Storm Analysis

As of 9/03/2016 06:00 EDT, water levels along coastal regions of North Carolina are rising and range from 1-2 feet above tidal predictions. Along the east coast from Florida to South Carolina, water levels are as much as 1.4 feet below normal tide levels.
Winds are increasing ahead of the storm center, from Hatteras, NC northward. Gusts up to 40 kts are being observed at several stations with gusts up to 60 knots at Duck, NC. Winds from Springmaid Pier, SC south have decreased and range from 10 to 20 kts with gusts to 25 kts. Barometric pressure has risen at stations south of the storm center and is dropping at all locations within North Carolina and Virginia.

Water Level and Meteorological plots available below are updated automatically. A line denoting Mean Higher High Water (MHHW) is displayed to provide an approximate indication of when flooding inundation may occur.

For additional data, please see the Center for Operational Oceanographic Products & Services website. For more information or archived products and reports, please see the Storm QuickLook Homepage.

Analyst: ADM

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SELECT NATIONAL HURRICANE CENTER ADVISORY INFORMATION:

TROPICAL STORM HERMINE ADVISORY NUMBER 24
NWS NATIONAL HURRICANE CENTER MIAMI FL
500 AM EDT SAT SEP 03 2016

...HERMINE EXPECTED TO MOVE OVER THE ATLANTIC SOON...
...DANGEROUS STORM SURGE EXPECTED IN THE HAMPTON ROADS AREA...

WATCHES AND WARNINGS
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CHANGES WITH THIS ADVISORY:
None.

SUMMARY OF WATCHES AND WARNINGS IN EFFECT:

A Tropical Storm Warning is in effect for...
* Surf City to Sandy Hook
* Pamlico and Albemarle Sounds
* Chesapeake Bay from Drum Point southward
* Tidal Potomac from Cobb Island eastward
* Delaware Bay

A Tropical Storm Watch is in effect for...
* North of Sandy Hook to west of Watch Hill

Interests elsewhere along the United States northeast coast should monitor the progress of this system. Additional watches or warnings may be require for portions of this area on Saturday.

For storm information specific to your area, including possible inland watches and warnings, please monitor products issued by your local National Weather Service forecast office.

DISCUSSION AND 48-HOUR OUTLOOK
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At 500 AM EDT, the center of Tropical Storm Hermine was located ABOUT 55 MI N OF CAPE LOOKOUT NORTH CAROLINA and ABOUT 60 MI WNW OF CAPE HATTERAS NORTH CAROLINA. Hermine is moving toward the east-northeast near 21 mph, and this general motion with a decrease in forward speed is forecast to continue today. A gradual turn toward the north is expected on Sunday. On the forecast track, the center of Hermine will emerge over the Atlantic later today.

Maximum sustained winds remain near 60 mph with higher gusts. Strengthening is forecast after the center moves over water, and Hermine could be near hurricane intensity by Sunday.

Tropical-storm-force winds extend outward up to 185 miles mainly to the south and east of the center.

The estimated minimum central pressure is 997 mb.

HAZARDS AFFECTING LAND
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WIND: Tropical storm conditions will continue to spread northward within the warning area along the Atlantic coast through Sunday. Tropical storm conditions are possible in the watch area by late Sunday or Sunday night.

STORM SURGE: The combination of a storm surge and the tide will cause normally dry areas near the coast to be flooded by rising waters moving inland from the shoreline. There is a danger of life-threatening inundation during the next 24 hours in the Hampton Roads area. Persons within this area should take all necessary actions to protect life and property from rising water. Promptly follow all instructions, including evacuation orders, from local officials. There is also the possibility of life-threatening inundation during the next 48 hours at most coastal locations between the North Carolina/Virginia border and Bridgeport, Connecticut.

For a depiction of areas at risk, please see the Prototype Storm Surge Watch/Warning graphic, which displays areas that would qualify for inclusion under a storm surge watch or warning currently under development by the National Weather Service and planned for operational use in 2017. The Prototype Graphic is available at www.hurricanes.gov/graphics_at4.shtml?wsurge

The water could reach the following heights above ground if the peak surge occurs at the time of high tide...

- North Carolina coast...1 to 3 feet
- Hampton Roads area...3 to 5 feet
- Elsewhere from the NC/VA border to Bridgeport, CT...2 to 4 feet

RAINFALL: Hermine is expected to produce total rainfall accumulations of 4 to 7 inches over far southeastern Virginia and the Atlantic coastal portion of Maryland through Monday morning. Hermine is expected to produce total rainfall accumulations of 1 to 4 inches over southern Delaware, southern and eastern New Jersey, and Long Island through Monday morning. Moisture wrapping around Hermine and trailing back to the south will produce an additional 1 to 3 inches or rain over parts of North Carolina and northern Florida. This rainfall may contribute to flooding in some areas.

NEXT ADVISORY
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Next intermediate advisory at 800 AM EDT.
Next complete advisory at 1100 AM EDT.

