ENVIRONMENTAL GUIDELINE FOR MARINAS, BOAT CLUBS AND BOAT MAINTENANCE FACILITIES IN THE PORT OF DURBAN

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TRANSNET

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1. INTRODUCTION

BACKGROUND

The Port of Durban is one of the national economy's key assets and an important resource for the citizens of Durban to access for recreational, educational and social activities. While the Port of Durban supports all these activities and uses, it has over the past century become increasingly degraded due to a variety of stresses placed on this sensitive ecosystem. Despite the level of degradation, the estuary of the port of Durban remains an important ecosystem that provides vital nursery areas for a number of marine species and is important feeding and roosting areas for a number of bird species, both resident and migratory. However, diminished and exploited habitats are less available to support healthy populations of estuarine and marine organisms and this renders them less able to perform the environmental, social and economic goods and services on which coastal populations depend for their livelihoods and protection. Conversely, the continued health of marine and estuarine systems, and consequently the human systems that depend on them, relies on the maintenance of high-quality habitat.

The Transnet National Ports Authority is actively working towards improving the state of the ecosystem in the bay through the close monitoring and management of activities that may contribute towards the further degradation of the bay. The boating and marina industry covers a wide range of operations. The industry has a potential to impact on the environment because of its waterfront location, activities, the raw materials and chemicals used and the waste generated. As well, the industry depends on clean waterways for people to enjoy their boating and fishing.

Marinas and associated boating activities have the potential to significantly harm the marine species and the general health of the bay if such activities are not appropriately monitored and controlled. In this regard TNPA have developed this guideline document to better assist the boating and marina industry in the Port of Durban to conduct their activates in a responsible manner.

ACKNOWLEDGMENTS

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PLEASE NOTE:

This guide provides information relevant at the time of publication. It is not a regulatory document and does not provide legal advice. If you need more information regarding legal obligations, consult a lawyer, the legislation, the Department of Environmental Affairs, the eThekwini Municipality or TNPA.

While reasonable efforts have been made to ensure the contents of this guide are factually correct, TNPA does not accept responsibility for the accuracy or completeness of the contents and is not liable for any loss or damage that may occur directly or indirectly through the use of, or reliance on, the contents of this guide.

PURPOSE OF THE GUIDELINES

This Guide has been developed to support the implementation of the Estuarine Management Plan for the Port of Durban.

Point source pollution generated during vessel maintenance can contaminate coastal waters and sediments, leading to negative impacts on the local community, the fishing and aquaculture industry, recreational users and the ecosystem itself. Maintaining good water and sediment quality is vital for all these uses and values.

This guide applies to leaseholders, operators and users of:

- Marinas
- Boat clubs
- Slipways
- Boat maintenance facilities

This guide is designed to help the users and operators of marinas, boat maintenance facilities and boat clubs to:

- Understand the environmental risks and responsibilities associated with the boating industry.
- Take action to improve the environmental management of their operations.
- Take advantage of the business benefits that result from improved environmental practices.
- This guide provides information for owners, managers and staff. It will also be useful to environmental officers employed by government authorities. The guide does not provide legal advice but will provide the reader with an understanding of regulatory requirements under environment protection laws in South Africa.

WHAT ARE THE KEY ISSUES?

Key environmental issues for marinas, boatsheds and slipways are:

- Water pollution caused by allowing any material other than rainwater to enter waterways.
- Air pollution and land contamination caused by releasing:
  - volatile organic compounds (VOCs) into the environment due to solvent or paint use
  - dust, including particles that may contain organic compounds, metals and metal complexes, due to sanding and blasting.
- Handling and disposing of dangerous goods such as solvents, fuel and paint wastes.
- Waste management, including reuse, recycling and disposal.
- Noise affecting the amenity of the surrounding community.
- Water use.
- Greenhouse gas emissions from energy use.
- Design, installation and operation of underground petroleum storage systems.

ENVIRONMENTAL MANAGEMENT – RISKS AND OPPORTUNITIES

For marinas, boatsheds and slipways, improving environmental performance is about managing risk and taking advantage of opportunities that will boost efficiency and profits.

A good starting point is to identify and prevent risks to your organisation from poor environmental management. High levels of dust from abrasive blasting or surface coating operations for example, could pose the risk of:

• Environmental prosecutions and fines

• Damage to the reputation of the organisation.

• Harmful effects on the health, safety and productivity of staff.

A chemical spill or other pollution could also harm the local marine and land environment, which belongs to all members of the community and impacts on their quality of life.

Improving environmental management also provides opportunities to make an organisation more profitable and viable in the long-term. Even small changes can save money. For example, many marinas and boatsheds have cut electricity costs by installing or cleaning skylights and regularly fixing leaks in air compressors. Some of these simple actions are described in more detail in the section on Resource efficiency.

The benefits of a high standard of environmental management go beyond ‘housekeeping’ and efficiency. They also include benefits from:

- An enhanced reputation as an organisation that is well managed.
- A ‘marina or club of choice’, particularly to environmentally conscious clients who are starting to consider environmental performance of suppliers and products as part of their initiatives to “Go Green”.
- Improved employee satisfaction, retention and productivity. Organisations with a good environmental record are more likely to win the ‘battle for talent’ in attracting and retaining staff. As well, employees are generally happier and more productive in a workplace that is clean, healthy and environmentally responsible.

2. ENVIRONMENTAL COMPLIANCE – MEETING YOUR LEGAL RESPONSIBILITIES

South Africa has a number of laws to help protect the environment and port facilities. The National Environmental management Action (Act 107 of 1998) is the main piece of environmental legislation covering water, land, air and noise pollution and waste management. In some cases breaking environmental law carries serious penalties involving hefty fines and prison sentences. If you end up in court, the prosecutor may not have to prove that you intended to cause the damage or pollution. Even accidents can result in prosecution and penalties.

