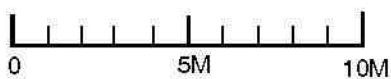
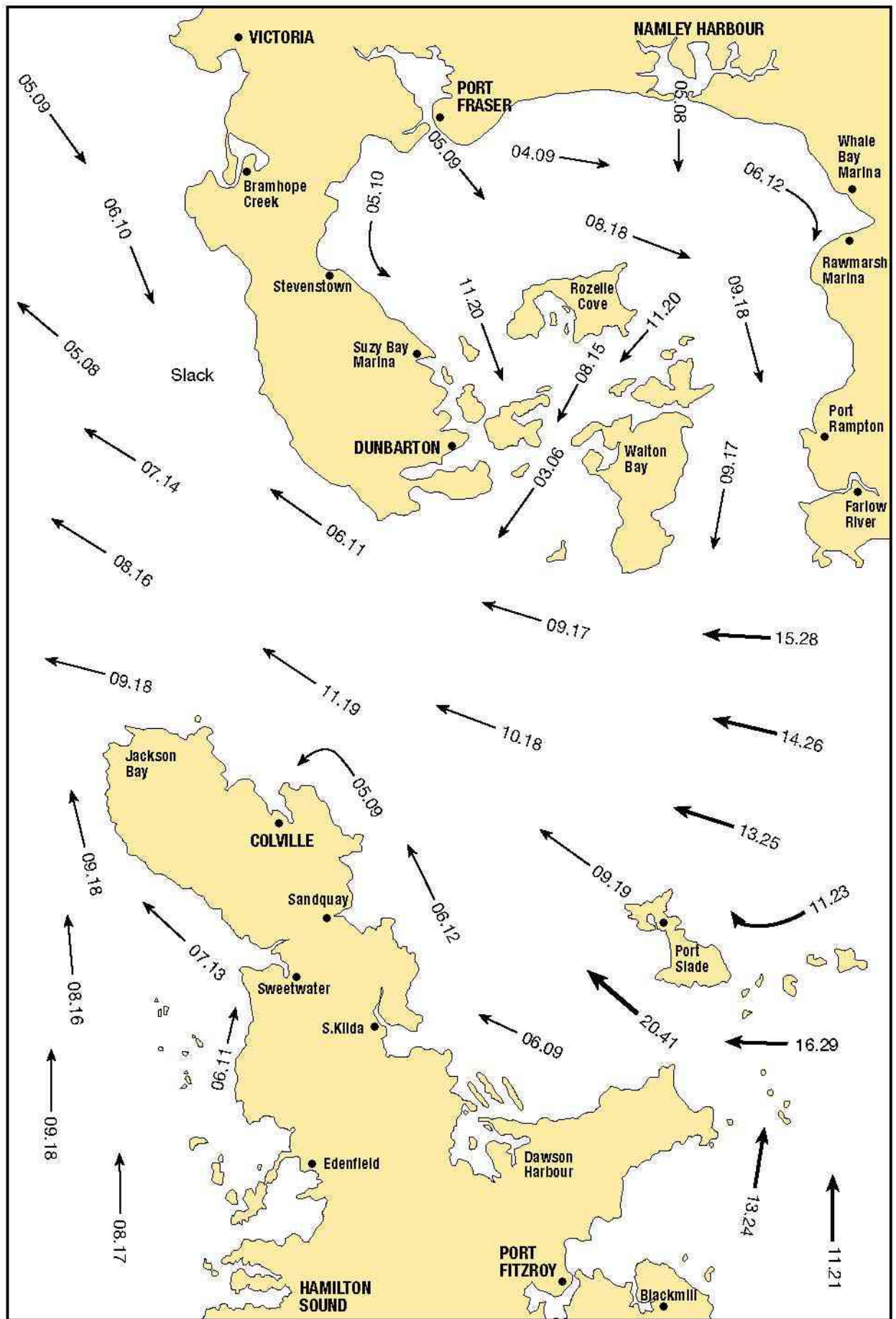


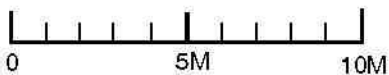
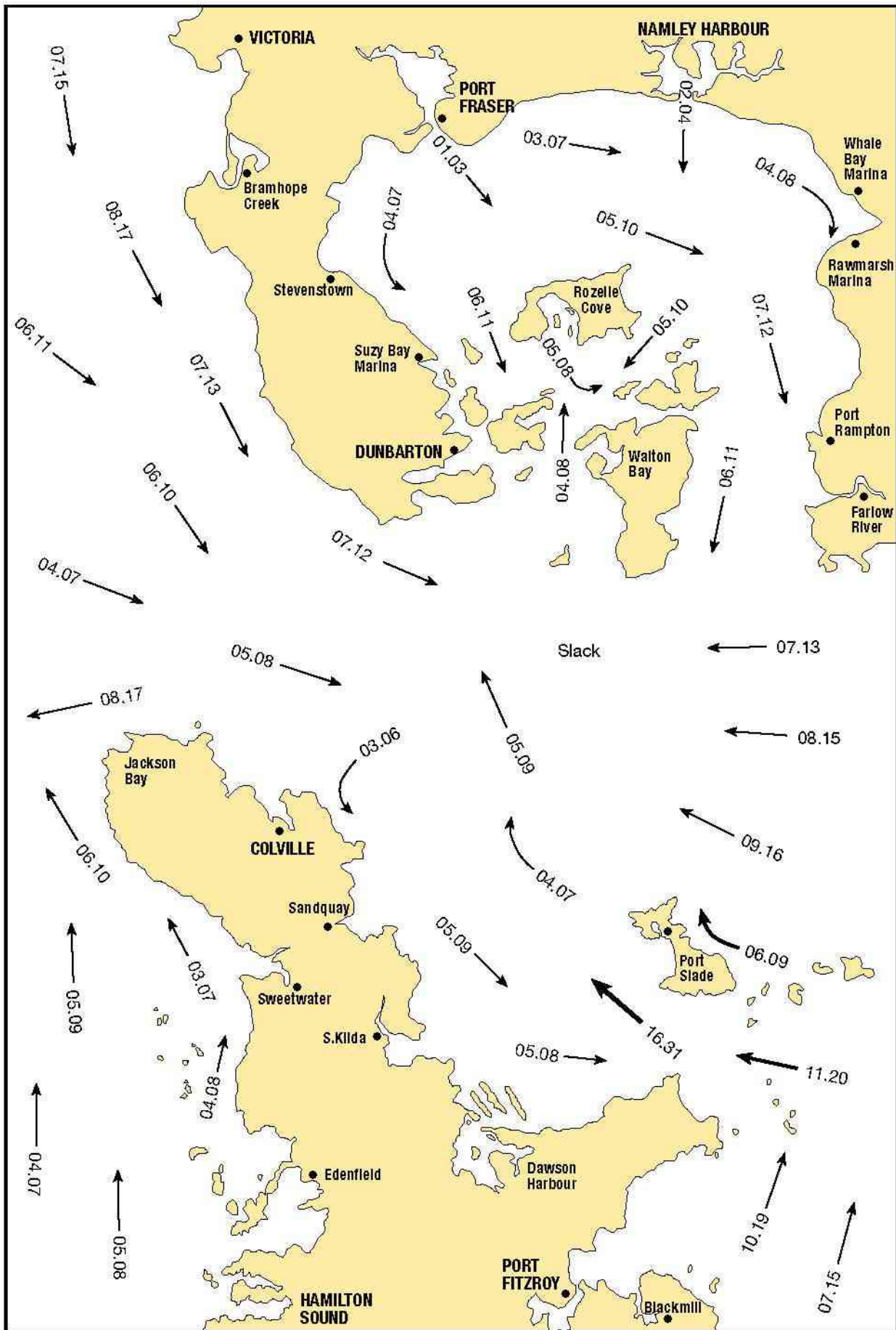
Admiralty symbols

	Power transmission line with pylons and safe overhead clearance		Church		Drying contour LW line, Chart Datum
	Vertical clearance above Highest Astronomical Tide		Radio mast, television mast		Below 5m blue ribbon or differing blue tints may be shown
	Harbourmaster's office		Monument (including column, pillar, obelisk, statue)		Anchoring prohibited
	Custom office		Chimney		Marine Farm
	Health Office, Quarantine		Wind motor Windfarm		Wreck, depth unknown, danger to navigation
	Post office		Tanks		Wreck, depth unknown, no danger to navigation
	Yacht Harbour, Marina		Recommended anchorage		Wreck, depth obtained by sounding
	Radio reporting point		Rescue station, lifeboat station, rocket station		Wreck, swept by wire to the depth shown
	Direction of buoyage		Fishing harbour		Submarine cable
	Mooring buoy		Fishing prohibited		Buried pipeline
	Wreck showing any part at level of chart datum		Perch, stake - port and starboard hand		Overfalls, tide rips and races
	Quarry or mine		Pilot boarding		Limit of safety zone around offshore installation
	Rock which covers and uncovers, height above Chart Datum		Emergency RDF station		Major light
	Rock awash at level of Chart Datum		Marsh		Dangerous underwater rock of unknown depth
	Visitors' Berth		Kelp		Dangerous underwater rock of known depth
	Fuel station (Petrol, Diesel)		Crane		Caravan site Camping site
	Public slipway		Inn and Restaurant		Public telephone
	Water tap		Public toilets		Public car park
	Public landing, steps, ladder		Public car park		Bird sanctuary
			Laundrette		Coastguard Station
			Yacht Club, Sailing Club		Radar Transponder Beacon with Morse identification and Radar band

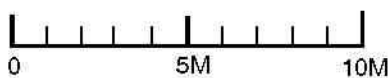
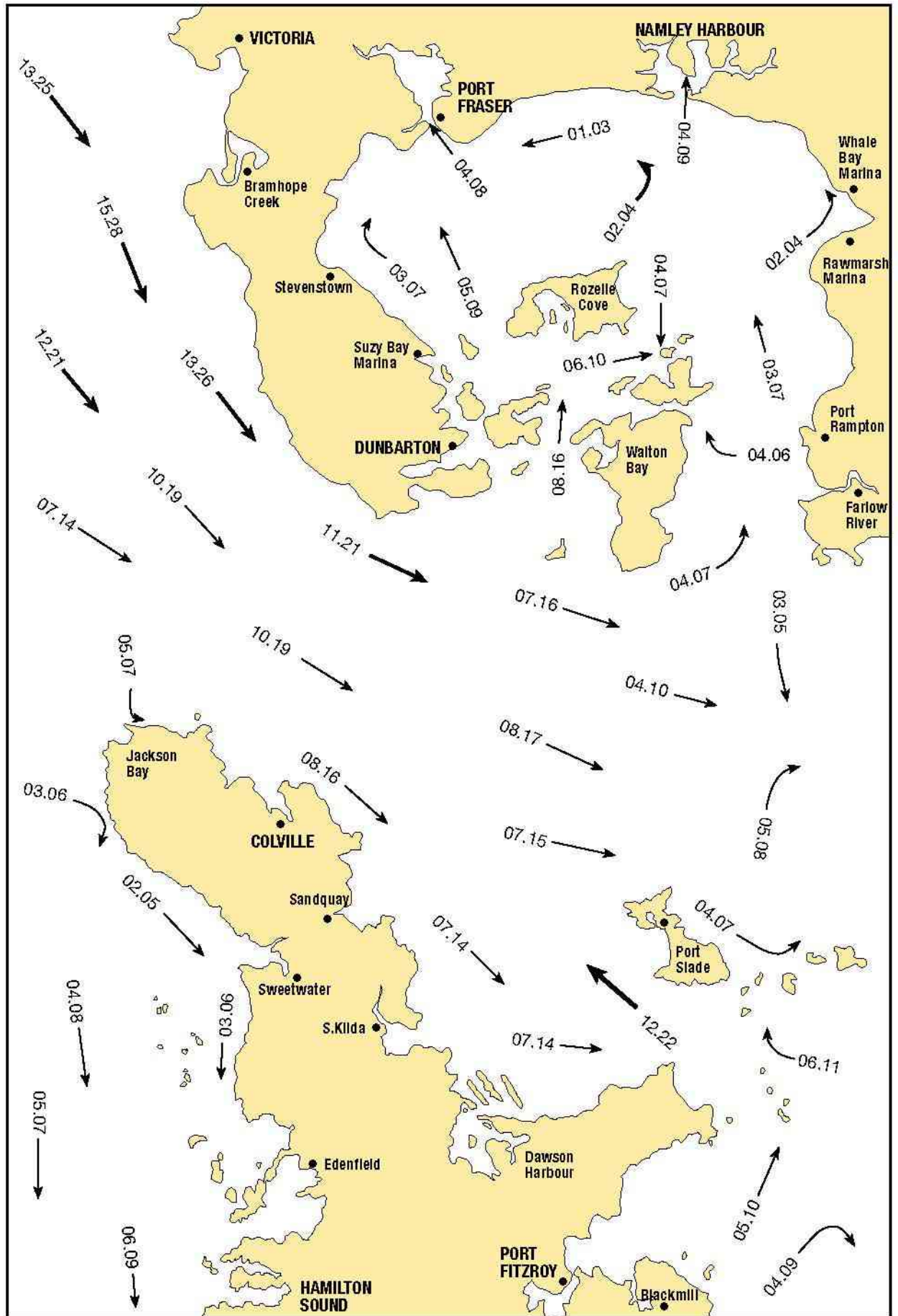
6 hours before HW VICTORIA



