

Biofouling

Issued December 2010

EPA 936/10: This information sheet is part of a series on environmental management practices for vessel and facility management on marine and inland waters. This information is extracted from the code of practice published in 2008.

Introduction

Marine pest fouling on vessels can have significant impacts on the marine environment, human health and the economy. Such impacts include destruction of marine habitats and adverse effects on tourism, fishing, marine industries and coastal values. Marine pests can be introduced into, or translocated between, locations in Australia on the hulls of vessels (as hull fouling), or entangled in deck gear, or in damp or fluid-filled spaces (niche areas) such as anchor lockers, bilges, sea chests or internal seawater systems.

Who this applies to

- vessel operators
- slipway operators
- marina operators
- boat yard operators
- boat ramp operators
- boat and yacht club operators

Operators must (required outcome)

- 1 comply with Sections 5.7 Vessel cleaning and 5.11 Painting and varnishing of the [Code of practice for vessel and facility management for inland and marine waters](#)

Operators should (recommended practices)

- 2 increase awareness of marine pest risks and management among vessel operators, vessel facility personnel and general users
- 3 incorporate biofouling management practices into environmental management systems and be prepared for emergency situations (eg declared outbreaks)
- 4 provide and maintain vessel facilities to allow proper marine pest vessel maintenance
- 5 manage vessel facility infrastructure for marine pest risks
- 6 remove biofouling from vessels at an EPA licensed facility with adequate waste and wastewater controls to capture and dispose of waste material
- 7 remove slime (primary biofouling) from the hull with a soft cloth

- 8 rinse trailered vessels with fresh water after each trip, ensuring the wastewater runoff does not re-enter the marine environment, and inspect the vessel for attached organisms. Remove any that are found and dispose of to a bin for landfill. Do not return organisms to water
- 9 where practical, allow your vessel to drain and air dry after each trip. Air drying is effective in killing most small pest species in about 24 hours
- 10 ensure hulls and other vessel areas prone to fouling are painted with antifouling systems. (Refer to Section 5.11 Painting and varnishing in the code of practice
- 11 regularly maintain the antifouling and anti-corrosion coatings of the following niche areas of the vessel, which are particularly susceptible to biofouling growth: bow and stern thrusters (cavitation forces), bilge keels, cooling and propulsion scoops, rudder hinges and stabiliser fin apertures
- 12 repair, as soon as practical, damage to antifouling paint as a result of grounding, collision or mechanical impact, even if the area of damage is relatively minor. Landing barge operators should be particularly vigilant
- 13 if a vessel has remained at the same site (ie on a mooring, at anchor or alongside a wharf) for an extended period of time (two–three months or more), inspect its hull and niche areas and in the event it has secondary biofouling, slip and clean those areas before departing the location
- 14 regularly inspect and maintain unpainted hull appendages such as anodes, velocity probes and echo sounders
- 15 regularly polish propellers to maintain operational efficiency and to prevent biofouling. Painting propellers and propeller shafts with silicone fouling-release coatings can maintain efficiency and enable self-cleaning, limiting the need for regular polishing
- 16 inspect and clean equipment routinely (including mooring lines, anchors, chains and warps)
- 17 ensure inspection regimes, hull, equipment and niche area cleaning are adequate for the type of vessel, eg slow-moving wooden vessels, such as sail training vessels, may be at higher risk of colonisation by marine pests and are vulnerable to infestation by wood boring organisms. Lighters tend to remain in situ for long periods and may become heavily fouled
- 18 ensure dredges that work in one area all the time undergo regular inspections to ensure the vessel is not becoming a reservoir for marine pests. Hoppers, suction and discharge pipes, cutter heads and buckets should be thoroughly cleaned with all spoil removed
- 19 be aware of the risks of translocating marine pests between mainland and offshore islands, especially ferry operators
- 20 maintain written records (eg a log book) that includes operational activities (eg sailing patterns of vessel), hull and equipment cleaning (eg dates, methods and locations at which such activities took place), application of antifouling coating (eg date, location and type of coating applied).

Marine pest species

If you think you have identified any marine pest species (either known to be in Australia or a suspected new pest) contact Fishwatch on 1800 065 522.

Signs of a suspected pest could include unusually heavy biofouling, dominance of the fouling by one species, or a 'new' species not seen before in your region. If possible, collect some specimens and keep them in a sealed plastic bag in the freezer until they can be taken for identification.

In South Australia, *Caulerpa taxifolia* has colonised significant areas of the Port River waterways. It is considered a serious threat to seagrass meadows. For information on areas closed to anchoring, visit <www.pir.sa.gov.au>.

The European fan worm, *Sabella spallanzanii*, was first recorded at Outer Harbor in 1985. It can now be found along the central metropolitan coastline and across to Kingscote on Kangaroo Island. The worm has out-competed molluscs, ascidians, worms and algal species to become the dominant species.

References

EPA, *Code of practice for vessel and facility management (marine and inland waters)*,
www.epa.sa.gov.au/xstd_files/Water/Code%20of%20practice/vessels.pdf

Useful websites

EPA Vessel and facility management pages, www.epa.sa.gov.au/vfm.

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.

Further information

Legislation

Legislation may be viewed at: <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>

For general information please contact:

Environment Protection Authority
GPO Box 2607
Adelaide SA 5001

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Facsimile: (08) 8124 4670
Freecall (country): 1800 623 445
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