



# NWS Wilmington, NC Surf Forecast Products

A summary of surf forecast products & resources available online for northeast SC and southeast NC beaches for the 2025 season



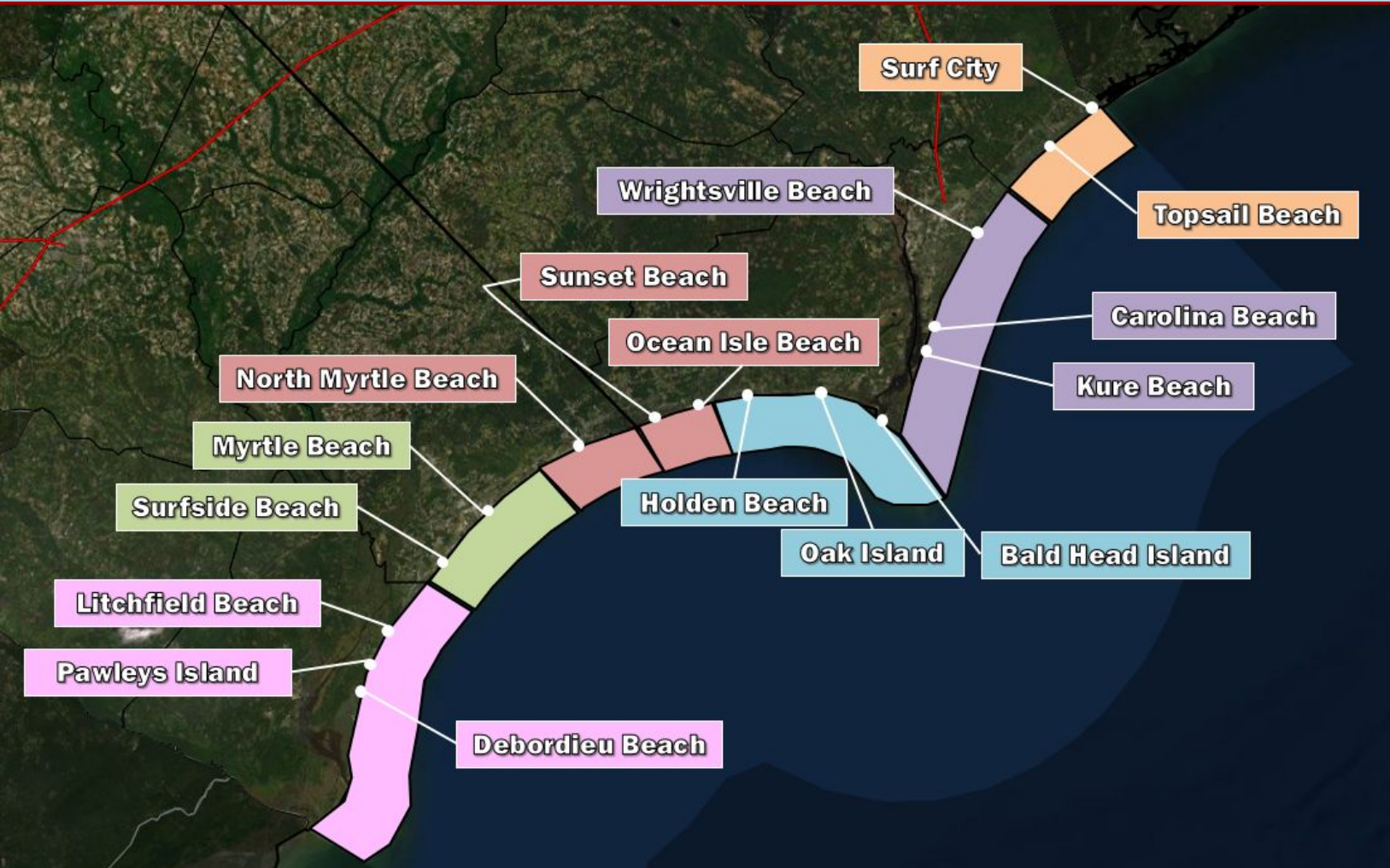
National Oceanic and  
Atmospheric Administration  
U.S. Department of Commerce

