

## West Coast Ocean Wind OCS-P0564 - September

Latitude: 33.50 N Longitude: 122.00 W

### Weather Days

Wave Height > 6.0 ft Mean: 14.8 days Range: 12.0 - 17.5 days p50:22.5 days p75:19.5 days p90:18 days

Wave Height > 7.0 ft Mean: 9.7 days Range: 6.3 - 13.2 days p50:14.5 days p75:12 days p90:11 days

Wave Height > 8.0 ft Mean: 5.7 days Range: 1.9 - 9.5 days p50:8.5 days p75:6 days p90:4 days

Wind Speed > 10.0 knots Mean: 21.5 days Range: 18.5 - 24.4 days p50:22 days p75:19 days p90:18.5 days

Wind Speed > 15.0 knots Mean: 11.6 days Range: 8.1 - 15.2 days p50:12 days p75:10 days p90:7 days

Wind Speed > 20.0 knots Mean: 4.0 days Range: 1.6 - 6.3 days p50:3.5 days p75:2.5 days p90:1.5 days

### Working Window

Wave Height < 6.0 ft  
A 1 day or longer window will statistically occur 3.0 times per month  
A 2 day or longer window will statistically occur 1.5 times per month  
A 3 day or longer window will statistically occur 0.7 times per month

Wave Height < 7.0 ft  
A 1 day or longer window will statistically occur 4.3 times per month  
A 2 day or longer window will statistically occur 3.0 times per month  
A 3 day or longer window will statistically occur 2.1 times per month

Wave Height < 8.0 ft  
A 1 day or longer window will statistically occur 4.3 times per month  
A 2 day or longer window will statistically occur 3.5 times per month  
A 3 day or longer window will statistically occur 2.7 times per month

### Waves

Mean Height: 6 - 8 ft

The wave heights will occasionally reach 12 - 14 ft, but rarely higher.

Mean Period: 10 - 12 sec

The wave periods will occasionally reach 22 - 24 sec, but rarely longer.

Principle Direction, from: NW

WindSea/Swell: 14% / 86%

### Winds

Mean Speed: 10 - 15 kts

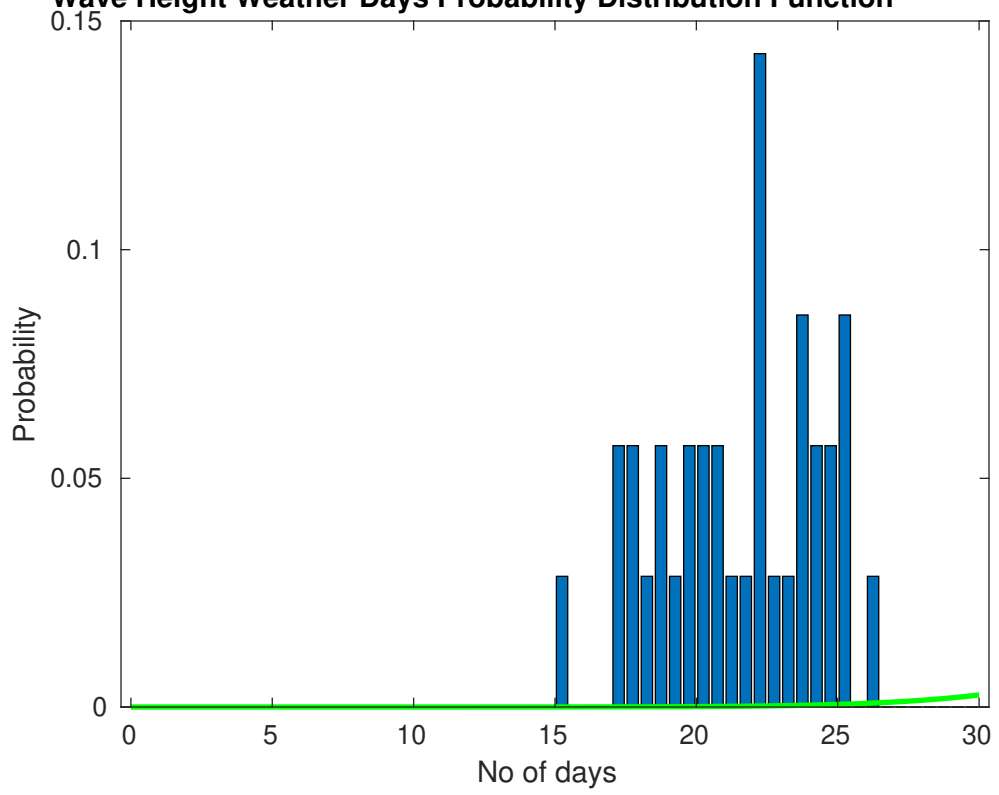
The winds will occasionally reach 25 - 30 kts, but rarely greater.

