



Cleveland Metroparks



2022 Trails Division Yearbook



Compiled by Ralph Protano & Elyria Little - trails@clevelandmetroparks.com



Dear Reader,

It's hard to believe that another year has flown by already. In 2022, Trails was able to work on a broad slate of projects that supported all user groups while also prioritizing natural resource protection. These included a significant expansion of the hiking trail system at West Creek, completing the highly visible Euclid Creek connector trail, digging into the new Wargo Farms trail, and completing a major phase of the the multi-year Rocky River Lagoon trail project. Our crew and permanent staff were supported by seasonal staff, professional contractors, youth/young adult Conservation Corps, and most importantly, a robust volunteer effort equivalent to the hours of two full-time employees.

Because Cleveland Metroparks trails are incredibly high-use, welcoming thousands of visitors each year, we have to take special care to make sure our trails are constructed to withstand the pressure of their feet. Over the past decade we have found that to be truly sustainable, many trails in Cleveland Metroparks need to be hardened with a specific material blend, in addition to more widely practiced trailbuilding strategies that ensure trail stability, and resilience to erosion. This means we follow an intensive process that requires blending more traditional construction techniques to improve accessibility with the best trailbuilding practices available to create the natural, intimate trails that much of our community desires.

As winter approaches and we begin to prepare for next year, we've taken some time to collect our favorite pictures, projects, and moments from last year. Looking at the full scope of what we do, we've realized that many folks around the park don't often have a chance to see everything that goes into a trail project, so we've tried to make space here to show some of the many perspectives that make up the tapestry beneath every simple path we build. Enjoy the adventure - and next time you get out on the trails, we hope this helps you see them with fresh eyes.

Onward,



Ralph Protano
Trails Development Manager



A look at two trail staircases being constructed, nearly 10 years apart. Very little has changed in terms of the philosophical approach, though we now have access to modern equipment and materials that we could have only dreamed of when this division was first founded.

LAGOON TRAIL

Rocky River Reservation

We began work on the Lagoon trail in 2021, when the condition of the existing trail was overgrown, muddy, and included an impassable crossing with water 3' deep. During 2022, our crews were able to complete multiple sections of boardwalk, restore a maze of bootleg trails and protect the slim buffer of woods around the lagoon, install signage along the new trail, and ensure that the newly installed natural surface trail will support high visitor use for decades to come. The new trail is truly a treasure, opening up this picturesque area to walkers as well as anglers, and providing a fully accessible experience to trail users in accordance with the Architectural Barriers Act.



Boardwalk Piers were pounded 7' into the ground in early winter just before the deep freeze.



The boardwalk was framed during the winter freeze, which minimized ground disturbance around the site.



The final surface was added in the late fall, after allowing a full season for the base material to compact and settle.



The boardwalk featured over 300' of in-house produced deckboards, the longest structure that we have built to-date featuring our own wood.



New split rail fences were installed around the tree line to help enhance wayfinding to the trail and protect vegetation from being trampled by shortcutting.



A second, shorter boardwalk was installed at the southern trailhead to accommodate the existing drainage pattern from the parking lot.



Our hand crews restored a large complex of bootleg trails around the site, some which were directly impacting a nearby turtle habitat.

SKYLINE TRAILS EXPANISON West Creek Reservation

This project was our primary focus for much of the summer. We laid the trail out in April with support from Natural Resources. In May, a trailbuilding contractor from Zanesville came out to do a rough bench cut of the trail. Our seasonal crew hand-finished the trail behind them, adding in key drainage structures. Our two-person CMEA crew brought in all the stone to harden the trail, and constructed key bridges and boardwalks to traverse streams and sensitive areas. Volunteers and the SCA high school crew worked to stabilize the critical downslope trail edge and decommission unsustainable legacy trails. This winter, mother nature is continuing to do the "finishing work" on the trail, allowing natural wet-dry cycles to compact the base before our crew will remobilize to add the final surface material to top the trails next spring.

Each piece of the West Creek puzzle was able to come together to reshape the network and build a series of hardened trails that is nearly twice as long as any previous trail crew project. If you visited West Creek before, you would have found a confusing mess of muddy trails in low-lying areas. Today, you can explore a connected, sustainable trail system that explores new areas of the reservation while increasing accessibility and providing a high level of care for surrounding natural resources.



