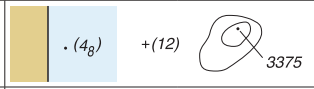
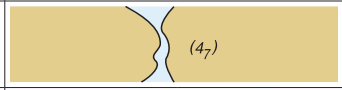
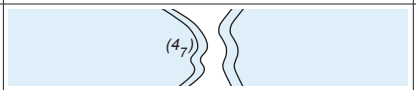
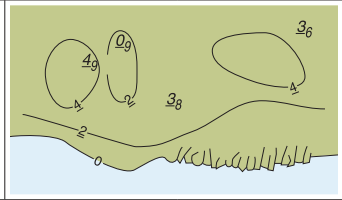
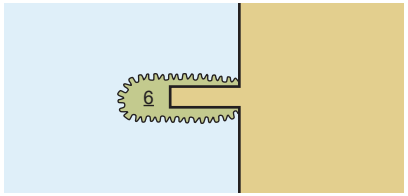
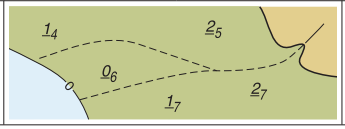
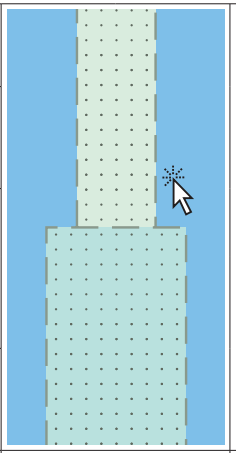
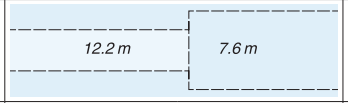
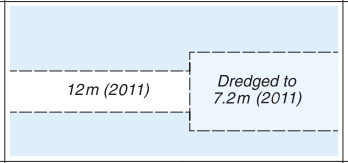
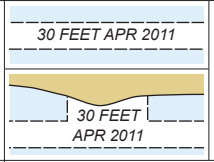
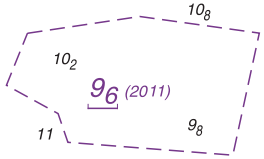
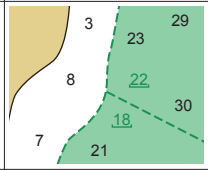
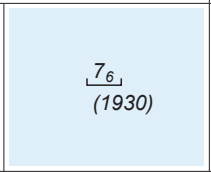
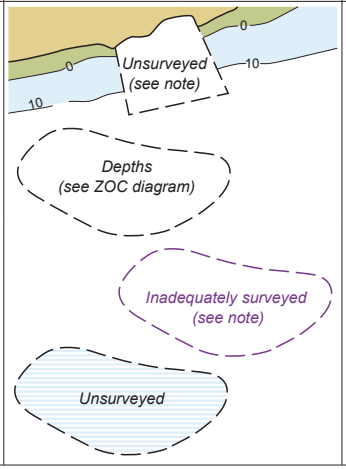
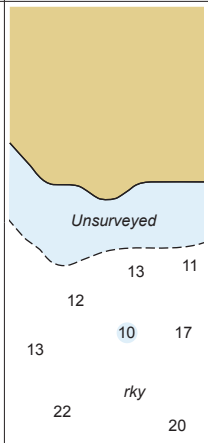
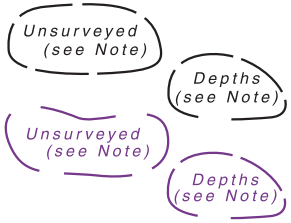
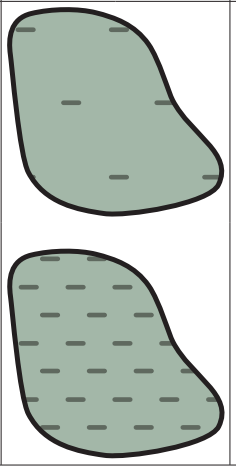
I Depths

