



# Musconetcong River News

Fall 2021

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Asbury, New Jersey

## Linking Up the Landscape Along MWA's Educational Trail

*By Ryan Jiorle, Community Engagement Coordinator*

Big changes are already underway on the MWA Educational Trail in Asbury, with even bigger changes to come. The existing trail, on the Warren County side of the Musky in Franklin Township, has received considerable attention from MWA staff over the course of 2021, after pandemic-induced pauses in work and major storm damage in late 2020.

In addition to fallen-tree clearing and the replacement of three wooden footbridges earlier this year, MWA led a native tree planting along the trail on September 18. The project area was an important wetland near the river, which has been dominated by *Phragmites australis*, an invasive species of reed. After mowing the tall plant (up to 15 feet in height!), staff and volunteers cleared the area and planted 68 native trees and shrubs. They also installed wire cages and plastic "tree tubes" to protect the young plants from deer browse and other wildlife.

As these plants grow taller, they will provide the much-needed shade to prevent the invasive reed from being able to grow, while also providing bank stability and wildlife habitat.

As important of a project as the tree planting was, even bigger work is now possible, thanks to the MWA receiving a \$362,000 grant from the National Fish and Wildlife Foundation, for our proposal, titled "Linking up the Landscape." Part of this grant will help fund work to expand the Educational Trail across the river into Hunterdon County – ultimately making this trail a true "loop" instead of an "out-and-back" trail. Because the New Jersey Department of Environmental Protection (NJDEP) recently purchased land in this area



*MWA hosted a volunteer tree planting day at the head of our Education Trail in September.*

to add to the Musconetcong Wildlife Management Area, there is now public access on both sides of the river, creating an opportunity to expand the existing trail across the river. This undertaking will require the construction of new footbridges, trail-clearing and trail-marking, installation of interpretive signage, and many other tasks necessary to create an accessible trail for the public to enjoy. Upon completion of this multi-year project, anglers, birders, and other outdoor enthusiasts will be able to access 3.8 miles of trails from three different parking areas: the MWA's River Resource Center, the Shurts Rd./Valley Rd. bridge area (multiple lots), and River Rd. (Hunterdon County).

MWA's Linking up the Landscape initiative will include many other projects as well, including further enhancing our education program and coordinating continued efforts to restore the Asbury Mill. Email [info@musconetcong.org](mailto:info@musconetcong.org) if you'd like to be added to our email list and receive the most up-to-date information about Linking up the Landscape and other MWA projects.

## MWA's Official River Watcher Logo is Unveiled!

**Congratulations, Tim Johnston, MWA Trustee and volunteer River Watcher!**



Tim is an avid fly fisherman that ties his own flies and still enjoys turning over rocks, observing nature, photographing turtles, snakes, frogs, salamanders and praying mantis. If it walks, crawls, swims, slithers, hops, flies or just sits there, Tim will want to get a closer look. He is a life member of Trout Unlimited and has participated in numerous stream clean ups, plantings, and invasive plant removals.

The new River Watcher logo will be featured on River Watcher gear and given to volunteers helping out in the field.

If you would like to become a River Watcher, or get involved with any of MWA's volunteer programs, visit our website: [musconetcong.org/get-involved](http://musconetcong.org/get-involved)

# MUSCONETCONG WATERSHED ASSOCIATION

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[www.musconetcong.org](http://www.musconetcong.org)

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*Printing: Good Impressions  
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## Volunteer Spotlight: Bill McQuaide

Bill McQuaide is a dedicated MWA volunteer since retiring from years of communications work with the Audio Engineering Society. Caring deeply about the environment and seeking a positive way to contribute to his community, Bill chose MWA as the organization in which to channel his energy. Bill's time and commitment to MWA's mission has been a wonderful example to others who are interested in making a difference. MWA is spotlighting Bill in this newsletter as a way for our members to learn about the important roles volunteers like Bill play in helping MWA facilitate its mission.

