MIAMI-SOUTH FLORIDA
National Weather Service
Forecast Office
http://www.weather.gov/miami

2020 Severe Weather Awareness Week

Tuesday, January 28th is Marine Hazards and Rip Current Awareness Day

Rip currents consistently rank at or near the top of the list of deadliest weather-related hazards in South Florida. Since 1979, rip currents, sometimes erroneously referred to as rip tides or undertows, have claimed more lives in South Florida than any other weather-related hazard combined!

Rip current deaths have steadily decreased over the past three (3) decades, with the average yearly number of deaths in South Florida decreasing by more than half compared to the previous 20-year period. In 2019, one (1) person drowned at South Florida beaches as a result of rip currents, the lowest yearly number since 2012. The

decrease in rip current-related deaths can be directly attributed to greater awareness of rip currents, the life-saving efforts of Ocean Rescue lifeguards, and increased rip current signage and warning flags at local beaches.

Despite the decreasing trend in rip current-related deaths, they still occur practically every year despite increasing public awareness, safety measures, and media coverage. In fact, in 2019 there were eighty-five (85) surf zone related fatalities across the United States and various islands including rip currents, high surf, and sneaker waves (Figure 1).

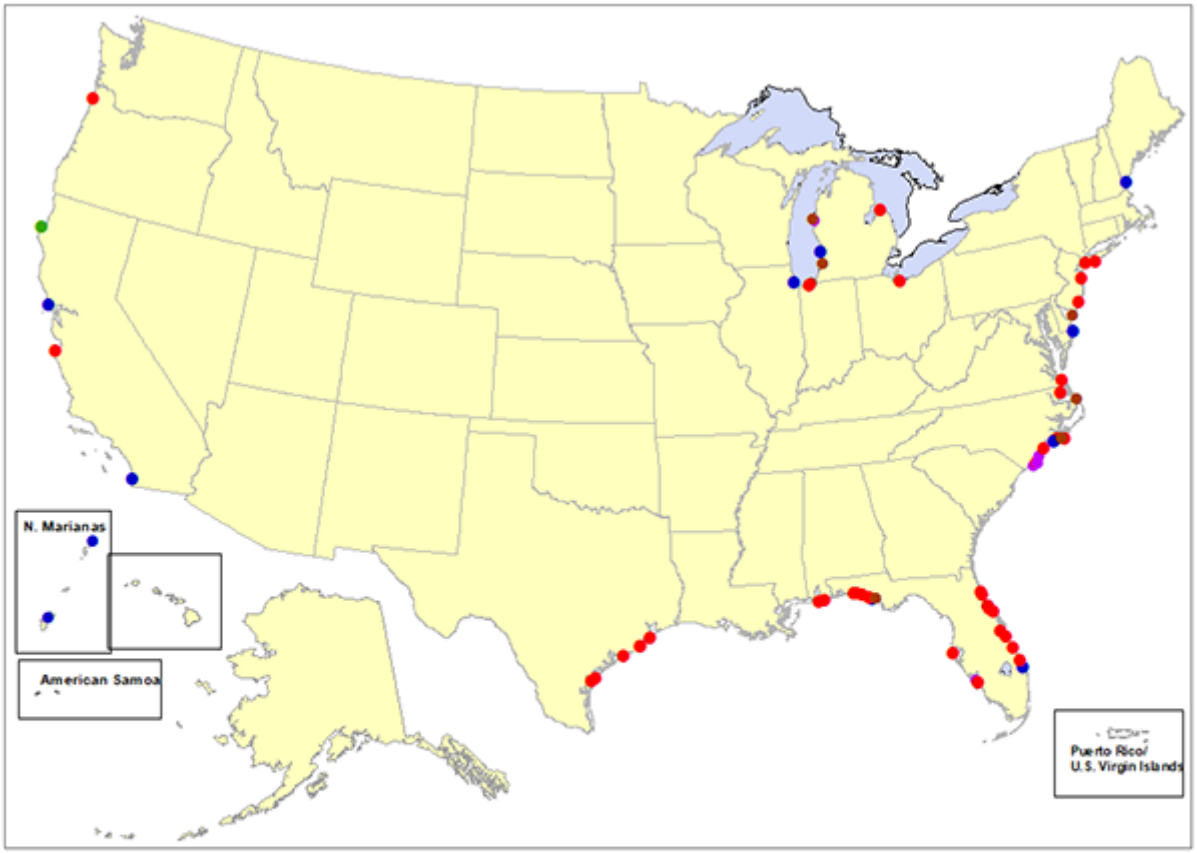

Figure 1: Surf zone related fatalities across the United States, American Samoa, Puerto Rico and the U.S. Virgin Islands, and the Northern Mariana Islands in 2019

Rip current casualties can occur year-round in the usually-warm South Florida surf, but happen most frequently during the spring break period in March and April, as well as during the summer months and on major holiday weekends. In 2019, there were twenty-six (26) *reported* surf zone related fatalities in Florida, nineteen (19) of which were caused by rip currents (Figure 2). In South Florida alone, there were nine (9) *reported* injuries as a result of rip currents, including 6 on a sunny and breezy April morning at Vanderbilt Beach in Collier County. Not included in these statistics is the tragic drowning of a teenage boy in early October when he was swept by strong longshore currents (not rip currents) at Virginia Key Beach while rescuing a child from the same current.

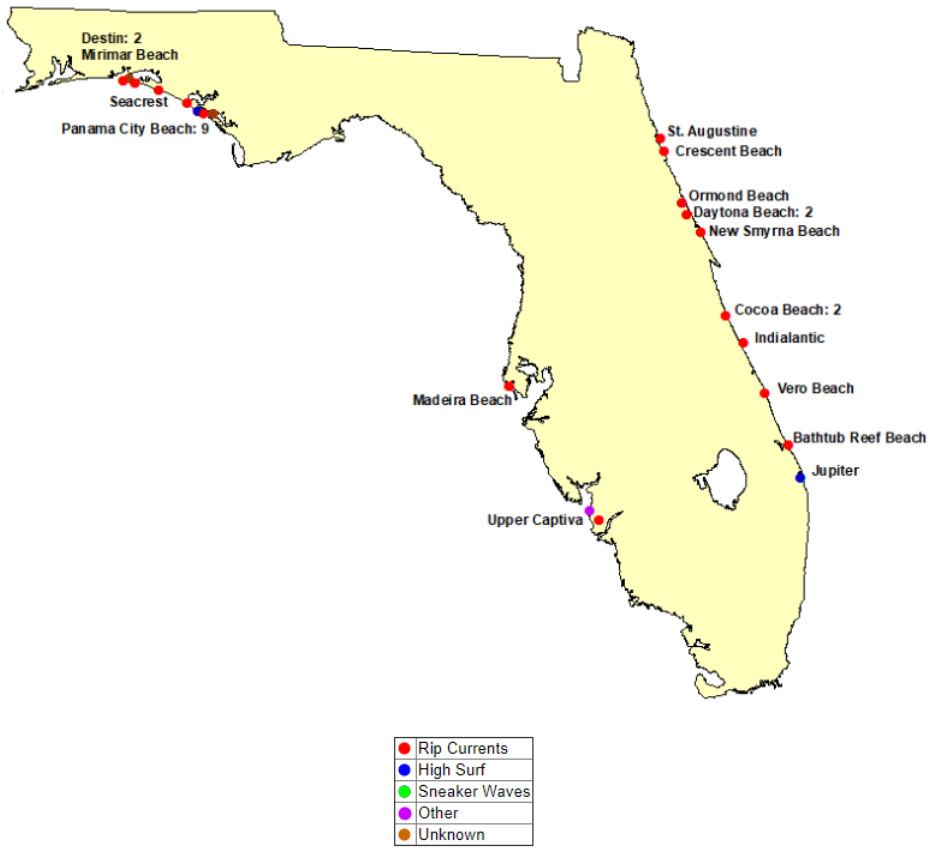

Figure 2: Surf zone fatalities in Florida in 2019

Why do people still succumb to rip currents? First, let's discuss what a rip current is, and what we can do to prevent from becoming a victim.