Wilmington, NC  
Weather Forecast Office



# ILM Surf Zones

[www.weather.gov/beach/ilm](http://www.weather.gov/beach/ilm)



NWS Wilmington, NC provides surf forecasts for 6 zones spanning several NC and SC beaches:

**Pender**

**New Hanover**

**Brunswick**

**N. Horry/  
W. Brunswick**

**South Horry**

**Georgetown**

These zones roughly follow the curvature of the coastline as the direction the beach faces will affect its rip current risk.



National Oceanic and  
Atmospheric Administration  
U.S. Department of Commerce

Wilmington, NC  
Weather Forecast Office



# Rip Current Risk

[www.weather.gov/beach/ilm](http://www.weather.gov/beach/ilm)

When forecasting rip current risk, the deciding factors are:

- Onshore winds
- Onshore wave height & period
- Low tide time

Stronger winds, larger wave heights, longer wave periods, or the time being closer to low tide will increase the rip risk.

The same factors will result in differing conditions across surf zones. For example, an east swell will have a larger impact on the east-facing beaches in Pender and New Hanover as opposed to the south-facing beaches in Brunswick.

<i>Risk Level</i>	<i>Description</i>
<b>Low</b>	The risk of rip currents is low. However, life threatening rip currents may still occur, especially near structures.
<b>Moderate</b>	Life threatening rip currents are possible. Use caution.
<b>High</b>	Life threatening rip currents are likely. The surf zone is dangerous for all levels of swimmers. Stay out of the water.
<b><i>All risk levels: Heed the advice of local beach patrol and flag warning systems.</i></b>	

**\* 55% of rip current drownings in the Carolinas since 2016 occurred on moderate risk days**





# Surf Zone Forecast (SRF)

[www.weather.gov/ilm](http://www.weather.gov/ilm)

## SRF is issued April through October

### Issued 3 times a day :

- 8PM: Forecast for next day and Day 2
- 4AM: Today & Tomorrow
- 11AM: Today & Tomorrow

Forecast Valid for 6AM to 8PM

### Components of the SRF :

- Rip Current Risk
- Surf Height
- Weather
- UV Index
- Water Temp
- Tides
- Remarks: Longshore Current
- Extended Forecast **\*NEW**



Scan for the latest NWS Wilmington, NC SRF forecast!

#### Surf Zone Forecast

National Weather Service Wilmington NC  
1049 AM EDT Wed Aug 21 2024

NCZ106-220300-

Coastal Pender-

Including the beaches of Surf City and Topsail Beach  
1049 AM EDT Wed Aug 21 2024

#### .REST OF TODAY...

Rip Current Risk\*.....Low.  
 Surf Height.....2 to 3 feet.  
 Thunderstorm Potential\*\*....None.  
 Waterspout Risk\*\*.....None.  
 UV Index\*.....Very High.  
 Water Temperature.....In the lower 80s.  
 Weather.....Sunny.  
 High Temperature.....Around 80.  
 Winds.....Northeast winds 10 to 15 mph.  
 Tides...  
 Topsail Inlet.....Low at 03:12 PM EDT.  
 Remarks.....None.

#### .THURSDAY...

Rip Current Risk\*.....Low.  
 Surf Height.....1 to 2 feet.  
 Thunderstorm Potential\*\*....None.  
 Waterspout Risk\*\*.....None.  
 Weather.....Sunny.  
 High Temperature.....In the upper 70s.  
 Winds.....Northeast winds 10 to 15 mph.  
 Tides...  
 Topsail Inlet.....High at 10:00 AM EDT.  
 Low at 04:07 PM EDT.  
 Remarks.....None.