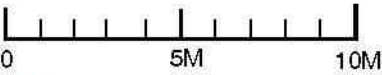
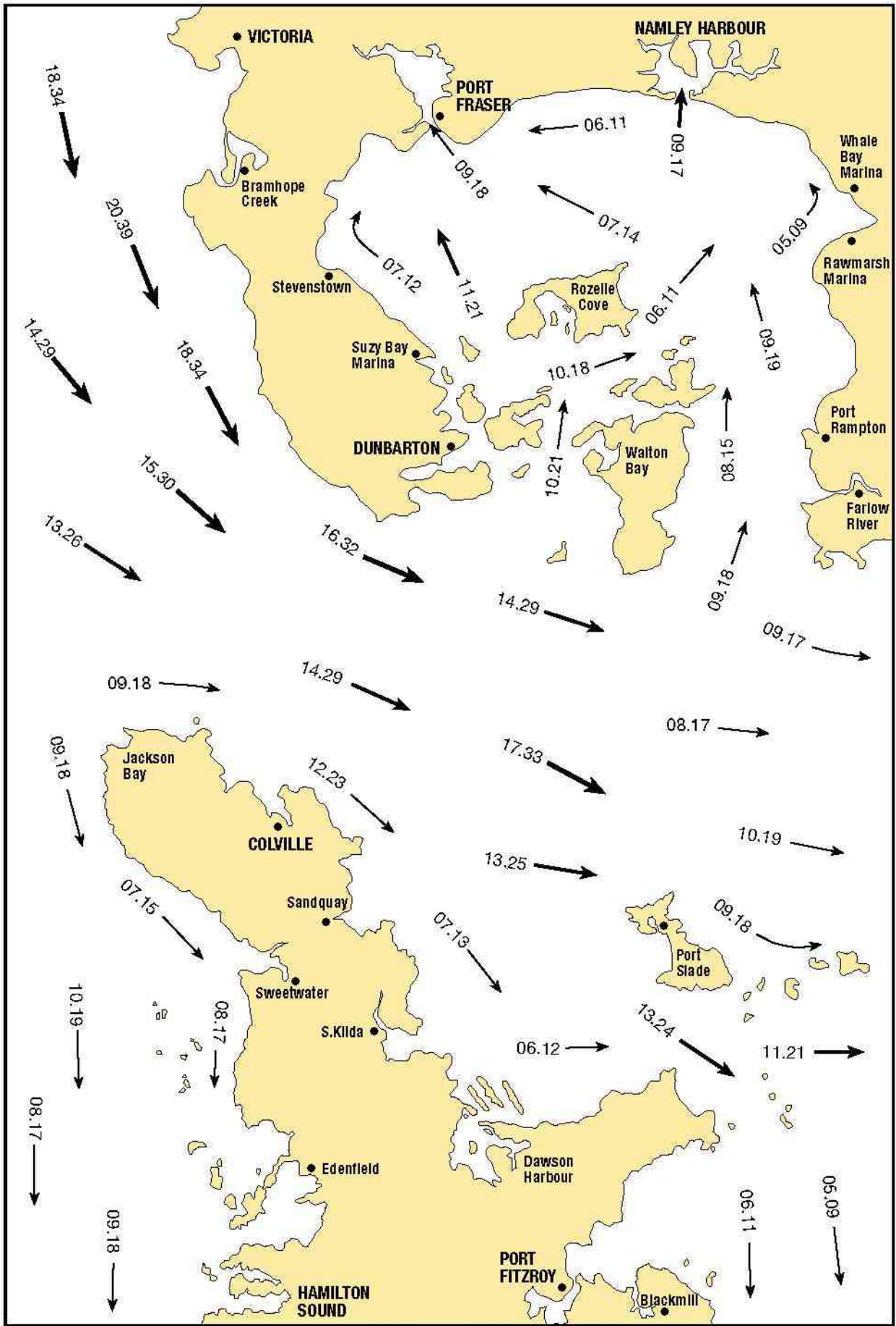
5 hours before HW VICTORIA



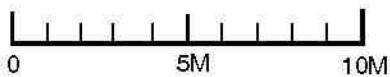
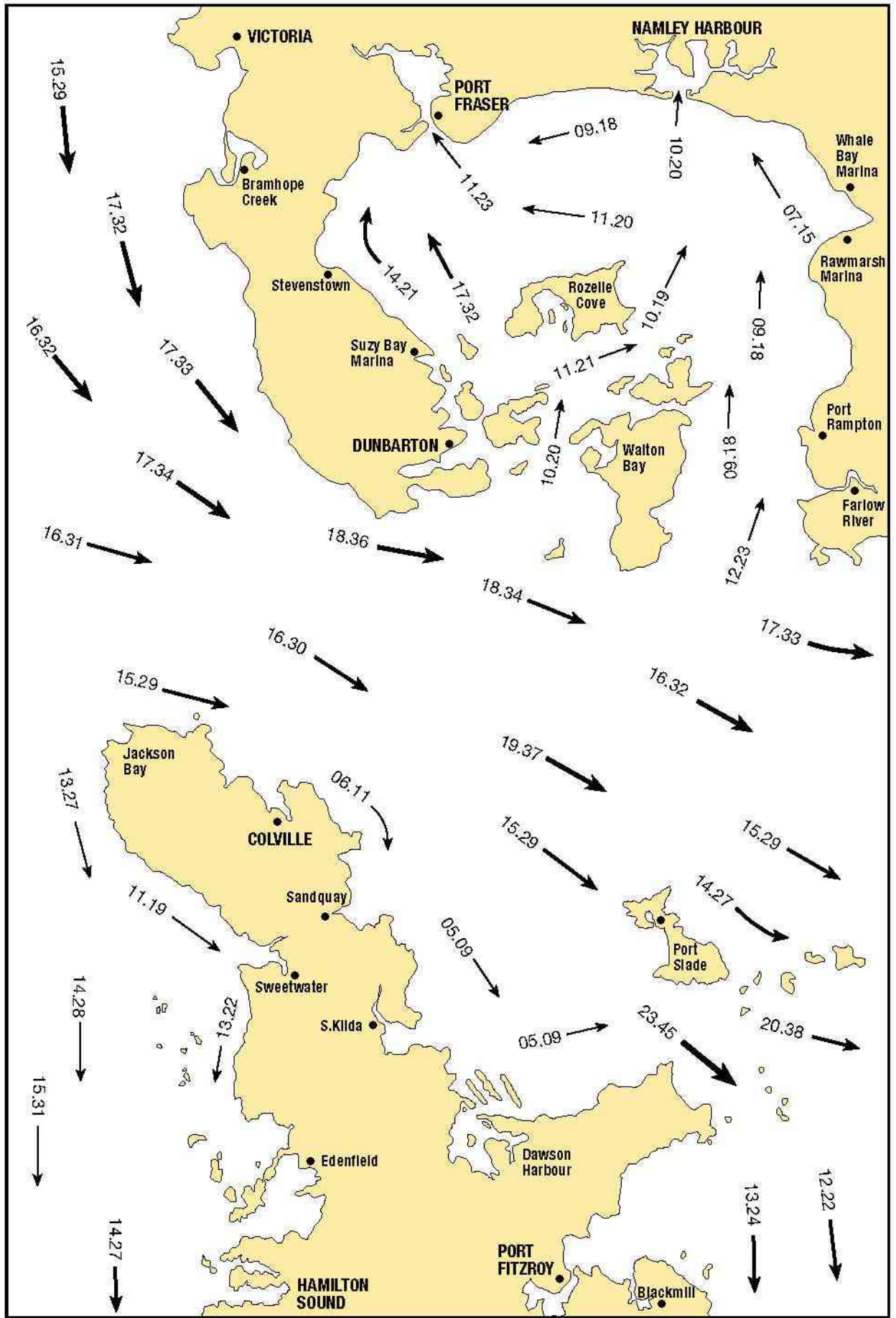
4 hours before HW VICTORIA



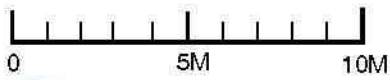
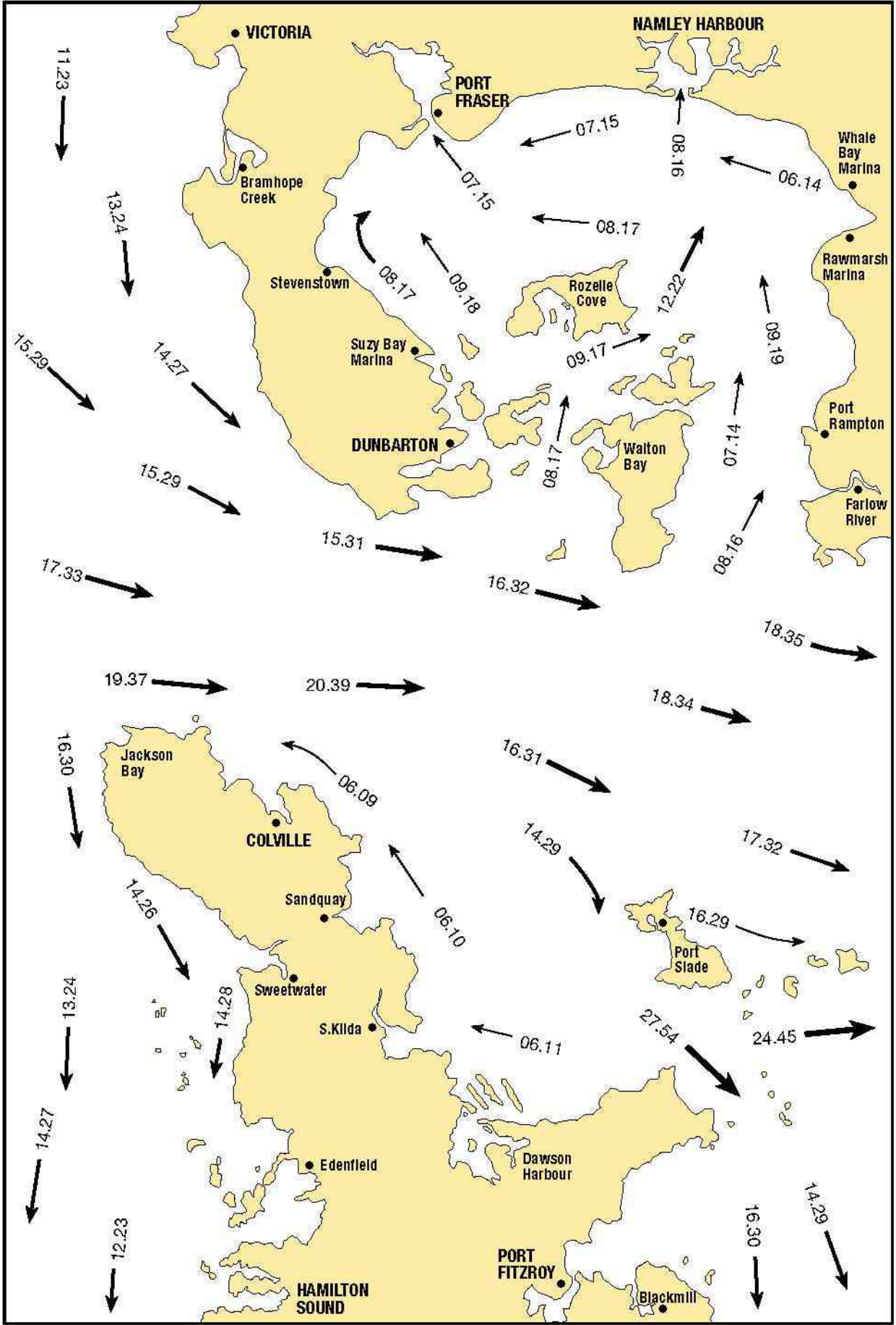
3 hours before HW VICTORIA

