

**PFAS
SAMPLING
RESULTS!**

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**BACK IN THE DAY:
CONNECTIONS.**

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THE

HOWL

Fall/Winter 2022 - 23

www.yellowdogwatershed.org

Bi-annual Newsletter
Volume 26, Issue 2

Preserving the Yellow Dog Watershed in its most natural state for the use of the public, now, and for the benefit of future generations.

THE CLEAN WATER ACT TURNS 50

By Rochelle Dale, Administrator

A little over three years ago, in June 2019, I attended a River Network conference in Cleveland Ohio. You might think Cleveland an odd choice for a conference about water and river health, but 2019 marked the 50th anniversary of the last time the Cuyahoga River, which runs through the center of Cleveland before emptying into Lake Erie, caught fire. The first fire on the big river happened in 1868, and after that the river burned at least 11 more times before the last one in 1969 finally caught the world's attention. It became the catalyst for the Clean Water Act (CWA) of 1972, and this year we are celebrating its 50th anniversary.

The burning river was the proverbial straw that broke the camel's back, but environmental awareness and therefore the environmental movement had been growing throughout the 60s. Rachel Carson published her book *Silent Spring* in 1962, which poignantly described the effects of indiscriminate use of pesticides, particularly DDT. Carson suggested that the chemical industries were guilty of disseminating misinformation and that public officials accepted the marketing claims without investigation. As the 60s wore on, the smog over Los Angeles and New York City settled in at an alarming rate due to lack of air quality standards. In January 1969 an oil drilling platform exploded off the coast of Santa Barbara, dumping 100,000 barrels of crude oil into the ocean, killing wildlife and covering a 35 mile stretch of Southern California coastline. According to the Los Angeles Times, Californians believed they were "losing the fight against pollution of its irreplaceable water resources." Then in June 1969, the Cuyahoga went up in flames.

Richard Nixon was president at the time, and in early 1970 as a result of heightened public concern over air and water pollution, he presented the House and Senate with a 37-point message on the environment. Among the requests were funding for the improvement of water treatment facilities, national air quality standards, stringent guidelines to lower auto emissions, and legislation to end the dumping of wastes into the Great Lakes.



The first Earth Day was celebrated on April 22, 1970, and around the same time, Nixon created a council whose goal was to organize the various federal programs designed to reduce pollution to operate more efficiently. The result was the creation of the Environmental Protection Agency (EPA), officially formed December 2, 1970.

Out of this then came the Clean Water Act of 1972, which received overwhelming bipartisan support in both the House and the Senate, enough to override a presidential veto (though Nixon supported the CWA, he believed the bill was too costly, the budget too high). The CWA helped reverse years of environmental damage and pollution to our rivers, lakes, and wetlands. The Act demanded the reduction of pollutants and contaminants discharged into our waters and set standards for water quality that would protect public health, wildlife, and recreational opportunities. Here are just a few highlights of the CWA:

(continued on page 12)

BETH MILLNER JEWELRY FUNDRAISER PENDANT NOW AVAILABLE



Say It in *The Howl*

The Yellow Dog Howl is published biannually by The Yellow Dog Watershed Preserve for its members and friends. We welcome your thoughts on environmental issues, stories of the history and legacy of the watershed, or anything you feel is related to our mission. Comments, suggestions, articles, poems or art can be shared with Sarah Heuer: sarah@yellowdogwatershed.org

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*Above: Beth Millner at work in her studio. At left: finished pendant.
Photos courtesy Beth Millner Jewelry.*

In the last issue we announced that Beth Millner Jewelry had selected YDWP as a partner in their Fundraiser Pendant Program for 2022. Beth has created a beautiful waterfall design inspired by our river, which is now on sale at her shop on Washington St. in Marquette and on the Beth Millner Jewelry website. At least \$50 from every pendant sold will be donated to YDWP, and shoppers can choose to donate even more with their purchase. What better way to celebrate the holidays than by offering that river lover on your list a gorgeous pendant that supports local artists and our vital work in the watershed!



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FROM THE CHAIR: GRATITUDE

By Chauncey Moran, Chairman of the Board

Blessings to all who read this message, especially those who, through direct involvement, financial contribution, or prayer supported the Yellow Dog Watershed Preserve over the last 28 years. You may have been a Board or staff member, a volunteer, or maybe you serve in local, state, federal, or tribal government, or are a member of another non-profit organization. You might be a corporate or private land owner, or perhaps a storyteller carrying the adventure of your visit to our 2500 acres.

Since our founding, we have relied on dedicated volunteers who, not only walk the corridors of the river, but sample the water for critical constituents that indicate safe conditions for living organisms, as well as for recreation. Throughout the year, staff and volunteers are on the land and water, monitoring and collecting data. It may be on a tributary stream, or along the River itself, observing high water effects on the shoreline, or evaluating activities that may negatively affect the integrity of the river bank and lead to potential failure.

Several programs and projects are an integral part of our watershed management plan. You will find current and planned projects described within these pages as well as on Facebook and our website. As a small, but vibrant organization, we are supported financially by grants, gifts, and endowments, but, at the core of our success is the perseverance of passionate individuals, who show an abiding dedication to the gifts of the natural world and are pivotal to the realization of our mission to maintain the Yellow Dog River Watershed in its most natural state for generations to come.

During these turbulent times, it is of paramount importance to maintain places where solitude calms and livens our heart spirits: raging waterfalls in spring, snow-capped trees above dark flowing waters, vibrant fall colors reflecting in a backwater pool, hardwood forest with sounds of rushing waters, rare plants in wetlands, fishing, swimming, skiing, snowshoeing, or hiking with a camera.

Our appreciation for the support of those who know these wonders remains priceless, and our gratitude to all who have assisted in bringing YDWP to this point can never be overstated. Hope to see you on the River!



Fall colors hike preceding our annual meeting, October 22, 2022. Photo by Chauncey Moran.

MINING UPDATE

By Rochelle Dale



Aerial view of Eagle Mine on the Yellow Dog Plains. Photo by Chauncey Moran.

