Storm Analysis
As of 8/31/2016 12:00 HST, water levels across the Hawaiian Islands are slightly elevated and range between 0.3 and 1.0 feet above normal tide levels. Madeline will make its closest pass to Hawaii this afternoon. Winds are generally 20 knots or less with some higher gusts to 35 knots especially across the Big Island. Barometric pressure continues to fall across the Hawaiian Islands.
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: CRD

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SELECT CENTRAL PACIFIC HURRICANE CENTER ADVISORY INFORMATION:

HURRICANE MADELINE ADVISORY NUMBER 22
NWS CENTRAL PACIFIC HURRICANE CENTER HONOLULU HI - 1100 AM HST WED AUG 31 2016

...MADELINE WEAKENING AS IT DRAWS CLOSER TO HAWAII...

SUMMARY OF 1100 AM HST INFORMATION
--------------------------------------------

LOCATION...18.6N 154.2W
ABOUT 95 MI... SE OF HILO HAWAII
ABOUT 305 MI... SE OF HONOLULU HAWAII
MAXIMUM SUSTAINED WINDS...75 MPH PRESENT MOVEMENT...W OR 260 DEGREES AT 13 MPH.
MINIMUM CENTRAL PRESSURE...991 MB

WATCHES AND WARNINGS
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CHANGES WITH THIS ADVISORY:

The Hurricane Warning has been discontinued for Hawaii County. A Tropical Storm Warning is now in effect for Hawaii County.

SUMMARY OF WATCHES AND WARNINGS IN EFFECT:

A Tropical Storm Warning is in effect for...
* Hawaii County
* Maui County including the islands of Maui, Molokai, Lanai and Kahoolawe

A Tropical Storm Warning means that tropical storm conditions are expected somewhere within the watch area, in this case over the next 24 hours. Preparations to protect life and property should be complete.

For storm information specific to your area, please monitor products issued by the National Weather Service office in Honolulu Hawaii.

DISCUSSION AND 48-HOUR OUTLOOK
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At 1100 AM HST, the center of Hurricane Madeline was located near latitude 18.6 North, longitude 154.2 West. Madeline is moving toward the west near 13 mph. This general motion is expected to continue for the next couple of days.

Maximum sustained winds are near 75 mph with higher gusts. Steady weakening is forecast during the next 48
Hurricane-force winds extend outward up to 10 miles from the center and tropical-storm-force winds extend outward up to 125 miles. During the past couple of hours, tropical storm force winds of 43 mph gusting to 51 mph have been reported at Kamuela Airport in Hawaii County.

The estimated minimum central pressure is 991 mb.

HAZARDS AFFECTING LAND
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WIND: Tropical storm conditions are expected to continue over Hawaii County through tonight and will develop over portions of Maui County later today and tonight. Winds will be strongest over mountains and where winds blow downslope from higher terrain.

SURF: Swells generated by Madeline will continue to increase across Hawaiian waters today, possibly becoming damaging along east facing shores of Hawaii County and eastern portions of the Island of Maui into tonight.

RAIN: Madeline is expected to produce total rain accumulations of 5 to 10 inches, with isolated maximum amounts near 15 inches, across Hawaii County, especially over windward areas and the Kau District. Total rainfall accumulations of 1 to 3 inches, with isolated maximum amounts up to 4 inches, can be expected in the islands of Maui County, mainly over windward terrain. This rainfall may lead to dangerous flash floods and mudslides.

NEXT ADVISORY
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Next intermediate advisory at 200 PM HST.
Next complete advisory at 500 PM HST.

Forecaster Wroe

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.
Last Observed Sample: 08/31/2016 11:54 (HST). Data relative to MHHW

Observed: -0.41 ft.  Predicted: -0.90 ft.  Residual: 0.49 ft.

Historical Maximum Water Level: Jan 20 1981, 1.37 ft.

Next High Tide: 08/31/2016 14:56 (HST), 0.31 ft.

Wind Speed: 4 knots  Gusts: 8 knots  Direction: 46° T
Last Observed Sample: 08/31/2016 11:54 (HST)
Barometric Pressure: 1014.5 mb

Last Observed Sample: 08/31/2016 11:54 (HST). Data relative to MHHW
Observed: -0.55 ft. Predicted: -1.37 ft. Residual: 0.82 ft.
Historical Maximum Water Level: Dec 13 2008, 1.22 ft.
Next High Tide: 08/31/2016 15:46 (HST), 0.08 ft.
Wind Speed: 11 knots  
Gusts: 22 knots  
Direction: 62° T

Barometric Pressure: 1010.2 mb
Last Observed Sample: 08/31/2016 11:54 (HST). Data relative to MHHW

Observed: -0.19 ft. Predicted: -0.47 ft. Residual: 0.28 ft.
Historical Maximum Water Level: Dec 20 1968, 1.23 ft.
Next High Tide: 08/31/2016 14:23 (HST), 0.31 ft.

