

Newtown Creek Bulkhead Habitat Project

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ABSTRACT

The Newtown Creek Bulkhead Habitat Project is an Environmental Benefits Project, funded by the New York State Department of Environmental Conservation and Attorney General's Office and administered by the City Parks Foundation. Back in 2010 LaGuardia Community College proposed creating metal frames that could house native salt marsh grasses on the otherwise flat surfaces that line most of Newtown Creek's shores. These marine planters are fixed to the bulkheads at the same elevation in the tidal cycle that grasses would exist in a natural intertidal zone, submerged in salt water near high tide and left dry as tides receded twice a day. Such plants have great potential in improving nutrient imbalances that currently have a drastic impact of the quality of water in Newtown Creek. The project aims to: 1) provide the environmental services of a salt marsh and 2) enable the communities of Newtown Creek to experience the native salt marsh ecosystem whether educationally or aesthetically. Pilot plantings began in 2013. In 2014, fabrication, installation, planting and monitoring of nearly a dozen floating planters was completed. Each planter holds a sediment basin and an underlying tray for ribbed mussel, the most common bivalve of the Creek. The presentation will present the results of the pilot program and outline plans to expand research to assess the degraded Newtown Creek shorelines as potential locations for "constructed" wetland habitat.

BIOGRAPHY

Sarah E. Durand, PhD, is an Associate Professor in LaGuardia's Biology Department as well as the Co-Director of the LaGuardia Collegiate Science and Technology Program, which originated and continues to lead LaGuardia's efforts to study, preserve and restore Newtown Creek. Dr. Durand received her BA in Marine Biology and MA in Ecology and Evolution as a combined degree from the University of Pennsylvania, Department of Biology, and her PhD. from Rutgers University, Center for Molecular and Behavioral Neuroscience. In addition to her many educational and academic accolades, Dr. Durand proposed and co-developed the Environmental Science major at LaGuardia under a Title V Promesa grant. The major includes courses in Ecology, Geographic Information Systems, Environmental Sociology and Environmental Science, which were developed in collaboration with colleagues of both the Natural Science and Social

Science departments. She also co-directs the Collegiate Science and Technology Program, which supports undergraduate research, and initiated the EDshed Project with a grant from the Hudson River Foundation and in collaboration the North Brooklyn Boat Club. Dr. Durand's involvement in environmental education and remediation around Newtown Creek led to an invitation from the USEPA to join the Community Advisory Group (CAG) for the Newtown Creek Superfund Site.