Storm Analysis

As of 08/22/2011 00:00 AST, water levels in the U.S. Virgin Islands and Puerto Rico are rising and range between 0.25 and 1.1 feet above predicted. Winds are increasing as well and range between 15 and 30 kts with gusts over 40 kts at many locations. Earlier this evening, Lime Tree Bay, VI reported a wind gust of 49 kts. Barometric pressure continues to fall across the region.

Water Level and Meteorological plots available below are updated automatically. Water level predictions relative to Mean Lower Low Water are:

Culebra, PR: Next predicted high tides are 0.66 ft (0.20 m) at 08/22/2011 02:19 AST and 1.02 ft (0.31 m) at 08/22/2011 17:03 AST.

Esperanza, Vieques Island, PR: Next predicted high tides are 0.70 ft (0.21 m) at 08/22/2011 19:12 AST and 0.75 ft (0.23 m) at 08/23/2011 19:53 AST.
San Juan, PR: Next predicted high tides are 1.02 ft (0.31 m) at 08/22/2011 02:28 AST and 1.54 ft (0.47 m) at 08/22/2011 16:46 AST.

Magueyes Island, PR: Next predicted high tides are 0.82 ft (0.25 m) at 08/22/2011 20:14 AST and 0.85 ft (0.27 m) at 08/23/2011 20:43 AST.

Mayaguez, PR: Next predicted high tides are 0.55 ft (0.17 m) at 08/22/2011 02:59 AST and 0.81 ft (0.25 m) at 08/22/2011 16:31 AST.

Mona Island, PR: Next predicted high tides are 0.85 ft (0.26 m) at 08/22/2011 21:23 AST and 0.89 ft (0.27 m) at 08/23/2011 22:04 AST.

Charlotte Amalie, VI: Next predicted high tides are 0.87 ft (0.27 m) at 08/22/2011 18:18 AST and 0.924 ft (0.29 m) at 08/23/2011 19:02 AST.

Lameshur Bay, St. John, VI: Next predicted high tides are 0.78 ft (0.24 m) at 08/22/2011 17:48 AST and 0.83 ft (0.25 m) at 08/23/2011 18:52 AST.

Lime Tree Bay, VI: Next predicted high tides are 0.82 ft (0.25 m) at 08/22/2011 20:20 AST and 0.88 ft (0.27 m) at 08/23/2011 20:49 AST.

For additional data, please see the Center for Operational Oceanographic Products & Services website. For information on Highest Astronomical Tide (HAT), NAVD88 and other datums, please see Tidal Datums. For more information or archived products and reports, please see the Storm QuickLook Homepage.

Analyst:PFF

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SELECT NATIONAL HURRICANE CENTER ADVISORY INFORMATION:

TROPICAL STORM IRENE ADVISORY NUMBER  6
1100 PM AST SUN AUG 21 2011

...IRENE STRENGTHENING AS IT APPROACHES PUERTO RICO...

WATCHES AND WARNINGS

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A HURRICANE WARNING IS IN EFFECT FOR...
* PUERTO RICO...VIEQUES...AND CULEBRA

A HURRICANE WATCH IS IN EFFECT FOR...
* U.S. VIRGIN ISLANDS

A TROPICAL STORM WARNING IS IN EFFECT FOR...
* U.S. VIRGIN ISLANDS

FOR STORM INFORMATION SPECIFIC TO YOUR AREA IN THE UNITED STATES...INCLUDING POSSIBLE INLAND WATCHES AND WARNINGS...PLEASE MONITOR PRODUCTS ISSUED BY
AT 1100 PM AST THE CENTER OF TROPICAL STORM IRENE WAS LOCATED ABOUT 50 MI WNW OF ST. CROIX AND ABOUT 50 MI SE OF SAN JUAN PUERTO RICO. IRENE IS MOVING TOWARD THE WEST-NORTHWEST NEAR 15 MPH. THIS GENERAL MOTION IS EXPECTED TO CONTINUE FOR THE NEXT COUPLE OF DAYS WITH A GRADUAL DECREASE IN FORWARD SPEED. ON THE FORECAST TRACK THE CENTER OF IRENE WILL MOVE NEAR OR OVER PUERTO RICO TONIGHT AND NEAR OR OVER THE DOMINICAN REPUBLIC ON MONDAY AND MONDAY NIGHT.

