

NOAA Nautical Charting Calendar

Depth Units and Vertical Datum

The units of depth on the chart are shown in the title block and in capital magenta letters at the top and bottom of the chart. NOAA publishes charts with depth units of feet, feet and fractional feet, fathoms¹ (6 feet per fathom), fathoms and feet, and fathoms and fractions. In the 1980's an attempt to convert to metric units was rejected by mariners and NOAA discontinued the conversion. Some metric charts remain and use meters and decimeters.

The chart note regarding depth units also defines the vertical datum. Typically Mean Lower Low Water is the vertical datum for soundings. MLLW is a 19-year (usually) average of all lowest water levels for tidal days. In locations with two low tides each day, MLLW is the average of the lower of the two. Mean High Water is the datum for heights on the chart, and a chart note indicates such.

NOAA charts also include a depth conversion scale near the chart border. This scale shows the correspondence between fathoms, feet, and meters.

The digital, raster navigational charts (RNCs) are identical to paper charts in depth units and datum. Electronic navigational charts (ENCs) are required to be in metric units so NOAA digitizes the depths in traditional units, converts to metric for the ENC, and truncates the result after the first decimal digit.

¹ Wikipedia states that 'fathom' derives from the old English word *fæðm* meaning 'outstretched arms.'

HESAPEAKE BA

ER SOUND - NORTHER

Mercator Projection
Scale 1:40,000 at Lat. 38°05'

North American Datum of 1983
(World Geodetic System of 1984)

SOUNDINGS IN FEET
AT MEAN LOWER LOW WATER

SOUNDINGS IN FEET

HEIGHTS

Heights in feet above Mean High Water.

FATHOMS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
FEET	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102
METERS																	

August 2007						
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
Prepared by the Office of Coast Survey, National Ocean Service, NOAA, www.NauticalCharts.NOAA.gov , 1-301-713-2770 Note: You can add your own information to the Charting Calendar using Adobe Reader 7 or later. The tools are found at Tools -> Commenting, and Tools -> Drawing Markup features of Adobe Reader.	1	2	3	4		
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	