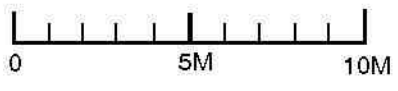
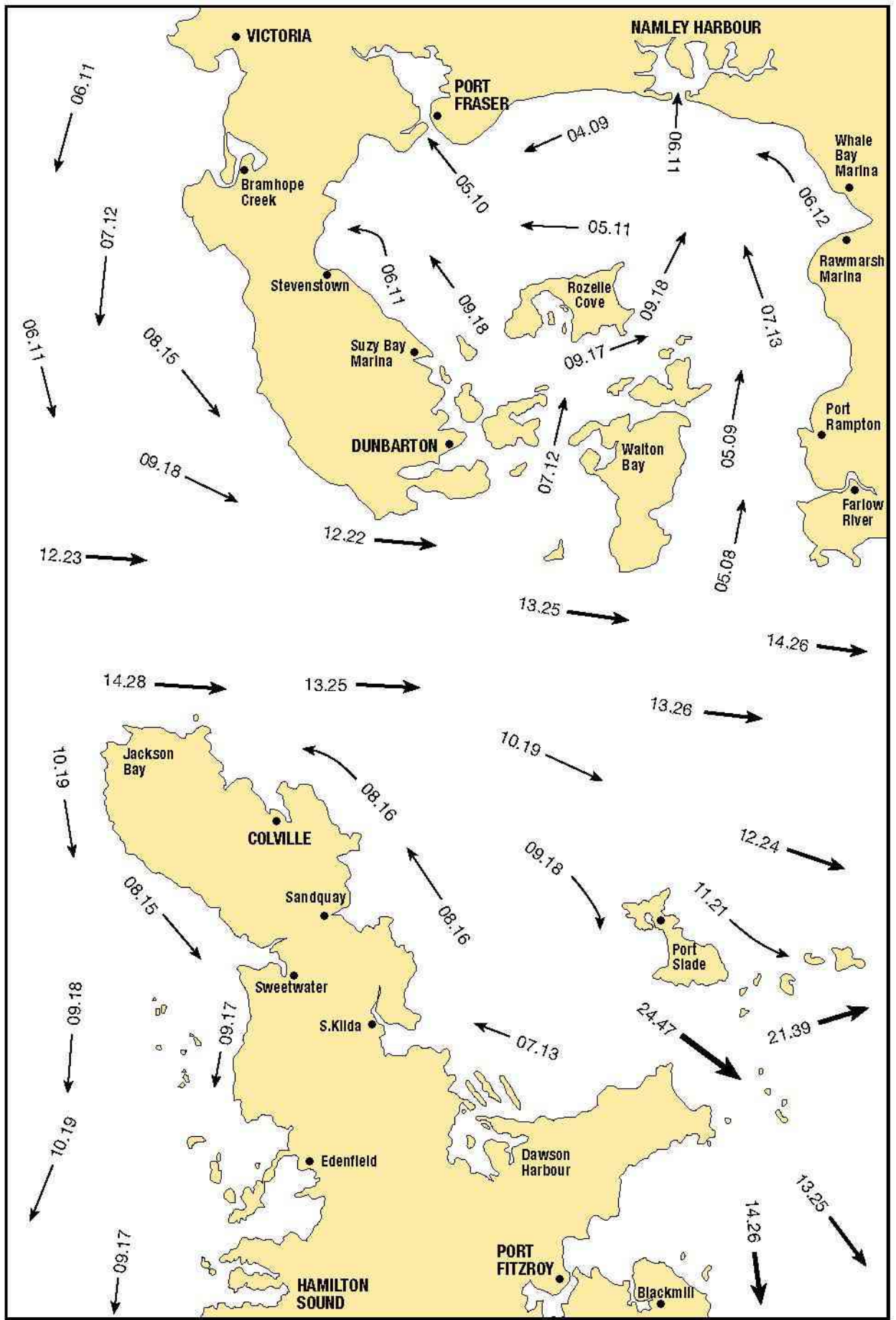


2 hours before HW VICTORIA

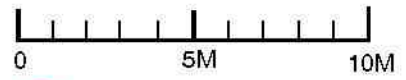
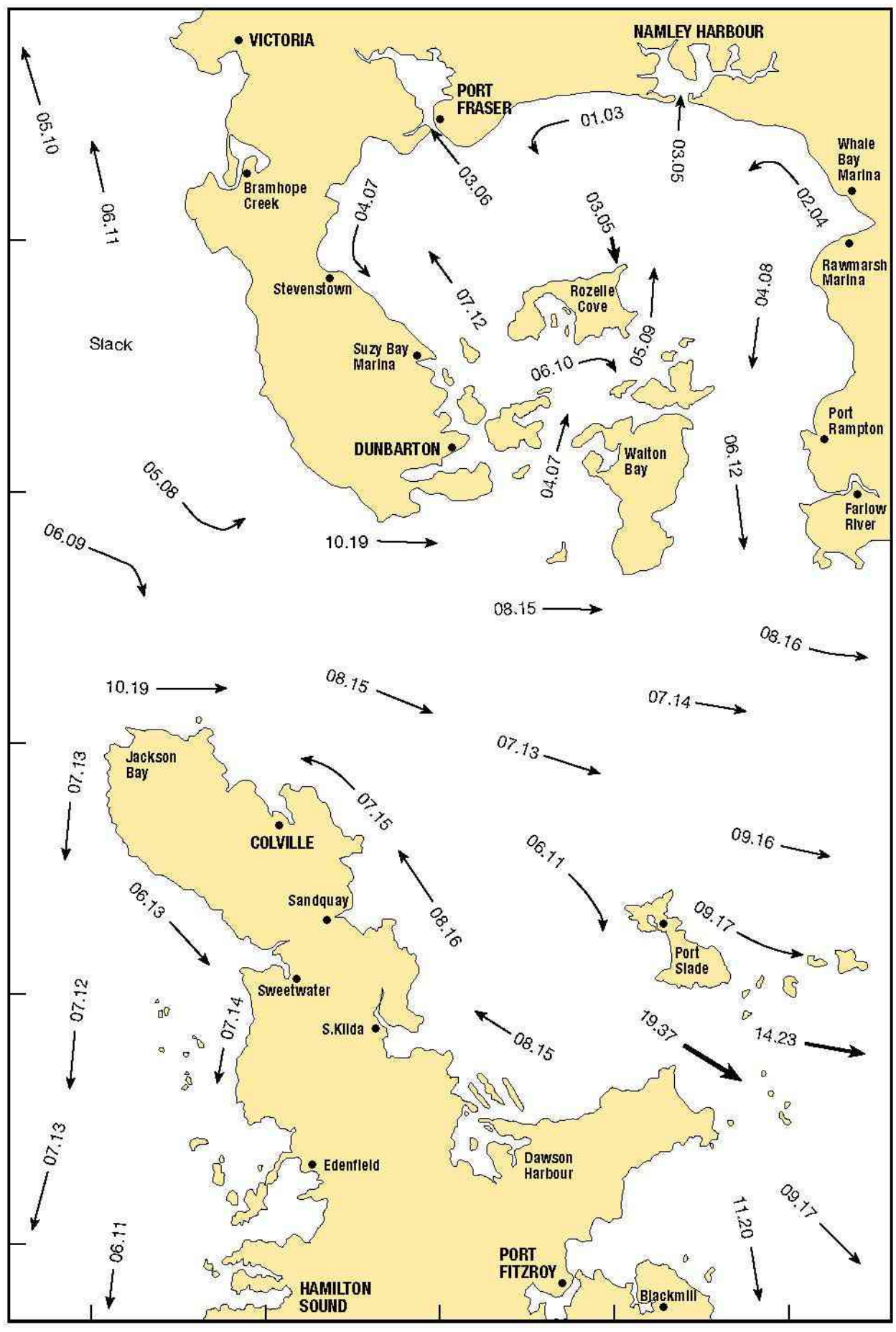


1 hour before HW VICTORIA

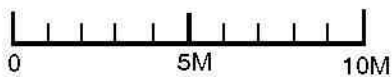
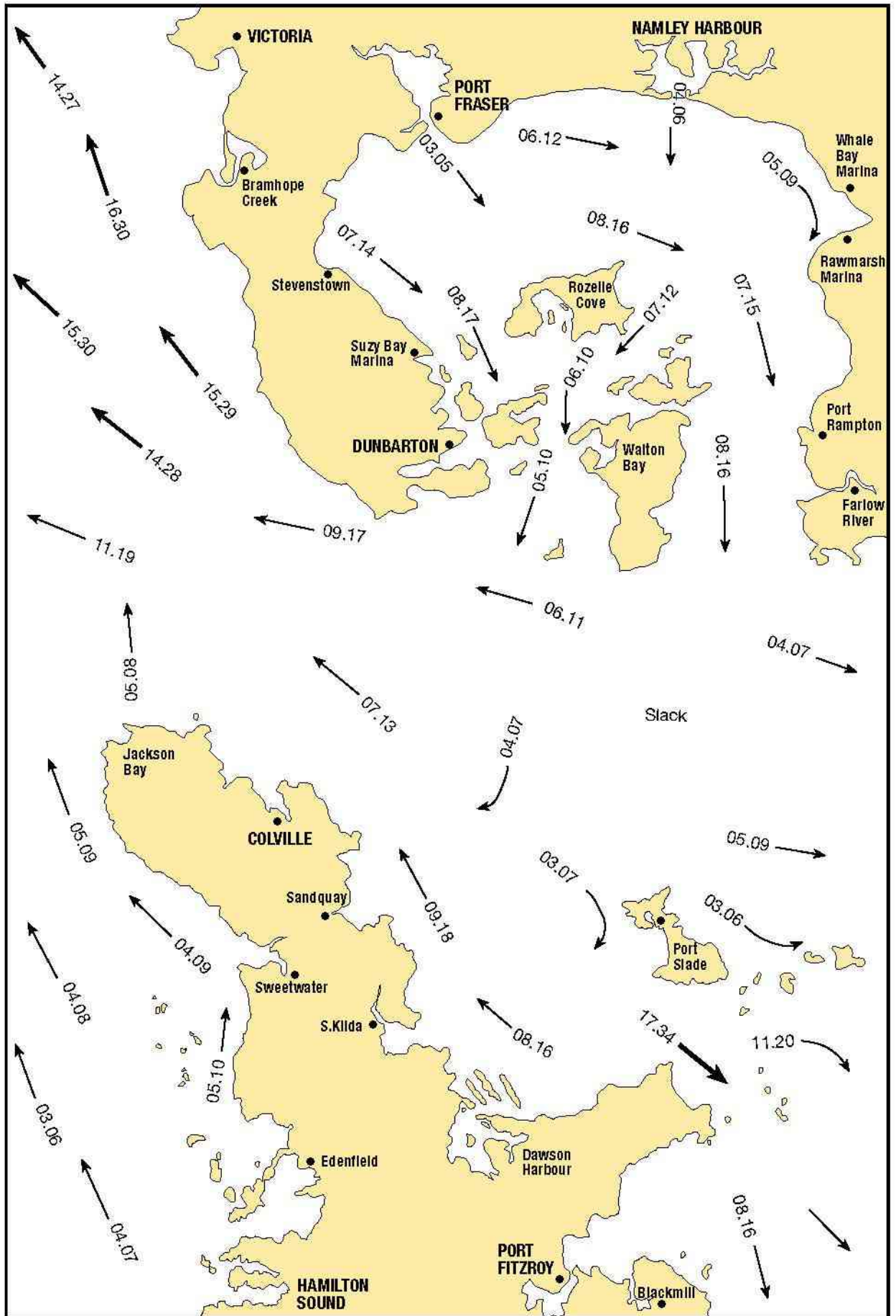