Last Observed Sample: 08/31/2016 11:54 (HST)
Wind Speed: 18 knots Gusts: 24 knots Direction: 44° T
NOAA/NOS/CO-OPS 1615680 Kahului, Kahului Harbor, HI

Barometric Pressure

Last Observed Sample: 08/31/2016 11:54 (HST)
Barometric Pressure: 1014.5 mb

NOAA/NOS/CO-OPS 1612480 Mokuoloe, HI

Last Observed Sample: 08/31/2016 11:54 (HST). Data relative to MHHW
Observed: -0.09 ft. Predicted: -0.63 ft. Residual: 0.54 ft.
Historical Maximum Water Level: Jan 8 1974, 1.46 ft.
Next High Tide: 08/31/2016 14:31 (HST), 0.13 ft.
Wind Speed / Gusts / Direction

Barometric Pressure

Last Observed Sample: 08/31/2016 11:54 (HST)

Wind Speed: 14 knots Gusts: 19 knots Direction: 69° T

Barometric Pressure: 1015.7 mb
Last Observed Sample: 08/31/2016 11:54 (HST). Data relative to MHHW
  Observed: -0.78 ft. Predicted: -1.06 ft. Residual: 0.28 ft.
  Historical Maximum Water Level: Feb 14 1967, 1.49 ft.
  Next High Tide: 08/31/2016 15:44 (HST), 0.21 ft.

Last Observed Sample: 08/31/2016 11:54 (HST)
  Wind Speed: 6 knots  Gusts: 11 knots  Direction: 25° T
NOAA/NOS/CO-OPS 1612340 Honolulu, HI
Barometric Pressure

Last Observed Sample: 08/31/2016 11:54 (HST)
Barometric Pressure: 1015.3 mb

NOAA/NOS/CO-OPS 1611400 Nawiliwili, HI
Last Observed Sample: 08/31/2016 11:54 (HST)
Data relative to MHHW
Observed: -0.54 ft. Predicted: -0.86 ft. Residual: 0.32 ft.
Historical Maximum Water Level: Sep 11 1992, 3.15 ft.
Next High Tide: 08/31/2016 15:31 (HST), 0.16 ft.
Last Observed Sample: 08/31/2016 11:54 (HST)

Wind Speed: 15 knots  
Gusts: 18 knots  
Direction: 60° T

Barometric Pressure: 1016.3 mb
## 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>1617760</td>
<td>Hilo, Hilo Bay, Kuhio Bay, HI</td>
<td>08/31/2016 11:54 (HST)</td>
<td>-0.41 ft</td>
<td>-0.90 ft</td>
<td>0.49 ft</td>
<td>0.88 ft</td>
</tr>
<tr>
<td>1617433</td>
<td>Kawaihae, HI</td>
<td>08/31/2016 11:54 (HST)</td>
<td>-0.55 ft</td>
<td>-1.37 ft</td>
<td>0.82 ft</td>
<td>0.82 ft</td>
</tr>
<tr>
<td>1615680</td>
<td>Kahului, Kahului Harbor, HI</td>
<td>08/31/2016 11:54 (HST)</td>
<td>-0.19 ft</td>
<td>-0.47 ft</td>
<td>0.28 ft</td>
<td>0.91 ft</td>
</tr>
<tr>
<td>1612480</td>
<td>Mokuoloe, HI</td>
<td>08/31/2016 11:54 (HST)</td>
<td>-0.09 ft</td>
<td>-0.63 ft</td>
<td>0.54 ft</td>
<td>0.69 ft</td>
</tr>
<tr>
<td>1612340</td>
<td>Honolulu, HI</td>
<td>08/31/2016 11:54 (HST)</td>
<td>-0.78 ft</td>
<td>-1.06 ft</td>
<td>0.28 ft</td>
<td>0.72 ft</td>
</tr>
<tr>
<td>1611400</td>
<td>Nawiliwili, HI</td>
<td>08/31/2016 11:54 (HST)</td>
<td>-0.54 ft</td>
<td>-0.86 ft</td>
<td>0.32 ft</td>
<td>0.61 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