

Rip Current Basics and Safety Information

Know Your Options!



Building a Weather-Ready Nation



What is important to learn...

- What are rip currents?
- Why are they dangerous?
- What are clues that a rip current may be present?
- How do I know if I am caught in rip?
- What can I do if I am caught in a rip?
- How do I help someone else?
- What are some other safety tips?



Photo: Galveston, TX Beach Patrol



The most common beach hazard



Photo: NOAA

- Rips are channelized currents of water that flow back into the ocean from the shoreline
- They typically form at breaks in sandbars, and near structures such as jetties & piers
- Rips are commonly found on along all surf beaches, including Great Lakes beaches



Facts about rip currents

- Rip current speeds average 1 to 2 ft per second but they have been measured as fast as 8 ft per second – **faster than an Olympic swimmer!**
- They do not pull people under the water, they pull people away from shore
- Rips are sometimes mistakenly called undertow or rip tides, but these terms are not correct



Photo: Galveston, TX Beach Patrol - Rip safety sign



Three parts of a rip current

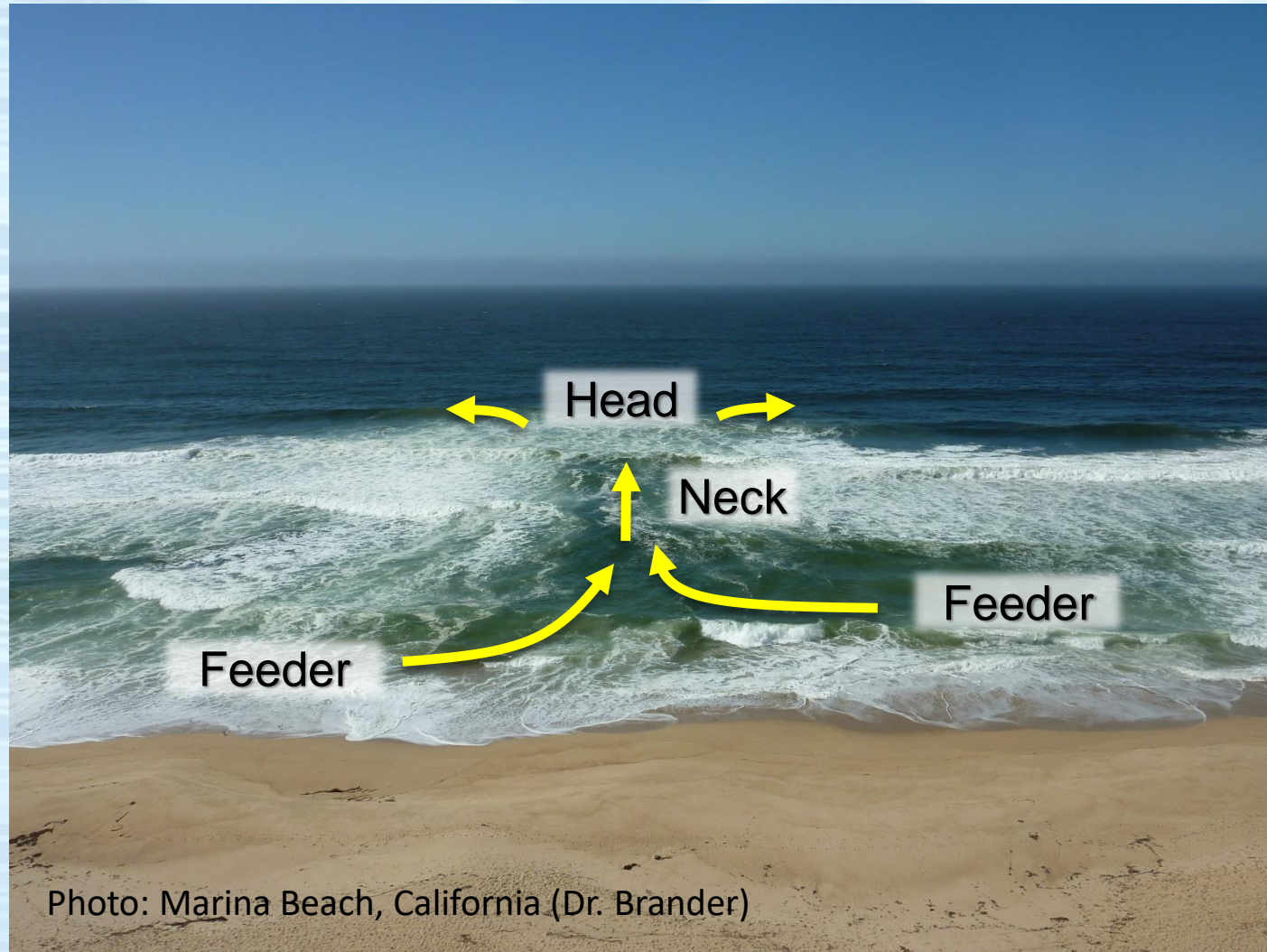
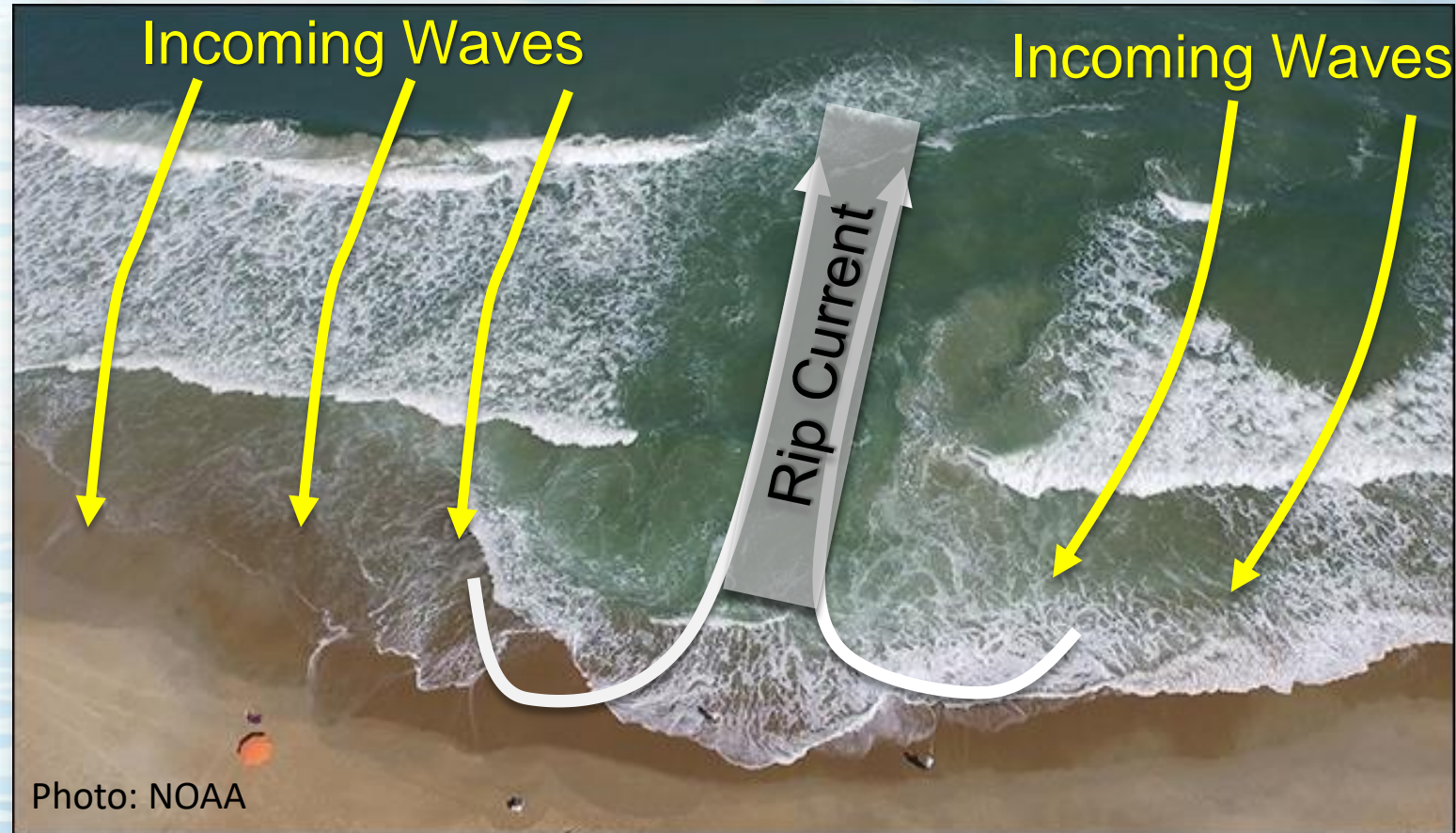


Photo: Marina Beach, California (Dr. Brander)

- Rip currents have three parts: Feeders, Neck, and Head
- Speeds are strongest in the neck, and they weaken beyond the breakers
- The length and width of rip currents can vary dramatically

How do rip currents form?

