

# Annual Review 2015

**MUSCONETCONG**  
  
**WATERSHED  
ASSOCIATION**

## Mission Statement

***The Musconetcong Watershed Association (MWA) is an independent, non-profit organization dedicated to protecting and improving the quality of the Musconetcong River and its Watershed, including its natural and cultural resources.***

## Board of Trustees

***Tish Lascelle, President***  
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Eric Snyder  
Karen Williamson

## About our Front Cover

***Bruce Livingston's "The Lower Musky" was taken near the terminus of the Musky facing upstream from where it flows into the Delaware River. Bruce is a former New York City music teacher and avid photographer who moved to Asbury 10 years ago, upon retirement.***

## *A Message from our President:*

What is the most important thing about the Musconetcong River to you? I'm not a fisherman, and I've only kayaked on the river twice on MWA group events. I love the river for its beauty and biodiversity, and those are my reasons for supporting the MWA. I deeply believe that a clean environment – and that includes clean water – is the ultimate human health issue.

When I describe MWA to people for the first time, if I haven't lost them just saying "Musconetcong" (an apt Indian word meaning, "rapid stream"), they are usually glazed over at "Watershed." But when I start talking about the amazing ways this organization is protecting the river and its tributaries or about how we're educating children to care about the natural world around them or how we are advocating for the river with local officials, people respond with understanding and appreciation. Many who don't recognize our name recognize our work. MWA has become a bit *legendary* because of our success removing dams along the river. Other organizations across the country seek out our Executive Director, Beth Styler Barry, to learn how we're doing it. And Beth would be the first to tell you, there is no formula; every dam presents its own unique challenges.

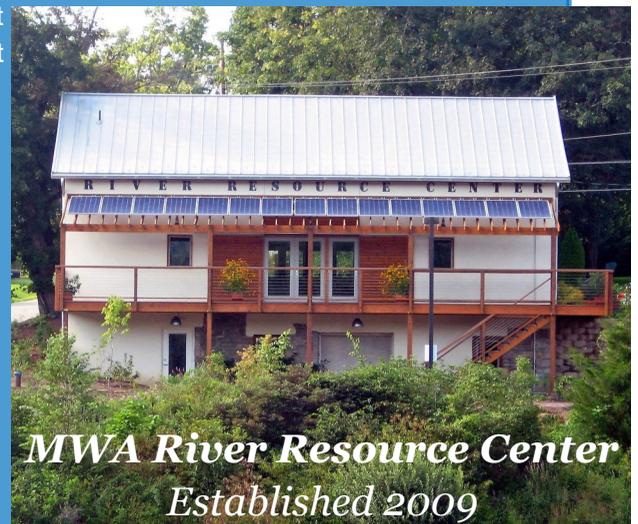
Our wonderfully diverse group of staff and volunteers are integral to achieving our mission of protecting and improving the quality of the Musconetcong River and its watershed - including its natural and cultural resources. It is a privilege to work with people who founded this organization 14 years ago and to renew and expand our capabilities by welcoming new trustees with a variety of backgrounds. We could never afford to buy from consultants the kind of experience and commitment we get from our volunteers. We routinely leverage our vast collective member and staff knowledge to our advantage, enabling us to run a fiscally responsible organization. Our successes also attract valuable business partners to us.

I am deeply grateful to our staff, members, trustees, volunteers and business partners. Together we are having the positive impact on the Musconetcong watershed that we envisioned. I am proud to share this first Annual Report detailing our impact with you.

Sincerely,

*Tish Lascelle*

Board President, MWA



## *A Message from our Executive Director:*

The Musconetcong Watershed Association is thriving, and I'm excited to share this first Annual Report with you! We continue to experience growth in both our membership and our funding. There is so much activity that we are literally chock-full of people at our River Resource Center in Asbury, NJ most days now. Within these pages you will read about the many ways MWA is making a difference in this watershed. Three things stand out among our many 2015 accomplishments:

- We issued our first Water Quality Report Card.

*The MWA Water Quality Monitoring Program began in 2007 with a dozen volunteer River Watchers. Since then we have amassed the kind of data that really begins to allow us to show trends and impacts.*

- We cleared nearly all hurdles for the removal of our fifth dam.

*We are very close to breaking ground on the removal of Hughesville Dam. If all goes well, this dam removal will be completed during the summer of 2016.*

- We expanded our outreach and monitoring.

