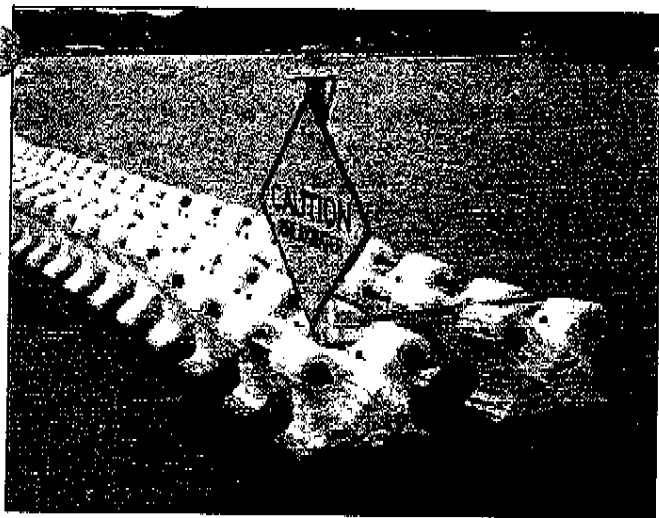


Waves No Longer Threaten Pier Pointe Marina

WIND and waves can be a bad combination if you're a boat owner. The last thing you want to find is your boat being tossed about like a jellyfish in the water. That was reality during bad weather at Pier Pointe Marina on Great Sodus Bay in Lake Ontario, New York. A southeast wind blowing into the Marina could generate waves up to four feet high. Wind can be predicted, but how do you control it on the water?

This situation was preventing the Marina owners from building additional dock space, which they needed in order to expand their business. They had to find something to slow the waves and prevent potential damage to the marina and the boats being docked there.

The system needed to be in-place all year; an annual removal and installation would be a tremendous effort, so maintenance would become costly. The idea was brought forward to use the patented **WhisprWave™**: a free-floating, environmentally friendly breakwater and wave attenuation device. Manufactured by Wave Dispersion Technologies, Inc. of Summit, New Jersey, it is constructed of marine-quality polyethylene, EDPM rubber, marine chain and stainless steel fittings. The tethered device is designed to extract



wave energy rather than deflecting it, as other products are designed to do.

A town meeting was held and questions were answered about concerns raised by the local residents. They wanted to know what this "thing" would look like. Also, the bay freezes solid in the winter, so there was the concern that the breakwater would be crushed, or that snowmobilers could hit it. Design and installation photos were shown, and the townspeople liked what they saw.

Permits were sought. The Village permit was issued in August, but the Government agencies needed to be convinced that the project would be environmentally sound. Although the structure was permanent, it could be released and floated away, so the Department of Environmental Conservation (DEC) and the Army

Corps of Engineers declared it a temporary structure. The original design was for a salt-water installation, which didn't consider the freezing factor of the fresh water. Wave Dispersion Technologies re-designed the upper modules, ordered new parts, and tested the system. In November of 1998, permits were received from the DEC, the State of New York, and the Corps of Engineers. (This was an internal review, with no public hearings. Permits were issued by the DEC and Corps because the breakwater was done in conjunction with the construction of additional docks.) A winter storage shed was used to construct the new breakwater that would protect the 500 feet of shoreline from the damaging southeast winds.

The 50-ft. sections of breakwater were placed in the bay and floated out to the site. They are located 800 feet from the last dock and parallel to the shoreline. Once positioned over the anchor points, chains were connected at 50 locations and the floating breakwater was secured.

The Coast Guard requires that the breakwater have lights on each end. To make it extra safe, lights were placed on three other places along the WhisprWave. Caution signs are posted, as well as those prohibiting mooring of boats or fishing from the breakwater.

The new breakwater is submerged six to eight feet below the water in the winter to prevent it from freezing. The module stays anchored to the 4500 pound concrete anchors that were installed using a barge and crane, which the marina was able to supply. (Other anchor systems, such as helical anchors, would require less equipment.) In the Spring, air is pumped into the module, pushing the water out of it, and the WhisprWave rises again to the surface.

The project was completed in September 1999. Actual installation took approximately two weeks. Cost of the breakwater itself was approximately \$500 per foot, as designed for the Pier Pointe Marina. The anchoring system is extra and depends on the method used and who installs it.

Extracting the energy from the waves, rather than deflecting it, has its benefits. The marina has received many comments from boat owners. Some who had been there 25 years stated that they, for the first time, were able to comfortably live aboard their vessels while moored in their slips. You'll find calm waters year round at the marina—a plus for boat owners and protection of the shoreline.

L&W

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