

CC EX 11 – DRIFT TEST:

This exercise can be carried out with the SAR Ex 8 or SAR Ex 9.

Purpose: To establish an estimate of drift (current and/or wind) to assist SAR planning for the search datum (search centre) from the LKP (last known position) of a missing object.

Object in the water will drift as the result of:

River Currents- Tides affect current speeds near the mouths of the rivers.

Tidal Streams- Reversing streams will cause significant changes in position.

Swell/Wave Current- May affect rafts and other small targets in calm conditions.

Surf Current- Moves objects shoreward in the breakers unless a long shore current occurs.

Long Shore Current- Caused by incoming swells striking the shore at an angle.

Rip Current- A narrow band of current flowing seaward through the surf line.

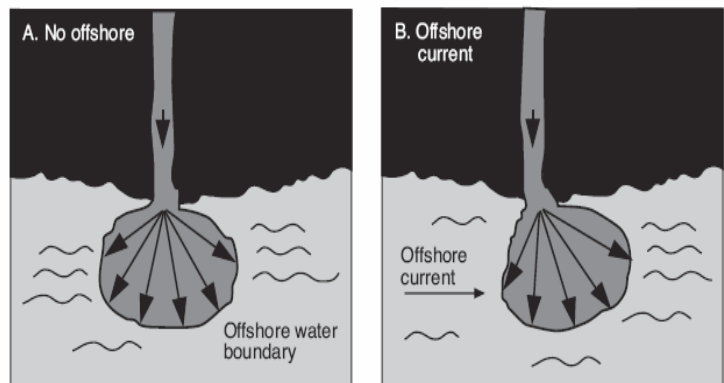
Sea Current- Tidal and local features will affect sea currents near the coast.

Local Wind Current- Generated by wind acting on the surface of the water.

Leeway- Wind force is countered by water drag on the underwater hull.

Divergence- Deflection to the left or right in the downwind direction due to object's shape.

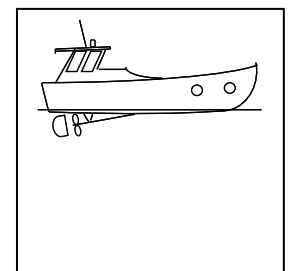
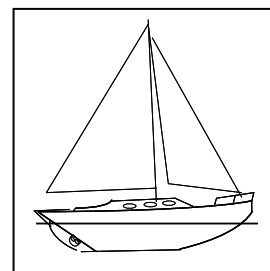
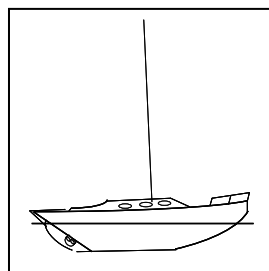
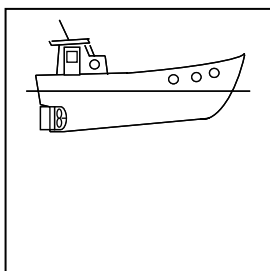
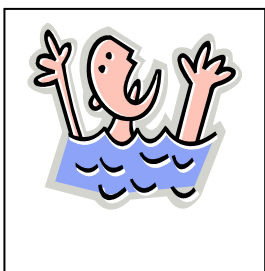
The complicated interactions of currents described are resolved for rapid response by use of a drift test. It quickly estimates the experienced drift at the LKP by tracking the distance & time of a similar object's drift.



River discharge (NATSAR Manual)

Caution:

The timed observation of the **similar** drift object must be at the **LKP** and be of **sufficient** duration (at least 20minutes) for meaningful results.

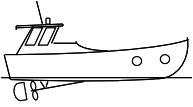


AFFECTED MORE BY CURRENT



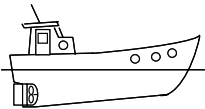
AFFECTED MORE BY WIND

Task One- Estimate the speed & direction of drift of a missing tinny with LKP at the Bait Reef 1 hours previously.



Method– Position the RIB at the Bait reef. Select GPS next **Quicksave waypoint**. Time a twenty minutes drift. Re-enter the Quicksave waypoint & select **Go to Wpt**. Extract the **Distance to Go** and multiply by **3** to arrive at the drift speed. Extract the **Bearing to Go** calculate the reciprocal to arrive at the drift direction. Plot the Search datum as 1 hours of drift from the LKP.

Task Two- Estimate the speed & direction of drift of a missing game boat with LKP at the Bird Rock distant 0.5 NM, bearing 270°M at 2 hours previously.



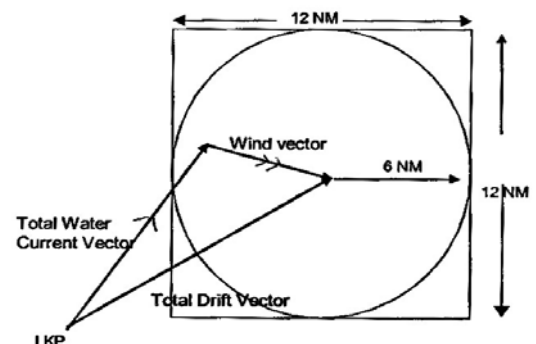
Method– Position CR1 at the LKP. Select GPS next **Quicksave waypoint**. Time a twenty minutes drift. Re-enter the Quicksave waypoint & select **Go to Wpt**. Extract the **Distance to Go** and multiply by **3** to arrive at the drift speed. Extract the **Bearing to Go** calculate the reciprocal to arrive at the drift direction. Plot the Search datum as 2 hours of drift from the LKP.

Task Three- Estimate the speed & direction of drift of a missing person in the water with LKP at the Southern Breakwall distant 0.5 NM, bearing 263°M at 1.5 hours previously.



Method– Position CR1 at the LKP. Throw over drum full of fresh water. Select GPS next **Quicksave waypoint**. Track drum for a twenty minutes drift. Re-enter the Quicksave waypoint & select **Go to Wpt**. Extract the **Distance to Go** and multiply by **3** to arrive at the drift speed. Extract the **Bearing to Go** calculate the reciprocal to arrive at the drift direction. Plot the Search datum as 1.5 hours of drift from the LKP.

Explanation- The drift test estimates the total drift vector for rapid response purposes by direct observation. As distance from the LKP increases and location changes (particularly from river entrances) so may the drift conditions. Thus the Search datum will have to be plotted individually from the best intelligence available (Aussar or Bur. Met.) of total water current & wind vector as shown on the right.



Training resources:

Workbooks- “Participate in Marine Rescue Ops” & “Bare facts of SAR”

Presentation - CD Index>Comp. Crew Lessons> Part Mar Res Ops.> “Assist in SAR”