



Rip Current Statistics

- 80% of ocean rescues (more than 70,000 per year) involve saving someone caught in a rip current.
- A strong rip current moves at 3 feet per second, which is faster than most swimmers.
- Super rips on big surf beaches have been measured at speeds of 6 to 8 feet per second, which is faster than an Olympic swimmer.
- Rips often occur at groins, jetties and piers; stay at least 100 feet away from these structures to avoid these deadly currents and other hazards. Rips at jettied inlets, such as Shinnecock Inlet or at the Rockaways, are especially dangerous as a person moved offshore by the rip can also be sucked into the inlet or propelled far offshore by the tidal jet of the inlet.

Recognizing and Escaping Rips

Lifeguards and surfers can usually detect rips, but most beachgoers have difficulty spotting them. The first thing to do upon arriving at the beach is to go to the highest point possible and scan the surf for anomalies in the surf zone, such as variations in the breaker line and especially any seaward flow of foamy water. Then check for warning flags and consult with lifeguards on surf conditions. Rips do not always appear in the same spot—they can change position from day to day and week to week. More than one rip can be present at the same beach on the same day.

Not knowing how to spot the tell-tale signs of a deadly rip current can result in a classic mistake, which has been repeated all-to-often at so many beaches. People often assume that the water is the safest where the waves are lowest, but this can be exactly where the rip is present--this strong seaward flow is literally knocking down the waves.

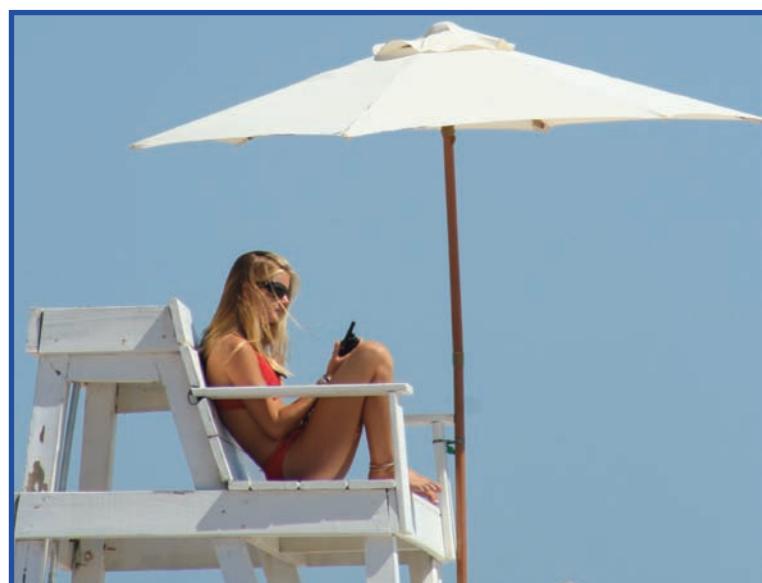
In a common scenario involving rip current drownings, it is the rescuer who drowns while the initial victim survives. Frequently, a father will attempt to save his child who is caught in a rip. But without knowing how to escape the rip current, the parent often drowns. To avoid this sort of disaster, always swim at a guarded beach.

If you attempt to rescue someone, take along a flotation device — a boogie board or surfboard is ideal, but a styrofoam cooler may be buoyant enough. If a rope is available, stay onshore and throw it to the victim. Get help from a lifeguard or have someone call 9-1-1. Stay on the beach and yell instructions on how to escape the rip by swimming parallel to the shore. Remember that many people drown while trying to save someone else from a rip current.

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- Guarding the beach in East Hampton, August 2008-

2009 HURRICANES LONG ISLAND RIP CURRENTS

**“Offshore Storms, Rough Seas Are
to Blame for Strong Rip Currents”***

**“Treacherous Rips
on Long Island
Cause Deaths”***

**“At Least 4 Drown Off NY
Beaches Over Weekend”***

**“Two Drown at East End
Beaches Last Weekend”***

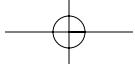
**“The Ocean’s
Deadliest Trick”***



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EASTERN LONG ISLAND COASTAL CONSERVATION ALLIANCE, LTD.

*Headlines from various summer 2008 newspapers



Hurricanes, Rip Currents and Long Island

Hurricane Bertha threatened Long Island in July 2008, but veered offshore after passing Bermuda. Yet this hurricane indirectly resulted in seven deaths from Coney Island to the Hamptons during a single weekend. It was sunny with only gentle breezes, but large breaking waves pounded the South Shore of Long Island beaches on July 25 and 26 as generated by Bertha over 800 miles away in the Atlantic Ocean. Rip currents kill more people on Long Island than landfalling hurricanes, lightning strikes and tornadoes.

