

Dune Swales – North Beach Project Racine, Wisconsin

Description

The use of dune swales as a mitigation measure began in 2004. Most recently, the City of Racine Departments of Health and Parks, Recreation, and Cultural Services sought \$1500 in funds from the Racine Community Foundation, Sustainable Racine Fund, to purchase plant plugs for the purpose of increasing the vegetation between the Kid's Cove Playground and North Beach Oasis, two popular attractions at North Beach. The purchased plant plugs were used to augment existing vegetation and to vegetate newly created encouraged dunes as one of several citywide Make-A-Difference Day projects in October of 2008 and Earth Day 2009. The strategic placement of dunes at this location will provide multiple physical benefits to the back beach area. Additionally, volunteers who assist in the ongoing planting and maintenance of this area will gain a sense of satisfaction by participating on a project which enhances the natural environment in our community.

Background

This project addresses multiple historic issues impacting beach management practices and water quality in Racine: structural maintenance, deterrence of nuisance waterfowl, and infiltration of non-point source pollution (as impervious and landscape run-off). Predominating winds displaced sand from the beach area that covered certain portions of the boardwalk between two popular attractions at Racine's North Beach. As an alternative to installing manmade structures, and in keeping with the City of Racine's commitment to the environment, we sought to utilize vegetation as a means of controlling wind blown sand which frequently covered this pathway with the added benefit of increasing the natural landscape. Racine Health Department research has demonstrated that the naturally vegetated areas of North Beach significantly deterred the roosting of gulls. Gulls have been shown to contribute to the fecal burden in beach sands in Racine and are a source of pollution to recreational water. The use of well designed landscape techniques can also aid in the infiltration of non-point source run-off from a variety of surfaces preventing delivery to near shore waters and potentially aiding in the reduction of water quality advisories. After large rain events there was frequent, visible evidence of shoreline erosion (as wash-outs) resulting, in part, to run-off originating in the back beach area. City of Racine Parks and Health Department employees work closely with Mr. Robert Oertel, *Keep Our Beaches Open*, and citizen volunteers to maintain this area so that it provides maximum benefit.

Results

The encouragement of dune swales is an ongoing process; the position and density of grasses is being evaluated on a continual basis. The majority of the boardwalk is now kept clean with minimal assistance of a maintenance crew, few gulls are seen loafing in the vicinity of the vegetation, and storm water passing through this area meanders and infiltrates prior to reaching the shoreline. An additional planting event is scheduled as a 2009 Earth Day project which will serve to fine tune this local best management practice. Local citizens and visitors to our beach will be able to swim and navigate unimpeded between two popular attractions and the City will be able to utilize park staff in a more efficient manner.

Before: 2001-2004



During Make A Difference Day 2004



During Make A Difference Day 2008



After. 2007- 2008



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