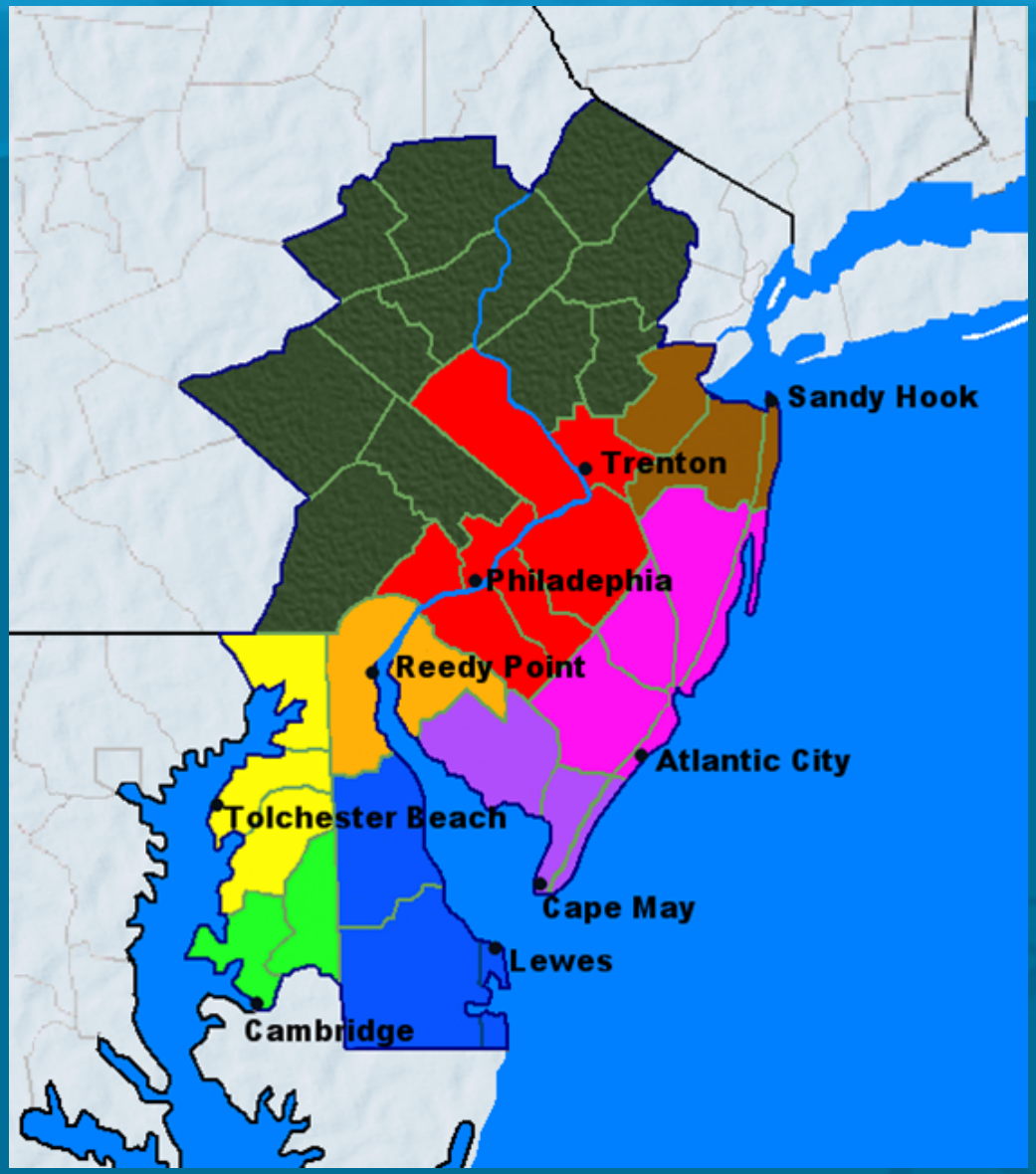
National Weather Service
Mount Holly, New Jersey

Coastal Flood Warning Program

Dean Iovino


Sandy Hook
Trenton
Philadephia
Reedy Point
Atlantic City
Tolchester Beach
Cape May
Lewes
Cambridge

Category definitions

In the MINOR category there is flooding of the most vulnerable roadways due to high water and/or wave splash-over. The majority of roads remain passable. There is no significant threat to life. Any impact on property is minimal.

Category definitions

In the MODERATE category there is widespread flooding of roadways due to high water and/or wave action with many roads becoming impassable. Lives may be at risk when people put themselves in harms way. Some damage to vulnerable structures may occur.

Category definitions

In the MAJOR category there is flooding that is severe enough to cause structural damage along with widespread flooding of roadways. Some evacuations become necessary. Vulnerable homes and businesses may be severely damaged or destroyed. Numerous roads become impassable and some neighborhoods may be isolated. The flood waters become a danger to anyone who attempts to cross on foot or in a vehicle.

Forecast Product Types

A Coastal Flood Warning is issued for moderate to major flooding. Ideally, a warning is preceded by a watch.

*A Coastal Flood Advisory is issued for minor flooding.**

** Due to the high frequency of occurrence and limited impact, we do not issue an advisory for water levels in the lowest third of the minor category.*

Product Lead Time

Area Forecast Discussion and Hazardous Weather Outlook – up to 7 days

Coastal Flood Watch – around 48 hours

Coastal Flood Warning – around 24 hours

Coastal Flood Advisory – from 12 to 24 hours

Tools

Extratropical Systems

- *Extratropical Storm Surge Model (ET-Surge or ETSS)*
- *Extratropical Surge and Tide Operational Forecast System (ESTOFS)*
- *New York and New Jersey Operational Forecast System (NYOFS)*
- *Delaware Bay Operational Forecast System (DBOFS)*
- *Chesapeake Bay Operational Forecast System (CBOFS)*

Tools

Tropical Systems

- *Sea, Lake and Overland Surges from Hurricanes Model (SLOSH)*
- *Storm Surge Maximum Envelope of Water (MEOW)*
- *Maximum of the MEOW (MOM)*
- *Probabilistic Storm Surge (P-SURGE)*
- *Probabilistic Hurricane Inundation Surge Height (PHISH)*

Tools

Wave Models

- *Wavewatch III*
- *Near-shore Wave Prediction System (NWPS)**

Wind and Precipitation Forecasts

Tidal Gauges

Tools

Delaware Coastal Flood Monitoring System

Davidson Laboratory Storm Surge Warning System

A comprehensive list of historic coastal flood events

A list of water level impact statements

Communication Tools

Briefing packages

Social media

Broadcast media

Web site http://www.weather.gov

Communication Tools

Local tide link – http://www.weather.gov/phi/tides

- *Flood categories*
- *Historic tide levels*
- *Impacts (mostly in the minor range to highlight the most susceptible locations)*

Needs

Inundation maps

Better modeling of the bays and tidal rivers

Improved methods of communication

Communication Needs

Tropical versus extratropical storm surge

Datum issues

Emphasize categories rather than specific heights

Ground truth reports

Flood Stage Project

NOS gauges – Delaware City and Chesapeake City

USGS gauges – Wilmington, Newport, Bowers Beach, Dewey Beach, Indian River Inlet, South Bethany Beach, Fenwick Island and Rosedale Beach

Thank you

Dean Iovino

National Weather Service Forecast Office

Mount Holly, New Jersey

dean.iovino@noaa.gov