Douglas Manor Environmental Association

SPRING 2022 • NEWSLETTER OF THE DMEA

MORE THAN $900,000 AWARDED FOR BIG ROCK WETLAND RESTORATION PROJECT

A rendering of the view looking south from Big Rock after the proposed Big Rock Restoration Project is completed, shows restored wetlands with native salt marsh grasses and a stone revetment at Douglas Road. (Rendering by GEI)

More than $900,000 from Federal sources will fund Phase 1 of construction for the $2.1 million Big Rock Wetland Restoration Project, starting with stabilization and replanting of the eroded shoreline at Memorial Field. Phase 1 construction is expected to start in 2023, and will begin with the removal of disintegrating concrete rip-rap and boulders dumped at the edge of the site in the 1950s and 1960s, which are causing increased erosion. The shoreline will then be regraded to create a gentler slope from the playing field level of the Field to the tidal flats, using Living Shoreline strategies. The slopes will be replanted with native plant species, the boat ramp area will be improved, and oyster castles will be installed in tidal areas.

Once completed, the restoration work will lessen the damage to the Field during storm surges that periodically flood the Field and adjacent roadways with up to two feet of saltwater. Although the edges of the Field will be regraded, the Big Rock project will have no effect on the size or use of the existing playing fields or the new playground.

The restoration was designed by GEI Consultants, Inc., an award-winning environmental firm specializing in ecological science and engineering with an office in Huntington Station, NY.

Later phases of the Big Rock Project include stabilizing the Douglas Road embankment which is collapsing, and removal of the invasive species Phragmites australis. Areas with Phragmites will be replanted with the tidal plant Spartina alterniflora and other native species, to improve water quality and create a rich and diverse habitat for birds, waterfowl, and fish. Views into Udalls Cove from Douglas Road will be enhanced and opened up, no longer blocked by tall Phragmites reeds. The construction of a planted timber crib wall and a planted stone revetment will protect the bank along Douglas Road, which is being undermined by tidal action and storm surges.

Phase 1 funding includes a $604,000 grant awarded to Save the Sound in December, 2021 from The Long Island Sound Futures Fund (LISFF), the largest grant ever for a wetland restoration project in Queens. Another $300,000 was obtained in March, 2022 through a community project funding request submitted by US Congressman Tom Suozzi (D–Long Island, Queens), as part of the $1.5 trillion Consolidated Appropriations Act, 2022, bringing the total funding for Phase 1 construction to $904,000.

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WHAT IS A LIVING SHORELINE?

Work on the Big Rock Wetland Restoration Project includes the use of techniques and strategies described as a Living Shoreline. But what does that phrase actually mean?

There are several ways to hold the landward edge of a shoreline. The most common and the most expensive is called a "hardened edge" strategy which is traditionally a timber bulkhead or a seawall. The seawall is often made out of poured concrete, like the one along Shore Road. Another strategy is to use boulders or concrete "rip rap," which is construction waste like demolished foundations and sidewalks placed along the landward edge as a wave buffer.

These "hardened edge" techniques for protecting a shoreline were common during the 20th century. Douglas Manor has both a concrete seawall along Shore Road as well as rip-rap and boulders.

Rip-rap and boulders were also used to hold the edge of the former landfill that is today's Memorial Field. Rip-rap is known to be harmful to wetlands and waterways, and is no longer used.

Deteriorating concrete rip-rap and loose boulders will be replaced in this area near Big Rock by a stone revetment interplanted with native plants to stabilize the Douglas Road embankment. (Photo by Kevin Gaffney)

Today, a Living Shoreline is often the preferred solution to shoreline stabilization and restoration. A Living Shoreline replaces hard edges such as concrete and rip-rap with plants, sand, and/or natural reef building materials such as oyster castles, to hold the shore edge. This is a more eco-friendly and resilient buffer against the destructive forces of wind and wave action when compared to the hard edge of a seawall.

In fact, a seawall can increase the destructive force of waves because it does not allow for the dissipation of energy; a natural and sloped edge made of plants, sand and/or rock, decreases the force by dispersing wave energy.

A Living Shoreline's functions improve over time as the plants take hold and reef-building organisms grow, while the materials of a concrete seawall or a timber bulkhead degrade, requiring continual maintenance and expensive repairs when they fail.