- Rips form as incoming waves push water up the slope of the beach
- To remain in balance, excess water building in the surf zone seeks the path of least resistance as a rip current through the surf zone





Structure caused rip currents

- Rip currents often form beside structures
- These currents can be strong
- Stay clear of structures



Photo: Stevens Institute of Technology – New Jersey

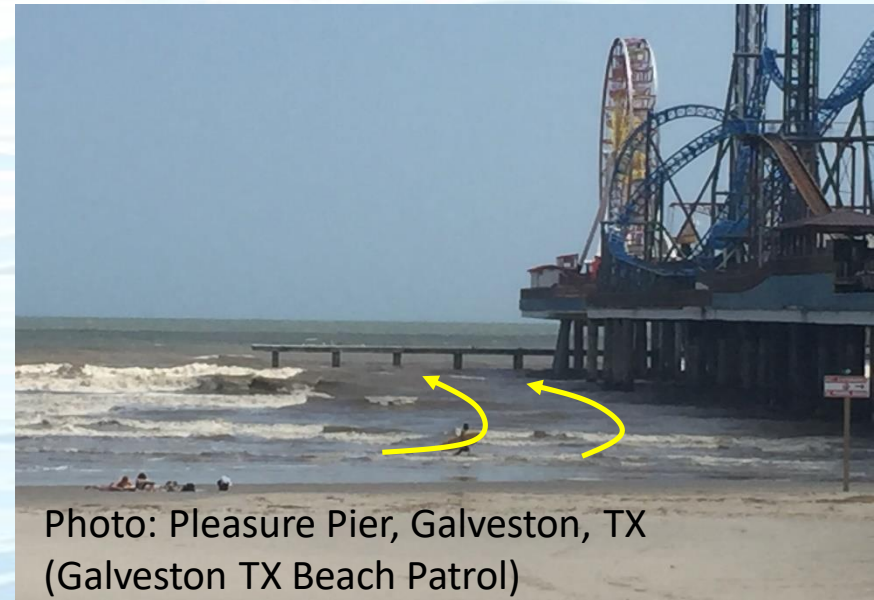


Photo: Pleasure Pier, Galveston, TX
(Galveston TX Beach Patrol)



Why are rip currents dangerous?



Photo: Chris Brewster - Blacks Beach, San Diego, CA Feb 9, 2012

- Rip currents pull people away from shore
- They are often hard to identify in the surf and not everyone knows about rip current dangers
- Sometimes the worst events occur with the best weather
- People try to out-swim them versus swim out of them