Principle Direction, from: NNW

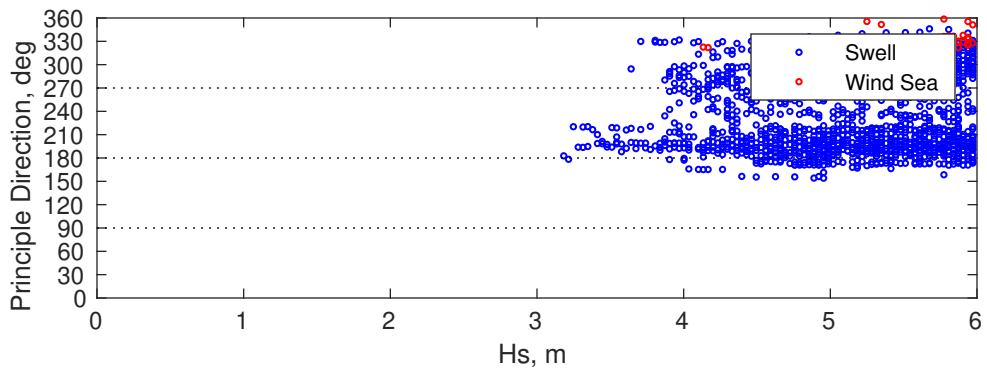
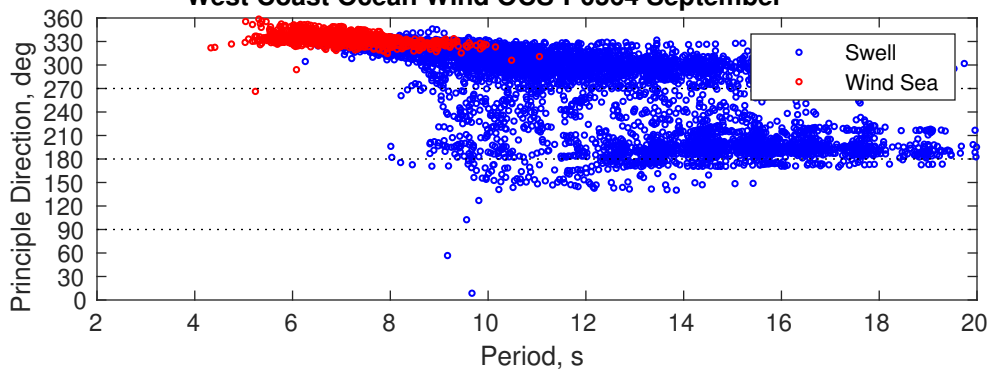
### Severe Storms

Severe storms with gale force winds and extreme waves are not expected during this month.

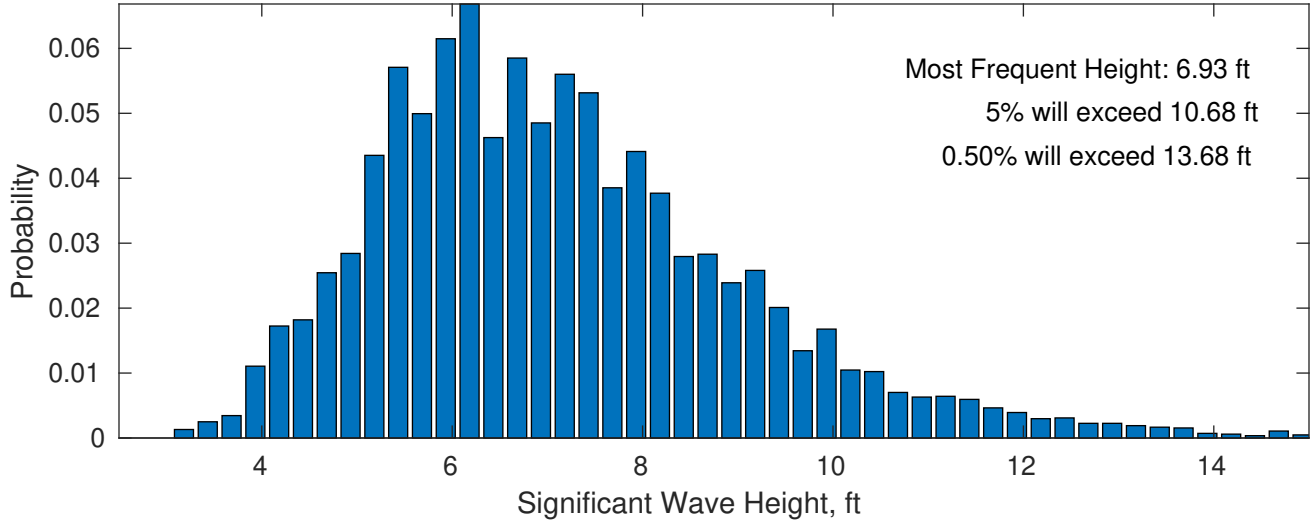
**Wave Height Weather Days Probability Distribution Function**