### Why did you choose to become a volunteer for the MWA?

We all need to be involved with the climate change crisis – even those who are not environmentalists need to pay attention to what is happening and donate to MWA to help fund its water preservation efforts.

I live in the Borough of Hampton, and the Musconetcong River runs through my county. It's in my neighborhood. My family walks and rides bikes along the river – it is a beautiful area. Because I retired one year ago I wanted to help out. I have been a member of the MWA for a few years, and the timing was right for me to get more involved. Prior to my becoming an active volunteer, as a member and financial supporter of MWA, I attended the annual Native Plant Sale events, and I frequently visit Asbury where I enjoy seeing the work that the MWA is doing to refurbish the Asbury Mill – a great looking historical building that MWA is preserving and renovating for people to enjoy.

Moreover, I chose MWA because they have some great people, making it easy for me to decide to become a volunteer. Alan Hunt is a person I respect and got to know well while attending community meetings relating to development and preserving the water quality of our river.



*Bill McQuaide and Christa Reeves, Water Quality Program Coordinator, installing a water quality sensor at Hampton Borough Park.*

### What types of projects do you volunteer for?

I volunteered to be a water quality monitor, testing the water in local agricultural ponds as part of MWA's River Watcher project this past summer. Along with staff members, I took readings of the water, and these readings were then analyzed to determine water quality.

I will soon begin a project, volunteering with MWA staff that focuses on invasive species in our river. I have been working with the staff to develop a procedure to alleviate and prevent the New Zealand Mudsail from further spreading in our watershed. We are working on identifying the locations of this invasive species that came to our river from other areas. The New Zealand Mudsail is dangerous to the Musky because they could potentially wipe out the native species in our water, negatively impacting our local waterways.

I will continue assisting with water quality monitoring. Most recently, I helped to install a sensor, one of many on the river, which monitors the

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# Welcome, Craig!

Craig Fleming is a current student at Centenary University, pursuing an environmental science degree. As a student, he learned about a variety of environmental issues, such as microplastics in the Musconetcong River, which lead him to the MWA River Watchers program and MWA's macroinvertebrate studies. Craig wanted to take part in MWA's water quality internship program to further his knowledge in the environmental field and gain real world experience in environmental efforts.



*Craig Fleming*

This internship will focus on installing decontamination stations at approximately 35 access points along the River to stop the spread of the invasive New Zealand Mudsnail. He will also help with sensor maintenance and winter sampling for a project impact assessment on Shurts Road in Hampton Borough (Hunterdon County), NJ.

Craig is from Oxford Township (Warren County), NJ and enjoys hiking, kayaking, and paddle boarding different trails and spots along the Delaware Water Gap. Through working with the MWA, he hopes to build a career working to improve environmental quality so that generations can experience the same joys and hobbies he's come to cherish. 🌿



*MWA's Water Quality team monitoring in Mount Olive, NJ.*

# Welcome, Denise!

Denise Manole is this year's Watershed Ambassador, serving in the Musconetcong Watershed and with partners in the Upper Delaware Watersheds. Denise received her Bachelor of Science in Biological Sciences and Master of Science in Applied Biology from Salisbury University in Maryland. Her Master's thesis was on the biodiversity and feeding preferences of ants on Assateague Island, a coastal barrier island off the coasts of Maryland and Virginia. She is passionate about the biodiversity and conservation of insects.

Denise was born and raised in Great Meadows and is excited to be back in



*Denise Manole*

New Jersey and serving out of MWA's River Resource Center. In her free time, Denise enjoys spending time outside, reading, and being with her two dogs and guinea pig. 🐾

## MWA Working with Landowners to Protect the Musky

*By Annie Polkowski, Watershed Programs Manager*

Riparian buffers, usually composed of native perennials, trees, and shrubs along the edge of our streams, are a critical resource to protect water quality and trout habitat. As Hurricane Ida and other severe weather events have demonstrated, the plants and trees along the edge of our streams knit together the river banks, preventing erosion, slowing down floodwaters, and soaking up excess precipitation. Often, it's not until after the flood waters recede that we value the importance of our riparian buffers – when we can see the beneficial impact of deep rooted native trees, shrubs, and perennial grasses.