On November 30, 2022, representatives from Eagle Mine held an informational community forum at the Powell Township Hall. External Affairs Manager, Matt Johnson, confirmed the projected date of mine closure at 2026 or 2027; however, Eagle has increased the number of employees to 430 due to intensified exploration in the vicinity of Eagle East. 2022 began with only one underground drill rig, but now there are four. Exploration for more deposits has also mushroomed above ground with geophysical surveying.

Currently, 70% of the ore from the mine comes from Eagle East, and by next year that figure will be 100%. 2023 will see the mine tapping into another section of Eagle East called "the Keel". The Keel is part of the same ore body but will require its own access. That work will begin in 2023, with ore removal expected to begin sometime in 2024.

With incentives to extract critical metals and the push toward electric cars, the demand and the price for nickel per pound has risen significantly, making additional exploration financially worthwhile. If Eagle finds more deposits, even ore bodies that previously seemed too small or too deep, they may now be valuable enough to exploit.

RESULTS OF WATERKEEPER ALLIANCE PFAS SAMPLING STUDY

By Brian Noell, Administrative Assistant

This summer YDWP took water samples on the Salmon Trout River as part of a study conducted by Waterkeeper Alliance on the prevalence of toxic PFAS chemicals in the nation's waterways. We later tested the Yellow Dog for PFAS as well. Although we are pleased to report that none of the 55 compounds detectable by the test were found in either river, the nationwide survey reveals PFAS to be much more prevalent than expected, a potential crisis in fact.

PFAS compounds have been used widely in manufacturing since the 1940s and are found in many different consumer, commercial, and industrial products. They have been linked to a variety of health problems, including cancer, liver and kidney disease, reproductive issues, immunodeficiencies, and hormonal disruptions. What is worse, PFAS compounds remain in organisms indefinitely without breaking down and thus build up in living tissue and the environment. They are, in short, "forever chemicals".

These compounds have entered our waterways for decades from polluting manufacturers who have benefitted from lack of regulation and loopholes. Experts estimate that nearly 30,000 industrial facilities, as well as airports, landfills, and other potential sources, discharge PFAS directly into surface waters or into wastewater treatment plants, which then expel contaminated effluent into lakes, rivers, and streams. Despite these threats, no federal limits exist for PFAS releases into surface waters under the Clean Water Act.

The Waterkeeper study, the most comprehensive yet conducted, engaged staff and volunteers in 113 organizations like ours in 34 states and the District of Columbia, who gathered samples upstream and downstream of sources of potential contamination. The results are sobering. 94 groups in 29 states and D.C. detected at least one PFAS compound, and in some cases the levels were in the thousands of parts per trillion, many times more than an interim EPA health advisory asserts is safe in drinking water. In other words, in the most extensive study of its kind ever conducted, 83% of the waters tested across the country were found to be contaminated by dangerous levels of PFAS.

Despite the serious health risks, there are currently no universal, science-based limits on the various PFAS chemicals in the United States. For many of these compounds, the EPA has not even set a health advisory limit that would give the public a baseline to determine what amount of that particular substance has a harmful effect on human health. Even for the few PFAS compounds for which EPA has issued health advisories (and, it should be noted that they have recently revised those limits downward), testing and enforce-



Downstream PFAS sample taken in the Jean Farwell Wilderness Area on the Yellow Dog River. Photo by Sarah Heuer.

ment regimes are not in place. Moreover, the federal government has yet to establish enforceable regulations on what level of PFAS is safe in the nation's drinking supply (although such regulations are promised in 2023), a startling oversight considering that much of that water is drawn from lakes and rivers.

To start tackling this crisis, Waterkeeper Alliance urges Congress to pass the Clean Water Standards for PFAS Act of 2022 to reduce the levels of PFAS entering our waters in the first place. It is also essential for EPA to prioritize bipartisan infrastructure funding for coordinated national monitoring and adoption of regulatory standards for PFAS, including new rules that would designate these chemicals as hazardous substances and require enforceable limits for these pollutants under the Clean Water Act and the Safe Drinking Water Act.

The scale of this problem is greater than we imagined, and we must act quickly to protect human health and the ecosystems that support it. For more information, or to get involved in the campaign, visit the Waterkeeper Alliance website (waterkeeper.org/pfas/). There you will find an interactive map to investigate possible PFAS contamination in a waterway near you as well as the full reports issued by Waterkeeper Alliance and Cyclopure, the company that developed the test kits and analyzed the samples. From there you can contact your members of Congress and state representatives to encourage them to take action now to stop the discharge of these dangerous chemicals into our waters, endangering the health of people, wildlife, and aquatic animals for generations to come.



Waiting for water sample to filter through sampling cup. Photo by Sarah Heuer.

NEW TRAIL COUNTERS INSTALLED AT THE COMMUNITY FOREST AND PINNACLE FALLS

By Sarah Heuer, Programs Coordinator



Brown tourist sign installed by the Big Bay Stewardship Council near the corner of Co. Rd. 510 and AAA. Photo by Sarah Heuer.

YDWP has needed a way to track visitors to our most frequented parcels for some time. Over the years, we have observed increases in visitation, most notably when the COVID pandemic hit and the number of Sunday drivers, first-timers, and out-of-towners seeking remote recreational destinations increased. This summer the Big Bay Stewardship Council (BBSC) installed brown tourist signs in various locations within town limits and in the surrounding area to guide travelers to locations of recreational interest, including YDWP's Community Forest and Pinnacle Falls Preserve. With that, we expect the upward trend in visitation to continue.

Of course, increased traffic brings parking challenges, trash, and wear and tear on the trails. Funding for trail work, maintenance, informational signage, parking improvements, and land monitoring comes mostly from grants. Applications often inquire about visitation (how much and when), and, in the past, we have had to give our best estimations, without having concrete figures.

In the interest of more accurately measuring visitation to our lands, we looked to Powell Township for advice, and, in July of 2022, we installed TRAFx infrared trail counters (as they have on their paths), in the Community Forest and at Pinnacle Falls.