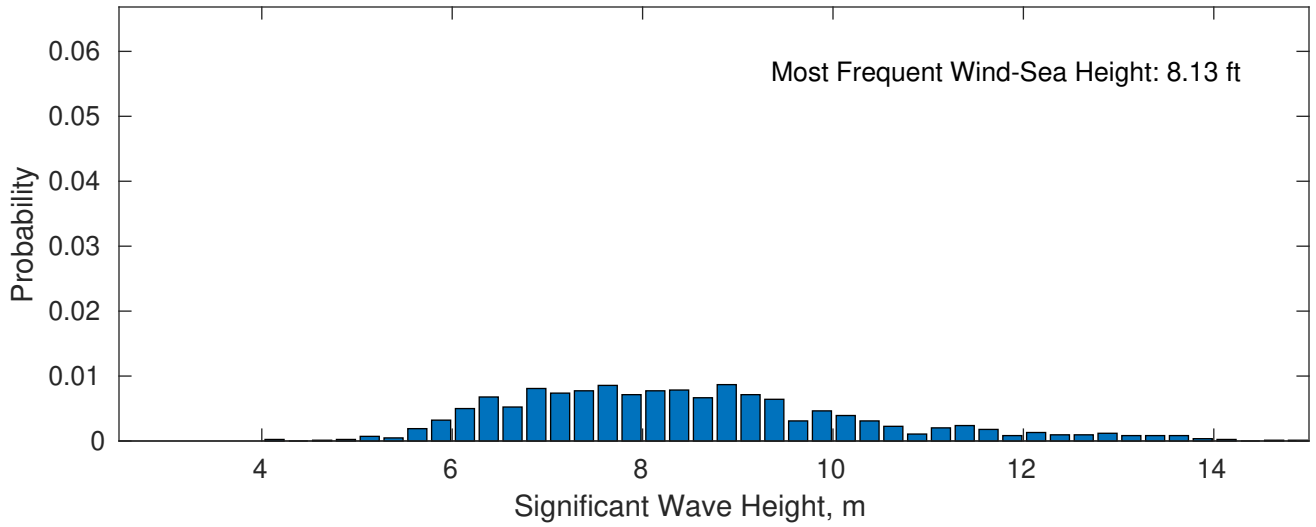
West Coast Ocean Wind OCS-P0564 September



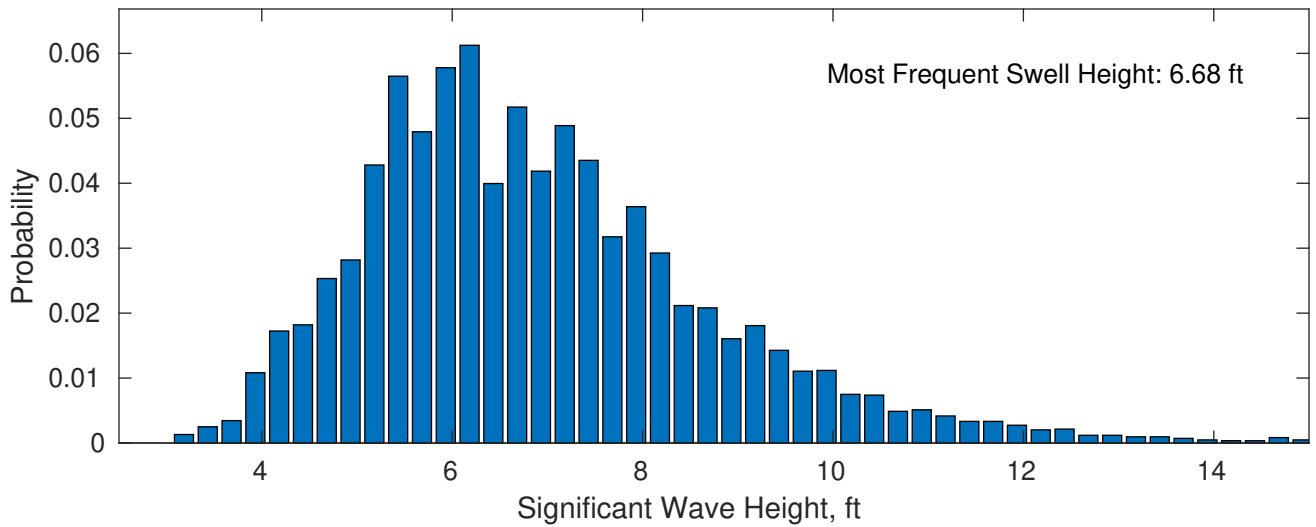
**September Wave Height PDF: 1979 - 2015**



