


Community pines for beach season

JoAnne Castagna, Ed.D.



If you make a trip today to **Bradley Beach** on the **New Jersey (NJ)** shore during the winter months, you may be surprised to see residents walking their dogs along the water, riding bikes on the promenade and even sporting wet suits while surfing the ice cold waves.

This was witnessed when a team of **US Army Corps of Engineers** personnel visited the beach that draws over 100,000 beachgoers annually. It was obvious to them that the residents yearn for beach season. Especially since the very dunes they were observing were created by the residents themselves, using donated Christmas trees, in an effort to protect the mile long shoreline the Corps restored a few years back.

The Bradley Beach shoreline had experienced erosion due to previous storms and was in need of sand nourishment. In July 1999 the US Army Corps of Engineers, **New York District** began a sand nourishment project on Bradley Beach, in **Monmouth County, NJ**, as part of the Corps' *Sandy Hook to Barnegat Inlet Beach Erosion Control Project*.

The Corps contracted Weeks Marine to place 3.1M yd³ of sand on the shore, which added over 200 ft of beach front, and to create seven groin notches and four outfall extensions.

"Dune creation was not a part of the Corps' project because they are not needed in this project area for protection because the area has a naturally high backshore. If dunes were needed the Corps certainly would have added this feature," said **Lynn Bocamazo**, senior coastal engineer, USACE, New York District, who designed and monitored the completed beach nourishment project.

After the project was completed in January 2001, a local effort arose. The Bradley Beach residents wanted to take an additional step to protect the Corps' work, so they decided to create beach dunes. Beach dunes control beach erosion by limiting wind-blown sand loss.

"We wanted to protect the beach's promenade from future storms and give it a new look, like no other town has," said **Richard Bianchi, Jr.**, operating supervisor of Public Works for Bradley Beach who designed the dune project and has been a life long resident of Bradley Beach.

"We also wanted to block out the noise for sunbathers on our beaches. The only noise that you hear now is the sound of the waves and birds." The dunes also protect beach residents' homes and provide them a beautiful ocean front and privacy."

Bocamazo said, "Bradley Beach is not the first community along the 21-mi. *Sandy Hook to Barnegat Inlet Beach Erosion Control Project* area to create dunes. **Manasquan Beach** and Monmouth Beach created dunes using fencing or dune grass, or a combination of planting and fencing. Bradley Beach is the first to use Christmas trees."

Every January, Bradley Beach residents place their donated pine Christmas trees on the curbside where a truck from the **Bradley Beach Public Works Department** picks them up.

Since the beginning of this community project, an estimated 28,000 trees were used to create a stretch of dunes, 10-ft high, along the mile-long oceanfront. "Presently, we are still collecting donated trees from this past Christmas season," said Bianchi.

In 2005, to support the dunes that were being created the community designed a dune system called a saw-tooth



Christmas trees from this past holiday season are placed on the ocean side of the sand dunes where they can capture sand blowing inland from the ocean and eventually form permanent dunes.

Photo Credit: Bradley Beach Public Works, January 2007.

design. “Snow fences were placed on an angle along the promenade side of the dune to support the dune system. This also makes the beach look appealing from the shore side,” said Bianchi.

As trees are being collected, Bradley Beach Public Works places them on the ocean side of the sand dune where they can capture sand blowing inland from the ocean and eventually form permanent dunes.

“This year we are laying the trees down north to south on the east side of the beach and next year we will do the west side,” said Bianchi.

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As in previous years, dune grass is going to be planted on top of the dunes. "When the project first began, residents of Bradley Beach planted 50,000 plugs of dune grass on the dunes to keep them anchored," said Bianchi. "We are in the process of receiving a grant for an additional 25,000 to 50,000 plugs of dune grass that will be planted this spring."

The beach dunes have proven to be successful. "The placement of Christmas trees in combination with snow fencing and dune grass has proven to be very effective in capturing windblown sand that results in the growth of the height and width of the dunes," said Bianchi.

"Today the dunes are much wider at 25-ft wide and taller at 10-ft high and are successfully holding the sand back," said Bianchi. "Right now we are trying to level everything out so that the dunes are all at one height," He added.

The dunes have shown to be beneficial to the environment because they provide a more diverse habitat than just sand alone. "The dunes create a sanctuary for sparrows. They also attract all kinds of insects that all wild birds eat," said Bianchi.

The public also finds the dunes appealing. "Everyone is excited about the dunes. They think it is a wonderful project and they love the feeling of the beautiful dunes and scenery," said Bianchi.

Bianchi adds that the public now has a personal connection with their beach that draws 100,000 residents every beach season. "Their donated trees will be there forever. They don't rot. The residents are now a part of the beach."

Community officials are also very supportive of the project and think it's beneficial to the public. "When you walk through the dunes to get to the beach from the promenade psychologically it provides the illusion that you are leaving one world for another," said **Stephen Schueler**, mayor of Bradley Beach who is a strong supporter and the financier for the project. Schueler will be funding the project till 2008, the year the dune project is expected to be completed.

It's this type of community involvement that the Corps likes to see. Bocamazo said, "A pro-active municipal public works department is a beneficial addition to any Federal or State beach erosion control project. Bradley Beach is trying to aggressively maintain the sand that was placed there and is an active participant in the project's success."

For more information about the Corps various beach erosion control projects, please contact the author at Joanne.castagna@usace.army.mil; Dr. JoAnne Castagna is a technical writer for the US Army Corps of Engineers in New York City. ○

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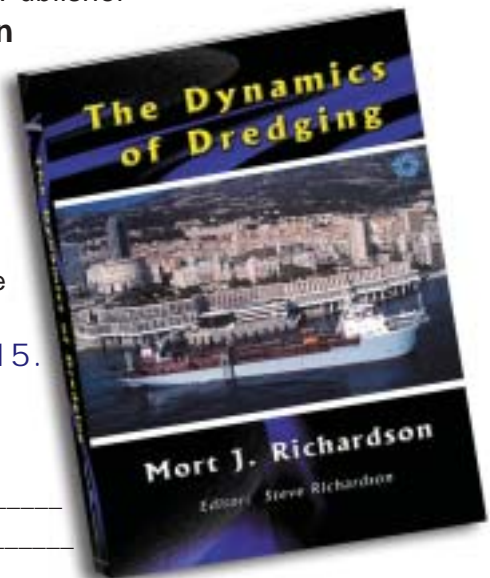
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