



TRASH COLLECTION 2.0

Reducing water pollution and improving quality of life with catch basin inserts

By Elizabeth Lisican

Robert Weltner, president of volunteer nonprofit organization Operation SPLASH (Stop Polluting Littering and Save Harbors), has pleasant memories of his childhood growing up in Freeport, N.Y. Freeport is located on the south shore of Long Island in the southwestern part of Nassau County, within the town of Hempstead.

"My whole life was around the water," he said. "Fishing, crabbing, clamming—it was beautiful, it was paradise. Over the years, I became a certified diver and a commercial diver and a rescue diver, and I spent a considerable amount of time underwater."

As time went on, Weltner, who also serves as the village of Freeport's commissioner for the environment, began to notice significant changes to the underwater environment of the region's surrounding bays.

"That involved storm water runoff, sewage treatment plant discharges,

copper-bottom paint on boats—things like that," he said.

Disturbed and baffled by the water's pollution, Weltner began conducting independent testing of the bay bottom. In 1999, he founded a group called Bring Back the Bay.

"It was myself and a couple of charter boat captains and some other divers who were very interested in finding out what the heck was going on with our ecosystem," Weltner said.

Ultimately, Bring Back the Bay merged with Operation SPLASH, and Weltner became president in 2000. The investigation into the culprit behind the polluted water continued.

"A lot of the people, including myself, thought a lot of it was coming from the boaters and boatyards, the people—somebody's got to be dumping stuff somewhere," Weltner said. "And then we found out all of it was coming through the storm water system."

"Most of us who weren't really savvy about all of that thought everything

went through a sewage treatment plant and got taken care of, but then we found out it was two separate systems. Everything in the streets and parking lots that gets drained through underground pipes into the rivers and streams and tributaries—all of that gets flushed out into the south shore estuary, which is basically the whole south shore of Nassau and Suffolk counties on Long Island."

Seeking Solutions

Weltner said he then asked some of the members of his group to seek for a solution.

"It's horrible the sediment samples that we had taken out in the bay, which is through the roof on all kinds of things—hydrocarbons, heavy metals—and nothing that anything could live in. There were no fish anymore, no crabs or clams in a lot of areas. You can't eat [from it] because it's contaminated. You've got to be able to stop this problem here, so we started

doing a lot of research.”

In Freeport, according to Weltner, there was no way to intercept the storm water from the street drains to the canals. “We have a whole system of canals in south Freeport and all of the drains filter right into the canal, so whenever we had a rain, it was just like flushing the toilet,” he explained.

The canals filled up with plastic bottles and cups, potato chip wrappers—virtually every conceivable

type of trash.

“You name it,” Weltner said. “We’re in a highly urbanized suburban area. It was funny, when I was asking some of the other agencies, ‘How do you stop this storm water problem?’ they would go, ‘Just plant a rain garden, Rob, it’s very simple.’ And I go, ‘Where the heck am I going to plant a rain garden? We’ve got no room.’”

The village ultimately decided to go with the manufacturer Fabco’s proposed

solution and initially installed about 15 catch basin inserts. The devices remove heavy metals, sediment, oil and grease, pesticides, bacteria, organics, nitrates and litter from storm water runoff before it ends up in waterways.

“We saw what they were catching, just the sediment alone, and then we started doing a little bit of analysis and found that there was a lot of bad stuff in that sediment, plus the trash and the cigarette butts and [everything] we wanted to keep out of the waterway it was catching,” Weltner said.

By 2006 there were enough drains in Freeport for Operation SPLASH to expand its testing because several of the other communities along the south shore and the bays were experiencing disaster areas as trash piled up, according to Weltner. Nassau County received many phone calls in an attempt to stop all of the trash from being flushed out into the bays.

“Part of what we had to do was have an intermunicipal agreement where whatever township got these inserts, we would install them and give them for free, but [the township] would have to maintain them thereafter,” Weltner said. “So we started calling around to some of the places that were looking for them, and a lot of them jumped on them right away.”

