

Module 5

Resources to Help Your Community be Flood Ready



3 Key Funding Sources for Assessments and Mitigation

- Coastal Management Grants
- Clean Water Infrastructure Grants
- Unified Hazard Mitigation Assistance Grant Programs



Real time and historic weather and stream data

Delaware Environmental Observing System

DEOS

Home Data Analysis Tools Information RSS XML

Historical Daily Station Summary Retrieval

Retrieve daily data summaries for networks archived for historical use by DEOS.

Network:

- DEOS
- DNERR-Water-Quality
- DelDOT

Station:

- Atglen, PA-Wolfs Hollow
- Bethany Beach, DE-Boardwalk**
- Bethany Beach, DE-NGTS
- Blackbird, DE-NERR
- Bridgeville, DE-SPB
- Chester Springs, PA-Park
- Claymont, DE-Park
- Dagsboro, DE-Pepper Creek
- Delmar, DE-Gumboro
- Devault, PA-Tredyfrin

Date:

January 1 2009
 February 2 2010
 March 3 2011
 April 4 2012
 May 5 2013
 June 6 2014

[Send Request](#)

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 DEOS Data Tracker: 819,451,319 observations processed and stored as of June 6, 2014

www.deos.udel.edu

Daily Streamflow Conditions

Select a site to retrieve data and station information.
 Friday, June 06, 2014 15:30ET

Explanation

- High
- > 90th percentile
- 76th - 90th percentile
- 25th - 75th percentile
- 10th - 24th percentile
- < 10th percentile
- Low
- Not ranked

The colored dots on this map depict streamflow conditions as a percentile, which is computed from the period of record for the current day of the year. Only stations with at least 30 years of record are used. The gray circles indicate other stations that were not ranked in percentiles either because they have fewer than 30 years of record or because they report parameters other than streamflow. Some stations, for example, measure stage only.

Statewide Streamflow Real-Time Table

Statewide Ground-Water Real-Time Table

Statewide Water-Quality Real-Time Table

Real-time data typically are recorded at 15-60 minute intervals, stored onsite, and then transmitted to USGS offices every 1 to 4 hours, depending on the data relay technique used. Recording and transmission times may be more frequent during critical events. Data from real-time sites are relayed to USGS offices via satellite, telephone, and/or radio and are available for viewing within minutes of arrival. All real-time data are **provisional and subject to revision**.

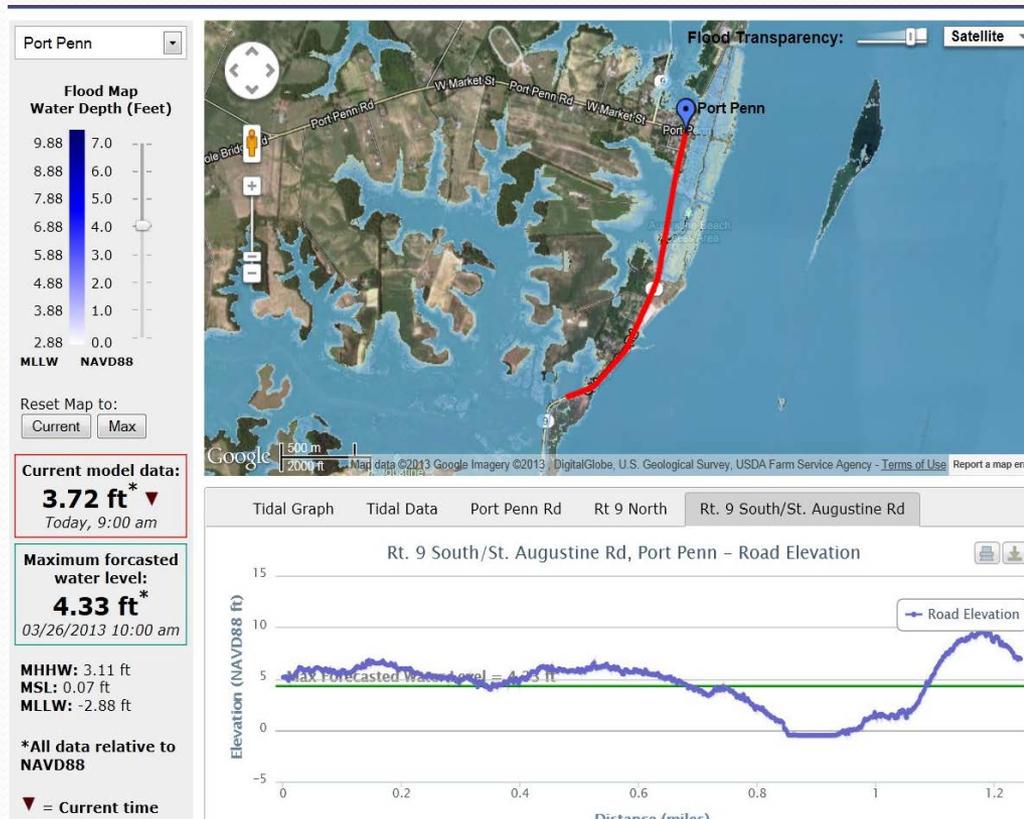
Build Real-Time Table	Show a custom real-time summary table for one or more stations.
Build Time Series	Show custom graphs or tables for a series of recent data for one or more stations.