#### .EXTENDED...

.FRIDAY...Rip risk is moderate. Surf height 2 to 3 feet. Sunny.  
 Highs in the lower 80s. South winds around 5 mph.  
 .SATURDAY...Rip risk is low. Surf height 1 to 2 feet. Sunny.  
 Highs in the lower 80s. Southeast winds around 10 mph.  
 .SUNDAY...Rip risk is low. Surf height 1 to 2 feet. Mostly sunny.  
 Highs in the lower 80s. Southeast winds around 10 mph.



National Oceanic and Atmospheric Administration  
U.S. Department of Commerce

Wilmington, NC  
Weather Forecast Office



# Surf Hazards - Products

[www.weather.gov/ilm](http://www.weather.gov/ilm)

Coastal Hazard Message  
National Weather Service Wilmington NC  
756 PM EDT Sat Apr 29 2023

NCZ110-300930-  
/O.NEW.KILM.RP.S.0001.230430T1000Z-230501T0000Z/  
/O.CON.KILM.SU.Y.0004.230430T1200Z-230501T0000Z/

Coastal Brunswick-  
756 PM EDT Sat Apr 29 2023

...HIGH RIP CURRENT RISK IN EFFECT FROM 6 AM EDT SUNDAY THROUGH SUNDAY EVENING...

...HIGH SURF ADVISORY REMAINS IN EFFECT FROM 8 AM TO 8 PM EDT SUNDAY...

\* WHAT...For the High Rip Current Risk, dangerous rip currents expected. For the High Surf Advisory, large breaking waves of 4 to 7 feet expected in the surf zone. Strong west to east longshore currents are also likely.

\* WHERE...Coastal Brunswick County.

\* WHEN...For the High Rip Current Risk, from 6 AM EDT Sunday through Sunday evening. For the High Surf Advisory, from 8 AM to 8 PM EDT Sunday.

\* IMPACTS...Dangerous swimming and surfing conditions and localized beach erosion. Rip currents can sweep even the best swimmers away from shore into deeper water.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

Inexperienced swimmers should remain out of the water due to dangerous surf conditions.

Swim near a lifeguard. If caught in a rip current, relax and float. Don't swim against the current. If able, swim in a direction following the shoreline. If unable to escape, face the shore and call or wave for help.

All NWS beach hazard products are issued under the Coastal Hazards Message (CFW) text product.

These hazard products include the:

- Rip Current Statement (RP.S)
- High Surf Advisory (SU.Y)
- Beach Hazards Statement (BH.S)

The Hazardous Weather Outlook (HWO) product is also used to highlight dangerous or worsening surf conditions such as:

