



NWS Wilmington, NC Surf Forecast Products

A summary of surf forecast products & resources available online for northeast SC and southeast NC beaches for the 2024 season



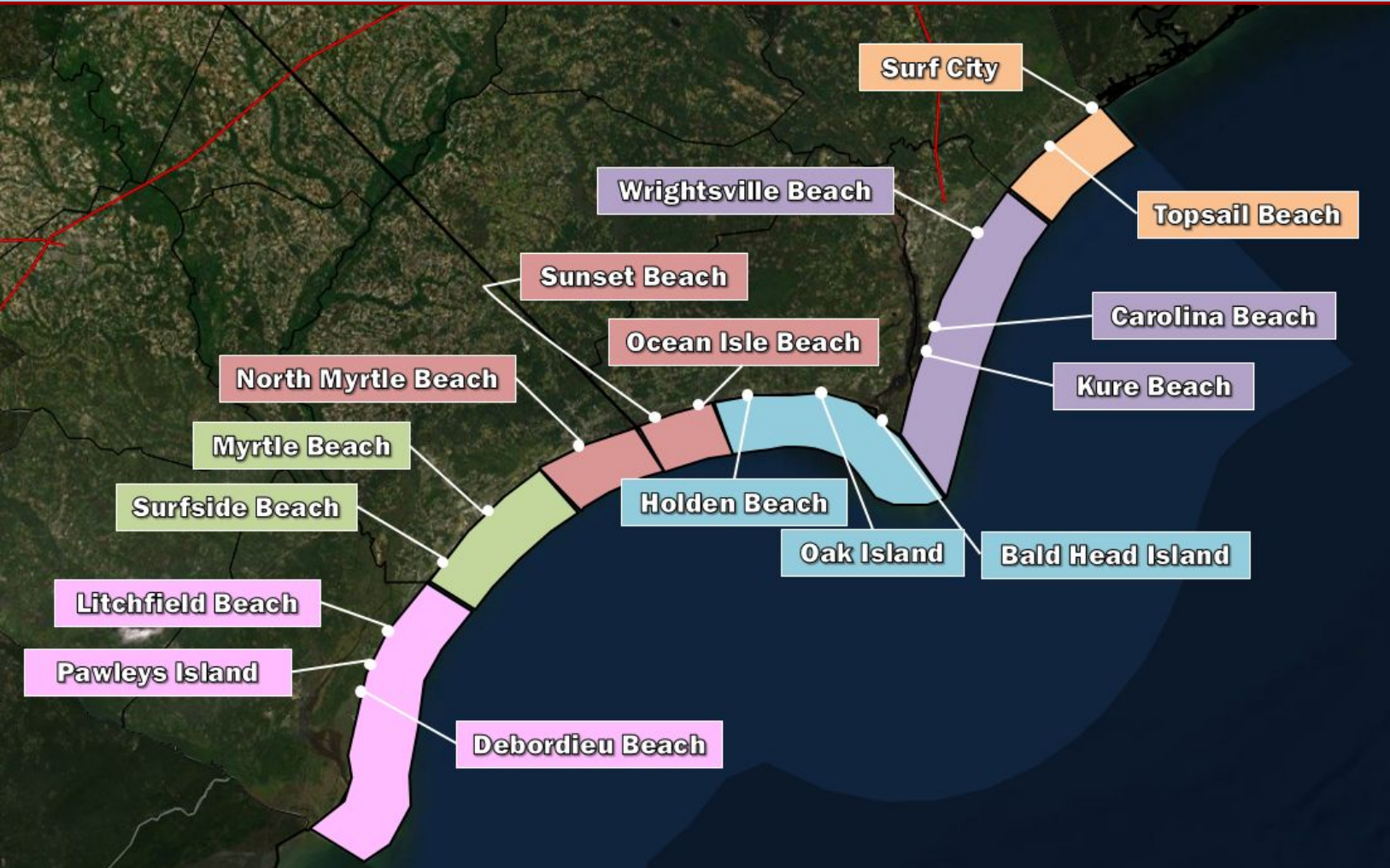
National Oceanic and
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U.S. Department of Commerce

Wilmington, NC
Weather Forecast Office



ILM Surf Zones

www.weather.gov/beach/ilm



NWS Wilmington, NC provides surf forecasts for 6 zones:

| | | |
|-----------------------------------|--------------------|-------------------|
| 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.



