Hurricane MATTHEW QuickLook
Posted: 00:00 EDT 10/07/2016

NOAA and NOAA Partnership Stations Relative to the Storm

Storm Analysis
As of 10/07/2016 00:00 EDT, water levels along the eastern coast of Florida from Trident Pier to Fernandina Beach range between 1.3 and 2.2 feet above tidal predictions. Winds are currently measuring 10 to 25 kts with gusts as high as 50 kts at Trident Pier. Barometric pressure is decreasing as the storm approaches.
Water levels between Vaca Key and Lake Worth, Florida are slightly lower and range between 0.7 and 1.1 feet above tidal predictions. Winds and barometric pressure are beginning to rebound as the storm moves northward.

Water levels along the Georgia and South Carolina coasts are slightly elevated and winds remain steady around 10 kts.

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: AJC

SELECT NATIONAL HURRICANE CENTER ADVISORY INFORMATION:

HURRICANE MATTHEW ADVISORY NUMBER 36
NWS NATIONAL HURRICANE CENTER MIAMI FL

1100 PM EDT THU OCT 06 2016

...EYE OF EXTREMELY DANGEROUS HURRICANE MATTHEW MOVING AWAY FROM THE BAHAMAS AND TOWARD THE EAST COAST OF FLORIDA...

WATCHES AND WARNINGS

--------------

CHANGES WITH THIS ADVISORY:

The Tropical Storm Warning has been discontinued for Florida Bay and the Florida Keys.

SUMMARY OF WATCHES AND WARNINGS IN EFFECT:

A Hurricane Warning is in effect for...

* Northwestern Bahamas, including the Abacos, Andros Island, Berry Islands, Bimini, Eleuthera, Grand Bahama Island, and New Providence

* Boca Raton to South Santee River

* Lake Okeechobee

A Tropical Storm Warning is in effect for...

* Ocean Reef to south of Boca Raton

* Anclote River to Suwannee River
* North of South Santee River to Surf City

A Tropical Storm Watch is in effect for...

* Englewood to Anclote River

Interests elsewhere in the Florida Peninsula and in the Carolinas should monitor the progress of Matthew.

A Hurricane Warning means that hurricane conditions are expected somewhere within the warning area. A warning is typically issued 36 hours before the anticipated first occurrence of tropical-storm-force winds, conditions that make outside preparations difficult or dangerous. Preparations to protect life and property should be rushed to completion.

A Tropical Storm Warning means that tropical storm conditions are expected somewhere within the warning area within 36 hours.

For storm information specific to your area in the United States, including possible inland watches and warnings, please monitor products issued by your local National Weather Service forecast office. For storm information specific to your area outside the United States, please monitor products issued by your national meteorological service.

DISCUSSION AND 48-HOUR OUTLOOK

-------------------------------

At 1100 PM EDT, the eye of Hurricane Matthew was located by NOAA Doppler weather radars and an Air Force Reserve reconnaissance aircraft about 125 MI SE of Cape Canaveral, Florida. Matthew is moving toward the northwest near 13 mph. A turn toward the north-northwest is expected on Friday, and a turn toward the north expected Friday night or Saturday. On the forecast track, the center of Matthew will be moving near or over the east coast of the Florida peninsula through Friday night, and near or over the coasts of Georgia and South Carolina on Saturday.

Maximum sustained winds are near 130 mph with higher gusts. Matthew is a category 4 hurricane on the Saffir-Simpson Hurricane Wind Scale. A gradual weakening is forecast during the next 48 hours. However, Matthew is expected to be a category 3 or stronger hurricane as it moves near the coast of Florida.

Hurricane-force winds extend outward up to 60 miles from the center and tropical-storm-force winds extend outward up to 185 miles.

The latest minimum central pressure reported by the reconnaissance aircraft was 939 mb. An automated station on the west end of Grand Bahama Island recently reported a pressure of 943.1 mb.

HAZARDS AFFECTING LAND

-----------------------------

WIND: Hurricane conditions should diminish over portions of the northwestern Bahamas tonight.