No.	INT	Description	NOAA	NGA	Other NGA	ECDIS	
General							
1	*ED*	Existence doubtful					Sounding of low accuracy
2	*SD*	Sounding of doubtful depth					Sounding of low accuracy Underwater hazard with depth greater than 20 meters Isolated danger of depth less than the safety contour
3.1	*Rep*	Reported, but not confirmed					Sounding of low accuracy Point feature or area of low accuracy Low accuracy line demarking area wreck or obstruction Low accuracy line demarking foul area
3.2	*Rep (2011)*	Reported (with year of report), but not confirmed					
4		Reported, but not confirmed sounding or danger (on small scale charts only)					Obstruction, depth not stated Sounding of low accuracy Underwater hazard with depth of 20 meters or less Underwater hazard with depth greater than 20 meters Isolated danger of depth less than the safety contour Point feature or area of low accuracy

No.	INT	Description	NOAA	NGA	Other NGA	ECDIS	
Soundings						Supplementary national symbols: a–c	
Plane of Reference for Depths → H		Plane of Reference for Heights → H					
10	12 9_7	Sounding in true position (NOAA shows fathoms and feet with vertical numbers and meters with sloping numbers)	$6\frac{1}{4}$ $6\frac{3}{4}$			9_7 30	Sounding shoaler than or equal to safety depth Sounding deeper than safety depth
11		Sounding out of position	(23) 3375			Depths are always shown in their true position in ECDIS	
12		Least depth in narrow channel					
13	$\overline{200}$	No bottom found at depth shown				200	Status of no bottom found is obtained by cursor pick
14	12 9_7	Soundings which are unreliable or taken from a smaller scale source (NOAA shows unreliable soundings in fathoms and feet with sloping numbers and in meters with vertical numbers)				12	Sounding of low accuracy
15		Drying heights and contours above chart datum				$\underline{4}$	Drying height, less than or equal to safety depth
16		Natural watercourse (in intertidal area), tidal gully, tideway					Tideway

I Depths

No.	INT	Description	NOAA	NGA	Other NGA	ECDIS	
Depths in Fairways and Areas						Supplementary national symbols: a, b	
Plane of Reference for Depths → H							
20		Limit of dredged area					Dredged area Depth, date of latest survey and other information is obtained by cursor pick
21		Dredged channel or area with depth of dredging in meters and decimeters					
22		Dredged channel or area with depth and year of the latest control survey					
23		Dredged channel or area with maintained depth					
24		Area swept by wire drag. The depth is shown at chart datum. (The latest date of sweeping is shown in parentheses.)					Swept area
25		Unsurveyed or inadequately surveyed area; area with inadequate depth information					Incompletely surveyed area Unsurveyed area

ECDIS Portrayal of Depths

ECDIS

ECDIS depth related symbols closely resemble their paper chart counterparts; however, ECDIS provides valuable additional information to mariners that paper charts cannot.

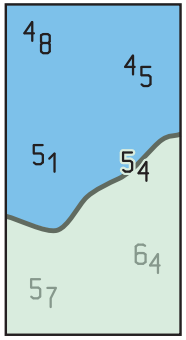
Soundings

ECDIS enables mariners to set their own-ship "safety depth." If no depth is set, ECDIS sets the value to 30m. Soundings equal to or shoaler than the safety depth are shown in black; deeper soundings are displayed in a less conspicuous gray. Fractional values are shown with subscript numbers of the same size.

Depth Contours & Depth Areas

Depth contours in ECDIS are portrayed with a thin gray line. Each pair of adjacent depth contours is used to create depth area features. These are used by ECDIS to tint different depth levels and to initiate alarms when a ship is headed into unsafe water.

