Douglas Manor Environmental Association

SPRING 2026 · NEWSLETTER OF THE DMEA

$6.2 MILLION BIG ROCK WETLAND RESTORATION PROJECT SET TO BEGIN! *By Kevin Wolfe*

Credit Kevin Wolfe : Memorial Field Looking south

Fourteen years ago, the 7-acre Big Rock Wetland Restoration Project was a dream—a big dream—to restore a degraded wetland and rapidly eroding shoreline at the eastern edge of the Douglas Manor peninsula. Later this year, with $6.2 million in federal and state grants secured to build it, construction will begin!

Imagine a beautifully restored wetland between Big Rock and Memorial Field, where native plants thrive, with a diverse environment from the tidal flats along the western shore of Udalls Cove, to the upland along Douglas Road, attracting wildlife of all kinds. This restoration will also help protect the shoreline during storms and tidal surges.

There are still some steps to go before a beginning construction date is confirmed, including securing final permitting and selection of a contractor, both of which are expected to be completed by late summer.

The Big Rock Project is managed by the non-profit Save the Sound (STS) in partnership with the DMEA and the Douglas Manor Association (DMA), which owns the site. The DMEA has an environmental easement over part of Memorial Field that protects it from future development. STS was instrumental in securing funding and will oversee the project when construction begins.

Much of the site will be restored as a “living shoreline,” with plantings of native marsh grasses that absorb wave energy rather than reflecting it back as sea walls do, resulting in a more resilient coastline.

Where parts of the shoreline along Douglas Road have been undermined by erosion and threaten collapse of the roadway, a combination of a stone revetment, interplanted with native plants, as well as a timber crib wall, will help stabilize the street.

The wood of the crib wall will intentionally rot out over time, allowing the plantings to root in and protect the shoreline. The invasive shoreline plant Phragmites australis, will be removed and replanted with cordgrass (Spartina alternifolia), a saltwater plant that builds up soil elevation and protects shorelines from erosion. “Phrag” is a tall reed which dominates large parts of the site that has squeezed out more productive native species over the past century, and that attracts little wildlife.

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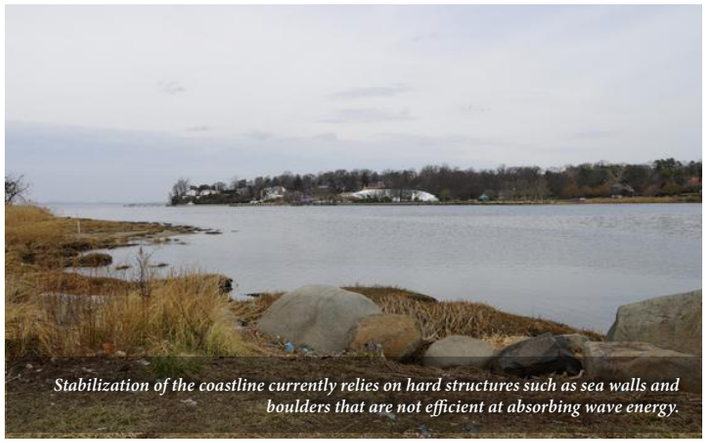
Big Rock site as it currently exists is overrun with invasive Phragmites reed grass and offers little protection from erosion.



Stabilization of the coastline currently relies on hard structures such as sea walls and boulders that are not efficient at absorbing wave energy.

Erosion at the edges of Memorial Field has accelerated dramatically in recent years. The Big Rock Project includes regrading and replanting the banks of Memorial Field to minimize damage from storm surges and super high tides, which flood the field on a regular basis. The existing playing field areas will not be impacted by the regrading and replanting.

Although use of the existing concrete boat ramp will be enhanced by regrading the adjacent banks to make boat access easier, the project does not include reconstruction of the ramp itself, which did not qualify for grant monies.

The restoration was designed by GEI Consultants, Inc., the nationally recognized environmental restoration and engineering firm based in Huntington Station, NY, that specializes in wetland restoration. GEI developed the design based on community input from the public meetings, scientific data including water samples, tide and weather data, soil borings, and engineering studies of the site by the GEI team, including a civil engineer, hydrologist and ecological engineer.

