Hurricane IRMA QuickLook
Posted: 06:00 EDT 09/08/2017

NOAA and NOAA Partnership Stations Relative to the Storm

Storm Analysis
As of 09/08/2017 06:00 EDT, water levels across the southern Florida, from Trident Pier to Fort Myers, are at or near normal tide levels. Over the past week, water levels have been averaging 0.3 to 0.5 feet above normal tide levels, with slightly higher averages for stations located along the western shore of Florida.

Winds across the Florida Peninsula are 5 to 10 knots with gusts to 15 knots and barometric pressure remains normal.
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: ADM

--SELECT NATIONAL HURRICANE CENTER ADVISORY INFORMATION:

Hurricane Irma Advisory Number 37
NWS National Hurricane Center Miami FL
500 AM EDT Fri Sep 08 2017

...IRMA MOVING THROUGH THE SOUTHEASTERN BAHAMAS AS AN EXTREMELY DANGEROUS CATEGORY 4 HURRICANE...

WATCHES AND WARNINGS
-----------------------
CHANGES WITH THIS ADVISORY:
None.

SUMMARY OF WATCHES AND WARNINGS IN EFFECT:

A Storm Surge Warning is in effect for...
* Jupiter Inlet southward around the Florida peninsula to Bonita Beach
* Florida Keys

A Storm Surge Watch is in effect for...
* North of Jupiter Inlet to Sebastian Inlet
* North of Bonita Beach to Venice

A Hurricane Warning is in effect for...
* Jupiter Inlet southward around the Florida peninsula to Bonita Beach
* Florida Keys
* Lake Okeechobee
* Florida Bay
* Haiti from the northern border with the Dominican Republic to Le Mole St. Nicholas
* Southeastern Bahamas and the Turks and Caicos Islands
* Cuban provinces of Camaguey, Ciego de Avila, Sancti Spiritus, and Villa Clara
* Central Bahamas
* Northwestern Bahamas

A Hurricane Watch is in effect for...
* North of Jupiter Inlet to Sebastian Inlet
* North of Bonita Beach to Anna Maria Island
* Cuban provinces of Guantanamo, Holguin, Las Tunas and Matanzas

2
A Tropical Storm Warning is in effect for...
* Haiti from south of Le Mole St. Nicholas to Port-Au-Prince
* Cuban provinces of Guantanamo, Holguin, and Las Tunas

A Storm Surge Warning means there is a danger of life-threatening inundation, from rising water moving inland from the coastline, during the next 36 hours in the indicated locations. For a depiction of areas at risk, please see the National Weather Service Storm Surge Watch/Warning Graphic, available at hurricanes.gov. This is a life-threatening situation. Persons located within these areas should take all necessary actions to protect life and property from rising water and the potential for other dangerous conditions. Promptly follow evacuation and other instructions from local officials.

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 Warning means that hurricane conditions are expected somewhere within the warning area. Preparations to protect life and property should be rushed to completion.

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.

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

Interests elsewhere in Cuba, Florida, and the southeastern United States should monitor the progress of Irma.

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 AM EDT, the eye of Hurricane Irma was located ABOUT 55 MI OF GREAT INAGUA ISLAND and ABOUT 495 MI SE OF MIAMI FLORIDA. Irma is moving toward the west-northwest near 16 mph, and this motion is expected to continue for the next day or so with a decrease in forward speed. A turn toward the northwest is expected by late Saturday. On the forecast track, the eye of Irma should continue to move westward away from the Turks and Caicos Islands and toward the southeastern Bahamas this morning. The core of the hurricane will then move between the north coast of Cuba and the Bahamas during the next day or two, and be near the Florida Keys and the southern Florida Peninsula Sunday morning.

Maximum sustained winds are near 155 mph with higher gusts. Irma is a category 4 hurricane on the Saffir-Simpson Hurricane Wind Scale. Some fluctuations in intensity are likely during the next day or two, but Irma is forecast to remain a powerful category 4 hurricane during the next couple of days.

Hurricane-force winds extend outward up to 70 miles from the center and tropical-storm-force winds extend outward up to 185 miles.

The estimated minimum central pressure is 925 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 is expected to reach the following HEIGHTS ABOVE GROUND if the peak surge occurs at the time of high tide...

Jupiter Inlet to Bonita Beach, including Florida Keys...5 to 10 ft
Bonita Beach to Venice...3 to 5 ft
Jupiter Inlet to Sebastian Inlet...3 to 6 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.

