Storm Analysis

As of 08/29/2017 0600 EDT, water levels along the East coast from South Carolina to Chesapeake Bay remain elevated at a range between 1.0 and 2.3 feet above normal tide levels. Water levels are rising steadily within the Chesapeake Bay ahead of the storm.
The strongest winds being observed are at Chesapeake Bay Bridge Tunnel, VA with winds of 30 kts and gusts between 35 and 40 kts. Elsewhere, winds are generally 10-20 kts with slightly higher gusts. Barometric pressure is falling out in front of the storm.

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 real-time and historical inundation information for select stations affected by this storm, please see Coastal Inundation Dashboard.

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: PFF

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SELECT NATIONAL HURRICANE CENTER ADVISORY INFORMATION:

Potential Tropical Cyclone Ten Advisory Number 7
NWS National Hurricane Center Miami FL AL102017
500 AM EDT Tue Aug 29 2017

...DISTURBANCE LOCATED NEAR THE SOUTH CAROLINA AND NORTH CAROLINA COASTAL BORDER...

SUMMARY OF 500 AM EDT...0900 UTC...INFORMATION

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LOCATION...33.5N 78.5W
ABOUT 95 MI...150 KM ENE OF CHARLESTON SOUTH CAROLINA
ABOUT 65 MI...100 KM SW OF WILMINGTON NORTH CAROLINA
MAXIMUM SUSTAINED WINDS...40 MPH...65 KM/H
PRESENT MOVEMENT...NE OR 45 DEGREES AT 12 MPH...19 KM/H
MINIMUM CENTRAL PRESSURE...1006 MB...29.71 INCHES

WATCHES AND WARNINGS

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CHANGES WITH THIS ADVISORY:

A Tropical Storm Watch has been discontinued from South Santee River to Little River Inlet.

SUMMARY OF WATCHES AND WARNINGS IN EFFECT:

A Tropical Storm Warning is in effect for...
* North of Surf City to Duck
* Albemarle Sound
* Pamlico Sound

A Tropical Storm Watch is in effect for...
* Surf City to Little River Inlet

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A Tropical Storm Warning means that tropical storm conditions are expected somewhere within the warning area later today.

A Tropical Storm Watch means that tropical storm conditions are possible within the watch area later this morning.

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 (0900 UTC), the disturbance was centered near latitude 33.5 North, longitude 78.5 West. The system is moving toward the northeast near 12 mph (19 km/h), and is anticipated to turn toward the east-northeast and accelerate during the next couple of days. The expected track will take the system along the North Carolina coast today before moving out to sea tonight.

Maximum sustained winds remain near 40 mph (65 km/h) with higher gusts. The disturbance is not expected to change much in strength today and the chances for the system to become a tropical cyclone appear to be decreasing. Regardless of whether or not this system becomes a tropical cyclone, tropical-storm-force winds and heavy rains are expected over portions of North Carolina later today.

* Formation chance through 48 hours...medium...50 percent
* Formation chance through 5 days...medium...50 percent

Tropical-storm-force winds extend outward up to 105 miles (165 km) from the center.

The estimated minimum central pressure is 1006 mb (29.71 inches).

HAZARDS AFFECTING LAND
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WIND: Tropical storm conditions are expected within the warning area this afternoon and tropical storm conditions are possible in the watch area later this morning.

RAINFALL: The system is expected to produce total rain accumulations of 1 to 3 inches with isolated amounts of 5 inches along northeastern North Carolina and southeast Virginia coasts into the Delmarva through Wednesday. The heavier rains may result in some flooding concerns along coastal areas.

SURF: Swells generated by this disturbance will affect portions of the North Carolina and Virginia coasts during the next day or so, creating dangerous surf and rip current conditions. Please consult products from your local weather office.

TORNADOES: A brief tornado is possible through midday along the North Carolina coast.