*In 2014, the William Penn Foundation announced an initiative to protect and restore water quality in the Delaware River watershed – a critical source of drinking water – by driving regional stewardship in targeted areas. MWA was one of several organizations in the NJ Highlands cluster selected to be part of this three-year initiative.*

In 2015, our work focused on improving agricultural land, restoring streams, removal of our fifth dam, improving septic system management and investigating for illicit connections. Working with municipalities and residents on these projects we made progress to reduce pollutant loading from agriculture, storm water and failing septic systems that will lead to measureable improvements in water quality. In addition to these efforts, monitoring done in the Microbial Source Tracking project has begun to identify specific sources of fecal coliform that will help us tailor future projects to better reduce water quality impairments. Our work on these projects gave us the opportunity to build on our strengths in outreach, education and water quality monitoring in ways that are fully aligned with our mission and would not have been possible without funding.

I am sure that you share my excitement as we look toward the future of the organization and the watershed. MWA is on the precipice of a growth spurt due to the credibility and trust we have built – both in our communities and with our funders. I believe our impact can be amplified through key strategic partners going forward.

I thank you for your past and continued support of MWA.

Sincerely,

*Beth Styler Barry*

Executive Director, MWA

## **MWA Staff**

***Beth Styler Barry***

*Executive Director*

***Brenda Berardo***

*Finance Manager*

***Kyle Richter***

*Education and Outreach  
Coordinator*

***Nancy Lawler***

*Water Quality Program  
Coordinator*

***Karen Doerfer***

*Communications &  
Administrative Coordinator*

***Jeff Branham***

*Ground Steward*



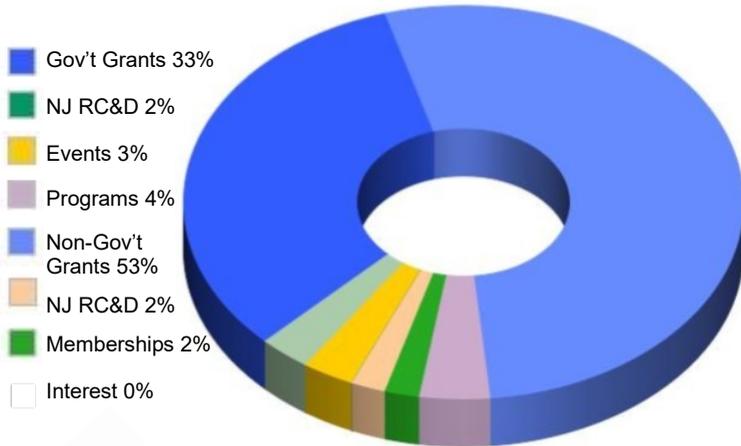
## **About our Back Cover**

***Hooded Mergansers on the Musky in front of the MWA River Resource Center was taken by Brian Butler. Brian is currently an elementary school teacher in Washington, NJ and a member of the MWA. He particularly enjoys the stretch of the Musky from Hampton to Asbury, NJ.***

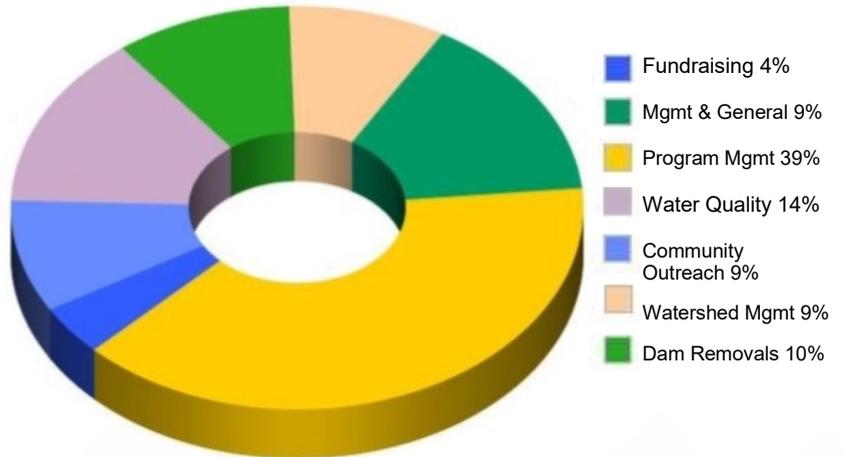
# Financial Highlights

The Musconetcong Watershed Association is a registered 501(c)(3) nonprofit organization. We rely on grants, fundraisers, memberships and donations from environmentally conscious individuals who care about our local water quality... People like you! Below are our financial highlights from 2015. Financial Reports are available upon request from our Finance Manager, Brenda Berardo.

