



Musconetcong River News

Summer 2011

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Asbury, New Jersey

The Lower Musky is Freed of Three Obstructions

by *Beth Styler Barry*

The Riegelsville Dams were built over 200 years ago but have been unused for the past 100 years. When the mills powered by the dams shut down, the dam structures were obsolete, and left unused, they degraded and began to break down. An examination of aerial photos taken over the past century reveals that most of the structures were washed away during the 1970's. By the mid 1980's all that remained is what we have long referred to as the Riegelsville Dam "remnants".

Prior to removal of the remnants in

early August, the only remaining components of the dam were the masonry abutment walls, earthen embankments outside of the channel, and the timber crib foundation in the river bed. The upstream stone dam remained in place, its only function for the past 150 years being to back up water and inhibit fish passage. The timber crib foundation was also high enough to prevent the upstream migration of certain species and it was certainly a safety hazard for paddlers and anglers. Additionally, the existence of the timber crib foundations and the stone dam created

a backwater and has been limiting the rivers natural sediment carrying capacity.

Beginning August 4th the MWA and partners began the process of removing these structures. Partners along path to removal included two private landowners, N. J. Fish and Wildlife, U.S. Fish and Wildlife Service, National Park Service, NJ Trout Unlimited and the NJ Department of Environmental Protection. Funders were the National Fish and Wildlife Foundation, Cora Brooks Foundation, Conservation Resources Inc.,

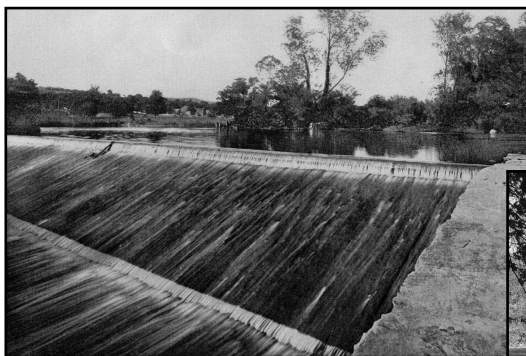
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Dam Removal Provides Opportunity for Historians

By *Jim Lee, Archaeologist, Hunter Research, Inc.*

A historical and archaeological investigation was conducted by Hunter Research, Inc. of the Riegelsville Dams as part of project compliance with the New Jersey Department of Environmental Protection land-use regulations. This study was required by the New Jersey Historic Preservation Office because the dams lie within the Riegelsville Company Town Historic District, which is considered eligible for inclusion in the New Jersey and National Registers of Historic Places. The investigation was conducted in order to document the historical and technological development of the three dams through background research, archaeological documentation and observation during the dam removal process.

Although the historical research is still underway, the rough historical outline of the dam's development has been retraced. The earliest dam was likely built in the late 1780s to early 1790s by Edward Hunt to direct water into a raceway that pow-



The third dam, shown here circa 1870, had massive timbers held together with large iron spikes.

For the past few decades the remnants of all three dams prevented fish passage, limited the river's ability to transport sediment and presented a safety hazard for paddlers and anglers.



New Photo

ered his grist mill on the north bank of the Musconetcong in Warren County. Not long after, a second dam appears to have been built downstream of the first dam to direct water to the raceway of Thomas Purcell's saw mill located on the south bank of the Musconetcong in Hunterdon

CUT LINE

RIEGLSVILLE DAMS

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LOWER MUSKY

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Corporate Wetlands Restoration Partnership and the U.S. Fish and Wildlife Service. Engineering plans and oversight was done by Princeton Hydro LLC, and removal and restoration was done by Urbani Fisheries. Riparian restoration of the upper stone dam area was done by Trout Unlimited Home Rivers Initiative Coordinator Brian Cowden along with several TU volunteers. To conduct oversight of removal, the NJ State Historic Preservation Office hired Hunter Research Inc.

The project site, Riegelsville, NJ, is just upstream of the confluence of the Musconetcong and Delaware Rivers and this project is expected to reopen the lower Musconetcong River to fish migration. Anglers currently catch American

shad and an occasional striped bass below the Musconetcong's first dam, the Finesville dam. River herring are found in the Delaware River upstream of the confluence with the Musconetcong as far north as Easton, Pennsylvania. Based on the Musconetcong's excellent water quality, it is expected that barrier removals such as this one will bring that species into the lower river to spawn.

The MWA and project partners have already made significant progress towards the watershed wide efforts to restore the Musconetcong River to its free-flowing state through the 2008 removal of the Gruendyke Mill Dam and the 2009 removal of the Seber Grove Dam in Hackettstown, NJ. The removal of the Finesville Dam is scheduled for 2011. ☪

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County. These two dams probably worked in tandem until sometime in the last quarter of the 19th century when the entire water right was directed to John Riegel's paper mill, which had been built about 1866 on the site of the original Hunt grist mill. At this time a third dam was built just downstream of the earlier Purcell dam.

