



DNREC, Shoreline and Waterway Management Section

Fall 2007

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## Bethany Beach and South Bethany Getting Out of Harm's Way

### The latest scoop:



- Electronic Information and Signatures – Senate Bill 64 passed. This means that Shoreline Management can now accept faxed signature pages for both Coastal Construction Permit applications and Construction Letter of Approval applications.

### In future Issues:

- Welcome to the New Lewes Field Facility
- FEMA's Community Rating System
- Updates of projects, such as beach nourishment and groin rehabilitation.



### Upcoming Events:

International Coastal Clean Up  
Saturday, September 15, 2007  
9 AM–12PM  
To register: [www.dnrec.delaware.gov](http://www.dnrec.delaware.gov)  
Or call 302-739-9906

Coast Day  
Sunday, October 7, 2007  
11AM-5PM  
UD College of Marine and Earth Studies  
Lewes, Delaware

## Bethany Beach/South Bethany Nourishment Project to Start after Labor Day

Bethany Beach



If you have been to Bethany Beach within the past couple of years, you may have noticed that during the winter months and early spring the high tide tends to bring the shoreline up underneath the boardwalk. This gives the impression that structures along the coastline are very susceptible to being destroyed in the next coastal storm. This situation is soon to change. Slated to start the 2nd or 3rd week of September 2007 is the Bethany Beach/South Bethany Storm Damage Reduction Project. The purpose of the project is to provide shoreline protection and reduce the potential for coastal storm damage along 2.8 miles of ocean front from the northern end



of Bethany Beach to the northern end of Fenwick Island State Park.

The U. S. Army Corps of Engineers has completed all

of the design documents and will contribute 65% of the initial construction and periodic nourishment costs. The Delaware Department of Natural Resources and Environmental Control (DNREC) will provide 35% of the initial construction and periodic nourishment costs.

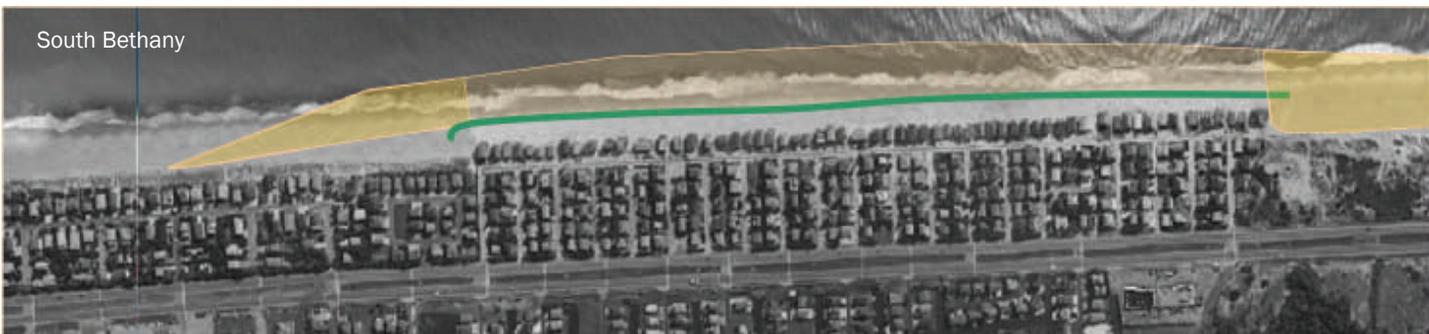
Approximately 2,862,000 cubic yards of sand will be pumped from an offshore borrow area to construct the beach and dune system. The source for sand for initial construction and subsequent periodic nourishment is located approximately 2.5 miles east of South Bethany. The beach will be a minimum of 150 feet wide with an average

*The purpose of the project is to provide shoreline protection and reduce the potential for coastal storm damage.*

elevation of +7 feet NAVD (7 feet above sea level). The dunes will have a 25 feet wide dune crest and will be built to an average elevation of 16 feet NAVD. The dunes will be planted with beach grass and fenced with Sand fence.

Note: In the figures at the top and bottom of the page, the green line represents the proposed dune. The orange hashed area is the area to be nourished and the solid orange area is the taper section.

South Bethany



## Sea Level Rise—Should we build an Ark?

On June 25<sup>th</sup>, the Delaware Department of Natural Resources and Environmental Control (DNREC) and the Delaware Sea Grant College Program held the **Delaware Coastal Issues Workshop on Sea-Level Rise and Coastal Inundation**. The goal of the workshop was to provide elected officials, coastal managers and decision makers with information about coastal problems associated with sea-level rise to increase awareness and enhance the understanding of the topic.