The full landscape restoration plan designed by GEI includes:

1) Removal of invasive Phragmites australis reeds
2) Re-introduction of native plantings
3) Enhancement of wildlife habitat and improved water quality
4) Restoration and replanting of the eroded edges of Memorial Field
5) Installation of an artificial reef that serves as breakwater
6) Restoration of tidal salt marsh grasses
7) Stabilization and replanting of the embankment along Douglas Road

Although part of the playing field lawn area at Memorial Field will be fenced off as a staging area during construction, the full extent will not be known until a contractor is selected. The contractor is responsible to repair any damage done to the field during construction.

The playground and the basketball courts are not expected to be impacted by the construction project which will be reached by the existing driveway. The project is expected to take at least a year to complete, as it is weather dependent, and work must stop during part of the winter months.

Since 2015, the DMEA has hosted or co-sponsored many public outreach programs and events about the Big Rock Project, attracting more than 1,000 participants. These events included walking tours, public education programs, and a design charrette inviting community input for the design. Programs will continue once construction begins. Informational signage explaining the project at the site will be posted on construction fencing.

Permanent plaques and other informational signage will also be installed, explaining the Big Rock site's history, ecology and importance as a natural environment once construction is completed.

The Big Rock Project is a multi-partner effort and includes participation from the Douglas Manor Association, Udalls Cove Preservation Commission, the Douglaston and Little Neck Historical Society, Hofstra University, Alley Pond Environmental Center, NYC Bird Alliance, Billion Oyster Project, NYC Parks and local schools. Since 2014, the Big Rock Wetlands Project has engaged more than 750 students and 20 teachers from local schools Middle School 67Q and Public School 98Q, and faculty and college students from the Department of Geology, Environment and Sustainability at Hofstra University. The DMEA will continue to reach out to involve participation of local community groups and school groups as the Big Rock project continues.

This rendering shows the future vision of the site including oyster castles and native vegetation.

250 MILLION YEARS OF HISTORY SAVED AT LITTLE NECK BAY *By Kristofer Doerfler*

It's 2:38 AM - a full moon low tide night in late May 2025, with clear water (for Little Neck Bay that is), as stunted waves roll into the Douglaston pier. There are 5 of us. We take the air temperature, 71 degrees; the wind speed, 2 MPH; and water temperature, 59.1 degrees - brrr. The sky is dark, our flashlights are on, and our eyes are peeled. Excellent conditions for horseshoe crabs to mate, and our perfect opportunity to count and study them.

Horseshoe crabs have existed for over 250 million years, dating back to the Triassic Period (when dinosaurs roamed the earth), and are considered a keystone species of the Long Island Sound ecosystem. This means that much of the other wildlife in the Long Island Sound, such as migrating seabirds, raccoons, and various fish species, rely on horseshoe crabs for their survival.

They used to cover the shorelines of Little Neck Bay in the breeding months of May-July in the thousands, but, alas, nowadays they count just in the hundreds as their numbers have plummeted in recent decades. This is due to horseshoe crabs being overfished for fish bait, harvested for the pharmaceutical industry, as well as reckless and outdated laws that inadequately protected this critical species. That is why the Douglas Manor Environmental Association (DMEA) volunteered to help The New York State Department of Environmental Conservation and the Cornell University Cooperative Extension Program do something about the declining numbers and shed light on how dire the plight of the horseshoe crab is.

For close to a decade the DMEA has run a horseshoe crab monitoring and tagging operation at multiple sites in Little Neck Bay every May-July, lining this work up with the moon cycles, as part of a large-scale horseshoe crab study covering all the Long Island coastline and parts of Connecticut and New Jersey.

After 250 million years, horseshoe crabs certainly aren't going to wait for our schedules, so we must adapt to theirs. Yes, that means if it is a full moon or new moon at 3 am on a rainy Wednesday night we are out there slogging through the cold Little Neck Bay water trying to catch a glimpse of any sea-going arachnid (the horseshoe crab) we can find before slinking back home to bed. Fortunately, though, most nights our work is done before 11PM and our time is spent relishing breezy late spring and early summer nights with the starry NYC skyline in the background, while we casually follow the horseshoe crabs with our flashlights before catching a few to tag and measure. It creates a wonderful environment to include other interested volunteers from around New York City and give people a chance to learn how environmental research is conducted. In this instance, we are also proud to say our research contributions as a community have led to a resounding success on a large scale!