Rip Current Risk

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

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





Surf Zone Forecast (SRF)

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
- Outlook Section



Scan for the latest NWS Wilmington, NC SRF forecast!

Surf Zone Forecast

National Weather Service Wilmington NC
417 AM EDT Thu Jul 6 2023

NCZ106-062030-

Coastal Pender-

Including the beaches of Surf City and Topsail Beach
417 AM EDT Thu Jul 6 2023

.TODAY...

Rip Current Risk*.....Low.

Surf Height.....Around 1 foot.

Thunderstorm Potential**....Moderate.

Waterspout Risk**.....Moderate.

UV Index**.....Extreme.

Water Temperature.....In the lower 80s.

Weather.....Mostly cloudy. A chance of showers and thunderstorms.

High Temperature.....In the mid 80s.

Winds.....South winds 5 to 10 mph.

Tides...

Topsail Inlet.....High at 10:26 AM EDT.

Low at 04:19 PM EDT.

Remarks.....None.

.FRIDAY...

Rip Current Risk*.....Low.

Surf Height.....1 to 2 feet.

Thunderstorm Potential**....Moderate.

Waterspout Risk**.....Low.

Weather.....Mostly sunny. A chance of showers and thunderstorms.

High Temperature.....In the upper 80s.

Max Heat Index.....Up to 100.

Winds.....West winds around 5 mph, becoming south in the afternoon.

Tides...

Topsail Inlet.....High at 11:24 AM EDT.

Low at 05:19 PM EDT.

Remarks.....None.

.OUTLOOK...

Rip current risk is expected to remain Low over the weekend.



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Surf Hazards - Products

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



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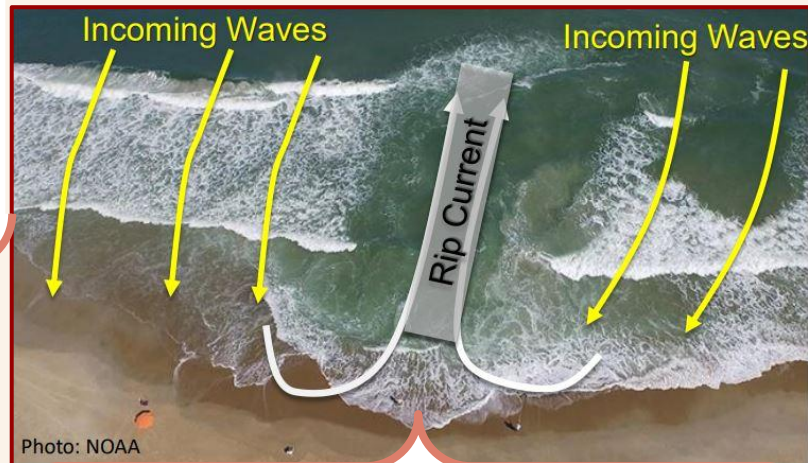