- High Surf
- Moderate or High Risk of Rip Currents
- Significant Beach Erosion



National Oceanic and  
Atmospheric Administration  
U.S. Department of Commerce

Wilmington, NC  
Weather Forecast Office

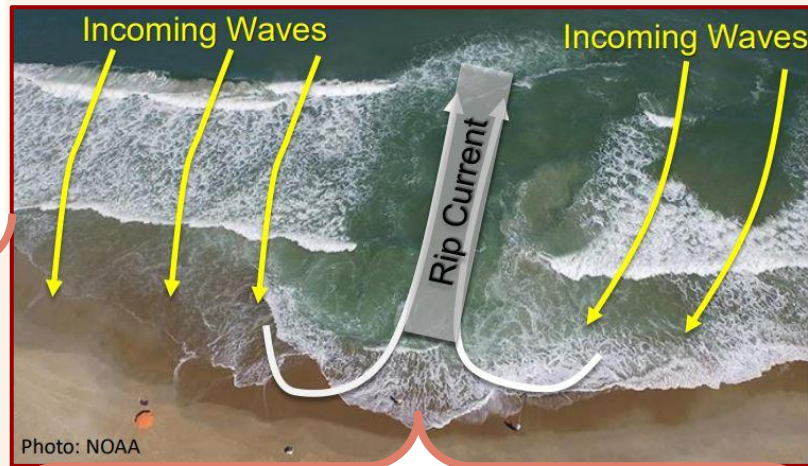
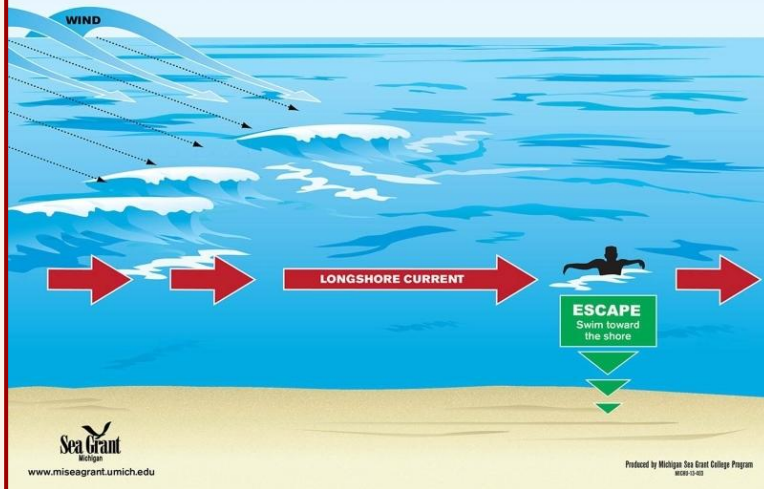


# Surf Hazards - Products

[www.weather.gov/ilm](http://www.weather.gov/ilm)

**BH.S** - Used to highlight strong longshore current and other beach hazards that do not meet advisory criteria (i.e., jellyfish)

## LONGSHORE CURRENTS



**RP.S** - Wind and/or wave conditions are expected to support the development of very strong rip currents or when there are reports of these conditions

**SU.Y** - Beach erosion and/or minor ocean overwash are expected due to breaking waves, 6 feet or greater, in the surf zone

**\* This hazard is the only one issued year-round!**



National Oceanic and Atmospheric Administration  
U.S. Department of Commerce

Wilmington, NC  
Weather Forecast Office



# Beach Hazard DSS Briefings

[www.weather.gov/ilm/briefing](http://www.weather.gov/ilm/briefing)

NWS Wilmington, NC will issue briefings when multiple days of high rip current risk are expected. These briefings are shared with our partners and made available to the public on our webpage.

Briefings are primarily created for when long period swells from distant tropical cyclones will impact the coastline.

## Dangerous Rip Currents and Rough Surf Expected



Wilmington, NC  
WEATHER FORECAST OFFICE

### OVERVIEW

- Swells from **Hurricane Franklin** will build today through midweek, with **Tropical Storm Idalia** also contributing to the threat midweek.
- Expect the potential for rough surf and life-threatening rip currents Tuesday through Thursday.

### TIMING

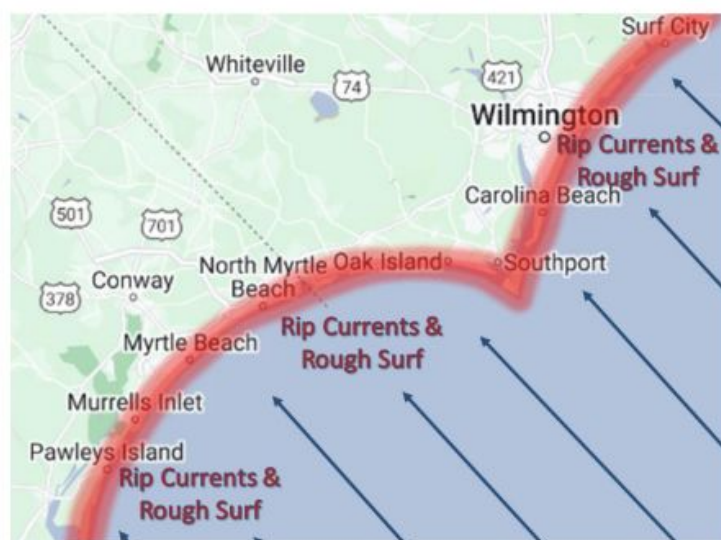
- Surf conditions will be most hazardous Tuesday through Thursday.

