Storm Analysis

As of 09/16/2018 06:00 EDT, Florence has been downgraded to a tropical depression and all watches and warnings have been discontinued. However, water levels along the North and South Carolina coast continue to be impacted by Florence. Tidal levels in Wilmington, NC continue to be about 3 feet above normal. Most other stations from Duck, NC to the Chesapeake Bay entrance are between 1 and 1.7 feet above normal tidal levels. Water levels near Charleston, SC and Springmaid Pier are rising again to about 2 feet above normal.
Winds around the region have decreased to 10-20 knots with the highest winds being recorded at Wrightsville Beach, NC with gusts near 30 knots. Barometric pressure continues rising around the region.

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 visit 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 visit the Storm QuickLook Homepage.

Analyst: LAH

Select National Hurricane Center Advisory:BULLETIN
Tropical Depression Florence Advisory Number 68
NWS National Hurricane Center Miami FL
500 AM EDT Sun Sep 16 2018

...FLORENCE WEAKENS TO A DEPRESSION BUT FLASH FLOODING AND MAJOR RIVER FLOODING WILL CONTINUE OVER A SIGNIFICANT PORTION OF THE CAROLINAS...

SUMMARY OF 500 AM EDT...0900 UTC...INFORMATION
-----------------------------------------------
LOCATION...33.8N 81.4W
ABOUT 20 MI SW OF COLUMBIA SOUTH CAROLINA
MAXIMUM SUSTAINED WINDS...35 MPH
PRESENT MOVEMENT...W OR 280 DEGREES AT 8 MPH
MINIMUM CENTRAL PRESSURE...1000 MB...29.53 INCHES

WATCHES AND WARNINGS
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CHANGES WITH THIS ADVISORY:
The Tropical Storm Warning from South Santee River South Carolina to Surf City North Carolina is discontinued.

SUMMARY OF WATCHES AND WARNINGS IN EFFECT:
There are no coastal watches or warnings in effect.

Interests in the southeastern and mid-Atlantic states should monitor the progress of Florence due to the heavy rainfall threat.

DISCUSSION AND OUTLOOK
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At 500 AM EDT (0900 UTC), the center of Tropical Depression Florence was located near latitude 33.8 North, longitude 81.4 West. The depression is moving toward the west near 8 mph (13 km/h). A turn toward the northwest with an increase in forward speed is expected today, followed by a turn toward the north and northeast with an additional increase in forward speed on Monday. On the forecast track, Florence's center will move across the western Carolinas today and then recurve over the Ohio Valley and Northeast U.S. Monday and Tuesday.

Maximum sustained winds have decreased to near 35 mph (55 km/h) with higher gusts. Continued gradual weakening is forecast during the next couple of days.

The estimated minimum central pressure is 1000 mb (29.53 inches).

HAZARDS AFFECTING LAND
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RAINFALL: Florence is expected to produce heavy and excessive rainfall in the following areas...

Central and western North Carolina into far southwest Virginia...

An additional 5 to 10 inches, with storm total accumulations of 15 to 20 inches in western North Carolina. These rainfall amounts will produce catastrophic flash flooding, prolonged significant river flooding, and an elevated risk for landslides in western North Carolina and far southwest Virginia.

Southern North Carolina into Northern South Carolina...

An additional 4 to 6 inches, isolated 8 inches. This rainfall will result in additional flash flooding while also exacerbating the river flooding. Storm total accumulations of 30 to 40 inches in southeast North Carolina.

West-central Virginia, north of Roanoke and west of Charlottesville...

2 to 4 inches, isolated 6 inches. This rainfall will result in flash flooding and potentially lead to some river flooding.

TORNADOES: A few tornadoes remain possible across North Carolina and eastern South Carolina today and tonight.

SURF: Swells generated by Florence are affecting Bermuda, portions of the U.S. East Coast, and the northwestern and central Bahamas. These swells are likely to cause life-threatening surf and rip current conditions. Please consult products from your local weather office.

NEXT ADVISORY
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This is the last advisory issued by the National Hurricane Center on Florence. Future information on Florence can be found in Public Advisories issued by the Weather Prediction Center beginning at 11 AM EDT, under AWIPS header TCPAT1, WMO header WTNT31 KWNH, and on the web at https://www.wpc.ncep.noaa.gov.

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Forecaster Pasch

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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: Wilmington - Water Level, Wilmington - Barometric, Wrightsville Beach - Water Level, Wrightsville Beach - Winds, Wrightsville Beach - Barometric, Beaufort, Duke Marine Lab - Water Level, Beaufort, Duke Marine Lab - Winds, Beaufort, Duke Marine Lab - 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, Duck - Water Level, Duck - Winds, Duck - Barometric, CBBT, Chesapeake Channel - Water Level, CBBT, Chesapeake Channel - Winds, CBBT, Chesapeake Channel - Barometric, Springmaid Pier - Water Level, Springmaid Pier - Barometric, Charleston, Cooper River Entrance - Water Level, Charleston, Cooper River Entrance - Winds, Charleston, Cooper River Entrance - Barometric, Fort Pulaski - Water Level, Fort Pulaski - Winds, Fort Pulaski - Barometric
Last Observed Sample: 09/16/2018 06:54 (EDT). Data relative to MHHW
Observed: 0.90 ft. Predicted: -2.93 ft. Residual: 3.83 ft.
Historical Maximum Water Level: Oct 8 2016, 3.48 ft.
Next High Tide: 09/16/2018 16:00 (EDT), -0.06 ft.