*“Understanding the dynamics of a specific coastal region involves incorporating a lot of physical factors into one package.”-Dr. Wendy Carey, University of Delaware Sea Grant Program*

Subject matter experts from U.S. Geological Survey (USGS), National Ocean and Atmospheric Administration (NOAA), US Army Corps of Engineers (USACE), University of Delaware, and DNREC presented background information on sea-level rise, provided an overview of on-going related research, and discussed planning issues and implications of sea-level rise as they relate to coastal communities. Some effects of sea-level rise include tidal inundation of low-lying areas; coastal erosion of wetlands and beaches; barrier island migration and migration of wetlands over adjacent uplands; increased coastal flooding and storm damage; and increased salinity of estuaries, marshes, rivers and aquifers. During the presentations and follow-up panel discussion, current options and future goals to mitigate these effects were suggested. Also included in the workshop was an open forum that provided an opportunity for attendees to express their concerns

and request additional information required to make appropriate coastal decisions.

The science-based information provided to decision makers was intended to facilitate and enable appro-

*“This is a first step. It needs to be followed up on an annual basis.”-Tony Pratt, DNREC*

appropriate measures to be incorporated into management and policy decisions. The workshop was successful in initiating community discussion about sea-level rise and coastal inundation, and with continued interest, future workshops will be held. For more information about the workshop, or sea-level rise and coastal inundation, please email Lisa Pietro at [Lisa.Pietro@state.de.us](mailto:Lisa.Pietro@state.de.us).

## Proper Construction of Steps In Areas That Are Susceptible to Wave Action



during the winter months, you increase their chances of survival.

- When constructing steps to a building or deck in an area that is susceptible to erosion, the steps

- Use the minimum amount of wood needed to provide the proper support. This minimizes the amount of debris that could end up on the beach or in the water after a coastal storm.
- No concrete footers in an area where the posts could be undermined.

- Steps can be constructed to be raised or removable by hinging them to the dune cross-over or to the deck. If on a deck you can create a pulley system for raising them. You can also bolt them in a way that makes them easily removed.



- By constructing steps that can be raised or removed during storms or when they are not being used

should be supported by either the piling foundation or from above. If they are undermined, they will hang and not collapse.



## Understanding the State's Role in Flood Plain Management

It can be confusing when trying to understand what agencies are involved in regulating construction in the beach area. The State of Delaware's Department of Natural Resources and Environmental Control's (DNREC's) Shoreline Management Section enforces the Regulations Governing Beach Protection and the Use of Beaches. Primarily these regulations protect the beach and dunes as a natural resource from residential and commercial development. The regulations also reduce coastal storm damage by requiring construction to be set-back away from the Atlantic Ocean and Delaware Bay.

Although flood issues tend to be taken into consideration when the Shoreline Management Section is reviewing applications for Coastal Construction Permits and Letters of Approval, the Regulations Governing Beach Protection and the Use of Beaches do not specifically address flood issues. Local governments, such as Delaware's three Counties, and local municipalities, such as incorporated coastal cities and towns, have adopted the Federal Emer-

gency Management Agency's (FEMA's) flood plain regulations in order to be included in the National Flood Insurance Program. By incorporating these regulations into their own building ordinances and/or codes the Counties and municipalities are ensuring that the properties within their jurisdiction are eligible for National Flood Insurance.

The role of DNREC is to provide, as necessary, policy development, technical assistance to communities, coordination, and prioritization and integration of floodplain management issues within Delaware. DNREC's Shoreline and Waterway Management Section contains professionally certified floodplain managers who have helped and continue to help their communities incorporate floodplain management into other community processes. The State's Floodplain Mitigation program also combines resources for disaster response by joining existing regional emergency compacts. The State also performs and administers floodplain mapping programs for the Federal Emergency Management Agency, administers the Hazard Mitiga-

tion Grant Program and the Flood Mitigation Assistance Program, and conducts environmental reviews for mitigation projects. The State and local communities develop the capability to do their own engineering studies and reviews, such as reviewing Letter of Map Revision submissions.

Local governments must become the focus of hazard mitigation efforts. It is for this reason that a minimum set of flood plain regulations are incorporated into their local ordinances. Sometimes local ordinances will exceed those set by FEMA, so that they can prevent storm damage and lower insurance rates for their residents. Without these regulations, the local governments would not qualify for National Flood Insurance. Therefore, it is important that the local governments are enforcing the flood regulations and requiring compliance. Otherwise the local governments could be withdrawn from the program and be unable to obtain National Flood Insurance. For more information, please contact Michael Powell or Greg Williams at (302) 739-9921.



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### *For Your Reference:*

#### Beach Preservation Act

<http://www.delcode.state.de.us/title7/c068/index.htm>

#### Regulations Governing Beach Protection and the Use of Beaches

<http://www.dnrec.state.de.us/bechregs.htm>

#### Link to Applications for Coastal Construction

Scroll to the bottom of the page for list of applications

<http://www.dnrec.state.de.us/dnrec2000/Divisions/Soil/ShorelineCons/Shoreline.htm>

#### FEMA's National Flood Insurance Program

<http://www.fema.gov/about/programs/nfip/index.shtm>

If you have any questions regarding the information found in this publication, please contact Jennifer Wheatley at (302) 739-9921 or

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