

**By Bob McCann,
1964 & 1965 Sears Cup Winning Crew**

Winds

During the month of August, the Marblehead area is usually under the influence of a light (5-10 knots) southeasterly sea breeze. In the late afternoon, this breeze will follow the sun to the south, eventually coming from 180° to 210°. The thermal heating of the land during the morning and early afternoon creates the sea breeze. Often in the early morning, there is little or no wind. Until the sun has had time to heat up the land, the thermal effect and resulting sea breeze do not come into play.

It is often said that Marblehead is subject to a prevailing southwest breeze. However, in the early morning, prior to the thermal effect taking place off Marblehead, the city of Boston (southwest of Marblehead) heats up enough to block the prevailing southwest breeze. Any southwesterly is typically diminished by 9:00 a.m. The only exception is when the southwesterly breeze is strong and the sun is blocked by enough haze to allow the southwest breeze to continue through the day. This is an unusual situation and only occurs approximately three or four days in August.

Should the conditions allow the prevailing southwesterly to continue throughout the day, you might expect it to back towards the east, slightly, as the land heats during the day. A backing from approximately 210° to 180° is not unusual. As the land cools off later in the day, the southwesterly will again come in from approximately 210°.

Assuming that the southwesterly breeze is not able to reach the Marblehead shore, typically between 11:00 a.m. and 1:30 p.m., the sea breeze will be generated by the thermal effect. The general direction of the sea breeze is 165°. Approximately half the time, the sea breeze will back during the early afternoon, to approximately 150° - 160°. As the afternoon goes on and the city of Boston cools down, the breeze will begin to clock to the right, eventually settling, in the late afternoon, in a general southerly-southwesterly direction (showing the effect of the prevailing southwesterly breeze). There are two other wind conditions which, though not generally prevalent in August, should be mentioned. In the event that a cold front comes through, resulting in dryer, cooler air, you may expect to see a north-northwesterly breeze. This breeze typically lasts for 2-3 days. On the first day following the cold front, the northwesterly breeze can be quite strong (up to 20 knots). The breeze will oscillate between 285° and 335°. The oscillations are generally 4-6 minutes apart in time, and depending on the location of the cold front and velocity of the breeze, may be predicted. In order to predict the timing and direction of the oscillations, you should spend some time prior to the start taking numerous wind directions and checking the timing between each and every change of direction. With enough attention, you will be able to predict the wind shifts to your advantage. In addition, while you are checking the wind shifts prior to the start, you should observe the water coming off the land. By watching closely, you will be able to pick up the velocity and directional changes on the water.

Depending on the strength of the cold front, the northwest breeze will last either 2 or 3 days. On the second or third day, the northwesterly will typically continue until early afternoon at which time the heating up of the land will cause it to die and the sea breeze to fill in. During the transition, it is not uncommon to see the northwest breeze blowing off-shore with the sea breeze blowing onshore, resulting in approximately 100 yards of flat calm between the two breezes. The sea breeze will typically take over as the day goes on.

Occasionally (though extremely rare in the month of August) a storm system will pass offshore resulting in a northeasterly breeze with 2 or 3 days of rain. In this situation, you may expect that the winds will blow out of the northeast at approximately 20-30 knots. If such a storm should come in during the series, you may expect fairly high seas with very steady winds.

CURRENTS

The Marblehead area is subject to extremely tricky current patterns. In general, close inshore, the currents run directly in and out of Salem Harbor (past Cat Island towards Halfway Rock). This flow is in general northerly (flood)/southerly (ebb) direction. Further offshore, the currents are more generally affected by the direction of the flow between Boston Harbor and Gloucester. These currents, near Halfway Rock and further out, flow in a general westerly (flood)/easterly (ebb) direction.

In between these two currents are numerous areas where the tides are somewhat unpredictable. Your best bet is to note the direction and strength of the current on the lobster pots where you are sailing. The currents inshore, near Satan's Rock and the Gooseberries, are generally lighter than the currents in the Open Bay area, which may run as strong as 2.5 to 3.5 knots. The strong currents are generated by a rise and fall in the tide of approximately 9 feet.