Surf Hazards - Products

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!**



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Beach Hazard DSS Briefings

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

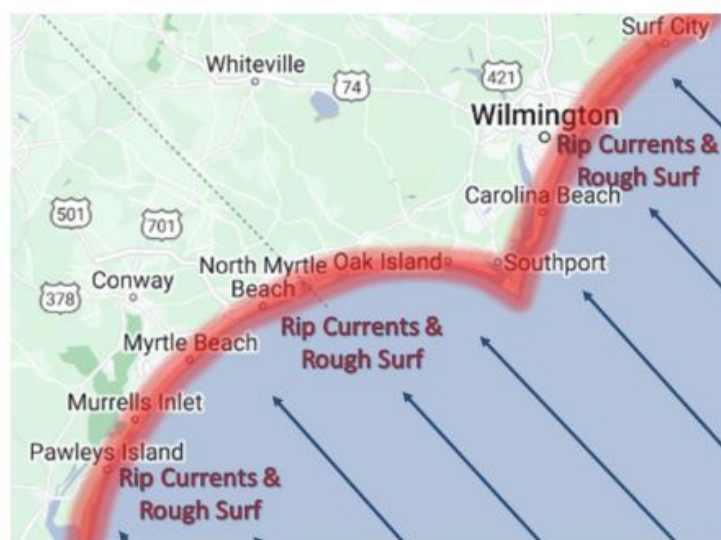
- Surf conditions will be most hazardous Tuesday through Thursday.

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



Issued: 8/28/2023 9:00 AM

www.weather.gov/ilm



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NWS Beach Forecast Page

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:



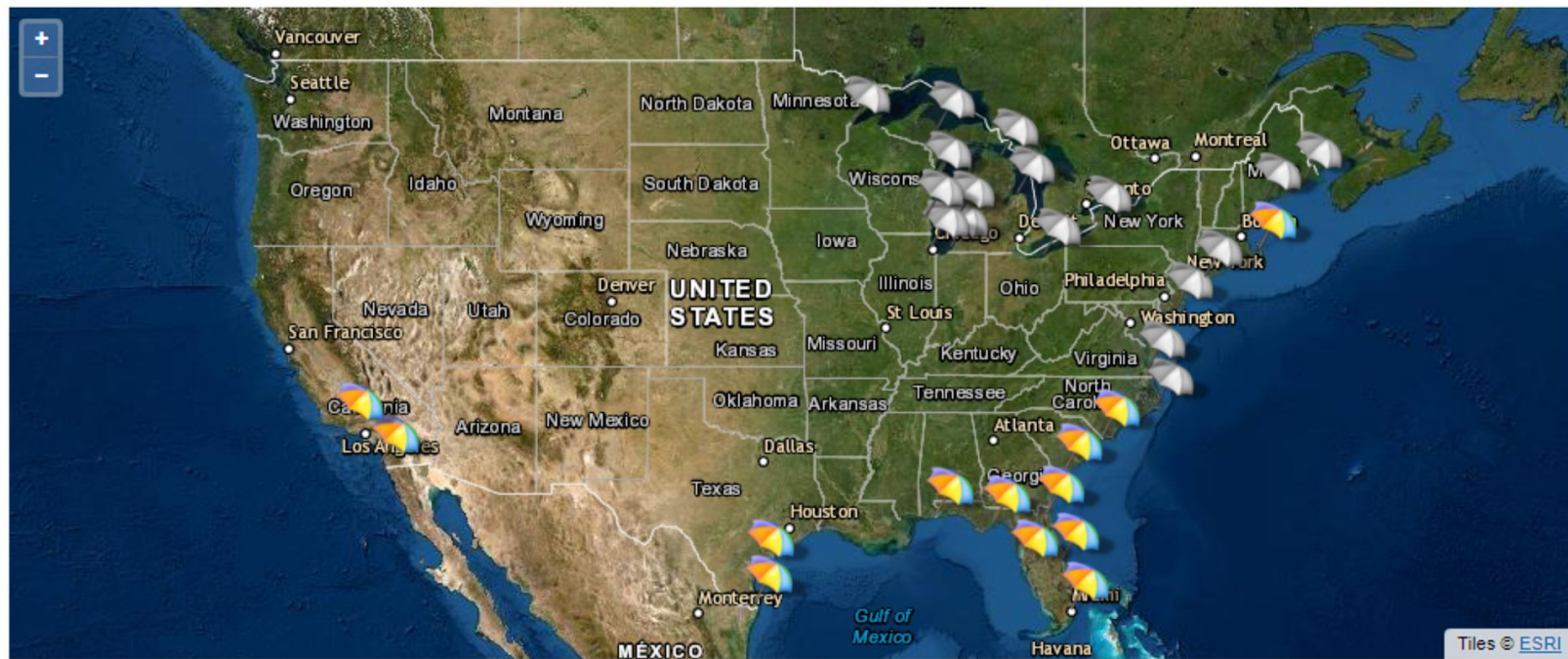
Surf is *in season*



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.



