

Dangerous Currents in the Great Lakes

Wisconsin Coastal Beaches Working Group Annual Meeting
Green Bay, WI

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Wisconsin Coastal Management Program



Dangerous Currents






- Persistent hazard: 2010-2017 622 fatalities in the Great Lakes (2017 85 fatalities, Lake Michigan 47%)
- Different types of dangerous currents
- Public awareness of rip currents is low
- Certain groups more susceptible
- Majority of Great Lakes beaches do not have lifeguards
- Inconsistent use of rescue and safety equipment

Water/Beach Safety Equipment

Implementing Dangerous Currents Best Practices Beach Safety Kits

State Working Groups will gather feedback from local partners and report to project group:

- Determine what water safety and emergency rescue components are desirable for application in each state.
- Determine exact location for kits (based in part on NWS incident data) and quantities of kit components (based on size of public beach area and other factors) for each state.

Item	Description	Purpose	Photo (if available)
<i>Emergency Land-based Rescue Equipment</i>			
Rescue Throw ring (Type IV Buoy)*	Orange, 24 in (std.) with grab rope on buoy and 75 ft. rope	On-land emergency assistance-more visible from shore and easier to toss	
Rescue Throwbag (RQ3 Ultimate "No Knot")	Second-chance float feature with 75 ft. rope	On-land emergency assistance-optimal in high wind conditions	
<i>Emergency In-water Rescue Equipment</i>			
Adult life vest (Crew Mate)*	Head up design, Type I, min. 22 lbs buoyancy	Trained first responders and others performing in-water emergency rescues	
Youth life jacket*	Head up design, 11.8 lbs buoyancy, 50 - 90 lbs. weight	Youth at the beach – loaner programs to encourage use (Could consider multiple sizes)	
Rescue Board	Carlson, 2'x4'x4" ethafoam (9 lbs.)	In-water emergency rescues (to be used with adult life vest)	
<i>Water Safety Equipment & Public Outreach Tools</i>			
Water watcher cards and lanyard	Break-away (no-choke cord) with plastic sleeve	Support a GL regional water watcher program to encourage close contact at the beach Printed cards for lanyards and 25K for Sea Grant and parks service to hand out	See appendices for MDEQ MI Sea Grant sample**

In 2015-16 over 2,000 pieces of equipment were distributed in six Great Lakes states (IL, IN, MI, MN, OH & WI)





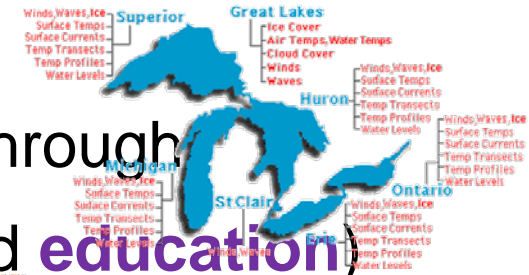
Project Objectives



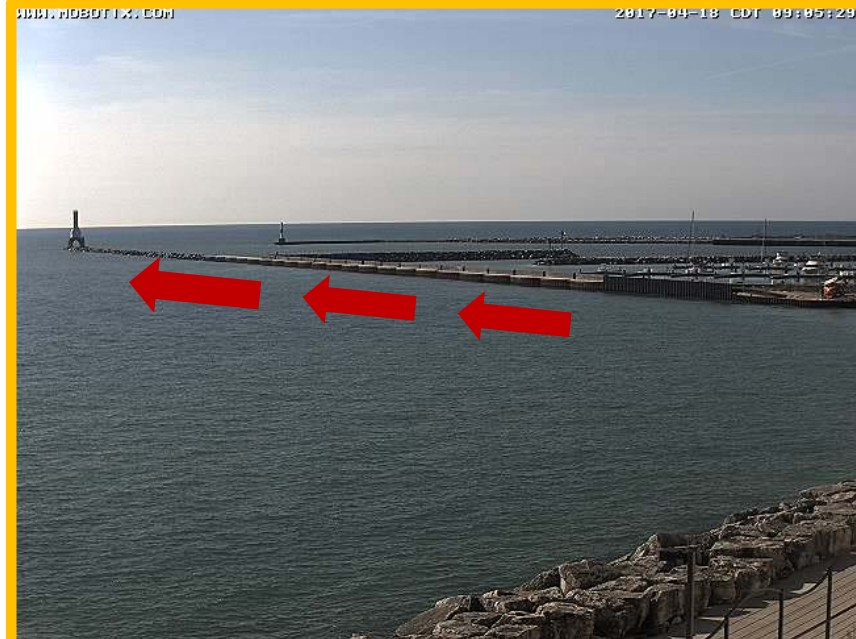
1) **Develop** a nowcast (**observation**) and forecast (**modeling**) system for real-time **rip current warning**

2) **Provide** nearshore in-situ wave observation for improving Great Lakes Coastal Forecasting System

3) **Enhance** the public rip current awareness through risk communications (**outreach** and **education**)



