

Coastal Communities Stormwater Retrofit Initiative

Phase 1: Anchorage Canal Drainage Area Retrofit Pilot Project (ACDARPP)

The coastal corridor from Dewey Beach to Fenwick Island has some of the highest coverages of impervious surfaces in the closest proximity to the waters of the Inland Bays. Much of these urban lands were developed prior to stormwater regulations and are major sources of nitrogen, phosphorus, sediment, and hydrocarbon pollution to the Bays. They also contain populations inclined to participate in and support efforts to improve the water quality of the Bays that they live near and enjoy. This makes the coastal corridor an excellent area for a collaborative stormwater retrofit demonstration project.



The Anchorage Canal Drainage Area

The Anchorage canal is the northernmost canal in South Bethany and it connects to Little Assawoman Bay. Relative to other canals in South Bethany, it has a very large drainage area of at least 65 acres, about half of which is impervious surface. Existing studies show that high levels of nitrogen, hydrocarbons, and sediment enter the canal from the watershed which produces runoff even during light rains. Much of the runoff is collected through a series of stormwater drains along Route 1 and is piped untreated to the Loop Section of the canal. The South Bethany Canals and Little Assawoman Bay are in poor condition and experience unhealthy levels of dissolved oxygen and bacteria, and dense blooms of environmentally harmful algae. Stormwater is a major source of pollutants for these water bodies.



Runoff from roofs, driveways, roads, and lawns carries pollutants into a large stormwater system that discharges the untreated water into a poorly flushed residential canal and Bay.

A Low-Impact Development Approach to Stormwater Retrofitting

Low-impact development is an approach to addressing stormwater pollution that uses multiple dispersed technologies (or retrofits) that favor infiltration and detention of runoff. These technologies are low in life time cost, they decentralize costs and maintenance, they are effective; and they include infiltration swales, rainbarrels, pervious pavements, downspout redirection, street sweeping, and improvement of existing controls. By infiltrating and detaining runoff, stormwater and its pollutants are slowed and treated before entering waterbodies.

Project Cooperators

- Center for the Inland Bays
- The Town of South Bethany
- Middlesex Beach
- Department of Transportation
- The United States Army Corps of Engineers
- University of Delaware Cooperative Extension
- Sea Colony
- The Town of Bethany Beach



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Status: The Retrofit Assessment (March 2009)

A total of \$70,000 worth of services from the USACE Planning Assistance to the States Program, DelDOT, the Town of South Bethany, and the Center for the Inland Bays has been secured to implement a stormwater retrofit assessment. The nationally known Center for Watershed Protection has been selected to conduct the assessment which will include a GIS-based office component, three days of technical field assessments, and a prioritized retrofit strategy developed with input from project cooperators. The goal is to complete the assessment by fall of 2009 and to have some level of implementation funds secured by this time. This unique project will focus a great deal of planning effort in a relatively small drainage area and will include consideration of cost efficiency, sea level rise, coastal aesthetics, and education.