### Sources of Funds



### How Funds Were Spent



## Run for the River Highlights

MWA's Run for the River is currently our largest annual fundraiser. The event is a four-mile walk or run that takes participants on a scenic loop in Asbury, Warren County where they pass streams, pastures, historic buildings and the Musconetcong River. MWA provides t-shirts and light refreshments, and in return, receives fundraising money in the form of participant registrations and sponsorship donations from local businesses.



### MWA would like to thank our 2015 Run for the River Sponsors!

Gold Sponsors– Borealis Compounds, Inc., Engineering & Land Planning, Princeton Hydro, Washington Animal Hospital  
 Silver Sponsors– Asbury Farms, LP, Asbury Village Farms, Brewster & Judith Perkins, Brown & Brown, Covanta, Four Paws Playground, George's Plumbing, Gullage Family, Hackettstown MUA, Hawk Pointe Golf Club, Hunterdon Orthopedic Institute, Dr. Sally Jorgensen, M&E Engineers, Inc. Musconetcong Sewerage Authority, Paddler's Cove, Perryville Wine & Spirits, Rick Allen's Auto, RiverLogic Solutions, LLC, Rockefeller Group, Rossi Chevrolet Buick GMC, Sanico, Tilcon, Verizon Wireless, Warren Animal Hospital, Witte Company



# Monitoring River Health

Assessing the health of the river and monitoring before and after restoration projects are essential roles of MWA. In 2015, MWA staff collaborated with university experts and our own volunteer River Watchers on the following water quality investigations:

## River Watcher Program

We added a new monitoring site at Shurts Road in Franklin Township, Warren County and trained 40 new River Watcher volunteers to assess river health. We also publicized biological and chemical data through our new Annual Water Quality Report Card under a grant from the Watershed Institute.

## Bacteria Source Study

We collected bacteria samples at 15 sites along the river and collaborated with Dr. Meiyin Wu, Director, Passaic River Institute, Montclair State University to determine bacteria sources using DNA biomarkers under a grant from the William Penn Foundation. This resulted in finding that the Musconetcong is one of the cleanest rivers in New Jersey, but geese are a major contributor of bacteria along the river. Livestock and septic systems are also a concern at some sites.

## Road Salt Study

MWA began a three-year collaboration with Dr. Hongbing Sun of Rider University to test for salts in local streams. MWA River Watcher volunteers collected monthly samples at ten locations. Dr. Sun found higher than expected levels in some areas. Further sampling will help identify the major sources.

## Impact of Restoration Projects

Under a three-year grant from the federal Natural Resource Conservation Services, MWA studied five restoration sites. Results indicated restorations may improve macroinvertebrate populations (which are the base of a river's food chain and an indicator of water quality), but may adversely affect mussel populations. MWA shared this data with Fish & Wildlife's Endangered and Non-Game Species Program to inform future work in the region.

