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# **APPENDIX R** **BEAUFORT SCALE** **WITH CORRESPONDING SEA STATE CODES**

1059

WITH CORRESPONDING SEA STATE CODES													
Beau- fort number	Wind speed				Seaman's term	U. S. Weather Bureau term	Estimating wind speed		Hydrographic Office		International		
	knots	mph	meters per second	km per hour			Effects observed at sea	Effects observed on land	Term and height of waves, in feet	Code	Term and height of waves, in feet	Code	
0	under 1	under 1	0.0-0.2	under 1	Calm	Light	Sea like mirror.	Calm; smoke rises vertically.	Calm, 0	0	Calm, glassy, 0	0	
1	1-3	1-3	0.3-1.5	1-5	Light air		Ripples with appearance of scales; no foam crests.	Smoke drift indicates wind direction; vanes do not move.	Smooth, less than 1	1			
2	4-6	4-7	1.6-3.3	6-11	Light breeze		Small wavelets; crests of glassy appearance, not breaking.	Wind felt on face; leaves rustle; vanes begin to move.	Slight, 1-3	2	Rippled, 0-1	1	
3	7-10	8-12	3.4-5.4	12-19	Gentle breeze	Gentle	Large wavelets; crests begin to break; scattered whitecaps.	Leaves, small twigs in constant motion; light flags extended.	Moderate, 3-5	3	Smooth, 1-2	2	
4	11-16	13-18	5.5-7.9	20-28	Moderate breeze	Moderate	Small waves, becoming longer; numerous whitecaps.	Dust, leaves, and loose paper raised up; small branches move.	Rough, 5-8	4	Slight, 2-4	3	
5	17-21	19-24	8.0-10.7	29-38	Fresh breeze	Fresh	Moderate waves, taking longer form; many whitecaps; some spray.	Small trees in leaf begin to sway.			Moderate, 4-8	4	
6	22-27	25-31	10.8-13.8	39-49	Strong breeze	Strong	Larger waves forming; whitecaps everywhere; more spray.	Larger branches of trees in motion; whistling heard in wires.			Rough, 8-13	5	
7	28-33	32-38	13.9-17.1	50-61	Moderate gale	Gale	Sea heaps up; white foam from breaking waves begins to be blown in streaks.	Whole trees in motion; resistance felt in walking against wind.	Very rough, 8-12	5	Very rough, 13-20	6	
8	34-40	39-46	17.2-20.7	62-74	Fresh gale		Moderately high waves of greater length; edges of crests begin to break into spindrift; foam is blown in well-marked streaks.	Twigs and small branches broken off trees; progress generally impeded.					
9	41-47	47-54	20.8-24.4	75-88	Strong gale		Whole gale	High waves; sea begins to roll; dense streaks of foam; spray may reduce visibility.	Slight structural damage occurs; slate blown from roofs.	High, 12-20	6		
10	48-55	55-63	24.5-28.4	89-102	Whole gale	Very high waves with overhanging crests; sea takes white appearance as foam is blown in very dense streaks; rolling is heavy and visibility reduced.		Seldom experienced on land; trees broken or uprooted; considerable structural damage occurs.	Very high, 20-40	7	High, 20-30	7	
11	56-63	64-72	28.5-32.6	103-117	Storm	Exceptionally high waves; sea covered with white foam patches; visibility still more reduced.		Very rarely experienced on land; usually accompanied by widespread damage.	Mountainous, 40 and higher	8	Very high, 30-45	8	
12	64-71	73-82	32.7-36.9	118-133	Hurricane	Hurricane	Air filled with foam; sea completely white with driving spray; visibility greatly reduced.		Confused	9	Phenomenal, over 45	9	
13	72-80	83-92	37.0-41.4	134-149									
14	81-89	93-103	41.5-46.1	150-166									
15	90-99	104-114	46.2-50.9	167-183									
16	100-108	115-125	51.0-56.0	184-201									
17	109-118	126-136	56.1-61.2	202-220									

and upon wind speed in knots, at five-knot intervals, rather than upon Beaufort number.

Note: Since January 1, 1955, weather map symbols have been based upon wind speed in knots, at five-knot intervals, rather than upon Beaufort number.