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Forecaster Avila

For the purpose of timely release, data contained within this QuickLook have undergone a "limited" NOS Quality Assurance/Control; however, the data have not yet undergone final verification. All data subject to NOS verification.

Jump to: Duck - Water Level, Duck - Winds, Duck - Barometric, USCG Station Hatteras - Water Level, USCG Station Hatteras - Winds, USCG Station Hatteras - Barometric, Oregon Inlet Marina - Water Level, Oregon Inlet Marina - Winds, Oregon Inlet Marina - Barometric, Wilmington - Water Level, Wilmington - Barometric, Wrightsville Beach - Water Level, Wrightsville Beach - Winds, Wrightsville Beach - Barometric, Beaufort - Water Level, Beaufort - Winds, Beaufort - Barometric, Chesapeake Bay Bridge Tunnel - Water Level, Chesapeake Bay Bridge Tunnel - Winds, Wachapreague - Water Level, Wachapreague - Winds, Springmaid Pier - Water Level, Springmaid Pier - Winds, Springmaid Pier - Barometric, Charleston - Water Level, Charleston - Winds, Charleston - Barometric, Fort Pulaski - Water Level, Fort Pulaski - Winds, Fort Pulaski - Barometric, Fernandina Beach - Water Level, Fernandina Beach - Winds, Fernandina Beach - Barometric.
NOAA/NOS/CO-OPS 8651370 Duck, NC

**Preliminary Water Level, relative to Mean Higher High Water (MHHW)**

Last Observed Sample: 09/03/2016 05:24 (EDT). Data relative to MHHW

- Observed: -0.13 ft.
- Predicted: -2.69 ft.
- Residual: 2.56 ft.

Historical Maximum Water Level: Sep 18 2003, 4.13 ft.

Next High Tide: 09/03/2016 09:26 (EDT), 0.11 ft.

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**NOAA/NOS/CO-OPS 8651370 Duck, NC**

**Wind Speed / Gusts / Direction**

Last Observed Sample: 09/03/2016 05:24 (EDT)

- Wind Speed: 38 knots
- Gusts: 56 knots
- Direction: 53° T
NOAA/NOS/CO-OPS 8651370 Duck, NC

Barometric Pressure

Barometric Pressure: 1000.1 mb

NOAA/NOS/CO-OPS 8654467 USCG Station Hatteras, NC

LastObservedSample: 09/03/2016 05:24 (EDT)

Data relative to MHHW

Observed: 0.41 ft. Predicted: -0.30 ft. Residual: 0.71 ft.

Historical Maximum Water Level: Oct 29 2012, 4.02 ft.

Next High Tide: 09/03/2016 10:37 (EDT), 0.03 ft.
Last Observed Sample: 09/03/2016 05:24 (EDT)

Wind Speed: 21 knots  Gusts: 32 knots  Direction: 204° T

Barometric Pressure: 997.1 mb
Last Observed Sample: 09/03/2016 05:36 (EDT). Data relative to MHHW

**Observed:** 0.50 ft.  **Predicted:** -0.81 ft.  **Residual:** 1.31 ft.
**Historical Maximum Water Level:** Aug 28 2011, 6.32 ft.
**Next High Tide:** 09/03/2016 09:58 (EDT), 0.08 ft.

**Wind Speed:** 12 knots  **Gusts:** 17 knots  **Direction:** 141° T
NOAA/NOS/CO-OPS 8652587 Oregon Inlet Marina, NC
Last Observed Sample: 09/03/2016 05:36 (EDT)
Barometric Pressure: 997.2 mb

NOAA/NOS/CO-OPS 8658120 Wilmington, NC
Last Observed Sample: 09/03/2016 05:24 (EDT)
Data relative to MHHW
Next High Tide: 09/03/2016 11:47 (EDT), -0.07 ft.
NOAA/NOS/CO-OPS 8658120 Wilmington, NC

Barometric Pressure

Last Observed Sample: 09/03/2016 05:24 (EDT)
Barometric Pressure: 1007.3 mb

NOAA/NOS/CO-OPS 8658163 Wrightsville Beach, NC

Preliminary Water Level, relative to Mean Higher High Water (MHHW)

Last Observed Sample: 09/03/2016 05:24 (EDT). Data relative to MHHW

Historical Maximum Water Level: Sep 25 2008, 2.81 ft.
Next High Tide: 09/03/2016 09:22 (EDT), 0.28 ft.
NOAA/NOS/CO-OPS 8658163 Wrightsville Beach, NC

Wind Speed / Gusts / Direction

Wind Speed: 13 knots  Gusts: 23 knots  Direction: 290° T

Barometric Pressure

Barometric Pressure: 1005.6 mb
Last Observed Sample: 09/03/2016 05:24 (EDT). Data relative to MHHW

Observed: -1.79 ft. Predicted: -2.56 ft. Residual: 0.77 ft.