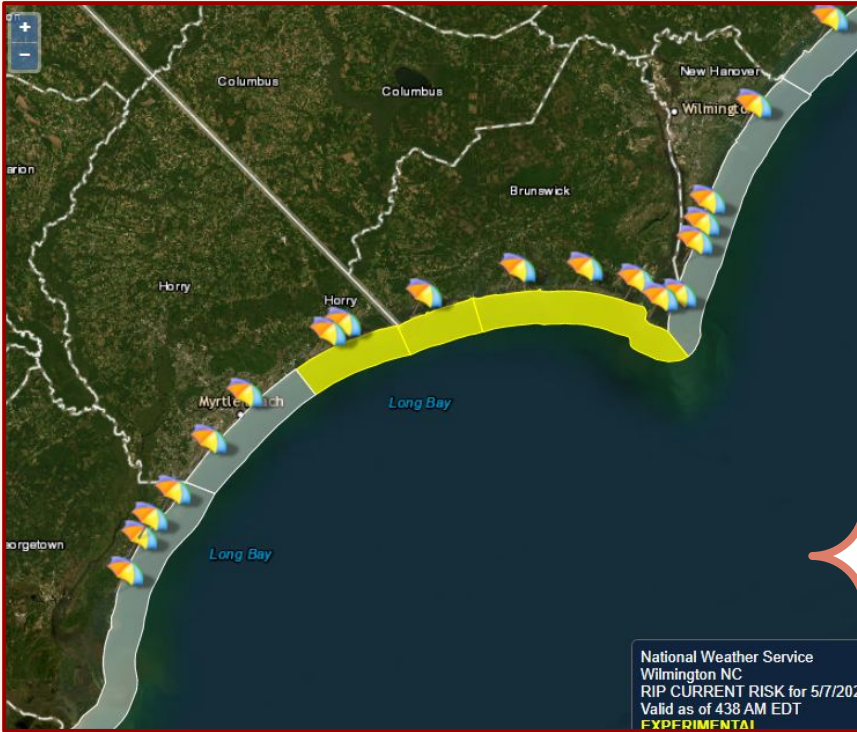
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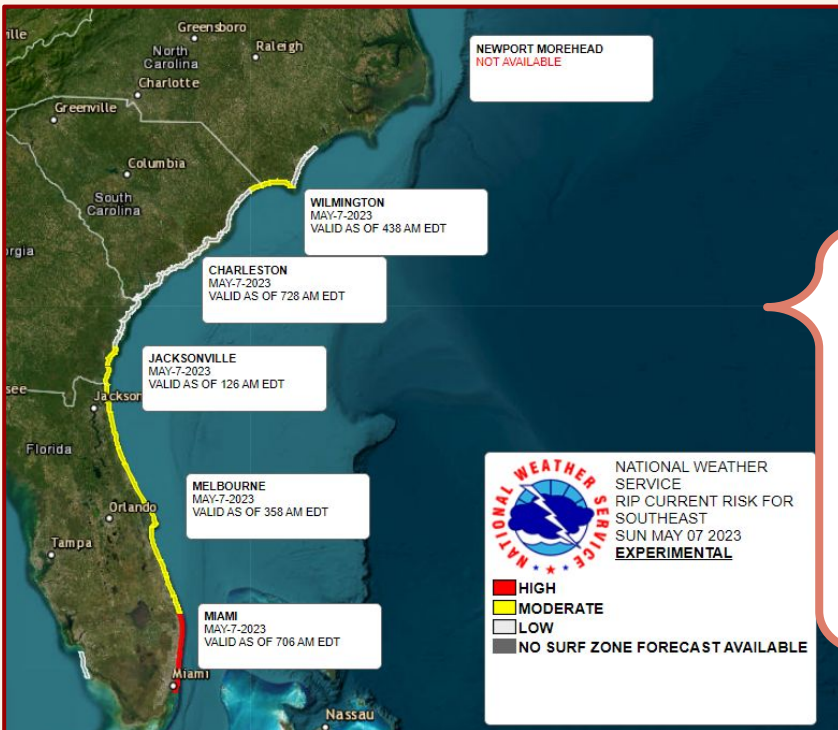
NWS Beach Forecast Page