In December 2025, Governor Kathy Hochul signed a law that will ban the harvesting of Horseshoe Crabs in NY waters over a 3 year transition period by 2029. State Assemblymember Deborah Glick,

Kristofer Doerfler tagging Horseshoe crab Douglas Manor Pier

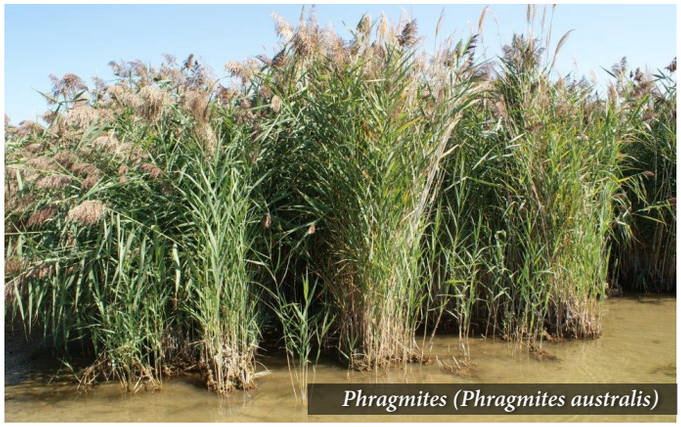
chair of the Assembly's Environmental Conservation Committee, was the bill's lead sponsor. This is a major triumph of years of work and partnership between volunteers and scientists in the Long Island community to provide the necessary data and knowledge to change the course of history for the vital horseshoe crab population.

We are looking forward to seeing first-hand if the protections lead to noticeable changes in the horseshoe crab count. Come join us this May/June—for one night, or more than one night—by reaching out to the DMEA: theDMEA.org. Volunteer to become a citizen scientist and learn just how much fun saving wildlife can be!!

The enduring horseshoe crab - as old as the dinosaurs

SPARTINA VS. PHRAGMITES, AND WHY IT MATTERS

by Jamie Sutherland



Phragmites (Phragmites australis)

A crucial part of the Big Rock Wetland Restoration Project is the removal of several acres of the invasive reed Phragmites australis and the planting of the low native grass Spartina alterniflora in its place. An explanation of the differences between these two marsh plants is necessary to understand the goal of the restoration, and why the invasive phragmites will be removed.

First off, let's identify the two plants. Phragmites is a tall (12-14 ft)–some may say elegant–reedy tufted plant (photo, above left). Phragmites, commonly referred to as "phrag", hug the shoreline and need brackish or fresh water from upland runoff. It is one of the most aggressive **invasive** plants in wetlands throughout the Northeast. Phragmites form a dense, impenetrable monoculture that crowds out more beneficial plants in the natural salt marsh ecosystem and support very little wildlife.

Spartina, a **native** wetland grass also known as cordgrass (photo above right) is a shorter grass (1-5 feet tall) with long narrow blades that evolved over time with our ancient salt marsh. Spartina leaves are smooth and flexible, resembling some ornamental grasses found in a cultivated garden. The roots tolerate salt water. This plant offers many ecological benefits in coastal environments like Udalls Cove.

Phragmites typically grow in the disturbed edges of a saltwater wetland, where landfills have happened. This can be from intentional landfilling, soil disturbance from road work, dumping garden waste, or drain outfalls, for example. Phragmites spread by rhizomes, forming dense root mats that allow it to colonize areas of Spartina, rapidly replacing it. Phragmites roots are deep.

For the Big Rock project, the areas of Phragmites will be excavated several feet to remove all the roots, backfilled with sand and soil, re-graded at the correct level for tidal flow, and then replanted with Spartina. A new saltwater stream bed will be cut into the restored area to allow saltwater to flow freely and reach these newly planted areas. The restoration area will be monitored for five years to ensure that the new plantings thrive, as has been done at other successful Long Island wetland restoration sites.

Here are the main reasons why we are removing Phragmites and replacing them with cordgrass:

►► *SUPPORTS WILDLIFE*

Spartina, because it is native to salt marshes and because it evolved in this environment from ancient times, supports a wide range of wildlife. Its open growth pattern allows small fish, crabs, and all kinds of shore birds to move easily through the marsh. Many species rely on Spartina for food, shelter, spawning and feeding. Phragmites, a common reed, is particularly invasive, and quickly overtakes native plants systems that are far richer ecologically. The dense habitat it creates physically limits wildlife including both fish and birds.