Everyone involved in your organisation (including general works, managers, supervisors, operators, contractors and subcontractors) needs to be aware of environmental laws that apply to your operations. Individuals are required to minimise the risk of an environmental incidents by implementing precautionary and control measures. By gaining awareness of environmental laws, and how your clubs the potential to affect the environment, you will be in a better position to manage risk in your business.

PREVENTION OF POLLUTION AND ENVIRONMENTAL DEGRADATION

In South Africa we have a rage of laws in place to protect the Environment some of which are specifically applicable to ports. This section provides the extracts from various pieces of legislation dealing with pollution prevention, mitigation of environmental impacts and remediation of damage caused.

NATIONAL ENVIRONMENTAL MANAGEMENT ACT (ACT 107 OF 1998)

Section 28. (1) Every person who causes, has caused or may cause significant pollution or degradation of the environment must take reasonable measures to prevent such pollution or degradation from occurring, continuing or recurring, or, in so far as such harm to the environment is authorised by law or cannot reasonably be

avoided or stopped, to minimise and rectify such pollution or degradation of the environment.

NATIONAL WATER ACT (ACT 36 OF 1998)

Section 19. Prevention and remedying effects of pollution.

(1) An owner of land, a person in control of land or a person who occupies or uses the land on which

(a) any activity or process is or was performed or undertaken; or

(b) any other situation exists,

which causes, has caused or is likely to cause pollution of a water resource, must take all reasonable measures to prevent any such pollution from occurring, continuing or recurring.

NATIONAL ENVIRONMENTAL MANAGEMENT: INTEGRATED COASTAL MANAGEMENT ACT (24 OF 2008)

Section 69. Discharge of effluent into coastal waters

(1) No person may discharge effluent that originates from a source on land into coastal waters except in terms of a general authorisation.

NATIONAL ENVIRONMENTAL MANAGEMENT: WASTE ACT (59 OF 2008)

Section 26.(1) No person may—

(a) dispose of waste, or knowingly or negligently cause or permit waste to be disposed of, in or on any land, waterbody or at any facility unless the disposal of that waste is authorised by law; or

(b) dispose of waste in a manner that is likely to cause pollution of the environment or harm to health and well-being.

NATIONAL PORTS ACT (12 of 2005): PORTS RULES

Section 85. Prevention of pollution and protection of the environment

(1) All persons within a port must take all reasonable steps to prevent, minimise and mitigate pollution or damage to or degradation of the environment.

(2) Any person who pollutes or causes damage to the environment will bear the costs associated with the combating and cleaning up of that pollution, damage or degradation, and the associated impacts relating thereto.

(3) If the person or persons responsible for the pollution or damage to the environment fail to take the necessary measures to prevent, minimize, mitigate, combat and clean up the pollution or damage to the environment, including its associated impacts, the Authority may take the necessary measures. The person or persons who caused the pollution or damage to the environment will be liable for the costs associated with the pollution, damage or degradation to the environment, its associated impacts and any mitigating measures.

Section 86. Deposit of harmful matter, including oil, in a port

(1) No person may throw or deposit within port limits any harmful matter or substance of whatsoever nature, including effluent or polluted water or foreign organisms, without the permission of the Authority, and, in the case where it is to be thrown or deposited from a vessel, without the permission of the Harbour Master. The Authority or the Harbour Master, as the case may be, may impose conditions upon the permission to be granted.

(2) No person may cause or allow pollutants, including paint, or cause or allow substances that can cause pollution or negatively impact on the environment, whether or not the substance or pollutant is of a mineral, animal or plant origin, to be dumped on the property of a port or to be discharged or to escape into waters within port limits.

(3) No oil of any description or harmful matter or substances of whatever nature, including effluent, polluted water or foreign organisms, may be discharged or dumped from a -

(a) Vessel, or be allowed to escape from a vessel into any part of the port, or

(b) terminal or any other source, or be allowed to escape into port waters from a terminal or any other source.

Section 134. Discharge of sewage in a port

No Pleasure vessel may discharge or dump sewage into port waters or any part of the port except into a facility dedicated for that purpose.

YOU MUST REPORT INCIDENTS THAT HARM THE ENVIRONMENT

If a pollution incident occurs and it causes or threatens material harm to the environment, by law you must inform the appropriate regulatory authority

The following could be reportable incidents, and if found to be shall be immediately reported to the Relevant Authorities:

Where Safety, Health or Environment were threatened and/or where;

- a hazardous substance or potential pollutant has been spilled;

- the uncontrolled release of a substance under pressure occurred;

- the uncontrolled release of an air pollutant occurred;

- a legislative requirement was breached;

- a permit condition was violated;.

- A Person/s is injured (Report to the Compensation Commissioner within 7 days).

- There is damage or harm to port infrastructure, facilities or the environment.

Section 82. of the Port Rules state that:

All service providers, employers, lessees or other persons, (other than a licensed operators whom are required to report in term of section 62(5) of the Ports Act), involved in an incident on the shore within a port, whether or not damage is done to any property or the environment, or involved in damage to the Authority's property on the shore or the environment within the port, must

(a) immediately report the incident to the Authority as well as any other applicable regulatory body or government department;

(b) submit to the Authority a full written report setting out the circumstances of the incident or damage to property within 24 hours after the incident; and

(c) furnish any further particulars that the Authority may require.

Incidents resulting in harm to the Environment must also be reported in terms of Section 30 of the National Environmental Management Act

The responsible person or, where the incident occurred in the course of that person's employment, his or her employer must forthwith after knowledge of the incident, report through the most effective means reasonably available -

(a) the nature of the incident;

(b) any risks posed by the incident to public health, safety and property;

(c) the toxicity of substances or by-products released by the incident; and

(d) any steps that should be taken in order to avoid or minimise the effects of the incident on public health and the environment to -

(i) the Director-General;

(ii) the South African Police Services and the relevant fire prevention service;

(iii) the relevant provincial head of department or municipality; and

(iv) all persons whose health may be affected by the incident.

