

Marine Information Bulletin

Sewage management on ships — accidental overflows onboard ships

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Background

Healthy and safe ships and the preservation of clean seas depend on well-maintained equipment, preventative measures and good planning.

In terms of sewage management, this means adopting practices that prevent sewage overflows and developing appropriate procedures to enable an effective response¹.

What are the health risks associated with contact with sewage?

Contact with sewage and its products may cause a number of illnesses such as:

- Gastroenteritis (nausea, diarrhoea or vomiting)²
- Giardia and Cryptosporidium
- viral infections such as Hepatitis A³
- infections of the skin or eyes.

How are these illnesses spread?

Such illnesses may be spread by:

- Hand to mouth contact during eating, drinking and smoking, or by wiping the face with contaminated hands, gloves or skin.
- Skin contact, through cuts, scratches, or penetrating wounds. Certain organisms can enter the body through the surfaces of the eyes, nose and mouth.
- Breathing in organisms, either through dust, aerosols, droplets or mist.

Prevention of sewage overflows

Simple measures to prevent accidental spills include:

- Maintaining the sewage treatment system and the macerator at regular intervals in accordance with the treatment system service manual and the manufacturer's instructions.
- Ensure that the sewage system is tested at regular intervals and, in the case of declared ships, that the system's service records are kept on board at all times.

- Ensure sewage is regularly discharged, preferably to a land-based facility⁴. It is prohibited to dispose of ship-sourced sewage in 'Nil Discharge Waters' such as canals, marinas, boat harbours, the Noosa River, northern Moreton Bay waters, and designated areas of State marine parks⁵.

For 'declared ships'⁶, owners and operators may wish to include sewage management practices and procedures in their shipboard sewage management plan.

Precautions to reduce the risk of exposure to sewage with sewage overflow clean up procedures

Where sewage overflows or spills occur, the contaminated area should be isolated and access should be restricted. Unprotected persons should leave the affected area until the area has been thoroughly cleaned and disinfected.

Persons involved in the cleanup procedure should wear personal protective clothing such as overalls, rubber boots, disposable gloves or washable rubber gloves and facial protection (if there is a risk of splashing). Ensure cuts are covered with a water resistant dressing.

Clean and hose the affected area using water and detergent, followed by disinfectant (for example, at least 1:50 dilution or five per cent household bleach). Chemical disinfectants are used to destroy or prevent the growth of disease-causing micro-organisms.

Other precautions may include:

- Assume anything touched by sewage is contaminated.
- Wash your hands and affected areas of the body thoroughly with clean warm water and soap, especially before eating or smoking. An adequate number of hand washing amenities should be provided in a suitable location. These should be maintained in a hygienic condition and include running water, liquid soap and disposable paper towels (not communal cloth towels).

¹ <<<http://www.hse.gov.uk/pubns/seweindx.htm>>>

<<<http://www.public.health.wa.gov.au>>>

² <<<http://www.health.qld.gov.au/goodhealthintng>>>

³ Hepatitis A is a vaccine-preventable disease. Crew responsible for maintaining sewage systems may wish to adopt the practice of plumbers, which is to receive vaccinations for Hepatitis A.

⁴ <<<http://www.msq.qld.gov.au/Home/Environment/Sewage>>>

⁵ A 'declared ship' is a commercially registered Class 1 passenger ship fitted with a fixed toilet.

- Drinking water should be brought to a rolling boil for around one minute before being used for drinking, food preparation or making ice. This simple precautionary measure should ensure that any risk to public health attributable to a contaminated water supply is minimised.
- Monitor safe food handling practices⁷.
- Immediately wash and disinfect any wounds that come into contact with sewage. This may reduce the likelihood of skin infections.
- Ensure that any pets are bathed or cleaned.
- Change out of dirty clothes and wash clothes separately as soon as possible.
- Clean and dry dirty footwear.
- Contact your doctor immediately if you experience any illness.

General clean up procedures

- Indoor clean up procedures involve cleaning the area thoroughly and the application of a chemical disinfectant over the affected area.
- Fans and natural ventilation should be used to assist in drying the area to prevent mould growth.
- All items unable to be hygienically cleaned by a professional should be disposed of appropriately.
- Please note that some ships may become uninhabitable for the duration of the clean up procedure.
- Thoroughly wash down affected areas on decks with clean water and apply an appropriate chemical disinfectant over these areas.

General procedures for absorbent material

Absorbent material such as carpets, rugs, upholstered furniture that has come into contact with sewage should be removed and replaced to prevent the growth of micro-organisms.

General procedures for hard surfaces

All hard surfaces should be thoroughly cleaned with clean hot water and detergent, and then appropriately disinfected. All items must then be thoroughly dried.

Preventing mould growth

Mould growth after a sewage overflow may occur as a result of excess moisture in materials. Mould is likely to grow if materials stay wet. In order to prevent mould from growing it is important to ensure all materials exposed to sewage are thoroughly cleaned, disinfected and allowed to dry, or disposed in accordance with the shipboard sewage management plan and/or the requirements at your port or marina.

It is extremely important to keep the area well ventilated following the event to assist in drying. Windows, doors and

hatches should be kept open. Fans should be used to assist in the drying process.

Information

For further information about this Marine Information Bulletin, email msgmail@msg.qld.gov.au.

Other Marine Information Bulletins covering various topics relating to the safe operation of ships can be obtained from Maritime Safety Queensland's website www.msg.qld.gov.au and from the following Maritime Safety Queensland regional offices:

Airlie Beach	(07) 4946 2200
Bundaberg	(07) 4131 8500
Cairns	(07) 4052 7400
Gladstone	(07) 4973 1200
Hervey Bay	(07) 4194 9600
Mackay	(07) 4944 3700
Mooloolaba	(07) 5477 8425
Pinkenba	(07) 3860 3500
Southport	(07) 5539 7300
Townsville	(07) 4726 3400

⁷ <<<http://www.health.qld.gov.au/foodsafetymatters>>>