

Biofouling on recreational vessels

March 2022, Primefact RDOC21/88724, First edition

NSW DPI Aquatic Biosecurity, Port Stephens

What is biofouling?

Biofouling on vessels occurs when organisms such as seaweeds (algae), barnacles, mussels, or other small animals attach themselves to submerged parts of vessels. Biofouling can be found on vessel hulls, propellers, internal seawater systems, ropes, buckets and anchors.

Vessel biofouling is a key pathway for non-native marine species and diseases entering and spreading in Australian waters. Non-native marine species that enter New South Wales (NSW) can cause considerable impacts on our economy, industries, communities and the environment through pest and disease impacts.

Biofouling begins when slime and algae grow on the vessel's sub-surfaces, which is known as microfouling, or the 'slime layer.' As biofouling intensifies over time, larger

organisms may foul the vessel, including barnacles, crabs, kelp, sea stars and mussels. Known as macrofouling, this includes all organisms you can see with the naked eye.



Image: Heavily fouled vessel, sourced awe.gov.au 30.12.21

How can biofouling impact you?

The impacts associated with biofouling are varied and far reaching. Biofouling can impact vessel owners through:

- costs of removing the biofouling
- increased maintenance costs and fuel consumption due to frictional drag on the vessel
- damage to the vessel
- cost of (re)applying hull protective coatings
- reduces the manoeuvrability of your vessel



Image: Underside of a vessel hull, fouled with mussels, source Biofouling Solutions (A. Coutts)

Importantly, marine pests can be introduced through biofouling, which compete with native species, create habitat changes, and introduce viruses and diseases. For those that love being in the great outdoors, such as boat owners, this may reduce the value of the very things in nature that you currently enjoy.

How can I prevent biofouling?

Inspect your vessel to prevent extensive biofouling

Inspect your vessel and equipment after each trip, to identify biofouling and take action to remove or treat it to reduce the impact of biofouling. Routine inspections of the hull, propellor, anchor, and even fishing gear, increases the chance that you will notice biofouling and take action to reduce the impact it can have.

Apply an anti-fouling coating

Anti-fouling coatings applied to vessel hulls can help to prevent the attachment of organisms. Make sure coating suits your needs, and that it is regularly reapplied.

Keep records

Keep a record of biofouling inspections, cleaning dates, anti-fouling coating dates and any biofouling or marine pests you find. This will keep you on top of your biofouling management.

What can I do if my vessel hull has biofouling?

The best time to remove biofouling is when you first notice it. You can use a number of removal methods depending on the extent of the biofouling and the resources available. It is your responsibility to ensure pests, diseases and contaminants do not return to our waterways (see steps overleaf).

Follow these steps to ensure safe and efficient cleaning:

1. **Clean vessels away from the water** – Remove the vessel from the water and take it to a cleaning facility such as a slipway or a suitable location away from the water.
2. **Check the vessel for biofouling** – Pay particular care to all areas shown in the figure below when inspecting and cleaning your vessel.
3. **Report any suspected pests or diseased animals** – Take note of any suspected marine pests/diseased animals and if found, report immediately to **1800 675 888**.
4. **Keep cleaning water and all other wastes away from our waterways** – When cleaning the vessel, it is important that water used for cleaning and any debris does not return to the waterway, as it may contain harmful pests and diseases.