The responsible person or, where the incident occurred in the course of that person's employment, his or her employer, must, within 14 days of the incident, report to the Director-General, provincial head of department and municipality such information as is available to enable an initial evaluation of the incident, including -

(a) the nature of the incident;

(b) the substances involved and an estimation of the quantity released and their possible acute effect on persons and the environment and data needed to assess these effects;

(c) initial measures taken to minimise impacts;

(d) causes of the incident, whether direct or indirect, including equipment, technology, system, or management failure; and

(e) measures taken and to be taken to avoid a recurrence of such incident.

Reporting in terms of Section 20 of the National Water Act.

All incidents or accidents which results in pollution to water resource or is likely to have a detrimental effect on a water resource must be report to the Department of Water Affairs, SAPS and the relevant Catchment Management Agency. Upon report of such an incident, the Department of Water Affairs my issue a verbal or written directive concerning the incident which must be complied with.

Reports to the Department of Water Affairs to be directed as follows:

Water Quality Management Officer

Department of Water Affairs

P. O. Box 1018

Durban

4000

Contract Number: (031) 336 2742

WHO 'POLICES' ENVIRONMENTAL LAW?

Environmental laws are policed by the 'appropriate competent authority as provisioned for in the law'. In the case of the Port of Durban, Environmental law enforcement is undertaken by the following organs of state:

- Transnet National Ports Authority;
- Ezemvelo KZN Wildlife;
- South African Maritime Safety Authority (SAMSA)

- The Provincial and National Departments responsible for Environmental Affairs;
- Department of Water Affairs;
- eThekwini Municipality and
- The South African Police Services (SAPS)

WHAT ARE THE PENALTIES FOR ENVIRONMENTAL OFFENCES?

The most serious offences are wilful breaches of the law that harm or are likely to harm the environment. These carry penalties of up to R10 million and/or ten years imprisonment.

COMPLIANCE NOTICES

A compliance notice may be issued by any of the organs of state listed above when a pollution incident has occurred or is occurring. Clean-up notices may direct an occupier of premises, or the polluter, to take remedial action.

NON-CONFORMANCE NOTICES

Non-conformance notices can be issued if an activity has been or is being carried out in an environmentally unsatisfactory manner. Non-conformance notices require that actions specified in the notice are carried out. Prevention notices can include directions – such as installing bunding within one month around a chemical storage area.

TRADE EFFLUENT DISCHARGE PERMIT

The discharge of effluent is a regulated activity and no person may discharge effluent into the Port of Durban without the authorisation of TNPA, Department of Environmental Affairs and the Department of Water Affairs. Effluent other than sewer may not by discharged into the municipal sewer reticulation system without the

approval of the eThekwini Municipality. Generally, businesses must have a written agreement or permit to discharge effluent or trade wastewater to the sewer. The permit contains condition under which effluent can be release into the sewer system.

DANGEROUS GOODS

Dangerous goods include flammable, toxic or corrosive substances, such as solvents must be stored in a dangerous goods store which meets the requirements of TNPA, the Municipality, the local fire department and the Occupational Health and Safety Act and its regulations.

3. RESOURCE EFFICIENCY

Efficiency in running an organisation includes reducing the use of resources (raw materials, water and energy) and lowering the volume and toxicity of waste and other emissions. This efficiency is often referred to as ‘LEAN manufacturing’, ‘cleaner production’ or ‘resource efficiency’. It involves finding ways to reduce costs and environmental impacts along the entire production or service delivery process, from the supply of raw materials to operations and distribution.

Identifying and implementing resource efficiency measures is ‘easy’ for marinas and boat clubs who understand their organisations and are prepared to have a close, systematic look at inefficiencies. It is an opportunity to profit from:

• Reducing the use of energy, water and raw materials.

• Avoiding waste and reusing and recycling materials.

• Minimising waste volumes and reducing waste toxicity to lower the cost of treatment and disposal.

• Implementing process changes to increase production and reduce spoilage.

• Reducing the use of hazardous and dangerous materials to minimise dangerous goods storage and environmental and occupational health and safety risks.

• Providing a safe, clean and pleasant work environment that leads to increased staff productivity.

WHERE DO I START?

PLAN AND ORGANISE.

Dozens of success stories prove that a team approach to resource efficiency is best. With management support, establish an environment team that includes staff from different areas of the business. Appoint a ‘champion’ or team leader and consider inviting suppliers or customers to join the team on occasions. Ideally, the environmental champion will have the full support of management and other staff.

From the outset, identify how you will integrate resource efficiency into organisational planning and member/staff responsibilities.

ASSESS AND MEASURE

The environment team needs to assess the processes, material flows and costs within the business, and identify any internal barriers that may be preventing the implementation of more efficient practices.

The team should start by collecting baseline data on resource use and waste – what gets measured gets considered! The team should also complete an initial organisational and process assessment, which could include brainstorming sessions, a facility ‘walk-through’ or a more formal audit. It’s also wise to involve an outside persons or members with technical expertise who can provide a ‘fresh pair of eyes’ and ideas from other companies. The initial assessment and data will provide you with a benchmark against which to measure ongoing improvement.

IDENTIFY OPPORTUNITIES AND IMPLEMENT PRIORITY ACTIONS

Your assessment of resource use will almost certainly identify immediate opportunities for cost savings, and these should be implemented as quickly as possible. These ‘small wins’ will help to maintain the team’s enthusiasm. Other ideas may need further research and assessment and may take longer to implement.