Daryl Wilcox connects the TRAFx dock to his laptop and downloads data. Photo taken at the Pinnacle Falls trailhead by Sarah Heuer.

The TRAFx brand has been a trusted source in its field for a long time. Agencies such as the US Forest Service, US Bureau of Land Management, and US National Parks Service, just to name a few, use these devices regularly. TRAFx can detect people walking, jogging, hiking, biking, etc. by sensing the infrared wavelength that people emit. These devices can be kept in place throughout the winter months as well, counting those engaged in snowshoeing and back country skiing.

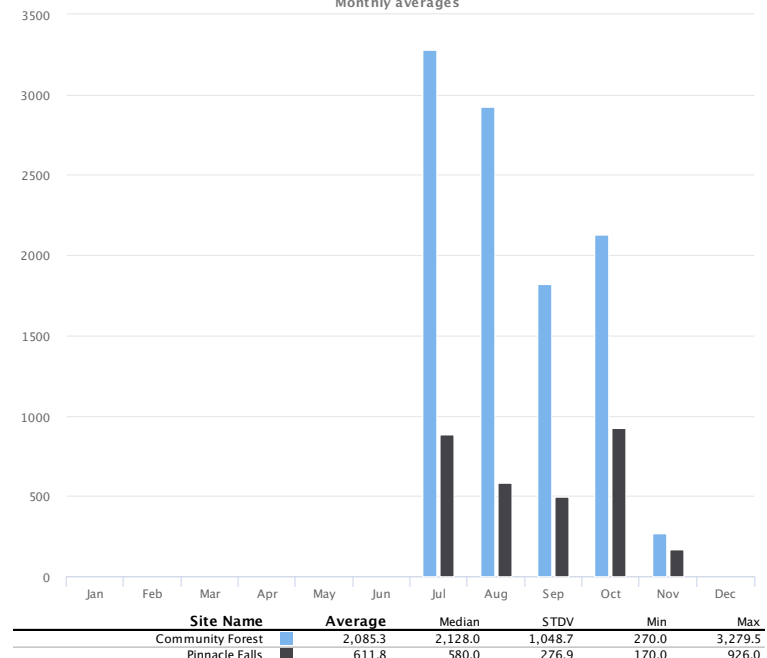
Daryl Wilcox, a Big Bay native and township employee helped us set up the devices and link them to Powell's data collection system. Daryl is currently responsible for managing the township's counters and taught us the system's ins and outs, introducing us to the dock for configuring and downloading data and running DataNet, the comprehensive web-based program which allows us to view, analyze, manage, and present data. With this program we can generate totals, charts, reports, and tables, creating a visual representation of visitation. The chart below shows the number of visitors to the Community Forest and Pinnacle Falls from July 7 through November 5 (monthly totals from July and November obviously are not complete).

YDWP would like to thank Sven Gonstead, head of the Parks and Recreational Committee for Powell Township and Chairman of the BBSC. With Sven's help and cooperation, we were able to work as a team and seamlessly integrate our counters into the Big Bay trail monitoring system.

It is our responsibility to maintain a safe and natural environment on our lands, not only for visitors but most importantly for those who live here, human and animal alike. It's a delicate balance, and we will use the TRAFx system to keep an eye on trends in visitation, giving us solid data for grant applications and to address problems that may arise from increased traffic on the parcels in our care.

Months of the year

2022-07-07 to 2022-11-05
Monthly averages



A TRAFx table illustrating monthly totals for the Community Forest (blue) and the Pinnacle Falls Preserve (black). Bear in mind that the counters tally people coming in and going out, so totals must be divided in half in order to accurately represent the number of visitors.

UPDATE ON DEER CREEK ROAD STREAM CROSSING PROJECT

By Rochelle Dale

Work on the impaired road stream crossing at Deer Creek continued throughout the summer. After the initial control points were established back in the spring, GEI Consultants continued with surveying and gathering data for the engineering plan that will be completed this winter. In July, once the Quality Assurance Plans had received final approval by Environment, Great Lakes and Energy (EGLE), GEI trained YDWP staff and volunteers in the proper procedures for collecting necessary preconstruction data. We learned on site how to conduct cross sections, longitudinal profiles, depth of refusal measurements, and pebble counts. We successfully completed the data collection for the season and have plotted the results. These will be compared to data collected at the same locations after the crossing is repaired. If all goes as predicted, as the creek returns to its normal state and finds its old stream bed, we will see significant changes in many of the collection sites. These results will be able to demonstrate the success of the project to people who may be unfamiliar with the Deer Creek site and its unique problems. The actual crossing repairs are scheduled to take place in the summer of 2023.

The volunteers on this project put in some long, hard days. Thanks to John Highlen and Doug Vanerka from Trout Unlimited and YDWP's Jan Zender and John Anderson. Thanks also to Ted Carland, who stuck with us the whole time to get some good photos.

The Deer Creek project is funded by an EGLE non-point source pollution grant with contributions from JM Longyear, the Fred Waara Chapter of Trout Unlimited, Partners for Watershed Restoration, Superior Watershed Partnership, and YDWP.



Olivia Engelhardt, once a YDWP intern, now a restoration ecologist with GEI, collecting sediment depth location and elevation data on Deer Creek with a Trimble Survey Total Station. Photo by Ted Carland.



Jan Zender, Sam Prentice (background), and John Anderson conducting a pebble count. Photo by Ted Carland.

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SUMMER FLY-FISHING WORKSHOP

By Marilyn, workshop participant

My neighbor called to tell me about a fly-fishing workshop coming up and asked if I wanted to attend. I jumped at the chance, “Absolutely”! I was excited to learn the finer details of fly fishing.

I believe I was the first of the fly-fishing enthusiasts to sign up for the August 27 and 28 event. There were 20 students in all, the maximum number of spaces available.

Three organizations coordinated the event: the Yellow Dog Watershed Preserve, Superior Outfitters, and the Fred Waara Chapter of Trout Unlimited. It was held at the Zender/Dale Yellow Dog Forest Retreat Center, with the Yellow Dog River close by. The facilities were able to accommodate over 40 attendees and support staff. The YDWP crew were stellar in providing camping sites, 2 wonderful gourmet meals a day, shuttle service, as well as group meeting areas in case of rain.

