

AQEC MEMORANDUM 2014-025

MOON AFFECTS TIDAL CONDITIONS



QUESTION:

“What is the significance of tidal conditions during a full moon?”

AQEC/SNC RESPONSE:

SPRING TIDES: *When the sun, moon, and earth are in alignment, the sun and moon are exerting their strongest force together and tidal ranges are at their maximum. This is known as a spring tide (spring tides are not named for the season, but from spring forward) and occurs twice each month at each full moon and new moon. Spring tides are higher than normal high tides and lower than normal low tides.*

Mariners should be aware that when tides are higher than normal; debris, tree branches, logs that are normally on shore are now floating and become hazards to navigation. Conversely when low tides are below normal; shoaling, pilings, and wrecks lurking beneath the surface of the water also become a hazard to navigation.

The goal is to have an understanding of how the moon affects tidal conditions during these periods so you will know what to expect and how the condition will affect navigation. A prudent mariner should know tidal conditions before they leave the dock/slip and never venture out of a familiar area or into another area without knowing tide and current predictions.

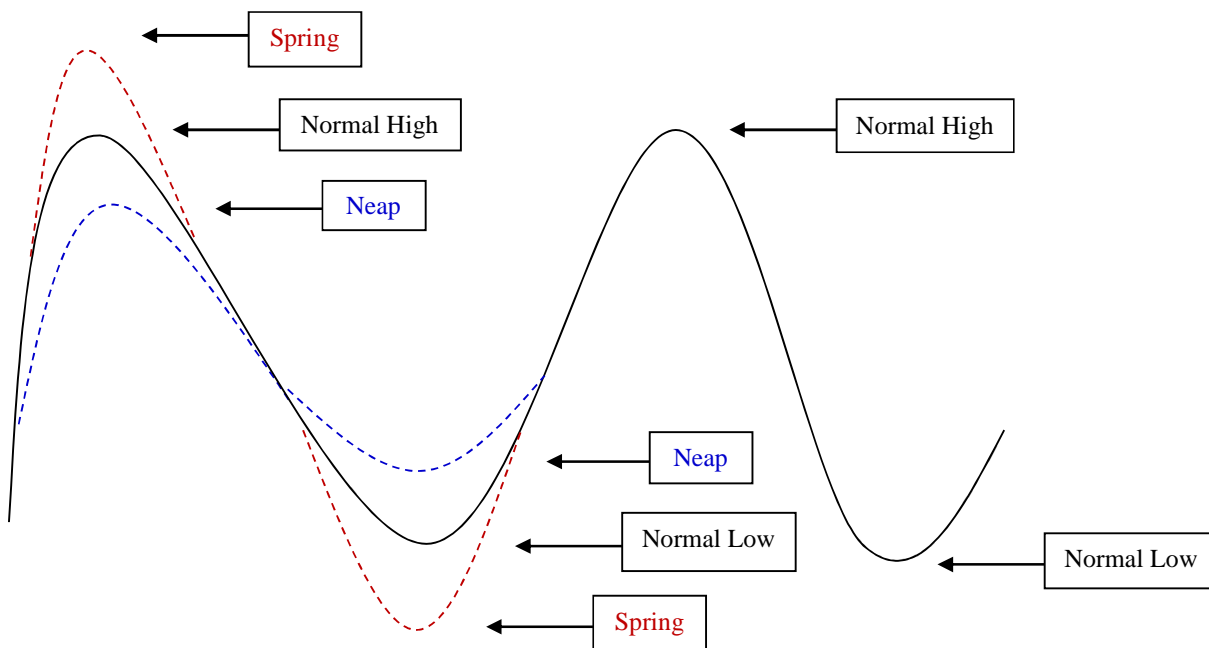
NEAP TIDES: *At the first and last quarter moon, the sun and moon are at a 45 degree angle to each other and their gravitational energy is diminished causing a lower than normal tidal range called a neap tide. A neap tide is lower than a normal high tide and higher than a normal low tide.*

See diagram on page #2 showing spring and neap tides.

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AQEC/SNC
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From Quotations with Character by W. David Edman

“Teaching mariners about risk assessment is to explain their actions may affect their life expectancy.”



The black line represents normal tidal conditions. You can obtain this information from various local sources or online:

www.tideandcurrentpredictor

The red line indicates there may be a danger, so caution should be used when navigating under these conditions.

Although the blue line may indicate there is less danger than a normal or a spring tide, caution should always be used when navigating in unfamiliar territory.

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