How to spot a rip current

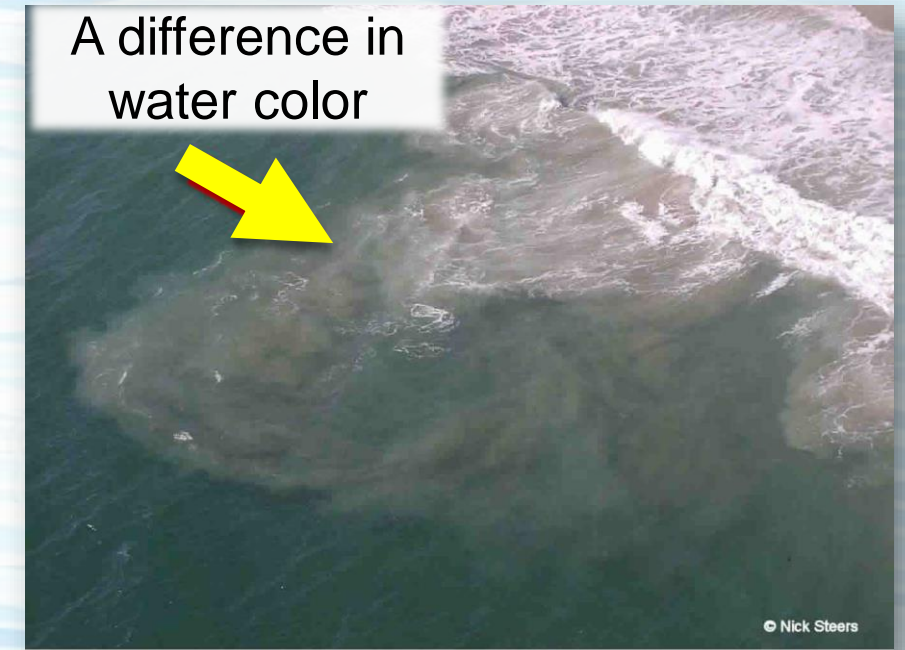
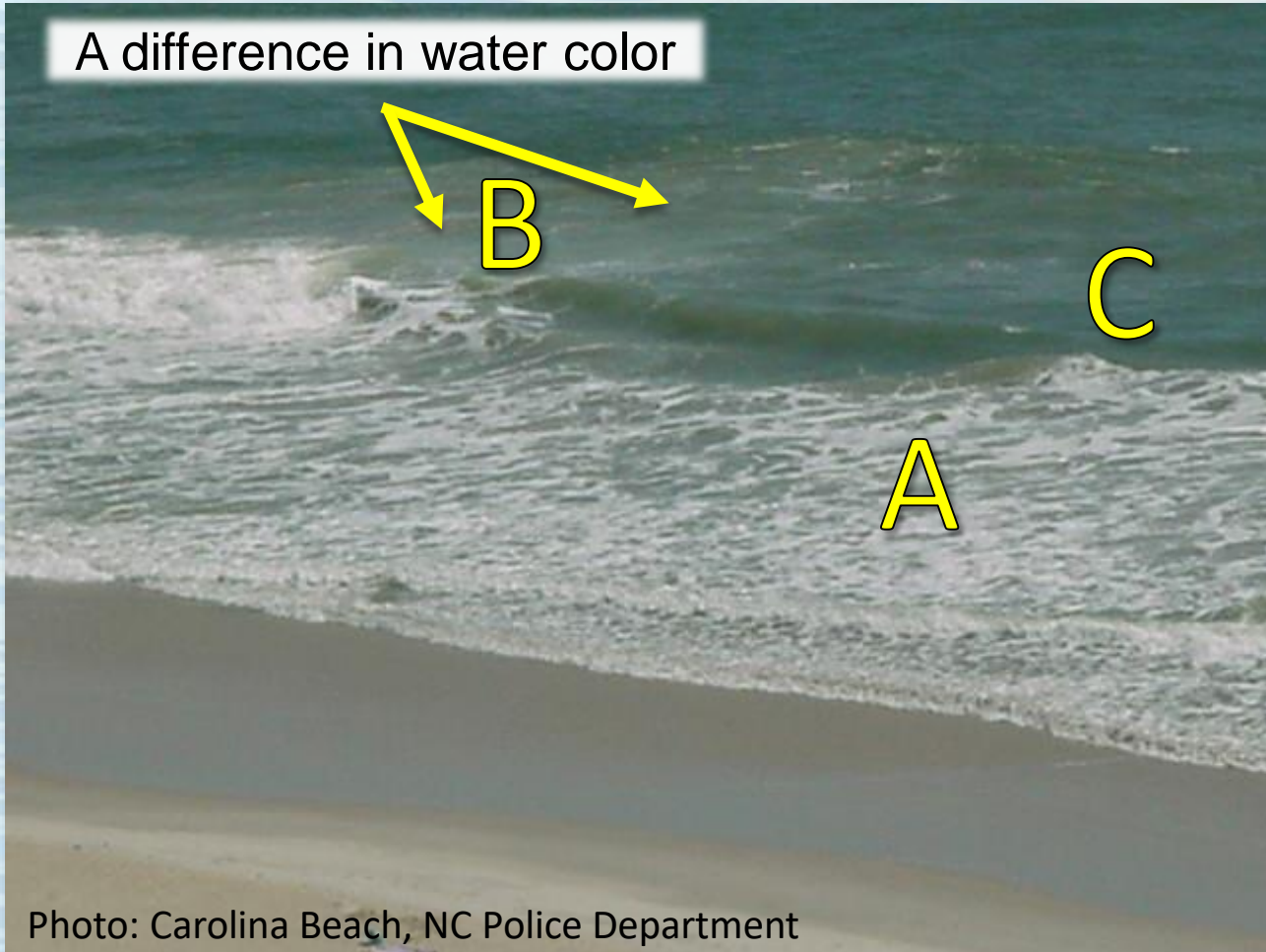


- A narrow gap of darker, seemingly calmer water between areas of breaking waves and whitewater
- A channel of churning, choppy water
- A difference in water color
- A line of foam, seaweed or debris moving seaward