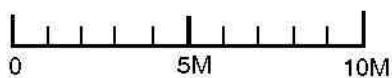
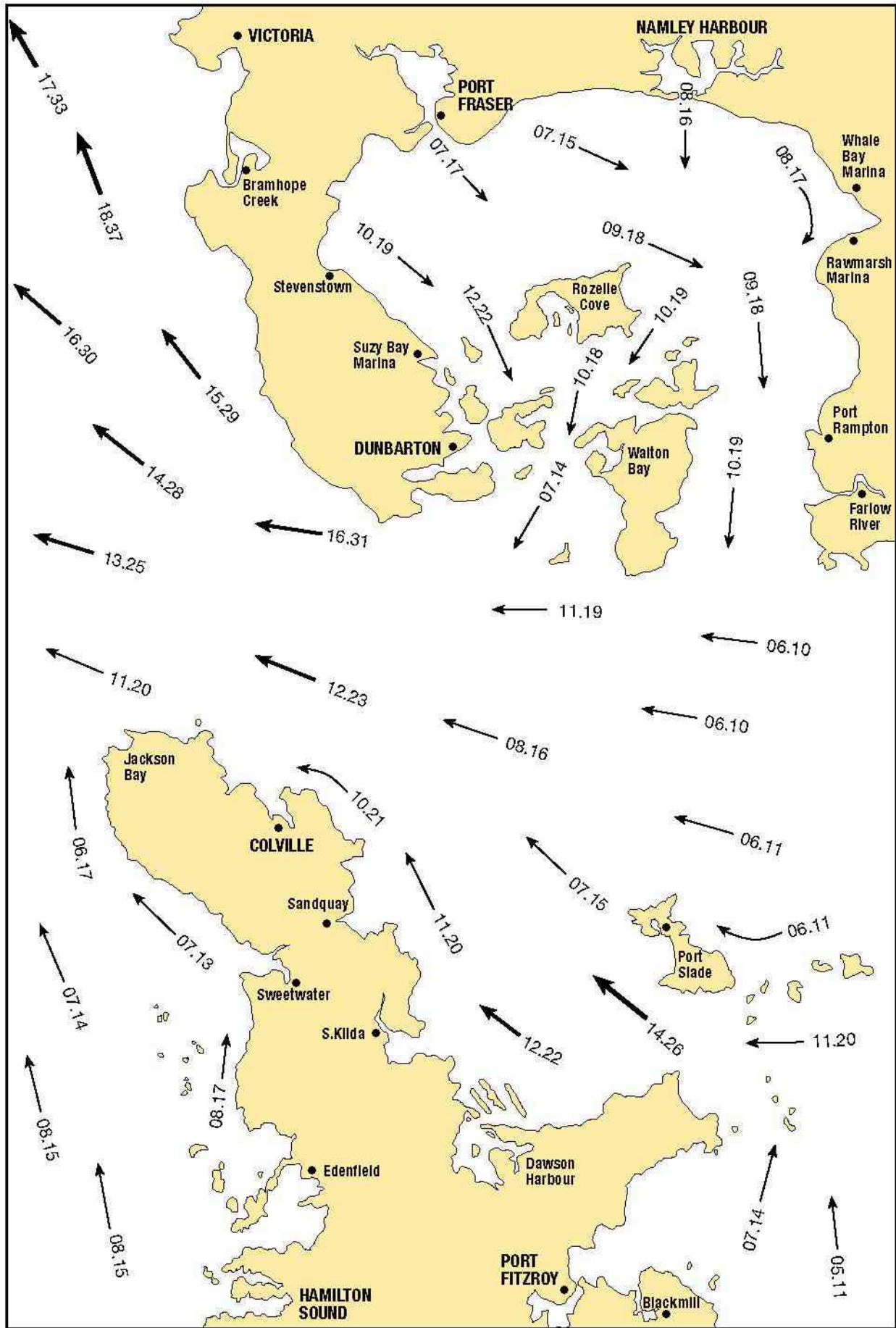
1 hour after HW VICTORIA



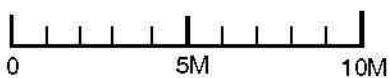
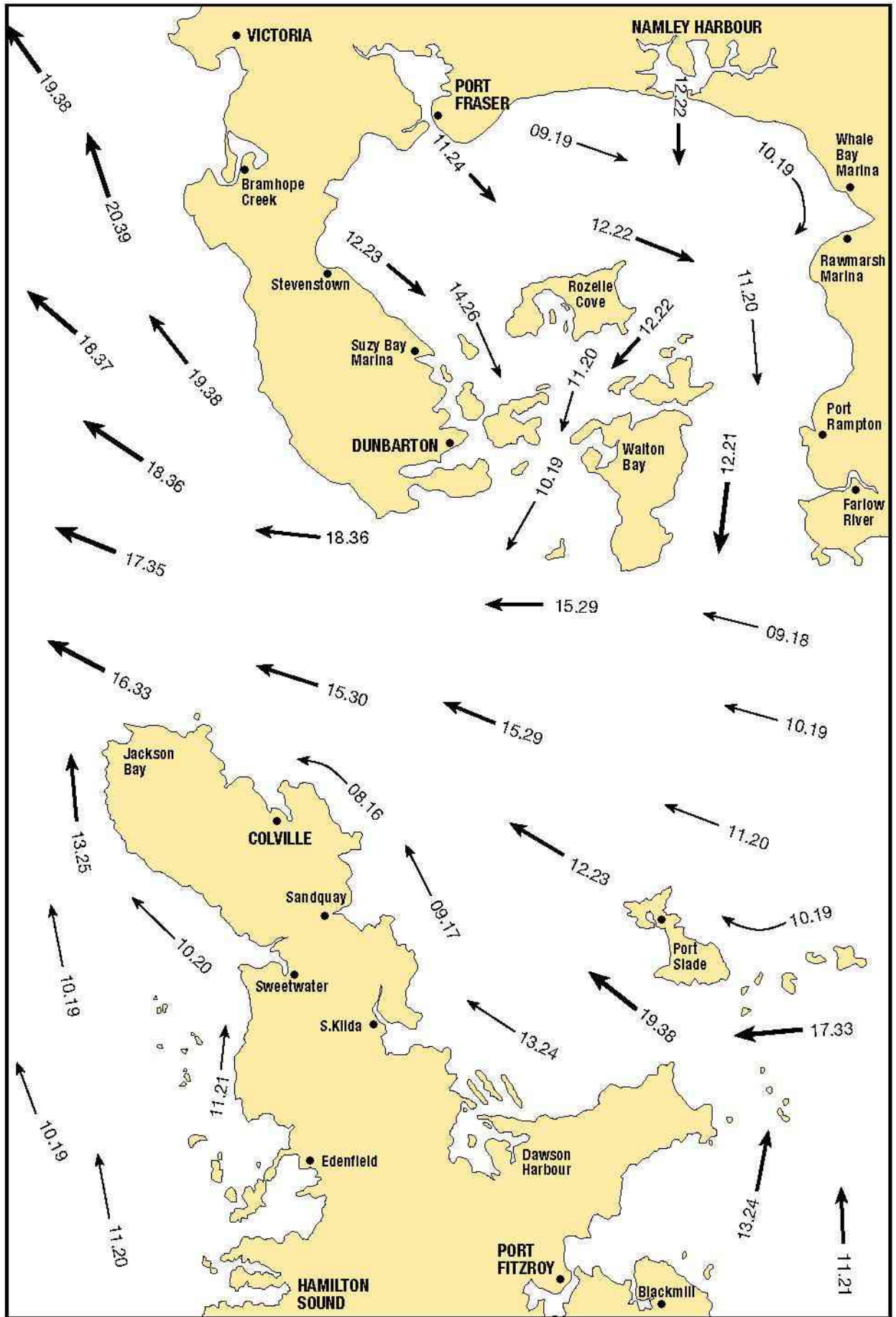
2 hours after HW VICTORIA



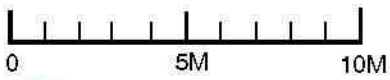
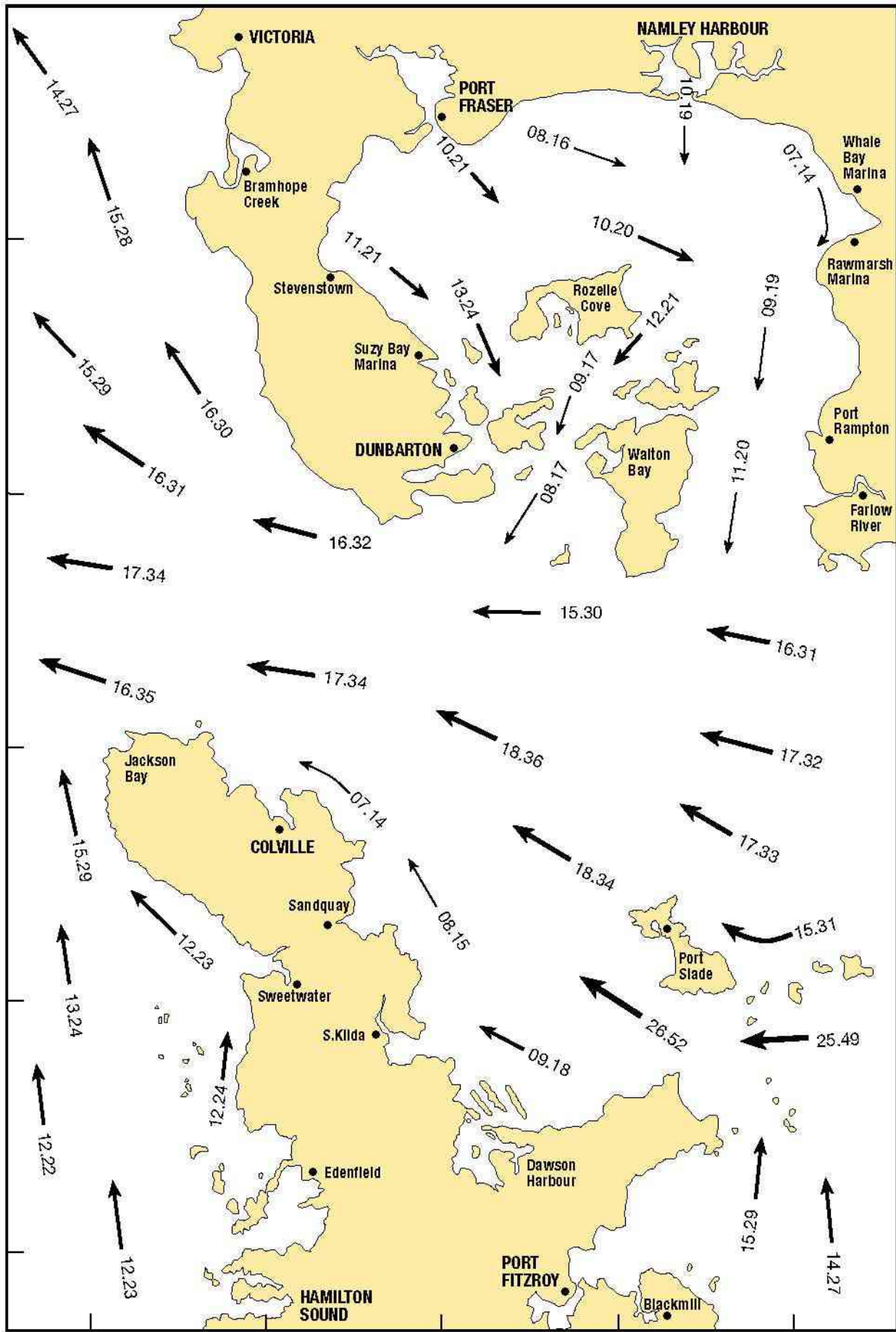
3 hours after HW VICTORIA