At the beginning of the workshop, Trout Unlimited instructors divided us into 3 groups which were rotated for each of the seminars. Superior Outfitters led one rotation, providing on-site riverfront teachings on how to “read” the water, best location of fish, the types of insects the fish might be eating, as well as how to cast in highly vegetated streams.

In the second rotation, Trout Unlimited instructors discussed the different types of fly rods (sizes, lengths, as well as types of reels and fly line) and offered practical hands-on instruction in casting.

The third rotation involved entomology: the study



*Workshop participants receiving instruction from John Reinertsen (right) of Trout Unlimited.
Photo by Ted Carland.*

of various insects, including their common names and growth cycles, particularly their aquatic stages in relation to fly-fishing seasons. We were also taught the different knots used for fly-fishing lines.

The workshop was a great learning experience and an especially fun weekend. We met other fly-fishing enthusiasts and made new friends. The event was well organized, very professional, and well-received. It met all my expectations, and I look forward to future fly-fishing events.



Instructor Evan Garrett and participant Isaac Larson on the Yellow Dog River. Photo by Lowell Larson.

YDWP would like to thank everyone who contributed to make this event a success. Special thanks to the Marquette Food Co-op, Super One Foods, Tadych's Marketplace Foods, Dead River Coffee, and Sassy Pants Farm for their generous food donations. Also, to Rhythm Wellness Retreats for their donations and professional help in the kitchen, Les Milligan for washing mountains of dishes, Jim Argeropoulos for his amazing breads, and Trout Unlimited and Superior Outfitters for supplying fly rods and other equipment and for organizing and leading the classes. Great job everyone!

If you missed the event this year, stay tuned for announcements. We plan to do it again next summer!



AN ADVENTURE ON TWO WHEELS: REVISITING REMEDIATION EFFORTS ON THE SALMON TROUT RIVER

By Jacklyn Lenten, Board member

An exciting part of this stream monitoring season was a bike ride Sarah and I took on November 3 to the East Branch of the Salmon Trout River off the Northwestern Road. This sampling site is especially important because the US Geological Survey (USGS) and Great Lakes Indian Fish and Wildlife Commission (GLIFWC) continuously collect data here using various gauges, both in and out of the water.

Typically, we can drive on a two-track road the majority of the way to the sampling site and take a brief walk to the water. This was not the case in the fall of 2022. The lock on the gate had been changed, and we did not have the opportunity to connect with the landowner to obtain a new key.

No vehicles it would have to be, then. Two miles isn't that long of a trek, but it is daunting when the weather is not in your favor, you have to carry a significant amount of gear, and two hours of wading through water and analyzing samples awaits. With a little creativity and a couple of ratchet straps, Sarah was able to create a rack that would hold the YSI meter and its large case, two 5-gallon buckets, and our sampling trays on the back tire of her bike. A rucksack full of other necessities and paperwork was strapped to her back. I followed on my own bike with my small backpack, waders wrapped around my neck, and the sampling net carefully balanced on my handlebars. Fortunately, the trip and sampling event went off without a hitch, and we now have a great story to tell!



Jacklyn Lenten and Sergey arrive at their destination. Photo by Sarah Heuer.



*Sergey monitors Jacklyn's macroinvertebrate sampling.
Photo by Sarah Heuer.*

It was nice to return to the site this year. The last time I visited was October 16, 2021, the same date as YDWP's Lost Creek tree planting event with Trout Unlimited. If you participated in that event, you'll recall the bad weather. On that day Chauncey and Nancy Moran, John Coleman of GLIFWC, and I spent hours attempting to manage beaver activity downstream of the water gauges in this portion of the Salmon Trout. A large dam had been inhibiting stream flow and creating a pond with the water gauge at its center. The quality of this stagnant water wasn't representative of the stream as a whole and therefore not useful to the USGS or GLIFWC. We meticulously disassembled the beaver dam and cleared debris out of some of the nearby braids of the stream to improve flow and release the pool of water. To ensure the ponding wouldn't happen again, regardless of beaver activity, we installed two large pipes under the water, reinforced with rebar. If the beavers tried to rebuild, they would have to work around our piping. The pipes, however, would stick out either side of the dam and allow water to continue flowing downstream.

Reflecting on the difficult work we conducted in fall 2021 under lousy weather conditions, I was eager to see what this section of stream looked like a year later. I am happy to report that our efforts have been successful. Chauncey reported in the Fall 2021/Winter 2022 issue of *The Howl* (approximately a month after our initial efforts) that the stream level at the USGS water gauge was approximately 4 inches lower than it had been with the dam present. As of November 21, 2022, stream depth was 4.8 inches lower than the same date in 2021. The specific conductivity also has dropped from 140 $\mu\text{S}/\text{cm}$ to 100 $\mu\text{S}/\text{cm}$ in the past year. The USGS website indicates that from June through October, 2021, stream quality was "poor" with heavy debris present. In the latter half of 2022, this sampling site was rated "fair" and was either completely clear or had only light debris in the water.

Although these data could be impacted by multiple variables, the favorable results across the board lead me to believe it was our efforts that helped the most. Beaver activity has not resumed since we dismantled the dam, and the pipes have remained in their original position. To view the data collected at this site by the USGS gauges, visit <https://waterdata.usgs.gov/monitoring-location/04043244>.

LAND TRUST ALLIANCE CONFERENCE 2022: NEW ORLEANS

By Rochelle Dale

The Land Trust Alliance (LTA) is a national organization whose goal has been to bring conservation-minded land trusts and nonprofit organizations together to synergize ideas about preserving lands for future generations and building a national community of mutual support. They do this by providing and sharing pertinent up-to-date information and expertise. Throughout the year, LTA offers on-line seminars and an annual three-day conference/rally. In September of this year, LTA hosted the first in-person conference since the Covid pandemic, and to make sure that the YDWP stays up to date on land conservation matters, Board member Jan Zender and I made the trip to New Orleans to attend.

