

# East Central Florida Rip Current Program

Program leader: Randy Lascody

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Rip currents are narrow channels of water flowing out past the surf zone that can pull even strong swimmers into deep water beyond the offshore sand bar.

Attempting to swim directly back to shore against the current, which can be as strong as 5 MPH, will result in exhaustion and in some cases, drowning. Since 1989, an average of 19 persons have died *each year* as a result of rip currents in Florida. Therefore, rip currents, *on average*, result in more deaths in Florida than hurricanes, tropical storms, tornadoes, severe thunderstorms and lightning *combined*. Many victims are tourists who are unfamiliar with the dangers of the ocean.

Data collected along the east central Florida coast shows that an average of 4-5 rip current-related drownings occur each year. Therefore, an empirical forecasting scheme was developed by the Melbourne office to warn beach goers when rip currents would be more dangerous than normal. Data was compiled from lifeguard rescue logs in the east central Florida coastal counties of Volusia, Brevard, Indian River, St. Lucie, and Martin.

The number of rip current rescues varies for each coastal county across east central Florida. Volusia county averages more rescues each year than all other counties in Florida combined. This is mainly due to the natural beach replenishment that occurs along the Volusia coast, which aids the development of offshore sand bars that are important for rip current generation. Additionally, a very high volume of people enter the surf at Daytona Beach. The Volusia county beach safety program is among the top five largest in the county. Lifeguards are well trained about the dangers of rip currents, which occur on a daily basis.

The remaining coastal counties of east central Florida have significantly less rip current rescues than Volusia county. However, there are an increasing number of people visiting the beaches of these counties, many of whom do not understand the danger of rip currents and attempt to swim where there are no lifeguards. Additionally, many local communities have plans for substantial beach replenishment where erosion has depleted beaches significantly in the past several decades. This will likely increase the formation of sand bars that help generate dangerous rip currents.

Increased public awareness is also a goal of the east central Florida rip current program. The media will be called upon to bring greater awareness of rip current danger to those who use the beaches. Tourists are especially vulnerable since they are often not knowledgeable about ocean dangers and often do not pay attention to the news reports while on vacation. Therefore, there are plans to utilize the media to increase rip current awareness.

All county offices having access to the normal suite of National Weather Service products receive statements indicating the threat of rip currents. The statements are also broadcast on NOAA Weather Radio so that individual lifeguard stations as well as the general public will be alerted.

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Below is an example of an actual statement issued to alert the public and emergency management officials of the rip current threat:

**EAST CENTRAL FLORIDA HAZARDOUS WEATHER OUTLOOK  
NATIONAL WEATHER SERVICE MELBOURNE FL  
700 AM EDT FRI MAY 30 1997**

**...RIP CURRENT THREAT REMAINS MUCH GREATER THAN NORMAL  
TODAY...**

**HIGH PRESSURE ALONG THE EASTERN SEABOARD WILL PRODUCE  
ONE MORE DAY OF MODERATELY STRONG EASTERLY WINDS.  
SEAS OFFSHORE WILL REMAIN IN THE 6 TO 7 FOOT RANGE THIS  
MORNING. WITH A CONTINUATION OF ONSHORE WINDS OF 10 TO  
15 MPH...THE THREAT OF RIP CURRENTS WILL AGAIN BE GREATER  
THAN NORMAL. TRY TO SWIM AT BEACHES GUARDED BY THE  
BEACH PATROL. IF NO GUARDS ARE PRESENT...CONSIDER  
STAYING OUT OF THE WATER GREATER THAN KNEE DEEP. IF YOU  
ARE CAUGHT IN A RIP CURRENT...SIGNAL SOMEONE ON SHORE  
FOR HELP AND SWIM PARALLEL TO THE BEACH TO GET OUT OF  
THE RIP CURRENT...THEN SWIM TOWARD SHORE.**

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Check the latest NWS Melbourne Hazardous Weather Outlook to see if there is a greater than normal threat of rip currents today.

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If you have any questions, suggestions, or comments regarding NWS Melbourne's rip current program, please send an email to Randy Lascody.

## East Central Florida Rip Current Fact Sheet

- Rip currents, commonly called rips, or run outs, and erroneously called rip tides and undertows, affect most of the surf areas along Florida's Atlantic and Gulf coasts.
- Rip currents, on average, kill more people in Florida than hurricanes, tornadoes, and lightning combined.
- Rip currents can occur at any time of the year, but the majority of deaths in east central Florida occur from April through October when the combination of a large number of bathers and favorable meteorological/oceanographic conditions coincide.
- Rip currents are most common when long period ocean swells break in the surf zone and pile up greater amounts of water than normal on the beaches.
- Most victims are those unfamiliar with surf dangers--tourists and Floridians that live inland. However, local residents are occasionally victims too.
- A rip current is a strong current of water usually flowing from inside the sand bar into deeper water.
- Rip currents are normally only about 10 to 30 yards wide, so the best escape is to wade or swim sideways across the current, parallel to the beach.
- The rip current extends on average from 50 to 200 yards offshore, and thus another means of escape for a strong swimmer is to float with the current out beyond the breakers where the rip current will weaken, then swim shoreward at an angle away from it.
- Most deaths associated with rip currents occur when people panic and try to swim directly toward shore against the current, become totally exhausted and drown.
- The rip current does not drag a person underwater but moves them at speeds of up to five miles per hour into deeper water. Even the strongest swimmer cannot swim directly against it and even persons standing on the ocean bottom are sometimes powerless to walk against it.
- Sometimes, would-be rescuers also get caught in the rip current and drown.
- The best safety action is to avoid getting caught in the rip current.
- At guarded beaches, beach patrol or lifeguard personnel can recognize certain characteristics, such as a brown-colored plume, foam or a seaweed streak extending seaward from the breakers. So, **always swim near a lifeguard!**
- Obey posted warning signs, flags or other displays and heed the advice of the beach patrol.

- Residents should advise visitors unfamiliar with ocean hazards about rip current dangers.

## Longshore Current Fact Sheet

1. A longshore current, sometimes called a cross current, lateral current or Littoral current, flows parallel to the coastline.
2. Everyone who has been in the water at the beach has experienced one. Let's say you go to the beach, put your blanket/chair at point "x" and enter the water there. Most always within 5 minutes you will be either north or south of point "x". This was caused by the longshore movement of water.
3. A longshore current is simply caused by swells or wind waves that are not coming directly onshore. It is unusual not to have at least a slight longshore current.
4. Though a longshore current is not as strong as a rip current, it can be very dangerous. A person standing on a sandbar can be pushed into deeper water. If you are not a good swimmer, you could drown as a result. Drownings have occurred due to the longshore current.
5. Another danger of the longshore current is that you could be pushed along the coast and right into a rip current! This can occur when swells are impacting the area but local winds are moving water laterally along the beach.
6. Check with the Beach Patrol about ocean hazards when arriving at the beach.
7. Always swim near a lifeguard.
8. Never try to swim directly against currents that occur at the beaches.
9. If you find yourself moving northward or southward along the coast into deep water, remain calm and do not swim directly back against the current. Signal for help and try to swim at an angle to the current and back to shore.
10. Avoid swimming near piers and jetties where seaward flowing rip currents could be strong.