DATA FROM AN AIR FORCE RESERVE HURRICANE HUNTER AIRCRAFT INDICATE THAT MAXIMUM SUSTAINED WINDS HAVE INCREASED TO NEAR 70 MPH WITH HIGHER GUSTS. SOME STRENGTHENING IS STILL POSSIBLE OVERNIGHT...AND IRENE COULD BECOME A HURRICANE BEFORE MOVING OVER PUERTO RICO IN THE NEXT FEW HOURS. SOME WEAKENING IS EXPECTED ON MONDAY AND MONDAY NIGHT AS THE CENTER MOVES NEAR OR OVER THE DOMINICAN REPUBLIC. SOME RESTRENGTHENING IS EXPECTED LATE TUESDAY AFTER THE CENTER MOVES OVER WATER.

TROPICAL STORM FORCE WINDS EXTEND OUTWARD UP TO 150 MILES FROM THE CENTER. A STATION AT SALT RIVER BAY ON ST. CROIX RECENTLY REPORTED A SUSTAINED WIND OF 47 MPH AND A GUST TO 57 MPH. ROOSEVELT ROADS NAVAL STATION ON PUERTO RICO RECENTLY REPORTED A WIND GUST TO 45 MPH.

THE LATEST MINIMUM CENTRAL PRESSURE MEASURED BY THE HURRICANE HUNTER AIRCRAFT WAS 993 MB...29.32 INCHES.

HAZARDS AFFECTING LAND
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WIND...TROPICAL STORM CONDITIONS ARE OCCURRING OR IMMINENT IN THE VIRGIN ISLANDS...EASTERN PUERTO RICO...CULEBRA AND VIEQUES...AND WILL CONTINUE TO SPREAD ACROSS PUERTO RICO TONIGHT. HURRICANE CONDITIONS ARE EXPECTED OVER PUERTO RICO...VIEQUES AND CULEBRA TONIGHT. THE HIGHEST WINDS ARE LIKELY TO OCCUR OVER AREAS OF ELEVATED TERRAIN.

RAINFALL...IRENE IS EXPECTED TO PRODUCE TOTAL RAINFALL ACCUMULATIONS OF 5 TO 10 INCHES ACROSS PUERTO RICO...THE VIRGIN ISLANDS...THE DOMINICAN REPUBLIC...HAITI...THE SOUTHEASTERN BAHAMAS AND THE TURKS AND CAICOS ISLANDS. ISOLATED MAXIMUM AMOUNTS OF UP TO 20 INCHES ARE POSSIBLE. THESE RAINS COULD CAUSE LIFE-THREATENING FLASH FLOODS AND MUD SLIDES IN AREAS OF STEEP TERRAIN.

STORM SURGE...A STORM SURGE OF 1 TO 3 FEET ABOVE NORMAL TIDE LEVELS IS EXPECTED ALONG THE COAST OF PUERTO RICO...AS WELL AS IN THE TROPICAL STORM WARNING AREA. NEAR THE COAST...THE SURGE WILL BE ACCOMPANIED BY LARGE AND DANGEROUS WAVES.

FORECASTER BRENnan
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.

