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Old Christmas trees build dunes on New Jersey beach

**By JoAnne Castagna
New York District**

It's below 30 degrees on a February day on Bradley Beach in New Jersey. Locals are walking their dogs along the snow-covered shore, riding bicycles on the promenade, and even donning wetsuits to surf the ice-cold waves.

It was obvious to a group of ear-muffed U.S. Army Corps of Engineers personnel that the residents of Bradley Beach are pining for beach season as they walked along the shore with local and state officials, surveying the dune work created by the community.

The residents are also literally "pinning" for beach season. For the past five years they've donated their used Christmas trees to the town to create dunes along the mile-long Bradley Beach shoreline to maintain the sand nourishment work completed by the Corps in 2001.

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



Donated Christmas trees being used to create dunes on Bradley Beach (Photo courtesy of Douglas Leite, Project Manager, New York District)



Corps surveys dune work with state and local officials. Pictured (L to R) Richard Bianchi, Supervisor of Public Works for Bradley Beach; Christopher Tucker, Senior Engineer, New Jersey Department of Environmental Protection; Chris Constantino, Environmental Specialist, New Jersey Department of Environmental Protection; Stephen Schueller, Mayor, Bradley Beach, NJ; JoAnne Castagna, Technical Writer/Editor, USACE, New York

Project.

The Corps contracted Weeks Marine to place 3.1 million cubic yards of sand on the shore, which added more than 200 feet 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're not needed in this project area for protection because the area has a naturally high backshore," said Lynn Bocamazo, Senior Coastal Engineer in New York District, who designed and monitored the completed beach nourishment project. "If dunes were needed the Corps certainly would have added this feature."

But 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, Operating Supervisor of Public Works for Bradley Beach.

He designed the dune project, and has been a life-long resident of Bradley Beach. "We also wanted to block out the noise for sunbathers. The only noise you hear now is the sound of the waves and birds. The dunes also protect beach residents' homes and provides them a beautiful ocean front and privacy."

Bocamazo said, "Bradley Beach is not the first community along the 21-mile 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. But Bradley Beach is

District; Lynn Bocamazo, Senior Coastal Engineer, USACE, New York District and Shawn Brennan, Aid for Congressman Frank Pallone, 6th District, N.J. (Photo courtesy of Douglas Leite, Project Manager, USACE, New York District)



Dunes are laid out in a saw-tooth design (Photo courtesy of Douglas Leite, Project Manager, New York District)

the first to use Christmas trees."

Every January, Bradley Beach residents leave their used Christmas trees on the curb where a truck from the Bradley Beach Public Works Department picks them up.

So far an estimated 20,000 trees have been used to create a stretch of dunes four-to-nine feet high along the mile-long oceanfront. This past holiday season an additional 3,000 trees were added.

On the beach, the trees are placed on the ocean side of the dune system. They are placed on their sides where their fine-mesh evergreen needles can capture sand blowing inland from the beach and eventually form permanent dunes.

The community is designing the dune system in what is called a saw-tooth design.

"Snow fences are being 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.

Dune grass is planted on the dunes. "When the project began, the town planted 50,000 plugs of dune grass on the dunes to keep the dunes anchored," said Bianchi. "We are in the process of receiving a grant for an additional 25,000 to 50,000 plugs of dune grass."

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

The dunes are 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 wild birds eat," said Bianchi.

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

Bianchi adds that the public now has a personal connection with their beach that draws 20,000 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 also support 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're 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 fund the project until 2008, the year the dune project is expected to be complete.

The Corps likes to see this type of community involvement. 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

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(Dr. JoAnne Castagna is a technical writer New York District.)

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