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 Landsea
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: Springmaid Pier - Water Level, Springmaid Pier - Barometric, Wrightsville Beach - Water Level, Wrightsville Beach - Winds, Wrightsville Beach - Barometric, Wilmington - Water Level, Beaufort - Water Level, Beaufort - Winds, Beaufort - Barometric, USCG Station Hatteras - Water Level, USCG Station Hatteras - Winds, Oregon Inlet Marina - Water Level, Oregon Inlet Marina - Winds, Duck - Water Level, Duck - Winds, Duck - Barometric, Chesapeake Bay Bridge Tunnel - Water Level, Chesapeake Bay Bridge Tunnel - Winds, Sewells Point - Water Level, Kiptopeke - Water Level, Kiptopeke - Winds, Lewisetta - Water Level, Lewisetta - Winds, Windmill Point - Water Level, Wachapreague - Water Level, Wachapreague - Winds
Last Observed Sample: 08/29/2017 05:48 (EDT). Data relative to MHHW
  Historical Maximum Water Level: Jan 1 1987, 3.65 ft.
  Next High Tide: 08/29/2017 14:22 (EDT), -0.47 ft.
Last Observed Sample: 08/29/2017 05:48 (EDT). Data relative to MHHW

- Observed: -1.88 ft.
- Predicted: -2.91 ft.
- Residual: 1.03 ft.

Historical Maximum Water Level: Sep 25 2008, 2.81 ft.

Next High Tide: 08/29/2017 14:03 (EDT), -0.12 ft.

Last Observed Sample: 08/29/2017 05:48 (EDT)

Wind Speed: 16 knots  
Gusts: 20 knots  
Direction: 111° T
NOAA/NOS/CO-OPS 8658163 Wrightsville Beach, NC

Barometric Pressure

Last Observed Sample: 08/29/2017 05:48 (EDT)
Barometric Pressure: 1007.0 mb

NOAA/NOS/CO-OPS 8658120 Wilmington, NC

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

Last Observed Sample: 08/29/2017 05:48 (EDT). Data relative to MHHW
Observed: -0.09 ft. Predicted: -1.63 ft. Residual: 1.54 ft.
Historical Maximum Water Level: Oct 8 2016, 3.48 ft.
Next High Tide: 08/29/2017 16:37 (EDT), -0.33 ft.
NOAA/NOS/CO-OPS 8656483 Beaufort, NC

Last Observed Sample: 08/29/2017 05:48 (EDT). Data relative to MHHW
Observed: -0.91 ft. Predicted: -2.18 ft. Residual: 1.27 ft.
Historical Maximum Water Level: Sep 14 2005, 3.01 ft.
Next High Tide: 08/29/2017 14:29 (EDT), -0.08 ft.

NOAA/NOS/CO-OPS 8656483 Beaufort, NC

Wind Speed / Gusts / Direction

Last Observed Sample: 08/29/2017 05:48 (EDT)
Wind Speed: 5 knots Gusts: 8 knots Direction: 63° T
NOAA/NOS/CO-OPS 8656483 Beaufort, NC

Barometric Pressure

Last Observed Sample: 08/29/2017 05:48 (EDT)
Barometric Pressure: 1010.0 mb

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

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

Last Observed Sample: 08/29/2017 05:48 (EDT). Data relative to MHHW
Observed: 0.73 ft. Predicted: -0.21 ft. Residual: 0.94 ft.
Next High Tide: 08/29/2017 15:18 (EDT), -0.13 ft.
NOAA/NOS/CO-OPS 8654467 USCG Station Hatteras, NC

Wind Speed / Gusts / Direction

Last Observed Sample: 08/29/2017 05:48 (EDT)
Wind Speed: 5 knots  Gusts: 6 knots  Direction: 233° T

NOAA/NOS/CO-OPS 8652587 Oregon Inlet Marina, NC

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

Last Observed Sample: 08/29/2017 05:42 (EDT). Data relative to MHHW
Observed: 0.57 ft.  Predicted: -0.54 ft.  Residual: 1.11 ft.
Historical Maximum Water Level: Aug 28 2011, 6.32 ft.
Next High Tide: 08/29/2017 14:57 (EDT), -0.11 ft.
NOAA/NOS/CO-OPS 8652587 Oregon Inlet Marina, NC