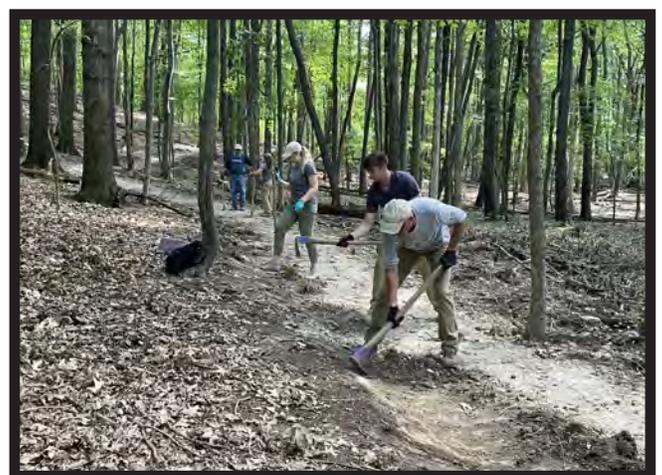
Although we incorporated machinery into as much of the build as possible, a human touch is required to turn the site back into a finished trail.



When staffing challenges shrink our seasonal crew down to 25% of its expected capacity, the SCA High School crew was able to step in and fill the gap. In all, they spent three weeks restoring decommissioned trails around the reservation and supporting our volunteers with much of the downslope finishing work.



Topsoil is carefully peeled off the existing ground and then reintroduced by hand to complete downslope finishing work and minimize any impact from the build.



Our well-trained and dedicated volunteers were eager to come out and complete all of the sensitive drainage details that could not be completed with equipment.

LAGOON TRAIL "FILLER PROJECTS"

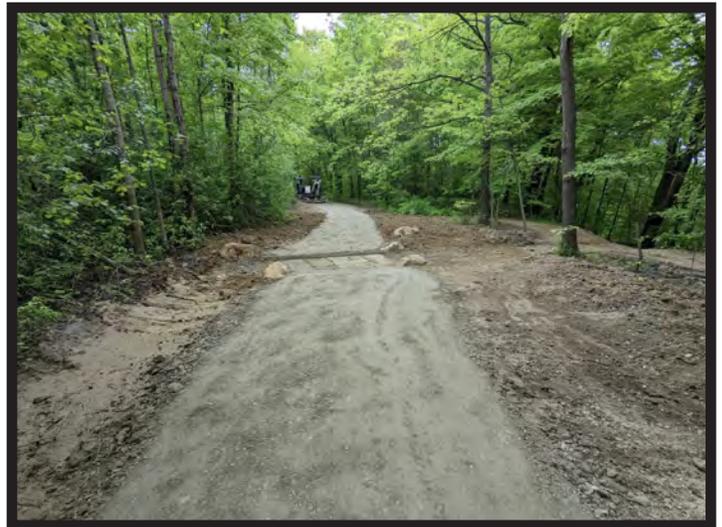
While working on main projects during shoulder seasons, "filler projects" are often setup at identified critical locations when the weather is more unpredictable. Filler projects allow us to complete meaningful work during times where it is unfeasible to work on capital projects. This spring, we were able to complete a meaningful machine and handwork project on days where we could not feasibly be on the Lagoon Trail.

LEWIS BRIDLE TRAIL

The Bridle Trail at Lewis Road serves as a major connector for the surrounding community. Unfortunately, the trail remained underwater for much of the year. Although equestrians were able to ford the underwater sections of trail, it was essentially unusable for hikers. As a part of the overall Lagoon Project, 1/4 mile of the most damaged trail was improved, preserving the character of the existing wetland while minimizing damage to vegetation along the trail.



The drainage on the existing bridle trail was so compromised that many sections remained underwater and unhikable for nearly the entire year.



The trail repair narrows the existing trail while converting the surrounding impacted areas into a combination of drainage systems and rehabilitated sites.

MT. PLEASANT EROSION MITIGATION

Since much of the Lewis Bridle Trail repairs were able to be completed by a small machine crew, the Trails Division set up a second handwork filler project for its seasonal crew in the surrounding area. The project that was identified was the long, unsustainable stretch of trail leading up to the top of Mount Pleasant. Without the time or resources to do a formal repair, the seasonal crew was able to mobilize as needed and install a series of large waterbars down the trail to break up the watershed and stabilize the existing trail until we are able to go back and complete a more sustainable improvement to the area.



The erosion caused soil loss that compromised entire root systems of mature trees. Additionally, the staircase at the top had become undercut.



Jackson demonstrates the broad shape required at the dip point of the waterbar in order for the drains to function sustainably & hold over time.