Despite this we still have many miles of stream that lack a substantial buffer along the Musconetcong River and its tributaries. To help remedy this, the MWA has been awarded funding from the National Fish and Wildlife Foundation to work with riparian landowners to *Push Back the Lawn* and get more buffers in the ground. The funds are dedicated to providing assistance to interested landowners on riparian buffer design, utilizing native plants. Additionally, MWA will create multiple plant palettes to highlight the multifunctional uses of riparian buffers, such as native edible landscapes, pollinator-friendly backyards,



*A riparian buffer planted at BSB Holsteins farm along West Portal Creek in the Musconetcong River Watershed.*

or seasonally interesting trees and shrubs to help encourage landowners to buffer their landscape instead of mowing to the edge of the stream.

In addition to education and outreach, the MWA will be partnering with local counties, municipalities, and small farmers, to implement two miles of new riparian buffer installations on public open space as well as agriculturally assessed lands within the Musconetcong Watershed.

Through this project, we hope to increase awareness about the importance of riparian buffers, especially as we deal with new threats, due to climate change. For more information about this program, or to express interest in technical assistance on your property, please contact Annie Polkowski, at [annie@musconetcong.org](mailto:annie@musconetcong.org). 🌿

# MWA Monitors Harmful Algal Blooms in the Musconetcong Watershed

By Christa Reeves, Water Quality Program Coordinator

In 2019, Lake Hopatcong, the headwaters to the Musconetcong River, was battling harmful algal blooms (HABs). HABs can cause significant water quality issues that can affect the local ecology and animal and human health. HABs are a misnomer. They are not actually algae. Rather, they are a bacteria that photosynthesize like algae and other plants. Normally invisible, in large volumes, they become visible as a blue-green bloom in the water and make toxins harmful to humans and animals. This can result in swimming restrictions that hamper the recreational economy.

This year, MWA received a small grant from the Watershed Institute to expand our capacity to monitor for this cyanobacteria. MWA reached out to partner with the Lake Hopatcong Foundation and the Lake Hopatcong Commission, as a large portion of this monitoring was volunteer-based and stretched almost the entire length of the 42-mile-long watershed. Trainings occurred at both Lake Hopatcong and MWA's River Resource Center headquarters to engage and educate as many volunteers as possible. Overall, 27 sites were chosen on Lake Hopatcong, Lake Musconetcong, Saxton Lake, Tilcon Lake, the Bloomsbury dam impoundment, and three agricultural ponds.

Over four months, from June through September, volunteers monitored these sites weekly. In addition to taking readings for phycocyanin, the blue-green pigment produced by HABs, water temperature was recorded. This was key since blooms are primarily caused by warmer temperatures.

Another factor for a bloom to occur is the presence of nutrient pollution (i.e., phosphorus and nitrogen). These nutrients can come from stormwater run-off or leaky septic systems. To understand this factor, MWA partnered with Centenary University's Environmental Science program to analyze water samples taken at select locations. The results from this data will provide another piece of the puzzle to understanding our water quality in a more robust manner. For example, it is well-known that phosphorus is a key

nutrient that limits or feeds blooms. If high levels of phosphorous can be identified at certain sites, then mitigation efforts can be focused in these areas.

Preliminary findings show that of the 520 phycocyanin readings taken, 132 exceeded the NJ Department of Environmental Protection's (NJDEP) criteria limit. These exceedances have been reported using the *Report a HAB* page on [www.nj.gov/dep/hab/](http://www.nj.gov/dep/hab/). The data also showed that most lake temperatures are following the global warming trend. In July, the average surface temperature at Lake Hopatcong was 80°F (26.7°C). This is slightly lower than what the NJDEP buoy at State Park Beach shows: 82.2°F (27.9°C). Increasing water temperature over time is certainly a key driver for increased HAB formation.