Spartina (Spartina alterniflora) Memorial Field looking North

►► *CONTROLS EROSION*

Spartina is crucial to coastal erosion control. Its root system binds soil together stabilizing shorelines and protecting against wave action and storms. Memorial Field gets flooded with extreme high tides and storm surges on a regular basis, and this wave action has scoured away the edges of the Field, threatening its survival. The boulders placed at the Memorial Field's edge in the 1960s to stop erosion have actually exacerbated it. The boulders will be removed and replaced with Spartina as well as a variety of native plants as the slope approaches the level of the Field. The replanting of Spartina, particularly in tidally submerged areas along the outer edges of the Field, will help slow down erosion. The root system of Spartina will act as a sponge absorbing flood water and helping to hold the soil in place. As Spartina shoots take root the marsh will slowly build back up the shoreline, helping to protect the Field.

Healthy Spartina marshes are also more resilient to environmental changes, including rising sea levels because they support a complex and adaptable ecosystem.

Invasive Phragmites on the other hand, can alter natural water flow and interrupt sediment patterns in ways that upset the natural ability of the salt marsh to hold soil.

►► *IMPROVES WATER QUALITY*

Spartina also contributes to water quality, filtering pollutants and trapping sediments in a way that supports the natural function of marshes. Spartina leaves slow water flow, trap particles, and support microbes, making salt marshes some of the most effective natural water filtration systems on Earth. Their leaves can break down pollutants including excess nutrients and some contaminants. They support shellfish growth that filters the water at 50 gallons a day for each shellfish! Because Spartina coexists with other native plants, the overall system remains balanced and effective.

Phragmites, being invasive, hinders healthy marsh growth. Its root system creates a hard mattress where shellfish cannot exist and fish cannot spawn. It creates a monoculture and its root system hinders water flow.

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►► ***IMPROVES COASTLINE VIEW and MARSH APPRECIATION***

Once the phragmites are removed, as you walk along Douglas Road, you will be able to see straight out over the road's edge into the marsh and across the cove to Great Neck. You will see the beautiful cordgrass changing colors with the seasons and softly undulating in the wind. Your view will no longer be hindered by the tall invasive phragmites.

Spartina will help maintain the natural appearance and function of the Udalls Cove salt marsh. During restoration, the DMEA will be placing signage to identify wildlife and plantings and to explain the different phases of the project. This signage will be posted on fencing on the physical site and on our website: thedmea.org. With an improved view and an understanding of the restoration process, the community will be able to truly appreciate the wonders of our salt marsh.

In summary, Spartina is beneficial because it supports wildlife, stabilizes shorelines, improves water quality, and maintains balanced ecosystems, while invasive phragmites disrupts these important natural processes. As you can see there are many benefits to replacing phragmites with cordgrass and this is why this aspect of the restoration is such an important part of the Big Rock project.

We, at the DMEA, look forward to sharing a restored beautiful salt marsh with the community. Beginning in 2014 we embarked on this project, and we are so thrilled for it to finally begin!

MAKING WAVES: A SUMMER OF LEARNING ON THE WATER RETURNS FOR 2026!

By: Bernadette Kelly

The DMEA pilot project last summer that brought a season of free environmental education programming to neighborhood children will be back for 2026—with more sessions, more field trips, and an enhanced curriculum. Building on last summer's great success, planning for the 2026 Big Rock Restoration Education Project has begun, with a continued commitment to our core mission to educate our youngest neighbors about the work DMEA is doing to restore and build back the environment of Little Neck Bay.

Last year DMEA partnered with Douglaston Junior Yacht Squadron (DJYS) and launched the first ever Summer Education Program, to tie into the upcoming Big Rock Restoration Project that is expected to begin construction later this year. Three programs ran across the summer, each one connecting young people to the waters they live alongside in a different way. All were offered at no cost to families, funded by the DMEA and staffed by volunteers.

In collaboration with the DJYS, DMEA is expanding the program and adding to a growing coalition of partners that includes Save the Sound, the Udalls Cove Preservation Committee, and the Junior Sailing Association of Long Island Sound (JSA of LIS). This year DMEA is also pursuing grant funding to sustain and deepen this work.

Here are some of the highlights from the Summer of 2025:

The Summer of 2025

OUT ON THE DOCK WITH SAVE THE SOUND

On July 16th, 2025, educators from Save the Sound (STS) in conjunction with JSA of LIS, spent two hours at the Douglaston Dock with our junior sailors. Kids got their hands on plankton tows, (a fine-mesh net towed through water to collect microscopic plant and animal samples), collected water quality samples, and peered through microscopes at live specimens pulled straight from our own Little Neck Bay. The session covered the crustaceans and organisms that make the Long Island Sound home and the human pressures that put that ecosystem at risk. STS is a regional nonprofit environmental organization dedicated to protecting and restoring the Long Island Sound and its surrounding watersheds.