The seasonal crew used trails-specific measuring techniques to help them better visualize the reshaping required for the fix.

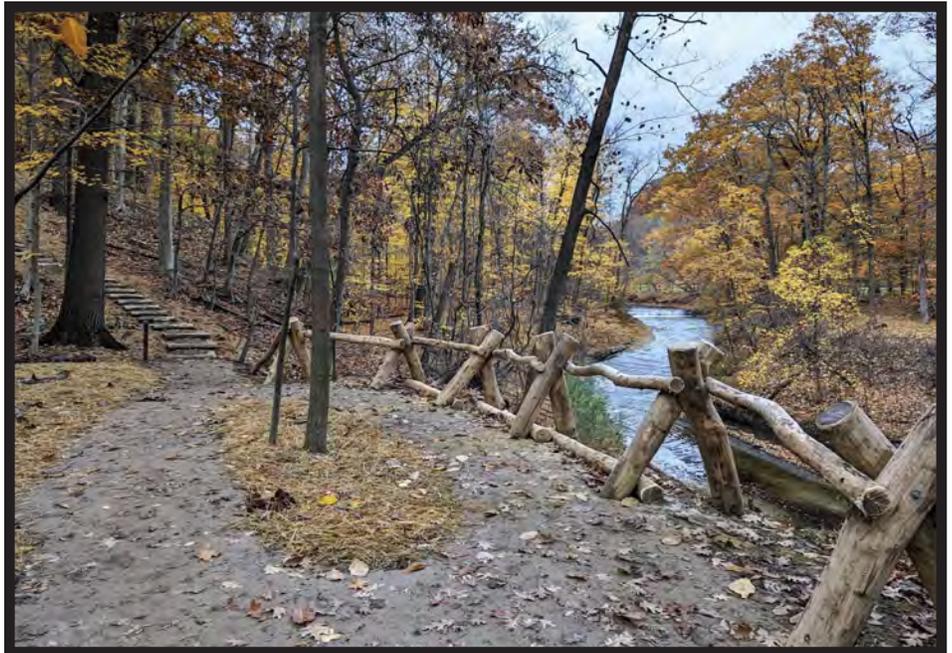
EASTERN LEDGE TRAIL Euclid Creek Reservation

The Euclid Creek connector trail was a team effort by many of the skilled crews in Construction. Trails was brought into the effort after other divisions had improved access to the area, and we leveraged our ACE crew as well as our regular volunteers to support staff in completing the natural surface portion of the connector trail.

The project gave Kirby and Chris a chance to really shine. The hand-built locust staircases and the barrier at the edge of the lower portion of the trail are some of the most sensitive and beautiful work Trails has completed in the last decade, rivalling the National Parks in how they marry form and function. If you haven't made it out to see the site yet I strongly encourage a visit - make sure to check out the upper overlook and the bridge spanning Euclid Creek as well!



Sections of the trail needed to be dug out entirely by hand to protect mature trees and sensitive slopes.



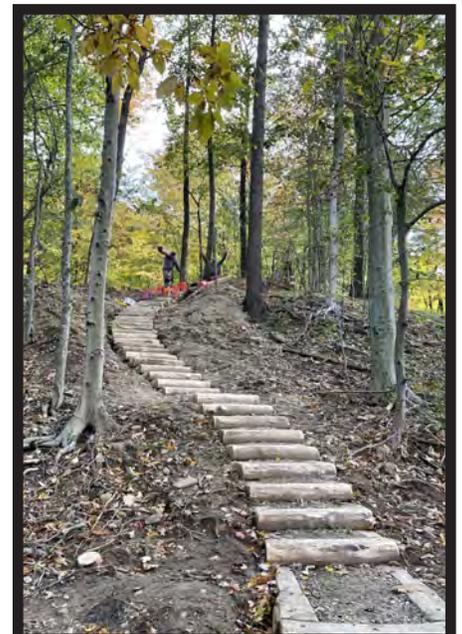
The crew installed a no-dig buck and pole system as a barrier, which helped bring users safely to desirable edges along the trail without compromising the delicate shale ledge underneath.



Each step was dug in a minimum of 24" into the hillside and was made from rot-resistant black locust to ensure the longevity and stability of the structures.



The locust was brought out in full pieces and then shaped onsite to ensure the staircase is form-fit to the surrounding environment.



The project required over 80 steps to help get users from the creek to the overlook through dynamic terrain.