It is forecasted that the Northeastern U.S. will become warmer and wetter with more frequent and severe weather events. With an increase in precipitation, there comes an increase in stormwater. This run-off washes over lawns and landscaped areas, flushing phosphorus and other pollutants into our waterways, creating a nice, warm home with a full kitchen in which to breed these cyanobacteria.

To stem the tide of this alarming trend, action on all levels must be taken. NJDEP has committed grant funds to direct mitigation efforts, increase their monitoring, update technology, and increase awareness through their messaging system and HAB website. Non-profit organizations, including

MWA and Lake Hopatcong Foundation, are providing outreach and education and expanding capacity to assist with monitoring. Private firms, like Princeton Hydro, are deploying treatment methods to directly combat this water quality concern by



Christa Reeves, MWA Water Quality Program Coordinator, and Donna Macalle-Holly, Lake Hopatcong Foundation, Grant Program Director, monitor for HABs on Lake Hopatcong.

implementing a clay-based nutrient inactivating technology called Phoslock.

How can individuals contribute to this effort? You can reduce the use of fertilizers on your yard and plant more native species that don't need excess nutrients like a lawn does. If you have property near a waterbody, leave a buffer between the yard and the water. Vegetated buffers act as a natural filtration system, preventing excess nutrients from reaching the water. If you have a septic system, have it pumped and inspected on a regular maintenance schedule.

If you would like to get even more involved, consider joining the dozens of volunteers that took a walk or a paddle to their nearest spot on the lake or river to monitor water quality this past summer. With the success that this project brought, it is more than likely that MWA's efforts to monitor HABs in the Watershed will continue next summer, ensuring that everyone stays safe and informed. ☺

## 2021 By the Numbers

50	Volunteers Trained
4	Months of Monitoring in 2021
27	Sites Monitored
132	Limit Exceedances
375	Volunteer Hours

## 'Volunteer Spotlight'

Continued from page 2

temperature in the Musky at Hampton Borough Park. This solar powered meter takes readings and uploads the temperature to the internet so anglers can go online at any time to see the temperature at a particular location. This is helpful for anglers because they can easily use a cell phone to scan and know the temperature before fishing. Having the water temperature is valuable because aquatic wildlife, like trout, thrive in cooler water. Anyone can see the sensor data at <https://monitormywatershed.org/sites/16-4-HP/>.

These sensors also monitor water depth and conductivity – a parameter associated with the salt content of the water. The higher the salt content, the more dangerous it is for plant life and fish. Monitoring the water for salt is also critical for the health of our rivers and streams.

In addition to water quality monitoring, I am also the alternate representative for Hampton Borough on the Musconetcong Resource Management Council.

### Do you have any advice for those who would like to volunteer for the MWA?

We are experiencing a climate crisis, and we all need to be concerned about what is happening to our watershed as a result of climate change. The MWA is doing great work for the environment, and if you are concerned about the environment, you should get involved.

You can also support the organization by donating toward the many beneficial programs MWA provides to preserve our local environment, protect the Musconetcong Watershed and educate our community.

For more information on how you can become a volunteer of the MWA, please visit our website: [www.musconetcong.org/get-involved](http://www.musconetcong.org/get-involved), or email Ryan Jiorle, Community Engagement Coordinator, at [ryan@musconetcong.org](mailto:ryan@musconetcong.org). 🎧

## National Water Trail Signs

By Ryan Jiorle, Community Engagement Coordinator

The Musconetcong River, in addition to having stretches designated as a National Wild and Scenic River, was designated in 2020 as a National Water Trail by the former Secretary of the Interior, David L. Bernhardt. To commemorate and advertise this, MWA staff has been working to install wayfinding signs at public access points along the Musconetcong River, to indicate access for paddlers looking to enjoy this unique trail. But, unlike a public park, the Musconetcong's lake and river access points are owned by a mix of state, county, and local governments. Coordination is key to making the National Water Trail work.

