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## Legislation

### Environmental legislation affecting the Queensland marine industry

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#### Eco-efficiency for the Marine Industry Fact Sheet

Environmental legislation aims to protect our natural environment and conserve our resources for future generations. In any business, it is important to be aware of the legislation and regulations affecting the company. This fact sheet outlines the responsibilities of marine industries as well as the role of local councils, state and federal governments in administering legislation. The specific policies or guidelines regarding water quality, air quality and waste management are summarised, and the references at the end of the fact sheet list some of the documents that may be useful in managing your environmental responsibilities.

#### Queensland legislation

##### Environmental duty, harm and nuisance

Under the *Environmental Protection Act 1994* (Qld), everyone has a 'general environmental duty', which means not carrying out any activity that causes or is likely to cause environmental harm, unless they take all reasonable and practicable measures to prevent or minimise the harm.

Environmental harm means any adverse effect, or potential adverse effect, on an environmental value, regardless of permanence, magnitude, duration or frequency. If you become aware of serious or material environmental harm being caused or threatened by an activity you are involved in, you have a duty to report that harm. <sup>[1]</sup>

There are a number of enforcement tools under the legislation to ensure compliance with this general environmental duty, including environmental protection orders (EPOs). In the case of the marine industry, an EPO will usually be issued by a local council. It can give a direction to a business about the actions that it is required to take to comply with the law. If you are issued with an EPO and do not comply with its provisions, you may be prosecuted. <sup>[1]</sup>

Compliance with your general environmental duty is a defence to offences related to causing environmental harm. If you can show that the harm happened, but that you fulfilled your 'general environmental duty', you cannot be found guilty of causing the harm. <sup>[1]</sup>

Environmental nuisance, which is a component of environmental harm, means unreasonable interference or likely interference with an environmental value caused by noise, dust, odour or light; by an unhealthy, offensive or unsightly condition because of contamination; or by another way prescribed by regulation. If your facility causes an environmental nuisance to the public, the Queensland Environmental Protection Agency (EPA) or local council have the power to investigate, to issue warning notices, on-the-spot fines or abatement notices, or to prosecute. In some cases, prior permission may be given for activities that cause nuisance, but you should contact the EPA or your local council before engaging in any such activity. <sup>[1]</sup>



One of the guidance documents produced by local councils

The Gold Coast City Council has developed a Guide to Completing your Environmental Management Program for Marina Operators and Boat Maintenance and Repairers <sup>[2]</sup> that outlines typical requirements for the marine industry under its jurisdiction. The council has also developed two checklists for operators <sup>[3,4]</sup>, which list compliance requirements for the industry under the Environmental Protection Act 1994, together with options for good practice.

## The role of local councils

Local councils are required to administer and enforce the *Environmental Protection Act 1994* (Qld) for boat builders, marinas, boat maintainers and repairers. The EPA recommends a number of environmental guides that were developed by Brisbane City Council and designed to help members of the marine industry meet (or exceed) their legislative obligations. These documents include:

- Pollution Solutions – Marina Operators & Boat Maintainers and Repairers <sup>[5]</sup>
- Pollution Solutions – Metal Finishers and Engineers <sup>[6]</sup>
- Pollution Solutions – Abrasive Blasters <sup>[7]</sup>
- Pollution Standards for Boat Maintainers/Repairers and Marina Operators <sup>[8]</sup>.

If you do not meet your legislative obligations, you may be required to undertake an approved environmental management program that sets out a process and timetable for compliance. Your local council may also have its own local guidelines or laws. Contact your local environmental health officer to ensure that you are meeting all your legislative obligations.

Under the Act, a number of ‘environmentally relevant activities’ (ERAs) are identified, and often a permit is required before carrying out these activities. ERAs relevant to the marine industry that require a permit include:

- ERA 73—marina/seaplane mooring
- ERA 69—boat maintaining and repairing, for facilities that maintain any type of boat or inboard or outboard marine engine
- ERA 51—plastic manufacturing, usually required for fibre composite boat builders commercially manufacturing plastic or plastic products
- ERA 25—metal surface coating, may be required by aluminium boat builders undertaking commercial spray painting (other than spray painting motor vehicles), powder coating, enamelling, electroplating, anodising or galvanising
- Facilities may also require a permit for ERA 23—abrasive blasting, a trade waste permit, or a flammable and combustible liquids storage licence, depending on the operations that are carried out on site. Contact your local council if in doubt.

Facilities that are not licensed for specific activities are still required to meet their general environmental duty and avoid causing nuisance to the community.

