Storm Analysis

As of 09/11/2018 06:00 AST, water levels from Charleston, SC to Oregon Inlet, NC are running up to 1 foot above tidal predictions. Water levels north of Oregon Inlet to Ocean City, MD are running 1.0 to 1.5 feet above tidal predictions. The already elevated water levels from Duck to Ocean City are a result of the strong easterly flow from the weekend weather system.
Winds are fairly light along the Mid-Atlantic coast this morning. Barometric Pressure is holding steady or even rising gradually in some areas.

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: CRD

Select National Hurricane Center Advisory Information:

Hurricane Florence Advisory Number 48
NWS National Hurricane Center Miami FL
500 AM AST Tue Sep 11 2018

...HURRICANE AND STORM SURGE WATCHES ISSUED FOR PORTIONS OF THE COASTS OF NORTH AND SOUTH CAROLINA...

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

LOCATION...26.4N 64.1W
ABOUT 410 MI... S OF BERMUDA
ABOUT 975 MI... ESE OF CAPE FEAR NORTH CAROLINA
MAXIMUM SUSTAINED WINDS...140 MPH
PRESENT MOVEMENT...WNW OR 290 DEGREES AT 15 MPH
MINIMUM CENTRAL PRESSURE...944 MB

WATCHES AND WARNINGS

CHANGES WITH THIS ADVISORY:

A Storm Surge Watch has been issued for the east coast of the United States from Edisto Beach, South Carolina northward to the North Carolina-Virginia border, including the Pamlico and Albemarle Sounds.

A Hurricane Watch has been issued for the east coast of the United States from Edisto Beach, South Carolina, northward to the North Carolina-Virginia border, including the Pamlico and Albemarle Sounds.

SUMMARY OF WATCHES AND WARNINGS IN EFFECT:

A Storm Surge Watch is in effect for...
* Edisto Beach South Carolina to the North Carolina-Virginia border
A Hurricane Watch is in effect for...
* Albemarle and Pamlico Sounds, including the Neuse and Pamlico Rivers
* Edisto Beach South Carolina to the North Carolina-Virginia border
* Albemarle and Pamlico Sounds

Interests elsewhere in the southeastern and mid-Atlantic states should monitor the progress of Florence. Additional watches may be required later today.

A Storm Surge Watch means there is a possibility of life-threatening inundation, from rising water moving inland from the coastline, in the indicated locations during the next 48 hours. For a depiction of areas at risk, please see the National Weather Service Storm Surge Watch/Warning Graphic, available at hurricanes.gov.

A Hurricane Watch means that hurricane conditions are possible within the watch area. A watch is typically issued 48 hours before the anticipated first occurrence of tropical-storm-force winds, conditions that make outside preparations difficult or dangerous.

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 OUTLOOK

At 500 AM AST, the center of Hurricane Florence was located near latitude 26.4 North, longitude 64.1 West. Florence is moving toward the west-northwest near 15 mph. A west-northwestward to northwestward motion with a slight increase in forward speed are expected during the next couple of days. On the forecast track, the center of Florence will move over the southwestern Atlantic Ocean between Bermuda and the Bahamas through Wednesday, and approach the coast of North Carolina or South Carolina on Thursday.

Maximum sustained winds are near 140 mph with higher gusts. Florence is a category 4 hurricane on the Saffir-Simpson Hurricane Wind Scale. Some strengthening is expected during the next day or so, and Florence is expected to be an extremely dangerous major hurricane through Thursday night.

Hurricane-force winds extend outward up to 40 miles from the center and tropical-storm-force winds extend outward up to 150 miles.

The estimated minimum central pressure is 944 mb.

HAZARDS AFFECTING LAND

STORM SURGE: The combination of a dangerous storm surge and the tide will cause normally dry areas near the coast to be flooded by rising waters moving inland from the shoreline. The water has the potential to reach the following heights above ground if peak surge occurs at the time of high tide...