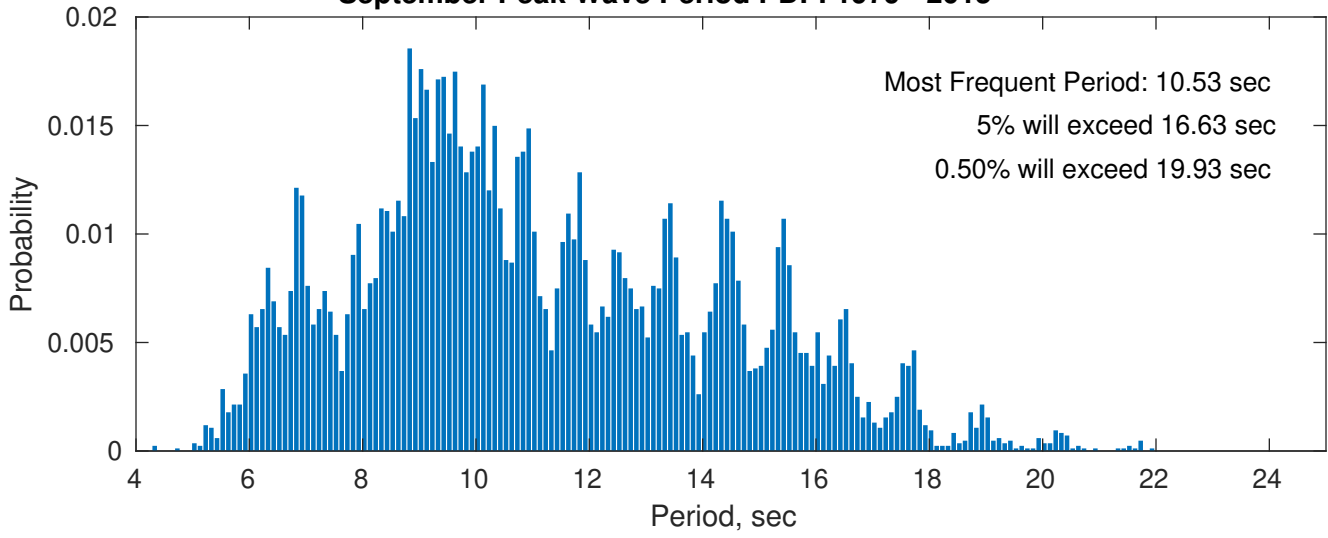
**Wind-Sea: 14.03%**



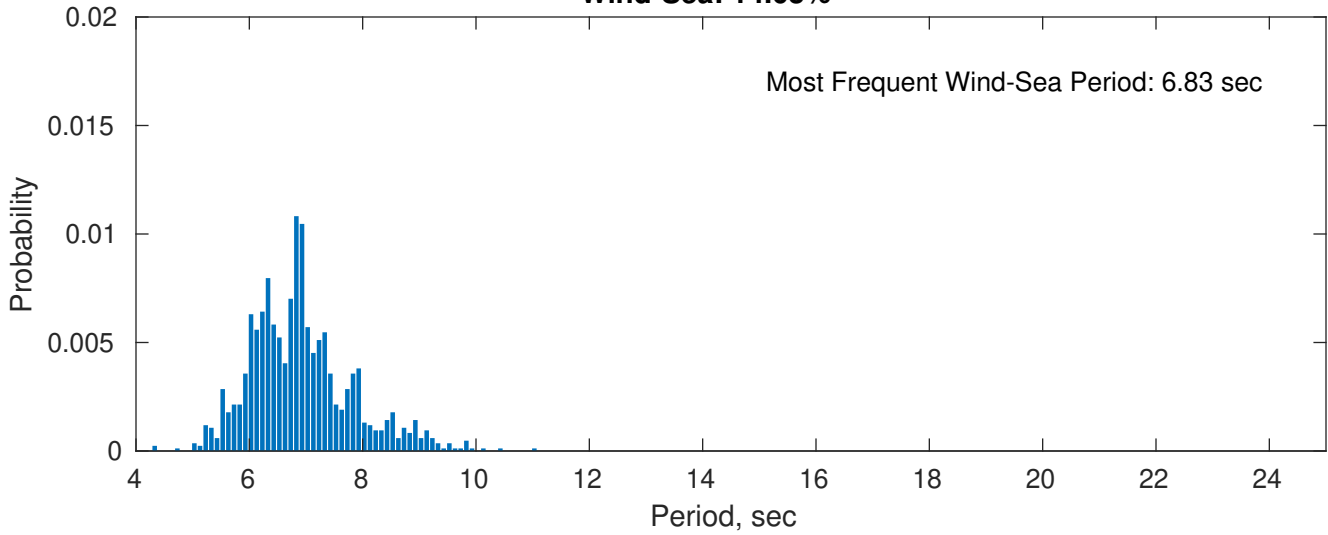
**Swell: 85.97%**



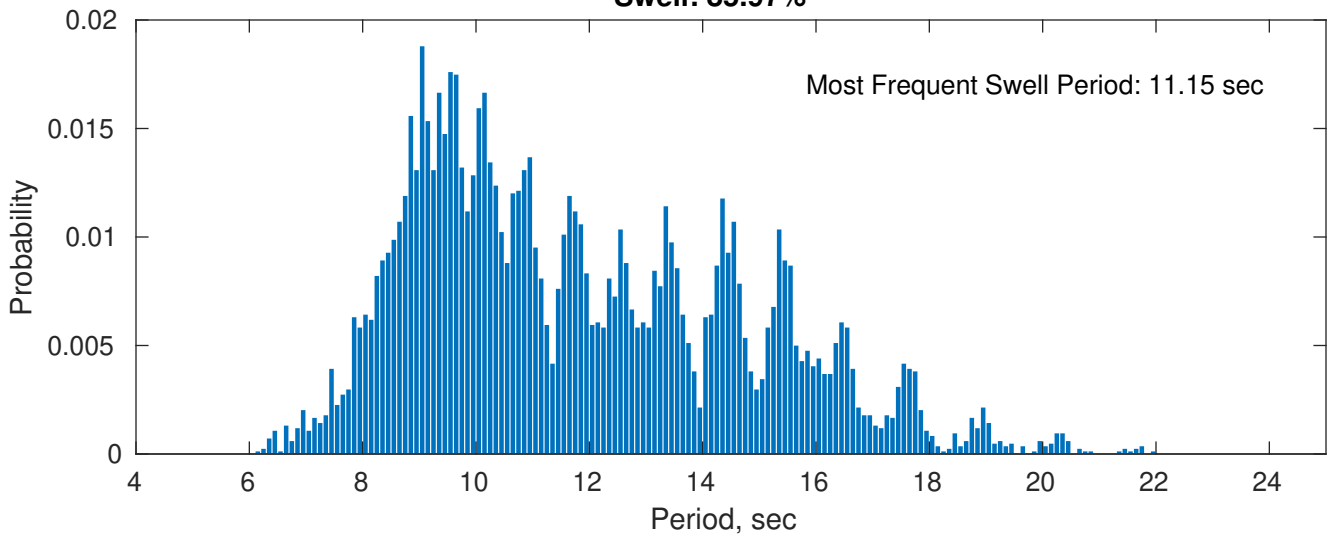
**September Peak Wave Period PDF: 1979 - 2015**



