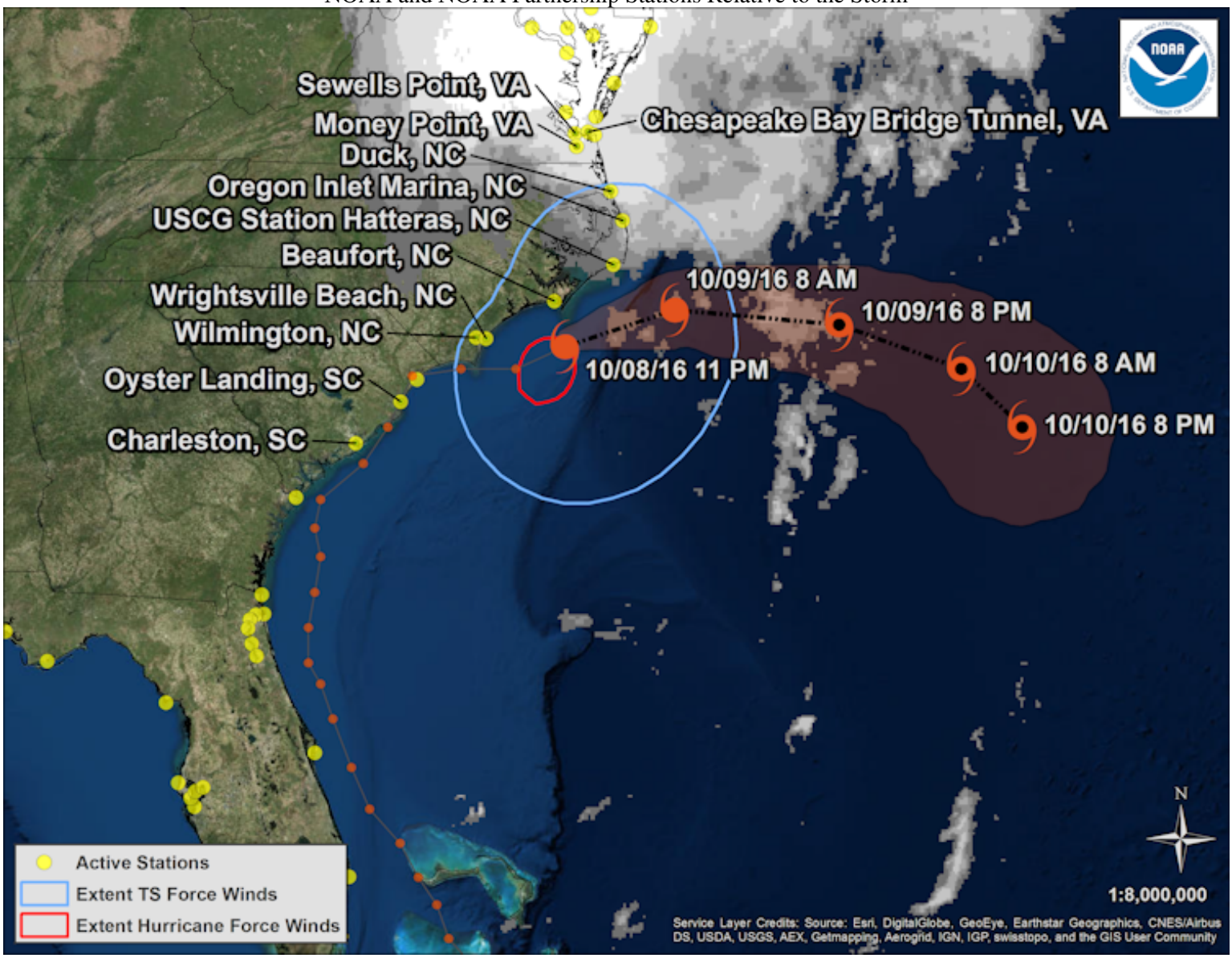
Hurricane MATTHEW QuickLook
Posted: 00:00 EDT 10/09/2016

NOAA and NOAA Partnership Stations Relative to the Storm



Storm Analysis

As of 10/09/2016 00:00 EDT, water levels from Cape Hatteras, NC to the Hampton Roads, VA area, including Oregon Inlet Marina within Pamlico Sound, NC are rising. With high tide approaching over the early morning hours across this region, the potential remains for water levels to remain significantly elevated. Water levels from Beaufort to Duck, NC range from 1 to just above 2 feet above normal tide levels. Within the Chesapeake Bay Entrance / Hampton Roads area, water levels range from 2.5 to 3.25 feet above tidal predictions. Water levels across South

Carolina and in the Wilmington, NC area have returned to normal tide levels.

Winds from Cape Hatteras, NC to southern Chesapeake Bay range from 20 to 40 kntos with higher gusts. Winds remain high at Wrightsville Beach, NC where gusts over 60 knots have been measured over the past few hours. Barometric pressure is falling from USCG Hatteras, NC northward.

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: PFF

NATIONAL HURRICANE CENTER PUBLIC ADVISORY:

HURRICANE MATTHEW ADVISORY NUMBER 44
NWS NATIONAL HURRICANE CENTER MIAMI FL
1100 PM EDT SAT OCT 08 2016

...STRONG WINDS POSSIBLE OVER EASTERN NORTH CAROLINA LATER TONIGHT AS MATTHEW MOVES EAST-NORTHEASTWARD...
...RECORD-BREAKING FLOODING OCCURRING OVER PORTIONS OF EASTERN NORTH CAROLINA...

SUMMARY OF 1100 PM EDT...0300 UTC...INFORMATION

LOCATION...34.1N 76.5W
ABOUT 35 MI...55 KM S OF CAPE LOOKOUT NORTH CAROLINA
MAXIMUM SUSTAINED WINDS...75 MPH...120 KM/H
PRESENT MOVEMENT...ENE OR 70 DEGREES AT 14 MPH...22 KM/H
MINIMUM CENTRAL PRESSURE...982 MB...29.00 INCHES

WATCHES AND WARNINGS

CHANGES WITH THIS ADVISORY:

A Hurricane Watch has been issued for the North Carolina coast north of Cape Lookout to Duck, including the Pamlico and Albemarle Sounds.

All warnings are discontinued west of Little River Inlet on the South Carolina-North Carolina border.

SUMMARY OF WATCHES AND WARNINGS IN EFFECT:

A Hurricane Warning is in effect for...
* Little River Inlet to Surf City

A Hurricane Watch is in effect for...
* North of Surf City to Duck
* Pamlico and Albemarle Sounds

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

A Hurricane Watch means that hurricane conditions are possible within the watch area, in this case within the next 12 hours.

