

Morristown's Foote's Pond

Pond restoration brings community together

*Anthony M. DeVizio, PE, PLS/Town Engineer, Town of Morristown;
Natalie BeCoats, Communication Specialist/Bergmann PC for Colliers Engineering & Design*

Bringing Morristown's Foote's Pond back to life was no small feat—it took a team of consultants, the Morristown Engineering Division, Morristown Environmental Commission, and the Town's community working together to take their pond back.

Foote's Pond Wood is a 25-acre park in Morristown adjacent to Thomas Jefferson Elementary School on James Street. It is an accessible park that supports a rich, diverse ecosystem within various habitats including open water bordering on meadow and woods. At one end of the naturalized passive public sanctuary stands a three-acre pond called Foote's Pond. Over 40 years of sediment and vegetative debris settled in the bottom, degrading the pond's health and ability to support wildlife. Its original maximum depth of four feet was down to 12 inches.

Restoring a pond to its former glory

The Town of Morristown was considering dredging the pond, the process of removing sediment with a portable dredge, which allows the operator to collect the sediment and pump it to another location through a system of large dredge pipes. In this case, dredging the pond would have removed all sediment, soil, and vegetative waste, all at a costly price of more than \$2 million. The dredging process is also heavily focused on removing hard debris and sediment through the pipe in a slurry which generally needs to be stored in a pond on site to allow natural drying of the slurry or portable dewatering equipment requiring a large staging area. Dredging is a long, drawn-out process that would have disturbed an excessive amount of parkland and required heavy NJDEP permitting.





After a deeper dive into research about the pond, the town's appointed consultant, Andrew Hipolit, PE, PP, CME, CFM, CPWM, from Colliers Engineering & Design, Discipline

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Leader for Municipal Services, advised town officials that hydro-raking would be the way to proceed,



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Ongoing efforts

But the restoration of the park didn't stop at just Foote's Pond. The Friends of Foote's Pond, a local grassroots volunteer group, donated countless hours to restore and protect

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the pond and the surrounding woodlands through community outreach, education, ongoing assessment, physical labor, and promotion of this

and Morristown approved the capital funding that enabled the project to proceed. This project did not require NJDEP permitting.

There were a multitude of requirements to consider, which included improving the community's quality of life in the areas surrounding Foote's Pond Wood, maximizing the Town's budget value, improving the pond's health without disturbing critical wildlife habitats, providing minimal disturbance to the public, and finally, overseeing the construction administration.

"We knew that the unique process of using a hydro-rake would be the most cost-effective solution for the Town," said Hipolit. "Hydro-raking would restore and improve the pond, all while providing significant savings to the town of almost \$1.6 million less than dredging."

What's a hydro-rake?

The hydro-rake is a unique floating excavator equipped with a long hydraulic arm with a rake attachment that combs the pond bottom to remove detritus, vegetative debris, and aquatic vegetation with attached root systems. Hydro-raking enables the operator to be more selective in removing only organic material. This method is also a more holistic means of improving the water quality and ecology, causing less disturbance to associated wildlife habitats in and around the pond.

When construction was complete, the hydro-rake had removed around 5,400 cubic yards of organic matter. This brought the water depth to an average of 2.5 to 3 feet, with a maximum depth estimated at 4 feet, marking a significant improvement from its prior state. Before the project, the pond had approximately 58,000 square feet of open water. At project completion, the water surface area had increased to 80,000 square feet. By culling the heavily meadowed areas of the pond, over 35% of additional surface water area was reclaimed.




valuable community resource. They have also taken the lead on certain maintenance of the park, revegetating native plants, and working toward keeping invasive species out, while pursuing grants with their new 501c3 designation

The transformation of this pond is significant, offering respite to visitors and residents alike. Local schools utilize the space for science projects, and individuals from near and far visit the park to enjoy various forms of passive recreation. Because native vegetation was left largely intact within the park, it will continue to invite wildlife into the habitat offered by the pond.

The town saved time, money, and natural resources by making the right choices. Opting to use hydro-raking over dredging saved taxpayers over a million dollars; negated the need for permitting; had a lower impact on the Pond's ecology; and set the municipality up for more manageable maintenance in the future.

The project was awarded the 2021 Municipal Construction Management

Project of the Year by the NJ Society of Municipal Engineers (NJSME). 

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