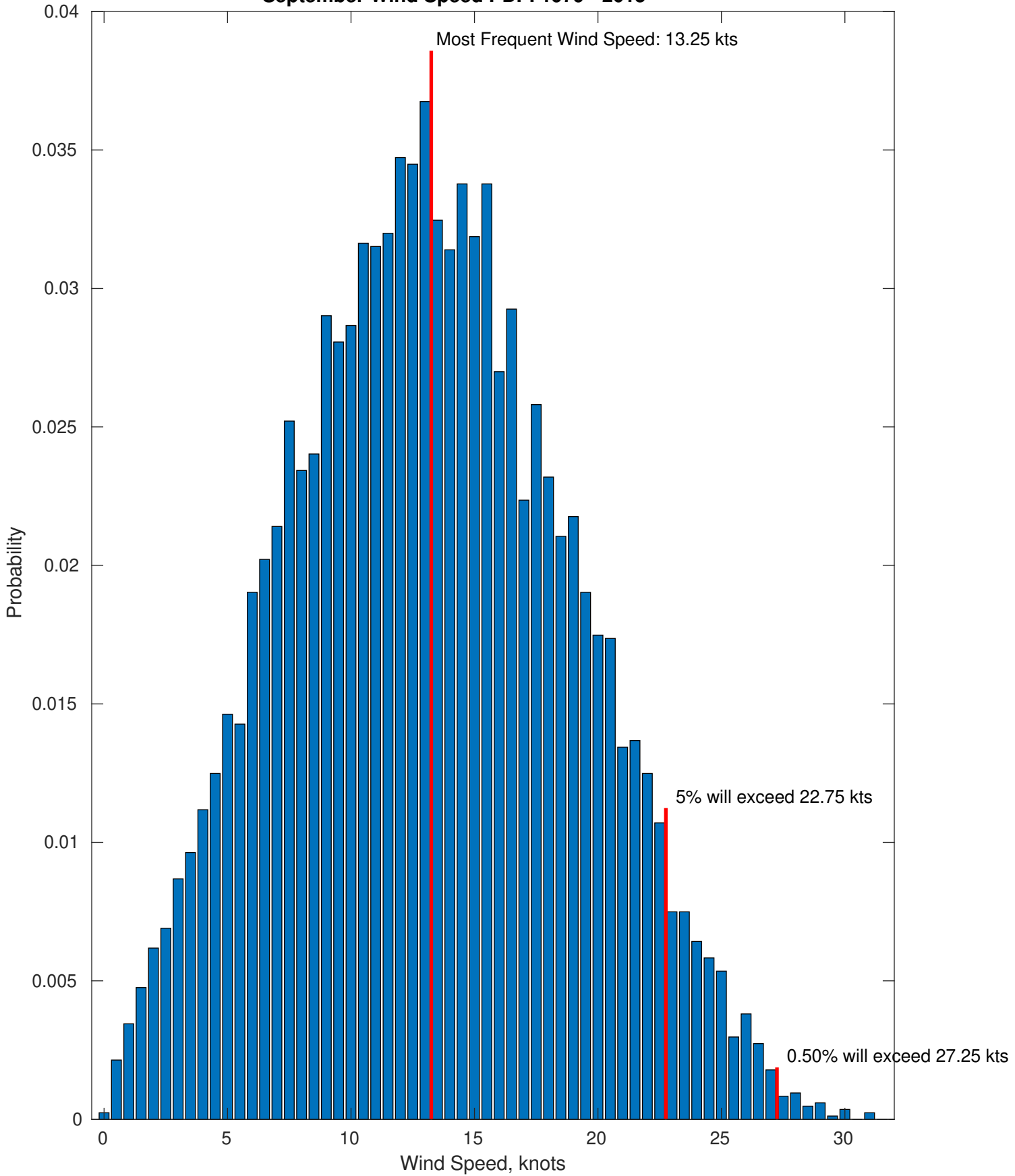
**Wind-Sea: 14.03%**



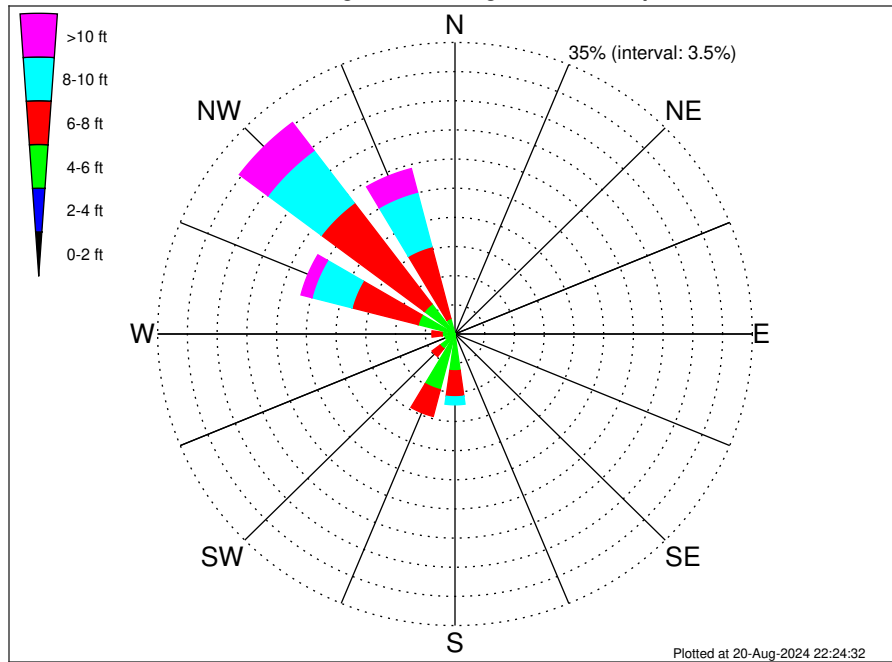
**Swell: 85.97%**



### September Wind Speed