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

At 1100 PM EDT (0300 UTC), the center of Hurricane Matthew was located near latitude 34.1 North, longitude 76.5 West. Matthew is moving toward the east-northeast near 14 mph (22 km/h) and this motion is expected to continue tonight. An eastward motion is expected Sunday night and Monday. On the forecast track, the center of Matthew should move near or south of the coast of North Carolina tonight and east of the North Carolina coast on Sunday.

Maximum sustained winds are near 75 mph (120 km/h) with higher gusts. Little change in strength is forecast tonight, although Matthew could become a post-tropical cyclone later tonight. Weakening is expected Sunday and Monday.

Hurricane-force winds extend outward up to 70 miles (110 km) mainly to the southwest of the center, and tropical-storm-force winds extend outward up to 185 miles (295 km). A wind gust to 81 mph (130 km/h) was recently reported by a private weather station at Federal Point, North Carolina.

The estimated minimum central pressure based on a combination of aircraft and surface data is 982 mb (29.00 inches).

HAZARDS AFFECTING LAND

WIND: Hurricane and tropical storm conditions are expected to continue over the hurricane warning area tonight and then subside during the day on Sunday.

Hurricane conditions are possible within the Hurricane Watch and Tropical Storm Warning area in North Carolina later tonight and Sunday morning, with tropical storm conditions expected during the next few hours.

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

Murrells Inlet, South Carolina, to Duck, North Carolina, including portions of the Pamlico and Albemarle Sounds...3 to 5 ft

Along the Georgia and South Carolina coasts southwest of Matthew's center, inundation caused by Matthew's storm surge will slowly recede today.

The deepest water will occur along the immediate coast in areas of onshore winds. Surge-related flooding depends on the relative timing of the surge and the tidal cycle, and can vary greatly over short distances. Large waves generated by Matthew will cause water rises to occur well in advance of and well away from the track of the center. For information specific to your area, please see products issued by your local National Weather Service forecast office.

There is a danger of life-threatening inundation during the next 36 hours along the coast from Murrells Inlet, South Carolina to Salvo, North Carolina including portions of the Pamlico Sound. There is the possibility of life-threatening inundation during the next 48 hours from Salvo to Duck, North Carolina including portions of the Albemarle Sound. For a depiction of areas at risk, please see the Prototype National Weather Service Storm Surge Watch/Warning Graphic. For information specific to your area, please see products issued by your local National Weather Service forecast office.

The Prototype Storm Surge Watch/Warning Graphic is a depiction of 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 hurricanes.gov.

RAINFALL: Matthew is expected to produce total rain accumulations of 8 to 12 inches from northeast South Carolina into northeast North Carolina and southeast Virginia, with possible isolated totals of 20 inches possible. This rainfall is producing record-breaking flooding over portions of eastern North Carolina, and it may result in life-threatening flooding and flash flooding elsewhere across the region.

SURF: Swells generated by Matthew will continue to affect much of the coast of the southeastern United States through early next week. These swells will likely cause life-threatening surf and rip current conditions. Please consult products from your local weather office.

NEXT ADVISORY

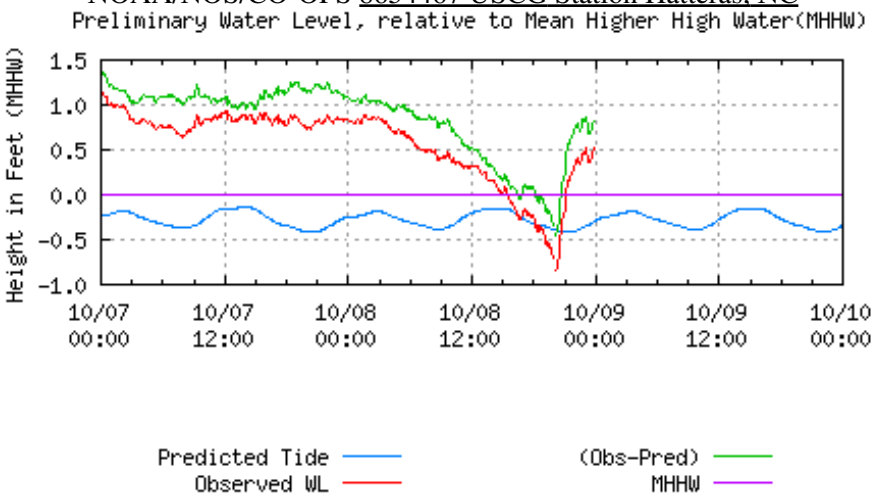
Next intermediate advisory at 200 AM EDT.
Next complete advisory at 500 AM EDT.

Forecaster Beven

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: 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, Chesapeake Bay Bridge Tunnel - Water Level, Chesapeake Bay Bridge Tunnel - Winds, Sewells Point - Water Level, Sewells Point - Barometric, Money Point - Water Level, Money Point - Winds, Beaufort - Water Level, Beaufort - Winds, Wilmington - Water Level, Wilmington - Barometric, Wrightsville Beach - Water Level, Wrightsville Beach - Winds, Oyster Landing (N Inlet Estuary) - Water Level, Charleston - Water Level, Charleston - Winds, Charleston - Barometric

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



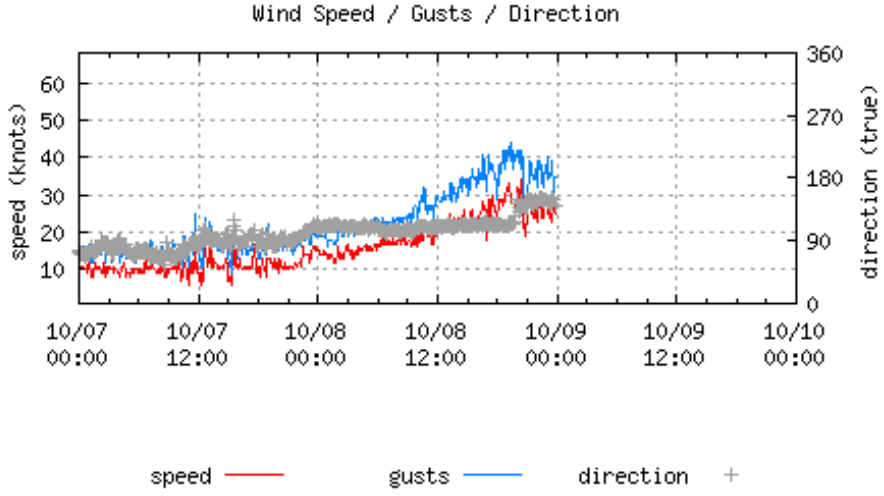
Last Observed Sample: 10/08/2016 23:54 (EDT). Data relative to MHHW

Observed: 0.59 ft. Predicted: -0.29 ft. Residual: 0.88 ft.

