

2024 JANUARY 10 WINTER STORM AT MOON GARDEN PIER

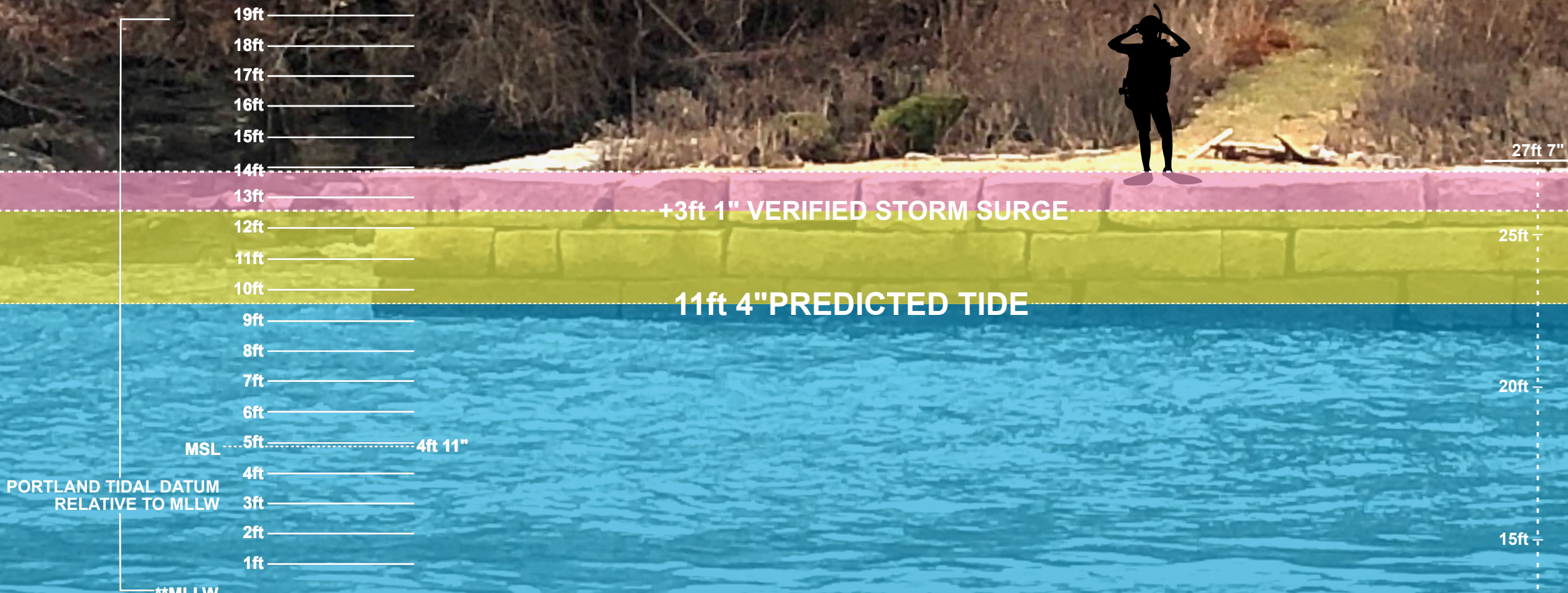
HOW BAD WAS IT?

The January 10, 2024 storm produced a storm tide of 13ft 8" at the Moon Garden pier, making it the fourth-highest water-level events recorded in Portland, Maine.

While much of Maine's coastline has evolved under prevailing northeasterly storm conditions, southeasterly storms like this one can concentrate wave energy on shorelines that experience less frequent exposure to severe wave action.

This powerful coastal storm arrived during a period of exceptionally high astronomical tides associated with the January 11 new moon. A storm surge of approximately 3ft 4" generated by strong southeasterly winds and heavy rainfall raised water levels to record heights.

Along Maine's coast, 2.9" of rain, wind gusts approaching 60mph, and swells reaching 15-20ft in Casco Bay contributed to widespread flooding, erosion, and infrastructure damage. The storm serves as an example of how the coincidence of an elevated astronomical tide and a significant storm surge can produce record-setting coastal flooding.



STORM AND SURGE TIDAL STATS FROM 1912-2023 (MGS)		
frequency	storm surge (ft)	storm tide (ft)
every year	2	11.7
every 5 years	2.9	12.6
every 10 years	3.3	12.9
every 25-100 yrs	+4	13.4-14.1

TIDAL STATS DO NOT INCLUDE WAVE HEIGHT OR SWELLS. TYPICAL WAVE HEIGHTS IN CASCO BAY RANGE FROM 1-3 FEET.

- HIGH WATER MARK
- SEVERE STORM SURGE +4-4.7FT
- 5-10 YEAR STORM SURGE +3FT
- ANNUAL STORM SURGE +2FT
- PREDICTED TIDE HEIGHT

SOURCE LINKS:
[MGS STORM SURGE AND TIDE FAQS](#)
[PORTLAND TIDAL STATION 8418150](#)
[DIAMOND COVE SEA LEVEL RISE PROJECTIONS](#)



TIDAL DATUM, TIDE HEIGHT AND DOCK TO SCALE