

## FAQ: Wastewater management requirements for vessels on marine waters

Updated October 2010<sup>1</sup>

*EPA 910/10: This information sheet summarises the requirements of Code of practice for vessel and facility management (marine and inland waters) introduced in 2008, specifically the new black water and grey water requirements for owners and operators of marine vessels.*

### What is vessel wastewater?

Two different types of wastewater are created on board vessels: **black water** and **grey water**.

Black water is the drainage and other wastes from any form of toilet or urinal. It also includes any other wastewater when mixed with such drainages, and includes solid human faecal wastes. Black water does not include grey water unless it is mixed with other black water wastes.

Grey water is water that has been used in the kitchen, showers, sinks and laundry. This includes water containing dissolved or undissolved by-products such as fat and oil, food scraps, household chemicals, soap and detergent rich in phosphate, nitrate and microbiological pathogens (eg bacteria and viruses).

If either type of wastewater is discharged into aquatic environments it can damage ecosystems, create algal blooms and pose significant human health risks.

### What is the difference between treated and untreated wastewater?

Any sewage discharged from a vessel will be either one of the following two categories: treated wastewater or untreated wastewater.

Treated wastewater is wastewater that has passed through an onboard wastewater treatment system suitable for treating black water or grey water. Macerated black water is not treated black water.

Untreated wastewater is all wastewater that has not passed through a treatment system, eg wastewater that is discharged directly from a toilet, kitchen or bathroom directly into a waterway (in areas where discharge is permitted) or contained in an onboard holding tank.

Any untreated black water that is discharged in areas where it is permitted must first be passed through a macerator.

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<sup>1</sup> First issued July 2010.

## What do I have to do with the wastewater and why?

The *Code of practice for vessel and facility management (marine and inland waters)* introduces a range of options for managing wastewater that are designed to protect both humans and the environment from harm. The types of options available depend on the size of the vessel and manner in which it is used. Management options include the use of:

- onshore facilities (such as public toilets, bathrooms and laundry facilities)
- an onboard portable toilet for later disposal ashore or in open waters where discharge is permitted
- an onboard wastewater holding tank for later disposal ashore where pump-out facilities are provided, or in open waters where discharge is permitted (see next section)
- onboard wastewater treatment systems.

Vessel operators need to ensure that wastewater, in particular black water, is managed appropriately and that any discharges are made in compliance with these requirements.

Boaters should consider:

- the type of waterway in which their boating activities will take place
- the number of people that they intend having onboard their vessel
- the amount of time to be spent boating in the various different waterway types
- the discharge requirements of those waterways (especially in zero-discharge waters).

Many owners and operators of recreational boats have found that the legislation does not greatly affect their vessel and, in many cases, that compliance is relatively straightforward and inexpensive. For example, it can be as simple as the use of a portable toilet in nil discharge waters, or fitting a macerator to the existing fixed toilet for use in open waters where discharge is permitted.

While the use of onshore toilet facilities may be a good short-term black water management solution, a more permanent and long-term user-friendly option should be considered, especially if your vessel makes extended or overnight trips.

Regardless of vessel type or area of operation, all vessel owners and operators should ensure that toileting arrangements on vessels are installed or modified by suitably qualified personnel and conform to the minimum requirements outlined in Australian Standard AS3542–1996, *Pleasure boats – toilet waste collection, holding and transfer systems*, which is available from Standards Australia.

## What is an onboard wastewater treatment system?

A treatment system is a system for treating either black water or grey water that can reduce the levels of wastewater quality characteristics below the levels outlined in the legislation. Such a system must:

- 1 include documentation of the system's performance under normal operating conditions, including:
  - a a statement of the levels of wastewater quality characteristics remaining in the wastewater after it has been treated
  - b the name and address of the independent testing entity that assessed the performance
  - c the date and results of the assessment
- 2 include comprehensive and durable manuals for operating and maintaining the system
- 3 be installed, operated and maintained in accordance with the manufacturer's specifications
- 4 be fitted with a malfunction indicator.

A treatment system must meet very specific criteria and perform a complex process. The simple act of throwing a handful of chlorine (or some other chemical) into the toilet bowl before flushing, or passing black water through a macerator



## Where can I pump out my wastewater in SA?

There are a number of marine vessel wastewater collection facilities throughout the state that will dispose of the wastewater for you.

The following list was accurate at the time of printing.