[Questions about sites/data?](#)
[Feedback on this web site](#)
[Automated retrievals](#)

[Data Tips](#)
[Explanation of terms](#)
[Subscribe for system changes](#)

<http://waterdata.usgs.gov/de/nwis/rt>

Mapping Tools – Delaware Coastal Flood Monitoring System



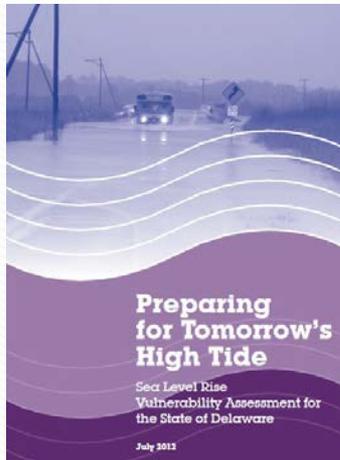
<http://www.coastal-flood.udel.edu/>

Mapping Tools – National Flood Insurance Rate Maps

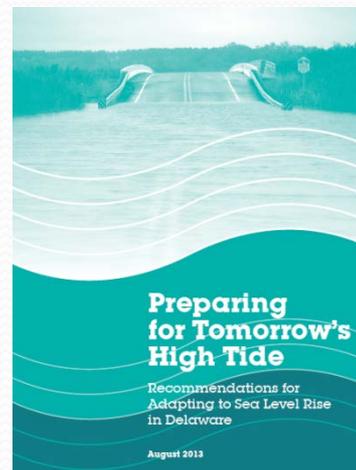
The screenshot displays the 'Sussex County, DE Flood Information Portal' interface. At the top, it identifies the location as 'Sussex County, DE Flood Information Portal' and 'FEMA REGION III'. An 'Investigator' window shows the following details for parcel 13301714000100: Latitude / Longitude: 38.59192 / -75.28537, LPE: -1.8 ft, HPE: 21.8 ft, and 'In LIMWA: Yes'. Below this, two side-by-side maps are shown: 'Effective [Date: 1/06/2005]' and 'Preliminary [Date: 1/31/2013]'. Both maps show a blue flood zone labeled 'Zone: AE' with an elevation of 7' and 8' respectively. A 'Find an address' window is open in the bottom right, with radio buttons for 'Address', 'FIRM Panel', 'Parcel', and 'Political Area'. A 'DISCLAIMER' window at the bottom left states: 'The data provided in this application is for informational purposes only and is not to be used as the basis for regulatory determinations or for supporting an application for a Letter of Map Change (LOMC). The flood information provided here including Base Flood Elevations (BFEs) is not a substitute for a determination made using the official FEMA Flood Insurance Study. All elevation data submitted in support of a LOMC'.