Historical Maximum Water Level: Sep 14 2005, 3.01 ft.

Next High Tide: 09/03/2016 09:51 (EDT), 0.14 ft.

Last Observed Sample: 09/03/2016 05:24 (EDT)

Wind Speed: 5 knots Gusts: 11 knots Direction: 279° T
NOAA/NOS/CO-OPS 8656483 Beaufort, NC
Barometric Pressure

Barometric Pressure: 999.4 mb

NOAA/NOS/CO-OPS 8638863 Chesapeake Bay Bridge Tunnel, VA
Preliminary Water Level, relative to Mean Higher High Water (MHHW)

Last Observed Sample: 09/03/2016 05:24 (EDT)
Data relative to MHHW

Observed: 0.28 ft. Predicted: -2.40 ft. Residual: 2.68 ft.
Historical Maximum Water Level: Nov 12 2009, 4.66 ft.
Next High Tide: 09/03/2016 10:18 (EDT), 0.16 ft.
NOAA/NOS/CO-OPS 8638863 Chesapeake Bay Bridge Tunnel, VA

Wind Speed / Gusts / Direction

Last Observed Sample: 09/03/2016 05:24 (EDT)
Wind Speed: 35 knots Gusts: 42 knots Direction: 26° T

NOAA/NOS/CO-OPS 8631044 Wachapreague, VA

Last Observed Sample: 09/03/2016 05:24 (EDT)
Data relative to MHHW
Next High Tide: 09/03/2016 10:36 (EDT), 0.17 ft.
NOAA/NOS/CO-OPS 8631044 Wachapreague, VA

Wind Speed / Gusts / Direction

Last Observed Sample: 09/03/2016 05:24 (EDT)
Wind Speed: 28 knots Gusts: 39 knots Direction: 45° T

NOAA/NOS/CO-OPS 8661070 Springmaid Pier, SC

Last Observed Sample: 09/03/2016 05:24 (EDT)
Data relative to MHHW
Observed: -5.42 ft. Predicted: -4.08 ft. Residual: -1.34 ft.
Historical Maximum Water Level: Jan 1 1987, 3.65 ft.
Next High Tide: 09/03/2016 09:32 (EDT) -0.00 ft.
NOAA/NOS/CO-OPS 8661070 Springmaid Pier, SC
Last Observed Sample: 09/03/2016 05:24 (EDT)
Wind Speed: 11 knots Gusts: 16 knots Direction: 274° T

Barometric Pressure

Last Observed Sample: 09/03/2016 05:24 (EDT)
Barometric Pressure: 1011.5 mb
NOAA/NOS/CO-OPS 8665530 Charleston, SC

Preliminary Water Level, relative to Mean Higher High Water (MHHW)

Height in Feet (MHHW)

Last Observed Sample: 09/03/2016 05:24 (EDT). Data relative to MHHW


Historical Maximum Water Level: Sep 21 1989, 6.76 ft.

Next High Tide: 09/03/2016 10:03 (EDT), -0.03 ft.

NOAA/NOS/CO-OPS 8665530 Charleston, SC

Wind Speed / Gusts / Direction

Last Observed Sample: 09/03/2016 05:24 (EDT)

Wind Speed: 7 knots Gusts: 12 knots Direction: 309° T
NOAA/NOS/CO-OPS 8665530 Charleston, SC

Barometric Pressure:

NOAA/NOS/CO-OPS 8670870 Fort Pulaski, GA

Last Observed Sample: 09/03/2016 05:24 (EDT)
Data relative to MHHW


Next High Tide: 09/03/2016 10:08 (EDT), -0.07 ft.
**Wind Speed / Gusts / Direction**

- **Wind Speed:** 6 knots
- **Gusts:** 7 knots
- **Direction:** 343° T

**Barometric Pressure**

- **Barometric Pressure:** 1015.5 mb
NOAA/NOS/CO-OPS 8720030 Fernandina Beach, FL

Last Observed Sample: 09/03/2016 05:30 (EDT). Data relative to MHHW
Historical Maximum Water Level: Oct 2 1898, 6.94 ft.
Next High Tide: 09/03/2016 10:59 (EDT), -0.04 ft.

Wind Speed: 4 knots  Gusts: 6 knots  Direction: 339° T
NOAA/NOS/CO-OPS 8720030 Fernandina Beach, FL
Barometric Pressure

Barometric Pressure: 1015.1 mb
<table>
<thead>
<tr>
<th>Station ID</th>
<th>Station Name</th>
<th>Date/Time</th>
<th>Observed Water Level</th>
<th>Predicted Tide</th>
<th>Residual Water Level</th>
<th>24 Hour Maximum Storm Tide</th>
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<tbody>
<tr>
<td>8651370</td>
<td>Duck, NC</td>
<td>09/03/2016 05:24 (EDT)</td>
<td>-0.13 ft</td>
<td>-2.69 ft</td>
<td>2.56 ft</td>
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<td>0.41 ft</td>
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