

## FACT SHEET: Understanding weather and water conditions

Checking the weather forecast and water conditions is critical to safe boating. Weather and water conditions can make the difference between having a good day out on the water and an uncomfortable day or even a tragic one. Bad weather can make boating extremely hazardous. The smaller the boat, the more the risk. Boats less than 21-feet long are at a greater risk of swamping and capsizing and even more of a risk in choppy water. This is especially true in small boats such as kayaks, canoes, rowboats, inflatable rafts and open cabin motorboats.

- According to U.S. Coast Guard Recreational Boating Statistics, in 2016, where data was known, the boat types with the highest percentage of deaths were open motorboats (47 percent) and kayaks/canoes (22 percent).
- According to the State Parks recreational boating statistics, in 2017, 66 percent of boating fatalities happened in boats under 21 feet long and half of those were in kayaks/canoes.



Safe boaters know the importance of understanding weather forecasts and conditions before heading out on the water.

**When in doubt, don't go out.**

- For coastal waterways (bays, harbors, inlets, seas, etc.), the **marine weather forecast can differ greatly from land weather forecast**, so it is important to seek out a marine forecast before heading out. General land forecasts do not take into account wind speed over water or the waves or swell.
- For rivers, it is important to check rapid ratings and water levels. Rapids vary in their intensity and may require special equipment and expertise before going out.
- Checking the marine weather forecast and river levels is free and accessible by a range of sources, including VHF radio, the internet, smartphone apps and some newspapers.
- Failure of the boat owner/operator to adequately plan and prepare for changes in the weather can result in prolonged exposure to the elements while awaiting rescue and decrease chances of survival.

**Not** checking the **weather** forecast is one of the **key risk** factors for **boating fatalities**.

### State Parks Boating Program recommends...

We encourage boaters to take a course that will help increase confidence in understanding weather forecasts and water conditions. Several organizations offer marine weather classes including local yacht clubs, paddlesport clubs, the U.S. Coast Guard Auxiliary and U.S. Power Squadron.



Boaters should check the weather forecast and water conditions before they go out—every time—and understand how it affects their ability to control their vessel. Following are the five **vital checks**:

- **WARNINGS** are the highest priority forecasts, indicating potentially dangerous wind conditions. Winds of more than 21 knots indicate rough conditions for small boats.
- **WEATHER** affects safe boating. Take note of forecasts indicating reduced visibility from fog or rain or risks to safety and comfort from thunderstorms, lightning or squalls.
- **WIND** forecasts are the average wind speed in knots; however, gusts can be up to 40 percent stronger. Plan a trip for best conditions; look at trends in wind speeds and shifts in wind directions over the day.
- **WAVE** forecasts are average wave heights; be prepared for waves of twice the average heights. While out on the water, boaters should note swell and wave conditions and how their boat reacts.
- **TIDES, CURRENTS** and **RIVER FLOWS** affect water conditions and are just as vital to check as weather conditions. Obstructions may be hidden at high tide and then become exposed and hazardous at low tide. Knowing tide times is very important for boats entering and exiting river entrances and crossing bars. The characteristics of a river can change remarkably as the water level rises or falls. Even normally calm stretches become turbulent and dangerous at flood stage.

In addition to the five vital checks, boaters should note the following tips:

- When heading out on coastal waterways such as the ocean, bays, harbors, inlets and major rivers that lead into seas, always check the **marine weather** forecast.
- When heading out on lakes or rivers, take note of forecasts that indicate reduced visibility from fog or rain, risks to safety and comfort from thunderstorms and lightning and river flow rates. Pay attention to wind, which can cause choppy conditions and is especially dangerous for small boats and paddlecraft.
- **Weather can change!** Always keep an eye on the weather. It can change suddenly and without warning, catching boaters off guard and creating life-threatening situations.
- Minimize risk by carrying essential safety gear such emergency communications equipment, wearing a life jacket, dressing for water temperature (not air temperature) and not boating under the influence of drugs or alcohol.
- Tune into the National Oceanic and Atmospheric Administration (NOAA) weather channel for real-time weather information. For access to local forecasts, visit NOAA's mobile-friendly website at [mobile.weather.gov](http://mobile.weather.gov).
- The National Weather Service offers online weather and river information useful for trip planning at [www.weather.gov](http://www.weather.gov).

Need more information?

- State Parks Boating Program: [www.parks.state.wa.us/Boating](http://www.parks.state.wa.us/Boating)
- National Oceanic and Atmosphere Administration:
  - Marine Watches, Warnings, Advisories: <http://www.wrh.noaa.gov/sew/MarAdviWarn1.php>
  - Marine forecasts: <http://www.nws.noaa.gov/os/marine/faq.htm>
  - NOAA Marine Fact Sheet: [http://www.nhc.noaa.gov/marine/outreach/Marine\\_Fact\\_Sheet.pdf](http://www.nhc.noaa.gov/marine/outreach/Marine_Fact_Sheet.pdf)