<http://maps.riskmap3.com/DE/>

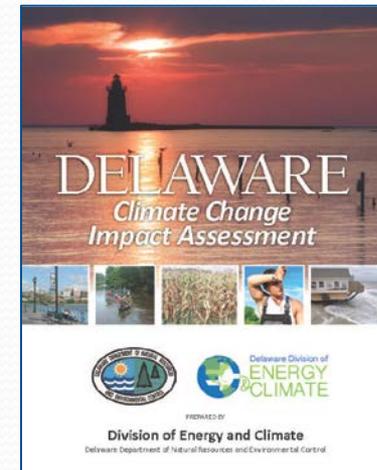
Climate Change Resources



<http://de.gov/slrva>



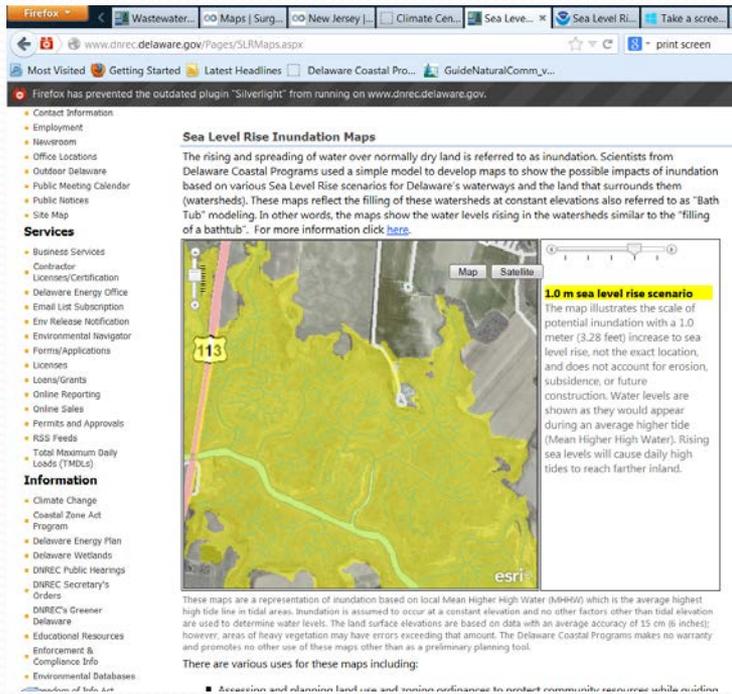
<http://de.gov/slradaptplan>



<http://www.dnrec.delaware.gov/energy/Pages/The-Delaware-Climate-Impact-Assessment.aspx>

Mapping Tools – Sea Level Rise

Delaware SLR Maps



Sea Level Rise Inundation Maps

The rising and spreading of water over normally dry land is referred to as inundation. Scientists from Delaware Coastal Programs used a simple model to develop maps to show the possible impacts of inundation based on various Sea Level Rise scenarios for Delaware's waterways and the land that surrounds them (watersheds). These maps reflect the filling of these watersheds at constant elevations also referred to as "Bath Tub" modeling. In other words, the maps show the water levels rising in the watersheds similar to the "filling of a bathtub". For more information click [here](#).

1.0 m sea level rise scenario

The map illustrates the scale of potential inundation with a 1.0-meter (3.28 feet) increase to sea level rise, not the exact location, and does not account for erosion, subsidence, or future construction. Water levels are shown as they would appear during an average higher tide (Mean Higher High Water). Rising sea levels will cause daily high tides to reach farther inland.

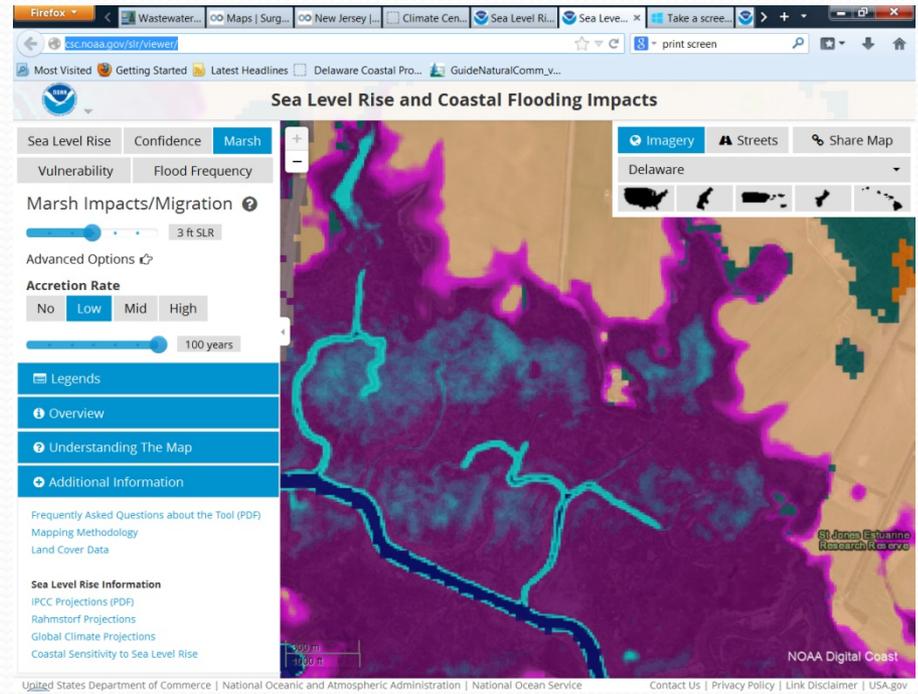
These maps are a representation of inundation based on local Mean Higher High Water (MHHW) which is the average highest high tide line in tidal areas. Inundation is assumed to occur at a constant elevation and no other factors other than tidal elevation are used to determine water levels. The land surface elevations are based on data with an average accuracy of 15 cm (6 inches); however, areas of heavy vegetation may have errors exceeding that amount. The Delaware Coastal Programs makes no warranty, and promotes no other use of these maps other than as a preliminary planning tool.