Culebra, PR - Return to List

NOAA/NOS/C0-CPS
Preliminary 6 min. Water Level vs. Predicted Plot
9752235 Culebra, PR
from 05/19/2011 23:48 - 08/22/2011 23:48

Last Observed Sample: 08/21/2011 23:42 (AST)
Relative to MLLW: Observed: 1.16 ft. Predicted: 0.61 ft. Residual: 0.55 ft.
Historical Maximum Water Level: Nov 6 2006, 0.85 ft. above MHHW

Culebra, PR - Return to List

NOAA/NOS/C0-CPS
Wind Speed/Gusts/Dir
9752235 Culebra, PR
from 05/19/2011 23:48 - 08/22/2011 23:48

Last Observed Sample: 08/21/2011 23:42 (AST)
Wind Speed: 15 knots Gusts: 36 knots Direction: 82° T
Culebra, PR - Return to List

NOAA/NOS/C0-CPS
Barometric Pressure Plot
9752235 Culebra, PR
From 08/19/2011 23:42 - 08/22/2011 23:48

Barometric Pressure: 1005.0 mb

Culebra, PR - Return to List

NOAA/NOS/C0-CPS
Air/Water Temperature Plot
9752235 Culebra, PR
From 08/19/2011 23:42 - 08/22/2011 23:48

Water Temperature: 83.3° F Air Temperature: 76.1° F
Tropical Storm IRENE QuickLook, POSTED 00:00 AST 08/22/2011

Esperanza, Vieques Island, PR - Return to List

NOAA/NOS/C0-CPS
Preliminary 6 min. Water Level vs. Predicted Plot
9752695 Esperanza, Vieques Island, PR
from 08/19/2011 23:48 - 08/22/2011 23:48

Last Observed Sample: 08/21/2011 23:42 (AST)
Relative to MLLW: Observed: 1.44 ft. Predicted: 0.46 ft. Residual: 0.98 ft.
Historical Maximum Water Level: Aug 30 2010, 0.84 ft. above MHHW

Esperanza, Vieques Island, PR - Return to List

NOAA/NOS/C0-CPS
Wind Speed/Gusts/Dir
9752695 Esperanza, Vieques Island, PR
from 08/19/2011 23:48 - 08/22/2011 23:48

Last Observed Sample: 08/21/2011 23:42 (AST)
Wind Speed: 20 knots Gusts: 30 knots Direction: 111° T
Esperanza, Vieques Island, PR - Return to List

NOAA/NOS/C0-CPS
Barometric Pressure Plot
9752695 Esperanza, Vieques Island, PR

Last Observed Sample: 08/21/2011 22:06 (AST)
Barometric Pressure: 1001.2 mb

Esperanza, Vieques Island, PR - Return to List

NOAA/NOS/C0-CPS
Air/Water Temperature Plot
9752695 Esperanza, Vieques Island, PR

Last Observed Sample: 08/21/2011 23:42 (AST)
Water Temperature: 83.3° F Air Temperature: 78.3° F
San Juan, PR - Return to List

NOAA/NOS/C0-CPS
Preliminary 6 min. Water Level vs. Predicted Plot
S75371 San Juan, PR

Last Observed Sample: 08/21/2011 23:42 (AST)
Relative to MLLW: Observed: 1.35 ft. Predicted: 0.93 ft. Residual: 0.42 ft.
Historical Maximum Water Level: Sep 21 1998, 1.21 ft. above MHHW

San Juan, PR - Return to List

NOAA/NOS/C0-CPS
Wind Speed/Gusts/Dir
S75371 San Juan, PR

Last Observed Sample: 08/21/2011 23:42 (AST)
Wind Speed: 22 knots Gusts: 33 knots Direction: 46° T
San Juan, PR - Return to List

NOAA/NOS/C0-CPS
Barometric Pressure Plot
975371 San Juan, PR

Last Observed Sample: 08/21/2011 23:42 (AST)
Barometric Pressure: 1006.6 mb

Magueyes Island, PR - Return to List

NOAA/NOS/C0-CPS
Preliminary 6 min. Water Level vs. Predicted Plot
9755410 Magueyes Island, PR
From 08/19/2011 23:45 - 08/22/2011 23:48