The combination of a life-threatening storm surge and large breaking waves will raise water levels ABOVE NORMAL TIDE LEVELS by the following amounts within the hurricane warning area near and to the north of the center of Irma. Near the coast, the surge will be accompanied by large and destructive waves.

Turks and Caicos Islands...15 to 20 ft
Southeastern and central Bahamas...15 to 20 ft
Northwestern Bahamas...5 to 10 ft
Northern coast of Haiti and the Gulf of Gonave...1 to 3 ft
Northern coast of Cuba in the warning area...5 to 10 ft

WIND: Hurricane or tropical storm conditions are expected to continue within the hurricane warning area in Haiti for the next few hours. Hurricane conditions are occurring on the Turks and Caicos Islands. Tropical storm and hurricane conditions are spreading across the southeastern Bahamas and will move into the central Bahamas later this morning. Hurricane conditions are expected within the hurricane warning area along the north coast of Cuba late today and Saturday. Hurricane conditions are expected in the northwestern Bahamas tonight and Saturday, and in portions of southern Florida and the Florida Keys Saturday night or early Sunday.

Hurricane conditions are possible within the watch area in Florida by Sunday, with tropical storm conditions possible by late Saturday.

RAINFALL: Irma is expected to produce the following rain accumulations through Tuesday night:

Northern Dominican Republic and northern Haiti...additional 2 to 4 inches.
Southern Dominican Republic and southern Haiti...additional 1 to 2 inches.
Turks and Caicos...additional 3 to 6 inches.
Southern Bahamas and northern Cuba...10 to 15 inches, isolated 20 inches.
Southern Cuba...4 to 8 inches, isolated 12 inches.
The upper Florida Keys into southeast Florida...10 to 15 inches, isolated 20 inches.
Eastern Florida northward into coastal Georgia...8 to 12 inches, isolated 16 inches.
Lower Florida Keys...3 to 5 inches.
Western Florida Peninsula into much of Georgia...South Carolina...and Western North Carolina...3 to 6 inches.

In all areas this rainfall may cause life-threatening flash floods and in some areas mudslides.
SURF: Swells generated by Irma are affecting Puerto Rico, the Virgin Islands, the southeastern Bahamas, the Turks and Caicos Islands, the northern coast of the Dominican Republic, and should start affecting portions of the southeast coast of the United States later today and tonight. These swells are likely to cause life-threatening surf and rip current conditions. Please consult products from your local weather office.

NEXT ADVISORY
-------------
Next intermediate advisory at 800 AM EDT.
Next complete advisory at 1100 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: Key West - Water Level, Key West - Winds, Key West - Barometric, Vaca Key - Water Level, Vaca Key - Winds, Vaca Key - Barometric, Virginia Key - Water Level, Virginia Key - Winds, Lake Worth Pier - Water Level, Lake Worth Pier - Winds, Trident Pier - Water Level, Trident Pier - Winds, Naples - Water Level, Naples - Winds, Fort Myers - Water Level, Fort Myers - Winds
Last Observed Sample: 09/08/2017 06:12 (EDT). Data relative to MHHW

Observed: -1.14 ft. Predicted: -1.45 ft. Residual: 0.31 ft.


Next High Tide: 09/08/2017 12:05 (EDT), 0.23 ft.

Wind Speed: 2 knots  Gusts: 4 knots  Direction: 67° T
NOAA/NOS/CO-OPS 8724580 Key West, FL

Barometric Pressure

Barometric Pressure: 1010.9 mb

Last Observed Sample: 09/08/2017 06:12 (EDT)

NOAA/NOS/CO-OPS 8723970 Vaca Key, FL

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

Last Observed Sample: 09/08/2017 06:06 (EDT). Data relative to MHHW

Observed: 0.15 ft. Predicted: -0.07 ft. Residual: 0.22 ft.


Next High Tide: 09/08/2017 16:11 (EDT), 0.22 ft.
Last Observed Sample: 09/08/2017 06:06 (EDT)
Wind Speed: 9 knots Gusts: 12 knots Direction: 62° T

Barometric Pressure: 1010.7 mb
**NOAA/NOS/CO-OPS 8723214 Virginia Key, FL**

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

- Last Observed Sample: 09/08/2017 06:06 (EDT). Data relative to MHHW
- Observed: -1.42 ft. Predicted: -1.81 ft. Residual: 0.39 ft.
- Next High Tide: 09/08/2017 11:15 (EDT), 0.44 ft.

