



Coastal Construction Manual

FORMULA CALCULATOR

11.3 Lateral Hydrostatic Load

γ :		$f_{sta} =$	lb/ft
d_s :		$F_{sta} =$	lb
w :			
$f_{sta} = (1/2)\gamma d_s^2$		$F_{sta} = f_{sta}(w)$	

f_{sta} = hydrostatic force per unit width (lb/ft) resulting from flooding against vertical element

γ = specific weight of water (62.4 lb/ft³ for fresh water and 64.0 lb/ft³ for salt water)

d_s = design stillwater flood depth in feet

w = width of vertical element in feet

F_{sta} = total equivalent lateral hydrostatic force on structure in lb