

## *Pierson - Moskowitz Sea Spectrum*

- Values are worst case forecasts for open water in vicinity of referenced point

### General guide of sea state versus operating frequency.

Wind Speed (Kts)	Sea State	Significant Wave (Ft)	Significant Range of Periods (Sec)	Average Period (Sec)	Average Length of Waves (FT)	Beaufort	Operational speed
3	0	<.5	<.5 - 1	0.5	1.5	1	30/50 hz
4	0	<.5	.5 - 1	1	2	2	30/50 hz
5	1	0.5	1 - 2.5	1.5	9.5	2	30/50 hz
7	1	1	1 - 3.5	2	13	3	40/50 hz
8	1	1	1 - 4	2	16	3	40/50 hz
9	2	1.5	1.5 - 4	2.5	20	3	50/60 hz
10	2	2	1.5 - 5	3	26	3	50/60 hz
11	2.5	2.5	1.5 - 5.5	3	33	4	50 hz
13	2.5	3	2 - 6	3.5	39.5	4	50 hz
14	3	3.5	2 - 6.5	3.5	46	4	45 hz
15	3	4	2 - 7	4	52.5	4	45 hz
16	3.5	4.5	2.5 - 7	4	59	4	40 hz
17	3.5	5	2.5 - 7.5	4.5	65.5	5	40 hz
18	4	6	2.5 - 8.5	5	79	5	40 hz
19	4	7	3 - 9	5	92	5	35 hz
20	4	7.5	3 - 9.5	5.5	99	5	30 hz
21	5	8	3 - 10	5.5	105	5	25 hz
Night mode	2	1.5	1.5 - 4	3	20	3	25 hz

Sea State 2



Wind: 4-6 Knots  
 Light breeze  
 Small wavelets, crests glassy, no breaking  
 Wind felt on face, leaves rustle, vanes begin to move

Sea State 3



Wind: 7-10 Knots  
 Gentle breeze  
 Large wavelets, crests begin to break, scattered whitecaps  
 Leaves and small twigs constantly moving, light flags extended

Sea State 4



Wind: 11-16 Knots  
 Moderate breeze  
 Small waves 1-4 feet becoming longer, numerous whitecaps  
 Dust, leaves, and loose paper lifted, small tree branches move