end of the wharf. A 3' high wall would limit wave overtopping to a 1% chance of occurrence, or 1 year in every 100 years.

If the Fundy Tidal Power Projects come to reality, it is predicted that the normal tidal range will be increased by approximately 1'. This would add another 0.5' to the storm tide elevations. Table 3 is the expected flood frequency of the interior of Central Wharf should the Fundy projects become reality and the ensuing predicted changes to tidal range are accurate.

TABLE 3: STORM TIDE ELEVATION FREQUENCIES
(WITH FUNDY INCREASE)

Elevation (NGVD)	% Chance Occurrence in any given Year	Return Period
+8.0'	100%	Each year
+8.5'	82%	1.2 years
+9.0'	40%	2.5 years
+9.5'	12%	8.3 years
+10.0'	4%	25 years
+10.5'	1%	100 years
+11.0'	0.3%	300 years

Central Wharf would flood annually under this scenario. It would probably flood twice each year during the winter months.

WAVE-REDUCING BREAKWATERS

There are two types of breakwaters which can be employed to reduce wave heights in the area of the marina planned for the end of the wharf: 1) fixed and 2) floating. Probably the most effective breakwater would be a surrounding wall of driven pilings extending 3' to 6' above the water surface at high tide along the eastern and southern margins of the planned marina area. I don't believe any other type of fixed breakwater would be feasible or cost effective.

Floating breakwaters have been devised, especially for marinas, in semi-protected waters. Portland Harbor would be classified as a semi-protected body of water. Floating breakwaters are not feasible where long-period waves are common, like the open ocean on Casco Bay.