Workshops began with coffee and light breakfast at 7:30 and continued through 5pm each day. Between us, we attended classes on memorial forests, carbon credits, conservation easements, critical record keeping and the corresponding useful data bases, methods to engage new conservation-minded members, and more. We learned about future grant possibilities, and we met people from like-minded organizations across the country.

It was fitting that this conference was held at the mouth of our country's biggest river, the Mississippi. We were able to see firsthand some of the problems that this river has had to endure: erosion, record-breaking storms, historical logging and levy building, as well as pollution from every river, stream, and ditch in the entire watershed that drains into the river. The people of the Mississippi Delta are losing their lands, and some of that loss could have been averted if we had been more conservation-minded when we were taking out the old growth cypress trees, using pesticides and harmful fertilizers on our fields, or if we had acted sooner in regard to climate change. While the focus of the YDWP has always been the Yellow Dog River, we have also come to understand that one of the keys to protecting water quality is to protect the surrounding lands. The Mississippi River is a lesson in point.



*Perfect Coup: A boat wrecked by hurricane Katrina, sits abandoned in the Mississippi River Delta basin.
Photo by Rochelle Dale.*

UPCYCLING OLD WADERS: NEW PRODUCTS COMING SOON



After a MI Corps grant made possible the purchase of new waders for staff and volunteers, we had no further use for our leaky, old gear. Not wanting just to dispose of waders that had seen better days, with their yards of neoprene material, we decided to upcycle them into saleable items. Thanks to the imagination of our staff and Board member Jacklyn Lenten, we have developed a number of cool products, including can koozies, travel bags, fanny packs, and mouse pads, which will be available soon on our web store and at our gift shop in Big Bay.

*At left: Jacklyn Lenten holds a tote bag she made from a worn out pair of Frogg Toggs waders.
Photo by Sarah Heuer.*

TIRED OF LITTERED BEACHES? REPORT GREAT LAKES DEBRIS!

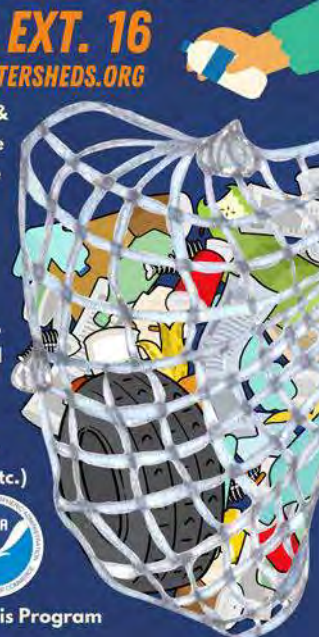
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Superior Watershed Partnership & the Great Lakes Climate Corps are organizing to collect a wide range of debris both large and small on Great Lakes shorelines and in nearshore waters. You can help by reporting locations of:

- Large debris (appliances, tires, building materials, abandoned vehicles & fishing gear)
- Potential beach clean-up sites with lots of litter (plastic bags, bottles, cans, cigarette butts, etc.)



Funded by the NOAA Marine Debris Program



BACK IN THE DAY: CONNECTIONS

By Jan Zender, Vice Chairman

As a young man, 50 years or so ago, I became aware of an early twentieth-century chronicler of Native American life named Walter McClintock. He wrote about and photographed the Blackfeet people, a tribe of Native Americans living on the northern plains of western Montana and Canada. His images are probably the most extensive of any such record for any of the Native peoples of North America. Through his 2500 photographs, along with several books and articles, he became quite well known in the world of ethnohistory. When I was young, I poured over his books and photos, and while at the University of Montana, met some of the descendants of the people he photographed and wrote about. So, when I read his name in C. Fred Rydholm's *Superior Heartland* while researching the Bentley Trail, I was more than a little surprised. In fact, I assumed it must have been a different Walter McClintock. But indeed, the two were the same.

Walter McClintock's parents were both from wealthy, prominent Pittsburgh families. They were Huron Mountain Club members, and son Walter attended Yale University from 1887-1891, afterward working in Pittsburgh for a few years before becoming seriously ill with typhoid fever. For recovery and recuperation, he traveled west for the first time. Upon his return, he made arrangements with two of his former classmates from Yale, Henry Graves and Gifford Pinchot, who later became the first head of



Walter McClintock and Blackfoot Child, 1909.

Water McClintock Papers. Yale Collection of Western Americana, Beinecke Rare Book and Manuscript Library.



Walter McClintock in cowboy clothes, 1913. Water McClintock Papers. Yale Collection of Western Americana, Beinecke Rare Book and Manuscript Library.

the U.S. Forest Service, to accompany a government agency tasked to assess the quality and condition of forests along the Continental Divide. McClintock was trained in forestry survey techniques and was already an accomplished photographer. He made the acquaintance of the Blackfeet people on this trip, and at some point, was adopted by a prominent Blackfeet leader named Mad Wolf.

McClintock spent several summers with the Blackfeet between 1903 and 1912, and this time with them completely changed his life. It became his mission to tell their story. He showed their pictures to audiences around the world. He spoke with Theodore Roosevelt and other high-ranking officials and presented at the most important museums in Europe, with royalty in attendance.

Darrell Robes Kipp, a contemporary Blackfeet elder and relative of one of my Blackfeet friends, wrote, "I remember reading McClintock's book, *The Old North Trail*, for the first time and being amazed. I hoarded the book for weeks and have reread it many times since. I could not get it out of my head how he knew so much about the tribe...his photographs seemed entirely familiar, and the cadence, content and context of my tribal heritage rang clear."

