CompuWeather
Site-Specific Historical Past Weather Reports
PROUDLY SERVING INSURANCE, LEGAL & ENGINEERING SINCE 1976

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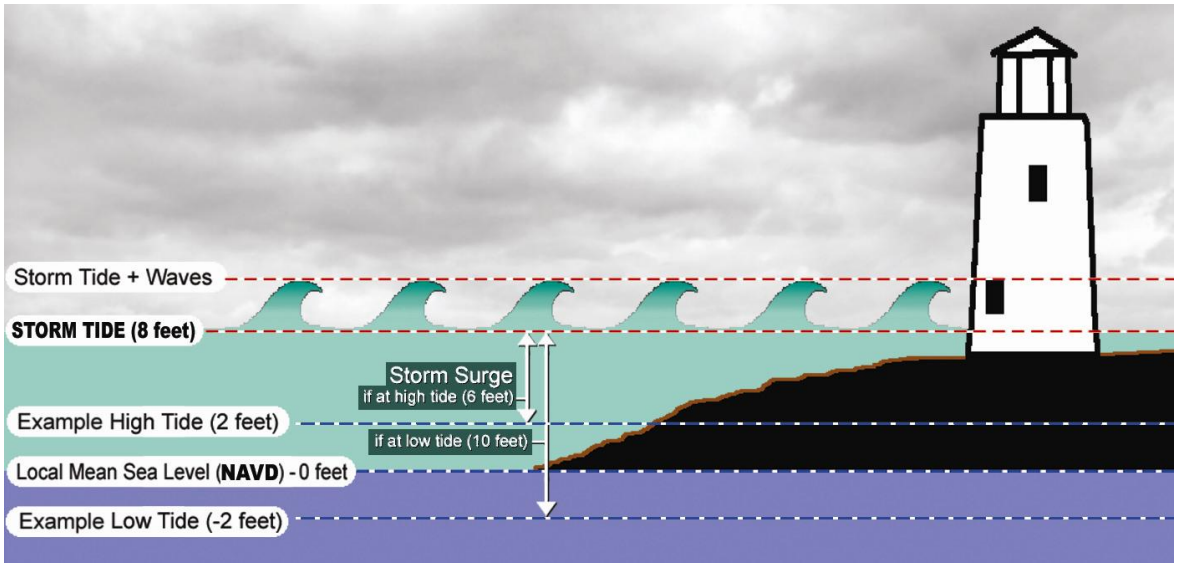
UNDERSTANDING STORM SURGE & STORM TIDE

The following illustrates conditions during a hurricane or tropical storm which may include tide fluctuation, storm surge, storm tide and wave activity:



Tide – The periodic (occurring at regular intervals) variations in the surface water level of the oceans, bays, gulfs, and inlets. Tides are the result of the gravitational attraction of the sun and the moon on the earth. There are generally two high tides and two low tides each day but there can be less. The two high tides each day do not have to be of equal height and the same holds true for the two low tides each day. Tides also differ in height on a daily basis.

Storm Surge - An abnormal rise in sea water level accompanying a hurricane or other intense storm, whose height is the difference between the observed level of the sea surface and the level that would have occurred in the absence of the storm. Storm surge is usually estimated by subtracting the astronomical tide from the observed Storm Tide.

Storm Tide - The actual sea water level resulting from the combination of Storm Surge and normal astronomical tide with reference to NAVD. Storm Tide represents the still-water level and does not include the added height of waves which also may be present. Storm Tide does not account for other conditions such as inland rainfall, freshwater flooding, and river currents which commonly affect non-coastal water levels.

NAVD (North American Vertical Datum of 1988) – NAVD is both a vertical and geodetic datum. Geodetic datums are a set of constants or points of reference used for calculating the coordinates of points on the Earth. Vertical datums are used to measure elevations or underwater depths. NAVD is the accepted standard and derived reference point used for elevations and vertical control surveying in the United States. It was adopted primarily to serve as a fixed constant for all areas since mean sea level (MSL) changes from area to area.