Last Observed Sample: 09/16/2018 06:54 (EDT)
Barometric Pressure: 1012.8 mb
Preliminary Water Level, relative to Mean Higher High Water (MHHW)

Last Observed Sample: 09/16/2018 06:54 (EDT). Data relative to MHHW

Observed: -2.72 ft. Predicted: -3.50 ft. Residual: 0.78 ft.
Historical Maximum Water Level: Oct 4 2015, 2.97 ft.
Next High Tide: 09/16/2018 13:28 (EDT), 0.20 ft.

Wind Speed: 22 knots Gusts: 28 knots Direction: 106° T
NOAA/NOS/CO-OPS 8658163 Wrightsville Beach, NC

Barometric Pressure

Last Observed Sample: 09/16/2018 06:54 (EDT)
Barometric Pressure: 1012.8 mb

NOAA/NOS/CO-OPS 8656483 Beaufort, Duke Marine Lab, NC

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

Last Observed Sample: 09/16/2018 06:54 (EDT). Data relative to MHHW
Historical Maximum Water Level: Sep 19 1955, 3.39 ft.
Next High Tide: 09/16/2018 13:53 (EDT), 0.18 ft.
Last Observed Sample: 09/16/2018 06:54 (EDT)
Wind Speed: 14 knots  Gusts: 17 knots  Direction: 106° T

Barometric Pressure

Last Observed Sample: 09/16/2018 06:54 (EDT)
Barometric Pressure: 1015.5 mb
Last Observed Sample: 09/16/2018 07:06 (EDT). Data relative to MHHW
- Next High Tide: 09/16/2018 14:41 (EDT), 0.03 ft.

Last Observed Sample: 09/16/2018 07:06 (EDT)
- Wind Speed: 14 knots  Gusts: 20 knots  Direction: 113° T
NOAA/NOS/CO-OPS 8654467 USCG Station Hatteras, NC

Last Observed Sample: 09/16/2018 07:06 (EDT)
Barometric Pressure: 1016.4 mb

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

Last Observed Sample: 09/16/2018 06:54 (EDT). Data relative to MHHW
Observed: 1.17 ft. Predicted: -0.57 ft. Residual: 1.74 ft.
Historical Maximum Water Level: Aug 28 2011, 6.31 ft.
Next High Tide: 09/16/2018 14:10 (EDT), 0.08 ft.
NOAA/NOS/CO-OPS 8652587 Oregon Inlet Marina, NC

Wind Speed / Gusts / Direction

Last Observed Sample: 09/16/2018 06:54 (EDT)
Wind Speed: 10 knots Gusts: 13 knots Direction: 84° T

Barometric Pressure

Last Observed Sample: 09/16/2018 06:54 (EDT)
Barometric Pressure: 1017.0 mb
Last Observed Sample: 09/16/2018 07:00 (EDT). Data relative to MHHW
Historical Maximum Water Level: Sep 18 2003, 4.13 ft.
Next High Tide: 09/16/2018 13:29 (EDT), -0.03 ft.

Wind Speed: 13 knots Gusts: 15 knots Direction: 75° T
NOAA/NOS/CO-OPS 8651370 Duck, NC

Barometric Pressure

Last Observed Sample: 09/16/2018 07:00 (EDT)
Barometric Pressure: 1017.3 mb

NOAA/NOS/CO-OPS 8638901 CBBT, Chesapeake Channel, VA

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

Last Observed Sample: 09/16/2018 06:54 (EDT). Data relative to MHHW

Historical Maximum Water Level: n/a
Next High Tide: 09/16/2018 14:23 (EDT), -0.07 ft.
NOAA/NOS/CO-OPS 8638901 CBBT, Chesapeake Channel, VA

Wind Speed / Gusts / Direction

Last Observed Sample: 09/16/2018 06:54 (EDT)
Wind Speed: 16 knots  Gusts: 21 knots  Direction: 85° T

Barometric Pressure

Last Observed Sample: 09/16/2018 06:54 (EDT)
Barometric Pressure: 1017.5 mb
Last Observed Sample: 09/16/2018 06:54 (EDT). Data relative to MHHW
Historical Maximum Water Level: Sep 21 1989, 8.77 ft.
Next High Tide: 09/16/2018 13:48 (EDT), -0.10 ft.

Last Observed Sample: 09/16/2018 06:54 (EDT)
Barometric Pressure: 1011.5 mb
Last Observed Sample: 09/16/2018 06:54 (EDT). Data relative to MHHW

- Historical Maximum Water Level: Sep 21 1989, 6.76 ft.
- Next High Tide: 09/16/2018 14:14 (EDT), -0.06 ft.

Last Observed Sample: 09/16/2018 06:54 (EDT)

- Wind Speed: 9 knots  Gusts: 15 knots  Direction: 187° T
NOAA/NOS/CO-OPS 8665530 Charleston, Cooper River Entrance, SC

Last Observed Sample: 09/16/2018 06:54 (EDT)
Barometric Pressure: 1006.3 mb

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

Last Observed Sample: 09/16/2018 06:54 (EDT). Data relative to MHHW
Observed: -5.42 ft. Predicted: -6.03 ft. Residual: 0.61 ft.
Historical Maximum Water Level: Oct 8 2016, 4.94 ft.
Next High Tide: 09/16/2018 14:21 (EDT), -0.21 ft.
NOAA/NOS/CO-OPS 8670870 Fort Pulaski, GA

Wind Speed / Gusts / Direction

Last Observed Sample: 09/16/2018 06:54 (EDT)
Wind Speed: 7 knots Gusts: 11 knots Direction: 232° T

Barometric Pressure

Last Observed Sample: 09/16/2018 06:54 (EDT)
Barometric Pressure: 1006.9 mb
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<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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<td>8658120</td>
<td>Wilmington, NC</td>
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<td>Duck, NC</td>
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Center for Operational Oceanographic Products & Services (CO-OPS) | National Ocean Service (NOS)  
National Oceanic and Atmospheric Administration | U.S. Department of Commerce