## 2015 Report Card Highlight

*Willow Street, Roxbury Township, Morris County*

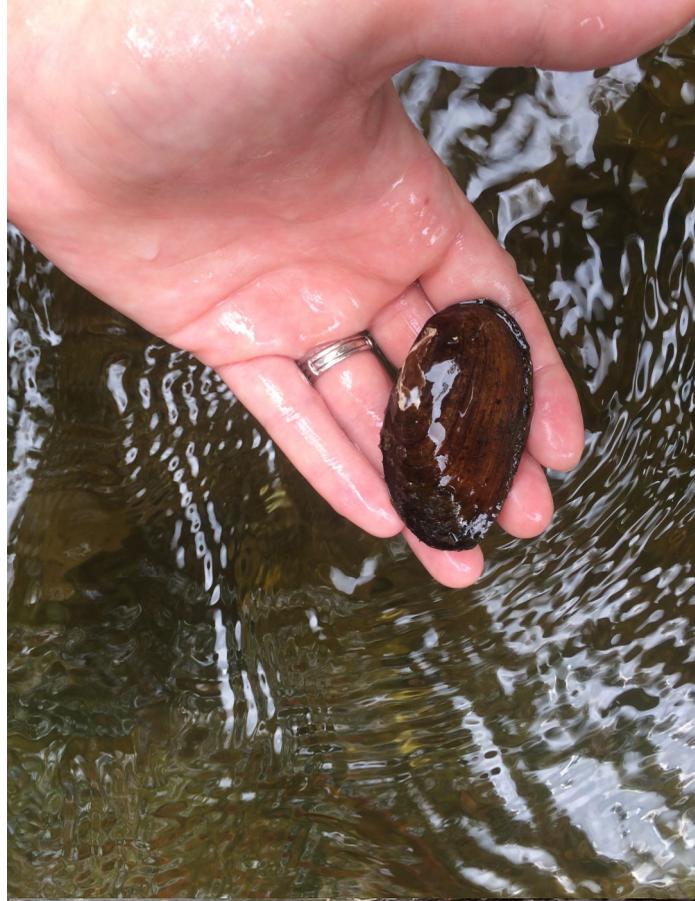
### What Reduced Water Quality in 2015?

- Water Temperature
- Sediment in Habitat Score

### What Supported Water Quality in 2015?

- Preserved land on the Sussex County side

This site is in a quiet residential neighborhood on the east side of the river, about one mile downstream of the Lake Hopatcong dam and about 500 feet upstream from where the Musconetcong River enters Lake Musconetcong. The west side of the stream is forested parkland. The water level is affected by changes in flow at the Lake Hopatcong dam.





## Education and Outreach Program Highlights

*MWA had a very successful 2015. We had over 1,000 participants attend our In-School Watershed Education Program, Camp Musky, Meet the River, Nature Exploration Extravaganza, Hiking Adventures, Paddling Trips and River Talks.*

### Watershed Education Program

The MWA Watershed Education Program teaches students about fresh water ecology, ground and surface water characteristics and the historic and geological features unique to the limestone valleys in the Musconetcong and adjacent Delaware River tributary watersheds. Our program promotes a sense of stewardship for the environment that is rooted in knowledge of science, local ecology and history. The MWA Watershed Education Program is already well established in several local elementary schools.

For further information or to schedule the MWA Watershed Education Program, please contact Kyle Richter, Education and Outreach Coordinator.

### Camp Musky and Meet the River

Camp Musky is an educational and fun day camp for kids ages 5 to 12-plus. Camp Musky offers an outdoor learning experience through hands-on, river-based programs. Campers utilize the beautiful River Resource Center property and adjoining preserved 30 acres of meadows, woods, wetlands and river as they explore nature through storytelling, cooperative play, arts and crafts and nature based activities. 52 campers attended Camp Musky in July, 2015 compared to 32 that attended Camp in 2014. This is a 62.5 percent increase in one year.

Our Meet the River program is designed to allow our youngest members to visit the river's edge and splash in the water. 16 children attended the Meet the River program, over five events.

Our Nature Exploration Extravaganza is like a Camp Musky in the Fall! It allows campers to experience everything Camp Musky has to offer during a different season. 36 campers attended Nature Exploration Extravaganza in November 2015. Compared to the 19 that attended in 2014, this is a 89.5 percent increase in attendance.

## 2015 Education by the Numbers

23

Classes reached through Watershed Education Program

10-18

Ages of students reached through Education Program

425

Students who attended the Watershed Education Program

5-12+

Ages of children attending Camp Musky



## Hikes

As part of our outreach effort, MWA hosts hike and paddle trips throughout our diverse watershed. Our hikes are often led by experts on native plants, birds or other topics of interest. In 2015 the MWA hosted hikes at:

- Stephens State Park
- Musconetcong Gorge
- Point Mountain
- Allamuchy Mountain

## Paddle Trips

There is no better way to experience the Musconetcong River than by paddling in your canoe or kayak! With sights of blue heron, bald eagles, osprey and others, it is an experience you do not want to miss. In 2015, MWA hosted paddle trips along the Hampton to Bloomsbury stretch of the River and at Tilcon Lake.

