Hurricane MARIA QuickLook
Posted: 18:00 AST 09/19/2017

NOAA and NOAA Partnership Stations Relative to the Storm

Storm Analysis
As of 9/19/2017 18:00 AST, water levels surrounding Barbuda, the U.S. Virgin Islands and Puerto Rico are measuring within 1 foot of normal tide levels but are slowly rising. Winds generally range between 10 and 25 knots with gusts slightly higher. Barometric pressure is decreasing across the region as Maria approaches from the southeast.
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: RCL

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SELECT NATIONAL HURRICANE CENTER ADVISORY INFORMATION:

Hurricane Maria Advisory Number 15
NWS National Hurricane Center Miami FL
500 PM AST Tue Sep 19 2017

...POTENTIALLY CATASTROPHIC HURRICANE MARIA EXPECTED TO PASS NEAR THE U. S. VIRGIN ISLANDS TONIGHT AND OVER PUERTO RICO ON WEDNESDAY...

...PREPARATIONS AGAINST LIFE-THREATENING STORM SURGE AND RAINFALL FLOODING AND DESTRUCTIVE WINDS SHOULD BE RUSHED TO COMPLETION...

SUMMARY OF 500 PM AST...2100 UTC...INFORMATION

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LOCATION...16.8N 64.0W
ABOUT 80 MI...130 KM SE OF ST. CROIX
ABOUT 175 MI...285 KM SE OF SAN JUAN PUERTO RICO
MAXIMUM SUSTAINED WINDS...165 MPH...270 KM/H
PRESENT MOVEMENT...WNW OR 300 DEGREES AT 10 MPH...17 KM/H
MINIMUM CENTRAL PRESSURE...916 MB...27.05 INCHES

WATCHES AND WARNINGS

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CHANGES WITH THIS ADVISORY:

The Meteorological Service of the Bahamas has issued a Hurricane Watch for the Turks and Caicos Islands and the Southeastern Bahamas.

The Meteorological Service of Antigua has discontinued the Tropical Storm Warning for Antigua and Barbuda.

The Meteorological Service of Barbados has discontinued the Hurricane Warning for Dominica.

SUMMARY OF WATCHES AND WARNINGS IN EFFECT:

A Hurricane Warning is in effect for...  
* St. Kitts, Nevis, and Montserrat  
* U.S. Virgin Islands
* British Virgin Islands
* Puerto Rico, Culebra, and Vieques
* Cabo Engano to Puerto Plata

A Tropical Storm Warning is in effect for...
* Saba and St. Eustatius
* St. Maarten
* Anguilla
* Guadeloupe
* West of Puerto Plata to the northern border of the Dominican Republic and Haiti
* West of Cabo Engano to Punta Palenque

A Hurricane Watch is in effect for...
* Saba and St. Eustatius
* St. Maarten
* St. Martin and St. Barthelemy
* Anguilla
* Isla Saona to Cabo Engano
* Turks and Caicos Islands and the Southeastern Bahamas

A Hurricane Warning means that hurricane conditions are expected somewhere within the warning area. 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.

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.

Interests elsewhere in Hispaniola and the Bahamas should monitor the progress of Maria. Additional watches and warnings may be required tonight or Wednesday.

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 500 PM AST (2100 UTC), the eye of Hurricane Maria was located near latitude 16.8 North, longitude 64.0 West. Maria is moving toward the west-northwest near 10 mph (17 km/h), and this general motion is expected to continue through Wednesday night. On the
forecast track, the eye of Maria will move near or over the U. S. Virgin Islands tonight, cross Puerto Rico on Wednesday, and then pass just north of the coast of the Dominican Republic Wednesday night and Thursday.

Reports from an Air Force Reserve Hurricane Hunter aircraft indicate that maximum sustained winds are near 165 mph (270 km/h) with higher gusts. Maria is a potentially catastrophic category 5 hurricane on the Saffir-Simpson Hurricane Wind Scale. Some fluctuations in intensity are likely during the next day or so, but Maria is forecast to remain an extremely dangerous category 4 or 5 hurricane as it moves near or over the Virgin Islands and Puerto Rico. Slow weakening is expected after the hurricane emerges over the Atlantic north of Puerto Rico and the Dominican Republic.

Hurricane-force winds extend outward up to 35 miles (55 km) from the center and tropical-storm-force winds extend outward up to 140 miles (220 km).

