## Why should you care? Pumps alone cannot save you!!

Stopping or slowing the incoming water is critical to saving your vessel. This chart shows how your pump is quickly overwhelmed by a fairly small hole or breach.

A 1.5" hole in your boat, only 2 feet below the waterline would fill a 50 gallon drum in 50 seconds. This is 2x what a many bilge pumps can handle.

And 50 gallons weighs over 400 pounds of lost flotation.

BOAT FLOODING RATES (gallons per minute) & BILGE PUMP OVERLOAD FACTOR										
DEPTH OF HOLE	DIAMETER OF OPENING (HOLE)									
BELOW WATERLINE	1" (25mm)	1.5" (38mm)	2" (51mm)	2.5" (64mm)	3" (76mm)	3.5" (89mm)	4" (102mm)			
1' (30cm)	20	44	79	123	177	241	314			
1600 GPH Pump = 26 GPM		1.7x	3x	4.7x	6.8x	9.3x	12.1x			
2' (61cm)	28	62	111	174	250	340	444			
2000 GPH Pump = 33 GPM		1.9x	3.4x	5.3x	7.6x	10.3x	13.5x			
3' (91cm)	34	77	136	213	306	417	544			
2000 GPH Pump = 33 GPM		2.3x	4.1x	6.5x	9.3x	12.6x	16.5x			
4' (1.2m)	44	99	176	274	395	538	702			
2000 GPH Pump = 33 GPM		3x	5.3x	8.3x	12x	16.3x	21.3x			

BOAT FLOODING RATES (liters per minute) & BILGE PUMP OVERLOAD FACTOR										
DEPTH OF HOLE	DIAMETER OF OPENING (HOLE)									
BELOW WATERLINE	25mm	38mm	50mm	65mm	75mm	90mm	100mm			
30cm	76	167	299	466	670	912	1189			
6000 LPH Pump = 100 LPM		1.7x	3x	4.7x	6.7x	9.1x	11.9x			
60cm	106	235	420	659	946	1287	1681			
7600 LPH Pump = 127 LPM		1.8x	3.3x	5.2x	7.5x	10.1x	13.2x			
90cm	129	291	515	806	1158	1579	2059			
		2.3x	4.1x	6.3x	9.1x	12.4x	16.2x			
1.2m	167	375	666	1037	1495	2037	2657			
		3x	5.2x	8.2x	11.8x	16x	20.9x			