FOCUSED RESTORATION WORK Brecksville Reservation

The trail projects at Brecksville this year have revolved around decommissioning unsustainable trails, protecting natural resources, and bringing the community together. Our season kicked off with a massive volunteer effort spearheaded by Vertical Runner, bringing trail runners out to restore a muddy section of the Salamander trail that Trails rerouted in 2021. Later in the spring we led a group from Rivian to celebrate their new Cleveland location, restoring a heavily used bootleg trail down to Deer Lick Cave.

The challenges our team addressed at Brecksville reflect the challenges we face around the park; too many users venturing off trail, and the rapid impact of many unplanned feet compacting soil, damaging vegetation, and channeling water to cause increased erosion. After years of frustration and a feeling of helplessness toward this type of damage, the trails division now has a proven toolkit along with a portfolio of examples to address these issues. At Brecksville alone this year, we were able to successfully restore over 7 acres of compacted ground. By next year, this will increase the water holding capacity at the reservation by over 140,000 gallons.



The 50+ volunteer group was able to hike in enough materials to restore nearly 1,200ft of decommissioned trail in a day.



This volunteer group had no problem cultivating this steep shortcut down to Deer Lick Cave by hand. This allowed us to prepare the ground for planting without disturbing sensitive mosses or tree roots around the site.



We often deploy relay systems for safety and efficiency to transfer restoration material down steep grades.



The existing Salamander Trail before restoration in the Spring of 2022.



Side-by-side of rerouted trail (White Oak) with the decommissioned Salamander Trail just 8 months later.

FOCUSED RESTORATION WORK

Hinckley
Reservation

WHIPPS LEDGES TRAIL

Before deploying our buck and pole system on the more sensitive Eastern Ledge Project, we teamed up with Natural Resources and Outdoor Recreation to test the structure in a more stable location by installing it as a barricade to promote restoration near an installed climbing bolt. We've all been pleased with the immediate results and saw the first signs of vegetation on these rocks this fall. As a follow-up in the summer, we also held a traditional restoration day with Tri-C staff to close down access to a major bootleg and further enhance the area.



Dan Sahli helped layout the barricade to make sure it supported climbing access. Members from outdoor recreation then pitched in to help complete the build!



A large group from Tri-C had a great time during their summer orientation helping to restore a long section of retired Buckeye Trail near the Top O' Ledges



The finished barricade included small signs to explain the intent of the structure.

WORDEN'S LEDGES TRAIL

In the Spring, we were approached by Natural Resources about rapidly expanded bootleg trails around Worden's Ledges, as the site has become very popular in recent years. The area, which boasts the most impressive wildflower display in all Cleveland Metroparks, was under immediate threat. With a chance still to save the existing seedbank, the trails crew mobilized this fall with the support of an Eagle Scout Project and Natural Resources to not only restore the bootlegs, but improve the trail to better accommodate our users and prevent future bootlegs. Although great strides have been made, the area will still need more attention in the future to ensure that this wildflower grove is preserved.



Rare flowers in bloom along the trail.



An Eagle Scout Group kicked off the work in the summer months.



An example of a finished restoration section, completed just before fall so leaves can fall and get trapped in the brush.



Our seasonal crew with support from an outside Conservation Corps built this sustainable trail by hand to help support surrounding restoration efforts.

FOCUSED RESTORATION WORK North Chagrin Reservation

As part of a multi-year effort, the Trails Division continued restoration efforts at North Chagrin, working to close off some of the badly worn bootleg shortcuts between Castle Valley and Squire's Lane. After seeing significant visible improvements from areas closed off in 2020, we decided to target a major bootleg trail that was confusing trail users and causing significant degradation of the area. To get the work done, we targeted a series of large volunteer days and partnered with Natural Resources to facilitate the groups. Through the groups, we were able to leverage donations to support planting trees, further enhancing restoration work and protecting the site.



SCA Alumni from around the country came to kickoff the project.



The materials were ferried from cache sites and then passed up the hillside hand to hand.



Natural Resources took the lead for ordering materials and showing volunteers proper tree planting techniques.



The inner-city high school crew worked on the site as an opportunity to explore new parts of the park district.



A view of completed one year old restoration work with the old trail entirely covered with brush. Look closely and notice the trout lilies already sprouting in the former trail bed.