### HAZARDS & IMPACTS

- Dangerous swimming conditions are expected given the presence of strong rip currents and large breakers in the surf.

### ADDITIONAL INFORMATION

- If you plan on visiting the beaches then pay attention to flags and follow the guidance of lifeguards and other local beach officials.
- If you see someone swimming in distress contact a lifeguard or 911. Never enter the surf without flotation to assist someone.



### Distant Hurricanes Can Be Deadly

- Hurricanes that are far away can still create deadly rip currents and waves.
- Never assume that the ocean is safe, even if the weather is nice.
- For maximum safety, swim near a lifeguard.
- Check the forecast before you go: [weather.gov/beach](http://weather.gov/beach)

Issued: 8/28/2023 9:00 AM

[www.weather.gov/ilm](http://www.weather.gov/ilm)



National Oceanic and Atmospheric Administration  
U.S. Department of Commerce

Wilmington, NC  
Weather Forecast Office



# NWS Beach Forecast Page

[www.weather.gov/beach](http://www.weather.gov/beach)

The NWS Beach Forecast Page can be a helpful navigation tool to see coastal NWS offices' beach pages. This can be useful for familiarization with where SRF is issued, and it can be a quick forecast stop for those travelling to the beach.

Each umbrella represents a coastal NWS office that issues SRF:



Surf is in season



Surf is out of season

Click on an umbrella to get the beach forecast. Greyed umbrellas do not have a forecast at this time, and can be clicked for details.

View the [product description document](#) for more information. [Comments](#) are currently being accepted.



Visit the [beach hazards safety page](#) for more information about the hazards you may encounter at the beach.



National Oceanic and  
Atmospheric Administration  
U.S. Department of Commerce

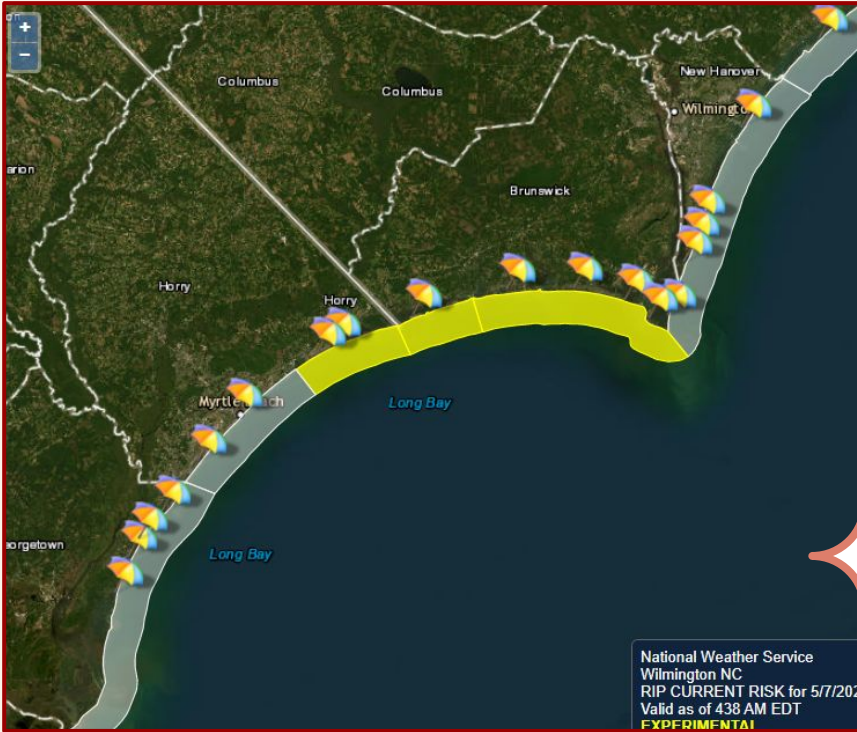
Wilmington, NC  
Weather Forecast Office