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

Next High Tide: 10/09/2016 03:32 (EDT), -0.19 ft.

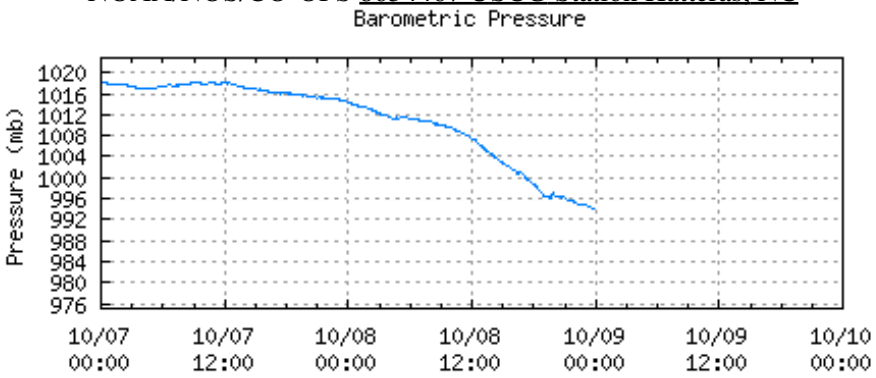
NOAA/NOS/CO-OPS 8654467 USCG Station Hatteras, NC



Last Observed Sample: 10/08/2016 23:54 (EDT)

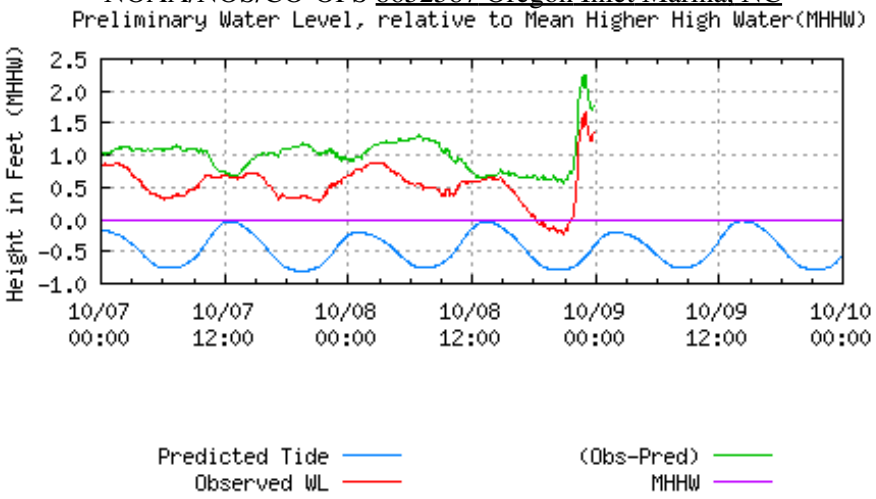
Wind Speed: 28 knots Gusts: 35 knots Direction: 146° T

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



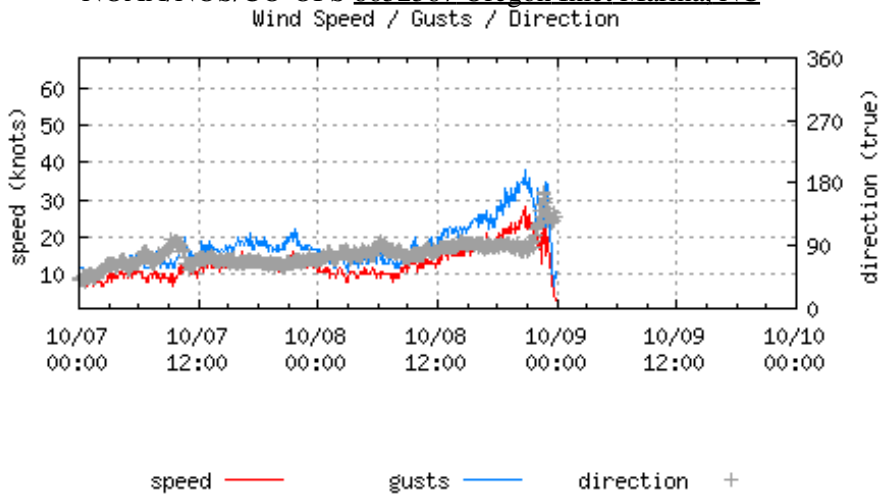
Last Observed Sample: 10/08/2016 23:54 (EDT)
Barometric Pressure: 993.6 mb

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



Last Observed Sample: 10/08/2016 23:48 (EDT). Data relative to MHHW
Observed: 1.36 ft. Predicted: -0.42 ft. Residual: 1.78 ft.
Historical Maximum Water Level: Aug 28 2011, 6.32 ft.
Next High Tide: 10/09/2016 01:56 (EDT), -0.19 ft.

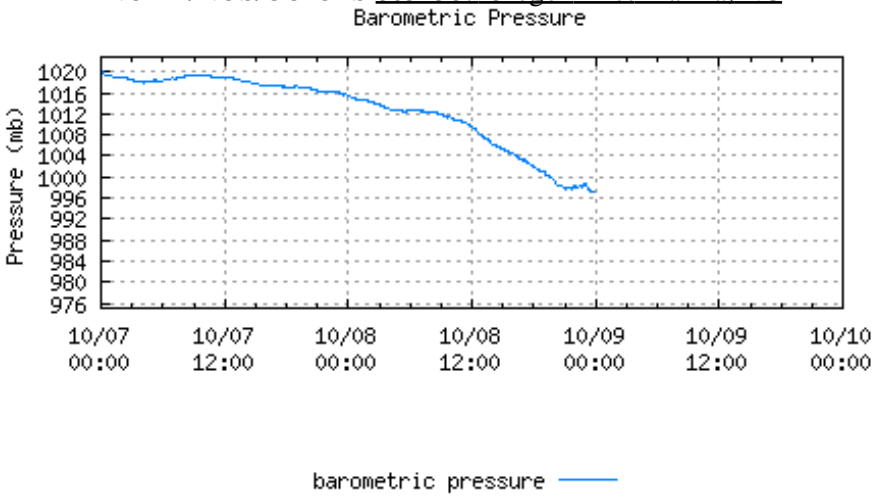
NOAA/NOS/CO-OPS 8652587 Oregon Inlet Marina, NC



Last Observed Sample: 10/08/2016 23:48 (EDT)