WARGO FARMS TRAIL

Bedford Reservation

The Wargo Farm trail connects several Garfield Heights neighborhoods on the edge of Bedford. Providing access to a recently acquired property, the trail loops through a meadow, skirts the edge of a deep ravine, and will offer a remarkably beautiful experience to users in just a short distance. The summer months were spent bushwhacking through thick groves of multi-flora rose, searching for just the right locations to plot a loop that is both interesting and sustainable. After the layout was complete, a young-adult corps mobilized to help clear out the multiflora as it began to die down for the season. In the weeks leading to the end of the year, our team made great strides on this project with support from Site Construction, a few dedicated volunteers who have shown up for long days of work in the cold, and the expertise and hard work of our Trails team and remaining seasonal crew. This winter, we will be back out on this trail, completing all the bridges and structures before finishing the project as the weather breaks in the early spring of 2023.



After a first machine excavation pass, our small but inspired seasonal crew cut all remaining roots by hand to minimize disturbance and prepare the trail for aggregate.



We kept the project site open to our core volunteers whenever we were working and were overwhelmed by the individuals that spent long hours in the cold, rain and snow. Thanks to the trainings we provided all summer at West Creek, they were able to jump right in and turn a rough-built machine trail into a solid and stable trail foundation.



After the mini-excavator benched through a section of trail with heavy clay, our dedicated volunteer team tested out our new battery tiller to help cultivate and rake out the spoils to minimize disturbance and enhance restoration.

MOUNTAIN BIKE TRAIL MANAGEMENT

Mountain bikers are deeply engaged with our trails. After hosting only 2 miles of trail a decade ago, Cleveland Metroparks now supports over 25 miles of natural surface trails for mountain biking. The ability to manage a system of this scale in an area that is so densely populated is no simple task, especially when you consider the clay rich soil in our area. Fortunately, we are surrounded by a community that has continued to commit real work towards sustaining their trails. This ongoing commitment has allowed us to grow our trails organically (and at more than triple the rate of any neighboring agency) with the trust that we can continue to work towards simple, sustainable solutions as they are getting ridden in: keeping the costs down and number of rideable days each year up. Additionally, our trail monitors continue to check on the conditions of these trails daily, utilizing social media to inform thousands of well-educated riders each day on the rideability of each trail.



Each volunteer day regardless of experience starts with a safety talk.



For smaller improvements, we often scour for leftover materials to keep project costs down.



An example of some of the armoring work completed at Bedford entirely with volunteers.



This year, veteran volunteers were trained on how to use basic rigging techniques.



They were able to complete the armoring in muddy conditions when other types of trailwork would have been impractical.



With many years of experience under their belts, our volunteers are not intimidated to get down and dirty in order to repair trails so they can last and function for the long haul.

TRAIL SIGNAGE PROJECT UPDATE

The signage project has grown substantially over the last few years. Trails designs the layout and placement for all the trailhead signs and confidence markers around the park, providing a simple, seamless experience for guests that helps them stay oriented and comfortable on the trails. In 2022, we were able to complete upgrades at Brecksville, West Creek and Acacia Reservations.

Our methods have shifted to incorporate sustainability as well as aesthetic appeal. We mill, stain, and prepare backers for all our signs in-house and prioritize the use of lumber from within the Metroparks. We have also adapted our installation techniques to move confidence markers higher in the trees, so visitors are less likely to remove the markers and take them home as souvenirs. We use climbing gear to install all new markers a full eight feet above the level of the trail, and while the process adds a significant amount of time to installation, it has also reduced theft of confidence markers to almost nothing this past year.

We now track over 2000 signs around the park district with support from over 50 regular volunteers. Confidence markers are installed with close to an inch of open space between the backer and the trees they're mounted on, and we use longer screws to allow for tree growth over time.



Updated maps restocked by volunteers are being rolled out at most trailheads.



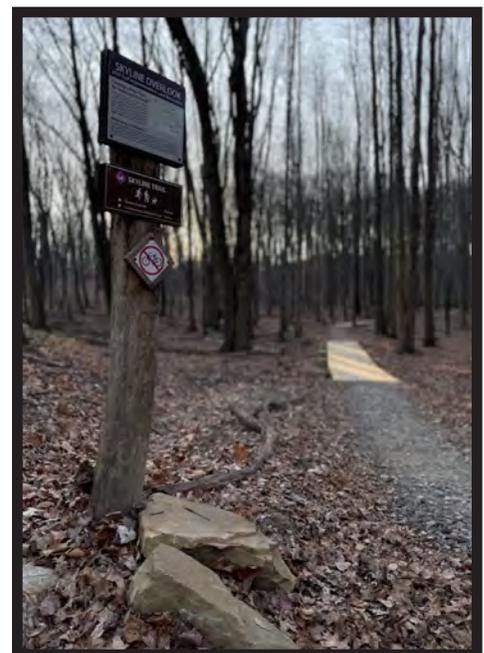
Confidence markers in trees are installed to allow space for growth over time.



