



CASE STUDY

Mega Snake Tray[®] Manages the Cables in New Cornell Cooperative Fish Hatchery By Patti Feldman

Project:

Provide an overhead cable management solution to support wires to provide electrical power at a new shellfish hatchery located at Cornell Cooperative Extension of Suffolk County Marine Environmental Learning Center (“SCMELC”) in the town of Southold, NY. At the hatchery, staff will spawn and grow juvenile clams and oysters for eventual resettling at various sanctuaries in the waters along the coastline of Long Island. As part of the project, Cornell Cooperative Extension of Suffolk County (CCE) is also conducting outreach and education with adult volunteers, students, and nursery site hosts to accomplish project goals.

Background:

In September 2017, New York State’s Governor Andrew Cuomo announced a \$10.4 million initiative to improve Long Island’s water quality and the economy and resiliency of its coastal communities. To accomplish these goals, the state of New York, through its Department of Environmental Conservation, is investing \$5.25 million in CCE. The funds will be utilized to build a hatchery at their Suffolk County location. The facility will be used to spawn and grow shellfish in a controlled environment. At a certain point in their development, shellfish will be deployed to approximately 70 nursery sites on Long Island coastline until they are big enough to survive on their own in protected sanctuary sites. This two-year project is designed to restore native shellfish populations that have dwindled dramatically over the past several decades.

The hatchery anticipates culturing and producing approximately 115 million seed clams and 35.9 million spat-on-shell oysters that are nurtured in tanks. The funding also pays to identify and manage the deployment of approximately 70 Floating Upwelling Systems (“FLUPSYs”) to grow out the shellfish at various sites throughout Long Island until optimal size for planting at five designated sanctuaries long the coastline of Long Island.

Challenge:

Provide a cable tray that can survive the humid salt water environment of the hatchery. This overhead cable tray, designed to support the electrical wiring, also must have the ability to support the piping that furnishes the salt water, fresh water, and compressed air that sustain the juveniles in the tanks below in the early stage of their development.





From seedlings to shellfish: how they grow

The seedlings spend their first few weeks of life swimming in seawater held in conicals (120 gallon tanks) before they move on to a downweller (a 6" deep cylinder with mesh on the bottom) where they "set" or metamorphose from swimming larvae to spat larvae, explains Lucas Merlo, Shellfish Aquaculture Educator at SCMELC.

They remain in a downweller until they reach 1 millimeter in size, at which point they can be moved to FLUPSYs, where they stay until they reach about 25 mm, large enough to settle into sand and survive the winter. At the end of each growing season, usually around late October or early November, the hatchery distributes the baby shellfish to spawning grounds at the open-water sites along the coastline at the sanctuary sites, which are off-limits to shell fishing, he notes.

To support the electrical wiring for the new building, Snake Tray® of Bay Shore, New York, supplied 320 linear feet of Mega Snake® 801 Series High Capacity Cable Tray, a preconfigured cable tray system, available in overhead and under floor models, that is engineered for quick lay-in of large quantities of high and low voltage cables. Fabricated from 100% recycled US steel in straight, turns, and cross sections, Mega Snake is accessorized to offer a total cable and power distribution system and also can be integrated with Snake Tray patented hand bendable cable tray and components.

For the installation at the hatchery, Snake Tray fabricated the cable tray from noncorrosive 316 steel optimized for the humid salt-water environment at the hatchery. The trays are 4" x 12" by ten feet long.

The cable tray was delivered in early July, 2018, and installed by hatchery staff. The ceiling is steel, the same material used for the entire new structure, which is a Morton brand building. The delivery of the pre-manufactured trays eliminated the need for field fabrication of turns, tees, and cross sections, minimizing material waste and requiring less hardware and fewer accessories. Snake Tray provided onsite consultation to help expedite the installation of the cable tray.

Mega Snake comes in several configurations of physical dimensions, loading dimensions, and cable capacity (in square inches and number of cables), in four finishes (pre-galvanized, stainless steel, powdered coated, and hot dipped galvanized). An accessory rail is available that allows the tray to be mounted without a need for under support.

The unique design of the built-in suspension system eliminates brackets and struts and enables connection of trays in under a minute. An accessory rail is available that enables for random placement of hanging rods. Mega Snake Series also interfaces with other Snake Tray components, including patch panels, strain relief, and fiber optic pass over devices. (Snake Tray is a patented hand bendable cable management system that can bend, in seconds, in any direction without cutting or clipping and without sharp edges.) An optional spanning bar allows Mega Snake to span over ten feet without deflection.

Because the cable tray is made from domestically sourced recycled steel, its use in a green building project aiming for certification for overall performance of design and construction of a building can help earn credit toward LEED™ certification under Materials + Resources (MR) Recycled Content Credit. (LEED - Leadership in Energy and Environmental Design - is a popular voluntary program developed by the non-profit U.S. Green Building Council that objectively measures, with points, the sustainability of a building in several key areas.)

The product is also manufactured on Long Island with distribution centers throughout the country. Therefore, there is less transportation to domestic building sites, saving on fuel consumption. In addition, the trays stack for compact shipping and easier handling and require less space for storage at the jobsite.



Snake Tray®
291 Skip Lane | Bay Shore NY 11706 | USA
T: 800-308-6788 | 631-674-0004
www.snaketray.com | MADE IN USA