The latest minimum central pressure reported by the Hurricane Hunter aircraft is 916 mb (27.05 inches).

HAZARDS AFFECTING LAND
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WIND: Hurricane conditions will continue in portions of the hurricane warning area in the Leeward Islands this evening, and spread into the Virgin Islands and Puerto Rico tonight and Wednesday. Tropical storm conditions are occuring over the remainder of the Leeward Islands, and are spreading over the Virgin Islands at this time. Tropical storm conditions should spread over Puerto Rico during the next several hours. Hurricane conditions are expected within the hurricane warning area in the Dominican Republic late Wednesday, with tropical storm conditions expected by early Wednesday. Tropical storm conditions are expected in the tropical storm warning areas in the Dominican Republic on Wednesday. Hurricane conditions are possible on Thursday in the Turks and Caicos Islands and the southeastern Bahamas.

Wind speeds atop and on the windward sides of hills and mountains and on high-rise buildings could be much stronger than the near-surface winds indicated in this advisory.

STORM SURGE: A dangerous storm surge accompanied by large and destructive waves will raise water levels by as much as 7 to 11 feet above normal tide levels in the hurricane warning area near where the center of Maria moves across the Leeward Islands and the British Virgin Islands.

A dangerous storm surge accompanied by large and destructive waves will raise water levels by as much as 4 to 6 feet above normal tide
levels in the hurricane warning area in the Dominican Republic, and
1 to 3 ft elsewhere along the northern coasts of the Dominican
Republic and Haiti.

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 is expected to reach
the following heights above ground if the peak surge occurs at the
time of high tide...

Puerto Rico and the U.S. Virgin Islands...6 to 9 ft

The deepest water will occur along the immediate coast near and to
the north and east of the landfall location, 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: Maria is expected to produce the following rain
accumulations through Thursday:

Central and southern Leeward Islands...10 to 15 inches, isolated 20
inches.
U.S. and British Virgin Islands...10 to 15 inches, isolated 20
inches.
Puerto Rico...12 to 18 inches, isolated 25 inches.
Northern Leeward Islands from Barbuda to Anguilla...4 to 8 inches,
isolated 10 inches.
Windward Islands and Barbados...2 to 4 inches, isolated 6 inches.
Eastern Dominican Republic...4 to 8 inches, isolated 12 inches.

Rainfall on all of these islands will cause life-threatening flash
floods and mudslides.

TORNADES: Several tornadoes are possible over Puerto Rico and the
U. S. Virgin Islands tonight and Wednesday.

SURF: Swells generated by Maria are affecting the Leeward Islands,
Puerto Rico, and the Virgin Islands. 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 PM AST.
Next complete advisory at 1100 PM AST.
Tropical Cyclone Updates will be issued hourly in between these
advisories.
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.

Barbuda

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

Last Observed Sample: 09/19/2017 17:48 (AST). Data relative to MHHW

Observed: 0.30 ft. Predicted: 0.06 ft. Residual: 0.24 ft.

Historical Maximum Water Level: Aug 23 2012, 1.05 ft.
Next High Tide: 09/19/2017 17:55 (AST), 0.06 ft.

Barometric Pressure

Last Observed Sample: 09/19/2017 17:48 (AST)

Barometric Pressure: 1008.1 mb
Last Observed Sample: 09/19/2017 17:48 (AST). Data relative to MHHW

- Observed: 0.90 ft.
- Predicted: -0.03 ft.
- Residual: 0.93 ft.

Next High Tide: 09/19/2017 19:48 (AST), 0.05 ft.

Last Observed Sample: 09/19/2017 17:48 (AST)

Wind Speed: 27 knots
Gusts: 41 knots
Direction: 44° T
NOAA/NOS/CO-OPS 9751364 Christiansted Harbor, St Croix, VI

Barometric Pressure

Last Observed Sample: 09/19/2017 17:48 (AST)
Barometric Pressure: 1002.6 mb

NOAA/NOS/CO-OPS 9751401 Lime Tree Bay, St. Croix, VI

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

Last Observed Sample: 09/19/2017 17:48 (AST). Data relative to MHHW
Observed: 0.74 ft. Predicted: -0.06 ft. Residual: 0.80 ft.
Historical Maximum Water Level: Nov 17 1999, 1.88 ft.
Next High Tide: 09/19/2017 20:43 (AST), 0.02 ft.
NOAA/NOS/CO-OPS 9751401 Lime Tree Bay, St. Croix, VI