PDF: 1979 - 2015



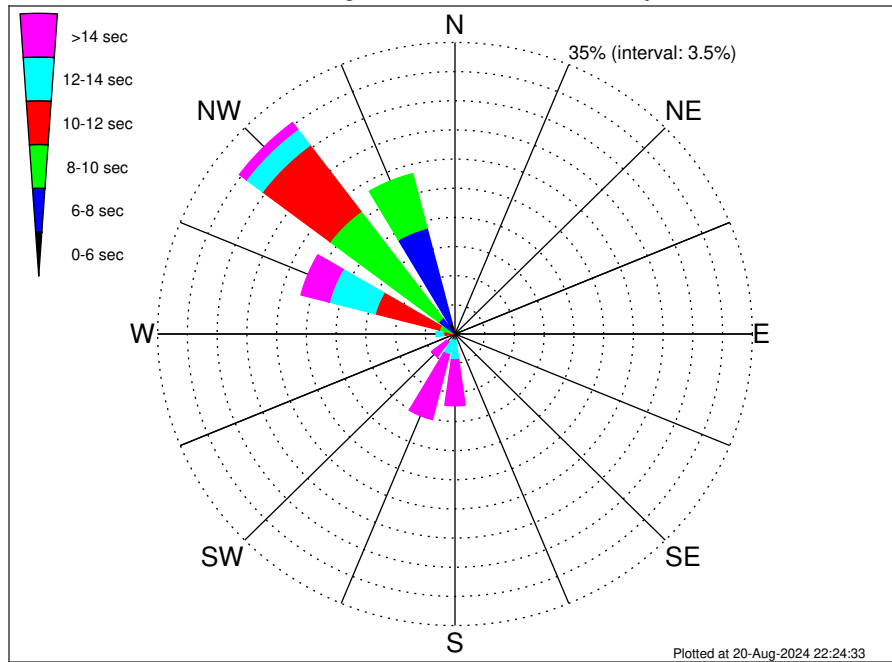
West Coast Ocean Wind OCS-P0564 Climatological WaveHeight Rose for September: 1979 - 2015