This bench overlooking Udalls Cove, once high and dry, is now flooded at its base on a regular basis during high tides, resulting in erosion that has collapsed the edges of Memorial Field.

Living Shorelines can be combined with hard-edged structures to address specific shoreline problems. Using natural plantings and materials in concert with "hard" structures, like timber crib walls or stone revetments may present a better solution in some cases. Careful analysis is required to determine the best to way to stabilize a shoreline and prevent erosion.

The landscape architects and engineers from GEI Consultants, Inc., the firm hired by the DMEA to design the Big Rock Wetland Restoration Project, used an on-staff expert to analyze wave action data collected from Little Neck Bay specifically for our site. GEI concluded that oyster castles, one of the most effective natural barriers to break down wave action, should be used in some of the tidal areas, along with the removal of the heavily invasive plant Phragmites australis. Phragmites, while an attractive looking plant, is a monoculture that crowds out all other plants, sacrificing plant and animal biodiversity. Areas where the Phragmites plant is located will be excavated, the Phragmites removed and replanted with the tidal plant Spartina alterniflora (common cordgrass), whose strong rooting habit and tough reeds protect against storm driven erosion. Other land based native plants will be planted along the Douglas Road slope where the site transitions from wetland to upland.

The data GEI collected and their on-site inspections of the Big Rock wetland site also revealed that which isn't visible to the casual stroller along our shoreline: below the lush greenery and vines, parts of the embankment holding up Douglas Road are actively collapsing. A serious intervention is required.

GEI concluded from their analysis that it is best to use three different strategies to stabilize the shoreline along the Big Rock Wetland site depending on location and wave action.

Oyster castles will be installed just offshore along most of the site to provide the dual benefit of wave dissipation and the potential for water quality improvements as oysters settle on the castles and grow over time. A planted stone revetment will be used along the Douglas Road embankment in the area closest to Big Rock. Plantings interspersed within the sloped stone embankment will soften the look of the revetment over time. Just south of that, a timber "crib wall" will be used, which will also be planted out. While the stone revetment structure will be permanent, the structure of the timber crib wall is intentionally planned to rot out and disappear.

By that time the plants will have rooted in to hold the embankment. A plantings-only strategy will stabilize the area closest to Memorial Field, while simultaneously creating an attractive native habitat for birds and other wildlife.

– Kevin Wolfe and Jamie Sutherland

HORSESHOE CRAB MONITORING

The Cornell Cooperative Extension Horseshoe Crab Monitoring Program was up and running again in spring 2021, after taking a pandemic year off. The DMEA was thrilled to once again participate in this NYS Marine District program, albeit with a few COVID rules in place and monitoring sites reduced to the dock shoreline only. The program monitors spawning horseshoe crabs at Long Island sites; resulting data assists with the management and conservation of this ancient species - they predate dinosaurs!

Catherine Bealin and Kris Doerfler trained as new Co-Site Coordinators, running a 12-week program to count and tag spawning horseshoe crabs around nocturnal high tides. Middle-of-the-night citizen science is humbling.

Some nights, volunteers counted well over 100 spawning crabs along the dock shoreline alone, leaving imaginations wild with estimates of how many crabs were beyond the reach of our flashlights and lining the entire Little Neck Bay shoreline. In the moonlight, the swarming crabs could be mistaken for big pebbles lapping along the sand.

Measurements were taken, not just of crabs for tagging, but also of environmental conditions. Estimating water visibility via the ball throw (not the scientific term!) mostly went well, except for the time it didn't and a non-protocol water recovery was undertaken. Kris proved to be a prolific tagger, not surprising given his experience tagging crocodiles in Costa Rica. And as any science student knows, data is compromised if it is not consistent. This meant that volunteers went out in all weather, setting middle-of-the-night wake-up alarms even in driving wind and rain.

