

Drift Calculator for establishing where a drifting casualty will be in x minutes

Table 1- Tidal Drift Ready Reckoner

Table 1 indicates the possible **distance in nautical miles** that a drifting craft or person may be carried by the tide from the last known position (LKP) over a set time. Establish the rate and direction of the tidal flow from the tidal stream atlas or the tidal diamonds on the chart.

Time elapsed	Rate of tide in knots (Drift calculations in nautical miles)															
	0.25kt	0.4kt	0.5kt	0.75kt	1.0kt	1.25kt	1.5kt	1.75kt	2.0kt	2.25kt	2.5kt	2.75kt	3.0kt	3.5kt	4.0kt	4.5kt
5 mins	-	-	-	-	0.1	0.1	0.1	0.15	0.2	0.2	0.2	0.2	0.25	0.3	0.33	0.4
10 mins	-	-	0.1	0.1	0.15	0.2	0.25	0.3	0.33	0.4	0.4	0.5	0.5	0.6	0.66	0.75
15 mins	-	0.1	0.125	0.2	0.25	0.3	0.4	0.4	0.5	0.6	0.6	0.7	0.75	0.9	1.0	1.1
20 mins	0.1	0.1	0.16	0.25	0.33	0.4	0.5	0.6	0.66	0.75	0.8	0.9	1.0	1.2	1.33	1.5
30 mins	0.125	0.2	0.25	0.4	0.5	0.6	0.75	0.9	1.0	1.1	1.25	1.3	1.5	1.8	2.0	2.25
45 mins	0.2	0.3	0.4	0.6	0.75	0.9	1.1	1.3	1.5	1.7	1.9	2.1	2.25	2.6	3.0	3.4
1 hour	0.25	0.4	0.5	0.75	1.0	1.25	1.5	1.75	2.0	2.25	2.5	2.75	3.0	3.5	4.0	4.5
1¼ hr	0.3	0.5	0.6	0.9	1.25	1.6	1.9	2.2	2.5	2.8	3.1	3.4	3.75	4.4	5.0	5.6
1½ hr	0.4	0.7	0.75	1.1	1.25	1.9	2.25	2.6	3.0	3.4	3.7	4.1	4.5	5.2	6.0	6.7
2 hours	0.5	0.8	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	7.0	8.0	9.0

Table 2- Wind Drift (leeway) Ready Reckoner

Table 2 indicates the possible **distance in nautical miles** that a drifting craft may be blown by the wind (leeway) from the last known position (LKP) over a set time. Leeway can vary between 0% and 7% of wind speed, depending on the type of casualty. Wind drift will be negligible for a person in the water, whilst a boat with a low resistance rig/deep keel will drift less than one with a high windage rig/shallow draught. As a 'rule of thumb' this table is **based on 5% of wind speed for boats and manned liferafts**. (Note: the effect of wind drift on an empty liferaft or inflatable will be much greater). Establish the wind direction from the weather station (see overleaf for conversion of compass points to degrees).

Note 1) *Divergence* of up to 60° either side of wind direction may occur because of the casualty 'sailing' across the wind.

2) a further complicating factor is *wind driven current*. When the wind has been blowing in the same direction for a day or so, a current of up to 2.5% of wind speed and to the right of the wind direction may develop. If this applies 'add a bit on' (perhaps half as much again) to the distances below.

Time elapsed	Wind speed in knots (Drift calculations in nautical miles and based on 5% of wind speed)															
	5kt F2	7kt F3	10kt F3	15kt F4	18kt F5	20kt F5	22kt F6	25kt F6	30kt F7	35kt F8	40kt F8	45kt F9	50kt F10	55kt F12	60kt F12	65kt F12
5 mins	-	-	-	-	-	-	0.1	0.1	0.125	0.15	0.15	0.2	0.2	0.25	0.25	0.3
10 mins	-	-	0.1	0.125	0.15	0.15	0.2	0.2	0.25	0.3	0.33	0.4	0.4	0.5	0.5	0.5
15 mins	-	0.1	0.125	0.2	0.2	0.25	0.3	0.3	0.4	0.4	0.5	0.6	0.6	0.7	0.75	0.8
20 mins	0.1	0.1	0.15	0.25	0.3	0.33	0.4	0.4	0.5	0.6	0.7	0.75	0.8	0.9	1.0	1.1
30 mins	0.125	0.2	0.25	0.4	0.4	0.5	0.5	0.6	0.75	0.9	1.0	1.1	1.25	1.4	1.5	1.6
45 mins	0.2	0.25	0.4	0.6	0.7	0.75	0.8	0.9	1.1	1.3	1.5	1.7	1.9	2.1	2.25	2.4
1 hour	0.25	0.3	0.5	0.75	0.9	1.0	1.1	1.25	1.5	1.8	2.0	2.25	2.5	2.75	3.0	3.25
1¼ hr	0.3	0.4	0.6	0.9	1.1	1.25	1.4	1.6	1.9	2.2	2.5	2.8	3.1	3.4	3.75	4.1
1½ hr	0.4	0.5	0.75	1.1	1.3	1.5	1.6	1.9	2.25	2.6	3.0	3.4	3.75	4.1	4.5	4.9
2 hours	0.5	0.7	1.0	1.5	1.8	2.0	2.2	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5