**Wind Speed / Gusts / Direction**

- Last Observed Sample: 09/08/2017 06:06 (EDT)
- Wind Speed: 8 knots Gusts: 11 knots Direction: 37° T
Last Observed Sample: 09/08/2017 06:06 (EDT). Data relative to MHHW
Observed: -1.78 ft. Predicted: -2.00 ft. Residual: 0.22 ft.
Historical Maximum Water Level: Oct 28 2012, 2.00 ft.
Next High Tide: 09/08/2017 10:07 (EDT), 0.28 ft.

Wind Speed: 14 knots Gusts: 15 knots Direction: 79° T
NOAA/NOS/CO-OPS 8721604 Trident Pier, FL

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

Last Observed Sample: 09/08/2017 06:06 (EDT). Data relative to MHHW

Observed: -1.92 ft. Predicted: -2.34 ft. Residual: 0.42 ft.

Historical Maximum Water Level: Sep 26 2004, 4.01 ft.

Next High Tide: 09/08/2017 09:53 (EDT), 0.35 ft.

---

NOAA/NOS/CO-OPS 8721604 Trident Pier, FL

Wind Speed / Gusts / Direction

Last Observed Sample: 09/08/2017 06:06 (EDT)

Wind Speed: 7 knots Gusts: 11 knots Direction: 44° T
NOAA/NOS/CO-OPS 8725110 Naples, FL

Last Observed Sample: 09/08/2017 06:12 (EDT). Data relative to MHHW

- Observed: -1.01 ft. Predicted: -1.64 ft. Residual: 0.63 ft.
- Next High Tide: 09/08/2017 14:15 (EDT), 0.33 ft.

NOAA/NOS/CO-OPS 8725110 Naples, FL

Wind Speed / Gusts / Direction

Last Observed Sample: 09/08/2017 06:12 (EDT)

- Wind Speed: 4 knots
- Gusts: 8 knots
- Direction: 22° T
Last Observed Sample: 09/08/2017 06:06 (EDT). Data relative to MHHW

Observed: 0.56 ft  Predicted: 0.04 ft  Residual: 0.52 ft.

Historical Maximum Water Level: Nov 23 1988, 3.41 ft.

Next High Tide: 09/08/2017 18:06 (EDT), 0.18 ft.

Last Observed Sample: 09/08/2017 06:06 (EDT)

Wind Speed: 5 knots  Gusts: 7 knots  Direction: 15° T
<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>8724580</td>
<td>Key West, FL</td>
<td>09/08/2017 06:12 (EDT)</td>
<td>-1.14 ft</td>
<td>-1.45 ft</td>
<td>0.31 ft</td>
<td>0.60 ft</td>
</tr>
<tr>
<td>8723970</td>
<td>Vaca Key, FL</td>
<td>09/08/2017 06:06 (EDT)</td>
<td>0.15 ft</td>
<td>-0.07 ft</td>
<td>0.22 ft</td>
<td>0.60 ft</td>
</tr>
<tr>
<td>8723214</td>
<td>Virginia Key, FL</td>
<td>09/08/2017 06:06 (EDT)</td>
<td>-1.42 ft</td>
<td>-1.81 ft</td>
<td>0.39 ft</td>
<td>0.80 ft</td>
</tr>
<tr>
<td>8722670</td>
<td>Lake Worth Pier, FL</td>
<td>09/08/2017 06:06 (EDT)</td>
<td>-1.78 ft</td>
<td>-2.00 ft</td>
<td>0.22 ft</td>
<td>0.61 ft</td>
</tr>
<tr>
<td>8721604</td>
<td>Trident Pier, FL</td>
<td>09/08/2017 06:06 (EDT)</td>
<td>-1.92 ft</td>
<td>-2.34 ft</td>
<td>0.42 ft</td>
<td>0.74 ft</td>
</tr>
<tr>
<td>8725110</td>
<td>Naples, FL</td>
<td>09/08/2017 06:12 (EDT)</td>
<td>-1.01 ft</td>
<td>-1.64 ft</td>
<td>0.63 ft</td>
<td>1.04 ft</td>
</tr>
<tr>
<td>8725520</td>
<td>Fort Myers, FL</td>
<td>09/08/2017 06:06 (EDT)</td>
<td>0.56 ft</td>
<td>0.04 ft</td>
<td>0.52 ft</td>
<td>1.08 ft</td>
</tr>
</tbody>
</table>

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