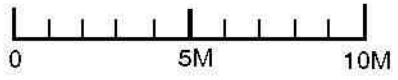
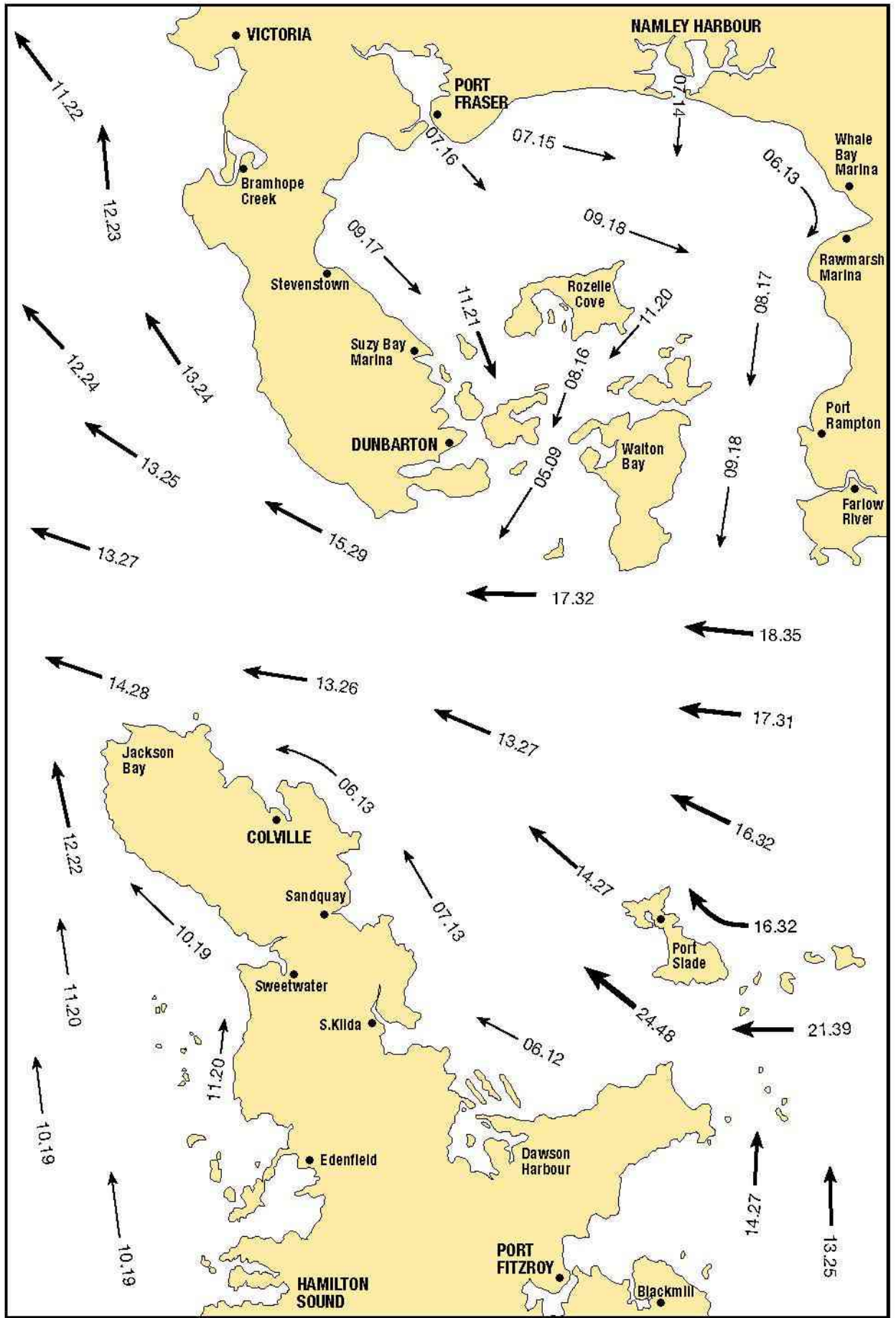
4 hours after HW VICTORIA



5 hours after HW VICTORIA

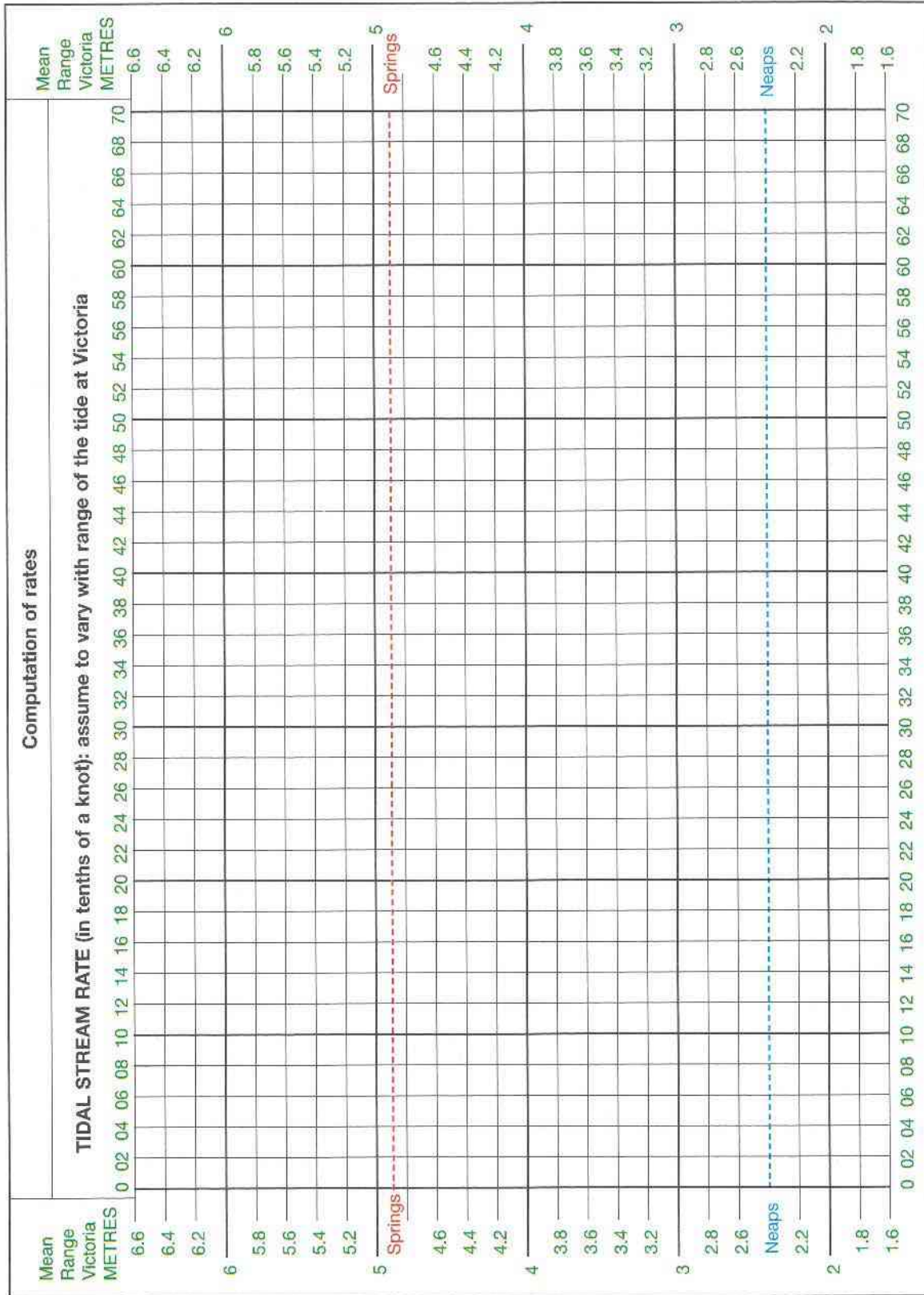


6 hours after HW VICTORIA



Computation of Rates

The graph is used to compute tidal stream rates when the tidal range is neither a spring or neap range. Tidal Diamond or Tidal Stream Atlas data can be computed using this graph.



Instructions

1. From the tide tables, calculate the range of the tide for the day in question.
2. Note the neap and spring rate from the Tidal Stream Atlas or Tidal Diamond for the required time and geographical position.
3. On this graph, plot the neap and spring rate on the relevant (neap or spring) dashed line, using the horizontal scale (Tidal Stream Rate).
4. Using a pencil and a straightedge, join the two plotted rates and extend the line to the extremities of the graph.
5. Using the calculated range from step 1, enter the vertical (Mean Range) scale. Draw a horizontal line to intercept the pencil line drawn in step 4.
6. At this interception, draw a line vertically, up or down, and read off on the horizontal scale the rate of the tidal stream for the calculated range.