## River Talks

Each year, MWA presents a series of “River Talks” on a broad range of topics of interest to our watershed residents. “River Talks” are presented by experts in their fields and are held on Tuesday evenings throughout the year at our River Resource Center. In 2015, MWA hosted six River Talks covering the following topics:

- Native American Life Along the River
- Beekeeping
- Amphibians and Reptiles of New Jersey
- Moth Night
- Forest Birds of Northern New Jersey
- Fly Tying– The Basics

# 2015 Outreach By the Numbers

6

Hikes Hosted

77

Total Hikers

22

Paddlers

4

Paddle Trips



**Finesville Dam—Before**



**Finesville Dam—After**



**Hughesville Dam 2015**



**Hughesville Dam 2015**

# Dam Removals

The MWA is committed to removing dams along the Musconetcong River. These removal projects are critical to the continued restoration of the Musconetcong River as a free-flowing waterway. Our goal is to remove as many obsolete dams as possible in order to maintain and improve water quality. At the end of our dam removal experience, we aim to have a river that has the highest possible water quality.

In 2015, MWA focused on breaking ground for the removal of the Hughesville Dam which will restore five miles as a migratory passage for the American eel, blueback herring, alewife, and potentially, American shad.

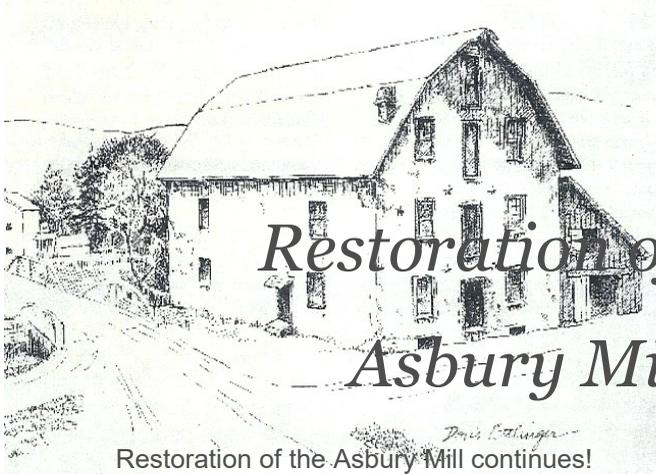
This past year, our engineers at Princeton Hydro completed design documents for the Hughesville Dam removal and assembled the permit package for submission to various agencies. Simultaneously, the project was put out to bid and by year's end, a contractor, RiverLogic Solutions, was selected.

## Hughesville Checklist

*MWA received permits or approvals from the following:*

- ✓ NJDEP Bureau of Dam Safety & Food Control
  - ✓ Division of Land Use Regulation
  - ✓ State Historic Preservation Office
  - ✓ NJ Division of Fish and Wildlife
- ✓ Office of Dredging and Sediment Technology
- ✓ Warren and Hunterdon County Soil Conservation Districts





# Restoration of the Asbury Mill

Restoration of the Asbury Mill continues!

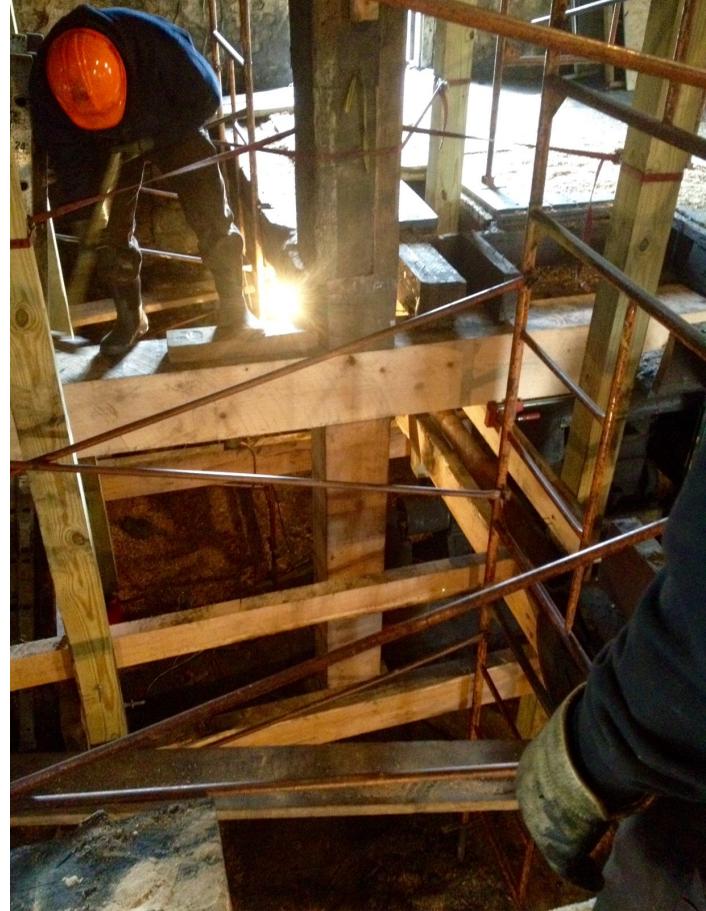
The Asbury Grist Mill forms much of the early industrial character of the Franklin Township, Village of Asbury. Since the mill's construction along the Musconetcong River, the building has characterized the early industrial might of New Jersey with its use of water wheel, and later, turbine power generation used to power the early machines of industry. Here, at the MWA, we are excited to be able to preserve and restore this mill to its original glory.