Wind Speed / Gusts / Direction

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<th>Speed (knots)</th>
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<th>5</th>
<th>10</th>
<th>15</th>
<th>20</th>
<th>25</th>
<th>30</th>
<th>35</th>
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<tbody>
<tr>
<td>Gusts (knots)</td>
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<td>-</td>
<td>-</td>
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<td>270</td>
<td>360</td>
<td>45</td>
<td>135</td>
<td>225</td>
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</table>

Last Observed Sample: 09/19/2017 17:48 (AST)
Wind Speed: 20 knots Gusts: 31 knots Direction: 46° T

NOAA/NOS/CO-OPS 9751401 Lime Tree Bay, St. Croix, VI

Barometric Pressure

<table>
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<tr>
<th>Pressure (mb)</th>
<th>1004</th>
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<th>1010</th>
<th>1012</th>
<th>1014</th>
<th>1016</th>
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Last Observed Sample: 09/19/2017 17:48 (AST)
Barometric Pressure: 1003.6 mb
Last Observed Sample: 09/19/2017 17:54 (AST). Data relative to MHHW

- Observed: 0.85 ft.
- Predicted: -0.11 ft.
- Residual: 0.96 ft.

Historical Maximum Water Level: Aug 30 2010, 0.89 ft.
Next High Tide: 09/19/2017 20:44 (AST), 0.08 ft.

Last Observed Sample: 09/19/2017 17:54 (AST)
Barometric Pressure: 1007.8 mb
NOAA/NOS/CO-OPS 9752235 Culebra, PR

Last Observed Sample: 09/19/2017 17:48 (AST). Data relative to MHHW
Observed: -0.04 ft. Predicted: -0.17 ft. Residual: 0.13 ft.
Historical Maximum Water Level: Nov 6 2006, 0.84 ft.
Next High Tide: 09/19/2017 20:18 (AST), 0.16 ft.

NOAA/NOS/CO-OPS 9752235 Culebra, PR

Barometric Pressure

Last Observed Sample: 09/19/2017 17:48 (AST)
Barometric Pressure: 1007.3 mb
NOAA/NOS/CO-OPS 9752695 Esperanza, Vieques Island, PR

Last Observed Sample: 09/19/2017 17:54 (AST). Data relative to MHHW
- Observed: 0.37 ft. Predicted: -0.02 ft. Residual: 0.39 ft.
- Historical Maximum Water Level: Aug 22 2011, 0.99 ft.
- Next High Tide: 09/19/2017 19:49 (AST), 0.05 ft.

NOAA/NOS/CO-OPS 9752695 Esperanza, Vieques Island, PR

Wind Speed / Gusts / Direction

Last Observed Sample: 09/19/2017 17:54 (AST)
- Wind Speed: 8 knots Gusts: 21 knots Direction: 59° T
NOAA/NOS/CO-OPS 9752695 Esperanza, Vieques Island, PR

Barometric Pressure

Last Observed Sample: 09/19/2017 17:54 (AST)
Barometric Pressure: 1007.2 mb

NOAA/NOS/CO-OPS 9752619 Isabel Segunda, Vieques Island, PR

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

Last Observed Sample: 09/19/2017 17:54 (AST). Data relative to MHHW
Observed: 0.15 ft. Predicted: -0.36 ft. Residual: 0.51 ft.
Historical Maximum Water Level: n/a
Next High Tide: 09/19/2017 20:34 (AST), 0.05 ft.
NOAA/NOS/CO-OPS 9752619 Isabel Segunda, Vieques Island, PR

Wind Speed / Gusts / Direction

Last Observed Sample: 09/19/2017 17:54 (AST)
Wind Speed: 15 knots Gusts: 23 knots Direction: 51° T

NOAA/NOS/CO-OPS 9753216 Fajardo, PR

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

Last Observed Sample: 09/19/2017 17:54 (AST). Data relative to MHHW
Observed: 0.20 ft. Predicted: -0.42 ft. Residual: 0.62 ft.
Historical Maximum Water Level: Aug 30 2010, 0.84 ft.
Next High Tide: 09/19/2017 20:24 (AST), 0.08 ft.
NOAA/NOS/CO-OPS 9753216 Fajardo, PR

Wind Speed / Gusts / Direction

Last Observed Sample: 09/19/2017 17:54 (AST)
Wind Speed: 26 knots Gusts: 33 knots Direction: 25° T

NOAA/NOS/CO-OPS 9754228 Yabucoa Harbor, PR

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

Last Observed Sample: 09/19/2017 17:54 (AST). Data relative to MHHW
Observed: 0.63 ft. Predicted: -0.13 ft. Residual: 0.76 ft.