Hurricane conditions are expected to first reach the hurricane warning area in Florida during the next several hours and will spread northward within the warning area through Friday. Tropical storm conditions will continue to spread northward in the warning area along the Florida east coast tonight and Friday.
Hurricane conditions are expected to spread northward in the warning area in Georgia and South Carolina Friday night and Saturday with tropical storm conditions expected on Friday.

Winds increase rapidly in elevation in a tropical cyclone. Residents in high-rise buildings should be aware that the winds at the top of a 30-story building will be, on average, about one Saffir-Simpson category higher than the winds near the surface.

Tropical storm conditions are expected in the tropical storm warning area in the Carolinas on Friday night and Saturday.

STORM SURGE: The combination of a dangerous storm surge and large and destructive waves could raise water levels by as much as the following amounts above normal tide levels...

Northwestern Bahamas...10 to 15 feet

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

Sebastian Inlet, Florida, to Edisto Beach, South Carolina, including portions of the St. Johns River...7 to 11 ft

Edisto Beach to South Santee River, South Carolina...4 to 6 ft

Boca Raton to Sebastian Inlet, Florida...4 to 6 ft

South Santee River, South Carolina, to Cape Fear, North Carolina...2 to 4 ft

Virginia Key to Boca Raton, Florida...1 to 3 ft

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.

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. There is a danger of life-threatening inundation during the next 36 hours along the Florida east coast, the Georgia coast, and the South Carolina coast from Boca Raton, Florida, to South Santee River, South Carolina. There is the possibility of life-threatening inundation during the next 48 hours from north of South Santee River, South Carolina, to Cape Fear, North Carolina. 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 rainfall amounts in the following areas:

The northern Bahamas...8 to 12 inches, isolated 15 inches The Atlantic coast of the United States from Central Florida to eastern North Carolina...6 to 12 inches with isolated totals near 15 inches along the coasts

TORNADOES: An isolated tornado or two is possible along the east-central Florida coast tonight.
SURF: Swells generated by Matthew will continue to affect portions of the north coast of Cuba and the Bahamas during the next few days, and will spread northward along the east coast of Florida and the southeast U.S. coast through the weekend. 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.

Tropical cyclone updates at 1200 AM, 100 AM, 300 AM, and 400 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: Vaca Key - Water Level, Vaca Key - Winds, Vaca Key - Barometric, Virginia Key - Water Level, Virginia Key - Winds, Virginia Key - Barometric, Lake Worth Pier - Water Level, Lake Worth Pier - Winds, Trident Pier - Water Level, Trident Pier - Winds, Trident Pier - Barometric, Red Bay Point, St Johns River - Water Level, Red Bay Point, St Johns River - Winds, Red Bay Point, St Johns River - Barometric, I-295 Bridge, St Johns River - Water Level, I-295 Bridge, St Johns River - Winds, I-295 Bridge, St Johns River - Barometric, Southbank Riverwalk, St Johns River - Water Level, Dames Point - Water Level, Mayport (Bar Pilots Dock) - Water Level, Mayport (Bar Pilots Dock) - Winds, Fernandina Beach - Water Level, Fernandina Beach - Winds, Fort Pulaski - Water Level, Fort Pulaski - Winds, Charleston - Water Level, Charleston - Winds, Charleston - Barometric, Oyster Landing (N Inlet Estuary) - Water Level, Springmaid Pier - Water Level, Springmaid Pier - Winds
Last Observed Sample: 10/07/2016 00:18 (EDT). Data relative to MHHW

- **Observed**: 0.74 ft. **Predicted**: -0.00 ft. **Residual**: 0.74 ft.
- Next High Tide: 10/07/2016 05:37 (EDT), 0.31 ft.

