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APPENDIX R BEAUFORT SCALE WITH CORRESPONDING SEA STATE CODES

Beaufort 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	Gentle	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		Large wavelets; crests begin to break; scattered whitecaps.	Leaves, small twigs in constant motion; light flags extended.	Moderate, 3-5	3	Smooth, 1-2	
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		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.	Very rough, 8-12	5	Rough, 8-13	5
7	28-33	32-38	13.9-17.1	50-61	Moderate 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.				
8	34-40	39-46	17.2-20.7	62-74	Fresh gale	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.	High, 12-20	6		
9	41-47	47-54	20.8-24.4	75-88	Strong gale		High waves; sea begins to roll; dense streaks of foam; spray may reduce visibility.	Slight structural damage occurs; slate blown from roofs.				
10	48-55	55-63	24.5-28.4	89-102	Whole gale	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.				Mountainous, 40 and higher	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.	Very rarely experienced on land; usually accompanied by widespread damage.	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								

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.