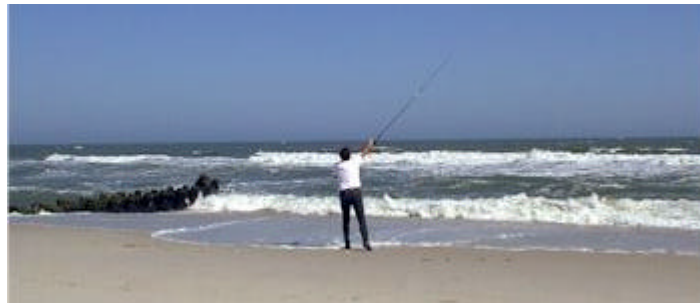


How To Read The Surf



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Reading the surf for the purpose of determining fish holding locations is mostly a matter of trying to determine relative changes in depth, bottom material, and current. Other factors such as inlets and river mouths are also important considerations.

For the purpose of fishing the front beach surf of barrier islands such as Long Beach Island, what you are looking for is the formation and interruption of sandbars and rip currents that form when the water from shore break waves is carried back out into the surf. The formation of and interruptions (cuts) in sandbars result in changes in current as swells and tide move over them. Reading the surf in an inlet location, such as between the north and south jetties of Barnegat inlet or down in Holgate (Little Egg Inlet) is somewhat different, as currents are more visible on the surface of the water, but mostly similar to front beaches.

First, it is far easier to read the beach structure at low tide, as the water depth is shallower and swells break further from the shore, or often, in the case of multiple roughly parallel bars, the swells break more than once. When a wave crests and breaks, it does so because the depth of the water is shallow enough to force the crest of the wave to fold and the wave to break. The more “cleanly” a wave breaks, the more substantial and rapid the relative change in depth is, i.e. the rise in the bottom structure is more abrupt. By “clean,” I mean a wave that breaks with the fold coming all the way to the trough, as an ideal wave for surfing would. A cut in the bar would be indicated on the same swell that was breaking “clean” in a particular section, by a section of the swell that was not breaking as aggressively or not breaking at all. This would be the case when the bottom depth is too great to force the swell to fold over. In other words, where the swell broke cleanly, the depth would be shallower than where that same swell did not break as cleanly or not at all. Where it did not break as cleanly, a cut in the bar exists. When the tide is higher, the water depth may be too deep to actually force swells to break as they pass over a bar. Instead, swells will peak as they pass over a more pronounced section of a bar, with the same swell not peaking at all or to a lesser degree where a cut is present.

The presence of sandbars can also be detected by observing the apparent color of the water, with this being easier to accomplish when the water is relatively free of sediment and relatively clear. The shallow areas appear beige (the color of the sand) with the deeper areas appearing greener or bluer.

It is also important to be able to determine the presence of sloughs (pronounced slews). Sloughs are the sections of deep water that are present between multiple sandbars or the sandbar and the beach itself. These are detected by observing the cessation of rolling breaking waves and the reforming of a swell after a wave breaks over a bar. Usually the swell that reforms is of substantially less magnitude than it was before it broke over the bar, as much of the swell’s energy has been dissipated. At higher tide stages, the waves may not actually break on the bar, but will peak to a degree as to make them more obvious, with the swell being substantially smaller or apparently nonexistent in the slough (the wave energy will still be present however, even when the swell is not observable). The sloughs can also be detected by the watercolor change as described in reading a cut in a bar. Accordingly, the slough is the space from where the waves stop breaking to where they again re-peak and break (either on another bar or at the shore break).

A rip is formed when the shore break (the waves that break directly on the beach) crashes on the beach and the backwash is concentrated into a vee-shaped funnel. Ordinarily, the breaking wave water and the backwash ebb and flow evenly, but sometimes, water ebbing from the north will flow to the south as it flows back out. If immediately to the south the ebbing water flows out to the north, these two flows converge, creating a mass of faster moving water with twice the mass. This phenomenon is called a rip. Rips will cut the bottom up and if they are of a magnitude substantial enough, will flow all the way to a sandbar and cut through it as well.

As you can see, the purpose of determining the bottom structure is to enable the angler to predict and or read the currents that are formed as wave action and tide work over them. When an incoming tide passes over a cut in a sandbar, the water flow at the edges of the cut is heavier than it is going over the bar itself or through the middle of the cut. This increased flow will carry baitfish and clams, and as the current finds the deeper water of the slough inside the bar, eddies will form where baits will be suspended. Gamefish will swim in the area where the slough, bar, and cut meet, as the bait will be brought to them. If a bar ends adjacent to a jetty or groin, a similar phenomenon will happen, as the current will be funneled between the jetty and the bar. On the outgoing tide, the eddies normally form on the outside of structure, necessitating longer cast to reach the favorable fish holding water. Fishing the edges of rips, particularly the outer edges, is also recommended, as eddies will form where the rip meets deeper, less disturbed water. Even in the absence of cuts in a bar or a jetty to funnel incoming or outgoing tide, fishing the front and back edges of sloughs can be productive, as north-south currents will tend to be stronger at the edges of sloughs (similar to channels in a back bay).

Sometimes there will be no sandbars (this often happens after long stormy periods that wipe them out), but there will still be holes or pockets of deeper water, readable in the same manner (again, reading the surf is a matter of discerning relative changes in the bottom depth). Currents will carry baits over the hole, where gamefish often lie, so fish the edges of the holes. In addition, often when there are no sandbars, the shore break is very severe, causing a deep and abrupt drop-off immediately past the surf impact zone. When there are no bars, the energy of swells is not at all dissipated until they reach the shoreline, resulting in powerful and violently breaking waves that literally pummel and paralyze baitfish and break clams. Gamefish, striped bass in particular, often swim tight to the beach to take advantage of this situation. Accordingly, casting out as far as you can is not always the best option.

While there really isn't any bottom other than sand to read in the surf of Long Beach Island, often mussel beds develop. Anglers most frequently discover them by bringing a string of mussels in on the retrieve, but in clear water conditions, mussel beds can often be seen, as the bottom while appear black. Mussel beds are highly productive for fluke.

It is important to remember that both the formation and destruction of beach structure is caused by the wind and swells that are in constant flux. Accordingly beach structure is always changing, and a spot that held fish one morning may not hold fish the next as the structure may have changed. However, certain areas seem to have patterns of development, and these areas are definitely worth investigating on a regular basis. Due to the fact that longer jetties or groins substantially retard sand flow with the current, these consistent areas of sandbar formation are often near locations with longer and more substantial jetty structures. Another good tip is to check the surf at low tide, and come back to fish the last end of the incoming at spots you marked at low tide with marks near the dune fence or via numbers recorded on a handheld GPS.