On June 1st 2021, the following National Ocean Service tide stations or gages will begin displaying water levels in the Mean Higher High Water (MHHW) datum on the National Weather Service New Orleans/Baton Rouge AHPS page:

In Mississippi: The tide stations at the Bay Waveland Yacht Club in Hancock County and the Pascagoula NOAA Lab in Jackson County.

In Southeast Louisiana: The tide stations at Shell Beach in St. Bernard Parish, Grand Isle in Jefferson Parish, and Port Fourchon in Lafourche Parish.

It is important to note that the change in datum to MHHW from Mean Lower Low Water (MLLW) will not change the actual water level, though the numerical value representing the water level will be lower than in the MLLW datum. Due to this change, at times in the normal tide cycle, these gages will report negative values.

The reason for this change is that water level predictions within Coastal Flood Warnings and Storm Surge Warnings are based on water height above ground level or AGL. The MHHW datum is a close approximation of water height above normally dry ground near the coast. Therefore, it is much easier to communicate impacts within warning areas and aid in warning verification.

For example, if a storm surge is expected to be 5-6 feet AGL, then we expect tide stations to report values of 5-6 feet MHHW. Because of the difference between MLLW and MHHW, a tide station would indicate a higher numeric value in the MLLW datum, giving the false impression that the National Weather Service is under-predicting storm surge. In reality, the water level is the same, but will now be reported in a more representative datum.

Once the change to MHHW occurs, anyone needing to convert the tidal gage reading back to MLLW can do so by adding a predetermined value to the current gage reading.

Each tidal station has its own unique conversion between MHHW and MLLW. To convert from MHHW to MLLW, add the following values to the observed water level:

Port Fourchon: +1.21 feet

Grand Isle: +1.06 feet

Shell Beach: +1.47 feet

Bay Waveland Yacht Club: +1.77 feet

Pascagoula NOAA Lab: +1.53 feet

For example, if the Grand Isle tide station is reporting a water level of 1.50 feet in MHHW, that means the gage would be reporting a water level of 2.56 feet in MLLW.

1.50 feet (MHHW) + 1.06 feet = 2.56 feet (MLLW)

While there is a numerical difference in these readings, the actual water level and impact are the same as datums serve as a reference point for water levels.

Information about tidal datums can be found at:
https://tidesandcurrents.noaa.gov/datum_options.html

Current water levels can also be found and displayed in either MHHW or MLLW at:
https://tidesandcurrents.noaa.gov/

For questions or comments, please contact

Lauren Nash
Warning Coordination Meteorologist
National Weather Service New Orleans/Baton Rouge
lauren.nash@noaa.gov

Or

Julie Lesko
Senior Service Hydrologist
National Weather Service New Orleans/Baton Rouge
julie.lesko@noaa.gov