WHAT'S A RIP CURRENT?

A rip current is a strong channel of water flowing out past the surf zone that can pull even the strongest swimmer into deeper water beyond the sand bar (Figure 3). Most deaths occur when people caught in the rip current try to swim toward shore directly

against the current, become entirely exhausted, and drown. Sometimes, would-be rescuers also drown. By understanding how a rip current works, people can escape this fate and save their own life and the lives of others.

Figure 3: Rip current visible between the whites of the breaking waves

Rip currents occur naturally and can affect virtually all of the surf beaches along the South Florida coast. These currents can pose a big threat to unsuspecting beachgoers. Rip currents can be referred to as the "fair weather killer" because they often occur when the weather appears to be generally nice. All that's required is a moderate to fresh onshore wind on a beautiful, sunny day.

Rip currents are frequently stronger near piers, inlets, and jetties and these can be particularly dangerous places to swim especially when rip currents are present. On March 23rd, 2016, an 18-year-old teenager drowned after jumping off a sea wall at the Haulover Inlet and getting caught in a rip current. On April 20th, 2019, six (6) people were rescued from rough surf and rip currents along the Gulf beaches in Collier County.

Rip currents are normally only about 10 to 30 yards wide and the best escape is usually to wade or swim sideways across the current in a direction following the shoreline until free from the current. A good rule of thumb is to swim parallel to the shore. Another method of escape is to float with the current out a short distance beyond the breakers, then swim towards the shore once out of the current (Figure 4).

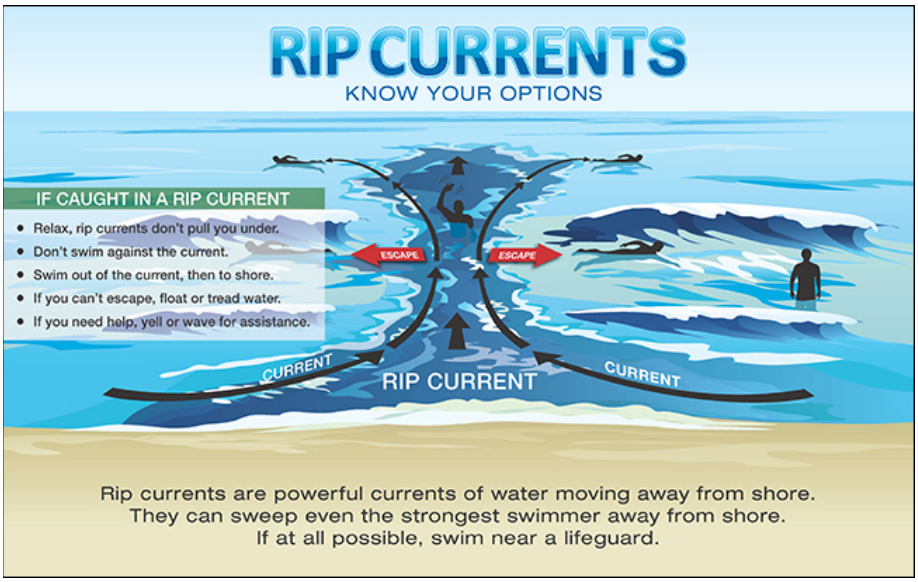

Figure 4: Ways to escape rip currents

The best way to stay safe and to be informed of the presence of dangerous rip currents is to heed the advice of lifeguards. Make sure you swim at guarded beaches and be aware of the flag color system (Figure 5) used by ocean rescue personnel to alert of rip currents. Swimming within clear sight of a lifeguard sharply reduces the chances of drowning. Sadly, the vast majority of rip current drownings take place at unguarded beaches. If you see a red flag at or near the lifeguard stand, strong and dangerous currents are present and you should not enter the water.