Depth Contour Labels



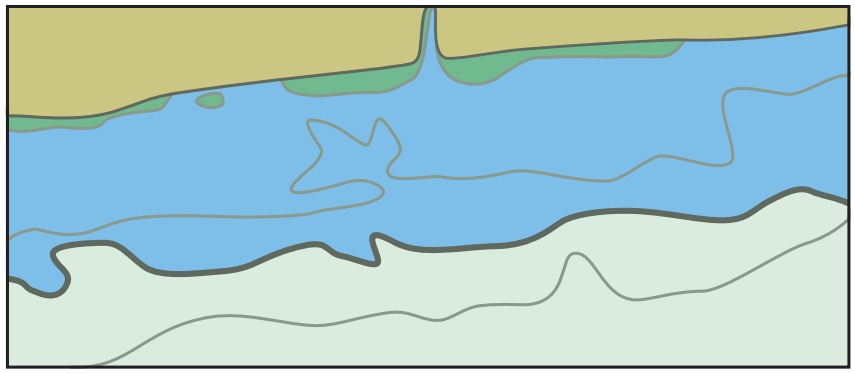
ECDIS depth contour labels are not centered and oriented along isolines as they appear on paper charts. They are displayed upright and may appear either on or next to the contour lines that they describe. The labels are black and the same size as soundings, but the labels have a light "halo" to set them apart. The graphic to the left shows depth labels and soundings both deeper and shoaler than the safety depth. Note that depths on NOAA paper charts and ENCs are usually compiled in fathoms and feet. Because ECDIS displays depths in meters, soundings and contour lines often show fractional meter values. The "own-ship safety contour" (described below) is always displayed, but mariners may choose to have all other depth contours turned off.

Safety Contour

ECDIS uses a "safety contour" value to show an extra thick line for the depth contour that separates "safe water" from shoaler areas. If the mariner does not set an own-ship safety contour value, ECDIS sets the value to 30m. If the ENC being displayed does not have a contour line equal to the safety contour depth value set by the mariner, then ECDIS sets the next deeper contour as the safety contour. Depending on the contour intervals used on individual ENCs, ECDIS may set different safety contours as a ship transits from one ENC to another. ECDIS will initiate an alarm if the ship's future track will cross the safety contour within a specified time set by the mariner.

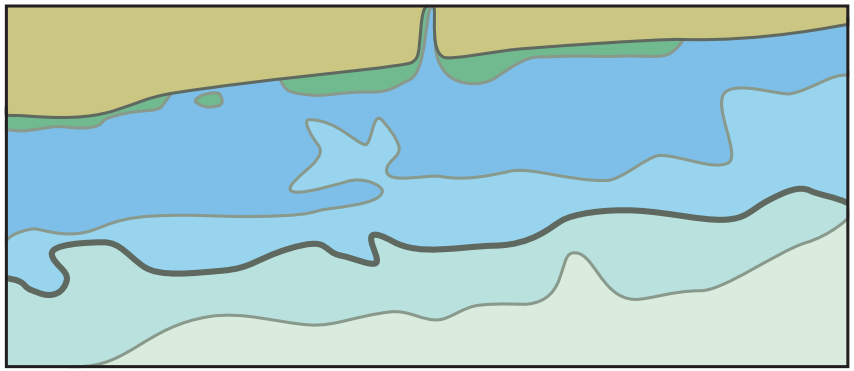
Two or Four Tints for Shading Depth Areas

ECDIS tints all depth areas beyond the (green tinted) foreshore in either one of two or one of four shades of blue. This is similar to the convention used for paper charts, but the depths used to change from one tint to another are based on the safety contour and thus "customized" for each ship. If the mariner chooses two shades to be displayed, water deeper than the safety contour is shown in an off-white color, water shoaler than the safety contour is tinted blue.

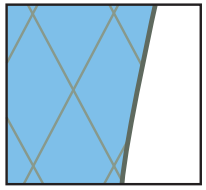


Portrayal of Depth Areas with 2 Color Settings

Some ECDIS enable mariners to define two additional depth areas for medium-deep water and medium-shallow water by setting a "deep contour" value and a "shallow contour" value. If this option is used, the safety contour is displayed between the medium deep and medium shallow contours.