The team should record ideas and options and prepare a simple action plan outlining opportunities, issues requiring further investigation, priorities, timeframes and staff responsibility for actions. As a starting point, the team could use the environmental action plan template in the ‘Useful Tools’ section of this guide, and adapt it to suit your club.

DOCUMENT RESULTS AND EVALUATE SUCCESS

Record financial investment in resource efficiency projects and the time taken to recover these costs – known as the ‘payback’ period. Set up simple spreadsheets or other tools to document project results in terms of their financial, environmental and

other outcomes. Take the time to note ‘qualitative’ results such as member enthusiasm, improved working relationships with suppliers and comments from stakeholders. These records will help to justify further resource efficiency projects.

REWARD AND REVISIT

The work of the environment team should be acknowledged and the team should be encouraged to continue to look for new ideas. Consider ‘refreshing’ the group by alternating leaders and inviting new team members. Remember, efficiency is a continuous process and the resource efficiency plan should be regularly revisited.

WHAT IF MY CLUB IS TOO SMALL FOR AN ENVIRONMENT TEAM?

Simply follow this suggested process on your own or with one or two members.

RESOURCE CONSERVATION OPPORTUNITIES FOR MARINAS, BOAT MAINTENANCE FACILITIES AND BOAT CLUBS

Cost-effective resource efficiency opportunities can be found in several areas:

MANAGING WASTE

• Make sure vessel facilities include waste bins for domestic waste, hazardous substances, fish waste, waste oil, oily mixture, scrap metal and wastewater (including bilge water).

• Segregate waste for recycling. Mixing wastes may make them unsuitable for reuse or recycling. For example don’t mix waste oil and solvents.

• Encourage staff to use metal /steel recycling bins for offcuts and waste scrap.

• Return empty drums to suppliers.

SAVING ENERGY

• Check the efficiency of electrical equipment and machinery regularly – this may reduce your energy consumption.

• Check your compressed air system for leaks and fix them. They make compressors run unnecessarily and result in higher electricity use.

• Operate air compressors with variable speed drives at minimal pressure to reduce air leaks and energy use. Turn off air compressors on non-working days and during breaks.

• Switch off lighting when it's not required and install energy-efficient lighting on marina walkways and areas that need permanent lighting. Install skylights and use natural lighting where possible, and keep skylights and lights clean.

• Increase the thermostat setting on your air conditioner by 1 to 2°C in warm weather, and decrease it slightly in cool weather.

• Check the efficiency of the workshop dust extraction system and clean filter bags regularly.

• Improve building insulation and enclose and ventilate heat-generating equipment.

• Use high efficiency electric motors and install electricity usage meters to measure the amount of electricity used in different parts of the business.

• Ask your electricity supplier about using power factor correction equipment. This will regulate the power received in your premises and may result in substantial cost savings.

• Regularly check fuel tanks for leaks – this will avoid fuel loss.

SAVING WATER

• Fit a rainwater tank and use rainwater to clean boats, irrigate your gardens and supply toilets.

• Check taps, toilets and showers for leaks and drips and repair them promptly. Ensure all taps are turned off when not in use.

• Fit water minimising controls where possible, e.g. spray nozzles on hoses, AAA-rated low-flow taps or tap aerators, water-efficient showerheads (which also save energy by reducing hot water use), low-flush toilets and sensors for urinal flushing.

• Keep water-using equipment well-maintained and check it periodically for leaks. Make sure staff are encouraged to report leaks and repair them promptly.

• Use water meter data to identify leaks.

REDUCING HAZARDOUS MATERIALS AND WASTE

• Reduce use of hazardous materials. Conduct an inventory of all the chemicals you use and assess if you can stop using some of them.

• Consider using less toxic chemicals. For instance, consider using water-based paints, water-based or biodegradable strippers, cleaners or degreasers.

• Switch to long-lasting, low-toxicity antifouling paint. Recommend antifouling

paints to your customers that are effective but contain the minimum amount of toxin.

• Stay informed about antifouling products, like Teflon, silicone, polyurethane, and wax that have limited negative impacts. Pass on the information to your customers.

• Organise your chemical storage area so that older chemicals are readily accessible and used before they become ‘out of date’.

• Keep lids on the containers of solvents and solvent-based chemicals and fit taps to reduce evaporation and unnecessary loss of product.

• Segregate recyclable liquids for collection by a licensed waste contractor.

WORKING WITH SUPPLIERS AND CUSTOMERS

• Encourage suppliers to provide materials in bulk, collect empty containers and take back their packaging for reuse or recycling.

• Ask your chemical suppliers for less toxic alternative products.

• Promote the benefits of being an environmentally responsible marina or club to your staff, suppliers and customers. This could enhance your reputation and you could gain extra publicity.

• Provide recycling bins that are easily accessible.

TECHNOLOGY UPGRADES

• Fit all hoses with a trigger nozzle – they can reduce water use by 30 to 50%.

• Use sensor-activated lighting in buildings and areas where permanent lighting is not required.

DON'T FORGET THE FEEDBACK

Don't forget to regularly communicate resource saving successes to your staff, customers and suppliers.

4. MANAGING WATER QUALITY

As most people in the boating industry are well aware, pollution of waterways is bad for tourism and for boating. The boating and marina industry has a vested interest in maintaining and improving the quality of our waterways by ensuring that its activities, and those of its customers, do not contaminate the environment.

PROTECTING WATERWAYS

Most activities carried out by marinas, boat clubs and boat maintenance facilities are adjacent to waterways and have the potential to pollute waters. Every activity must

therefore be carried out in a way that protects the environment. Polluting stormwater or waterways, whether intentional or not, is a serious offence and can lead to fines and legal proceedings.

THE DRAIN IS JUST FOR RAIN!