Historical Maximum Water Level: n/a
Next High Tide: 09/19/2017 20:53 (AST), -0.02 ft.
NOAA/NOS/CO-OPS 9754228 Yabucoa Harbor, PR

Wind Speed / Gusts / Direction

Wind Speed: 9 knots  Gusts: 19 knots  Direction: 2° T

NOAA/NOS/CO-OPS 9755371 San Juan, La Puntilla, San Juan Bay, PR

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

Predicted Tide  Observed WL  (Obs-Pred)  MHHW

Last Observed Sample: 09/19/2017 17:48 (AST). Data relative to MHHW

Observed: -0.23 ft.  Predicted: -0.45 ft.  Residual: 0.22 ft.

Historical Maximum Water Level: Sep 18 1989, 2.77 ft.

Next High Tide: 09/19/2017 20:42 (AST), 0.17 ft.
Wind Speed / Gusts / Direction

Last Observed Sample: 09/19/2017 17:48 (AST)
Wind Speed: 10 knots Gusts: 18 knots Direction: 52° T

Barometric Pressure

Last Observed Sample: 09/19/2017 17:48 (AST)
Barometric Pressure: 1010.3 mb
Last Observed Sample: 09/19/2017 17:54 (AST). Data relative to MHHW

Observed: -0.28 ft. Predicted: -0.38 ft. Residual: 0.10 ft.
Historical Maximum Water Level: Oct 8 2010, 0.90 ft.
Next High Tide: 09/19/2017 20:09 (AST), 0.06 ft.

Last Observed Sample: 09/19/2017 17:54 (AST)

Wind Speed: 2 knots Gusts: 3 knots Direction: 109° T
NOAA/NOS/CO-OPS 9757809 Arecibo, PR

Barometric Pressure

Last Observed Sample: 09/19/2017 17:54 (AST)
Barometric Pressure: 1012.8 mb

NOAA/NOS/CO-OPS 9759110 Magueyes Island, PR

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

Last Observed Sample: 09/19/2017 17:48 (AST). Data relative to MHHW
Observed: 0.17 ft. Predicted: -0.02 ft. Residual: 0.19 ft.
Historical Maximum Water Level: Aug 31 1979, 1.96 ft.
Next High Tide: 09/19/2017 20:46 (AST), 0.09 ft.
Last Observed Sample: 09/19/2017 17:48 (AST)

Wind Speed: 6 knots  
Gusts: 9 knots  
Direction: 17° T

Barometric Pressure: 1009.8 mb
Last Observed Sample: 09/19/2017 17:48 (AST). Data relative to MHHW

**Observed:** -0.30 ft. **Predicted:** -0.38 ft. **Residual:** 0.08 ft.

Historical Maximum Water Level: Oct 1 2015, 0.99 ft.

Next High Tide: 09/19/2017 20:24 (AST), 0.11 ft.

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**Wind Speed / Gusts / Direction**

Last Observed Sample: 09/19/2017 17:48 (AST)

**Wind Speed:** 0 knots **Gusts:** 4 knots **Direction:** 79° T
NOAA/NOS/CO-OPS 9759394 Mayaguez, PR

Barometric Pressure

Last Observed Sample: 09/19/2017 17:48 (AST)
Barometric Pressure: 1010.5 mb

NOAA/NOS/CO-OPS 9759938 Mona Island, PR

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

Last Observed Sample: 09/19/2017 17:54 (AST). Data relative to MHHW
Observed: 0.20 ft. Predicted: -0.16 ft. Residual: 0.36 ft.
Historical Maximum Water Level: Dec 23 2010, 1.24 ft.
Next High Tide: 09/19/2017 20:10 (AST), 0.02 ft.
Last Observed Sample: 09/19/2017 17:54 (AST)
Barometric Pressure: 1011.1 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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<tbody>
<tr>
<td>9761115</td>
<td>Barbuda</td>
<td>09/19/2017 17:48 (AST)</td>
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