

In 2015 the Newtown Creek Alliance (NCA) completed the Living Dock, a custom designed and built habitat structure to provide much needed habitat for various marine plants and animals in the Newtown Creek waterway, a federally designated Superfund site that acts as border between Northern Brooklyn and Western Queens in the heart of NVew York City. Marine habitat has been severely impacted over the past 150 years within Newtown Creek; many of the sediments are highly polluted with chemical contaminants and much of the natural intertidal area has been filled and horizontal shorelines replaced with vertical walls. Yet despite poor conditions and environmental abuse, wildlife is returning to the Creek. The Living Dock project is a way to encourage and study this trend, while providing educational and access opportunities for nearby communities in the process.

This booklet details the overall plans and key features of the Living Dock. We hope that other waterway stewards are able to draw inspiration from the project and create more Living Dock projects beyond Newtown Creek.

The Living Dock Project was made possible with funding provided by the Office of the New York State Attorney General and the New York State Department of Environmental Conservation through the Greenpoint Community Environmental Fund. For more information about the fund visit http://gcefund.org.



For more documentation of the project, visit the Living Dock website: http://livingdock.tumblr.com





LIVING DOCK BASICS



DETAILS





• HABITAT UNITS:

We used standard rectangular plastic milk crates with an aluminum angle lip fixed along the long side with stainless steel nut and bolt. The milk crates are uniform in size, quite durable and often easy to come by.





18' 1.75"



aluminum supports for crates



undecked area for crates

_____ 30 gallon barrels

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HABITATS

We have used our crates to house various salt marsh plant species and substrates including: Spartina Alterniflora, Spartina Cynosuroides, Oyster Shells, Clam Shells, Broken Stone, Clean Sediment, Synthetic and Natural Ropes.

In our experience to date, some habitats, like ropes and stone, have provided more protection for smaller prey like killifish and shrimp while other materials, like oyster and clam shells, saw a higher recruitment of more permanent residents such as barnacles, mussels and slipper snails.

Our own dock did not introduce or seed any animals, but this could easily be done following local and state regulations. Additionally, a wide range of safe and durable materials could be utilized in building unique habitats, perhaps designed as part of a classroom activity.





Crate sections



Oyster Shells

LUMBER

Treated woods can leach harmful chemicals into the water and repel natural growth. Instead use naturally rot resistant woods such as cedar. For our dock we used a large amount of reclaimed cedar, from old rooftop water towers, and purchased new cedar for the longer structural sections.



Painting the end grains of your lumber can help protect against warping and rotting.



Reclaimed can have interesting features but also require extra work to cut down to the uniform measurements.



The reclaimed lumber we used was cedar from old rooftop water tanks. Purchase from BIG Reuse in Queens, NY.

HARDWARE

All hardware should be made from marine grade materials. This can include galvanized steel, stainless steel, coated steel or aluminum. When possible avoid contact between different metals.



CONSTRUCTION



Certain power tools are needed for construction, such as a chopsaw for cutting lumber, as well as an aluminum angle.



Consider the weight of your completed frame and options to transport it to the water without stressing the structure.



Multiple power drills with different bits, for pre-drilling and driving, are needed for lag screws.



Putting barrels into place at the water may be easier to do if working from another dock.

EXTRAS

Here are some ideas for extra features that can be added onto the dock to improve usability and function.



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MATERIALS LIST

Qty:	Material:
150'	Aluminum Angle (1½ " x 1½ " x ½ ")
17	30 Gallon Plastic Drums with sealed and closed head
190'	Cedar Lumber (2x10)
140sq'	Cedar Decking
250	Lag Bolts with washers (5 ½" x 🐝 galvanized steel)
4	Galvanized Steel corner brackets
900	Coated Deck Fasteners (2 ½")
600	Coated Deck Fasteners (1 ¼")

Extra items:

- Primer paint for sealing end grains.
- Dock cleats for tying up.
- Marine fenders for protecting the dock against a shoreline.
- Double braided nylon rope for tying up.



Visit the project website for more info and updates: livingdock.tumblr.com

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GREENPOINT COMMUNITY ENVIRONMENTAL FUND