediment and phosphorus reaching Lake Mac is ongoing, making the lake a cleaner and clearer resource for the community. These pollutants come from a variety of places across the watershed and from a variety of sources -- farm fields, parking lots, construction sites, and backyards all can contribute dirt. Another significant contributor is the watershed's streams. Runoff from hard surfaces and fields leads to stronger flows, like ones with the power to scour streambanks and eat away at the root systems of dead ash trees.

Along with controlling how water gets to the streams, such as through our rain garden and bioswale projects, there are streams that have received so much abuse from floodwaters that we need to stabilize and restore them. One such stream is Peters Creek, which has historically had some of the highest sediment and phosphorus loads in the watershed. With grant funding from EGLE's Non-Point Source program, we were recently able to restore 1200 feet of channel in Zeeland Township. We had previously restored around 750 feet of this same stream back in 2019, but the project was so successful that we decided to extend the restoration work further upstream.

Our original project put naturalized curves back into the stream, rather than the sharp, haphazard bends the stream had developed from years of flooding. The restoration area looked great, but the area just upstream was a log-jammed mess. So using the stream designing expertise of stream engineers Mike Geenan and Chris Freiburger along with the team at Niswander Environmental, we came up with a plan to redesign the stream using processes that mimic what a healthy stream would do naturally. Logs were placed at the edges of bends to help absorb the energy of floodwaters. These pieces of downed trees, called toe wood, are softer than rock or concrete, which allow them to absorb some of the energy of the stream, instead of just bouncing that energy down to the next bend, or creating a scour point. We then secured the reworked streambanks with biodegradable erosion mats and reseeded it with native species. The crew from 28 Specialties did a great job moving the dirt and assembling the log structures.

We hope that these types of techniques can be used more broadly across the watershed. While there is some higher cost with the design and implementation, these systems will have much lower long-term maintenance than a traditional ditch project. They also have the added benefit of creating a higher-quality habitat for the fish, reptiles, amphibians, and birds that frequent Peters Creek.

## Steps in Stream-Bank Stabilization



Reshaping stream banks in preparation for erosion mats and native planting.



Spreading native straw and seed along the bank.



Rolling out biodegradable mats that hold seeds and straw in place until they become better established.



Placing stakes that keep erosion mats in place.



## Haworth Prairie Restoration

This past May, ODC Conservation Services began the project of restoring a native prairie at Haworth's headquarters. By replacing the turf grass on Haworth's campus with native prairie grasses and flowers, the prairie will once again support populations of native wildlife like bees, butterflies and birds.

The restoration project rested on the successful removal of invasive plants like Autumn Olive, Teasel, and Canada Thistle. The Teasel and Canada Thistle were treated with herbicide in both June and August, and the Autumn Olive will receive a cut stump treatment in the early fall.

Following the most recent herbicide treatment, a seed mix of annual rye and oat was spread. Planting an annual crop in the area protects the soil and ensures it will not be eroded before the native plants germinate in the spring. Additionally, it helps to improve the soil's structure and water retention.



The final phase of this restoration project for the year will come in November or December as close to the first hard frost as possible. During this time, a seed mix with the native grasses and flowers will be spread. The native seed mix will be spread this late in the season to allow the seeds to lie dormant for the winter, preventing germination from occurring until the warmer spring months.

The seeds will take three growing seasons to establish the desired plant community within the prairie. While this growth is occurring, the project will be monitored to ensure the desired native plants are growing and the invasive plants do not begin to take over. This project will help to preserve native ecosystems while promoting Haworth's goal of having a more sustainable campus.



Clearing the existing plants creates more room for native plants like Milkweed, which is an essential plant for Monarch Butterflies.



Milkweed

### Targeted Invasive Plants

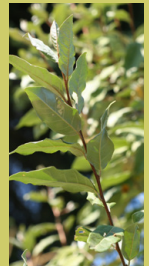
Invasive species can cause biological pollution by reducing plant diversity, impacting food sources and habitat for wildlife, including pollinators crucial for crop and other plant growth.



Canada Thistle



Teasel



Autumn Olive



4214 56th Street • Holland, MI • 49423

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