A few words of thanks are necessary. First, the DMEA would like to acknowledge the tremendous efforts of board member Mike Gannon to run the DMEA Horseshoe Crab program over the years. Mike initiated the DMEA partnership with Cornell, trained as Site Coordinator and ran the Little Neck Bay sites year-after-year. He stepped back from this role during the pandemic, leaving big muckboots to fill! Thank you Mike! Second, the DMEA would like to thank all the volunteers who stepped up last spring. Nancy Barthhold, VeronicaYurick and Vivienne Lenk are a wonderful group of experienced and avid nature enthusiasts, without whom the new and inexperienced Site Coordinators would have been lost. And a special shout out to the Coastal Preservation Network, Kat Cervino and environmental friends in College Point, who supplied a steady stream of excited volunteers for middle-of-the-night adventures. Lastly, thanks to the DMA Security Guard Jimmy Derby who always checked on the team.

The DMEA's 2022 monitoring program will count as our in-kind contribution to the $605,000 grant for the Phase 1 construction of the Big Rock Wetland Restoration Project at Memorial Field. A call for 2022 volunteers will go out later this spring.

In the meantime, here's a few key facts about our interesting marine friends:

Horseshoe crabs are not crabs. They are more closely related to arachnids (spiders). Horseshoe crabs are listed as vulnerable – population decline is due to habitat loss and human interference, not natural predators. Horseshoe crabs ARE NOT DANGEROUS. The sharp tail is used to flip them over when they get stuck on the seabed. It is not a weapon and they will not harm people. In fact, they need human help sometimes. When you see them upside down, simply flip them. Horseshoe crabs are MEDICAL HEROS! Their blood is blue – yes blue – and it is used to TEST VACCINE SAFETY. All the more reason to flip them when you see them!

–Catherine Bealin

photos: Catherine Bealin and Kat Servino

Dr. J. Bret Bennington, Chair of Hofstra University's Department of Geology, Environment and Sustainability, collecting data. DMEA Project Manager Louise Harrison, of Conservation & Natural Areas Planning, assists.

Oyster spat (baby oysters) attach themselves and cover the interlocking concrete blocks.

A timber crib wall uses wood posts to form a structure that is interplanted with native plants.

An aerial view rendering of the $2.1 million Big Rock Restoration Project showing the entire 7 acre site

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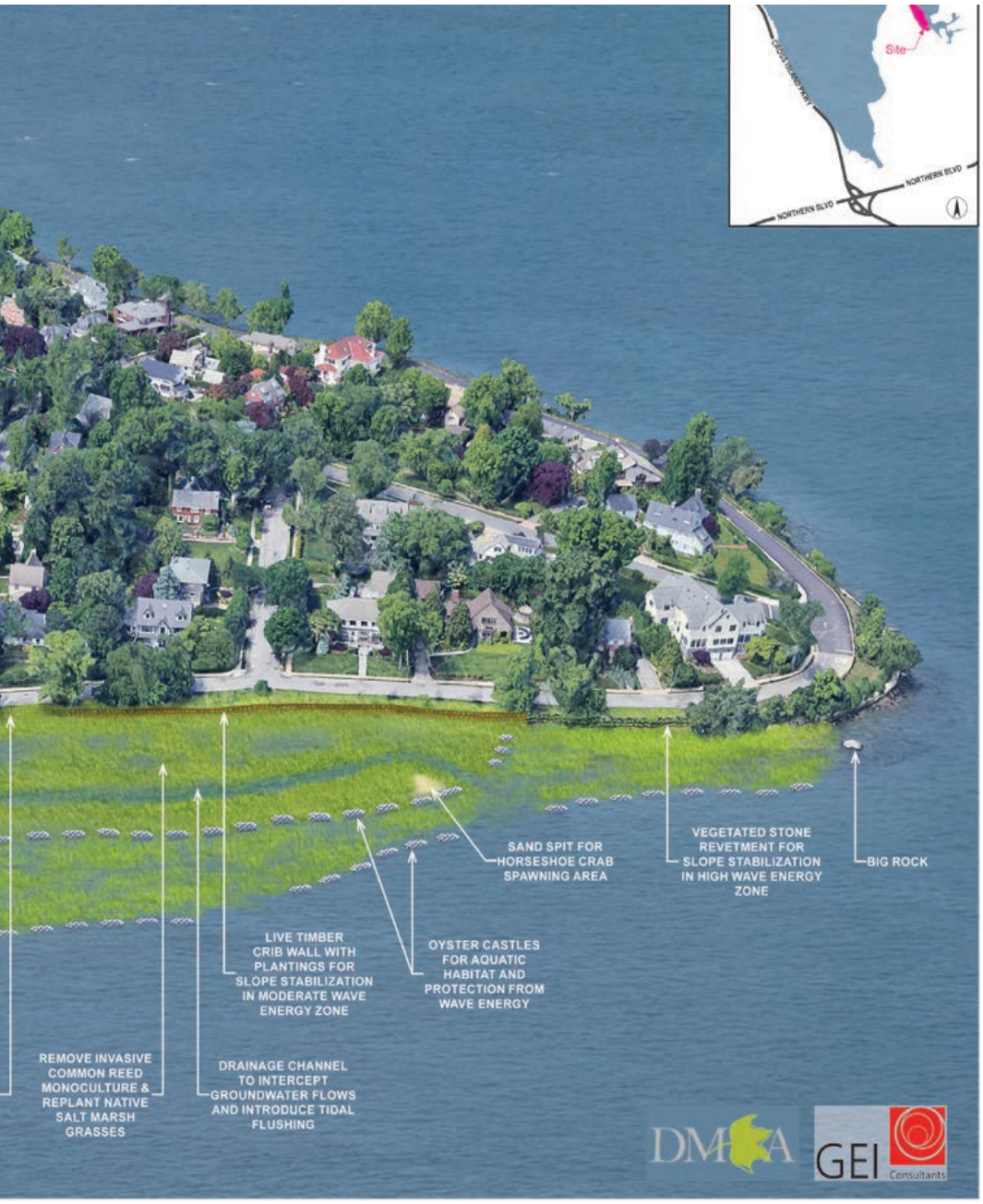
Save the Sound, DMEA's partner in the Big Rock Project, is a private non-profit whose mission is to fight climate change, save endangered lands, protect the Long Island Sound and its rivers, and restore natural ecosystems.