An Agreement

A few years in the making, the project officially kicked off on July 1, 2009, with a blanket purchase order issued by Nassau County. The company was awarded the order based on a publicly published competitive sealed bid. Under the blanket order, Fabco can supply approved products and services to all political subdivisions of New York state and other entities authorized by law to make such purchases. All prices are fixed for the term of the contract.

Catch basin insert products include StormBasin, StormSak, StormPod or StormSok. The company also handles pre-cleaning of catch basin vaults prior to installation of the filters, along with disposal of waste; supplies spare parts and labor if required; and conducts periodic maintenance of the products.

The project is tailored to meet as many of the county’s needs as possible,

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The inserts remove heavy metals, sediment, bacteria, organics, nitrates and litter from storm runoff.

said John Markee, director of sales and marketing for Fabco.

"Nassau County asked us to make the bags bigger to reduce the maintenance on these so they could clean them out once a year, maybe

twice," Markee said. "Along the way, they asked us to add an oil-absorbing boom around the periphery of [the insert] to catch oils contained in the water as they flow into our basin. And in some of the areas they've asked

us to make a nutrient remover. We have designed that and put that into well over a thousand of those in the Merokee Pond area, which is heavily residential with a lot of fertilizers and everything coming off of those streets and roads."

The first project completed by Fabco under the agreement took place with the village of Flower Hill in August 2009. The latest project the company is working on is under direct management of the county in Freeport.

In the past 15 months, Fabco has supplied and installed more than 2,100 units—more than 140 units per month. By the middle of 2011, most of the south shore of Nassau County should be complete.

"We have also cleaned over 350 catch basins during that time, removing an estimated 2,479,950 lb of sediments, trash and water," Markee said. "This gives us the depth and space needed to install our units, but as an added bonus it also restores the efficiency and capacity of the existing drainage



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system, improving flow and reducing potential flooding.”

Solidifying Success

In November 2010, Fabco performed a cleanout service on approximately 64 catch basin inserts, removing 7,600 lb of sediment, trash and debris. Cleanouts were performed using a Vactor 2100 vacuum truck leased from Jet-Vac Inc. To confirm what has been cleaned, the November Freeport project included a sediments analysis by Ecotest Laboratories. Tests revealed elevated levels of heavy metals (lead, chrome and zinc), phosphates, and oils and grease.

The catch basin insert project can serve as a model for similar regions in other parts of the country. In fact, Fabco currently is taking its inserts to Portland, Maine, and Myrtle Beach, S.C.

“Our intention is to offer the same top-to-bottom support that we offer on Long Island: design, manufacturing, delivery, pre-cleaning services, installation and long-term maintenance,” Markee said. **SWS**

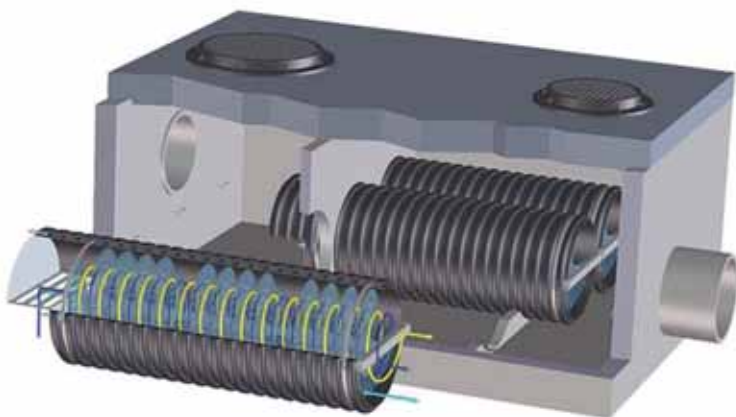


Nassau County received many phone calls about stopping trash from being flushed out into the bays.

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