The archaeological investigation and monitoring was conducted just prior to and while the dams were being removed. This work included photographic documentation of the dams and the preparation of measured drawings, especially the arrangement of the timber work, types of carpentry joints, pegs, nails and sheeting. Overall the archaeological findings tie in well with what is known about the historical development of the dams. The earliest dam, the upper dam, was the most primitive. It consisted entirely of quarry stone (as opposed to river cobbles) piled across the river as an embankment. The early dam directed water into the 0.8-mile-long headrace that fed the early Hunt grist and saw mills at the outlet of the Musconetcong on the Delaware River. The middle dam was a much more substantial, and complicated structure consisting of a timber crib base with upstream and downstream timber aprons. These large timbers were held together with wooden pegs through well-made dove-tail, lap, and cross-halved joints. Both ends of this dam were held in place by dry-laid stone abutments. This dam likely conducted water to a no-longer-extant tailrace along the south bank of the Musconetcong, feeding the Purcell saw mill visible on 19th-century maps of the area. Finally, the lower dam had massive, square-cut timbers held together with large iron spikes, but no joints. Extremely high mortared-stone abutments are located on either side of the dam with an armored stone spillway to the south and an iron gate structure to the north. Long earthen embankments extend through the floodplain in the fields to the north and south. This dam was built to meet the demands of an increasingly industrialized paper making process.

These findings will be expanded upon and documented in a full report due to be completed in the next few months. Please don't hesitate to contact us if anyone knows any more detail about the history of these structures or has any questions. You can contact Historian Patrick Harshbarger (pharshbarger@hunterresearch.com) or Archaeologist Jim Lee (jlee@hunterresearch.com) at Hunter Research, Inc., (www.hunterresearch.com) or call (609)695-0122. ☪

MUSCONETCONG WATERSHED ASSOCIATION

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Double or Triple Your Impact!

Increase the impact of your donation to the Musconetcong Watershed Association with matching funds from your employer! Many employers have gift-matching programs, in which they will match part or all of your contribution to MWA. If you or your spouse works for, or is retired from, a company or organization that matches charitable contributions, your gift to the MWA could be increased by two or three times its amount.

The MWA has received matching gifts from companies such as IBM, Forest Laboratories, AT&T, Prudential, Verizon, Pfizer and others. Check with your human resources office to learn if your company will match a gift to MWA – and if they do please take advantage of it – it makes a difference!

Lenape Villages on the Musconetcong Recognized

By Bob Sheridan

On Friday July 8, 2011, two plaques were dedicated that memorialize the Lenape nation, whose members lived in two villages along the Musconetcong River. One village, was located across the river from Hampton Borough, and a second village, was near Hackettstown. The Lenape lived in a sustainable way in the Musconetcong Valley by hunting, fishing, and farming. It is hoped that these educational plaques will encourage the present and future residents of the Musconetcong Valley to be similarly conservation-minded. The plaques were installed at Hampton Borough Park off of Valley Road and at Hackettstown Riverfront Park off of Willow Grove Street.

The plaques were produced under the direction of the Historical and Archaeological Committee of the Musconetcong River Management Council, with support from the Musconetcong Watershed Association. Committee members are Allamuchy Township representative Charlie Fineran, Mansfield Township representative Paul Tarlowe, and Bob Sheridan representing Hampton. Funding for the plaques was provided by the



Members of the Historical and Archaeological Committee of the Musconetcong River Management Council unveil the sign at Hampton Borough Park. Committee members are from left Bob Sheridan representing Hampton, Mansfield Township representative Paul Tarlowe and Allamuchy Township representative Charlie Fineran.

Musconetcong River Management Council Historical and Archaeological Committee Chair Bob Sheridan at far left with Munsee Delaware Council Members from left Rose Snake, Mark Peters, Luke Waddilove, Derek Snake and Chief Patrick Waddilove at the Hackettstown sign dedication.



Hunterdon County Cultural and Heritage Commission, the New Jersey Historical Commission, and the U.S. National Park Service.

The guest of honor and keynote speaker was Chief Patrick Waddilove of the Munsee Delaware Nation of Ontario, Canada. Waddilove's nation includes the descendants of the Munsee

Lenape who occupied the villages along the Musconetcong. The American and Canadian governments officially call the Lenape the Delaware because they lived along the Delaware River and its tributaries, such as the Musconetcong River. Other dignitaries attending the ceremony included Munsee Delaware Council Members (from left in photo) Rose Snake, Mark Peters, Luke Waddilove, and Derek Snake.

It Can't be Friday Already?