Photo: NOAA – Big Sur, Monterey, CA



Can you find the rip current? Exercise 1





Can you find the rip current? Exercise 2

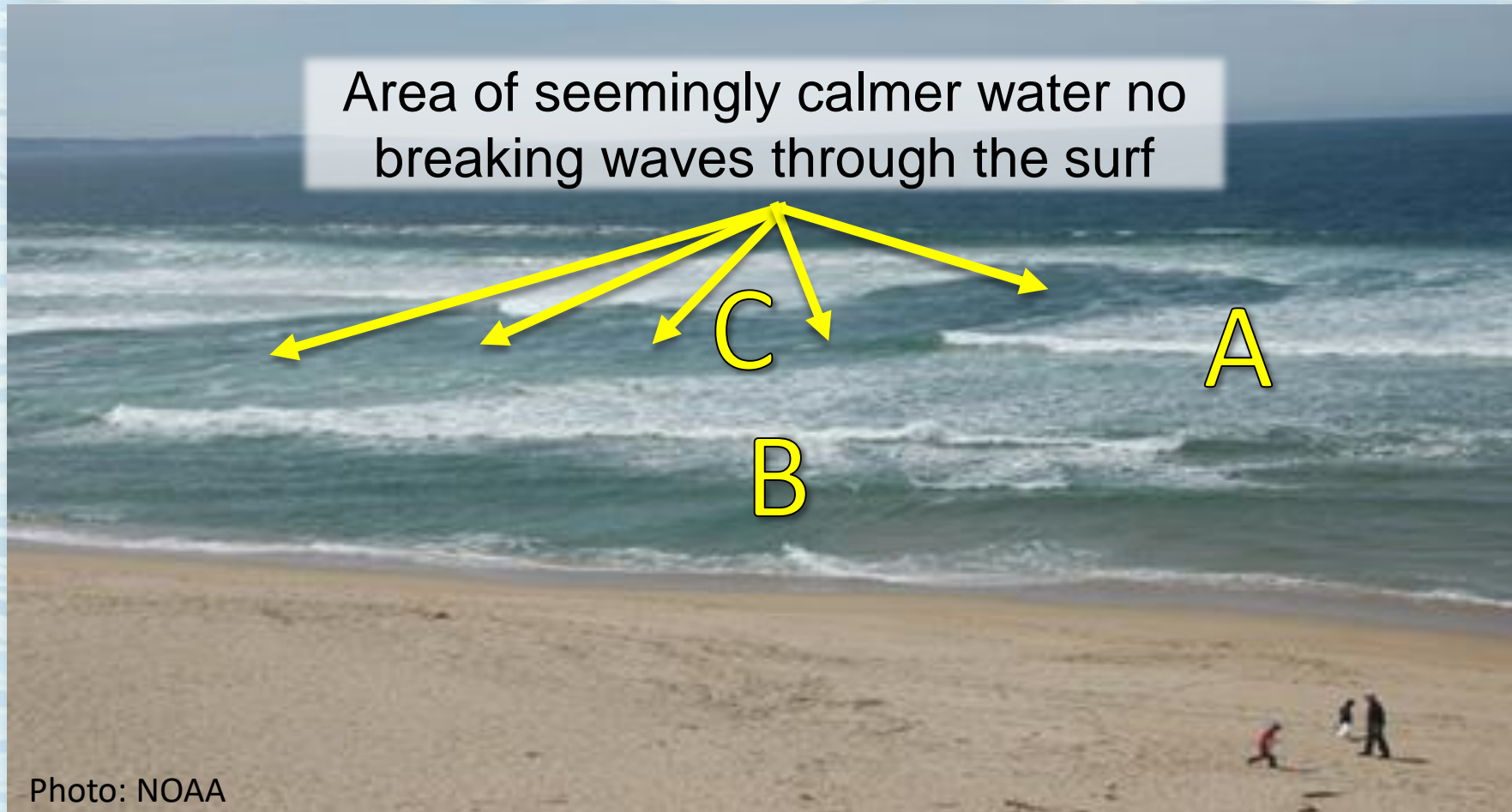


Photo: NOAA



Can you find the rip current? Exercise 3

Another example of a rip in an area that looks calmer with no breaking waves