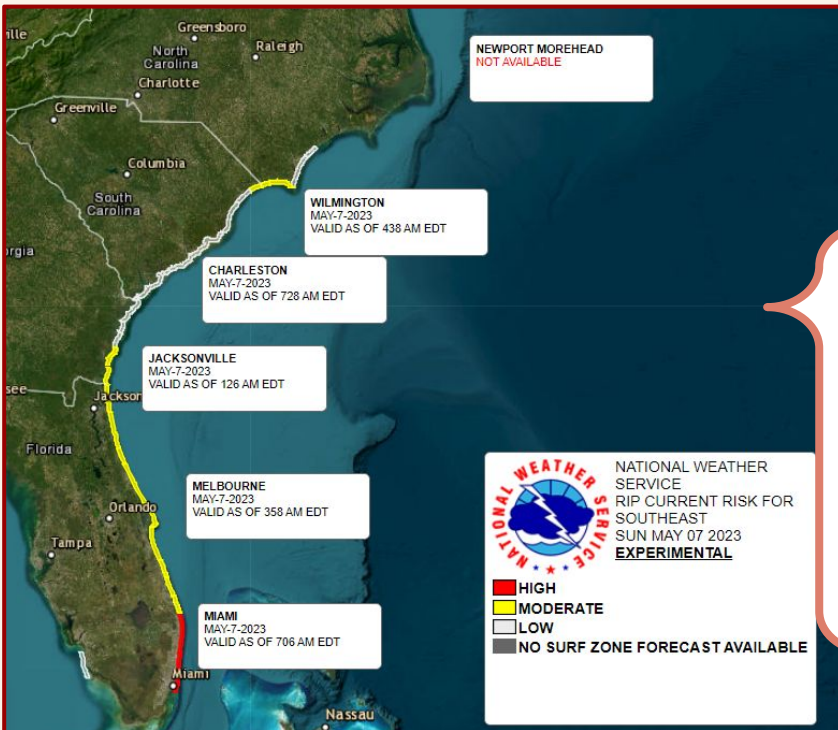
# NWS Beach Forecast Page

[www.weather.gov/beach/ilm](http://www.weather.gov/beach/ilm)



Here is a look at our local Beach Forecast Page! The rip risk for each surf zone is color filled, and clicking on the zone will pull up the associated SRF text product.

Similarly, each umbrella represents an individual beach, and clicking it will pull up the surf & weather forecast for that beach.



For an area-wide look at the rip current risk across the southeast U.S. try the regional viewer at:

[www.weather.gov/beach/southeast](http://www.weather.gov/beach/southeast)





# Surf Forecast - Matrices

[www.weather.gov/ilm/surfmatrices](http://www.weather.gov/ilm/surfmatrices)

Surf City	Topsail Island	Wrightsville Beach	Masonboro Island	Carolina Beach	Kure Beach	Bald Head Island	Oak Is
Holden Beach	Ocean Isle Beach	Sunset Beach	Cherry Grove	North Myrtle Beach	Myrtle Beach	Surfside Beach	Mur
Litchfield Beach	Pawleys Island	Debordieu Beach					

