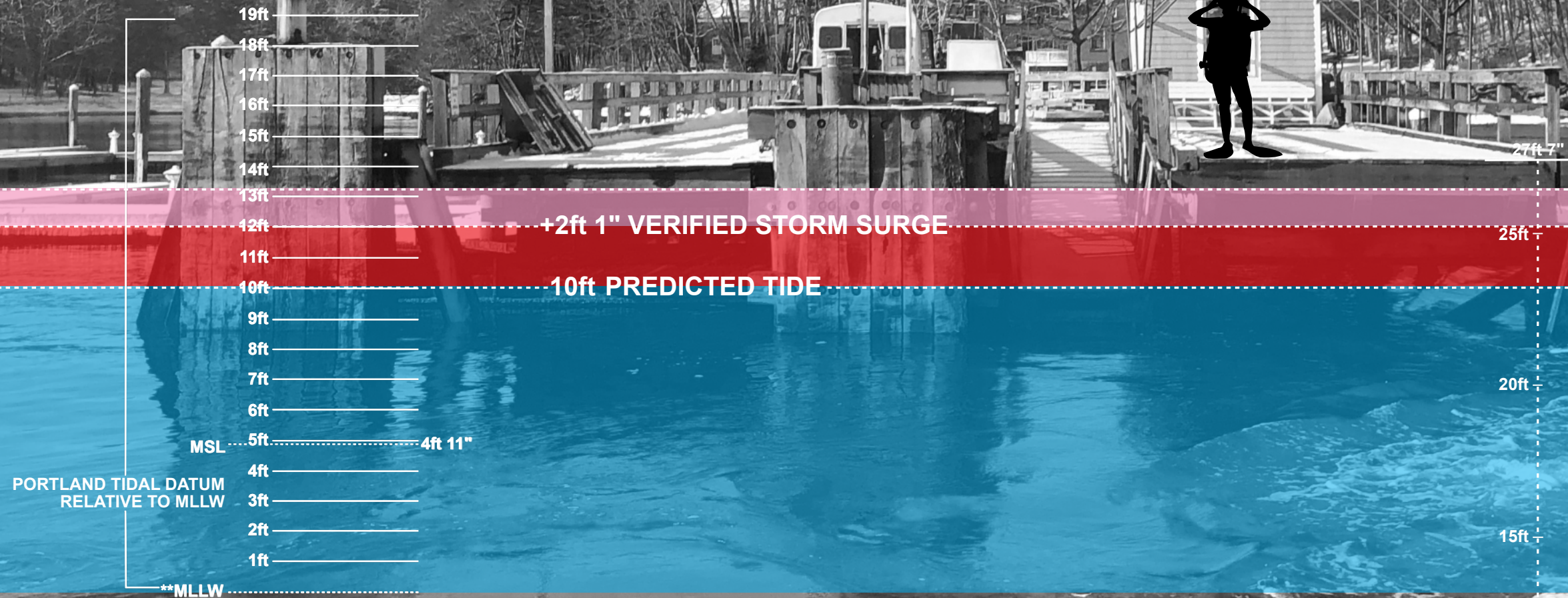


# 2023 DECEMBER 18 WINTER STORM AT DIAMOND COVE PIER

## HOW BAD WAS IT?

The December 18, 2023 storm produced a storm tide of 12ft at Diamond Cove. This storm was part of a rapidly strengthening extratropical cyclone that underwent bombogenesis as warm and cold air masses collided over eastern North America. Along Maine's coast, sustained southeasterly winds of 30-40mph, generating large waves and prolonged wave attack on coastal shorelines.

The Grinch Storm was part of a recent pattern of powerful coastal storms that approached Maine from the southeast rather than the more typical northeast direction. Referred to as "sou'easters," these storms drive wave energy toward shorelines that are less frequently exposed to storm-force winds and waves. Because much of Maine's coastline has evolved under prevailing northeasterly storm conditions, southeasterly storms can expose shorelines and infrastructure to wave energy from a direction to which they are less adapted.



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

SEA FLOOR