A development approval (DA) is issued for all of the activities occurring at a site. The conditions for the DA are determined before the facility is allowed to operate, by either the local council or the EPA. They consider all the activities that may lead to environmental harm or nuisance. DA conditions remain with the premises, regardless of who operates the facility, while the current operators are also required to hold a registration certificate for the facility<sup>[9]</sup>, which is issued by the local council.

## Operational policy

### Maintenance and repair of boats in water

The EPA has also released an operational policy regarding the maintenance and repair of boats in the water. This policy states that ‘in-water maintenance and repairs of all boats is inappropriate. To minimise the potential for environmental harm, maintenance and repairs to boats should be undertaken either above the highest astronomical tide (HAT) or in a dry dock/hardstand area, with appropriate control methods used to prevent the release of contaminants or potential release of contaminants to any waters’.<sup>[9]</sup>

However, local governments have been given the final responsibility of determining whether in-water work is permitted, and work on the water may be permitted at an approved facility, with all the correct controls in place. To avoid ongoing compliance issues, talk to your local council well before you begin any work on the water, and gain necessary approvals in advance.

For more information, consult the EPA’s guideline *Over-Water Abrasive Blasting in Marine and other Aquatic Environments*<sup>[10]</sup> and information sheet *Over-Water Abrasive Blasting – Environmental Risk Assessment*<sup>[11]</sup>.



*Working on water with protective sheeting in place*

## Guidelines for over-water abrasive blasting in marine and other aquatic environments

For over-water abrasive blasting of areas greater than 10 m<sup>2</sup>, it is compulsory to conduct a risk assessment. The risk assessment process should consider:

- the levels of contaminants in the coating to be removed or applied
- the total quantities of coating to be removed or applied
- a maintenance regime that reduces the need for large-scale blasting and recoating operations and considers alternatives to abrasive blasting
- the levels of contaminants in the abrasive media to be used, and the amounts that could potentially be leached into the water column
- the total quantities of abrasive media to be used
- the type of receiving environment that could be potentially affected (e.g. areas of high conservation value such as seagrass beds)
- appropriate techniques for the capture, storage, transport, recycling and disposal of spent abrasives and coatings.

For more information, consult the EPA's guideline *Over-Water Abrasive Blasting in Marine and other Aquatic Environments*<sup>[10]</sup> and information sheet *Over-Water Abrasive Blasting – Environmental Risk Assessment*<sup>[11]</sup>.

## International guidelines and legislation

Local councils may also use international guidelines to guide their administration of marine industry activities. This section summarises some commonly used guidance documents.

### Antifoul

The Australian and New Zealand Environment and Conservation Council (ANZECC) has developed a *Code of Practice for Antifouling and In-water Hull Cleaning and Maintenance*.<sup>[12]</sup> This code specifies the practices that should be undertaken when maintaining hulls, especially when removing or applying antifoul. For example, the code specifies:

- techniques to abate pollution (e.g. the use of bunded areas, written operating procedures, no spray painting in high winds)
- procedures for maintenance
- procedures to minimise releases to air and water
- procedures for the disposal of residues.

*The International Maritime Organization's (IMO) International Convention on the Control of Harmful Anti-fouling Systems*

on Ships was signed on 5 October 2001, and bans the application or re-application of organotin compounds, which act as biocides in antifouling systems, as of 1 January 2003. This convention also specifies that by January 2008, ships should either not have organotin compounds on their hulls, external parts or surfaces, or should have a coating that forms a barrier to prevent such compounds leaching into the water. The convention has not yet entered into force. However, under a voluntary agreement between industry and government, the painting of vessels in Australia with tributyltin (TBT) has been banned since 2003. Australia's Ocean Policy<sup>[13]</sup> also signals an intention by the Commonwealth Government to ratify the convention.

## Waste reception facilities

ANZECC has also released *Best Practice Guidelines for Waste Reception Facilities at Ports, Marinas and Boat Harbours in Australia and New Zealand*.<sup>[14]</sup> The aim of these guidelines is to reduce pollution to the marine environment from boating and shipping. The document is aimed at regulators, together with managers of marinas, boat harbours and commercial ports, and provides guidance for best practice management of waste from boats and ships. These recommendations differ depending on the size and type of vessel, and cater for a variety of wastes including oil and oily mixtures, noxious liquids, sewage and household garbage.

The IMO has also issued a number of publications which provide advice on the management of environmental issues, including:

- *Comprehensive Manual on Port Reception Facilities*<sup>[15]</sup>
- *Guidelines for Ensuring the Adequacy of Port Waste Reception Facilities*.<sup>[16]</sup> This document is also the subject of an IMO convention.