"We're thrilled to receive this award to help bring the Douglas Manor community's vision to reality, using nature-based solutions to help address the serious erosion and marsh loss in this section of Little Neck Bay," said Katie Friedman, the New York Ecological Restoration Program Manager for Save the Sound.

"New York City has lost more than 85 percent of its tidal marshes in the past century, and with climate change accelerating there is a clear urgency to act on bold, community-driven, nature-based solutions like the Big Rock Wetland Restoration Project."

The coming year will be spent seeking additional funding, finalizing permits from various agencies, and selecting a contractor



restored, from Memorial Field to Big Rock, with the various components called out. (Rendering by GEI)

for the work. LISFF is funded by the US Environmental Protection Agency through the Long Island Sound Study and administered by the National Fish and Wildlife Foundation.

The Big Rock Wetland Restoration Project is an ongoing effort by the DMEA that began in 2014, with the goal of restoring the rapidly eroding edges of Memorial Field and the adjacent wetlands, improving water quality and wildlife habitat, and lessening the impact of rising tides and storm damage at the Field.

In addition to Save the Sound, the DMEA has partnered on the Big Rock Project with the Douglas Manor Association, the owner of the site; the Alley Pond Environmental Center; the Udalls Cove Preservation Committee; the Douglaston and Little Neck Historical Society; the New York City Department of Parks and Recreation; the Audubon Society, Hofstra University; Dadras Architects; and local public schools Middle School 67Q and Public School 98Q.

–Kevin Wolfe and Jamie Sutherland

During the design charrette, residents, including children, were asked to sketch their ideas and share their thoughts for the Big Rock Wetland Restoration Project.

GEI Landscape Architect and Senior Ecologist Laura Schwanof points to a rendering showing restored wetlands planned for the Big Rock site as DMEA Project Manager Louise Harrison of Conservation & Natural Areas Planning looks on, during a walking tour in 2019

Neighborhood volunteers pitched in and gathered data to inform GEI's wetland restoration design. Alexandra Parsons Wolfe checks a tide gauge off Memorial Field before heading off to work, 2018.

BIG ROCK WETLAND RESTORATION PROJECT: 2014 – 2022

Former New York State Senator Tony Avella (D) poses with a group of residents and local schoolchildren for a 2017 event at Memorial Field celebrating the $120,000 grant .