Wind Speed: 17 knots  
Gusts: 21 knots  
Direction: 290° T
NOAA/NOS/CO-OPS 8723970 Vaca Key, FL

Last Observed Sample: 10/07/2016 00:18 (EDT)
Barometric Pressure: 1005.7 mb

NOAA/NOS/CO-OPS 8723214 Virginia Key, FL

Last Observed Sample: 10/07/2016 00:24 (EDT)
Barometric Pressure: 1005.7 mb

Next High Tide: 10/07/2016 01:27 (EDT), 0.11 ft.
NOAA/NOS/CO-OPS 8723214 Virginia Key, FL

Wind Speed / Gusts / Direction

Last Observed Sample: 10/07/2016 00:24 (EDT)
Wind Speed: 23 knots Gusts: 30 knots Direction: 248° T

NOAA/NOS/CO-OPS 8723214 Virginia Key, FL

Barometric Pressure

Last Observed Sample: 10/07/2016 00:24 (EDT)
Barometric Pressure: 1001.2 mb
Last Observed Sample: 10/07/2016 00:18 (EDT). Data relative to MHHW

Observed: 3.44 ft. Predicted: -0.25 ft. Residual: 3.69 ft.

Historical Maximum Water Level: Nov 23 1984, 1.88 ft.
Next High Tide: 10/07/2016 00:22 (EDT), -0.25 ft.

Last Observed Sample: 10/07/2016 00:18 (EDT)

Wind Speed: 24 knots Gusts: 36 knots Direction: 260° T
Last Observed Sample: 10/07/2016 00:18 (EDT). Data relative to MHHW

- Observed: 1.45 ft.  Predicted: -0.55 ft.  Residual: 2.00 ft.
- Historical Maximum Water Level: Sep 26 2004, 4.01 ft.
- Next High Tide: 10/07/2016 12:44 (EDT), 0.08 ft.

Last Observed Sample: 10/07/2016 00:18 (EDT)

Wind Speed: 27 knots  Gusts: 37 knots  Direction: 16° T
NOAA/NOS/CO-OPS 8721604 Trident Pier, FL

Barometric Pressure

Last Observed Sample: 10/07/2016 00:18 (EDT)
Barometric Pressure: 1000.5 mb

NOAA/NOS/CO-OPS 8720503 Red Bay Point, St Johns River, FL

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

Last Observed Sample: 10/07/2016 00:18 (EDT). Data relative to MHHW
Observed: 1.43 ft. Predicted: -0.76 ft. Residual: 2.19 ft.
Historical Maximum Water Level: Sep 27 2004, 2.93 ft.
Next High Tide: 10/07/2016 05:50 (EDT), -0.15 ft.
NOAA/NOS/CO-OPS 8720503 Red Bay Point, St Johns River, FL

Last Observed Sample: 10/07/2016 00:18 (EDT)

Wind Speed: 16 knots  Gusts: 23 knots  Direction: 36° T

NOAA/NOS/CO-OPS 8720503 Red Bay Point, St Johns River, FL

Barometric Pressure

Last Observed Sample: 10/07/2016 00:18 (EDT)

Barometric Pressure: 1008.6 mb
Last Observed Sample: 10/07/2016 00:18 (EDT). Data relative to MHHW
Observed: 1.54 ft. Predicted: 0.08 ft. Residual: 1.46 ft.
Historical Maximum Water Level: Sep 27 2004, 3.46 ft.
Next High Tide: 10/07/2016 03:08 (EDT), 0.59 ft.

Wind Speed: 17 knots  Gusts: 23 knots  Direction: 9° T
NOAA/NOS/CO-OPS 8720357 I-295 Bridge, St Johns River, FL

Barometric Pressure

Last Observed Sample: 10/07/2016 00:18 (EDT)
Barometric Pressure: 1009.2 mb

NOAA/NOS/CO-OPS 8720226 Southbank Riverwalk, St Johns River, FL

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

Last Observed Sample: 10/07/2016 00:18 (EDT). Data relative to MHHW
Observed: 1.20 ft. Predicted: -0.50 ft. Residual: 1.70 ft.
Historical Maximum Water Level: Sep 27 2004, 3.44 ft.
Next High Tide: 10/07/2016 02:04 (EDT), -0.13 ft.
NOAA/NOS/CO-OPS 8720219 Dames Point, FL

Last Observed Sample: 10/07/2016 00:24 (EDT). Data relative to MHHW
Observed: 1.07 ft. Predicted: 0.11 ft. Residual: 0.96 ft.
Historical Maximum Water Level: Sep 17 2001, 2.40 ft.
Next High Tide: 10/07/2016 01:24 (EDT), 0.30 ft.