Wrightsville Beach, NC												
Date	Tue 04/12				Wed 04/13							
EDT 3hrly	11	14	17	20	23	02	05	08	11	14	17	20
Rip Current Risk	Low				Low							
Rip Probability	29	29	23	30	42	29	14	18	38	35	20	25
Surf Height (ft)	2	2	2	2	2	2	1	1	1	1	1	1
Dom Period (s)	4	4	4	4	4	4	5	5	5	4	4	4
Chance Precip	0	0	0	0	0	0	0	0	0	0	0	0
TSTM Potential	None	None	None	None	None	None	None	None	None	None	None	None
Cloud Cover	Mclr	Mclr	Mclr	Mclr	Mclr	Mclr	Mclr	Pcld	Pcld	Pcld	Pcld	Mcld
Temperature	69	70	69	67	66	65	64	65	69	71	71	69
Heat Index												
Wind (mph)	SW 13	S 16	S 18	SW 15	SW 14	SW 12	SW 9	S 13	S 16	S 16	S 16	S 16
Wind Gust		22	23	20				17	20	22	23	25
Longshore	Mod	Strng	Strng	Strng	Mod	Mod	Mod	Mod	Mod	Strng	Strng	Strng
Waterspout Risk	Low	Low	None	None	None	None	None	None	None	None	None	None

Date	Thu 04/14				Fri 04/15				Sat 04/16				Sun 04/17		
EDT 6hrly	02	08	14	20	02	08	14	20	02	08	14	20	02	08	14
Rip Probability	55	34	69	37	68	24	61	23	74	31	77	29	75	31	73
Surf Height (ft)	2	2	3	3	2	2	1	1	1	2	2	2	2	1	1
Dom Period (s)	5	5	6	6	6	6	6	7	7	7	8	7	8	8	8
Chance Precip	0	10	10	50	70	40	20	10	10	10	20	20	20	20	30
TSTM Potential	None	None	None	Mod	Mod	None	None	None	None	None	Low	None	None	None	None
Cloud Cover	Mcld	Mcld	Pcld	Mcld	Cld	Mcld	Mclr	Mclr	Pcld	Pcld	Pcld	Pcld	Pcld	Mcld	Pcld
Temperature	67	67	72	69	65	63	68	65	62	62	70	67	63	61	66
Heat Index															
Wind (mph)	S 15	SW 13	S 17	S 15	N 12	NE 12	E 10	SE 7	S 7	S 8	SW 12	SW 9	N 10	NE 12	NE 12
Wind Gust	23	20	24	22	17	17	20	17	13	14	17	18	16	16	20
Longshore	Strng	Mod	Strng	Strng	Mod	Mod	Mod	None	None	Weak	Weak	Mod	Mod	Mod	Mod
Waterspout Risk	None	Low	Low	Low	Low	Low	None	None	Low	None	Low	Low	Low	None	None

## Experimental Surf Forecast Matrices

- 6-day forecast
- Includes similar forecast elements as the operational SRF product
- Individual matrix is available for popular beaches in our area

The official Surf Zone Forecast (SRF) includes one forecast per surf zone per day. Since beach conditions change throughout the day, and from one beach to another, the Surf Forecast Matrices were created to highlight timing, duration, and give an extended outlook for any surf hazards.