Real-Time Rip Current Watch



Port Washington, WI

INFOS *Port Washington*

Integrated Nowcast/Forecast Operation System for Port Washington

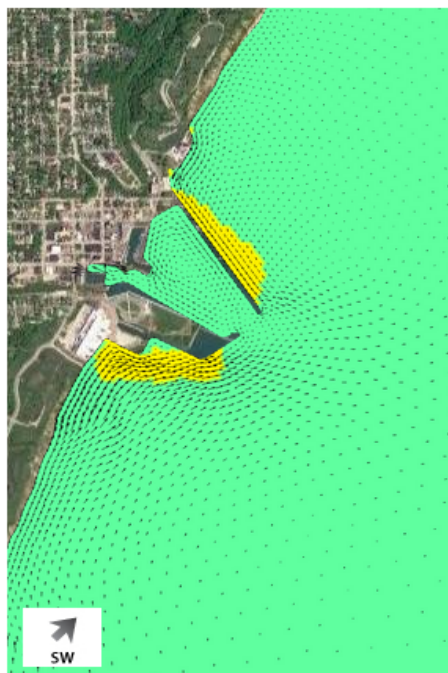
Home

About INFOS

Real-Time Rip Current Watch at Port Washington, Wisconsin

Current
Condition
Table

Update at: 2017/11/07 4:21 PM	Wave Height	1.7 ft	Wind Speed	10.8 mph	Air Pressure	30.1 in Hg	Water Temp. (surface)	41.3 °F
	Wave Period	3.2 sec	Wind Direction	SW	Air Temp.	46.8 °F	Water Temp. (bottom)	N/A °F



Live
camera
view



Rip Current Risk Levels

< 1 ft

Low Risk

1-2 ft

Moderate Risk

> 2 ft

High Risk

Characterizing and Forecasting Dangerous Currents on the South Shore of Lake Superior in Minnesota and Wisconsin

Minnesota and Wisconsin Sea Grant Joint RFP

- Characterize dangerous currents on Minnesota-Wisconsin south shore of Lake Superior and investigate the roles of varying wind and changing bathymetry in generating dangerous currents
- Forecast dangerous currents on Minnesota-Wisconsin south shore of Lake Superior
- Develop an integrated framework for dangerous current watches, warnings, and advisories by building a collaborative community through outreach & education, and coordination & communication

Great Lakes Water Safety Consortium

- Community of practice
- Established in 2015
- Registered nonprofit 501c3 organization
- Governance:
 - Board of Directors (5)
 - Leadership Council (17)
 - Advisory Team representing all eight Great Lakes states and Ontario (300+)

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Join an Action Committee



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LIFESAVING WATER SAFETY TIPS

The Great Lakes Water Safety Consortium's mission is to end drowning in the Great Lakes.
Here are ways you and your loved ones can be safer in the water.

AVOID DROWNING BE CURRENT SMART

Know Before You Go

Check the National Weather Service for forecasts about dangerous waves and currents.



Stay Dry When Waves Are High

Whitewater/waves as little as 2-3 feet high can generate dangerous currents.

When in Doubt, Don't Go Out

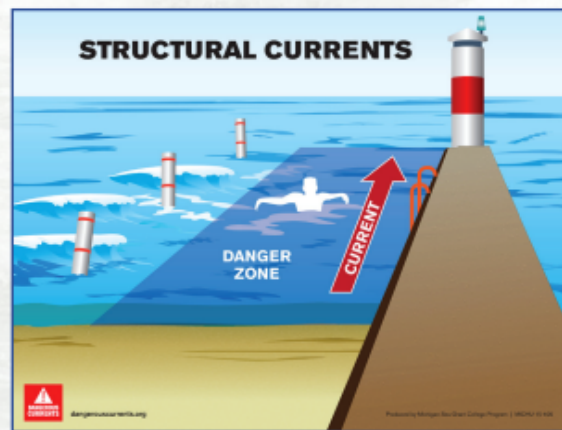
Respect the power of the water and don't take chances.

Buddy Up

Never swim alone – there's safety in numbers.

Steer Clear of the Pier

Most current-related incidents occur near structures.



ESCAPE DROWNING BE A SURVIVOR

Don't Fight the Current

Even Olympic swimmers can't overcome the power of rip currents.

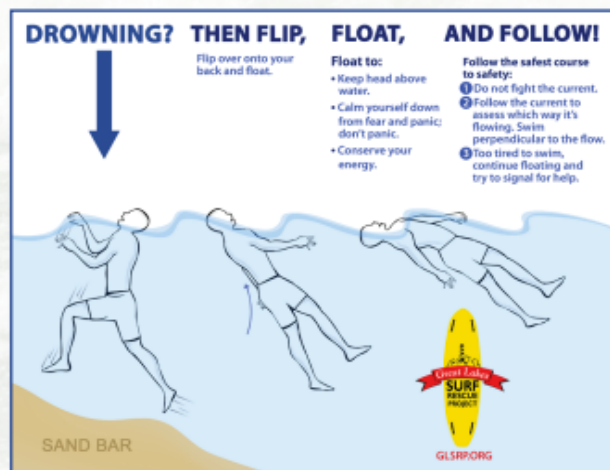
Yell for Help

Call for help as soon as you realize you're in trouble – the closer you get to drowning, the harder it will be to yell.