**Table 1 Marine vessel wastewater collection facilities**

Station	Location & usage conditions	Contact information
<b>St Vincent Marina</b>	Sunset Cove Resort Complex, Second Valley (public welcome by arrangement, contact marina operator for conditions of use)	(08) 8598 2400 < <a href="mailto:marina@sunset-cove.com.au">marina@sunset-cove.com.au</a> >
<b>Marina Adelaide</b>	Snowdens Beach, Port River (public welcome, contact marina manager, fees apply, complimentary use with fuel purchases)	(08) 8169 0055
<b>North Arm Marina</b>	North Arm, Port River, Port Adelaide (for use by commercial fishing vessels moored at marina only)	
<b>Port Lincoln Marina</b>	Port Lincoln (public welcome, contact DTEI marina operator for conditions of use)	Phone number available at pump-out facility
<b>Christmas Cove</b>	Penneshaw, Kangaroo Island (contact KI Council for conditions of use)	(08) 8553 4500
<b>American River</b>	American River, Kangaroo Island (contact KI Council for conditions of use)	(08) 8553 4500
<b>Copper Cove Marina</b>	Wallaroo Marina Wharf, adjacent to the Wallaroo Marina Hotel (public welcome, please follow the instructions at the station)	(08) 8823 3704 < <a href="http://www.coppercove.com.au">www.coppercove.com.au</a> >
<b>Cruising Yacht Club of S.A.</b>	North Haven Marina – Marina West (public welcome, please contact the club prior to use)	(08) 8248 4222
<b>Cape Jaffa Anchorage Marina</b>	Portable pump out facility (public welcome, please call marina manager to arrange time)	Marina Manager 0418 899 748

Pumping contractors can also provide a pump-out service for a fee. Contact the local council for this information. The EPA welcomes other pump-out facilities to contact us on (08) 8204 2000 to be added to this list.

## Who can I talk to about onboard sewage management options?

The EPA will not endorse, approve or recommend a product or service. However, the following list can provide you with expert advice on the particular sewage management option most suitable to your individual boating needs:

- AMI Sales <[www.amisales.com.au](http://www.amisales.com.au)>
- All Marine Solutions – The Nautical Plumbing and Bow Thruster Specialists <[www.allmarinesolutions.com.au](http://www.allmarinesolutions.com.au)>
- Nautical Waste Solutions <[www.nwsa.com.au](http://www.nwsa.com.au)>
- Sani-Loo Professional Marine Sanitation Systems <[www.gradonmarine.com.au](http://www.gradonmarine.com.au)> or <[www.sani-loo.com.au](http://www.sani-loo.com.au)>
- Marine Plant Systems <[www.marineplantsystems.com](http://www.marineplantsystems.com)>
- Seairland Systems <[www.seairland.com.au](http://www.seairland.com.au)>

- Antelope Engineering <[www.antelope.com.au](http://www.antelope.com.au)>
- TSF Maintenance Services <[www.tsfeng.com.au](http://www.tsfeng.com.au)>
- Port Marine Pty Ltd <[www.portmarine.com.au](http://www.portmarine.com.au)>
- Rochem Technical Services <[www.rochem.com.au](http://www.rochem.com.au)>
- RFD Australia <[www.rfd.com.au](http://www.rfd.com.au)>
- HI Fraser Group <[www.hifraser.com.au](http://www.hifraser.com.au)>
- RWO – Marine Water Technology <[www.rwo.de/en](http://www.rwo.de/en)>
- Water and Environmental Treatment Systems/Solutions <[www.wetss.com.au](http://www.wetss.com.au)>
- North Haven Marine <[nhmarine.com.au](http://nhmarine.com.au)>.

**Disclaimer:** The EPA does not endorse the products or information provided by these businesses and/or service providers. The above links are provided as an aid to commercial operators and the boating public to provide them with relevant industry contacts and sources of information on which to base decision making regarding ship-sourced sewage management options.

### **What else can I do onboard my vessel to help protect the environment?**

While the following practices are not compulsory, the EPA recommends them for vessel operators who wish to take further steps to reduce the risk of harm to people and the environment.

#### ***Black water***

- Use land-based toilet amenities when possible.
- Retain all black water on board your vessel for disposal into land-based wastewater collection facilities.
- Install low-flush toilets – there are systems that use only 0.4L of water per flush.
- Ensure the black water collection, holding and transfer system meets Australian Standard AS 3542–1996, Pleasure boats – toilet waste collection, holding and transfer systems.
- Install an onboard wastewater treatment system that surpasses the discharge standards set out in the code, reducing your environmental impact even more.
- Consider an onboard wastewater management system that can retain, treat and control the discharge of wastewater. Look for options that will allow you to plumb your system into land-based wastewater management systems during extended mooring periods and a GPS function that will aid you to discharge the wastewater in acceptable areas.
- Perform regular inspections and maintenance of all wastewater equipment to make sure it is working properly. Keep logs and invoices for these activities.
- Maintain a log for all discharges into land-based wastewater management facilities.
- Plan voyages with the location of waste collection facilities in mind.

#### ***Grey water***

- Check product labels and use low-nitrogen and non-phosphorus detergents.
- Keep instructions and reminders on your vessel. This can include stickers and signs to advise people on practices when cooking, cleaning, showering and washing.
- Scrape leftover food scraps into garbage bins (bonus points for using biodegradable bags that can be placed into green waste bins for composting) before washing them.
- Avoid adding cooking oils, greases and dairy products to dishwasher where possible – dispose of them with the food scraps.