Because the Musconetcong spans so many communities and serves as the border between four different counties, and New Jersey is a "home rule" state, the challenge has been getting approval to install these signs along roads where paddlers can publicly access the river. That's where MWA's experience in forming partnerships comes into play. At the time of this writing, 11 of the 15 signs have been installed. The Lake Hopatcong Foundation assisted with getting approval for five signs in the upper reaches of the Watershed, with MWA taking the responsibility for the remaining ten. These ten signs alone have required working with one state agency, three different counties, and four municipal governments – all of whom own the land or have jurisdiction along these state, county, and local roads. Further, with each entity having its own pathway for approving these sign installations, the entire process has required a considerable commitment to building relationships.

Installing the National Water Trail signs has been right out of the MWA playbook for partnership formation, and learning to work with our local government agencies. For instance, one town channeled the request through its zoning officer and deputy mayor, while another had a public works employee and police officer handle it as a public safety proposal. Another town brought



*Musconetcong National Water Trail sign at an access point to the River in Bloomsbury.*



*Waterloo Road access point in Allamuchy Mountain State Park in use by a kayaker.*

the request before the town council. Some counties handled it entirely within their engineering offices and another put the proposal for new sign post installations before its Board of Commissioners.

The end result has been a better understanding of the way different entities handle requests to install signage near the roadway which is, ultimately, a matter of public safety for their citizens. Thankfully, MWA has been able to work with all of these different people, building awareness for this National Water Trail designation, as well as the overall recreational value of the Musconetcong River. 🎧

# Working to Inspire a New Generation of Anglers

*By Karen Doerfer, Communications and Administrative Coordinator*

MWA believes that a community that is aware of the value and vulnerability of our natural resources will work to protect them. This is why we actively seek opportunities to educate our local leaders, schools, and public about recreational opportunities in the Musconetcong River as well as the threats to local water quality.

In our nearly 30 years as an established non-profit, MWA Board, staff, and super volunteers have hosted a number of hiking and paddling trips to introduce newcomers and reintroduce those who may not have known these opportunities existed.

Through a recent Junior Ranger Angler grant award from the National Park Foundation, we are now expanding our focus to include the angling community. We often promote the importance maintaining cooler temperatures in the Musky because they benefit aquatic wildlife, like our native brook trout. Now, through this grant, we are able to work with communities in the watershed and introduce them to trout fishing – showing them first hand why maintaining these cooler temperatures helps these trout thrive.

MWA is working in partnership with the, newly formed, PEACE NJ to encourage and support young children and their families to get involved in the angling hobby. We have established a gear library, through our Tackle Access program, that allows families who may not have otherwise had access to the necessary fishing gear to borrow from our equipment, removing the cost barrier.

Working with an organization like PEACE NJ, with Spanish-speaking staff and volunteers, removes language barriers and allows us to reach new communities, primarily in the Hackettstown area.

Through the Junior Ranger Angler program, young anglers not only learn about the aquatic wildlife in the Musconetcong River Watershed, but they also have the opportunity to earn their Junior Ranger Angler badge. Something they can take with them whether they are part of the Boy and

Girl Scouts of America or not.

Last month, MWA and PEACE NJ hosted an event at Alumni Park in Hackettstown on one of the two Free Fishing Days that New Jersey allows each year. Along with an additional partnership with Trout Unlimited, families were able to learn from experts how to tie flies and cast in the River. Young children were able to participate in activities on the stream banks that taught them the basics of casting from the safety of land.