Erica uses a harness and climbing system to get the markers just at 8ft above the trail.



Volunteers come to our shop to apply the vinyl signage to metal backers. The Trails Division now independently runs every facet of the production excluding running the vinyl plotter for printing.



Example of new trail sign installed on a hiking trail at West Creek.

MILLING & PRODUCTION

From the start of the Trails Division, one of our highest priorities has been to minimize our impact on the planet as much as possible. We accomplish this by using native and natural materials; by milling and fabricating our own materials as much as feasible; and by building all our trails (and our signage program as well) with longterm sustainability in mind. In 2022 we have continued to expand the space for milling and storage we occupy at Brecksville where our shop used to be located.

2022 production details:

- Trail sign backers made from scrap wood
- Cut stone outcroppings and gargoyles for steps and staircases
- Peeled locust for approaches and sign posts
- Milled locust for steps, retaining walls and other structures
- Screened trail stone mix made from native bedrock materials to match local conditions
- Dried and stained milled wood from fallen park hardwood trees
 - Typically used as boards for decking, handrails, and posts

You may have noticed a "live-edge" look to the handrails of some of our bridges. In all our material production, we do our best to emphasize the natural beauty and shape of the materials we work with. Instead of a one size fits all approach, we let the unique features of each piece shine through to create a living experience that engages trail users on a fundamental level.



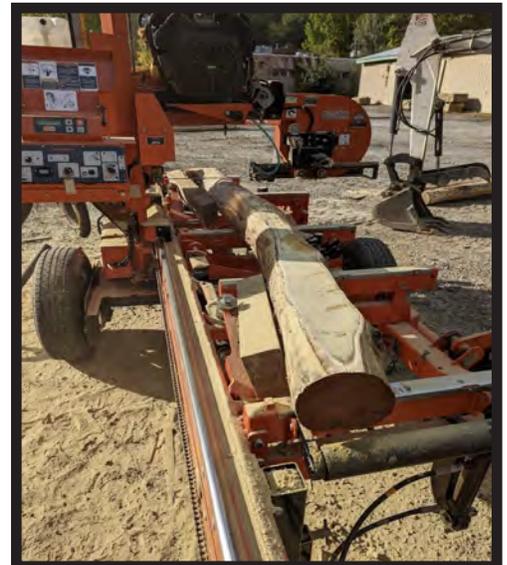
We have begun to stain and dry our boards entirely before applying them in the field. All of this lumber was painted in winter before being used for the long boardwalk at the Lagoon Project.



Chris & Jackson set a live-edge handrail for a bridge made entirely out of highly rot-resistant black locust on the Eastern Ledge Trail.



The top surface material is screened out to a fine blend in our yard before being used on trail projects.



We mill just the top of these logs to make natural timber steps.

WE THANK YOU FOR YOUR SUPPORT.

When we look at trails, we're struck by one thing: people. Trails connect us. Trails connect people to where they want to go, and to new places they didn't know they needed. At their best, trails give people the space and the time to connect with each other, too. Building a trail requires an understanding of psychology and what will feel safe, what will feel exciting, and what will leave a trail user so unsatisfied that they have to venture off-trail to get the adventure they were looking for.

Trailbuilding requires an intuitive grasp of people, physics, and the ways they interact. The innovations we depend on are less about developing new tools or new approaches, and more about looking for new ways to apply or leverage our understanding. This work is science, and art, and more besides; it is a careful and constant series of decisions that test and temper our judgement of distance, erosion, time, and our own abilities. Being part of a trail crew is an invitation to test your mettle, and the only limit to what you might discover is what questions you're bold enough to ask.

As the Trails Division continues to expand to better serve the public and the park, we want to continue to empower all the people who make up this team. Our strength comes from our diverse experiences and insights about the world, and the best trails we build reflect that diversity. I am excited to see what we can accomplish with the addition of a conservation corps next year, and I hope many of you can come out and see us in action one of these days. Trails can be lifechanging, no matter how you choose to experience them - all you need to do is show up!

Happy trails,

The Cleveland Metroparks Trails Team

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Jackson

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