The sighting of a single shark at a swimming beach can generate widespread public alarm and many news reports, but rip currents are often undetected by beachgoers and drownings receive scant attention. Actually, rip currents are fairly common at surf beaches; lifeguards rescue about 70,000 people each year with 80 percent of the saves from rips. More than 100 people drown each year in rip currents; hot spots include Southern California, Florida, Outer Banks of North Carolina, and the South Shore of Long Island, New York.

A rip current is like a treadmill, moving water and entrained objects away from the beach. Often hard to spot, you first realize that you are in the grasp of a rip when being pulled offshore and cannot make any progress trying to swim back to shore. Being caught in a rip current can be a terrifying experience, but it need not happen to you.

Rip Current Signs

- Change in water color from the surrounding water—murkier from sediment, seaweed and flotsam or darker because of the depth of the underwater channel where the rip flows.
- Gap in breaking waves, where the rip is forcing its way seaward through the surf zone.
- Agitated (choppy) surface that extends beyond the breaker zone.
- Floating objects moving steadily seaward.

What to do if Caught in a Rip

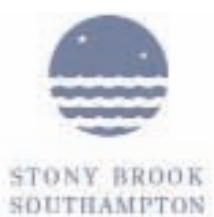
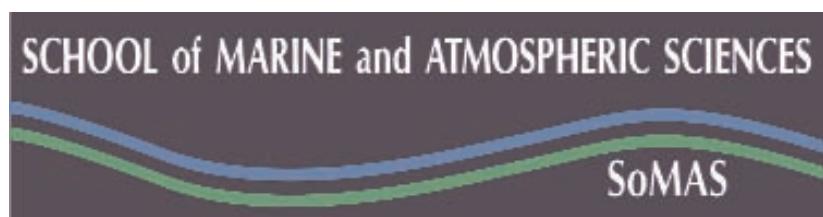
- Wave your arms in the direction of the lifeguard or at anyone on shore.
- Don't panic--this wastes your energy and keeps you from thinking clearly.
- Don't attempt to swim against the current directly back to shore.
- Swim parallel to shore until you are out of the current as the offshore flow is restricted to a relatively narrow channel.
- Float calmly with the rip (e.g., relax and enjoy the ride if you are a good swimmer). When the current subsides, just beyond the surf zone, swim diagonally to shore.

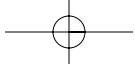
Rip Currents 101

Rip currents are powerful, channeled currents of water that flow offshore from the beach. These dangerous currents are caused by large amounts of water being pushed up the beach by breaking waves. The water then escapes back to the ocean as a concentrated flow, usually through a low area or break in the nearshore sand bar. Plunging breakers of swell waves are the most effective in producing the conditions for rip currents.

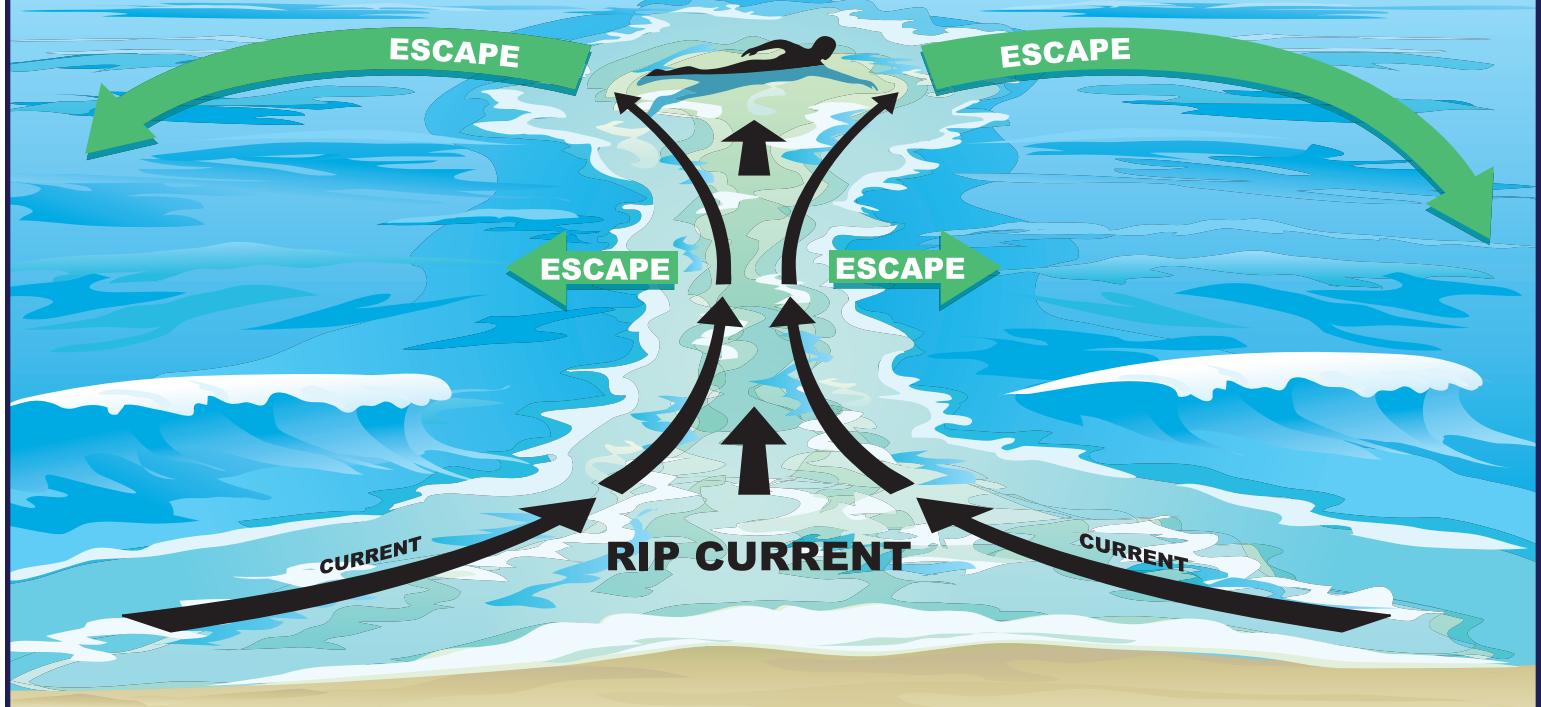
Hurricanes generate the large swells that are the delight of surfers, but the bane of bathers and swimmers. Most of the drownings on the South Shore of Long Island occur in August when kids are out of school, the ocean water is its warmest and tropical storm activity is nearing its peak. In addition to the tragic losses in July, another five people drowned in rip currents in early August 2008 with three lives lost on Long Beach and two in the Hamptons. Clearly 2008 was an especially bad year for rip deaths on the South Shore.