The Asbury Grist Mill was constructed in 1863, and between then and the time it ceased operation in 1975, the mill went through numerous conversions, reconfigurations and modifications. The changes functioned as intended, but many of them were less than elegant in their implementation. For example, if previous owners needed to run a chute through an exterior wall, they would whack through the masonry wall with a sledge hammer, install the chute and never repair the wall. If a structural column was too short, they would jam scrap wood shims in to fill the gap; and holes were drilled through flooring in order to move equipment between floors, then never repaired. MWA is now repairing these gaps.

The mill has also faced some natural challenges leading to structural issues. During high water conditions, the basement tends to flood and during heavy rain, the foundation leaks. Because of these issues, many of the floor joists and heavy structural timber columns on the first floor rotted to a point where they provide no structural support. These issues, combined with floors being overloaded with heavy equipment and product, caused joists to crack and the floors to sag requiring engineering surveys to assess the structural integrity and design plans to ensure that the mill was structurally sound before making any exterior restorations and improvements. Work commenced on these repairs in 2015 and continues into 2016.

Looking forward, MWA is planning another Asbury Mill fundraising event. This will be a special "Back Lot" tour of the mill. The tour will be led by contractor, Paul Grefe, who will be able to answer technical questions and provide his insight into the restoration process. In addition, attendees will each get a signed, numbered pen and ink print of the mill by local artist, Doris Ettliger McFadden.

For more information and pictures capturing real time progress of the restoration, visit MWA's Facebook page which can be found on our website.



# Volunteer Opportunities

MWA reaches out to the community for participation in several volunteering opportunities throughout the year. Members of the community donate their time by becoming a River Watcher, helping with planting and cleaning up around our River Resource Center and volunteering at our annual River Clean-up.

## Annual River Clean-up

MWA's River Clean-up is currently our largest scale volunteer day. We organize local boy and girl scout troops, schools, families and independent volunteers from the top of our watershed at Lake Hopatcong State Park to the bottom, in the Riegelsville area, and many spots in between to clean up trash, recycling, tires, scrap metal and anything else that is not natural to the watershed. Local trash haulers donate their time and trucks to pick up everything collected by volunteers. As a thanks for all of the community involvement, MWA hosts a picnic at our River Resource Center and invites all volunteers back after they are done.

In 2015, 283 participants volunteered 1,016 hours and cleaned up 231 bags of trash, 50 bags of recycling and 52 tires at over 20 locations along a 60 mile stretch.



## Native Plant Sale Highlights

MWA sold over 100 species of native perennials, ferns, grasses, vines, shrubs and trees at our 2015 annual Native Plant Sale.