## Air quality

The marine industry releases a variety of pollutants into the air. Your local council will consider a number of different guidelines to determine whether air quality in your region is being harmed, and how those guidelines should be incorporated into a facility's development approval. A number of common air pollutants released by the marine industry, together with commonly applied guidelines, are listed in table 1. Any assessment against these guidelines should consider all the relevant sources of pollution in a region, including your facility. To determine whether guidelines are being met in your region will require either ambient pollutant monitoring or computer-based modelling of the sources of pollution in a region. For air quality nuisance issues such as odour, environmental health officers may only act on the basis of valid complaints from the community.

**Table 1: Some policy goals and guidelines for air pollutants commonly released from the marine industry**

Substance	Uses/causes	Policy goals/ guidelines <sup>b</sup>	Averaging period <sup>d</sup>	Source <sup>e</sup>
Styrene	Resins	70µg/m <sup>3</sup> or 0.01 ppm 800 µg/m <sup>3</sup> or 0.2 ppm <sup>c</sup> 0.21 µg/m <sup>3</sup>	30 min 24 h 3 min	Qld EPP (Air)/BCC Qld EPP (Air) BCC
Toluene	Paints and adhesives	1 mg/m <sup>3</sup> or 0.2 ppm 8 mg/m <sup>3</sup> or 2 ppm <sup>c</sup> 0.65 mg/m <sup>3</sup>	30 min 24 h 3 min	Qld EPP (Air)/BCC Qld EPP (Air) BCC
Tetrachloroethylene	Degreasing and paint stripping	8 mg/m <sup>3</sup> or 1 ppm 5 mg/m <sup>3</sup> or 0.7 ppm <sup>c</sup> 6.3 mg/m <sup>3</sup>	30 min 24 h 3 min	Qld EPP (Air) Qld EPP (Air) BCC
Trichloroethylene	Degreasing and metal cleaning	1 mg/m <sup>3</sup> or 0.2 ppm 17.8 mg/m <sup>3</sup>	24 h 3 min	Qld EPP (Air)/BCC BCC
Dichloromethane	Paint stripping and adhesives	3 mg/m <sup>3</sup> or 0.8 ppm <sup>c</sup> 24 mg/m <sup>3</sup>	24 h 3 min	Qld EPP (Air) BCC
<sup>a</sup> Particles as PM <sub>10</sub>	Dust from sanding, grinding, etc.	150 µg/m <sup>3</sup> 50 µg/m <sup>3</sup> <sup>c</sup> 50 µg/m <sup>3</sup> 50 µg/m <sup>3</sup>	24 h 24 h 24 h 1 year	Qld EPP (Air)/BCC NEPM BCC Qld EPP (Air)
Particles as TSP	Dust from sanding, grinding, etc.	90 µg/m <sup>3</sup> 50 µg/m <sup>3</sup> 4 g/m <sup>2</sup> /month <sup>c</sup> 2.5 g/m <sup>2</sup> /month	1 year 1 year 30 days 30 days	Qld EPP (Air) BCC BCC BCC

- < 10 µm average diameter
- Units are micrograms/cubic metre (µg/m), milligrams/cubic metre (mg/m<sup>3</sup>), or parts per million (ppm)
- For sensitive receiving environments (e.g. parks, schools) only. These requirements will be relevant only if your facility is close to a sensitive receiving environment within Brisbane City Council.
- The period over which the average concentration should not exceed the guideline.
- Qld EPP Air – *Queensland Environmental Protection (Air) Policy 1997* <sup>[17]</sup>  
BCC – *Brisbane City Councils City Plan 2000* <sup>[18]</sup>  
NEPM – *The National Environment Protection Council's Ambient Air Quality National Environmental Protection Measure* <sup>[19]</sup>.

## Water quality

It is forbidden to cause environmental harm to waterways. Queensland's Environmental Protection (Water) Policy 1997<sup>[20]</sup> prohibits the deposit of certain contaminants into waterways or areas that could lead to waterway contamination (e.g. stormwater drains, roadside gutters). These contaminants include cement or concrete, degreasers, paints, varnishes, thinners and oils (see section 31 of the policy for a complete list). It is also prohibited to allow run-off that leads to sediment build-up in waterways.

The policy also allows for water quality guidelines to be developed at different levels of government (e.g. national, state and local). Where there is more than one set of applicable guidelines, the most local guidelines take precedence, provided that they have been developed according to the requirements specified in the draft *Queensland Water Quality Guidelines 2005*<sup>[21]</sup>. However, for a number of indicators such as toxic pollutants, there may be little or no local information. For these indicators, the *Australian and New Zealand Guidelines for Fresh and Marine Water Quality*<sup>[22]</sup> should be the principal source of guidance for regulators.