Later in life, McClintock realized that his life among the Blackfeet was a way to "escape the turmoil and daily grind of city life, 'the shackles of social convention, and the slavery of business' where money making took precedence over everything else." McClintock found Native peoples' close connection with nature, their brotherhood with birds and animals, completely appealing. They took him hunting, fishing, taught him about birds; older women taught him the medicinal value of plants. They taught him much, and afterwards, he was able to say:

While we have mastered and harnessed the forces of nature to do our bidding, and have achieved wonderful things in science and industrial combination, have we, with all striving and complex life, attained a much higher average of character, contentment and loyalty to the community interests, than was attained by a simple life and few wants of the average Blackfoot family before the invasion of the white race? We could look in vain in such camps as that of the North Piegan, nestled among the cottonwoods, to find the depravity, misery and consuming vice which involve multitudes in the industrial centers of all the large cities of Christendom.

This is the Walter McClintock that Cyrus Bentley wrote to in 1914 to ask for his help in laying out what became the Bentley Trail, for as Fred Rydholm says, "Walter McClintock was considered to be one of the world's greatest woodsmen of his day."

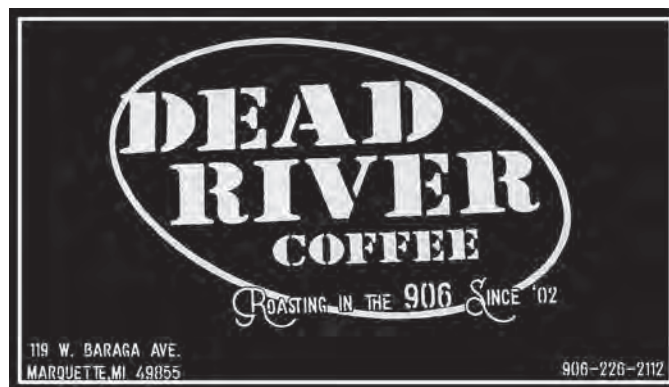


Blackfoot camp below mountain peaks, 1906. Walter McClintock Papers. Yale Collection of Western Americana, Beinecke Rare Book and Manuscript Library.



Jim Andersen (left) and Walter McClintock began to lay out the Bentley Trail at White Deer Lake on October 6, 1914. Photo by Cyrus Bentley in Fred Rydholm's Superior Heartland, Volume 1.

Having been familiar with Walter McClintock's work for more than 50 years, and then suddenly learning that he had a part in creating the Bentley Trail, adds to that serendipitous sense of connection that can sometimes spark new enthusiasm or commitment. As the Yellow Dog Watershed Preserve moves forward with reestablishing the Bentley Trail, I will be thinking about McClintock and his regard for Native people and their way of life, his eye for capturing history, joy, and daily life in his work as a photographer, and his deep affection for nature and wilderness.





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THE CLEAN WATER ACT TURNS 50

(continued from page 1)

- Established a basic structure for regulating pollutants in U.S. waterways.
- Gave the United States Environmental Protection Agency the authority to implement pollution control programs, such as setting wastewater standards for industry.
- Made it unlawful to discharge any pollutant from a point source into navigable waters without a permit.
- Funded construction of sewage treatment plants.

The Clean Water Act has been very successful. Before the law's implementation, many cities, and especially small rural towns, had limited or no sewage treatment, and there were no federal controls on any kind of pollution, including that from industry. I can remember the days before these laws were enforced, when nearly raw sewage poured out of pipes into our rivers. We hurried by in our canoes, careful not to touch the water. Soon, though, those same rivers, without the constant pollutants surging into them, began to run cleaner and cleaner.

While we celebrate this 50th anniversary and give a belated thanks to all those who pushed for the bill back in 1972, we cannot think our work is done and that all is well. We cannot be complacent. In recent years, various corporate interests, fossil fuel companies, and in some cases, individuals have tried to weaken the CWA, hoping to roll back protections in the name of jobs, the economy, and growth. For example, the Supreme Court recently heard a case, *Sackett vs EPA*, in which the scope of the agency's authority to regulate wetlands is under fire by a private landowner. The Court has not yet made its decision, but if it rules against the EPA on this matter, the CWA will be compromised, and wetlands across the country will be in danger. In addition, we must encourage our legislators to ensure that the CWA stays current by adding measures to combat PFAS pollution.

We know that water is life, that all human beings, no matter their economic condition, religious beliefs, or where they live have a basic and fundamental right to clean water for drinking, bathing, and safe recreation. For 50 years, the Clean Water Act has been instrumental in upholding and protecting that right. Let's ensure it stays strong.



Pastel painting of Christ Andersen Headwaters Preserve by Kathy Binoniemi.

*Some of her works are on display through December at Wintergreen Hill Gallery and Gifts in Marquette.
For contact information, see business card below.*

NATURE ON CANVAS

By Kathy Binoniemi, YDWP member

I've always had a love of swamps and marshes, so as soon as our schedules aligned, my daughter Jacklyn Lenten took my mom Sandie Pierce, and me to see the newly acquired Christ Andersen Headwaters Preserve. The road into the preserve is gorgeous, and we braved the blood-thirsty flies to stop, every few yards it seemed, because there was another photo-op of the dozens of lady slippers in bloom along the way.

Jacklyn showed me a photo of the preserve that she had taken one evening (complete with a moose trotting through!), but it was even more beautiful seeing it in person. It's now one of my favorite places, and I'm looking forward to getting out there to paint *en plein air*.

I've had the pleasure of being introduced to quite a few of the sites that the Yellow Dog Watershed Preserve monitors and oversees, and I enjoy trying to capture that beauty with pastels.

To date I've painted the Yellow Dog River, Chauncey's Rock, Pinnacle Falls, the Christ Andersen Headwaters Preserve, and a couple of other marshy wetlands that I'm not sure have names.



THE WONDERFUL WETLANDS OF THE YELLOW DOG PLAINS: HIKE EXPLORES YDWP'S LATEST ADDITION

By Steve Garske, GLIFWC Invasive Species Coordinator

In August a group of 27 intrepid hikers traveled to the Yellow Dog Plains to visit YDWP's latest addition: the 120-acre Christ Andersen Headwaters Preserve. This pristine wetland complex forms part of the headwaters of Andersen Creek, a tributary of the Yellow Dog River. The area supports a diverse mix of conifer swamps, fens, bogs, sedge meadows, and mixed hardwood-conifer forest. Its high biodiversity and ecosystem integrity is due in part to its remote location and limited historic disturbance.