The Big Rock Wetland Restoration Project is an ongoing project that the DMEA began in 2014 to restore 7 acres of tidal wetlands and upland at Douglas Manor bordering Memorial Field north to Big Rock, and including the Field.

The DMEA hosted or co-sponsored many public outreach programs and events over the ensuing years, including walking tours, public education programs, and a design charrette inviting community input for the Big Rock Project. These programs attracted more than 1,000 participants. The DMEA is planning a public event later this year to celebrate the funding for the first phase of construction that is expected to begin in 2023.

In 2018, the DMEA received a $120,000 planning grant through former State Senator Tony Avella, and hired the nationally recognized environmental restoration and engineering firm GEI Consultants, Inc. based in Huntington Station, NY, and project manager Conservation & Natural Areas Planning, based in Peconic, NY.

GEI completed a design for a $2.1 million dollar multi-faceted "permit ready" restoration plan in June, 2021. Save the Sound, DMEA's partner in the project, was recently awarded more than $904,000 for Phase 1 construction (See main story for funding details). Save the Sound is a private non-profit that leads in environmental restoration and preservation efforts throughout the Long Island Sound watershed.

The property is owned by the Douglas Manor Association, another essential partner in the project. The DMEA has an environmental easement over a portion of the DMA property at Memorial Field.

DMEA and Save the Sound are currently seeking additional funding for the construction of later phases to complete the restoration project.

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 oyster castles for wave breaks, erosion control and habitat
6) Restoration of tidal salt marsh grasses
7) Stabilization and replanting of the embankment along Douglas Road

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. Until the pandemic, MS 67Q and PS 98Q included the Big Rock project in their STEM (Science, Technology Engineering and Math) curriculums, and participated in on-site events at the Big Rock wetland site with their teachers. The DMEA will continue to reach out to involve participation of local community groups and school groups as the Big Rock project continues.

–Kevin Wolfe and Jamie Sutherland

DMEA PROJECT INSPIRES NEW PLAYGROUND

Over the spring of 2021, The Trust for Public Land worked with the third and fourth grade classes of PS 98 The Douglaston School to design a new green infrastructure playground for their schoolyard. Once built, the yard will capture 175,000 gallons of stormwater per year. This water will remain on site to water the plants and trees.

Over three months, the students engaged in a participatory design process which included learning about the surrounding wetlands by using elements of the DMEA curriculum. In the final plan, the students created color seal art of animals and plants that are found in Alley Pond and Little Neck Bay.

The schoolyard renovation will start construction in March 2022 and open by October 2022.

The project is funded by Queens Borough President Donovan Richards and former City Council member Paul Vallone.

This fall, the DMEA will work with the students to design and paint a wetlands mural in the yard.

–Mary Alice Dadras

DMEA ZION HALLOWEEN EVENT

Due to Covid-19 and weather conditions once again our annual Halloween Festival at Memorial Field had to be canceled in 2021, but happily the DMEA was able and eager to join the Zion Church for their Spooky Halloween Graveyard Drive-Thru on October 31st. Just like last year, the day was a delight as so many community groups participated, and scores of friends and families lined up to drive through, collect their bags of candy, and enjoy the array of decorations and costumed characters. The second year of this event continued to be a joyful coming together for the community during the pandemic on a day that means so much to children, and a beautiful alternative during challenging times.

We hope it will become a yearly celebration.

–Kathrine Mueller






Photos by Kevin Wolfe

DMEA TAKES PART IN THE DLDC WINTER FESTIVAL

On Saturday, December 11th the Douglas Manor Environmental Association was excited to participate in the 4th Annual Douglaston LDC Winter Festival at the Douglaston Station Plaza.

After a long year, it was great to be out with friends and neighbors. It was an unseasonably warm day but there was lots of holiday spirit, live music, ice skating, vendors, and great food.

Board member Catherine Touwsma brought back her amazing homemade french crepes this year; she made dozens of fresh and delicious crepes. Mulled cider was sold as well as our bags and mugs.

The DMEA was extremely pleased to announce the grant that we received in conjunction with Save The Sound for the Big Rock Restoration.