Last Observed Sample: 08/29/2017 05:42 (EDT)
Wind Speed: 8 knots Gusts: 13 knots Direction: 111° T

NOAA/NOS/CO-OPS 8651370 Duck, NC

Last Observed Sample: 08/29/2017 05:48 (EDT). Data relative to MHHW
Historical Maximum Water Level: Sep 18 2003, 4.13 ft.
Next High Tide: 08/29/2017 14:04 (EDT), -0.28 ft.
NOAA/NOS/CO-OPS 8651370 Duck, NC

Wind Speed / Gusts / Direction

Wind Speed: 18 knots  Gusts: 21 knots  Direction: 130° T

Barometric Pressure

Barometric Pressure: 1012.0 mb
Preliminary Water Level, relative to Mean Higher High Water (MHHW)

Last Observed Sample: 08/29/2017 05:54 (EDT). Data relative to MHHW
Observed: 0.31 ft. Predicted: -1.60 ft. Residual: 1.91 ft.
Historical Maximum Water Level: Nov 12 2009, 4.66 ft.
Next High Tide: 08/29/2017 14:49 (EDT), -0.17 ft.

Wind Speed / Gusts / Direction

Last Observed Sample: 08/29/2017 05:54 (EDT)
Wind Speed: 31 knots Gusts: 36 knots Direction: 62° T
NOAA/NOS/CO-OPS 8638610 Sewells Point, VA

Last Observed Sample: 08/29/2017 05:54 (EDT). Data relative to MHHW
Historical Maximum Water Level: Aug 23 1933, 5.26 ft.
Next High Tide: 08/29/2017 15:49 (EDT), -0.18 ft.

NOAA/NOS/CO-OPS 8632200 Kiptopeke, VA

Last Observed Sample: 08/29/2017 05:48 (EDT). Data relative to MHHW
Observed: 0.30 ft. Predicted: -1.39 ft. Residual: 1.69 ft.
Historical Maximum Water Level: Mar 8 1962, 4.13 ft.
Next High Tide: 08/29/2017 15:20 (EDT), -0.17 ft.
NOAA/NOS/CO-OPS 8632200 Kiptopeke, VA

Wind Speed / Gusts / Direction

Last Observed Sample: 08/29/2017 05:48 (EDT)
Wind Speed: 10 knots  Gusts: 18 knots  Direction: 72° T

NOAA/NOS/CO-OPS 8635750 Lewisetta, VA

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

Last Observed Sample: 08/29/2017 05:54 (EDT). Data relative to MHHW
Observed: 1.36 ft.  Predicted: -0.25 ft.  Residual: 1.61 ft.
Historical Maximum Water Level: Sep 1 2006, 4.14 ft.
Next High Tide: 08/29/2017 07:55 (EDT), -0.07 ft.
NOAA/NOS/CO-OPS 8635750 Lewisetta, VA

Wind Speed / Gusts / Direction

Last Observed Sample: 08/29/2017 05:54 (EDT)
Wind Speed: 12 knots Gusts: 19 knots Direction: 58° T

NOAA/NOS/CO-OPS 8636580 Windmill Point, VA

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

Last Observed Sample: 08/29/2017 05:48 (EDT). Data relative to MHHW
Observed: 1.45 ft. Predicted: -0.08 ft. Residual: 1.53 ft.
Historical Maximum Water Level: Sep 1 2006, 3.74 ft.
Next High Tide: 08/29/2017 17:44 (EDT), 0.11 ft.
Last Observed Sample: 08/29/2017 05:48 (EDT). Data relative to MHHW
- Next High Tide: 08/29/2017 15:08 (EDT), -0.18 ft.