Wind Speed: 3 knots Gusts: 11 knots Direction: 131° T

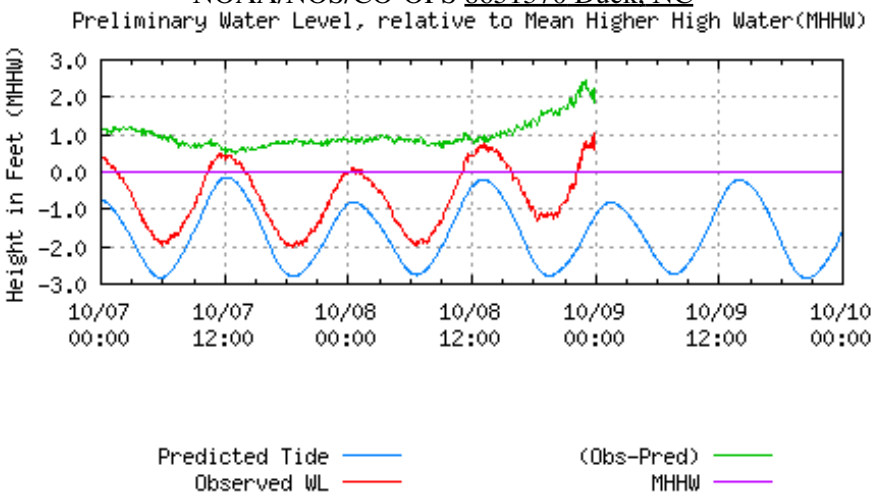
NOAA/NOS/CO-OPS 8652587 Oregon Inlet Marina, NC



Last Observed Sample: 10/08/2016 23:48 (EDT)

Barometric Pressure: 997.2 mb

NOAA/NOS/CO-OPS 8651370 Duck, NC



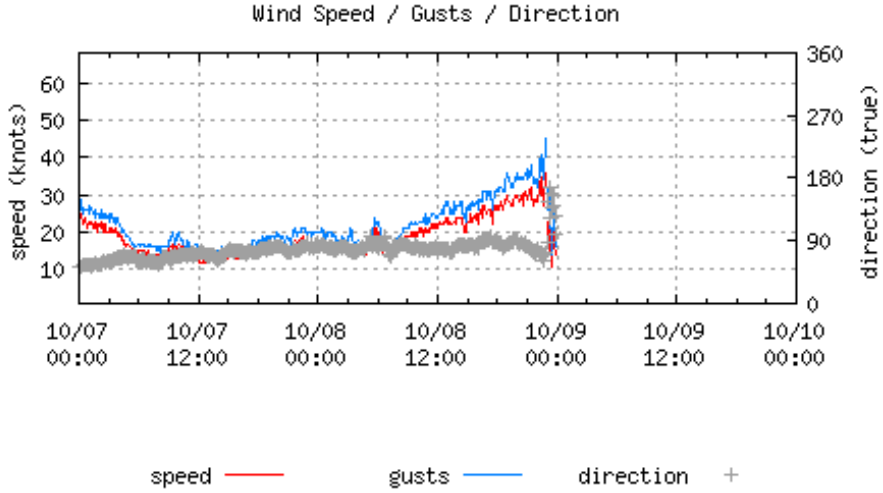
Last Observed Sample: 10/08/2016 23:54 (EDT). Data relative to MHHW

Observed: 1.04 ft. Predicted: -1.20 ft. Residual: 2.24 ft.

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

Next High Tide: 10/09/2016 01:29 (EDT), -0.81 ft.

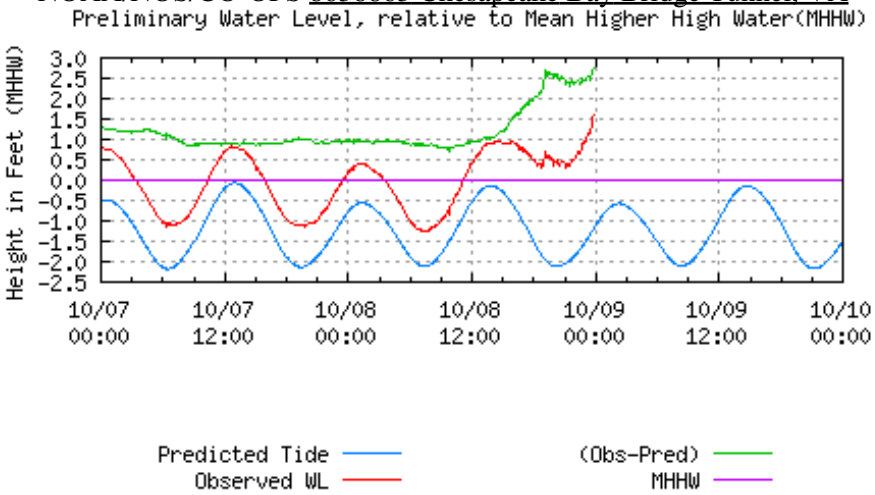
NOAA/NOS/CO-OPS 8651370 Duck, NC



Last Observed Sample: 10/08/2016 23:54 (EDT)

Wind Speed: 14 knots Gusts: 16 knots Direction: 99° T

NOAA/NOS/CO-OPS 8638863 Chesapeake Bay Bridge Tunnel, VA



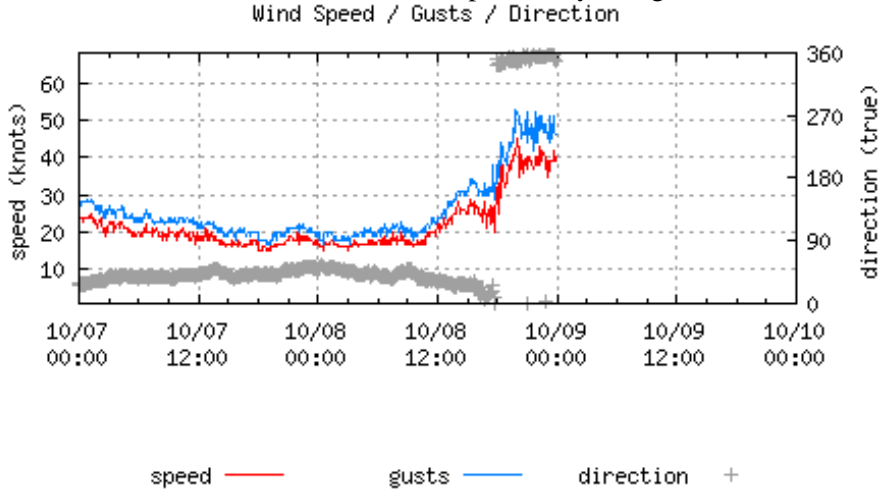
Last Observed Sample: 10/08/2016 23:54 (EDT). Data relative to MHHW

Observed: 1.53 ft. Predicted: -1.15 ft. Residual: 2.68 ft.