NOAA/NOS/CO-OPS 8720218 Mayport (Bar Pilots Dock), FL

Last Observed Sample: 10/07/2016 00:18 (EDT). Data relative to MHHW
Observed: 1.02 ft. Predicted: -0.27 ft. Residual: 1.29 ft.
Historical Maximum Water Level: Sep 27 2004, 2.47 ft.
Next High Tide: 10/07/2016 01:01 (EDT), -0.15 ft.
NOAA/NOS/CO-OPS 8720218 Mayport (Bar Pilots Dock), FL

Wind Speed / Gusts / Direction

Last Observed Sample: 10/07/2016 00:18 (EDT)
Wind Speed: 24 knots Gusts: 31 knots Direction: 34° T

NOAA/NOS/CO-OPS 8720030 Fernandina Beach, FL

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

Last Observed Sample: 10/07/2016 00:24 (EDT). Data relative to MHHW
Observed: 0.56 ft. Predicted: -0.89 ft. Residual: 1.45 ft.
Historical Maximum Water Level: Oct 2 1898, 6.94 ft.
Next High Tide: 10/07/2016 01:16 (EDT), -0.68 ft.
NOAA/NOS/CO-OPS 8720030 Fernandina Beach, FL

Wind Speed / Gusts / Direction

Last Observed Sample: 10/07/2016 00:24 (EDT)
Wind Speed: 13 knots Gusts: 23 knots Direction: 10° T

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

Last Observed Sample: 10/07/2016 00:18 (EDT)
Data relative to MHHW
Observed: 0.29 ft. Predicted: -0.99 ft. Residual: 1.28 ft.
Next High Tide: 10/07/2016 00:32 (EDT), -0.98 ft.
NOAA/NOS/CO-OPS 8670870 Fort Pulaski, GA

Wind Speed / Gusts / Direction

Wind Speed: 16 knots
Gusts: 21 knots
Direction: 26° T

NOAA/NOS/CO-OPS 8665530 Charleston, SC

Last Observed Sample: 10/07/2016 00:18 (EDT)

Data relative to MHHW

Observed: 0.50 ft. Predicted: -0.77 ft. Residual: 1.27 ft.

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

Next High Tide: 10/07/2016 12:47 (EDT), -0.26 ft.
Last Observed Sample: 10/07/2016 00:18 (EDT)

Wind Speed: 17 knots  
Gusts: 20 knots  
Direction: 18° T

Barometric Pressure: 1015.4 mb
NOAA/NOS/CO-OPS 8662245 Oyster Landing (N Inlet Estuary), SC

Last Observed Sample: 10/07/2016 00:12 (EDT). Data relative to MHHW
Observed: 0.04 ft. Predicted: -0.77 ft. Residual: 0.81 ft.
Historical Maximum Water Level: Aug 26 2011, 2.40 ft.
Next High Tide: 10/07/2016 01:08 (EDT), -0.58 ft.

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

Last Observed Sample: 10/07/2016 00:18 (EDT). Data relative to MHHW
Observed: -0.12 ft. Predicted: -1.08 ft. Residual: 0.96 ft.
Historical Maximum Water Level: Jan 1 1987, 3.65 ft.
Next High Tide: 10/07/2016 12:32 (EDT), -0.39 ft.
NOAA/NOS/CO-OPS 8661070 Springmaid Pier, SC

Last Observed Sample: 10/07/2016 00:18 (EDT)

