










## Beaufort Wind Scale




One of the first scales to estimate wind speeds and the effects was created by Britain's Admiral Sir Francis Beaufort (1774-1857). He developed the scale in 1805 to help sailors estimate the winds via visual observations. The scale starts with 0 and goes to a force of 12. The Beaufort scale is still used today to estimate wind strengths.

Force	Wind (Knots)	WMO Classification	Appearance of Wind Effects		
			On Land	On the Water	Image
0	Less than 1	Calm	Calm, smoke rises vertically	Sea surface smooth and mirror-like	 Force 0
1	1-3	Light Air	Scaly ripples, no foam crests	Smoke drift indicates wind direction, still wind vanes	 Force 1
2	4-6	Light Breeze	Wind felt on face, leaves rustle, vanes begin to move	Small wavelets, crests glassy, no breaking	 Force 2


3	7-10	Gentle Breeze	Leaves and small twigs constantly moving, light flags extended	Large wavelets, crests begin to break, scattered whitecaps	
4	11-16	Moderate Breeze	Dust, leaves, and loose paper lifted, small tree branches move	Small waves 1-4 ft. becoming longer, numerous whitecaps	
5	17-21	Fresh Breeze	Small trees in leaf begin to sway	Moderate waves 4-8 ft taking longer form, many whitecaps, some spray	



6	22-27	Strong Breeze	Larger tree branches moving, whistling in wires	Larger waves 8-13 ft, whitecaps common, more spray	
7	28-33	Near Gale	Whole trees moving, resistance felt walking against wind	Sea heaps up, waves 13-20 ft, white foam streaks off breakers	
8	34-40	Gale	Whole trees in motion, resistance felt walking against wind	Moderately high (13-20 ft) waves of greater length, edges of crests begin to break into spindrift, foam blown in streaks	

9	41-47	Strong Gale	Slight structural damage occurs, slate blows off roofs	High waves (20 ft), sea begins to roll, dense streaks of foam, spray may reduce visibility	
10	48-55	Storm	Seldom experienced on land, trees broken or uprooted, "considerable structural damage"	Very high waves (20-30 ft) with overhanging crests, sea white with densely blown foam, heavy rolling, lowered visibility	
11	56-63	Violent Storm		Exceptionally high (30-45 ft) waves, foam patches cover sea, visibility more reduced	



12	64+	Hurricane		Air filled with foam, waves over 45 ft, sea completely white with driving spray, visibility greatly reduced	
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