Historical Maximum Water Level: Nov 12 2009, 4.66 ft.

Next High Tide: 10/09/2016 02:16 (EDT), -0.57 ft.

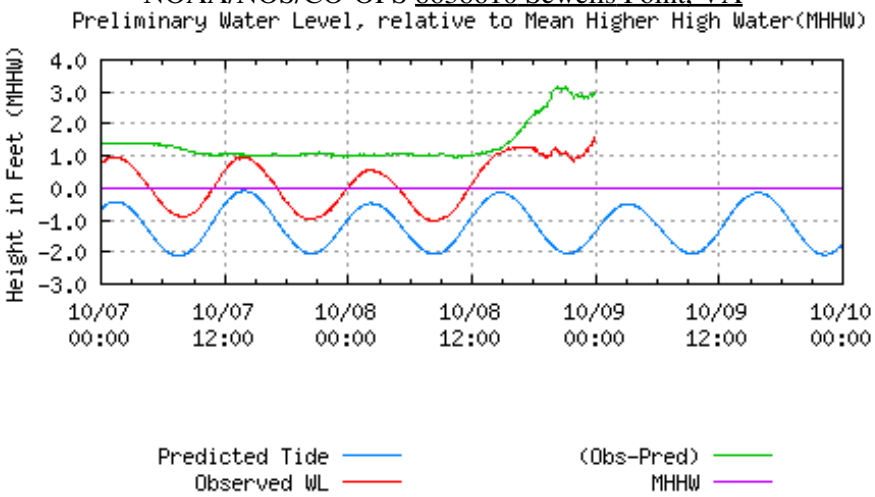
NOAA/NOS/CO-OPS 8638863 Chesapeake Bay Bridge Tunnel, VA



Last Observed Sample: 10/08/2016 23:54 (EDT)

Wind Speed: 38 knots Gusts: 50 knots Direction: 0° T

NOAA/NOS/CO-OPS 8638610 Sewells Point, VA



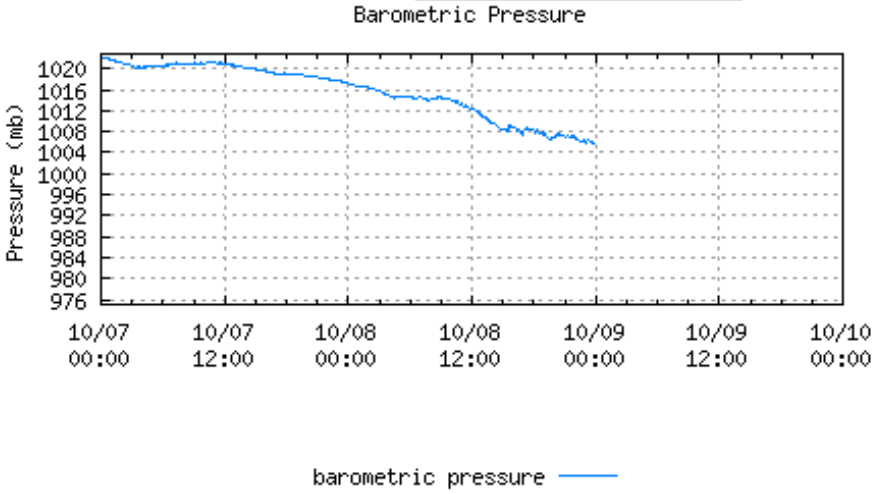
Last Observed Sample: 10/09/2016 00:00 (EDT). Data relative to MHHW

Observed: 1.63 ft. Predicted: -1.36 ft. Residual: 2.99 ft.

Historical Maximum Water Level: Aug 23 1933, 5.26 ft.

Next High Tide: 10/09/2016 03:10 (EDT), -0.50 ft.

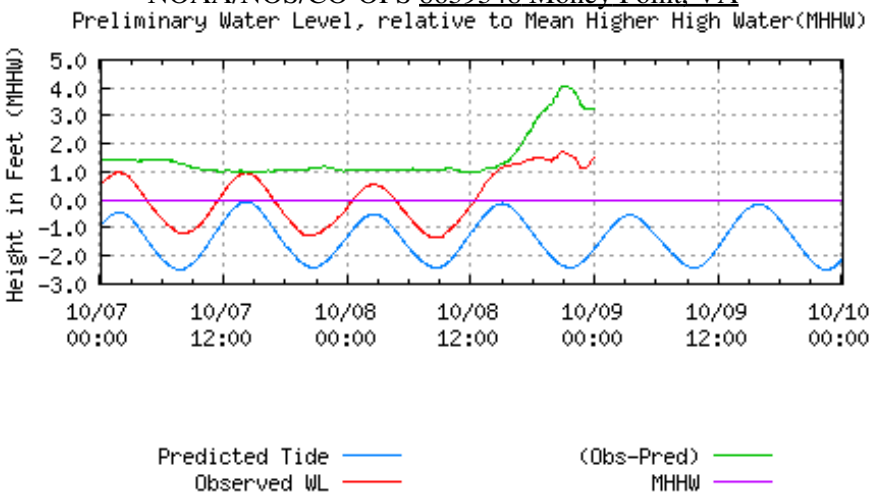
NOAA/NOS/CO-OPS 8638610 Sewells Point, VA



Last Observed Sample: 10/09/2016 00:00 (EDT)

Barometric Pressure: 1005.8 mb

NOAA/NOS/CO-OPS 8639348 Money Point, VA



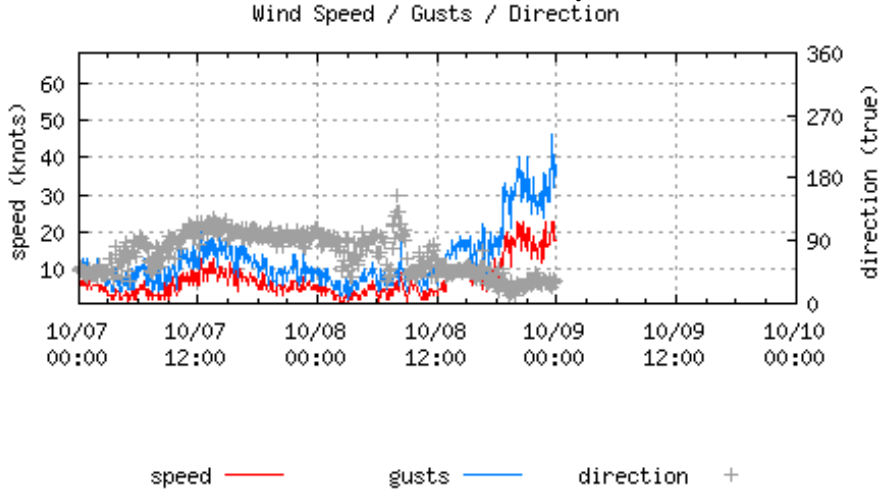
Last Observed Sample: 10/08/2016 23:54 (EDT). Data relative to MHHW

Observed: 1.47 ft. Predicted: -1.77 ft. Residual: 3.24 ft.