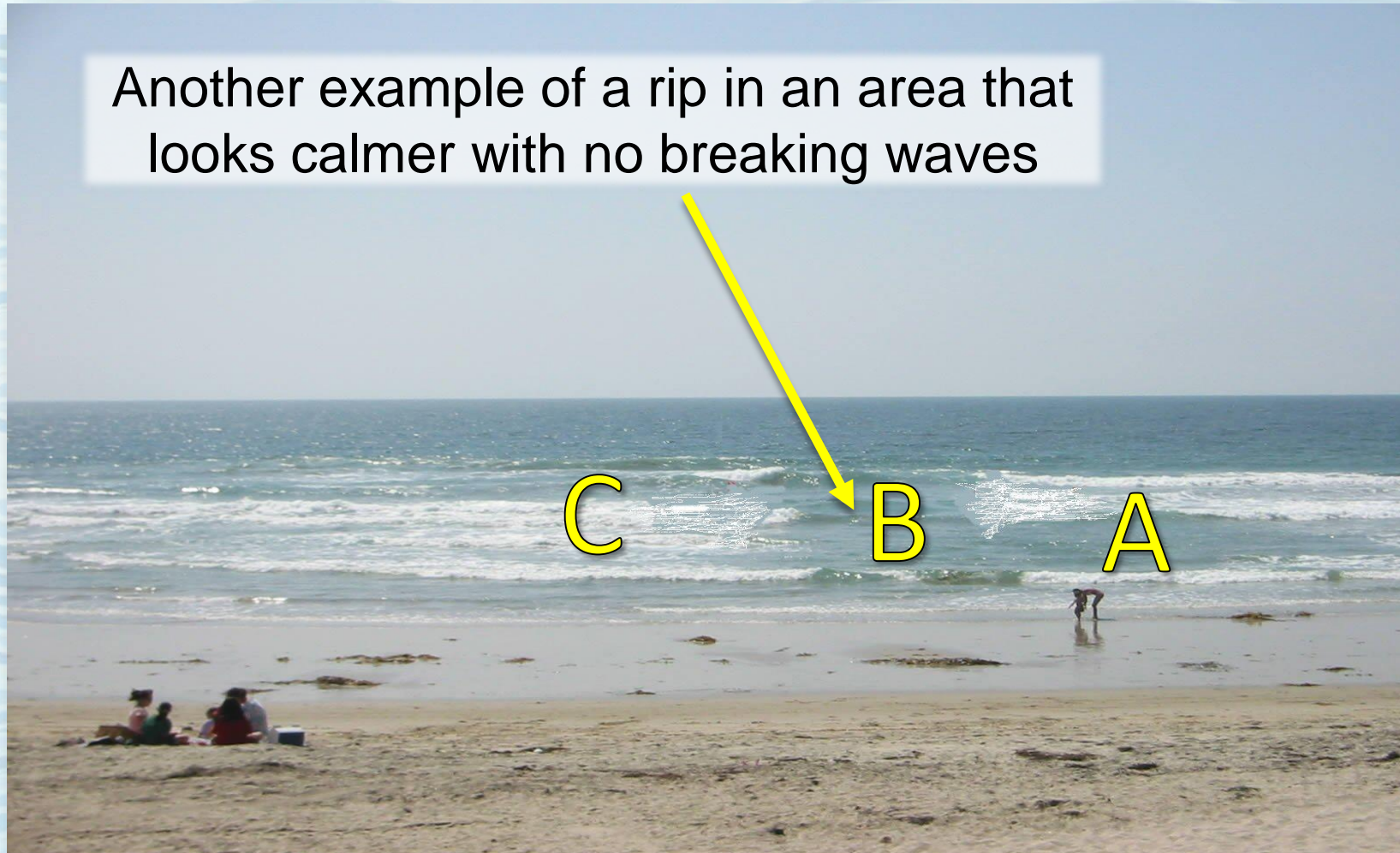


Photo: Chris Brewster – Pacific Beach, San Diego, CA



Can you find the rip current? Exercise 4

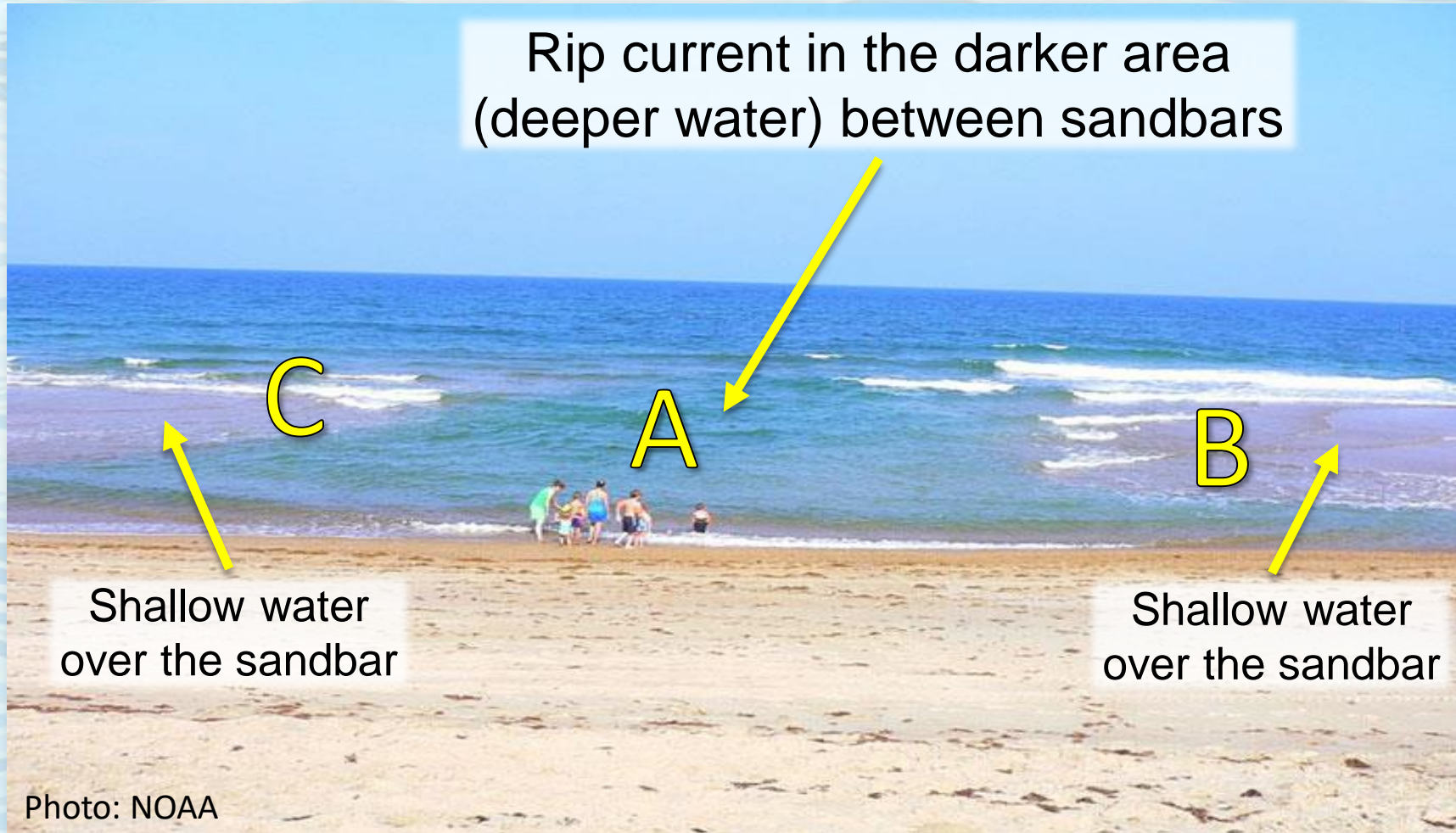


Photo: NOAA



How many rips in this picture? Exercise 5