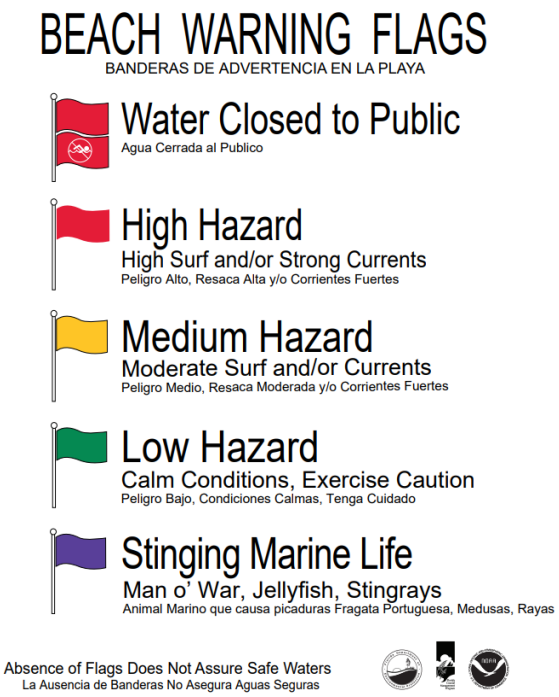

Figure 5: Beach warning flags color system, courtesy of the Florida Department of Environmental Protection

Another important way to stay safe is to check the weather and surf conditions before heading to the beach. The National Weather Service in Miami issues daily Hazardous Weather Outlooks, Surf Forecasts, and Beach Forecasts which alert the public of expected hazardous marine weather and rip currents. The rip current threat is forecast daily on a scale ranging from low, to moderate, to high. Rip current alerts are issued when the rip current threat is high and are broadcast on NOAA Weather Radio, commercial television, and radio, as well posted on the National Weather Service in Miami website at weather.gov/miami.

For further information on rip currents and rip current safety, please visit the National Weather Service's Rip Current Awareness website at www.ripcurrents.noaa.gov.

BOATING IS FUN, BUT WATCH THE WEATHER!

South Florida's aquamarine waters make it prime boating country. We are surrounded by water on three sides and the third largest fresh water lake in the United States, Lake Okeechobee, sits just north of the Everglades. There is also a vast network of canals, bays and other waterways which cut across the area. These bodies of water are vulnerable to rapid changes in the weather which can occur in South Florida throughout the year. Fast moving thunderstorms are a threat mainly during the summer months but can occur year-round and catch mariners by surprise. Sudden gusts of wind and rough seas associated with local thunderstorms and large swells from distant storms can be strong enough to overturn boats. Cold fronts in the cooler months also bring periods of strong winds and large, rough waves.

It's because of these rapidly-changing conditions that vessel operators should err on the side of safety, be prepared for rapidly-changing weather and/or water conditions EVERY DAY and always wear life jackets onboard. More information on boating safety can be found at the National Safe Boating Council's web site.

Waterspouts are common occurrences over all of South Florida's large bodies of water year-round, although they're more frequent during the warm and humid summer months. Therefore, you must prepare and stay aware of weather threats in order to remain safe while enjoying a day out on the boat. NOAA Weather Radio is an excellent source of continuous weather information, including warnings and advisories for rapidly changing and dangerous weather conditions.

Before heading out, check the National Weather Service marine forecasts. You can also check the latest NWS buoy observations from the National Data Buoy Center. Lastly, you should make sure your boat has essential, and in some cases, required, safety equipment and communications tools. Visit the NWS Marine/Safe Boating web site for more details.