

# PRECIPITATION, WIND, WAVES & FOG



SK BASICS 2016

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# OBJECTIVES

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- Understand weather impacts on your kayaking plans
- How to get a forecast
- Understand a forecast
- Preparation, observation, validation

# WEATHER & KAYAKING

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- Precipitation
- Temperature
- Fog
- Wind

# PRECIPITATION

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- Rain, sleet, hail, snow, . . .
- Comfort – dress for the weather
- Visibility – may impact your route
- Communication – remain within oral communication range

# TEMPERATURE

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- Not too hot, not too cold, . . . just right (with layer management)
- Hyperthermia – dehydration, muscle cramps, heat stroke
- Hypothermia – loss of coordination, mental acuity, coma

# FOG

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- **Visibility** – see and be seen, . . .  
may impact your route
- **Radiation fog** – clear night cools  
ground, cools air to dew point
- **Sea fog** – cold air blows over  
warm water, water evaporates  
into air

# WIND

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- **Speed** – drift at rest, speed over ground when upwind / downwind
- **Navigation** – leeway alters steered course
- **Boat control** – turns & stability increasingly challenging

# WIND WAVES

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- **Speed** – impacts achievable distance over ground into waves vs. with waves
- **Navigation** – leeway alters steered course
- **Boat control** – turns & stability increasingly challenging



# INTERACTION OF WEATHER W/ LAND & WATER

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- Precipitation affected by upwind mountain ranges (rain shadows & micro climates)
- Wind direction and strength affected by land masses:
  - Topographic features channel or block wind
  - A point will magnify wind and wave action
- Fetch length – distance wind travels over open water, . . . more fetch = stronger wind & larger waves

## The Beaufort Scale

Wind	Symbol	Speed(mph)	Force #	Effect
calm		> 1	0	smoke rises vertically
light air		1-3	1	smoke drifts slightly
light breeze		4-7	2	leaves rustle; wind vane moves
gentle breeze		8-12	3	leaves-constant motion light flag extended
moderate breeze		13-18	4	raises dust and papers; small branches stir
fresh breeze		19-24	5	small trees sway
strong breeze		25-31	6	large branches move; use of umbrella difficult
moderate gale		32-38	7	whole trees in motion
fresh gale		39-46	8	twigs broken off trees; difficult to drive a car
strong gale		47-54	9	slight structure damage occurs
whole gale		55-63	10	trees uprooted; severe structural damage
storm		64-73	11	widespread damage
hurricane		above 75	12	devastation

The Beaufort Scale has unofficially been extended to Force 17 to describe tropical storms exceeding 126 miles per hour



This is hard and challenging work!!

# WEATHER FORECASTS

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- NOAA on the web:
  - [www.weather.gov](http://www.weather.gov)
- VHF, weather radio

The background of the slide is a light gray gradient. It is decorated with several realistic water droplets of various sizes, scattered primarily in the top-left and bottom-right corners. The droplets have highlights and shadows, giving them a three-dimensional appearance.

# Online demonstration of the NOAA weather website

- VHF RADIO



- WEATHER RADIO



# BROADCAST NOAA

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- Marine weather broadcasts
- 24 hrs/day, 7 days/wk
- Updated periodically as conditions change
- Entire forecast ~10 min, cont. repeated



Wishing you smooth waters & sunny skies!!