Example of multiple rip currents highlighted by a difference in water color as sediment is being carried away from the shoreline by the rips

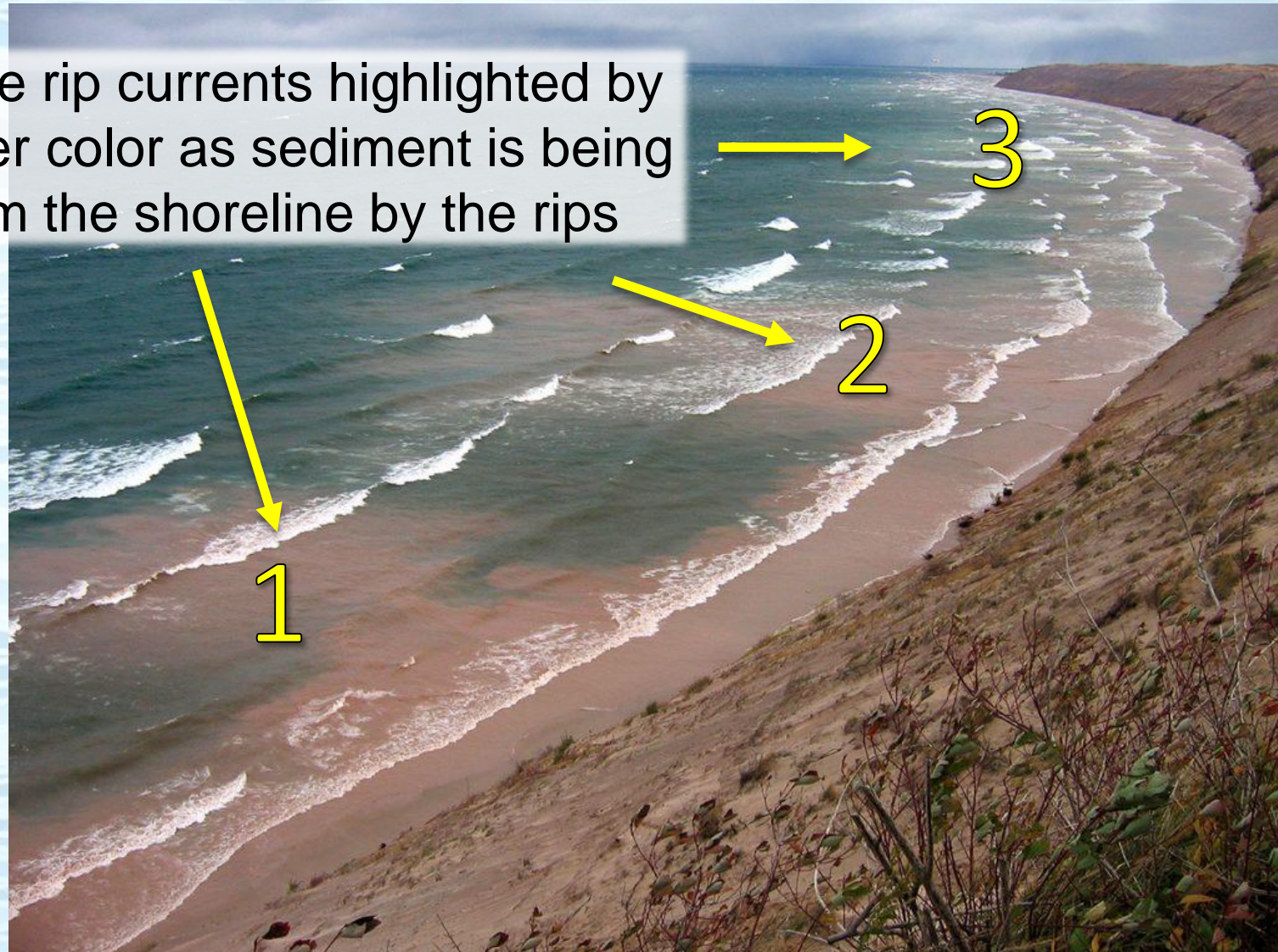


Photo: Michigan Sea Grant – Lake Michigan



Not all rip currents are created equal



Pacific Beach, San Diego, CA (Chris Brewster)