Historical Maximum Water Level: Nov 13 2009, 5.37 ft.

Next High Tide: 10/09/2016 03:27 (EDT), -0.54 ft.

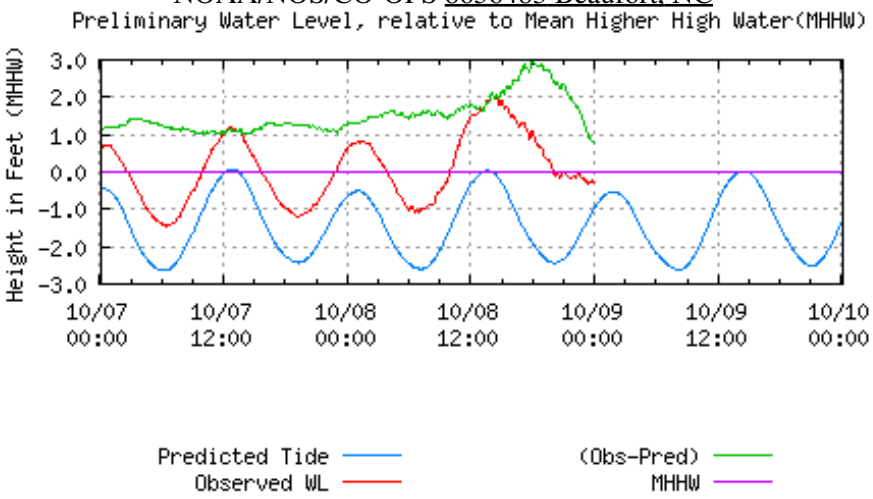
NOAA/NOS/CO-OPS 8639348 Money Point, VA



Last Observed Sample: 10/08/2016 23:54 (EDT)

Wind Speed: 18 knots Gusts: 38 knots Direction: 31° T

NOAA/NOS/CO-OPS 8656483 Beaufort, NC



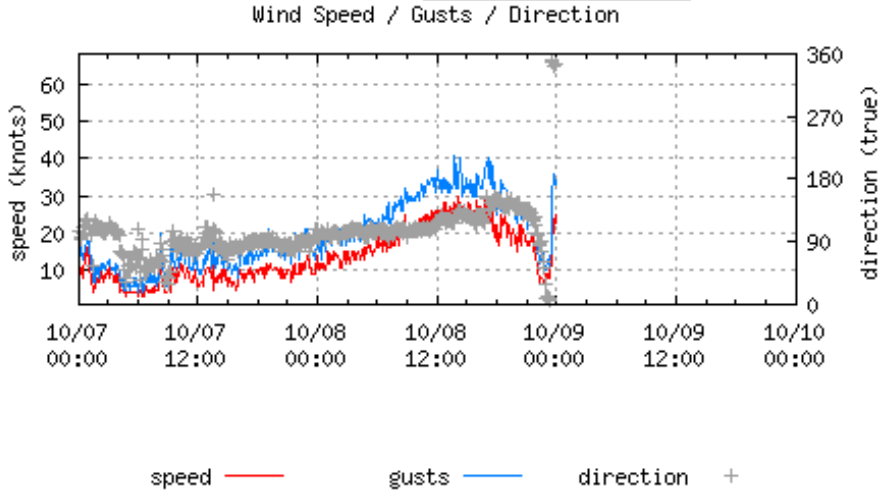
Last Observed Sample: 10/08/2016 23:54 (EDT). Data relative to MHHW

Observed: -0.25 ft. Predicted: -1.00 ft. Residual: 0.75 ft.

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

Next High Tide: 10/09/2016 01:51 (EDT), -0.53 ft.

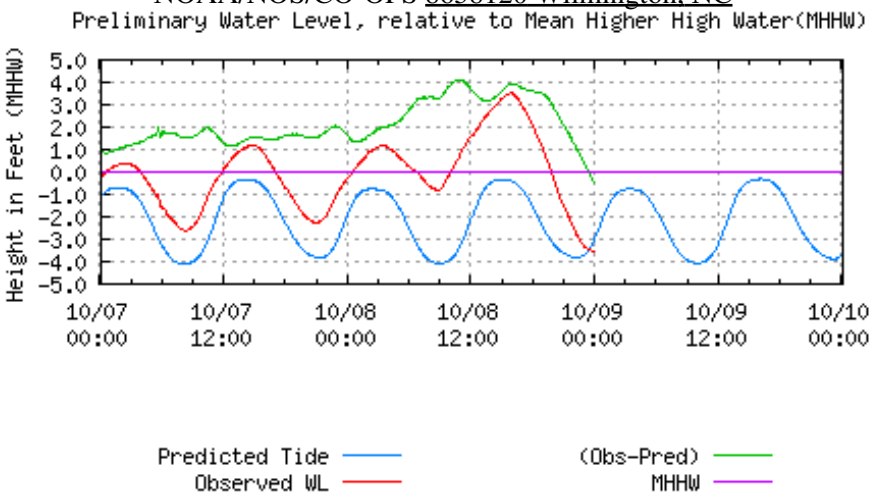
NOAA/NOS/CO-OPS 8656483 Beaufort, NC



Last Observed Sample: 10/08/2016 23:54 (EDT)

Wind Speed: 25 knots Gusts: 33 knots Direction: 346° T

NOAA/NOS/CO-OPS 8658120 Wilmington, NC



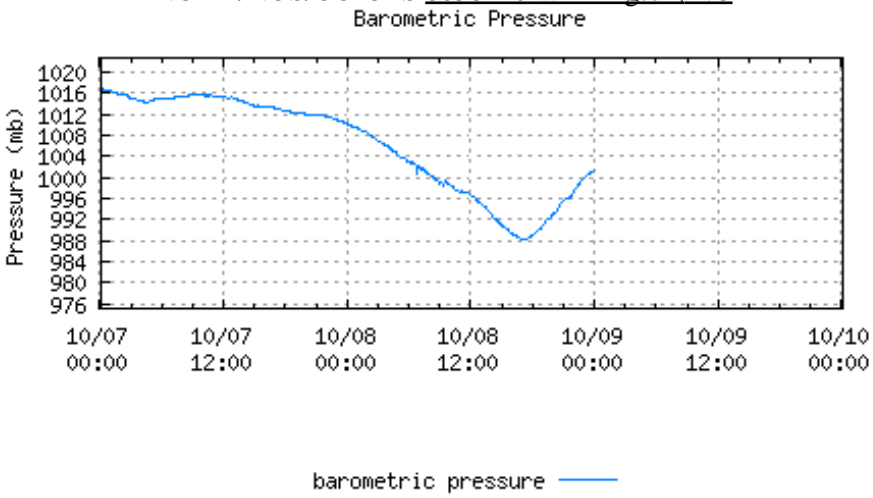
Last Observed Sample: 10/08/2016 23:54 (EDT). Data relative to MHHW

Observed: -3.51 ft. Predicted: -3.06 ft. Residual: -0.45 ft.