Edisto Beach to Murrells Inlet...2-4 ft
Murrells Inlet to Cape Fear...4-6 ft
Cape Fear to Cape Lookout including The Neuse and Pamlico River...6-12 ft
Cape Lookout to Ocracoke Inlet...5-8 ft
Ocracoke Inlet to North Carolina/Virginia Border...3-5 ft
The deepest water will occur along the immediate coast in areas of onshore winds, where the surge will be accompanied by large and destructive waves. Surge-related flooding depends on the relative timing of the surge and the tidal cycle, and can vary greatly over short distances. For information specific to your area, please see products issued by your local National Weather Service forecast office.

RAINFALL: Florence is expected to produce total rainfall accumulations of 15 to 20 inches with isolated maxima to 30 inches near Florence's track over portions of North Carolina, Virginia, and northern South Carolina through Saturday. This rainfall may produce life-threatening flash flooding.

WIND: Hurricane conditions are possible within the watch area by late Thursday or Thursday night, with tropical storm conditions possible by Thursday morning.

SURF: Swells generated by Florence are affecting Bermuda and portions of the U.S. East Coast. 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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Next intermediate advisory at 800 AM AST.
Next complete advisory at 1100 AM AST.

Forecaster Brown

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.
Last Observed Sample: 09/11/2018 06:24 (EDT). Data relative to MHHW

- Observed: -2.35 ft.
- Predicted: -3.03 ft.
- Residual: 0.68 ft.

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

Next High Tide: 09/11/2018 09:57 (EDT), 0.72 ft.

Last Observed Sample: 09/11/2018 06:24 (EDT)

Wind Speed: 3 knots
Gusts: 4 knots
Direction: 36° T
NOAA/NOS/CO-OPS 8665530 Charleston, Cooper River Entrance, SC

Last Observed Sample: 09/11/2018 06:24 (EDT)
Barometric Pressure: 1015.9 mb

NOAA/NOS/CO-OPS 8662245 Oyster Landing (N Inlet Estuary), SC

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

Last Observed Sample: 09/11/2018 06:24 (EDT). Data relative to MHHW
Observed: -2.73 ft. Predicted: -3.49 ft. Residual: 0.76 ft.
Historical Maximum Water Level: Oct 8 2016, 4.64 ft.
Next High Tide: 09/11/2018 10:47 (EDT), 0.40 ft.
NOAA/NOS/CO-OPS 8658163 Wrightsville Beach, NC

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

- Last Observed Sample: 09/11/2018 06:36 (EDT)
- Data relative to MHHW
- Observed: -0.39 ft.
- Predicted: -1.15 ft.
- Residual: 0.76 ft.
- Historical Maximum Water Level: Oct 4 2015, 2.97 ft.
- Next High Tide: 09/11/2018 09:07 (EDT), 0.93 ft.

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

**Wind Speed / Gusts / Direction**

- Last Observed Sample: 09/11/2018 06:36 (EDT)
- Wind Speed: 5 knots
- Gusts: 5 knots
- Direction: 3° T
NOAA/NOS/CO-OPS 8658163 Wrightsville Beach, NC

Last Observed Sample: 09/11/2018 06:36 (EDT)
Barometric Pressure: 1017.0 mb

NOAA/NOS/CO-OPS 8658120 Wilmington, NC

Last Observed Sample: 09/11/2018 06:24 (EDT)
Data relative to MHHW
Observed: -4.18 ft. Predicted: -4.86 ft. Residual: 0.68 ft.
Historical Maximum Water Level: Oct 8 2016, 3.48 ft.
Next High Tide: 09/11/2018 11:40 (EDT), 0.44 ft.
NOAA/NOS/CO-OPS 8658120 Wilmington, NC

Barometric Pressure

Last Observed Sample: 09/11/2018 06:24 (EDT)
Barometric Pressure: 1016.5 mb

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

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

Last Observed Sample: 09/11/2018 06:24 (EDT). Data relative to MHHW
Observed: -0.82 ft. Predicted: -1.65 ft. Residual: 0.83 ft.
Historical Maximum Water Level: Sep 19 1955, 3.39 ft.
Next High Tide: 09/11/2018 09:42 (EDT), 0.63 ft.
NOAA/NOS/CO-OPS 8656483 Beaufort, Duke Marine Lab, NC

Wind Speed / Gusts / Direction

- Last Observed Sample: 09/11/2018 06:24 (EDT)
- Wind Speed: 3 knots
- Gusts: 4 knots
- Direction: 50° T

Barometric Pressure

- Last Observed Sample: 09/11/2018 06:24 (EDT)
- Barometric Pressure: 1017.4 mb
NOAA/NOS/CO-OPS 8654467 USCG Station Hatteras, NC

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

Last Observed Sample: 09/11/2018 06:36 (EDT). Data relative to MHHW

Observed: 0.51 ft. Predicted: -0.12 ft. Residual: 0.63 ft.