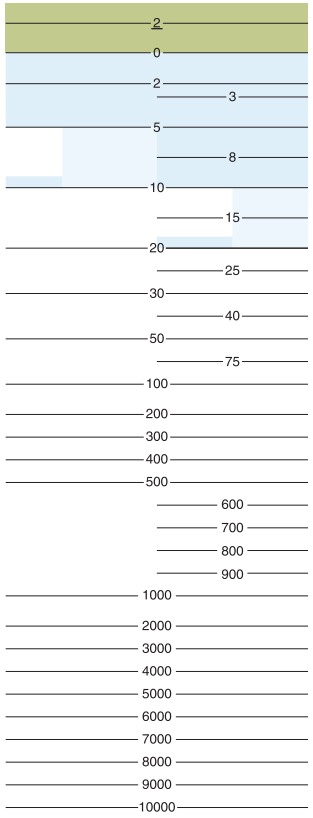
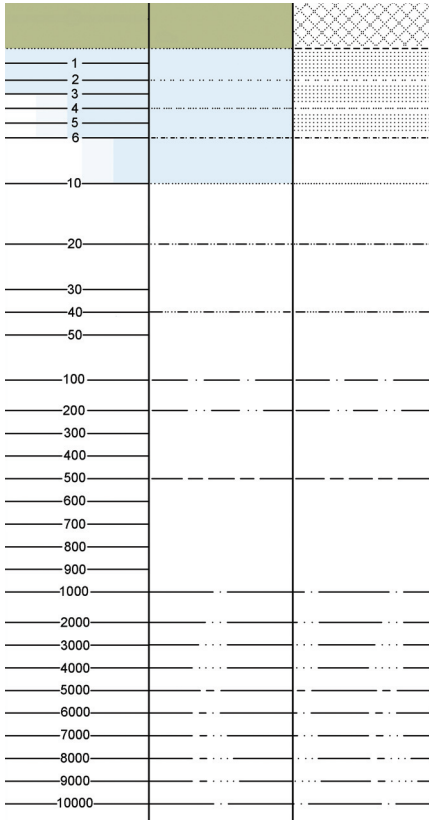
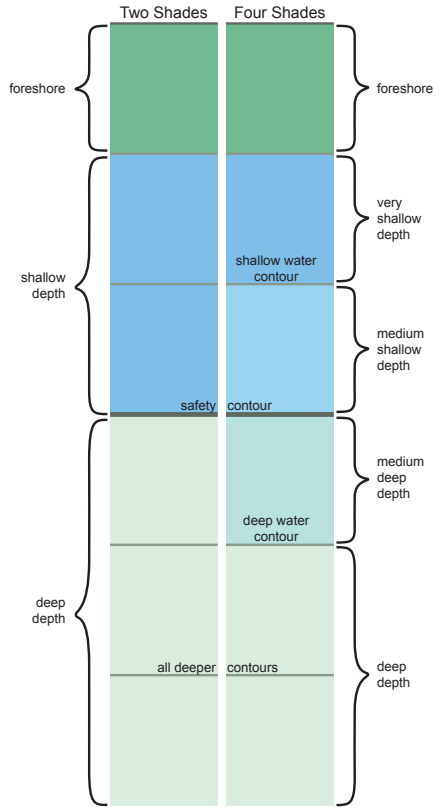
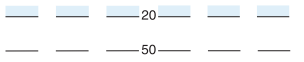
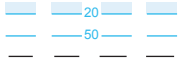
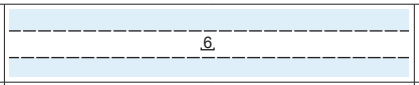
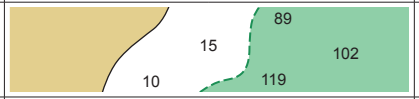


Portrayal of Depth Areas with 4 Color Setting



Some ECDIS also provide the mariner with the option of displaying a cross-hatch "shallow water" pattern over all depth areas shoaler than the safety contour.

I Depths

No.	INT	Description	NOAA	NGA	Other NGA	ECDIS
Depth Contours						
30		Drying contour Low water line Blue tint, in one or more shades, or tint ribbons are shown to different limits according to the scale and purpose of the chart and the nature of the bathymetry. On some charts, contours and values are printed in blue.			
31		Approximate depth contours				 Approximate depth contour Approximate safety depth contour
Supplementary National Symbols						
a		Swept channel				
b		Swept area, not adequately sounded (shown by purple or green tint)				
c		Stream