The plant family Ericaceae (the leatherleaf family) was one focus of the hike. You've probably never heard of the Ericaceae, but you surely are familiar with many of its members: blueberries, cranberries, huckleberries, leatherleaf, rhododendrons, Labrador tea (now classified as a rhododendron), bog laurel, and bog rosemary. The Ericaceae also includes familiar woodland plants such as the pyrolas (or shinleaves), pipsissewa, and trailing arbutus. Some members of this family lack chlorophyll and are parasitic on fungi or other plants, including so-called Indian pipe and the rare pine-drops. Most grow in moist to wet habitats on moderately to highly acid soil.



Plant ID cards created and designed by Kathleen Heideman were distributed to participants during the hike.



Steve Garske introduces the Christ Andersen Headwaters Preserve to the public, emphasizing "bog specialists" (plants that grow only under these unique swamp conditions). Photo by Chauncey Moran.

Other botanical wonders included tessellated rattlesnake plantain (really an orchid, *Goodyera tessellata*) and pitcher plants, which trap insects in their liquid-filled pitchers to use as a source of nitrogen and other nutrients in nutrient-poor habitats such as bogs.

In addition to providing a home to countless plants, animals, insects and other beings, wetlands also act as areas of high groundwater recharge. Unlike built environments, where precipitation often flows over impervious surfaces, picking up pollutants before being channeled directly to surface water, most precipitation in natural terrestrial and wetland habitats travels underground, where it is purified before reaching streams, rivers and lakes. Protecting the Andersen wetlands in their natural state will add to the health of the Yellow Dog watershed for generations to come.

When Kathleen Heideman and I were preparing for this trip, we wanted to combine botany and art to make the hike as interesting as possible. But nature stole the show! These pristine wetlands are the essence of biology, biodiversity and art – one only has to spend a little time there to experience all this and more.

A final note - Thank you to everyone who participated. You all helped make the trip interesting and fun. Special thanks goes to botanist Alex Graeff, who expertly explained details of plant ID and natural history, and Chauncey and Nancy Moran, whose detailed knowledge of the area added greatly to the trip. The hike was sponsored by YDWP, the Northwoods Native Plant Society, and the Upper Peninsula Environmental Coalition.



Kathleen Heideman, Steve Garske, Keith Kuykendall, Leslie Warren, Alex Graeff (kneeling), Christine Saari, and Rochelle Dale examine a plant. Photo by Chauncey Moran.



THE MOOSE LOCATOR GUIDE IS DEFUNCT

Poem by Kathleen Heideman, YDWP member

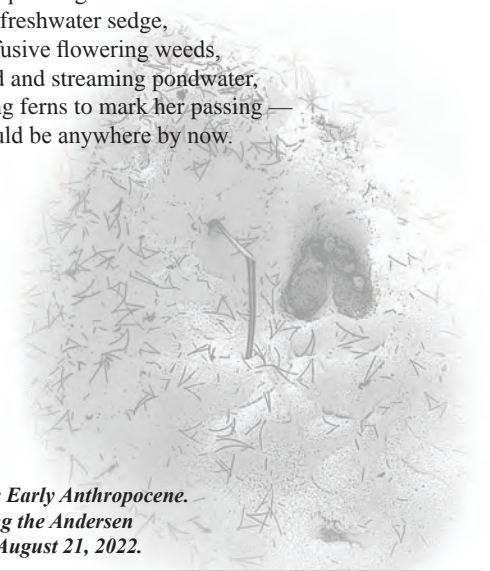
Visitors to the area can take a guided tour or ride the beautiful forested back country roads in search of the elusive moose. Unfortunately, the DNR are no longer producing the Moose Locator Guide as they have dispersed throughout the Upper Peninsula and their whereabouts is unpredictable.

This is due to their wide ranging habits.

- Notice on the Big Bay Corner Store website (2001)

Where wolves dragged down the cow-moose
on a dinner plate of wind-glazed ice, her radio collar
was left unchewed, her old gnawed hip bones, keratinous
hooves: come thaw, they slip together into a melting pond
and rest as sleeping turtles, settling in receptive sediments.
Impossible to locate those old moose bones, now —
or her yearling, uncollared, who stretches long legs
on hundred mile jags, striding under lichen-draped limbs
of jack pine bending and twisting, brittle-gray
and lower each season, twigs snagging tufts of hair,
the moose loping powerful, curious skull, graceful
through shadowed timber, dense black spruce-copse,
climbing bald outcrops to survey the Highlands,
her homeland, pathless miles of Michigamme sloughs,

a wilderness of muck and mire, birch and tag alder,
cat-tailed rivers where she's plowing teeth-first
through current-bent reeds, freshwater sedge,
submerged to the ears in effusive flowering weeds,
elusive moose, lily-crowned and streaming pondwater,
steaming pellets piled among ferns to mark her passing —
that moose, I mean. She could be anywhere by now.



Excerpted from *Psalms of the Early Anthropocene.*

Kathleen read this poem during the Andersen

Headwaters Preserve hike on August 21, 2022.

FALL MIGRATION

By Nancy Moran, YDWP member



A female northern harrier seen on the Yellow Dog Plains in September. Drawn from a photograph with conté crayon and graphite by Nancy Moran.

The Yellow Dog Plains had fallen silent of birdsong. Bright September sun cast long shadows in the jack pine; all around you could feel and see the season change as we drove to the river. Warblers and sparrows foraged along the river corridor in family groups, having fledged in the summer. They flashed and darted in still-green alder along the riverbank, snatching insects in a feeding frenzy, preparing for the flight south.

The road through the Christ Andersen Headwaters winds along the only passage through black spruce bog and marsh, and the foraging continues all along the way- we look for a bittern we had seen earlier this season, scanning the pale green and silver sunlit water of the ponds. Here we see an oven bird family inspecting the leaf litter, and are approached by a young bird, curiously watching us on its quest for food.