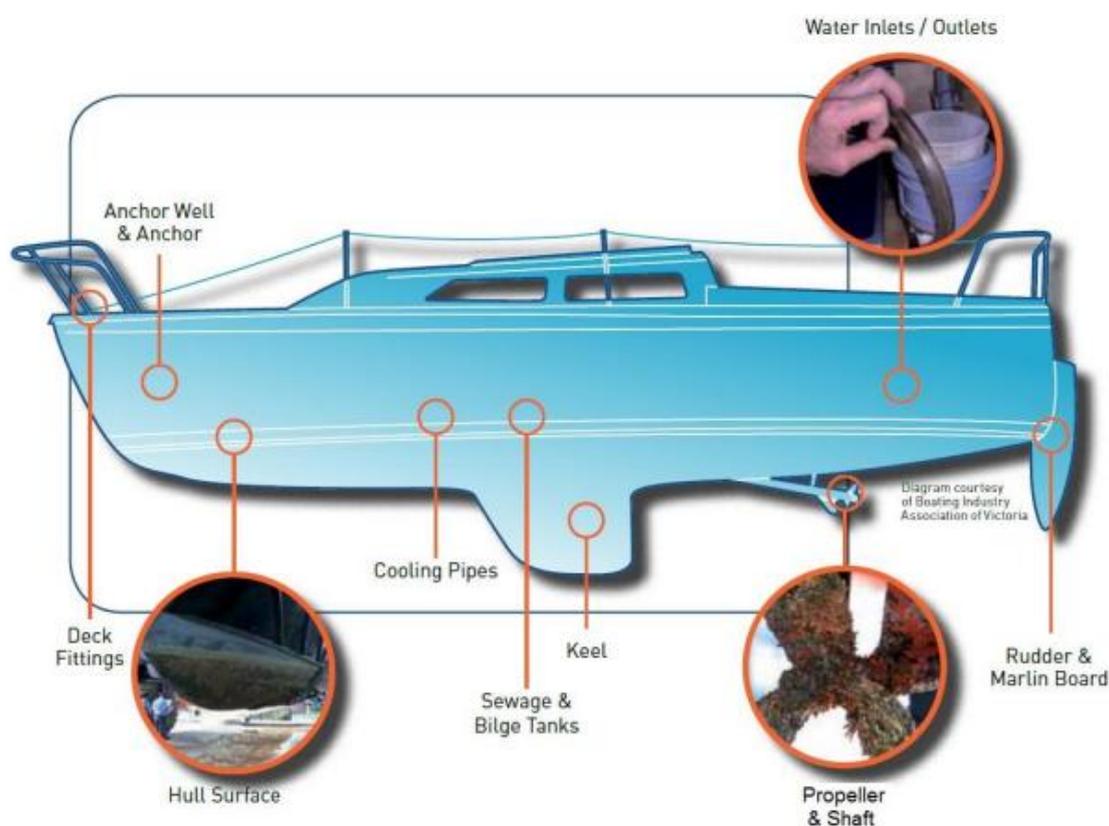


Image: Illustration adapted from a diagram provided by Mermaid Marine Australia Ltd.

Figure 1. Areas on your vessel to clean carefully. Source National Biofouling Guidelines (awe.gov.au)

What should I do if I notice a suspected marine pest?

Report suspected aquatic pests or diseases immediately by:

- **Calling** the 24-hour Emergency Animal Disease Hotline: **1800 675 888** (preferred)
OR
- **Completing** the [online form](#)
OR
- **Emailing** aquatic.biosecurity@dpi.nsw.gov.au

When making your report:

1. **Note the location**, and if possible, provide a map or record GPS points.
2. **If observed with your vessel**, NSW DPI will advise further steps upon contact – please do not move your vessel back into the water, or to another waterway.
3. **Photographs/samples** - Take good quality close-up photos and collect a sample and refrigerate it so NSW DPI can test it.

For more information, see the web resources below, contact the Aquatic Biosecurity team during business hours on 02 4916 3900 or email on aquatic.biosecurity@dpi.nsw.gov.au or call your local [NSW DPI Fisheries office](#) and ask to speak to a Fisheries Officer.

More information

- See the NSW DPI marine biosecurity webpage at <https://www.dpi.nsw.gov.au/fishing/aquatic-biosecurity/pests-diseases/marine-pests> for information on common marine pests and their impacts.
- Primefact 1551, Prohibited matter – pests and diseases of animals, June 2020, second edition at https://www.dpi.nsw.gov.au/data/assets/pdf_file/0020/724016/prohibited-matter-animal-pests-and-diseases.pdf

Acknowledgement

This production is funded by the NSW Government under the Marine Estate Management Strategy. This ten-year Strategy was developed by the NSW Marine Estate Management Authority to coordinate the management of the marine estate.

Your Reference number (RDOC21/88724)

© State of New South Wales through Regional NSW 2022. The information contained in this publication is based on knowledge and understanding at the time of writing (March 2022). However, because of advances in knowledge, users are reminded of the need to ensure that the information upon which they rely is up to date and to check the currency of the information with the appropriate officer of the Department of Regional NSW or the user's independent adviser.