Joint Frequency Distribution Table

|            | N    | NNE | NE | ENE  | E | ESE  | SE   | SSE  | S    | SSW   | SW   | WSW  | W    | WNW   | NW    | NNW   | Total  |
|------------|------|-----|----|------|---|------|------|------|------|-------|------|------|------|-------|-------|-------|--------|
| calm       | •    | •   | •  | •    | • | •    | •    | •    | •    | •     | •    | •    | •    | •     | •     | •     | •      |
| 1 - 2 ft   | •    | •   | •  | •    | • | •    | •    | •    | •    | •     | •    | •    | •    | •     | •     | •     | •      |
| 2 - 4 ft   | •    | •   | •  | •    | • | •    | •    | •    | 0.07 | 0.52  | 0.15 | 0.02 | 0.06 | 0.10  | •     | 0.08  | 1.01   |
| 4 - 6 ft   | 0.06 | •   | •  | •    | • | •    | •    | 0.20 | 4.35 | 6.39  | 2.06 | 1.18 | 1.46 | 4.39  | 4.51  | 1.83  | 26.42  |
| 6 - 8 ft   | 0.23 | •   | •  | •    | • | 0.01 | 0.12 | 0.50 | 3.12 | 3.32  | 1.18 | 0.58 | 1.20 | 8.05  | 15.20 | 8.92  | 42.42  |
| 8 - 10 ft  | 0.04 | •   | •  | 0.01 | • | •    | 0.04 | 0.11 | 0.96 | 0.38  | 0.06 | 0.12 | 0.31 | 4.86  | 7.88  | 6.75  | 21.52  |
| 10 - 12 ft | •    | •   | •  | •    | • | •    | •    | 0.04 | 0.12 | 0.01  | •    | •    | •    | 0.96  | 3.06  | 2.21  | 6.40   |
| 12 - 14 ft | •    | •   | •  | •    | • | •    | •    | •    | •    | •     | •    | •    | •    | 0.23  | 1.00  | 0.63  | 1.86   |
| 14 - 16 ft | •    | •   | •  | •    | • | •    | •    | •    | •    | •     | •    | •    | •    | 0.14  | 0.14  | 0.08  | 0.37   |
| 16 - 18 ft | •    | •   | •  | •    | • | •    | •    | •    | •    | •     | •    | •    | •    | •     | •     | •     | •      |
| > 18 ft    | •    | •   | •  | •    | • | •    | •    | •    | •    | •     | •    | •    | •    | •     | •     | •     | •      |
| Total      | 0.32 | •   | •  | 0.01 | • | 0.01 | 0.15 | 0.84 | 8.62 | 10.62 | 3.45 | 1.90 | 3.03 | 18.73 | 31.79 | 20.51 | 100.00 |

West Coast Ocean Wind OCS-P0564 Climatological WavePeriod Rose for September: 1979 - 2015