Historical Maximum Water Level: Oct 9 2016, 5.76 ft.

Next High Tide: 09/11/2018 10:21 (EDT), 0.15 ft.

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

Wind Speed / Gusts / Direction

Last Observed Sample: 09/11/2018 06:36 (EDT)

Wind Speed: 3 knots Gusts: 4 knots Direction: 151° T
NOAA/NOS/CO-OPS 8654467 USCG Station Hatteras, NC

Barometric Pressure

Last Observed Sample: 09/11/2018 06:36 (EDT)
Barometric Pressure: 1017.2 mb

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

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

Last Observed Sample: 09/11/2018 06:24 (EDT). Data relative to MHHW
Observed: 0.52 ft. Predicted: -0.45 ft. Residual: 0.97 ft.
Historical Maximum Water Level: Aug 28 2011, 6.31 ft.
Next High Tide: 09/11/2018 09:47 (EDT), 0.27 ft.
NOAA/NOS/CO-OPS 8652587 Oregon Inlet Marina, NC

Wind Speed / Gusts / Direction

Last Observed Sample: 09/11/2018 06:24 (EDT)

Wind Speed: 4 knots Gusts: 5 knots Direction: 141° T

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

Barometric Pressure

Last Observed Sample: 09/11/2018 06:24 (EDT)

Barometric Pressure: 1017.2 mb
Last Observed Sample: 09/11/2018 06:24 (EDT). Data relative to MHHW.

- Observed: -0.34 ft.  Predicted: -1.44 ft.  Residual: 1.10 ft.
- Historical Maximum Water Level: Sep 18 2003, 4.13 ft.
- Next High Tide: 09/11/2018 09:15 (EDT), 0.69 ft.

Last Observed Sample: 09/11/2018 06:24 (EDT)

- Wind Speed: 2 knots
- Gusts: 2 knots
- Direction: 159° T
NOAA/NOS/CO-OPS 8651370 Duck, NC

Barometric Pressure

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<th>Pressure (mb)</th>
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Last Observed Sample: 09/11/2018 06:24 (EDT)
Barometric Pressure: 1017.2 mb

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

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

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Last Observed Sample: 09/11/2018 06:24 (EDT). Data relative to MHHW
Observed: -0.32 ft  Predicted: -1.83 ft  Residual: 1.51 ft.
Historical Maximum Water Level: n/a
Next High Tide: 09/11/2018 10:08 (EDT), 0.57 ft.
NOAA/NOS/CO-OPS 8638901 CBBT, Chesapeake Channel, VA

Wind Speed / Gusts / Direction

Last Observed Sample: 09/11/2018 06:24 (EDT)
Wind Speed: 10 knots Gusts: 11 knots Direction: 243° T

Barometric Pressure

Last Observed Sample: 09/11/2018 06:24 (EDT)
Barometric Pressure: 1016.5 mb
Last Observed Sample: 09/11/2018 06:24 (EDT). Data relative to MHHW
Observed: 0.49 ft. Predicted: -0.85 ft. Residual: 1.34 ft.
Next High Tide: 09/11/2018 09:49 (EDT), 0.46 ft.

Last Observed Sample: 09/11/2018 06:24 (EDT)
Wind Speed: 5 knots Gusts: 6 knots Direction: 137° T
NOAA/NOS/CO-OPS 8570283 Ocean City Inlet, MD

Barometric Pressure

Last Observed Sample: 09/11/2018 06:24 (EDT)
Barometric Pressure: 1018.2 mb
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<td>8662245</td>
<td>Oyster Landing (N Inlet Estuary), SC</td>
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