Stormwater is rainwater that flows directly across outside surfaces into stormwater drains or directly into waterways. Stormwater should not contain any pollution from your club activities. If pollutants such as antifouling, lead-based paint, solvents, oil, dust or other substances are allowed to enter the stormwater system or waterways they can cause serious damage to the environment and pose a health hazard for humans.

The following measures will help you reduce the chance of polluting waterways:

• Make sure staff know that chemicals including paint, solvents or other toxic substances must not be poured on the ground, into stormwater drains or waterways.

• Allocate responsibility for keeping outdoor surfaces free of debris.

FIRST FLUSH

‘First flush’ is the term used for the first 15 mm of rain that falls on the operational work areas of your site. To avoid water pollution, it is recommended that you catch and treat this water.

To calculate the size of the tank required to hold your first flush, multiply 15 mm by the square metre area of your operational catchment areas. Your catchment and treatment system must be large enough to hold or treat this quantity. If you are using a filtration system the plant must be switched on at all times so that, in the event of a storm, float switches will activate the system and start the plant.

CAN DUST POLLUTE STORMWATER?

Yes – dust and sediment accumulation can pollute stormwater. This can occur when dust is swept, hosed or left to be washed by rain into gutters or the stormwater system. Dust in the water can starve fish, frogs and other aquatic life of oxygen (oxygen is depleted because the dust increases the carbon load on the water), as well as potentially carrying oils and metals into the environment.

Wastewater catch drain. The drain collects and then directs waste liquids, paints and solids to a collection pit / silt trap. The collected wastewater is pumped through a filter to a holding tank for reuse or disposal to the sewer.

WHAT SHOULD YOU DO TO PREVENT WATER POLLUTION?

Ensure antifouling paint and marine incrustation scraped or blasted from hulls and other pollutants are not allowed to enter waterways as they may contain toxic substances and increase nutrient levels.

• Avoid working over tidal areas.

• Regularly clean and maintain work areas.

• Install a floating boom around the slipway to stop debris entering the waterway.

• Use tarpaulins on slip rails to catch falling particles.

• Cover work areas or, if possible, move work into the workshop.

• As part of the water treatment plant on the slipway, install filtration technology capable of filtering hull fouling and marine biota (with an average diameter of 60 microns and greater) to minimise the risk of¸ introducing aquatic alien species.

Sweep and collect paint chips (don't hose) immediately after scraping or sanding.

VESSEL MAINTENANCE ON SLIPWAYS AND HARDSTANDS

To prevent water pollution from vessel maintenance on slipways and hardstands:

• Make sure all work carried out on the slipway is situated above a catch drain so all waste is captured and cannot enter the waterway.

• Investigate whether you can improve the way antifouling build-up is removed from boat hulls. New technologies, such as fully contained grit blasting or chemical stripping, can help contain residues.

• Large-scale antifouling removal or sanding should be done in an enclosed shed or workshop and on hard stand. If this is not possible, construct an enclosure (tent) with tarpaulins to capture the dust generated.

• Follow a regular maintenance program to check whether measures designed to minimise water pollution are working effectively or could be improved.

• When carrying out repairs to the structure of vessels, ensure that dust from sanding timber, fibreglass or paint is collected and is not released into the atmosphere.

• Use appropriate machinery and work practices to control dust, such as sanders fitted with dust bags or an extraction system. Moveable screens and shields can also help. During high winds, some tasks may need to be rescheduled to prevent the risk of pollution.

• Glues, resins and paints should be used with care. Avoid spills by using a proper containment system and drop sheets under your work area.

Debris and dust must not enter the water.

• When servicing outboard motors or stern drives, make sure all work is carried out above catch drains. When draining oil from gearboxes use a container that can be sealed once full and place it in a larger plastic box to contain spills.

• When using roller trays on the slipway, place the tray inside a plastic container or fish box. This makes a full roller tray easier to carry around a work site, acts as a bund to contain spills and provides a flat support surface when putting the tray on a narrow plank or cradle.

• Make sure waste bins are conveniently located around the slipway. Use ‘wheelie bins’ on slipways and hardstands – they are easy to move around the site and their lids contain rubbish in windy conditions and keep rain out.

• Mix paints and solvents away from the water and prevent dripping into the water.

• Avoid mixing paint or cleaning brushes on open floats or other structures over the water.

Antifouling removal and sanding done in an enclosed shed. Tarpaulin on the floor is used to contain droppings and spilled materials.

VESSEL MAINTENANCE IN MARINAS AND WORK BERTHS

IN-WATER MECHANICAL REPAIRS

• When servicing larger vessels in water, take care when moving fluids and parts to and from the boat. Seal all fluids in secure containers. Transport dirty oil filters in buckets with a sealed lid.

• Place spare parts, oil filters, etc. in drip trays.

• Oil filters cannot be disposed of in normal waste bins, i.e. sent to landfill. If properly drained, metal filters can be sent to scrap metal recyclers.

OUTBOARD MOTORS AND TRAILER BOATS

Do not clean or repair engines or parts in outdoor areas where they could contaminate the ground, the foreshore or the water.

All outboard motor test tanks should be located in a covered and bunded area so that they cannot overflow and discharge oily water during rain.

CLEANING BOATS AND MOTORS

Prevent pollutants discharging into the water when cleaning boats and motors:

• Where possible, rinse boat decks with water only. This may mean more frequent rinsing to avoid dirt and grime build-up.

• Use detergents with a low phosphate content. Stop soapy water from washing off the deck by using a broom or mop and collecting the wash water in a bucket. Empty the wash water into the sewer/wastewater system.

• Wipe off as much oil, fuel and dirt as possible from a motor before rinsing it.

• Wash or rinse outboard motors in a work area where run-off drains to a pit and wastewater is properly treated, reused or disposed of to a trade waste system.