Lillit Genovesi was there to represent the Long Island Sound Study at the event. The Long Island Sound Study initiated the Long Island Sound Futures Fund (under which Save the Sound received a grant) through US EPA's Long Island Sound Office and National Fish and Wildlife Foundation.

We are looking forward to next year's event!!

–Rebecca Gellos


Photos: John Touwsma

Douglas Manor Environmental Association

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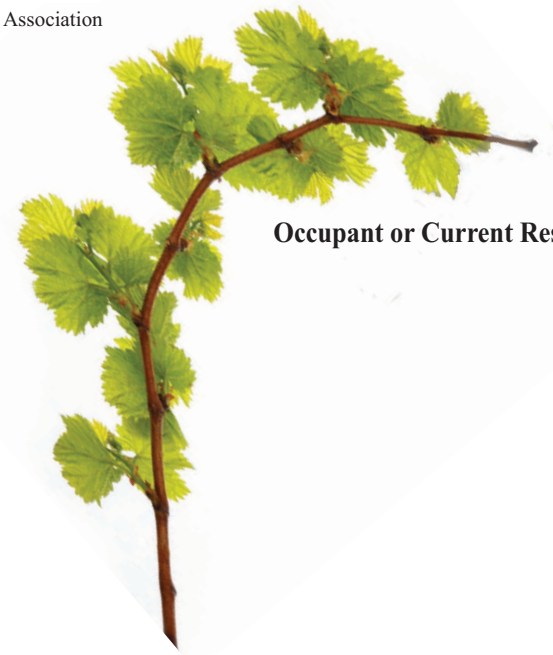

Occupant or Current Resident

A MESSAGE FROM OUR PRESIDENT (BELOW THE FOLD)

Dear Neighbors,

The DMEA Board has had a busy and successful year in the midst of the pandemic. We received wonderful news about our biggest, longest running project – the Big Rock Wetland Restoration Project–which brought an unprecedented **$904,000 to Douglas Manor.** The funds from two different sources were granted to DMEA's partner, Save the Sound, to construct the first phase of a wetlands restoration and Living Shoreline project.The National Fish and Wildlife Foundation Long Island Sound Futures Fund granted The DMEA and our partner, Save the Sound, funding to construct the first phase of a wetlands restoration and living shoreline project. More about this amazing work and gift is in our newsletter

In the warmer months of 2021, we were able to engage in a number of outdoor events:

In an effort to help our community reduce and reuse, The DMEA organized a neighborhood yard sale. Twenty houses participated and the weather cooperated–giving us a nice sunny day for people to walk, bike or drive around the neighborhood searching for treasures and catching up with their neighbors. We hope to do this again in 2022.

We stayed up late on several summer nights to engage in the Cornell Cooperative Extension Horseshoe Crab counting and tagging project. Send us an email at info@thedmea.org if you are interested in joining us this June to help with the 2022 count!

We catalogued gingko trees for the Smithsonian Institute's Citizen Fossil Atmospheric Gingko Tree Project. Gingkos are one of the oldest living tree species in the world -- first appearing on our planet 290 million years ago.

The DMEA partnered with The Trust for Public Land on designing a wetlands themed playground at PS 98.

We worked with elected officials in an effort to pass local legislation that would curtail the use of loud, gas powered leaf blowers, to promote a cleaner and quieter environment.

Our popular Memorial Field Halloween event with the PS 98 PTA was rained out, but we were able to join the Zion Church to distribute candy and composting information to neighborhood families.

We enjoyed making crepes and explaining our Big Rock Project to the community during the Douglaston Local Development Corporation's Winter Festival in the Douglaston Plaza.

The DMEA also kept up our social media accounts, please follow us on Instagram at **thedmeaorg** or on Facebook at **Douglas Manor Environmental Association** and our new website **thedmea.org**

We wouldn't have been able to accomplish any of this without your support. Your funding is crucial to our efforts for preservation, beautification, mitigation and education. Your tax deductible contribution to the DMEA ensures that we can continue to protect and improve our natural coastal environment.

Please see the center fold to forward your tax deductible contribution. We are grateful for whatever donation you can afford in these trying times.

Sincerely,
Mary Alice Dadras
President, Douglas Manor Environmental Association