Gardeners love them and so do birds, bees and butterflies. One of the benefits of our tough native plants is that they can survive New Jersey's hard, cold winters and hot, dry summers. In addition to greater survivability, native plants require less fertilizer, less use of pesticides, less maintenance and less watering. They also play an important role in supporting biodiversity. This is why MWA plants them

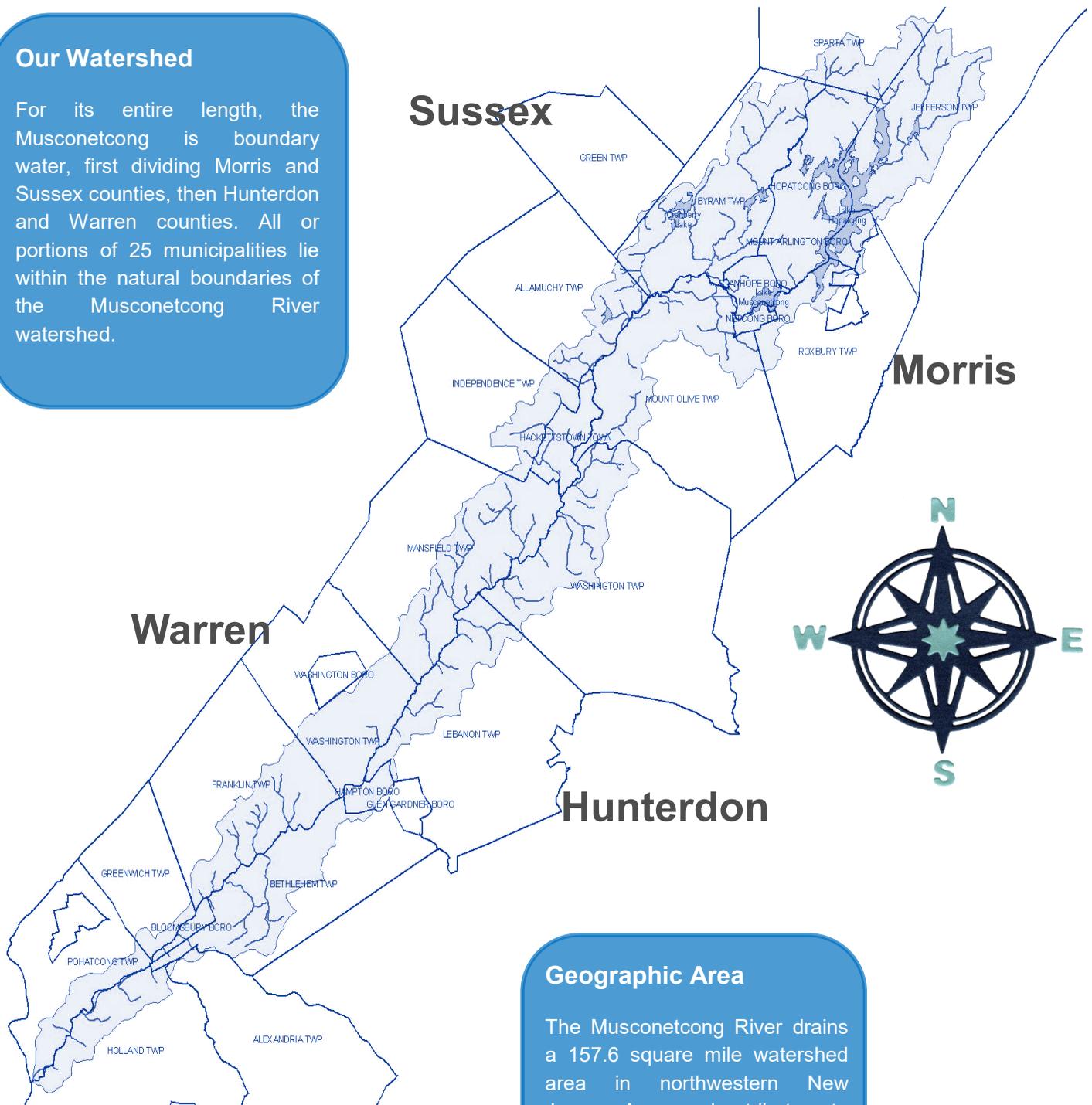
at our River Resource Center and restores the banks of the Musconetcong River using only native plants. They're good for the health of the river and for our wildlife!



# Musconetcong Watershed

## Our Watershed

For its entire length, the Musconetcong is boundary water, first dividing Morris and Sussex counties, then Hunterdon and Warren counties. All or portions of 25 municipalities lie within the natural boundaries of the Musconetcong River watershed.



## Geographic Area

The Musconetcong River drains a 157.6 square mile watershed area in northwestern New Jersey. As a major tributary to the Delaware River, the Musconetcong is part of the nearly 13,000 square mile Delaware River Basin.



***Thank you for your continued support!***

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