Wind Speed: 10 knots  
Gusts: 13 knots  
Direction: 347° 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>8723970</td>
<td>Vaca Key, FL</td>
<td>10/07/2016 00:18 (EDT)</td>
<td>0.74 ft</td>
<td>-0.00 ft</td>
<td>0.74 ft</td>
<td>0.93 ft</td>
</tr>
<tr>
<td>8723214</td>
<td>Virginia Key, FL</td>
<td>10/07/2016 00:24 (EDT)</td>
<td>0.92 ft</td>
<td>0.02 ft</td>
<td>0.90 ft</td>
<td>1.08 ft</td>
</tr>
<tr>
<td>8722670</td>
<td>Lake Worth Pier, FL</td>
<td>10/07/2016 00:18 (EDT)</td>
<td>3.44 ft</td>
<td>-0.25 ft</td>
<td>3.69 ft</td>
<td>3.44 ft</td>
</tr>
<tr>
<td>8721604</td>
<td>Trident Pier, FL</td>
<td>10/07/2016 00:18 (EDT)</td>
<td>1.45 ft</td>
<td>-0.55 ft</td>
<td>2.00 ft</td>
<td>1.60 ft</td>
</tr>
<tr>
<td>8720503</td>
<td>Red Bay Point, St Johns River, FL</td>
<td>10/07/2016 00:18 (EDT)</td>
<td>1.43 ft</td>
<td>-0.76 ft</td>
<td>2.19 ft</td>
<td>1.96 ft</td>
</tr>
<tr>
<td>8720357</td>
<td>I-295 Bridge, St Johns River, FL</td>
<td>10/07/2016 00:18 (EDT)</td>
<td>1.54 ft</td>
<td>0.08 ft</td>
<td>1.46 ft</td>
<td>1.83 ft</td>
</tr>
<tr>
<td>8720226</td>
<td>Southbank Riverwalk, St Johns River, FL</td>
<td>10/07/2016 00:18 (EDT)</td>
<td>1.20 ft</td>
<td>-0.50 ft</td>
<td>1.70 ft</td>
<td>1.42 ft</td>
</tr>
<tr>
<td>8720219</td>
<td>Dames Point, FL</td>
<td>10/07/2016 00:24 (EDT)</td>
<td>1.07 ft</td>
<td>0.11 ft</td>
<td>0.96 ft</td>
<td>1.54 ft</td>
</tr>
<tr>
<td>8720218</td>
<td>Mayport (Bar Pilots Dock), FL</td>
<td>10/07/2016 00:18 (EDT)</td>
<td>1.02 ft</td>
<td>-0.27 ft</td>
<td>1.29 ft</td>
<td>1.50 ft</td>
</tr>
<tr>
<td>8720030</td>
<td>Fernandina Beach, FL</td>
<td>10/07/2016 00:24 (EDT)</td>
<td>0.56 ft</td>
<td>-0.89 ft</td>
<td>1.45 ft</td>
<td>1.49 ft</td>
</tr>
<tr>
<td>8670870</td>
<td>Fort Pulaski, GA</td>
<td>10/07/2016 00:18 (EDT)</td>
<td>0.29 ft</td>
<td>-0.99 ft</td>
<td>1.28 ft</td>
<td>1.10 ft</td>
</tr>
<tr>
<td>8665530</td>
<td>Charleston, SC</td>
<td>10/07/2016 00:18 (EDT)</td>
<td>0.50 ft</td>
<td>-0.77 ft</td>
<td>1.27 ft</td>
<td>1.13 ft</td>
</tr>
<tr>
<td>8662245</td>
<td>Oyster Landing (N Inlet Estuary), SC</td>
<td>10/07/2016 00:12 (EDT)</td>
<td>0.04 ft</td>
<td>-0.77 ft</td>
<td>0.81 ft</td>
<td>1.04 ft</td>
</tr>
<tr>
<td>8661070</td>
<td>Springmaid Pier, SC</td>
<td>10/07/2016 00:18 (EDT)</td>
<td>-0.12 ft</td>
<td>-1.08 ft</td>
<td>0.96 ft</td>
<td>0.94 ft</td>
</tr>
</tbody>
</table>