There are various uses for these maps including:

- Accession and planning land use and zoning ordinances to protect community resources while reducing

de.gov/slrmap

NOAA Digital Coasts



Sea Level Rise and Coastal Flooding Impacts

Sea Level Rise Confidence Marsh

Vulnerability Flood Frequency

Marsh Impacts/Migration

3 ft SLR

Advanced Options

Accretion Rate

No Low Mid High

100 years

Legends

Overview

Understanding The Map

Additional Information

Frequently Asked Questions about the Tool (PDF)

Mapping Methodology

Land Cover Data

Sea Level Rise Information

IPCC Projections (PDF)

Rahmstorf Projections

Global Climate Projections

Coastal Sensitivity to Sea Level Rise

NOAA Digital Coast

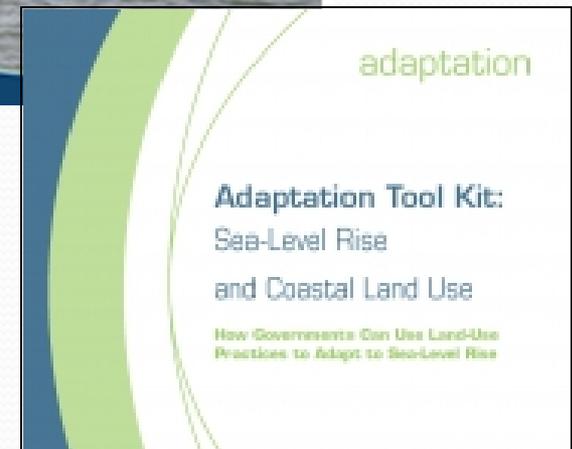
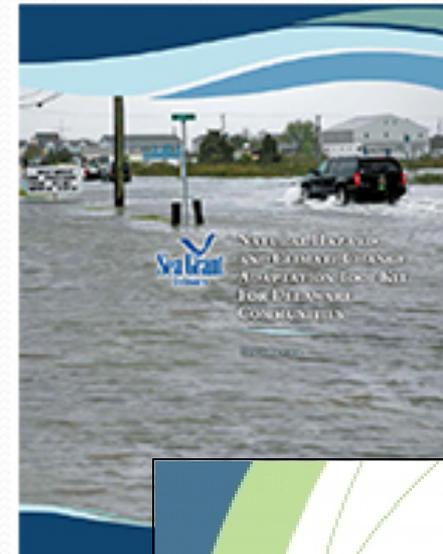
United States Department of Commerce | National Oceanic and Atmospheric Administration | National Ocean Service

Contact Us | Privacy Policy | Link Disclaimer | USA.gov

csc.noaa.gov/slr/viewer

How To Info:

- DE Sea Grant Natural Hazard and Climate Change Adaptation Tool Kit
 - <http://www.deseagrant.org/>
- Georgetown Law Adaptation tool kit
 - <http://www.georgetownclimate.org/resources/adaptation-tool-kit-sea-level-rise-and-coastal-land-use>
- Live Trainings and Workshops
 - Coastal Training Program
 - Delaware Sea Grant



Questions and Lunch!