Last Observed Sample: 08/29/2017 05:48 (EDT)
- Wind Speed: 14 knots  Gusts: 19 knots  Direction: 52° T
## Latest Water Level Observations on MHHW

<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>
</tr>
</thead>
<tbody>
<tr>
<td>8661070</td>
<td>Springmaid Pier, SC</td>
<td>08/29/2017 05:48 (EDT)</td>
<td>-2.83 ft</td>
<td>-3.82 ft</td>
<td>0.99 ft</td>
<td>0.92 ft</td>
</tr>
<tr>
<td>8658163</td>
<td>Wrightsville Beach, NC</td>
<td>08/29/2017 05:48 (EDT)</td>
<td>-1.88 ft</td>
<td>-2.91 ft</td>
<td>1.03 ft</td>
<td>1.23 ft</td>
</tr>
<tr>
<td>8658120</td>
<td>Wilmington, NC</td>
<td>08/29/2017 05:48 (EDT)</td>
<td>-0.09 ft</td>
<td>-1.63 ft</td>
<td>1.54 ft</td>
<td>0.60 ft</td>
</tr>
<tr>
<td>8656483</td>
<td>Beaufort, NC</td>
<td>08/29/2017 05:48 (EDT)</td>
<td>-0.91 ft</td>
<td>-2.18 ft</td>
<td>1.27 ft</td>
<td>0.89 ft</td>
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<tr>
<td>8654467</td>
<td>USCG Station Hatteras, NC</td>
<td>08/29/2017 05:48 (EDT)</td>
<td>0.73 ft</td>
<td>-0.21 ft</td>
<td>0.94 ft</td>
<td>0.91 ft</td>
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<tr>
<td>8652587</td>
<td>Oregon Inlet Marina, NC</td>
<td>08/29/2017 05:42 (EDT)</td>
<td>0.57 ft</td>
<td>-0.54 ft</td>
<td>1.11 ft</td>
<td>0.69 ft</td>
</tr>
<tr>
<td>8651370</td>
<td>Duck, NC</td>
<td>08/29/2017 05:48 (EDT)</td>
<td>-1.10 ft</td>
<td>-2.51 ft</td>
<td>1.41 ft</td>
<td>1.04 ft</td>
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<tr>
<td>8638863</td>
<td>Chesapeake Bay Bridge Tunnel, VA</td>
<td>08/29/2017 05:54 (EDT)</td>
<td>0.31 ft</td>
<td>-1.60 ft</td>
<td>1.91 ft</td>
<td>1.29 ft</td>
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<tr>
<td>8638610</td>
<td>Sewells Point, VA</td>
<td>08/29/2017 05:54 (EDT)</td>
<td>1.21 ft</td>
<td>-1.19 ft</td>
<td>2.40 ft</td>
<td>1.54 ft</td>
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<tr>
<td>8632200</td>
<td>Kiptopeke, VA</td>
<td>08/29/2017 05:48 (EDT)</td>
<td>0.30 ft</td>
<td>-1.39 ft</td>
<td>1.69 ft</td>
<td>1.09 ft</td>
</tr>
<tr>
<td>8635750</td>
<td>Lewisetta, VA</td>
<td>08/29/2017 05:54 (EDT)</td>
<td>1.36 ft</td>
<td>-0.25 ft</td>
<td>1.61 ft</td>
<td>1.47 ft</td>
</tr>
<tr>
<td>8636580</td>
<td>Windmill Point, VA</td>
<td>08/29/2017 05:48 (EDT)</td>
<td>1.45 ft</td>
<td>-0.08 ft</td>
<td>1.53 ft</td>
<td>1.45 ft</td>
</tr>
<tr>
<td>8631044</td>
<td>Wachapreague, VA</td>
<td>08/29/2017 05:48 (EDT)</td>
<td>-0.86 ft</td>
<td>-2.62 ft</td>
<td>1.76 ft</td>
<td>1.13 ft</td>
</tr>
</tbody>
</table>

Center for Operational Oceanographic Products & Services (CO-OPS) | National Ocean Service (NOS) | National Oceanic and Atmospheric Administration | U.S. Department of Commerce