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





Surf Forecast - Matrices

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 | | | | | |

| 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 | N 12 | E 10 | SE 7 | S 7 | S 8 | SW 12 | SW 9 | N 10 | N 10 | N 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

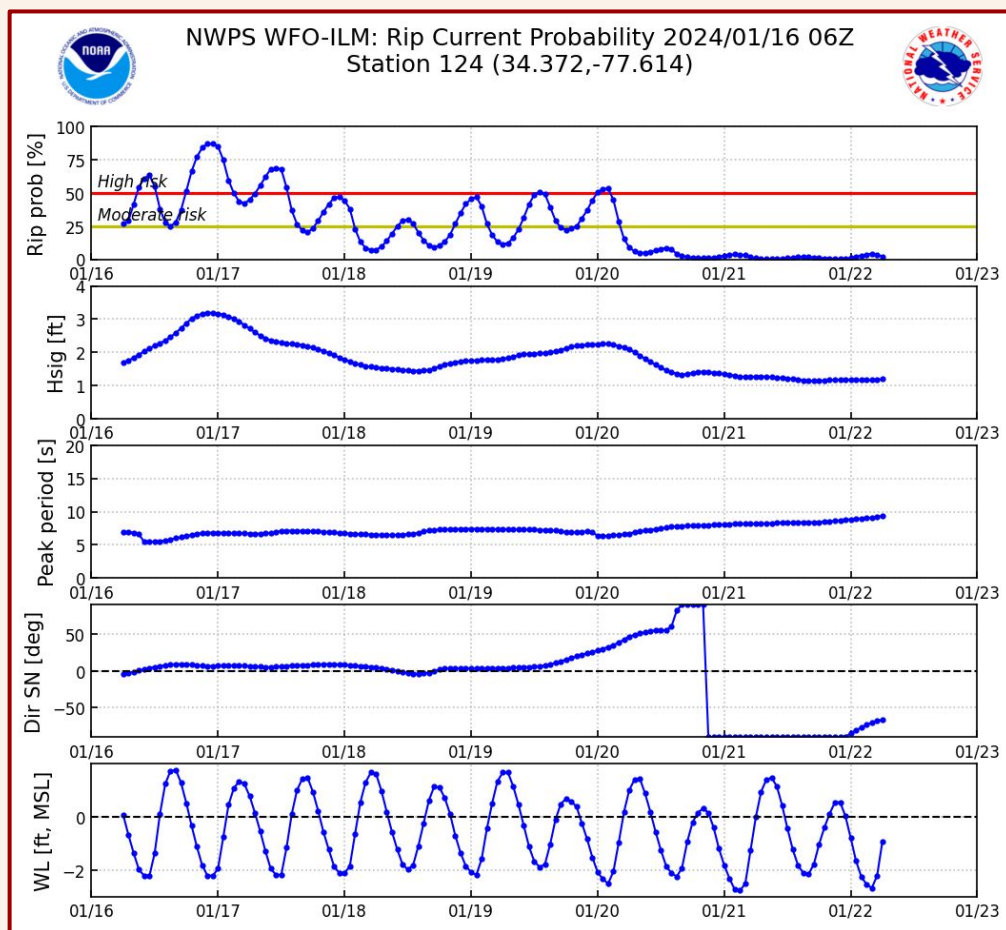
www.weather.gov/ilm/surfmatrices

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

CONTACT US:



Phone: (910) 762-4289



Email: 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



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