For more information on how your child can earn their Junior Ranger Angler badge, or to donate your unused equipment to MWA's Tackle Access library, visit our website or reach out to Ryan Jiorle, Community Engagement Coordinator, at [ryan@musconetcong.org](mailto:ryan@musconetcong.org). 🎣



*A young angler using gear donated to MWA's Tackle Access Library.*



*A tiger trout display with fish donated by the Musky Trout & Fish Hatchery.*



*Keith Fritschie, Trout Unlimited NJ Upper Delaware Restoration Coordinator, showing a young angler how to hold a fishing pole.*

*Ryan Jiorle, MWA Community Engagement Coordinator, teaching a young angler how to tie a knot.*





# SHOWING WINTER 2022

## West Portal Creek

### A Film by Kate Geis

*West Portal Creek* features farmers, conservationists, scientists, and federal agencies working together to solve the complex problem of water pollution.

By focusing on one stream, and using pioneering DNA technology to target water quality improvement projects on two farms and a nearby school, this partnership was able to reduce

bacterial contamination in the Creek by 97%, above their goal of a 93% reduction.

The film project was supported by the William Penn Foundation, a Philadelphia-based foundation funding collaborative restoration projects in the Delaware River Watershed, home of the largest undammed major river in the East.

*West Portal Creek* was developed by the MWA and partners, Trout Unlimited, and North Jersey Resource Conservation and Development.

MWA will be screening *West Portal Creek* at our 2022 Wild & Scenic Film Festival On Tour early next year. Stay tuned for our date announcement! 🎧



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Association



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**Meetup**  
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River Area  
Outdoor Activities

For more information or to register for any of these events, please email [info@musconetcong.org](mailto:info@musconetcong.org) or call (908) 537-7060, unless otherwise noted. MWA River Resource Center (RRC) is located at 10 Maple Avenue, Asbury, NJ.



## The Musconetcong Watershed Association

The Musconetcong River Valley is rich in scenery, history, natural resources, and recreational opportunities. The river rises up in Lake Hopatcong - New Jersey's largest spring-fed lake - and is shadowed by 1,000-foot Highland ridges and slices through a deep, limestone river valley, flowing swiftly to the Delaware River. Along the way the "Musky" passes by state and county parks, bustling towns, vital industries, historic villages, and some of the most productive farmland in the state.

The Musconetcong Watershed Association (MWA) is a non-profit organization formed in 1992 to protect and enhance the Musconetcong River and its related resources through advocacy and environmental education programs, scientific research and river restoration projects. The MWA scope spans the 158 square-mile Musconetcong River Watershed, and includes portions of four counties, and all or portions of 26 municipalities. The Musconetcong River became part of the National Wild and Scenic River System in 2006.

MWA members are part of a network of individuals, families and organizations who care about the Musconetcong River and its watershed. They are kept informed about issues concerning the river and its related resources by receiving quarterly issues of the Musconetcong River News.

## MWA Membership Application

Please enroll me as a member of the Musconetcong Watershed Association. I have enclosed a check payable to MWA for the amount indicated below:

- |  |  |
|--|--|
| <input type="checkbox"/> \$20 Student          | <input type="checkbox"/> \$100 Sustainer |
| <input type="checkbox"/> \$30 Family           | <input type="checkbox"/> \$250 Steward   |
| <input type="checkbox"/> \$50 Supporter        | <input type="checkbox"/> \$500 Champion  |
| <input type="checkbox"/> \$1,000 + Life Member |  |

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone: \_\_\_\_\_

E-mail: \_\_\_\_\_

### Mail to:

Musconetcong Watershed Association  
PO Box 113, Asbury, NJ 08802

- ◆ Working to Inspire a New Generation of Anglers
- ◆ National Water Trail Signs
- ◆ Musconetcong Watershed
- ◆ MWA Monitors Harmful Algal Blooms in the
- ◆ MWA Working with Landowners to Protect the Musky
- ◆ Welcome Craig
- ◆ Welcome Denise
- ◆ Volunteer Spotlight: Bill McQuaide
- ◆ MWA's Official River Watcher Logo is Unveiled!
- ◆ Linking Up the Landscape at the MWA's Educational Trail

### What's Inside:

Asbury, NJ 08802  
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