Save the Sound educator presenting at the Dock

ANIMALS ALIVE! WITH ALLEY POND ENVIRONMENTAL CENTER

On July 22nd, 2025, educators from the Alley Pond Environmental Center (APEC) brought the lesson indoors with some animal friends. Live animals, including smooth-as-silk furry chinchillas, were passed around a room full of wide-eyed kids at the Douglaston Club in two different sessions. APEC educators connected each animal to its habitat, diet, and the broader story of biodiversity in our local ecosystem. The energy in the room was amazing and the kids loved it!

APEC group session and animal handling at the Douglaston Club

Kids around oyster cage on dock, a crab, and an oyster tray being tended at CIOR, City Island

CITY ISLAND AND THE BILLION OYSTER PROJECT

Through the DMEA's relationship with City Island Oyster Relief (CIOR), we were able to have a field trip of DJYS sailors over to City Island. Many thanks to Douglas Manor residents Sheri and Ernan Roman for taking our sailors over to the Bronx to witness firsthand the incredible work that CIOR does to save our shared waters.

Instructors and sailors witnessed active oyster restoration sites in collaboration with the Billion Oyster Project. Dock-side, experts walked kids through how oyster reefs filter water and support marine ecosystems and how community organizations like the Billion Oyster Project are actively restoring oyster beds in our own backyard, including in Little Neck Bay.

This neighborhood has always known that Little Neck Bay is worth protecting — let's teach our kids that it's worth it, too! For more information about the Big Rock Restoration Education Project, visit thedmea.org.

A BETTER WAY TO GET MORE SEWAGE OUT OF LITTLE NECK BAY

By Walter Mugdan

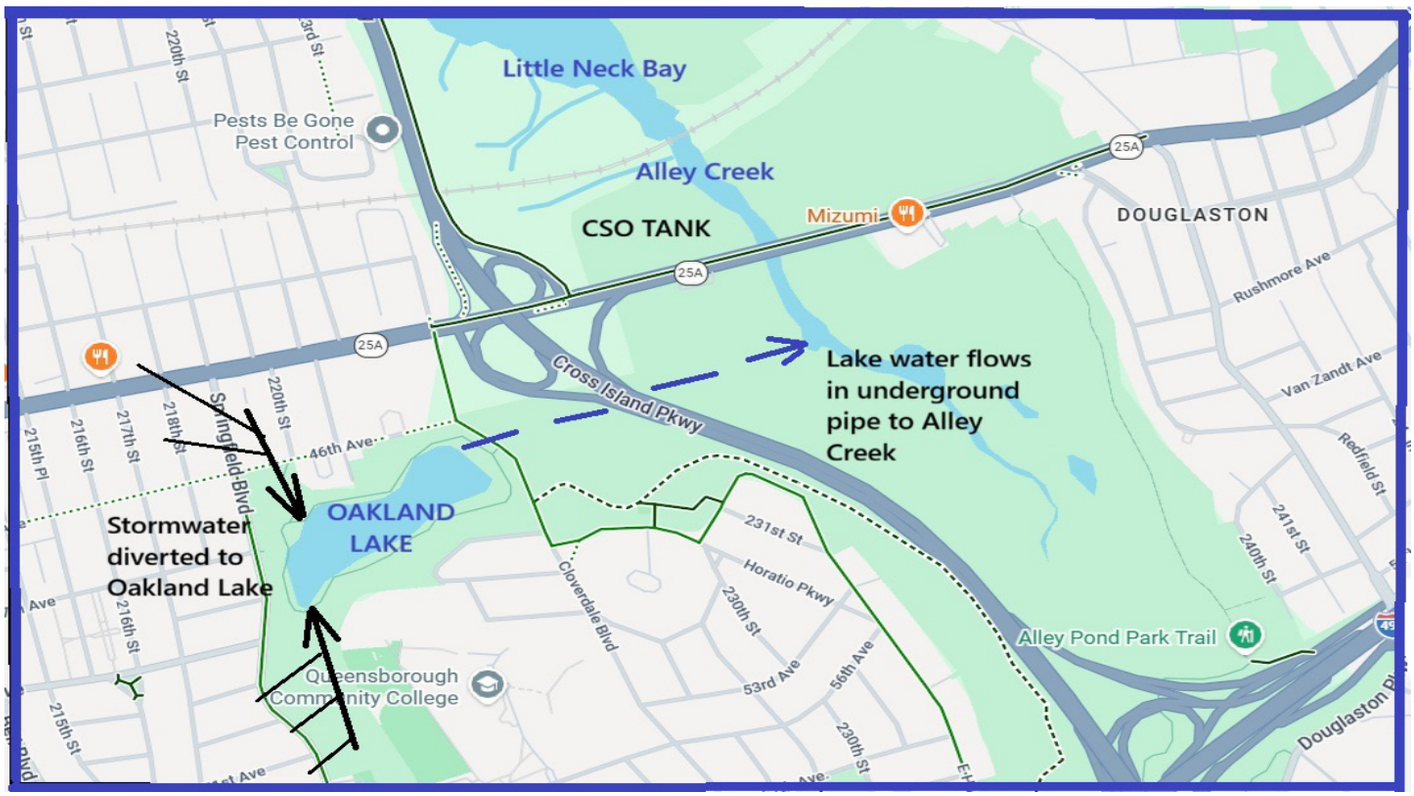
Combined Sewer Overflows (CSOs) are the most significant remaining source of water pollution in New York City and many older cities. In a combined sewer system, the same pipe under the street that carries the "dirty" sewage from your toilet, dishwasher, shower, etc., also receives the "clean" stormwater when it rains. However, neither the pipe nor the sewage treatment plant to which it leads are large enough to handle all the stormwater from a big rainstorm. Combined sewer systems are therefore designed with overflow points, where the excess sewage-plus-rainwater empties directly into a stream or a bay or a harbor. Throughout NYC, 60% of our sewage is managed in combined sewers. (The other areas have separated sewers, where one pipe carries the sewage to the treatment plant, and a different pipe carries the stormwater to the stream, bay or harbor.)