Rip currents are especially dangerous for weak or non-swimmers. Rip speeds are typically 1 to 2 feet per sec-





Break the Grip of the Rip

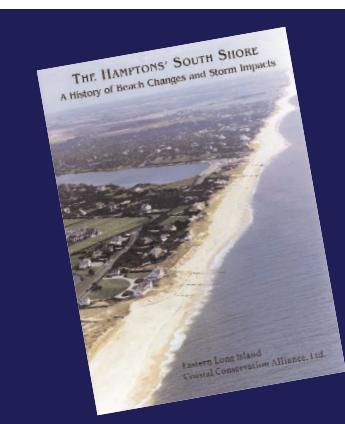


- Courtesy of Michigan Sea Grant and NOAA.

ond, but can reach 6 to 8 feet per second for the largest waves, which is faster than an Olympic swimmer. Therefore, even the strongest swimmers are at risk and can be swept offshore.

Rips typically form at breaks in sand bars, but are also prevalent near groins, jetties and piers. These offshore-flowing currents extend through the surf zone and then dissipate a few hundred feet or more from shore, depending upon wave height and hence current strength. It is generally not understood by the public that the energy produced by a wave is proportional to its height squared. Therefore, a 3-foot wave is 9—not 3—times more powerful than a 1-foot wave. Even 3-foot plunging breakers can sometimes produce life-threatening rips. When breaking waves at the shore reach 5 feet, the surf is generally too dangerous for swimming.

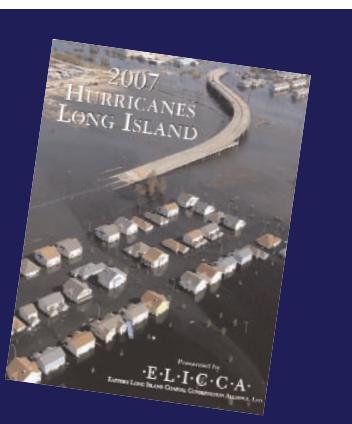
Rip current drownings are often blamed on the mythical undertow, freak waves or collapsing sand bars. Rips pull people directly offshore, not under water. Rip tide is also a misnomer because tides play little to no role in causing these strong offshore-flowing currents, except that they can be strongest at low tide on some beaches. Drownings occur because of fear, panic, exhaustion and a lack of swimming ability. Rips are sometimes referred to as the drowning machine because of their almost mechanical ability to tire swimmers, ultimately causing death.



In the past several years E.L.I.C.C.A. has produced a number of reports on storm impacts and beach erosion.

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2009 Hurricane Names

Ana
Bill
Claudette
Danny
Erika
Fred
Grace
Henri
Ida
Joaquin
Kate
Larry
Mindy
Nicholas
Odette
Peter
Rose
Sam
Teresa
Victor
Wanda