Black's Beach, San Diego, CA (Chris Brewster)



Stanwell Park, Sydney, Australia (Dr. Brander)



Huntington Beach, CA (Chris Brewster)



St Kilda Beach, Dunedin, South Island New Zealand (Dr. Brander)



Zuma Beach, Malibu, CA (Nick Steers)



How do I know if I am caught in a rip?

- It's not always obvious if you are caught in a rip
- As you are swimming toward shore you are not making any progress and becoming tired
- With stronger rips you may feel that you are being pulled away from the beach



Photo: Wrightsville Beach Ocean Rescue, NC



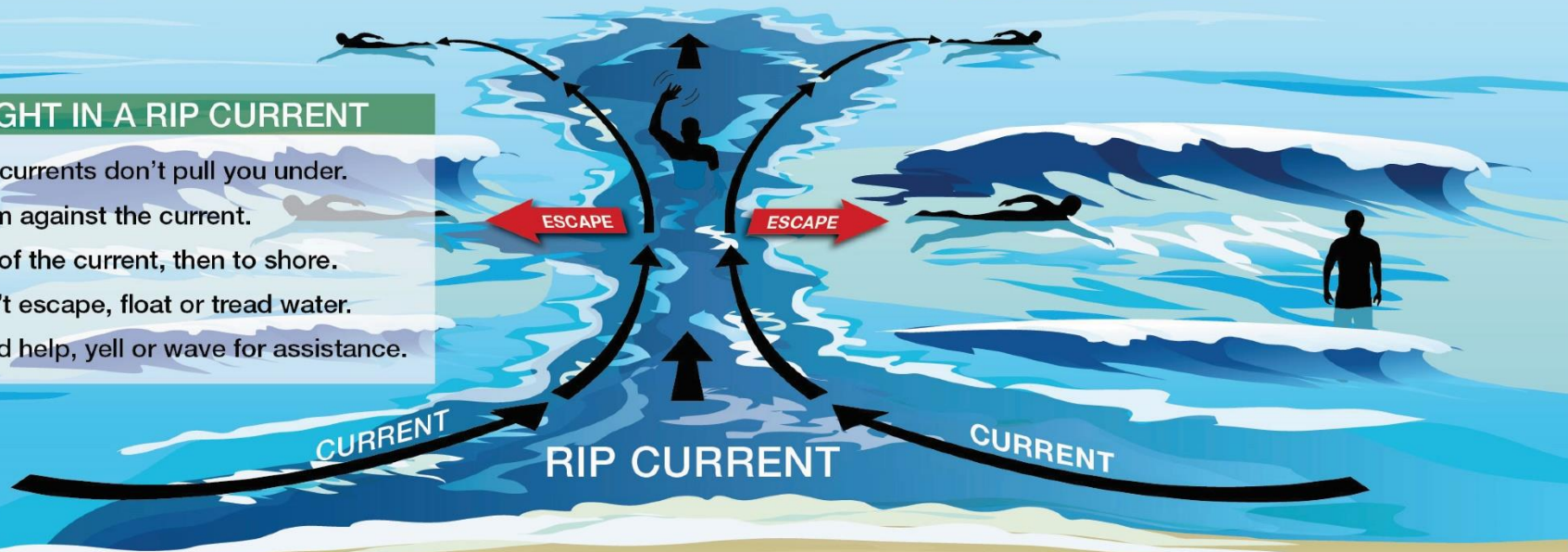
What can I do if I am caught in a rip?

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.



How do I help someone else?

Know your options!

- ✓ Don't put yourself at risk
- ✓ Get help from a lifeguard
- ✓ If a lifeguard is not present, call 9-1-1, then try to direct the victim to swim following the shoreline to escape
- ✓ If possible, throw the rip current victim something that floats
- ✓ Never enter the water without a flotation device

Photo: California Sea Grant



What are some other safety tips?



Photo: USLA

- **Know how to swim**
- **Swim near a lifeguard**
- **Never swim alone**
- **If in doubt, don't go out!**

Thank you & have a safe trip to the beach!

National Weather Service

<https://ripcurrents.noaa.gov>

United States Lifesaving Association

<https://www.usla.org/ripcurrents>



Building a Weather-Ready Nation