• Prohibit in-water bottom cleaning, hull scraping or any underwater process that could remove antifouling paint from the boat hull. It is impossible to contain the debris that end up in the water.

Boat being repaired with masking from the hull to the wharf

WORKSHOP REPAIRS

When dismantling engines in the workshop, make sure this is carried out in an area where any residual oil and coolant that escapes from the engine does not drain on soil or into the waterway. A metal workbench with a small lip works well. Drill a small hole in the middle or at the lowest point and place a bucket under it to catch any fluid.

You should also:

• Place oil absorbent pillows under each engine.

• Make it a routine part of your servicing procedure to clean and repaint engines on completion. This practice makes it easy to spot oil leaks so they can be fixed before oil laden bilge water is pumped into waterways.

• When the engine service is complete, clean and wipe down the engine bay and dispose of oily water in a liquid waste tank or the oil/water separator.

TRADE WASTEWATER

Trade waste or effluent is any liquid, and any substances contained in it, produced by an industrial or commercial activity at a business premises. Trade wastewater from marinas, boat clubs and boat maintenance facilities may contain pollutants such as sediment, particles and chemicals and must not enter the stormwater system or the harbour. Trade wastewater includes blast water but doesn't include wastewater from toilets, bathrooms or non-commercial kitchens or laundries.

There are several options for dealing with wastewater captured from your slipway, hardstand and other work areas:

• Contact the eThekwini Municipality about wastewater pre-treatment and setting up a trade waste agreement which allows you to discharge wastewater into the sewerage system.

• Collect run-off in a storage tank and arrange for a licensed waste contractor to remove it for treatment off-site.

• Invest in appropriate filtration equipment and hold wastewater in a storage tank for reuse in the water blaster.

DISCHARGING EFFLUENT OR TO THE SEWER – LEGAL REQUIREMENTS

You must have an effluent discharge permit from the municipality to discharge trade wastewater/effluent to the sewer system.

Your agreement or permit will set out the discharge conditions for effluent discharge. The Municipality may require you to pre-treat effluent before discharging it to the sewer.

MANAGING SEWAGE FROM VESSELS

The discharge of untreated sewage from vessels is prohibited in all South African Ports

It is strongly recommended that marinas provide pump-out facilities for the safe discharge of sewage from holding tanks. This can increase the marinas business and will protect the environment.

BILGE WATER

The discharge of contaminated bilge water into the port is prohibited. Marinas and boat clubs should promote the use of oil absorbent products on all vessels.

For example, there are many products available for dealing with discharge from the bilge, such as absorbent pillows that retain oil but not water. These can be purchased from most pollution control companies.

To avoid automatic pumps activating and discharging oily water, remove bilge water before slipping a vessel.

EDUCATING YOUR MEMBERS

Keep your members informed about the environmental improvements made to the club or marina. Let them know what is expected of them as members of an environmentally aware club.

Give them a copy of your clubs Environmental Policy and provide simple step-by-step procedures on how to use facilities.

Take the time to show new members and visitors around the marina or club and show them how you have set up recycling and waste systems. Ask them to pass this information on to their families and guests.

Encourage members to be environmentally responsible and dispose of liquid and solid wastes in designated areas. Clearly label waste containers and locate them in convenient areas to encourage use.

KEEPING COSTS DOWN

The following ideas may help reduce your club's running costs:

• Install a rainwater tank. Clean stormwater is also a valuable resource – capture it where possible and use it for watering grounds or connect it to toilet blocks.

• Find out if your wastewater can be treated for reuse.

• Save money by conserving water. Check taps and toilets for leaks and drips. Replace washers where required. Install AAA-rated low-flow taps or tap aerators, dual flush toilets and water-efficient showerheads.

• Investigate the cost-benefit of recycling thinners and cleaning fluids.

WHAT THE LAW SAYS

Environmental laws require that you do not pollute waters or the land. In practice this means that operators of marinas, boat clubs and boat maintenance facilities should:

• Keep oils and hazardous chemicals in bunded and covered storage areas.

• Ensure that any chemical spill or leak is contained and doesn’t enter waterways, the marine environment, stormwater drains or soak into the soil.

• Maintain all plant and equipment in a proper and efficient manner.

• Ensure that dust and other debris do not enter waterways or stormwater drains.

• Ensure all waste is sent to a facility that can lawfully take it.

• Never hose chemical spills down the drain.

Any spills or pollution incidents that cause material harm to the environmental must be immediately reported to TNPA Port Control.

5. MANAGING AIR QUALITY

Dust, fumes and smoke generated by boat maintenance and marina activities can cause air pollution and should be an ongoing management issue.

MANAGING DUST

Removing antifouling build-up from boat hulls is one of the more environmentally challenging tasks performed by boat maintenance facilities.

To reduce dust when removing antifouling and paint make sure you take the following precautions:

• Fit sanding machines with a dust bag or extraction system. Collect dust as close to the source as possible.

• Ensure that no dust leaves your boundary. Because dust is difficult to control, especially on windy days, this really means that no dust should leave your building. An efficient extraction system and effective housekeeping will address this.

• For antifouling removal or sanding on a larger scale, place the boat in an enclosed shed or workshop. If this is not possible, construct an enclosure (tent) with tarpaulins to capture the dust you are generating. A mobile dust extraction system can be connected to these enclosures to extract and capture the dust. After completing the work, vacuum up any remaining dust before removing the enclosure.

• Always use a suitable SABS approved dust mask/respirator when sanding.

• Regularly sweep or vacuum work areas.

REMOVING ANTIFOULING AND PAINT

Antifouling paints are toxic to marine life and can be absorbed by edible fish and shellfish.

The toxicants in antifouling paint can be passed up the food chain from mussels and mud prawns to fish, birds, and humans. The toxins in antifouling paints enter the environment through spillage, sanding, sand blasting, or scraping. Antifouling paint chips and dust left on the ground or driveway can be transported into the water by stormwater runoff.