TIME ZONE UT
For Summer Time add ONE hour in non-shaded areas

SPRING & NEAP TIDES
Dates in red are SPRINGS
Dates in blue are NEAPS

TIMES AND HEIGHTS OF HIGH AND LOW WATERS

JANUARY				FEBRUARY				MARCH				APRIL			
Time	m	Time	m	Time	m	Time	m	Time	m	Time	m	Time	m	Time	m
1 0510 0.9		16 0549 1.2		1 0028 5.7		16 0028 5.1		1 0524 0.3		16 0532 0.9		1 0024 5.7		16 0000 5.3	
1126 5.8		1201 5.5		0627 0.6		0629 1.2		1139 6.2		1142 5.5		0628 0.4		0607 1.0	
TU 1742 0.7		W 1814 1.1		F 1245 6.0		SA 1242 5.4		F 1755 0.0		SA 1750 0.9		M 1247 5.8		TU 1219 5.2	
2354 5.6				1903 0.4		1851 1.1				2359 5.2		1858 0.6		1821 1.1	
2 0556 0.9		17 0024 5.1		2 0115 5.5		17 0100 5.0		2 0006 5.8		17 0601 1.0		2 0108 5.4		17 0033 5.2	
1212 5.8		0623 1.3		0714 0.8		0702 1.3		0606 0.3		1213 5.4		0714 0.7		0642 1.2	
W 1830 0.7		TH 1235 5.4		SA 1333 5.8		SU 1315 5.3		SA 1224 6.1		SU 1819 1.0		TU 1334 5.4		W 1255 5.1	
		1849 1.2		1952 0.6		1924 1.3		1839 0.2				1944 1.1		1858 1.3	
3 0043 5.5		18 0058 5.0		3 0204 5.3		18 0133 4.9		3 0050 5.6		18 0028 5.2		3 0155 5.1		18 0109 5.0	
0643 1.0		0658 1.5		0803 1.0		0736 1.5		0651 0.5		0632 1.1		0806 1.2		0723 1.4	
TH 1301 5.7		F 1311 5.3		SU 1423 5.5		M 1350 5.1		SU 1310 5.9		M 1245 5.3		W 1427 4.9		TH 1336 4.9	
1920 0.8		1925 1.4		2045 1.0		2000 1.5		1925 0.5		1850 1.1		2037 1.6		1941 1.6	
4 0135 5.3		19 0134 4.8		4 0257 5.0		19 0209 4.7		4 0135 5.4		19 0059 5.0		4 0248 4.8		19 0153 4.8	
0733 1.2		0734 1.6		0858 1.4		0816 1.7		0737 0.8		0705 1.3		0907 1.6		0813 1.6	
F 1353 5.6		SA 1348 5.1		M 1520 5.2		TU 1430 4.8		M 1357 5.5		TU 1318 5.1		TH 1532 4.5		F 1429 4.6	
2015 0.9		2003 1.5		2144 1.3		2043 1.7		2013 0.9		1924 1.3		2144 2.0		F 1429 4.6	
5 0230 5.1		20 0213 4.7		5 0358 4.7		20 0254 4.5		5 0223 5.1		20 0133 4.9		5 0357 4.5		20 0252 4.6	
0828 1.4		0815 1.9		1003 1.7		0905 2.0		0829 1.2		0743 1.5		1028 1.9		0921 1.8	
SA 1449 5.4		SU 1429 4.9		TU 1627 4.9		W 1521 4.6		TU 1450 5.1		W 1356 4.9		F 1704 4.2		SA 1542 4.4	
2115 1.1		2046 1.7		2253 1.6		2138 2.0		2109 1.4		2004 1.6		2310 2.3		2151 2.1	
6 0332 4.9		21 0258 4.5		6 0512 4.6		21 0355 4.3		6 0319 4.7		21 0214 4.7		6 0527 4.4		21 0414 4.4	
0930 1.6		0902 2.1		1120 1.9		1013 2.2		0932 1.6		0831 1.8		1200 2.0		1049 1.8	
SU 1552 5.2		M 1517 4.7		W 1748 4.7		TH 1632 4.4		W 1557 4.7		TH 1445 4.6		SA 1844 4.2		SU 1718 4.4	
2220 1.3		2137 1.9				2253 2.1		2217 1.9		2057 1.9				2322 2.1	
7 0440 4.8		22 0354 4.4		7 0008 1.8		22 0521 4.3		7 0432 4.5		22 0311 4.4		7 0037 2.3		22 0546 4.5	
1039 1.8		1000 2.2		0631 4.6		1140 2.2		1053 1.9		0936 2.0		0653 4.5		1212 1.6	
M 1702 5.0		TU 1616 4.6		TH 1242 1.9		F 1804 4.4		TH 1727 4.4		F 1556 4.4		SU 1318 1.8		M 1841 4.6	
2329 1.4		2239 2.0		1911 4.6				2341 2.1		2212 2.1		1953 4.5			
8 0551 4.7		23 0505 4.3		8 0122 1.8		23 0018 2.1		8 0603 4.4		23 0436 4.3		8 0144 2.0		23 0040 1.8	
1151 1.8		1112 2.3		0742 4.7		0648 4.4		1225 2.0		1108 2.1		0755 4.7		0658 4.8	
TU 1813 5.0		W 1728 4.5		F 1355 1.7		SA 1302 1.9		F 1905 4.4		SA 1736 4.3		M 1413 1.8		TU 1318 1.2	
		2349 2.0		2020 4.8		1923 4.6				2347 2.1		2038 4.7		1941 5.0	
9 0035 1.5		24 0620 4.4		9 0223 1.7		24 0130 1.8		9 0105 2.1		24 0616 4.4		9 0231 1.7		24 0141 1.4	
0657 4.8		1225 2.2		0839 5.0		0754 4.8		0725 4.6		1237 1.8		0838 4.9		0754 5.2	
W 1301 1.7		TH 1842 4.6		SA 1453 1.5		SU 1406 1.5		SA 1345 1.8		SU 1904 4.5		TU 1453 1.3		W 1412 0.7	
1921 5.0				2113 4.9		2024 4.9		2016 4.6				2112 4.9		2030 5.3	
10 0137 1.4		25 0056 1.9		10 0311 1.5		25 0228 1.4		10 0210 1.9		25 0107 1.8		10 0307 1.5		25 0230 1.0	
0756 5.0		0724 4.6		0924 5.2		0845 5.1		0825 4.8		0728 4.7		0912 5.1		0842 5.6	
TH 1403 1.5		F 1330 1.9		SU 1538 1.3		M 1458 1.0		SU 1441 1.5		M 1345 1.4		W 1526 1.1		TH 1459 0.4	
2021 5.1		1945 4.8		2154 5.0		2113 5.3		2104 4.8		2006 4.9		2140 5.1		2114 5.5	
11 0232 1.4		26 0154 1.7		11 0351 1.3		26 0316 1.0		11 0257 1.6		26 0207 1.4		11 0338 1.2		26 0314 0.6	
0847 5.2		0818 4.9		1001 5.4		0930 5.5		0908 5.1		0822 5.2		0943 5.3		0927 5.8	
F 1457 1.4		SA 1426 1.6		M 1615 1.1		TU 1545 0.6		M 1522 1.3		TU 1438 0.9		TH 1555 1.0		F 1542 0.2	
2113 5.2		2039 5.0		2228 5.1		2158 5.6		2139 5.0		2055 5.3		2207 5.2		2155 5.7	
12 0319 1.3		27 0245 1.4		12 0426 1.2		27 0400 0.7		12 0334 1.4		27 0256 1.0		12 0407 1.0		27 0357 0.4	
0931 5.4		0904 5.2		1035 5.5		1013 5.8		0942 5.3		0908 5.6		1013 5.4		1011 6.0	
SA 1543 1.2		SU 1515 1.2		TU 1649 1.0		W 1628 0.3		TU 1556 1.1		W 1523 0.4		F 1623 0.9		SA 1625 0.1	
2157 5.2		2127 5.3		● 2259 5.2		○ 2241 5.8		2209 5.1		2138 5.6		● 2234 5.3		○ 2236 5.8	
13 0400 1.2		28 0331 1.1		13 0458 1.1		28 0442 0.4		13 0406 1.2		28 0339 0.6		13 0435 0.9		28 0440 0.3	
1012 5.5		0947 5.5		1107 5.6		1056 6.1		1013 5.4		0951 5.9		1043 5.4		1056 6.0	
SU 1625 1.1		M 1601 0.8		W 1720 1.0		TH 1712 0.1		W 1625 1.0		TH 1606 0.1		SA 1650 0.8		SU 1707 0.2	
● 2238 5.2		O 2212 5.5		2329 5.2		2323 5.9		2236 5.2		O 2219 5.8		2301 5.3		2319 5.8	
14 0439 1.2		29 0415 0.8		14 0528 1.0		14 0528 1.0		14 0435 1.0		29 0420 0.3		14 0504 0.9		29 0524 0.3	
1050 5.6		1030 5.7		1138 5.6		1138 5.6		1042 5.5		1034 6.1		1114 5.4		1141 5.8	
M 1703 1.1		TU 1645 0.5		TH 1750 1.0		TH 1750 1.0		TH 1653 0.9		F 1649 0.0		SU 1719 0.9		M 1751 0.5	
2315 5.2		2257 5.7		2358 5.2		2358 5.2		● 2303 5.3		2300 5.9		2330 5.3			
15 0515 1.2		30 0459 0.6		15 0559 1.1		15 0559 1.1		15 0503 0.9		30 0502 0.2		15 0535 0.9		30 0002 5.6	
1126 5.6		1114 5.9		1210 5.5		1210 5.5		1112 5.5		1117 6.2		1145 5.4		0609 0.5	
TU 1740 1.1		W 1730 0.4		F 1820 1.0		F 1820 1.0		F 1721 0.9		SA 1731 0.0		M 1750 1.0		TU 1228 5.6	
2350 5.2		2342 5.7						2330 5.3		2342 5.8				1834 0.8	
31 0543 0.6		31 0543 0.6		31 0544 0.2		31 0544 0.2		31 0544 0.2		31 0544 0.2		31 0544 0.2		31 0544 0.2	
		1159 6.0		1201 6.1		1201 6.1		1201 6.1		1201 6.1		1201 6.1		1201 6.1	
		TH 1816 0.3		SU 1814 0.2		SU 1814 0.2		SU 1814 0.2		SU 1814 0.2		SU 1814 0.2		SU 1814 0.2	

