FLOODING OF HOLD

	ACTION (NOT NECESSARILY IN ORDER)
☐	Sound the general alarm.
☐	Commence pumping hold bilges with bilge pump and any other pump that may be linked to the bilge system e.g. general service pump.
☐	Check and close all ballast valves.
☐	Alter ships course and speed to ease the motion of the ship.
☐	Check extent of flooding by sounding and visual inspection.
☐	Recheck and monitor the inflow of water and establish if bilge pumps are coping.
☐	If ships pumps unable to cope mobilise portable pumps and call for assistance and arrange for extra portable pumps to be placed onboard.
☐	Check other holds for signs of flooding.
☐	Check and monitor all ballast tanks to establish if contents remain constant.
☐	Calculate stability taking into effect the 'Free Surface Effect' of the water in the hold.
☐	Check stowage plan and manifest for hazardous cargo and marine pollutants. Some hazardous cargoes will react with water and give off toxic fumes or ignite. The movement of water in the hold may smash containers and packaging causing hazardous cargo to spill that may release volatile vapour creating a danger of fire or explosion.
☐	Call for assistance if vessel in grave or imminent danger.
☐	Advise owners and charterers of situation.
☐	Establish source of leak and take appropriate action in consultation with owners. • If leak from a ballast tank or ballast vent line, lower contents of tank or pump out (check stability first). • If leak in hull plating make every endeavour to shore up and cement box (if accessible). Consider listing vessel to raise damage above the waterline. • If leak from damaged hatch covers, hatch accesses or vent pipes, effect temporary repairs and adjust vessels course and speed to minimise sea on deck

	CONTINGENCY PLAN FOR FLOODING OF HOLD(S)
1.	Flooding of holds can occur in many ways and some examples are as follows; • Damage to hull plating due to impact e.g. from collision or from structural failure and stress. • Leaks from ballast/fuel oil/slop tanks due to damage; stress fracture; leaking tank lids; corroded or damaged vent pipes or sounding pipes. • Leaking hatch covers, hatch accesses or vents on deck due to heavy weather and damage; corrosion; poor sealing/closing arrangements; incorrectly closed or left open. • Leaking pipelines that may transverse through the hold e.g. fresh water or diesel oil line to the foc'sle. • A combination of the above e.g. a leaking ballast tank lid coupled with a passing isolating valve which allowed cooling water to enter and pressurise the ballast line and tank.
2.	Following discovery of hold flooding, quick action is necessary to control the inflow of water. Commence pumping the hold bilges without delay using the bilge pump and any other pump that may be capable of being connected to the bilge line system. If the ships pumps cannot cope with the inflow then rig as many portable pumps as possible and call for shore assistance.
3.	Every effort must be made to minimise pollution. MARPOL Reg 11 provides for oil or oily mixtures to be discharged into the sea for the purpose of securing the safety of the ship or safety of life, provided all reasonable precautions have been taken to minimise the discharge. (Authorities will thoroughly investigate and check that all reasonable precautions were taken, if not heavy penalties could be imposed). Keep a log of all events, communications, precautions taken to prevent pollution and any decisions that may have an adverse effect on pollution prevention.
4.	All ballast valves should be closed and checked that they are not passing in order to quickly eliminate a potential source of flooding. It is essential to check each and every valve that is connected to the ballast system because valves not routinely used are sometimes over looked.
5.	If the vessel is under way at sea the course and speed should be altered to ease the motion of the ship to make conditions safe on deck and to minimise the wave action of the water in the hold. The wave action in the hold will increase the damage to the cargo and may result in bilges becoming clogged, and will place addition stress on hold bulkheads.
6.	The flooding may result in a major loss of buoyancy and damage stability must be calculated taking into account the free surface effect of the water in the hold.
7.	If the source of the leak is not visible or easily detectable then it is essential to keep an open mind and use a process of elimination to find it taking into account all potential sources.
8.	Detailed information about the extent and location of the leak or damage, and stability condition of the vessel must be sent to the owners in order for the to access the situation and provide advice to the master. This will include the information required by contracted damage response services e.g. Lloyds SERS.
9.	Guidance is provided by the following publication; • PERIL AT SEA AND SALVAGE ○ Chapter 1 Assistance, including salvage assistance ○ Chapter 2 Communications ○ Chapter 3 Casualty reports ○ Chapter 4 Evaluation of situation ○ Chapter 5 Action when ship is disabled but not aground. ○ Accidental flooding.