Historical Maximum Water Level: Oct 15 1954, 3.47 ft.

Next High Tide: 10/09/2016 03:26 (EDT), -0.77 ft.

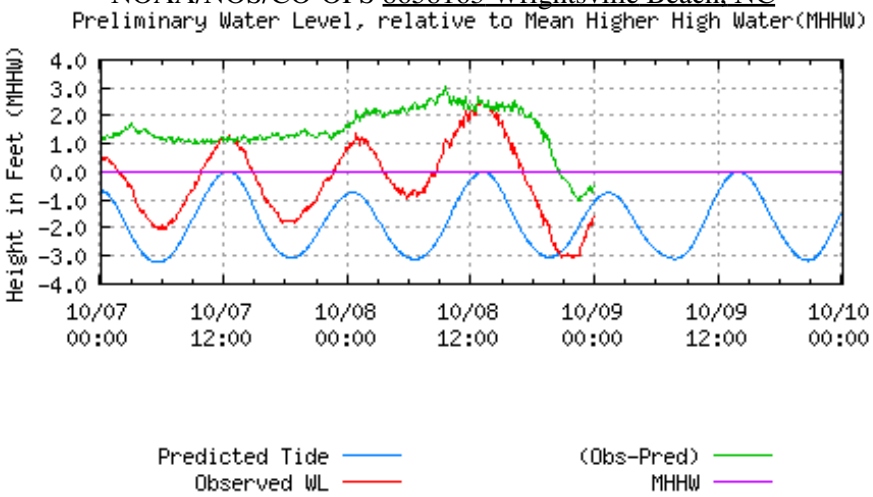
NOAA/NOS/CO-OPS 8658120 Wilmington, NC



Last Observed Sample: 10/08/2016 23:54 (EDT)

Barometric Pressure: 1001.4 mb

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



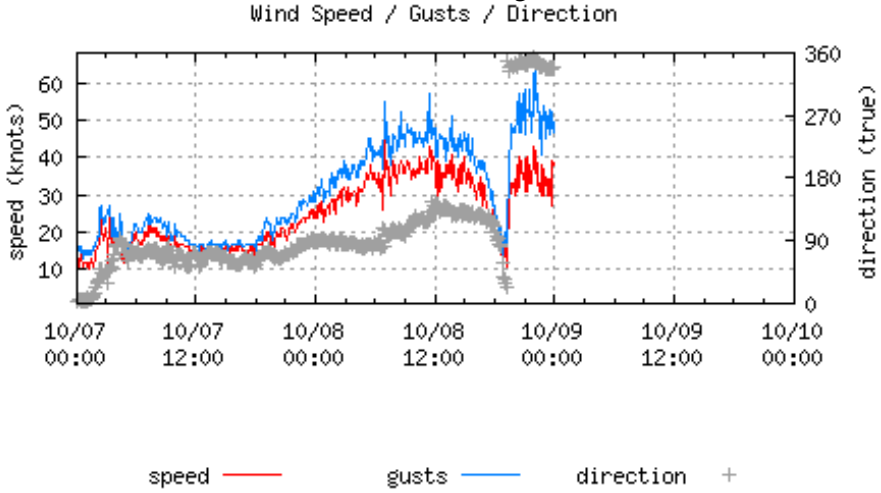
Last Observed Sample: 10/08/2016 23:54 (EDT). Data relative to MHHW

Observed: -1.62 ft. Predicted: -1.10 ft. Residual: -0.52 ft.

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

Next High Tide: 10/09/2016 01:22 (EDT), -0.75 ft.

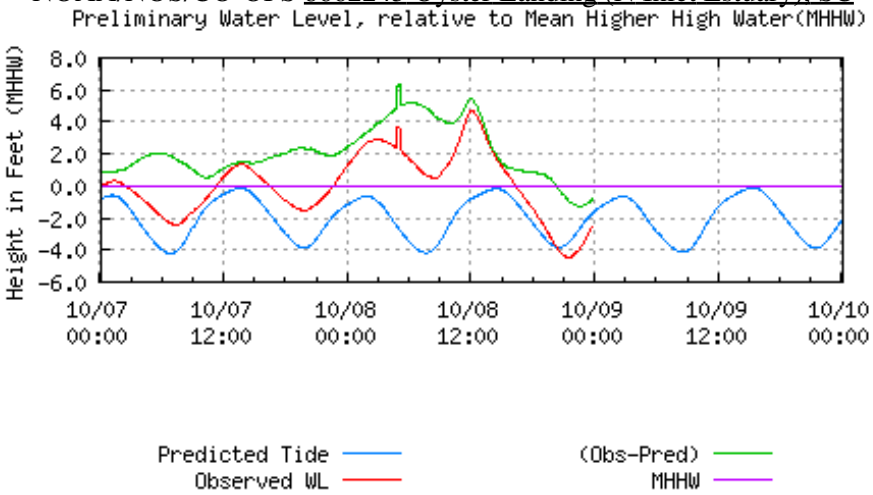
NOAA/NOS/CO-OPS 8658163 Wrightsville Beach, NC



Last Observed Sample: 10/08/2016 23:54 (EDT)

Wind Speed: 38 knots Gusts: 47 knots Direction: 340° T

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



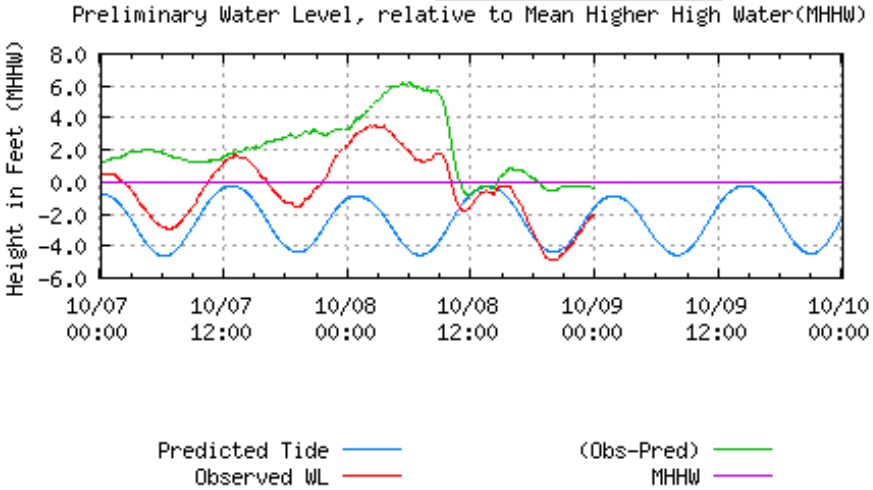
Last Observed Sample: 10/08/2016 23:48 (EDT). Data relative to MHHW

Observed: -2.51 ft. Predicted: -1.68 ft. Residual: -0.83 ft.