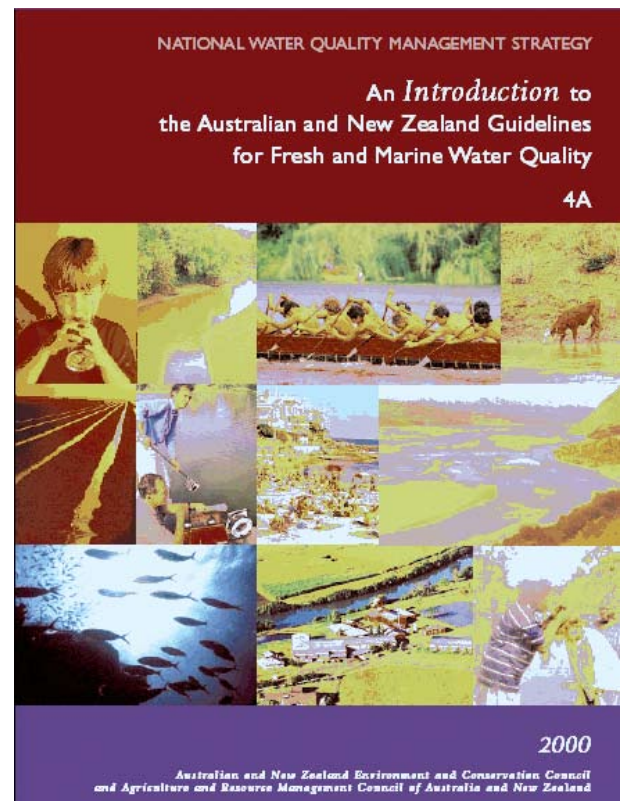
The draft *Queensland Water Quality Guidelines 2005* use the following indicators of water quality:<sup>[21]</sup>

- nitrogen (as ammonia, oxidised, total) and phosphorus (filterable, reactive, total)—indicators of nutrient run-off
- chlorophyll—an indicator of biomass abundance
- turbidity—an indicator of suspended sediment, which reduces light needed for photosynthesis and can stress marine life if different to normal conditions
- secchi depth—an indicator of water clarity and algal abundance
- dissolved oxygen (DO)—necessary for aquatic life
- pH—a measure of acidity
- conductivity—a measure of salinity
- temperature
- Ecosystem Health Monitoring Program (EHMP)—ecological indicators developed specifically for south-east Queensland.

The acceptable levels for each of these indicators differ according to the region within Queensland (e.g. the Wet Tropics and Eastern Cape, Central Coast, South-East, Murray Darling, Lake Eyre or Gulf Rivers).

Specific waters within each region may also have their own guidelines. Further information may be found in the draft *Queensland Water Quality Guidelines 2005* (Qld).<sup>[21]</sup> Your local council may also have their own local laws, regulations or guidelines relating to water quality or trade waste, and you should consult your local environmental health officer if you are not aware of them.

*Queensland's Transport Operations (Marine Pollution) Regulation 1995*<sup>[23]</sup> also regulates the discharge of pollutants into coastal waters. Among other requirements, it is forbidden to discharge sewage (treated or untreated) into a boat harbour, canal, marina or smooth waters. Smooth waters are defined in detail in the Regulation as including rivers, creeks, streams, lakes, within breakwaters or revetments, and most coastal waters near Brisbane, Maryborough, Gladstone, Port Alma, Bowen, Lucinda, Mourilyan, Cairns, Port Douglas, Cooktown, Thursday Island, Weipa and Karumba.



The ANZECC Guidelines for Fresh and Marine Water Quality should be the principal source of guidance for regulators assessing water quality, if more local guidelines are not available

## Waste management

Waste management laws in Queensland make it an offence to litter or dump waste. Provisions are also made to track the amount of different categories of waste generated, recycled and disposed of. Certain wastes such as grease trap waste, organic solvents, tyres, filter cake and wastes containing various pollutants are considered as 'regulated waste' and attract special provisions for handling and recordkeeping. Regulated wastes may only be handled by operators licensed specifically for that purpose. For more information, contact the EPA or consult *Queensland's Environmental Protection (Waste Management) Policy 2000*<sup>[24]</sup> or *Environmental Protection (Waste Management) Regulation 2000*<sup>[25]</sup>.

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## For further information

Ecobiz can assist you to reduce costs and improve eco-efficiency in your business Call 1300 369 388 for further information.

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