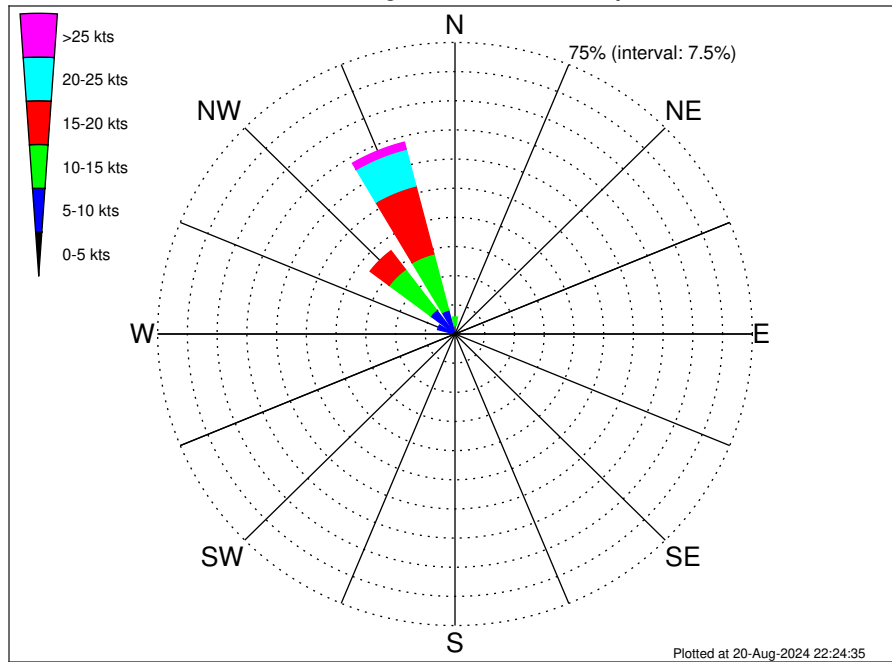


Joint Frequency Distribution Table

|             | N    | NNE | NE | ENE  | E | ESE  | SE   | SSE  | S    | SSW   | SW   | WSW  | W    | WNW   | NW    | NNW   | Total  |
|-------------|------|-----|----|------|---|------|------|------|------|-------|------|------|------|-------|-------|-------|--------|
| calm        | •    | •   | •  | •    | • | •    | •    | •    | •    | •     | •    | •    | •    | •     | •     | •     | •      |
| 1 - 2 sec   | •    | •   | •  | •    | • | •    | •    | •    | •    | •     | •    | •    | •    | •     | •     | •     | •      |
| 2 - 4 sec   | •    | •   | •  | •    | • | •    | •    | •    | •    | •     | •    | •    | •    | •     | •     | •     | •      |
| 4 - 6 sec   | 0.14 | •   | •  | •    | • | •    | •    | •    | •    | •     | •    | •    | 0.01 | •     | 0.04  | 1.34  | 1.53   |
| 6 - 8 sec   | 0.17 | •   | •  | •    | • | •    | •    | •    | •    | •     | •    | •    | •    | 0.01  | 2.37  | 11.77 | 14.32  |
| 8 - 10 sec  | 0.01 | •   | •  | 0.01 | • | 0.01 | 0.01 | 0.11 | 0.30 | 0.37  | 0.23 | 0.27 | 0.37 | 1.89  | 16.02 | 6.77  | 26.36  |
| 10 - 12 sec | •    | •   | •  | •    | • | 0.05 | 0.49 | 0.49 | 0.42 | 0.56  | 0.73 | 0.96 | 7.79 | 9.95  | 0.45  | 21.88 |        |
| 12 - 14 sec | •    | •   | •  | •    | • | 0.10 | 0.19 | 2.32 | 1.80 | 0.43  | 0.45 | 0.88 | 5.59 | 2.39  | 0.12  | 14.26 |        |
| 14 - 16 sec | •    | •   | •  | •    | • | •    | 0.06 | 2.84 | 4.97 | 1.13  | 0.33 | 0.70 | 2.53 | 0.78  | 0.06  | 13.41 |        |
| 18 - 20 sec | •    | •   | •  | •    | • | •    | •    | 1.84 | 2.60 | 0.81  | 0.12 | 0.11 | 0.70 | 0.21  | •     | 6.40  |        |
| 22 - 24 sec | •    | •   | •  | •    | • | •    | •    | 0.83 | 0.46 | 0.30  | •    | •    | 0.21 | 0.02  | •     | 1.83  |        |
| Total       | 0.32 | •   | •  | 0.01 | • | 0.01 | 0.15 | 0.84 | 8.62 | 10.62 | 3.45 | 1.90 | 3.03 | 18.73 | 31.79 | 20.51 | 100.00 |



West Coast Ocean Wind OCS-P0564 Climatological Wind Rose for September: 1979 - 2015



Joint Frequency Distribution Table

|             | N    | NNE  | NE   | ENE  | E    | ESE  | SE   | SSE  | S    | SSW  | SW   | WSW  | W    | WNW  | NW    | NNW   | Total  |
|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|-------|--------|
| calm        | 0.01 | •    | 0.01 | •    | 0.01 | •    | 0.01 | 0.06 | •    | 0.01 | 0.01 | •    | •    | 0.08 | 0.02  | •     | 0.24   |
| 0 - 5 kts   | 0.43 | 0.30 | 0.21 | 0.19 | 0.19 | 0.15 | 0.25 | 0.17 | 0.18 | 0.32 | 0.43 | 0.33 | 0.75 | 0.80 | 0.89  | 0.74  | 6.33   |
| 5 - 10 kts  | 1.72 | 0.40 | 0.20 | 0.10 | 0.14 | 0.23 | 0.30 | 0.30 | 0.30 | 0.26 | 0.29 | 0.52 | 1.03 | 3.65 | 6.84  | 5.65  | 21.93  |
| 10 - 15 kts | 2.24 | 0.18 | 0.01 | 0.01 | 0.04 | 0.05 | 0.06 | 0.02 | 0.01 | 0.06 | 0.07 | 0.06 | 0.21 | 1.77 | 13.05 | 14.90 | 32.74  |
| 15 - 20 kts | 1.11 | 0.05 | 0.05 | 0.02 | 0.04 | 0.01 | •    | •    | •    | •    | 0.02 | 0.01 | 0.01 | 0.10 | 6.02  | 18.08 | 25.51  |
| 20 - 25 kts | 0.31 | •    | 0.01 | 0.01 | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | 1.17  | 9.74  | 11.24  |
| 25 - 30 kts | 0.05 | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | 0.08  | 1.83  | 1.96   |
| 30 - 35 kts | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •     | 0.06  | 0.06   |
| 35 - 40 kts | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •     | •     | •      |
| 40 - 45 kts | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •     | •     | •      |
| 45 - 50 kts | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •     | •     | •      |
| Total       | 5.86 | 0.93 | 0.50 | 0.33 | 0.42 | 0.44 | 0.62 | 0.55 | 0.49 | 0.65 | 0.82 | 0.93 | 2.01 | 6.40 | 28.07 | 50.99 | 100.00 |