- Use all soaps and cleaners sparingly.
- Use land-based amenities to shower, and wash dishes and clothing when possible.
- Retain all grey water on board your vessel for disposal into land-based wastewater collection facilities.
- Install water-saving devices such as low-flow shower heads and tap aerators.
- Install an onboard wastewater treatment system that surpasses the discharge standards mentioned above, reducing your environmental impact even more.
- Consider an onboard wastewater management system that can retain, treat and control the discharge of wastewater. Look for options that will allow you to plumb your system into land-based wastewater management systems during extended mooring periods and a GPS function that will aid you to discharge the wastewater in acceptable areas.
- Perform regular inspections of and organise services for all wastewater equipment to make sure it is working properly. Keep logs and invoices for these activities.
- Maintain a log for all discharges into land-based wastewater management facilities.
- Avoid running the shower, washing machine and dishwasher simultaneously if you have a treatment system onboard.
- Maintain a log for all discharges into land-based wastewater management facilities.
- Plan voyages with the location of waste collection facilities in mind.

#### **What if I cannot meet the timeframes set out by the code?**

If you are a vessel operator who is experiencing difficulties with achieving compliance with the new wastewater requirements then you should contact the EPA on (08) 8204 2000 as soon as you can to discuss your options with an EPA officer.

#### **How does the code of practice link to existing legislation?**

The code was gazetted on 10 July 2008 and is linked to the *Environment Protection (Water Quality) Policy 2003* and supersedes the *Code of practice for vessels on inland waters* (2003).

#### **If I register my boat in another state, but operate it in South Australia, do I still have to comply with the SA grey water requirements?**

Yes. Any boat operating on South Australian waters is required to comply with the *Code of practice for vessel and facility management (marine and inland waters)*.

#### **Is there any guidance available to help me understand the requirements of the new code of practice?**

The EPA can provide a series of presentations and publications to industry groups and the media to assist the public in understanding the requirements of the new code of practice.

Owners and operators of vessels should obtain a copy of the code of practice and other EPA publications, including:

- *EPA Guideline: Managing vessel wastewater for black and/or grey water* (2010)
- *EPA Information: Wastewater requirements for vessels on marine waters* (2010)

These documents are available for download from the EPA website <[www.epa.sa.gov.au/vfm](http://www.epa.sa.gov.au/vfm)> or by contacting the EPA.

#### **How is the EPA going to enforce the new wastewater components of the legislation?**

Vessels will be inspected for compliance with the black and grey water requirements and may be subject to enforcement if they are non-compliant. If you are a vessel operator experiencing difficulties with achieving compliance then you should notify the EPA in writing as soon as possible. In your letter you should clearly outline the circumstances resulting in the non-compliance.

The code of practice is linked to the Environment Protection (Water Quality) Policy 2003. Mandatory provisions of this policy may be enforced on vessel owners and operators by:

- Issuing an Environment Protection Order (EPO) to gain compliance with the policy.
- Issuing an expiation notice (on-the-spot fine) of \$300 for a breach of a mandatory provision.
- Issuing an EPO as well as an on-the-spot fine for a breach of a mandatory provision.
- Issuing an on-the-spot fine for failing to comply with an EPO.
- Prosecuting through the court (maximum penalty \$30,000).

Officers from the EPA, local councils, and other government authorities are authorised to enforce the Environment Protection (Water Quality) Policy 2003, which allows for on-the-spot fines.

## Disclaimer

This publication is a guide only and does not necessarily provide adequate information in relation to every situation. This publication seeks to explain your possible obligations in a helpful and accessible way. In doing so, however, some detail may not be captured. It is important, therefore, that you seek information from the EPA itself regarding your possible obligations and, where appropriate, that you seek your own legal advice.

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## Further information

### **Legislation**

Legislation may be viewed at: <[www.legislation.sa.gov.au](http://www.legislation.sa.gov.au)>

Copies of legislation are available for purchase from:

Service SA Government Legislation Outlet  
Adelaide Service SA Centre  
108 North Terrace  
Adelaide SA 5000

Telephone: 13 23 24  
Facsimile: (08) 8204 1909  
Website: <[shop.service.sa.gov.au](http://shop.service.sa.gov.au)>

### **For general information please contact:**

Environment Protection Authority  
GPO Box 2607  
Adelaide SA 5001

Telephone: (08) 8204 2004  
Facsimile: (08) 8124 4670  
Freecall (country): 1800 623 445  
Website: <[www.epa.sa.gov.au](http://www.epa.sa.gov.au)>  
Email: <[epainfo@epa.sa.gov.au](mailto:epainfo@epa.sa.gov.au)>

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