NYC has spent billions in the past decades to reduce CSOs. In 2011 the City completed a 5-million gallon underground CSO retention tank on the north side of Northern Blvd., across from the Alley Pond Environmental Center. When it rains and the combined sewer pipe gets full, the excess flows into the tank. Most of the solids (the bad stuff) settle out in the tank. When the rain stops, the tank contents are pumped back into the system and sent to the treatment plant. If there's a lot of rain and the tank gets full, the excess flows into Alley Creek and Little Neck Bay. The tank captures about half the sewage that would otherwise enter the Bay each year; and what comes out of the tank is much cleaner than what goes in … but it's still got plenty of dangerous bacteria. That's why Little Neck Bay is on New York State's list of water bodies "impaired" by pollution. And it's why you're not supposed to swim at the Douglaston dock in the days following a rainstorm.

To address this problem, in 2017 the State directed the City to install "chlorination-and-dechlorination" at the underground tank. Chlorination would kill the bacteria; dechlorination would prevent excess chlorine entering the Creek and Bay. If this directive were followed, the chlorination facility would be built in the cloverleaf between the Cross Island Pkwy. and Northern Blvd., and the dechlorination facility would be built near the outfall from the tank. The process would be expensive and difficult to run, and these above-ground structures would be intrusive and unattractive.

The City has therefore proposed a better approach: much of the stormwater that now enters the combined sewer pipes and reaches the tank would instead be "daylighted" and routed into Oakland Lake, the freshwater lake just west of Cloverdale Blvd in Bayside (see the photo below). This would reduce the annual discharge from the tank to the Creek and Bay by 121 million gallons, or 51%.

DMEA and other local environmental and conservation groups strongly support this alternative. New York State will be considering the City's proposal in the coming months, and we expect there will be an opportunity for public comment. If the State approves, the entire project will take about 10 years to complete.



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Occupant or Current Resident

DID YOU KNOW?

By Kathrine Mueller

- The most environmentally friendly form of laundry soap is powder sold in card board boxes. Liquid comes in heavy plastic jugs, laundry pods are packaged in plastics, even many laundry sheets are made with polyvinyl alcohol (PVA), a plastic that dissolves, thereby still putting microplastics into the environment.

- The same logic applies to dishwashing soap. Powder in cardboard boxes are the most environmentally friendly option.

- Wool dryer balls are generally considered a superior, eco-friendly, and cost-effective alternative to traditional chemical fabric softeners and dryer sheets. While liquid fabric softener coats fibers with chemicals to make them feel soft, wool balls use mechanical action to fluff fabrics, reduce drying time, and naturally reduce static electricity. They can be used over and over again, also eliminating plastic bottles, or other packaging.