ABRASIVE BLASTING

If abrasive blasting is required, all wastes generated (e.g. blast agent and paint debris) should be contained and collected. Abrasive blasting can be conducted in commercially built booths, blasting yards or inside temporary enclosures erected on-site.

To manage dust and particles resulting from abrasive blasting, make sure you take the following precautions:

• Ensure the booth or enclosure is properly sealed.

• Use a filtration system that is capable of dealing with the amount of particulates and dust produced.

• Regularly maintain the filtration system and blasting equipment (blast hoses and nozzles) to avoid excessive production of particulates and dust.

• Sweep or vacuum the spent abrasive material and place it in a bin with a closed lid.

NEW TECHNOLOGIES

In recent years new technologies have emerged and better methods are available to the industry. These new systems are clean, contained and environmentally safe. For instance, antifouling removal can be done with a stripper contained within a plastic film.

MANAGING AIR EMISSIONS

APPLYING PAINT

To reduce air emissions, restrict outside painting and re-spraying to minor repair and detailing work and only at times where the weather conditions do not promote the release of pollutants to the air. Consider wind direction and velocity and ambient air temperature.

Consider changing your work practices when applying paint. In order of preference, apply paint by using:

• Rollers or brushes

• Airless spray guns

• High-volume low-pressure spray guns – these reduce the amount of over spray, paint usage, release of volatile organic compounds (VOCs) and odours.

SPRAY PAINTING

If vessel spray painting is required, spraying should be conducted:

• Inside designated structures with ventilation and filter systems.

• At designated shore-side areas or zones away from open water, with temporary structures or plastic sheeting provided to minimise the spreading of overspray.

• In covered slips, with tarps and sheeting installed with a tight seal between the vessel being worked on and the floats or walkway surface.

• Away from the water. If an emergency repair on a vessel is required, use protective sheeting and ensure that it is removed with care to prevent loss of accumulated waste material into the water. Consider your location and neighbours. For example, don’t spray if it is windy or on weekends.

All clubs and boat maintenance facilities in which spray-painting or abrasive blasting or welding takes place must in possession of a valid schedule trade permit from the eThekwini Municipality.

FIBRE-GLASSING

The processes involved in fibreglassing, whether using epoxy, polyester, or vinylester resins for small or big jobs, can release harmful emissions and odour. Ensure you take the following precautions:

• Fibreglassing spray lay-up should be carried out in a booth or enclosure fitted with appropriate environmental controls. Where this is not practical, odours and other emissions must be controlled by other means, including the use of buffer zones to avoid impact on neighbours.

• Store drums, brushes and containers of resin and other chemicals used for fibreglassing in a bunded and covered storage area.

• Place fibreglass mat off cuts that cannot be used in production or the repair job in sealed plastic bags before disposal.

• Implement dust control measures.

• Take special care when decanting resin. The storage containers should be sealed immediately.

WHAT THE LAW SAYS

It is an offence to cause air pollution (which includes dust and odours) through the inefficient operation or maintenance of equipment or handling of materials.

In practice, this means you need to:

• Conduct spray-painting under cover or in conditions that are not likely to result in paint drifting.

• Make sure lids are kept on chemicals containers so vapour cannot escape unnecessarily.

• Never use evaporation as a method of disposing of solvents.

• Control dust by setting up an effective dust collection and extraction system and ensure that no dust leaves your premises.

• Ensure odours generated by your operations are not detectable beyond your boundary. If odours are affecting any person outside the boundary of your premises then you may be issued with a notice requiring you to carry out work to prevent the odour or be open to other regulatory action.

• Open air burning and incineration of wastes is illegal, unless you are expressly permitted to do this by a licence issued in terms of the National Environmental Management: Air Quality act and the Waste Act.

Antifouling removal using a dust collecting sander

6. HAZARDOUS MATERIALS AND LIQUID WASTE

Spill prevention and appropriate storage of chemicals will benefit your staff, members, customers and the environment.

STORING AND USING CHEMICALS

The most common chemicals used by marinas, boat clubs and boat maintenance facilities slipways are thinners, solvents, resins, acetone, acids and antifouling agents.

Fire hazard prevention and Occupational Health and Safety (OH&S) are important considerations affecting how you store, use and dispose of chemicals. You need to comply with the National Environmental Management: Waste Act, Hazardous Chemical Substances Regulations and the Municipal bylaws relating to chemical hazards in the workplace.

Chemicals present a risk, not only to health and safety, but also to the environment. Chemical spills that reach stormwater drains can pollute the harbour, rivers and waterways. Fires involving chemicals can spread toxic fumes.

To reduce risks to the environment:

• Store all chemicals and liquid waste awaiting collection for off-site treatment in bunded and covered areas. Seal the drums, store them upright and have them removed as soon as possible.

• Store each type of chemical in a separate clearly marked container and non-compatible chemicals or materials well away from each other. Inspect storage containers regularly and replace them if they are rusted, damaged or likely to leak. Allow yourself easy access.

• Clearly label each container with the name of the chemical it contains. Keep an up-to date register of all chemicals on site, including the Material Safety Data Sheets.

• Where chemicals are in constant use, place drip trays where leakage is likely to occur.

Regular equipment maintenance and careful handling will help prevent leaks and spills.

• Make sure all staff know about the potential hazards of the chemicals on-site.

LABELS ON CHEMICALS

Make sure staff read the labels on all the chemical products they use. Labels on chemical products help to identify the product, its ingredients, and its hazards or dangers. Labels also contain important health and safety information.