Historical Maximum Water Level: Aug 26 2011, 2.40 ft.

Next High Tide: 10/09/2016 02:46 (EDT), -0.65 ft.

NOAA/NOS/CO-OPS 8665530 Charleston, SC



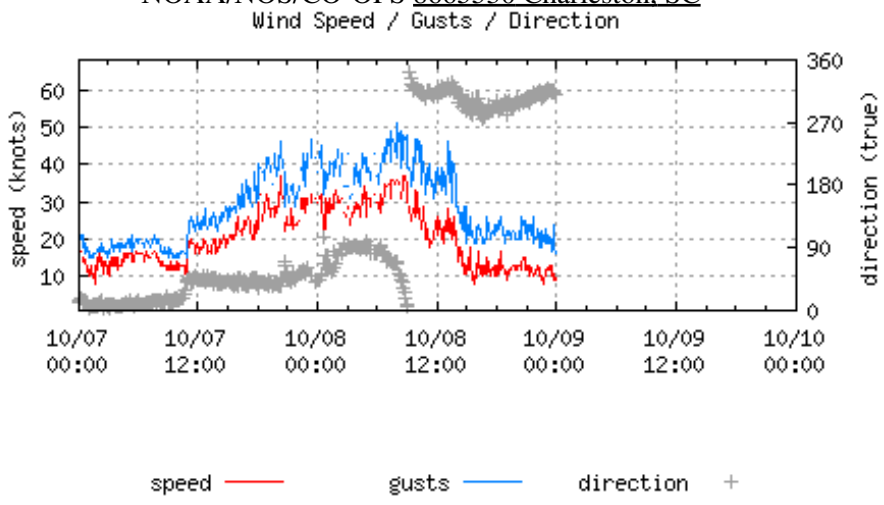
Last Observed Sample: 10/08/2016 23:54 (EDT). Data relative to MHHW

Observed: -2.01 ft. Predicted: -1.63 ft. Residual: -0.38 ft.

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

Next High Tide: 10/09/2016 01:51 (EDT), -0.87 ft.

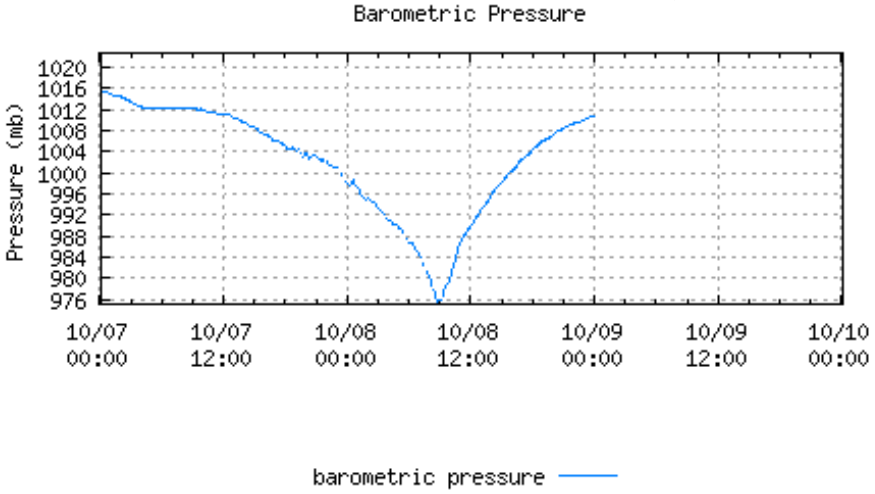
NOAA/NOS/CO-OPS 8665530 Charleston, SC



Last Observed Sample: 10/08/2016 23:54 (EDT)

Wind Speed: 9 knots Gusts: 16 knots Direction: 311° T

NOAA/NOS/CO-OPS 8665530 Charleston, SC



Last Observed Sample: 10/08/2016 23:54 (EDT)

Barometric Pressure: 1010.8 mb

Latest Water Level Observations on MHHW

Station ID	Station Name	Date/Time	Observed Water Level	Predicted Tide	Residual Water Level	24 Hour Maximum Storm Tide
8654467	USCG Station Hatteras, NC	10/08/2016 23:54 (EDT)	0.59 ft	-0.29 ft	0.88 ft	0.89 ft
8652587	Oregon Inlet Marina, NC	10/08/2016 23:48 (EDT)	1.36 ft	-0.42 ft	1.78 ft	1.68 ft
8651370	Duck, NC	10/08/2016 23:54 (EDT)	1.04 ft	-1.20 ft	2.24 ft	1.04 ft
8638863	Chesapeake Bay Bridge Tunnel, VA	10/08/2016 23:54 (EDT)	1.53 ft	-1.15 ft	2.68 ft	1.58 ft
8638610	Sewells Point, VA	10/09/2016 00:00 (EDT)	1.63 ft	-1.36 ft	2.99 ft	1.63 ft
8639348	Money Point, VA	10/08/2016 23:54 (EDT)	1.47 ft	-1.77 ft	3.24 ft	1.71 ft
8656483	Beaufort, NC	10/08/2016 23:54 (EDT)	-0.25 ft	-1.00 ft	0.75 ft	2.10 ft
8658120	Wilmington, NC	10/08/2016 23:54 (EDT)	-3.51 ft	-3.06 ft	-0.45 ft	3.53 ft
8658163	Wrightsville Beach, NC	10/08/2016 23:54 (EDT)	-1.62 ft	-1.10 ft	-0.52 ft	2.63 ft
8662245	Oyster Landing (N Inlet Estuary), SC	10/08/2016 23:48 (EDT)	-2.51 ft	-1.68 ft	-0.83 ft	4.70 ft
8665530	Charleston, SC	10/08/2016 23:54 (EDT)	-2.01 ft	-1.63 ft	-0.38 ft	3.53 ft

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