**\* This product is experimental and not intended to be substituted for the official SRF.**





# Probabilistic Rip Current Model

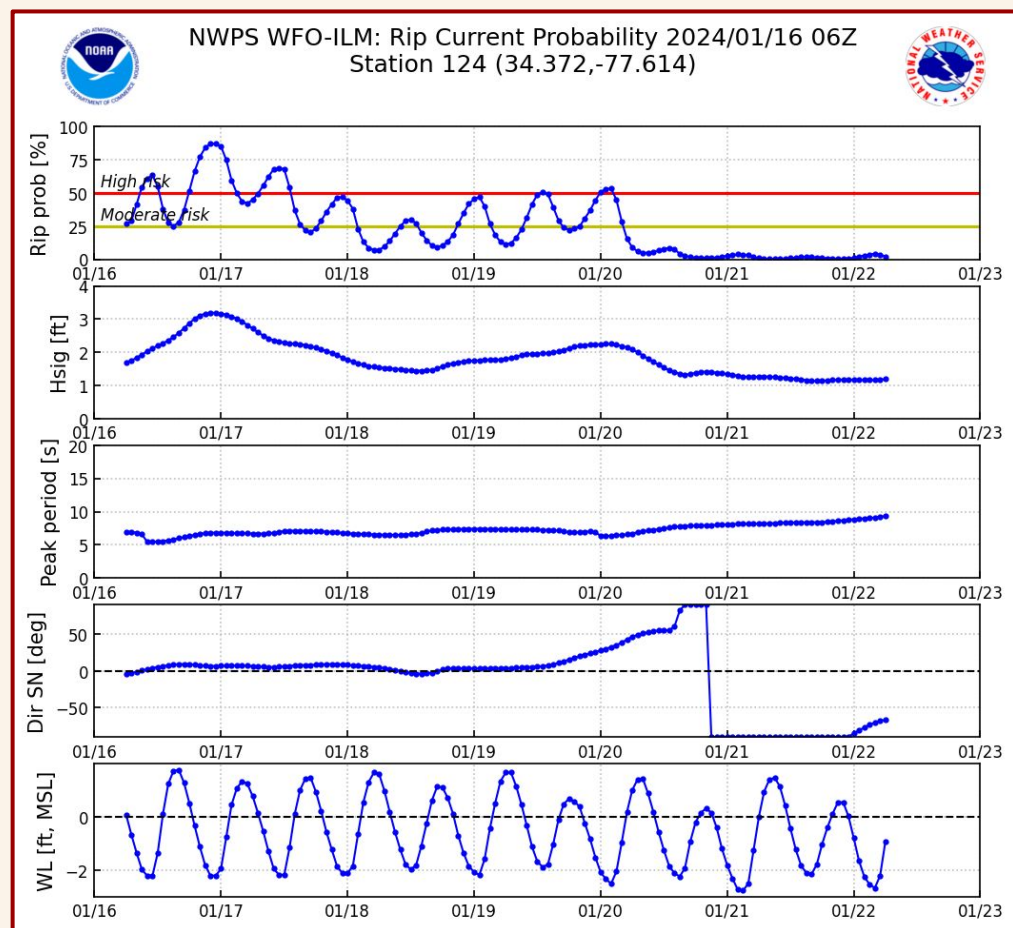
[www.weather.gov/ilm/surfmatrices](http://www.weather.gov/ilm/surfmatrices)

NOAA's national rip current forecast model, tied to the Nearshore Wave Prediction System, predicts the probability of hazardous rip currents occurring using output from the wave model and predicted tide levels.

Values are calculated from 0-100%, hourly through 144 hours, and at 2 km intervals along the coast.

*Although known to have a high bias, the probabilities are great for trends and planning purposes.*

*They are also used as input into the official NWS rip current forecast!*





# Questions? Reach Out to Us!

[www.weather.gov/ilm/ripcurrents](http://www.weather.gov/ilm/ripcurrents)

## CONTACT US:



Phone: (910) 762-4289



Email: [ilm.webmaster@noaa.gov](mailto:ilm.webmaster@noaa.gov)

### RIP CURRENTS

KNOW YOUR OPTIONS

**IF CAUGHT IN A RIP CURRENT**

- Relax, rip currents don't pull you under.
- Don't swim against the current.
- Swim out of the current, then to shore.
- If you can't escape, float or tread water.
- If you need help, yell or wave for assistance.

Rip currents are powerful currents of water moving away from shore. They can sweep even the strongest swimmer away from shore. If at all possible, swim near a lifeguard.

*For additional information on rip currents, statistics, and beach safety graphics, visit the [Carolinas Rip Current Awareness website](http://www.carolinaripcurrent.com)*



National Oceanic and  
Atmospheric Administration  
U.S. Department of Commerce

Wilmington, NC  
Weather Forecast Office