VICTORIA - Standard Port

TIME ZONE UT

For Summer Time add ONE hour in non-shaded areas

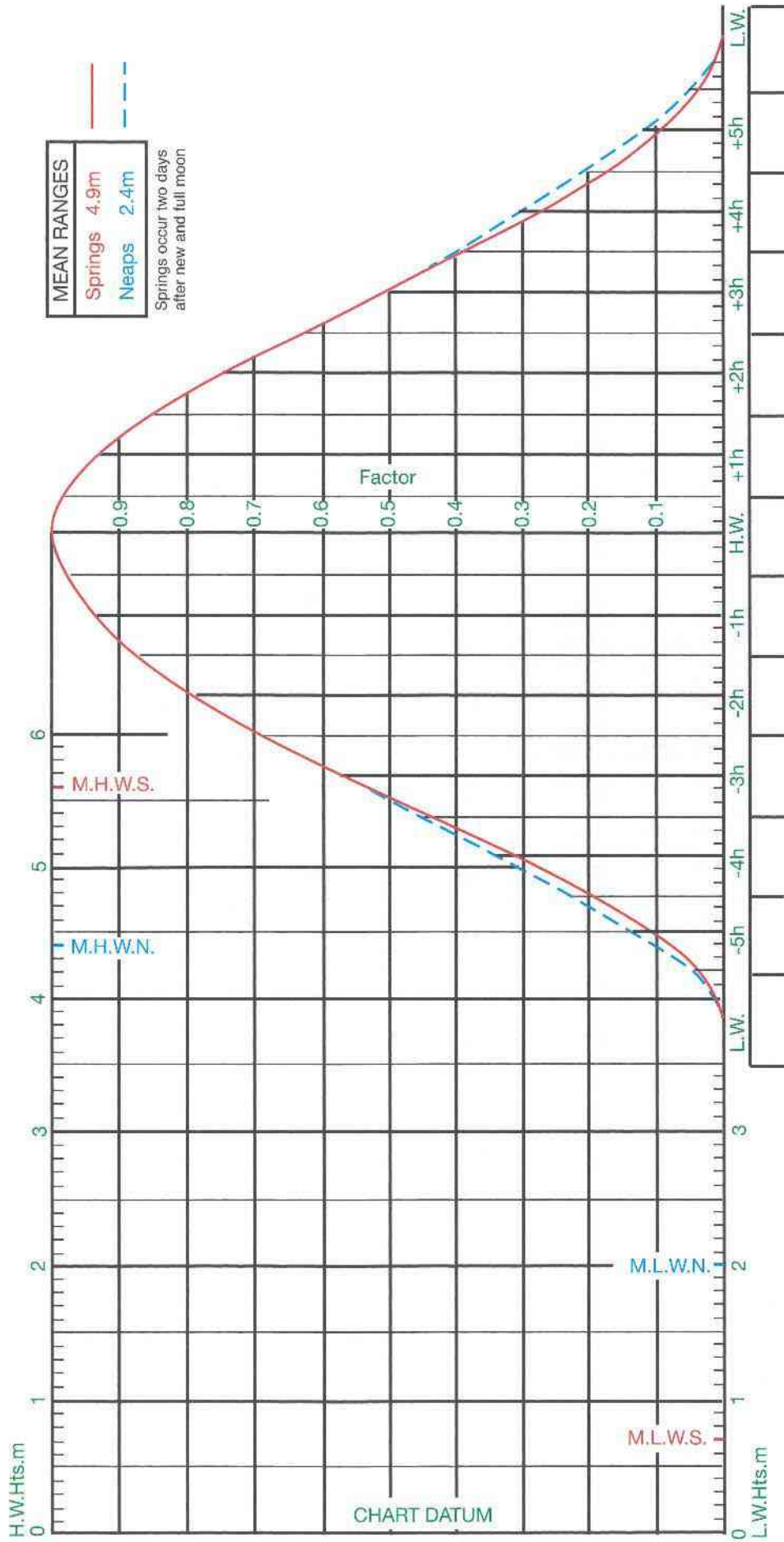
SPRING & NEAP TIDES

Dates in red are SPRINGS
Dates in blue are NEAPS

TIMES AND HEIGHTS OF HIGH AND LOW WATERS

MAY				JUNE				JULY				AUGUST			
Time	m	Time	m	Time	m	Time	m	Time	m	Time	m	Time	m	Time	m
1 0046 0856 W 1315 1920	5.4 0.8 5.2 1.2	16 0015 0628 TH 1241 1842	5.2 1.1 5.1 1.3	1 0159 0822 SA 1440 2038	5.0 1.5 4.5 1.9	16 0139 0801 SU 1417 2016	5.2 1.1 4.9 1.5	1 0214 0835 M 1449 2048	5.0 1.6 4.5 1.9	16 0217 0840 TU 1455 2053	5.4 0.9 5.0 1.3	1 0259 0917 TH 1533 2139	4.7 1.8 4.4 2.1	16 0349 1013 F 1630 2240	5.0 1.5 4.7 1.8
2 0132 0747 TH 1407 2011	5.2 1.2 4.8 1.7	17 0056 0713 F 1327 1929	5.1 1.2 4.9 1.5	2 0251 0920 SU 1542 2139	4.8 1.7 4.3 2.2	17 0236 0901 M 1520 2118	5.1 1.2 4.8 1.6	2 0301 0925 TU 1542 2143	4.8 1.7 4.3 2.1	17 0314 0939 W 1556 2156	5.2 1.1 4.8 1.5	2 0353 1014 F 1637 2247	4.5 2.0 4.3 2.3	17 0506 1128 SA 1750	4.7 1.8 4.6
3 0223 0846 F 1509 2111	4.9 1.6 4.4 2.1	18 0145 0808 SA 1424 2026	5.0 1.4 4.7 1.7	3 0351 1024 M 1653 2249	4.6 1.9 4.2 2.3	18 0339 1007 TU 1628 2227	5.0 1.2 4.7 1.7	3 0354 1021 W 1644 2245	4.6 1.9 4.3 2.2	18 0417 1044 TH 1703 2306	5.1 1.3 4.7 1.6	3 0501 1122 SA 1753	4.4 2.1 4.3	18 0003 0633 SU 1246 1907	1.8 4.6 1.8 4.7
4 0325 0958 SA 1630 2229	4.6 1.9 4.2 2.3	19 0245 0914 SU 1535 2137	4.8 1.5 4.5 1.9	4 0458 1130 TU 1802 2357	4.5 1.9 4.3 2.2	19 0447 1115 W 1738 2336	5.0 1.2 4.7 1.6	4 0456 1122 TH 1751 2351	4.5 1.9 4.3 2.2	19 0527 1152 F 1813	4.9 1.4 4.7	4 0002 0617 SU 1232 1902	2.2 4.4 2.0 4.5	19 0123 0751 M 1354 2012	1.7 4.7 1.7 5.0
5 0442 1119 SU 1758 2351	4.4 2.0 4.2 2.3	20 0359 1031 M 1656 2256	4.7 1.5 4.5 1.9	5 0603 1230 W 1900	4.5 1.8 4.4	20 0555 1219 TH 1842	5.0 1.1 4.9	5 0601 1222 F 1852	4.5 1.9 4.4	20 0018 0639 SA 1259 1919	1.6 4.9 1.4 4.9	5 0111 0726 M 1334 1959	2.0 4.6 1.8 4.7	20 0228 0851 TU 1449 2102	1.5 4.9 1.6 5.2
6 0602 1232 M 1908	4.4 1.9 4.3	21 0517 1145 TU 1811	4.8 1.3 4.7	6 0055 0700 TH 1321 1946	2.1 4.6 1.6 4.6	21 0041 0658 F 1319 1938	1.5 5.1 1.0 5.0	6 0052 0702 SA 1317 1943	2.1 4.6 1.7 4.6	21 0127 0747 SU 1400 2017	1.5 4.9 1.4 5.0	6 0209 0823 TU 1427 2046	1.7 4.8 1.6 5.0	21 0318 0936 W 1532 2143	1.3 5.0 1.4 5.4
7 0059 0706 TU 1329 1957	2.1 4.6 1.7 4.6	22 0009 0626 W 1249 1912	1.7 5.0 1.1 4.9	7 0144 0748 F 1404 2025	1.8 4.8 1.5 4.8	22 0140 0756 SA 1413 2029	1.3 5.2 1.0 5.2	7 0146 0756 SU 1405 2028	1.8 4.7 1.6 4.8	22 0228 0847 M 1454 2108	1.4 5.0 1.3 5.2	7 0259 0911 W 1513 2129	1.4 5.0 1.3 5.3	22 0358 1013 TH 1609 2218	1.1 5.1 1.2 5.5
8 0150 0754 W 1413 2034	1.9 4.8 1.5 4.8	23 0111 0725 TH 1344 2003	1.4 5.2 0.8 5.2	8 0225 0831 SA 1442 2100	1.6 4.9 1.3 5.0	23 0234 0850 SU 1503 2116	1.1 5.3 0.9 5.4	8 0233 0843 M 1449 2108	1.6 4.9 1.4 5.0	23 0321 0938 TU 1541 2153	1.2 5.1 1.2 5.4	8 0343 0954 TH 1556 2210	1.0 5.3 1.0 5.6	23 0433 1045 F 1642 2251	1.0 5.2 1.1 5.6
9 0230 0833 TH 1448 2105	1.6 5.0 1.3 5.0	24 0203 0816 F 1434 2049	1.1 5.5 0.6 5.4	9 0303 0910 SU 1517 2134	1.4 5.1 1.2 5.1	24 0325 0940 M 1549 2201	0.9 5.4 0.9 5.5	9 0317 0927 TU 1531 2147	1.3 5.1 1.2 5.2	24 0408 1023 W 1622 2234	1.0 5.2 1.1 5.5	9 0426 1037 F 1638 2252	0.7 5.5 0.8 5.8	24 0506 1116 SA 1714 2323	0.9 5.2 1.1 5.6
10 0304 0908 F 1519 2134	1.4 5.1 1.1 5.1	25 0251 0905 SA 1520 2133	0.8 5.6 0.5 5.8	10 0339 0947 M 1553 2208	1.2 5.2 1.1 5.3	25 0413 1028 TU 1633 2245	0.8 5.4 0.9 5.5	10 0359 1009 W 1612 2227	1.1 5.2 1.1 5.4	25 0449 1103 TH 1701 2312	0.9 5.2 1.1 5.5	10 0509 1120 SA 1720 2335	0.5 5.6 0.6 5.9	25 0536 1145 SU 1745 2355	0.9 5.2 1.1 5.5
11 0335 0941 SA 1550 2203	1.2 5.2 1.0 5.2	26 0337 0952 SU 1604 2216	0.6 5.7 0.5 5.6	11 0416 1025 TU 1629 2243	1.1 5.2 1.0 5.3	26 0458 1114 W 1716 2328	0.8 5.3 1.0 5.5	11 0441 1051 TH 1653 2308	0.9 5.3 1.0 5.5	26 0528 1140 F 1738 2349	0.9 5.1 1.1 5.5	11 0552 1203 SU 1803	0.3 5.6 0.6	26 0607 1215 M 1816	1.0 5.1 1.2
12 0406 1014 SU 1620 2233	1.1 5.3 0.9 5.3	27 0423 1038 M 1648 2259	0.5 5.7 0.6 5.7	12 0455 1105 W 1707 2322	1.0 5.2 1.0 5.4	27 0543 1158 TH 1757	0.9 5.2 1.1	12 0525 1135 F 1737 2352	0.7 5.4 0.9 5.6	27 0604 1215 SA 1813	1.0 5.1 1.2	12 0019 0636 M 1249 1847	5.9 0.4 5.5 0.7	27 0027 0637 TU 1247 1847	5.4 1.1 5.0 1.3
13 0438 1047 M 1652 2304	1.0 5.3 0.9 5.3	28 0509 1125 TU 1731 2343	0.6 5.5 0.8 5.6	13 0536 1146 TH 1748	0.9 5.2 1.1	28 0010 0625 F 1240 1837	5.5 1.0 5.0 1.3	13 0610 1221 SA 1821	0.7 5.4 0.9	28 0025 0639 SU 1250 1848	5.4 1.1 5.0 1.3	13 0105 0723 TU 1335 1934	5.8 0.5 5.4 0.9	28 0100 0709 W 1319 1922	5.2 1.3 4.9 1.6
14 0512 1122 TU 1725 2338	1.0 5.3 1.0 5.3	29 0555 1212 W 1815	0.7 5.3 1.0	14 0003 0619 F 1232 1832	5.4 0.9 5.1 1.2	29 0051 0707 SA 1322 1918	5.3 1.2 4.8 1.5	14 0037 0656 SU 1310 1908	5.6 0.7 5.3 1.0	29 0100 0714 M 1324 1924	5.3 1.2 4.8 1.5	14 0153 0812 W 1425 2026	5.6 0.8 5.1 1.2	29 0134 0744 TH 1354 2000	5.1 1.5 4.7 1.8
15 0548 1159 W 1802	1.0 5.2 1.1	30 0027 0641 TH 1259 1859	5.4 0.9 5.0 1.3	15 0049 0708 SA 1322 1921	5.3 1.0 5.0 1.3	30 0132 0750 SU 1404 2001	5.1 1.4 4.6 1.7	15 0128 0748 M 1400 1958	5.5 0.8 5.1 1.2	30 0136 0751 TU 1401 2002	5.1 1.4 4.7 1.7	15 0246 0908 TH 1522 2126	5.3 1.1 4.9 1.5	30 0212 0824 F 1437 2047	4.8 1.8 4.6 2.1
31 0113 0730 F 1347 1946	5.2 1.2 4.7 1.6							31 0215 0831 W 1443 2046	4.9 1.6 4.5 1.9			31 0301 0915 SA 1533 2151	4.6 2.0 4.4 2.3		

VICTORIA - Mean Spring and Neap curves



46°18'.84N 006°06'.47W
Northern Territories CHART RYA 3.

Standard Port PORT FRASER (→)

Times		Height (metres)							
		High Water		Low Water		MHWS	MHWN	MLWN	MLWS
0000	0600	0500	1100	4.2	3.4	1.1	0.4		
1200	1800	1700	2300						
Differences STEVENSTOWN									
-0026	-0024	-0032	-0012	-0.2	+0.2	+0.2	0.0		

DESCRIPTION. A small marina with two floating pontoons and good shoreside facilities. The marina is tucked outside the western breakwater of the military dockyard and is protected by a floating boom. There are a number of moorings outside the boom, some of which are available for visiting yachts. Shelter is good inside of the boom except during strong NE winds when a scend will make the berths uncomfortable. The minimum depth on the outer pontoon is 3m and vessels <15m can be accommodated. The main dockyard is a military area and is patrolled by military police vessels.

APPROACH WAYPOINT. 46°19'.29N 006°05'.45W.

PILOTAGE NOTES. Louisa Rks sit 1.5M to the ENE of Stevenstown. The rocks are marked by two NCM, one of which indicates an isolated obstruction NW of the main group of rocks. Louisa Lt Ho [Fl.6s17m12M] (R&W chequered bn) sits on the southern edge of the rocks. If approaching from the SE beware of the unmarked rocks and small islands that extend in some cases out to 4ca from the shore. Approaching the harbour, leave the Fl(3)7s light on the end of the dockyard bkwr well to port, and then run

on a SW'ly course to parallel the breakwater with its Q.G and Fl.R.2s lights. The wall is steep-to and except in a lee shore situation can be followed closely round to the northern entrance of the marina. The southern entrance to the marina is between the boom and the Town Quay; due to numerous unlit moorings in the area this route is not advised at night.

TIDAL STREAMS AND HEIGHTS. At spring tides the stream can reach up to 2kn in the region of Louisa Rks. Closer to the coast the stream drops off to 0.5kn or less. In the moorings or in the marina the stream is barely discernible. With the exception of the inshore berths which are reserved for small sports-boats and RIBs, the berths are accessible at all states of the tide.

LIGHTS AND MARKS. Louisa Lt Ho [Fl.6s17m12M] Racon Q (3cm) (R&W chequered bn) is the main light in the NW section of Beaufort Bay. The main breakwater around the naval base is well lit by 5 lights; the boom and the pontoons are unlit but readily identifiable at night due to the backscatter of the town lights.