Last Observed Sample: 08/21/2011 23:42 (AST)
Relative to MLLW: Observed: 0.69 ft. Predicted: 0.48 ft. Residual: 0.21 ft.
Historical Maximum Water Level: Sep 22 1998, 1.6 ft. above MHHW
Magueyes Island, PR - Return to List

NOAA/NOCS/C0-CPS
Wind Speed/Gusts/Dir
9799110 Magueyes Island, PR

Last Observed Sample: 08/21/2011 23:42 (AST)
Wind Speed: 7 knots Gusts: 10 knots Direction: 14° T

Mayaguez, PR - Return to List

NOAA/NOCS/C0-CPS
Preliminary 6 min. Water Level vs. Predicted Plot
5799394 Mayaguez, PR
From 08/19/2011 23:45 - 08/22/2011 23:48

Last Observed Sample: 08/21/2011 23:42 (AST)
Relative to MLLW: Observed: 1.00 ft. Predicted: 0.32 ft. Residual: 0.68 ft.
Historical Maximum Water Level: 0 ft. above MHHW
Mayaguez, PR - Return to List

NOAA/NOS/C0-CPS
Wind Speed/Gusts/Dir
9759394 Mayaguez, PR
from 08/19/2011 23:48 - 08/22/2011 23:48

Last Observed Sample: 08/21/2011 23:42 (AST)
Wind Speed: 3 knots Gusts: 9 knots Direction: 34° T

Mona Island, PR - Return to List

NOAA/NOS/C0-CPS
Preliminary 6 min. Water Level vs. Predicted Plot
9759938 Mona Island, PR
from 08/19/2011 23:48 - 08/22/2011 23:48

Relative to MLLW: Observed: 0.82 ft. Predicted: 0.53 ft. Residual: 0.29 ft.
Historical Maximum Water Level: Dec 23 2010, 1.26 ft. above MHHW
Charlotte Amalie, VI - Return to List

NUA0/NOAA/CO-OPS
Preliminary 6 min. Water Level vs. Predicted Plot
9751639 Charlotte Amalie, VI
from 08/19/2011 23:48 - 08/22/2011 23:48

Last Observed Sample: 08/21/2011 23:42 (AST)
Relative to MLLW: Observed: 1.27 ft. Predicted: 0.49 ft. Residual: 0.78 ft.
Historical Maximum Water Level: Sep 16 1995, 2.93 ft. above MHHW

Lameshur Bay, St. John, VI - Return to List

NUA0/NOAA/CO-OPS
Preliminary 6 min. Water Level vs. Predicted Plot
9751381 Lameshur Bay, St. John, VI
from 08/19/2011 23:48 - 08/22/2011 23:48

Last Observed Sample: 08/21/2011 23:42 (AST)
Relative to MLLW: Observed: 1.18 ft. Predicted: 0.41 ft. Residual: 0.77 ft.
Historical Maximum Water Level: Aug 30 2010, 0.9 ft. above MHHW
Tropical Storm IRENE QuickLook, POSTED 00:00 AST 08/22/2011

Lime Tree Bay, VI - Return to List

NOAA/NOS/C0-CPS
Preliminary 6 min. Water Level vs. Predicted Plot
9/1401 Lime Tree Bay, VI
from 08/19/2011 23:48 - 08/22/2011 23:48

Last Observed Sample: 08/21/2011 23:42 (AST)
Relative to MLLW: Observed: 1.25 ft. Predicted: 0.56 ft. Residual: 0.69 ft.
Historical Maximum Water Level: Nov 17 1999, 1.88 ft. above MHHW

Lime Tree Bay, VI - Return to List

NOAA/NOS/C0-CPS
Wind Speed/Gusts/Dir
9/1401 Lime Tree Bay, VI
from 08/19/2011 23:48 - 08/22/2011 23:48

Last Observed Sample: 08/21/2011 23:42 (AST)
Wind Speed: 32 knots Gusts: 39 knots Direction: 184° T