By Adrienne A. Kaczynski

As each week-long Camp Musky session was coming to a close, we heard the familiar complaint from the campers, "Is it really the last day?" That's how you can tell that your program is a success. Our four week camp sessions were nearly full, two thirds of the attendants being returning campers. That's another good sign. We couldn't have been more pleased by the responses of our campers, their parents and our instructors.

The 5-6 yr olds spent most of their time on artistic, environmentally friendly activities; that is, when they weren't exploring the many fun river adventures or how to mix the two. The older campers explored the river world through endless exciting challenges and hands on outdoor experiences including raft building. We were told they went home and taught their parents a thing or two. Now that's what we call outreach. The MWA would like to say thank you to our instructors Nancy Miller and Megan Bubalis, our volunteers Savannah, Rebecca, Gabbi and our Camp Musky families for another awesome July.



Local officials attending the ceremonies included Stefanie Stevens and John Kuhl of Hunterdon County Cultural & Heritage Commission, Assemblyman Erik Peterson, Hackettstown Mayor Mike Lavery, Hackettstown Councilman Joe Bristow, Shaymaria Silvestri of US Natural Resources Conservation Service, Bill Leavens, Musconetcong Watershed Association Trustee, Karen Williamson, Chair, Musconetcong River Management Council, Paul Kenney, U.S. National Park Service, Andrea Proctor of Winakung at Waterloo, Inc., Hampton Councilman Pete Winter, Tom Carpenter, Chair, Hampton Historical Committee, Mary Ann Carpenter and Ed Butler, Hampton Historical Committee and Helen Maurella, Superintendent, New Jersey State Parks.

Water, Water Everywhere!

A Synopsis Of Musky, Delaware and Merrill Creek MWA Paddling Trips

Hampton Park – Bloomsbury Paddling Trip

June 4th by CJ Koop

June 5th I am challenged with how to begin this story. There are so many points of access to the five hours of sheer fun and adventure. Reality TV, who needs it! We have a river. The Musky is the stage and we ourselves the players.



Father and son paddlers Stuart and Tristan Shafraan participated in all three recent paddling trips.

Before starting our paddling adventure, we signed the waivers that say in fine print we promise, amid other things, to wear our life jackets the entire trip from Hampton Borough Park downstream to Bloomsbury. The group was led by John Brunner, a master paddler with so many insights about the river. Beth, our Executive Director, was the “sweep”. Her job was to stay in the rear and keep us together. A quick blow on her whistle would tell us to slow down so as to stay as a group. It wasn't long before her breath made the shrill of that red whistle a reality. Just minutes underway we had our first story in the making: the swamping of one of our party's kayak. This rather lengthy delay included Beth assisting MWA Trustee Stuart Shafraan in the dumping of the kayak's catch of the river water. About 100 yards downstream while we waited, Stuart's son Tristan challenged the power of our tandem canoe against his prowess at solo kayaking. Oh the innocence of youth combined with the boy in every grown man!

The weather and temperature made for a perfect day on the water. For me, this was a much needed retreat from the grind and challenges of everyday life that can remove us from our passions. As a trustee, I spend much of my spare time working for our goals as an Association, and I love what I do. This trip renewed all that passion. It brings to mind a line in the movie Armageddon with Bruce Willis. The scene was the night before the deep core drillers are about to launch into space to blow up an asteroid twice the size of Texas. Bruce Willis' character Harry Stamper asks for the night off for his guys. It is his reason that came to mind. “What if they get up there and forget what they are fighting for”. Being on the Musky and seeing again just how beautiful a treasure we have right here refreshed my memory. If you have not taken one of our trips I truly recommend it. We welcome all levels and would love to show you what your membership is protecting.

The Three Congs Trip on the Delaware River – July 2nd by John Brunner

A great group of paddlers came out for our “Three Congs” tour of the Delaware River between Phillipsburg and Riegelsville. The oddly named trip took us down the 9-mile section of the Delaware that cuts through the NJ and PA

Highlands Region in Warren County NJ and Northampton County PA. Along the way we passed the Lopatcong and Pohatcong Creeks and Musconetcong River - three great trout streams in Warren County.



MWA members Jim Shupsky and his wife Roberta Ford joined the July second Paddle.

The river was running at a brisk 5.70 feet so our flotilla made record time. A more normal level for that time of year would typically be about two feet lower.

We couldn't land at the traditional lunch spot at Groundhog Lock because the high water inundated our landing spot. An improvised landing on the upper end of Raubs Island offered up a scenic and relaxing lunch. Below Raubs Island we observed many people swimming and fishing, with tents setup on the Pohatcong Township side of the river. Camping is not permitted along this section of the river, but it was a pleasant surprise to observe that the swimmers were wearing life jackets. It was especially rewarding to lead this particular group because for some participants it was a first trip down the Delaware River.