Back into the jack pine, a northern harrier floats above a brushy clear cut, hovering gracefully in typical harrier fashion, searching for rodents. This is the third of these beautiful hawks seen today, a male (we spied another male and a young female earlier). The male harrier is a grayish bird, pale gray underneath, while the female is mottled and streaked in shades of brown (the young female also has chocolate brown eyes). Both adult males and females have large deep-set yellow eyes, with a mask on the brow line resembling a cross between an owl and a Valkyrie warrior. We enjoyed observing several spruce grouse trotting lightly along the sandy trails, including a brood of four with the adult female.

The day ended at Mudjekewis, with several ravens, a small flight of Canada geese, and, on the pond, a pair of solitary sandpipers, working along the water's edge.

The Yellow Dog Plains provides a place for birds migrating south from their breeding range as well as the nesting locals to fuel up for the oncoming winter or the journey to follow the sun. The change in season yields sightings of birds in groups as they gather; some are species not seen as commonly in spring. Observing the activity of migrating birds inspires us also to prepare for winter. Or should we just follow the flocks south? Well, no, then we would miss winter on the river. I'm looking forward to deep snow under blazing blue sky!

THANK YOU MEMBERS AND DONORS

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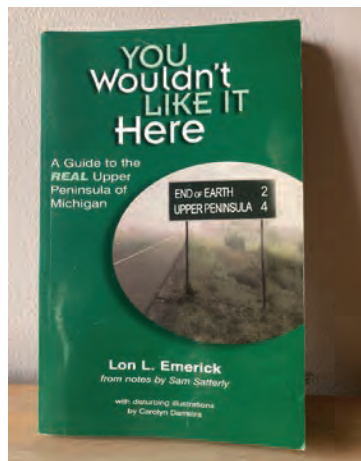
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A YDWP Recommended Read:

Lon Emerick, *You Wouldn't Like it Here: A Guide to the Real Upper Peninsula of Michigan*.

To check out more of Lon's work visit https://www.goodreads.com/author/show/476798.Lon_L_Emerick

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In honor of Seth Houston's birthday

If we have accidentally omitted your name, or if you find an error, we apologize. Please contact Brian at (906)345-9223 or email brian@yellowdogwatershed.org so we can make it right.

The YDWP's 27th Annual Meeting was held in October at the historic Thunder Bay Inn following a scenic hike up a nearby hilltop. Over thirty friends and members gathered to review accomplishments of the organization, share food, photos, stories, and music by local musicians. New memberships and donations added to the success of the business meeting and social potluck. A special thank you to the Thunder Bay Inn for the welcoming meeting space.



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FINDING LOST TRAILS

By Kathleen Heideman

Last winter I read *The Bear*, a wonderful novel by Andrew Krivak, in which a father reads from tattered books of poetry, tells stories of talking animals, and teaches his young daughter to fish, forage, and fashion her own bows and arrows, preparing her to survive. Living at the foot of a wild mountain, the man and his girl are the last of humankind. The glass of a small window in their cabin was a gift from grandparents who “received it themselves from the generation before, so precious a thing it had become as the skill for making it was lost and forgotten.” In other words: civilization began to unravel a long time ago.

“He told her how a long time ago others could travel over and measure land with the precision of a single degree, though this was something he had only read of in a book and did not know for sure if it was true or just a story.” Using a compass, they would undertake a long walk to the sea, to collect salt. There is no blazed path, he tells her, but he has already made the journey three times in his life, remembers the landmarks, and will teach her the route.

Knowledge - like trails - can be easily lost. Bark grows over blazes, and the old trees themselves grow old and fall over. In his book *Superior Heartland*, Fred Rydholm describes searching for the Bentley Trail starting in the 1940s: a thirty mile trail (established by Cyrus Bentley, and built by Christ Andersen and his brother Jim) from White Deer Lake in the McCormick Wilderness to Lake Superior and the Huron Mountain Club. The Bentley Trail was well traveled for a few decades but fell into disuse during the Depression years. The route was further obfuscated by fires, logging, and fast-growing tag alders. Fred would spend the rest of his life gathering and preserving Bentley Trail stories, artifacts, even some land through which the trail passed.

Fred also bought the old “Bentley Halfway Cabin”, but when it couldn’t be saved, he salvaged as much as possible: boards, wainscot, doors, hardware, and windows. That passage in *The Bear* about the “precious” window glass, reminds me of Fred’s salvaged Bentley windows, and their little panes of time-rippled glass.

In 2021, I hosted a small gathering of Bentley Trail enthusiasts at Fred’s cabin in the Mudjekewis Wildlife Refuge. It was an opportunity for some to meet in person after email-only correspondences, and included historians, hikers, staff of the Ottawa National Forest and Yellow Dog Watershed Preserve, and a few members of the Huron Mountain Club. We visited the former site of the Bentley Halfway Cabin, reviewed maps and other artifacts, and discussed plans for digitizing materials and preserving the historic trail as a StoryMap project.

One guest was Mike Finlay, a Wisconsin DNR forestry supervisor and trail enthusiast who had learned about the Bentley Trail from reading *Superior Heartland* and hiking in the McCormick Wilderness. This fall, Mike and I made plans to meet in mid-October for several days of trail work with Chauncey and Nancy Moran, to clear fallen trees between the AAA Road and Bentley Lake. After the ferns were dry, I assured Mike, the trail would be obvious; we’d enjoy trail work with no bugs, shared meals, and stories by the fireplace at night. Such were our plans, and it mostly went as envisioned. We simply didn’t expect an early winter storm that dumped two feet of wet snow on the Yellow Dog Plains! On the upside — there were very few mosquitoes.



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Mike Finlay helping to clear the Bentley Trail after an October 2022 snowstorm on the Yellow Dog Plains. Photo by Kathleen Heideman. Mike reports:

It felt like working in the footsteps of giants who came before, thinking about Cyrus Bentley, Christ and Jim Andersen, George Baker and others building it, and later Fred Rydholm and the groups he led maintaining it. What an honor to continue that tradition, the snow making the work feel more rustic and authentic. These predecessors dealt with the same unexpected weather in their journeys on the trail.