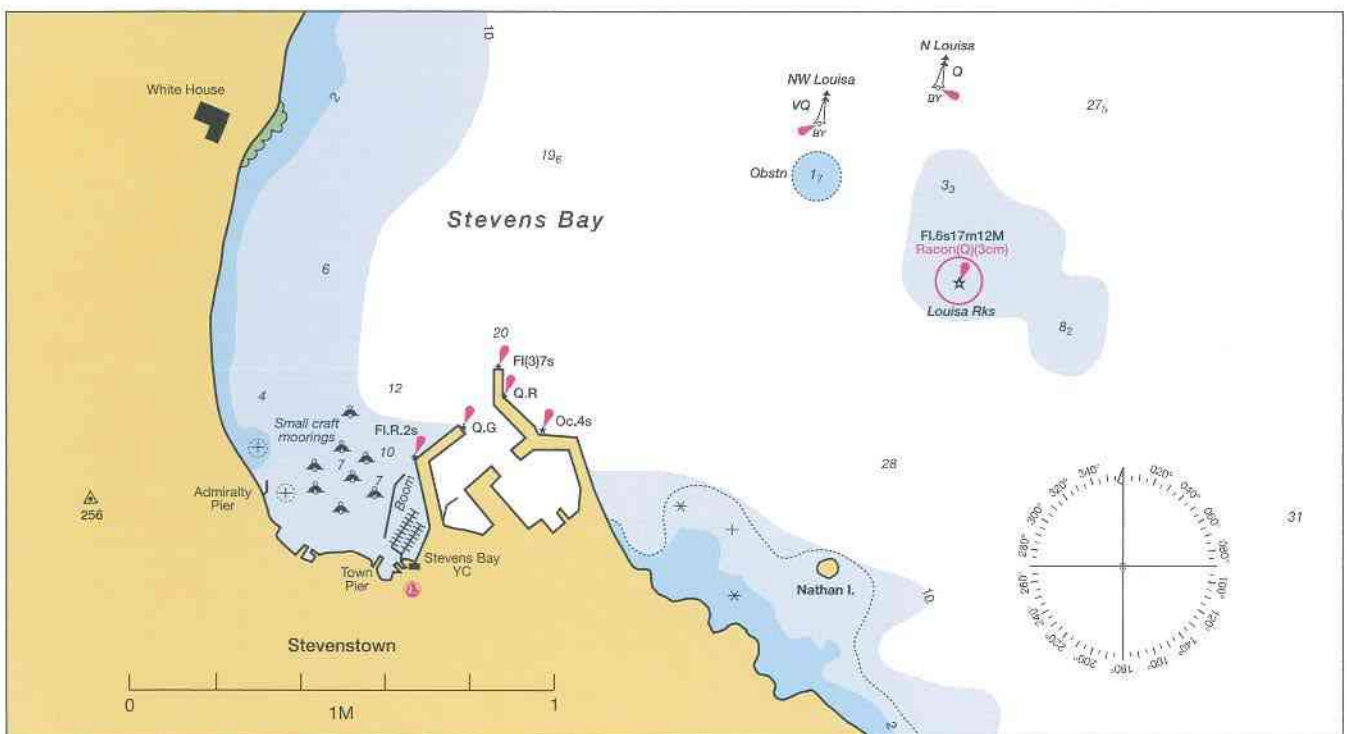
VHF RADIO. Stevenstown Naval Base Radio and patrol vessels Ch 12, 14, 16. Marina Ch 80 (0900-1800).

FACILITIES. FW, CH, ME, EL, Bar, R.

ADJACENT MINOR HARBOUR.

Kinder Harbour. A small fishing harbour with moorings for resident fishing vessels only. Emergency berthing available, obtain permission from the Harbour Master. VHF Ch 9, working hours only.

A straightforward approach with no off lying dangers. The breakwater is lit with LFl. R. 6s.



PORT FRASER - Standard Port

TIME ZONE UT
For Summer Time add ONE
hour in non-shaded areas

SPRING & NEAP TIDES
Dates in red are **SPRINGS**
Dates in blue are **NEAPS**

TIMES AND HEIGHTS OF HIGH AND LOW WATERS

SEPTEMBER				OCTOBER				NOVEMBER				DECEMBER			
Time	m	Time	m	Time	m	Time	m	Time	m	Time	m	Time	m	Time	m
1 0526 1139 SU 1752	3.4 1.3 3.3	16 0036 0702 M 1330 1950	1.3 3.3 1.2 3.5	1 0555 1229 TU 1838	3.3 1.3 3.3	16 0131 0752 W 1427 2039	1.6 3.3 1.0 3.6	1 0153 0807 F 1436 2051	1.3 3.5 0.7 3.8	16 0256 0906 SA 1533 2142	1.3 3.7 0.8 3.8	1 0219 0831 SU 1504 2114	1.1 3.8 0.5 3.9	16 0258 0905 M 1527 2139	1.2 3.6 0.9 3.7
2 0022 0637 M 1258 1911	1.3 3.3 1.3 3.3	17 0201 0822 TU 1452 2104	1.4 3.4 1.0 3.6	2 0110 0723 W 1352 2010	1.4 3.3 1.1 3.4	17 0241 0857 TH 1525 2135	1.4 3.6 0.8 3.8	2 0254 0907 SA 1534 2146	1.1 3.8 0.5 4.1	17 0342 0952 SU 1612 2223	1.1 3.8 0.7 3.9	2 0316 0927 M 1556 2206	0.9 4.0 0.4 4.1	17 0343 0952 TU 1607 2221	1.0 3.7 0.8 3.8
3 0142 0758 TU 1415 2033	1.3 3.4 1.2 3.5	18 0309 0926 W 1553 2202	1.3 3.6 0.8 3.9	3 0225 0842 TH 1504 2120	1.3 3.5 0.9 3.8	18 0333 0949 F 1612 2222	1.2 3.8 0.7 4.0	3 0346 0959 SU 1623 2234	0.9 4.1 0.3 4.3	18 0421 1032 M 1646 2259	0.9 3.9 0.7 4.0	3 0409 1020 TU 1644 2255	0.7 4.2 0.3 4.2	18 0423 1035 W 1645 2300	0.9 3.8 0.8 3.9
4 0252 0911 W 1525 2141	1.2 3.6 1.0 3.7	19 0401 1019 TH 1642 2250	1.2 3.9 0.6 4.0	4 0325 0941 F 1601 2214	1.1 3.8 0.6 4.1	19 0416 1033 SA 1650 2302	1.0 4.0 0.6 4.1	4 0433 1047 M 1708 ● 2320	0.7 4.3 0.2 4.4	19 0456 1108 TU 1717 2331	0.8 3.9 0.7 4.0	4 0458 1110 W 1729 ● 2341	0.6 4.3 0.4 4.2	19 0502 1115 TH 1722 O 2336	0.8 3.9 0.8 3.9
5 0351 1009 TH 1624 2236	1.0 3.9 0.7 4.0	20 0443 1104 F 1722 2332	1.0 4.0 0.5 4.1	5 0415 1030 SA 1650 2302	0.9 4.1 0.3 4.3	20 0453 1112 SU 1723 2337	0.9 4.0 0.6 4.1	5 0518 1132 TU 1751	0.6 4.4 0.2	20 0528 1142 W 1747 O	0.8 3.9 0.8	5 0547 1158 TH 1812	0.5 4.3 0.4	20 0541 1154 F 1758	0.7 3.9 0.8
6 0440 1058 F 1713 2324	0.9 4.1 0.4 4.3	21 0521 1144 SA 1757 O	0.9 4.1 0.5	6 0459 1116 SU 1734 ● 2346	0.7 4.3 0.2 4.5	21 0527 1145 M 1752 O	0.9 4.0 0.7	6 0003 0602 W 1218 1831	4.4 0.5 4.5 0.3	21 0001 0600 TH 1215 1817	4.0 0.7 3.9 0.8	6 0025 0634 F 1246 1853	4.1 0.5 4.3 0.6	21 0013 0620 SA 1233 1834	3.9 0.7 4.0 0.8
7 0523 1142 SA 1757 ●	0.7 4.3 0.3	22 0009 0554 SU 1218 1827	4.1 0.9 4.1 0.6	7 0541 1159 M 1815	0.6 4.4 0.1	22 0007 0556 TU 1214 1817	4.0 0.8 4.0 0.7	7 0046 0647 TH 1302 1912	4.3 0.5 4.4 0.4	22 0032 0635 F 1249 1849	4.0 0.7 3.9 0.8	7 0108 0722 SA 1333 1934	4.1 0.5 4.2 0.7	22 0050 0701 SU 1312 1910	3.9 0.6 4.0 0.9
8 0009 0604 SU 1225 1839	4.4 0.7 4.4 0.1	23 0041 0624 M 1246 1853	4.0 0.9 4.0 0.6	8 0028 0622 TU 1242 1855	4.5 0.5 4.5 0.1	23 0033 0625 W 1241 1844	4.0 0.8 3.9 0.7	8 0128 0732 F 1347 1953	4.2 0.5 4.3 0.6	23 0104 0712 SA 1325 1921	3.9 0.7 3.9 0.9	8 0150 0811 SU 1420 2016	4.0 0.5 4.1 0.9	23 0127 0744 M 1354 1948	3.9 0.6 4.0 0.9
9 0053 0645 M 1307 1921	4.5 0.6 4.4 0.1	24 0106 0652 TU 1311 1916	4.0 0.8 4.0 0.7	9 0111 0705 W 1324 1935	4.5 0.5 4.5 0.2	24 0058 0656 TH 1311 1911	4.0 0.8 3.9 0.8	9 0210 0820 SA 1434 2036	4.1 0.6 4.2 0.8	24 0139 0752 SU 1404 1957	3.9 0.7 3.9 1.0	9 0232 0901 M 1507 2059	3.8 0.6 3.9 1.1	24 0207 0829 TU 1439 2030	3.8 0.6 3.9 1.0
10 0135 0726 TU 1348 2001	4.5 0.6 4.5 0.2	25 0130 0721 W 1338 1942	3.9 0.8 4.0 0.7	10 0152 0748 TH 1407 2016	4.3 0.5 4.4 0.4	25 0127 0729 F 1343 1941	4.0 0.8 3.9 0.8	10 0252 0911 SU 1525 2122	3.9 0.7 3.9 1.1	25 0218 0836 M 1448 2038	3.8 0.8 3.8 1.1	10 0315 0953 TU 1558 2145	3.7 0.7 3.7 1.3	25 0250 0918 W 1528 2118	3.8 0.6 3.8 1.0
11 0217 0809 W 1430 2042	4.4 0.6 4.4 0.3	26 0157 0753 TH 1408 2011	3.9 0.8 3.9 0.7	11 0234 0833 F 1452 2058	4.2 0.6 4.2 0.7	26 0200 0806 SA 1419 2013	3.9 0.8 3.9 0.9	11 0338 1010 M 1623 2218	3.6 0.9 3.6 1.4	26 0301 0927 TU 1539 2129	3.7 0.9 3.7 1.2	11 0403 1049 W 1653 2241	3.6 0.9 3.5 1.4	26 0339 1011 TH 1623 2212	3.7 0.6 3.7 1.1
12 0300 0853 TH 1514 2126	4.2 0.7 4.3 0.5	27 0229 0828 F 1443 2043	3.9 0.9 3.9 0.8	12 0317 0923 SA 1542 2146	3.9 0.8 4.0 1.0	27 0237 0847 SU 1500 2051	3.8 0.9 3.8 1.0	12 0435 1121 TU 1734 2328	3.4 1.0 3.4 1.6	27 0354 1029 W 1639 2234	3.5 0.9 3.6 1.3	12 0500 1150 TH 1755 2347	3.4 1.0 3.4 1.5	27 0436 1111 F 1725 2314	3.6 0.7 3.6 1.2
13 0346 0941 F 1603 2215	4.0 0.8 4.0 0.8	28 0306 0908 SA 1522 2120	3.8 1.0 3.8 1.0	13 0405 1022 SU 1643 2247	3.6 1.0 3.6 1.3	28 0320 0937 M 1550 2142	3.6 1.0 3.6 1.2	13 0551 1239 W 1850	3.3 1.0 3.4	28 0500 1141 TH 1752 2353	3.4 0.9 3.5 1.4	13 0607 1253 F 1900	3.3 1.0 3.3	28 0542 1218 SA 1832	3.6 0.7 3.6
14 0436 1039 SA 1703 2317	3.7 1.0 3.7 1.1	29 0350 0957 SU 1610 2211	3.7 1.1 3.6 1.2	14 0507 1140 M 1804	3.4 1.1 3.4	29 0413 1044 TU 1653 2258	3.4 1.1 3.4 1.4	14 0049 0707 TH 1349 1958	1.6 3.3 1.0 3.5	29 0617 1256 F 1908	3.4 0.8 3.6	14 0059 0713 SA 1351 2000	1.5 3.4 1.0 3.4	29 0026 0651 SU 1329 1939	1.2 3.6 0.7 3.6
15 0540 1155 SU 1823	3.4 1.2 3.5	30 0444 1105 M 1714 2335	3.4 1.3 3.4 1.4	15 0005 0632 TU 1311 1928	1.5 3.2 1.1 3.4	30 0524 1206 W 1814	3.3 1.1 3.4	15 0200 0812 F 1446 2055	1.5 3.5 0.9 3.7	30 0111 0729 SA 1405 2015	1.3 3.6 0.7 3.7	15 0205 0813 SU 1442 2053	1.3 3.5 0.9 3.6	30 0141 0758 M 1434 2043	1.1 3.7 0.6 3.7
31 0034 0651 TH 1327 1942	1.5 3.3 1.0 3.5														
														31 0249 0902 TU 1533 2142	1.0 3.8 0.6 3.8

PORT FRASER - Mean Spring and Neap curves