An evening Paddle on Merrill Creek – July 20th by John Brunner

It was a sweltering summer day but that changed as soon as we got on the water - a cool breeze was blowing across Merrill Reservoir. After a brief discussion about the unique history of this popular recreational amenity in Warren County, we set off for a peaceful paddle under a rising full moon. We had close-up looks at cormorants (closest I've ever seen on any lake or river), heard an Eastern Belted Kingfisher and a Pileated Woodpecker, and saw a Great Blue Heron resting on a submerged tree.



A group of about a dozen paddlers enjoy a peaceful paddle under a rising full moon through the 'dead tree forest' at the lower end of the Merrill Creek Reservoir.

I was most impressed by the intrepid teen in the group (Tristan). He paddled a kayak single bladed through the 'dead tree forest' at the lower end of the lake. He's a natural born paddler as we observed on prior river trips down the Musconetcong and Delaware. We all watched while Tristan's dad caught a whopper of a largemouth bass.

The highlight of the trip was the Bald Eagle that dove into the lake right in front of the group (it came up empty-clawed). This was a special thrill for paddler and avid birder Liz Canavan Dunne, a New Jersey native now living in Massachusetts. “I've never seen a bald eagle in the wild and it was as if someone had special ordered a display for us. We were right below as he circled, spotted his prey and dove – it was great!”

SAVE THESE DATES!

- **Tuesday, September 20 - River Talk - 7:00 pm – 8:30 pm - Water Quality in the Musconetcong: Successes and Challenges** This River Talk will focus on water quality in the Musconetcong River. Learn about the work that the organization is doing to monitor the health of the river. MWA River Watcher Coordinator Nancy Lawler will discuss the successes we've had and challenges that the river still faces. We'll discuss data collected by our own MWA River Watchers as well as other groups. What trends do we see? Where is the river most threatened? Come for answers to these questions and to find out how you can become more involved. The talk will be held at the MWA River Resource Center, 10 Maple Avenue, Asbury, NJ 08802. Email adrienne@musconetcong.org or call (908) 537-7060 for information or to register.
- **Wednesday, September 21 - 6:00 pm - 8:00 pm – Caring for your land and Watershed- What you can do, Where to get help, How to find funding** MWA in conjunction with Heritage Conservancy is offering a free workshop for landowners and public officials who would like to learn about how to improve their land, help protect water quality, and to get help to do so. The workshop will be held at the MWA River Resource Center, 10 Maple Avenue, Asbury, NJ 08802. Email adrienne@musconetcong.org or call (908) 537-7060 for information or to register.
- **Sunday, October 2 - 9th Annual MWA Wine Tasting Event -1:00- 4:00pm** Join us for a relaxing fall afternoon under the Pavilion at Warren County Rod and Gun Club located in Asbury, New Jersey. Email adrienne@musconetcong.org or call (908) 537-7060 for more information. Tickets are now available online at www.musconetcong.org . They can also be purchased at the MWA River Resource Center 10 Maple Avenue, Asbury or Perryville Wine and Spirits, Rte 173, Hampton, NJ.
- **Saturday, November 26 – Hike at Point Mountain – 10:00am - 12:30pm(ish)** Each year MWA members and others set aside the Saturday after Thanksgiving to burn off those extra calories by hiking the trail at the Point Mountain Reserve. Hikers will use the Ridge Trail which cuts through the forests and a mountain stream. A scenic overlook is along this trail and provides a view of distant mountains and farmland in Warren County. The trail is diverse and challenging at times and includes a steep and rocky incline. MWA members are free, nonmembers are asked to donate \$3 per person. Bring a snack, water and binoculars. All are welcome, novice and expert alike. The meeting place for this hike is the gravel parking lot on Point Mountain Road approximately 0.3 miles from Route 57. Call (908) 537-7060 or e-mail adrienne@musconetcong.org for details or to register.

Note: If you are not receiving e-mail reminders for these events it means that we do not have a current e-mail address. If you'd like to receive reminders and occasional "Musky News Briefs" please contact beth@musconetcong.org.

- ◆ Save These Dates
- ◆ Water, Water Everywhere!
- ◆ Double or Triple Your Impact!
- ◆ Dam Removal Provides Opportunity for Historians
- ◆ The Lower Musky is Freed of Three Obstructions

What's Inside:

Musconetcong River News



Asbury, NJ 08802
PO Box 113



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 1991 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 25 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 in which I will receive membership benefits and publications. I have enclosed a check payable to **MWA** for the membership category listed below:

- | | |
|---|--|
| <input type="checkbox"/> \$20 Student | <input type="checkbox"/> \$100 Sustainer |
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| <input type="checkbox"/> \$50 Supporter | <input type="checkbox"/> \$500 Champion |
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