Flip – flip over onto your back and stay calm.

Float – float to keep your head above water and conserve energy.

Follow – follow the safest path out of the water – swim to the side (parallel to shore) and if too tired to swim, keep floating.



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CONSORTIUM



SAFELY SAVE OTHERS FROM DROWNING DON'T BECOME A VICTIM

Be a Water Watcher

Designate someone to watch people in the water as their sole responsibility.

Drowning Doesn't Look Like Drowning

Know the signs of drowning – it's not like Hollywood with lots of yelling and waving – it's actually subtle and silent.

Save Yourself First

Don't become a victim trying to save someone else – only go out with a flotation device (e.g., life ring, kayak, surf/paddle board, cooler, soccer ball) and keep it between you and the victim; have someone call 911 to get more help on the way. Wear a life jacket if available.

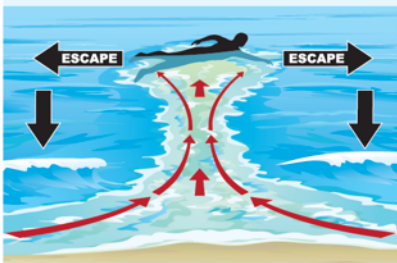
Preach, Reach, Throw, Row

Shout to the victim that help is on the way, try to reach them with a pole or rope, throw them a floatable, get to them on a board or in a boat/kayak/canoe.



Dangerous Currents Avoid Dangerous Areas:

- Stay in designated swim areas.
- Avoid swimming near piers and breakwalls. Many fatalities have occurred.



If trapped in a dangerous current:

- Swim to the side, out of the current, and then to shore.
- If in danger, call for someone to throw a life ring or anything that floats.

The Great Lakes Water Safety Consortium is a community of BEST practices working together to END DROWNING in the Great Lakes. Learn more at www.GreatLakesWaterSafety.org



In our current conditions at this and other beaches, swim the QR code with your mobile device.



! DANGER

Stay Alive – Avoid Piers



Danger Zone – No Swimming

- Swim in designated area, away from this structure.
- If trapped, call for help.
- Call for someone to throw life ring or anything that floats.
- Get to ladder, if possible.

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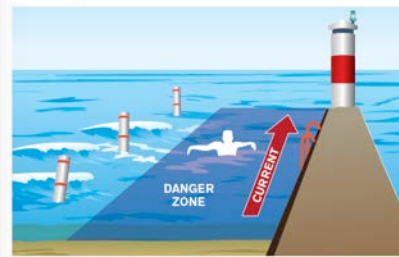


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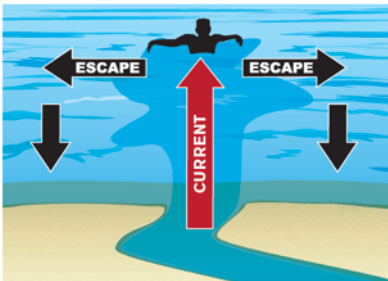
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Dangerous Current Beware of Strong Outlet Current



Caution, fatalities have occurred!

If trapped in a dangerous current:

- Swim to the side, out of the current, and then to shore.
- If in danger, call for someone to throw a life ring or anything that floats.

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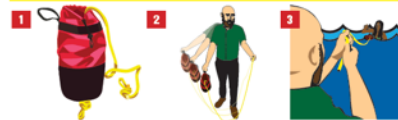


! EMERGENCY USE ONLY

If swimmer is in distress:

- Yell or blow a whistle to call for help
- Dial 911
- Keep the victim in sight
- Use available safety equipment, staying on shore if possible
- Put on a life jacket if you must enter the water

RESCUE BAG



Release drawstring. Remove a short amount of rope from top of bag.

Hold rope securely. Throw rope-filled bag to, or past, victim using underhand motion.

Pull victim to safety once they grasp the rope.

RESCUE RING



Hold rope securely. Ensure rope is unknotted or rope bag is open (if equipped).

Throw ring to, or past, victim using underhand or sidearm motion.

Wait for victim to grab ring, then pull them to safety.

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Dangerous Current Beware of Strong Channel Current



Caution, fatalities have occurred! Do not attempt to swim to the island.

If trapped in a channel current:

- Swim to the shore, not to the sandbar connecting the beach and island.
- If in danger, call for someone to throw a life ring or anything that floats.

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- Avoid swimming near piers and breakwalls. Many fatalities have occurred.



If trapped in a dangerous current:

- Swim to the side, out of the current, and then to shore.
- If in danger, call for someone to throw a life ring or anything that floats.

www.drowningprevention.com | BSC, CGL, etc.

\$10 each

Annual Water Safety Conference



Continuing Efforts

- GLWSC 2018 spring and fall conferences
- INFOS Sheboygan
- Community response to dangerous currents