MATERIAL SAFETY DATA SHEETS

A Material Safety Data Sheet (MSDS) is an information sheet about the safe handling, storage, transport and disposal of a material. It is just as important as any tool or piece of equipment on your business. The information on the MSDS can save lives in an emergency and you should:

• Make sure you receive an MSDS for every hazardous substance you buy or use. If you don’t have one for a material, ask your supplier.

• Make sure all relevant MSDS are readily accessible and check they are up-to-date.

• Make sure all staff have read the labels on all the chemical products they use. Labels on chemical products help to identify the product, its ingredients, and the hazards or dangers of the product. Labels also contain important health and safety information.

• MSDS should be in a 16 point format that complies with Annexure 8 of the Hazardous Substances Regulations.

PREVENTING AND CONTAINING SPILLS

Chemical spills can pollute waterways, contaminate soil and make your business open to prosecution and clean-up costs. To reduce the risk of spills:

• Minimise the movement of chemicals or other liquids.

• Fit taps to chemical containers so that hand pouring is not required.

• Where you have to pour by hand, use a funnel.

• Regularly check your fuel tanks for leaks.

• Regularly check fuel lines and bowsers on wharf areas.

BUNDING

Chemicals should be stored in a bunded area to prevent spills reaching waterways or soaking into the ground. Bunding is secondary containment of stored materials.

The main type of bunding for bulk liquids is a solid concrete or brick wall made of any impervious material (i.e. liquids can’t flow through). Bunding must be appropriate for the type of liquid contained, as some chemicals can permeate concrete and brick. Bunded chemical storage units can be purchased for smaller chemical storage needs or bunding can be constructed in situ. The volume of the bund should be large enough to hold the contents of the all the containers or tank plus 10% of its total volume.

Outdoor bunded areas should be roofed to prevent rain entering them and washing pollutants out or rusting metal drums. A bund should have a valve to safely drain and spilled product of rainwater when required and should be regularly inspected and maintained.

Storing chemicals in a bunded and covered area will contain spills.

The following containment practices are recommended:

• Store oils and potentially hazardous liquids on plastic pallets or trays and in a bunded and covered area isolated from stormwater run-off. Make sure spill response materials are on hand at all times.

• If the walls and workshop floor are well sealed, an impervious hump can be installed at all doors of the workshop. Oils and chemicals can be stored anywhere inside a workshop that is fully bunded in this way.

• Any product/chemical spills collected in the bunded area should be pumped or drained out as quickly as possible.

• The liquids waste contained in the bunded area should be collected by a TNPA licenced waste contractor.

• If you drain the bund, don’t forget to close the drain tap or valve.

Store all hazardous liquids, such as paints and solvents, in a properly maintained and operated bunded area with a roof that excludes rain.

DEALING WITH SPILLS

Clear signs outlining spill clean-up procedures and emergency contact numbers should be prominently displayed at your marina, boat club or boat maintenance facility. All chemical and other spills should be cleaned up immediately – no matter how small.

All marinas, boat clubs and boat maintenance facilities should have fully stocked spill kits at all times and have a nominated spill response contractor.

Spill kits should be appropriate for the operation and the materials stored on-site. They should include booms to contain liquid, absorbent pillows and material to block drains, hydrocarbon absorbents and material to absorb chemical spills.

Spill kits should be kept stocked with relevant absorbent and clean-up materials.
If a spill occurs that causes or threatens 'material' harms to the environment, you must immediately inform TNPA.

Under no circumstances should you hose a chemical spill down a drain or into the water.

The general response to spills is:

1. Eliminate the source of the spill immediately if it is safe to do so.
2. Contain the spill. Use the materials in the spill kit to contain the spill and control its flow. If necessary, stop the spill from entering waterways by using a boom, or block the stormwater drain inlets.
3. Inform TNPA Port Control.
4. After referring to the relevant MSDS, clean up the spill promptly. It is important to clean up all spills quickly, even small ones, as they can easily flow into waterways or stormwater drains or be washed into the bay or into drains by the rain.

5. For major spills, call a Spill Response Contractor, inform TNPA Fire, TNPA Pollution Control Department and Port Control relevant government agencies.
6. Store all waste generated from spill clean-up in a sealed vessel (limiting emission of odorous or volatile compounds) and in a bunded and covered area.
7. Contact a TNPA licenced waste contractor to dispose of the absorbents used in the spill clean-up.

Make sure all staff are aware of emergency telephone numbers to call in the case of a spill.

Prepare and practice a spill clean-up plan. Staff should know what to do, where to find emergency equipment and how to use it.

SOLVENTS

Solvents used in strippers and cleaning products evaporate into the atmosphere and contribute to photochemical smog and contaminate land and water. Solvents tend to be highly volatile and flammable.

To reduce risks to the environment:
• Store solvents away from heat, naked flames, direct sunlight, oil or other flammable liquids.
• Avoid unnecessary evaporation and loss of solvents by storing them in a sealed container with a tap (to avoid the need to pour). Keep containers closed when they are not in use.
• Use water-based or biodegradable strippers, cleaners or degreasers wherever possible.

When handling solvents always wear the protective equipment recommended on the MSDS, such as gloves, protective eyewear and respiratory gear. Keep the storage area well-ventilated.

DISPENSING FUEL

If your marina or boat club dispenses fuel, make sure your staff and customers follow correct procedures in relation to health, safety and the environment when refuelling. To avoid the risk of a fuel spill:

• Regularly inspect and maintain fuel storage and dispensing facilities.

• Avoid overfilling, and discourage customers from topping up fuel tanks once the automatic cut-off shows the tank is full.

• Make sure all nozzles cut off automatically when back-pressure reaches a certain level, and cannot be locked in the 'on' position.

• Use drip trays on fuel pumps so spills and leaks cannot contaminate the environment.

• Cover fuel pumps to keep rain out.

• Keep a spill kit, with clear instructions visible, accessible from every pump.

• Fit an emergency shut-off button next to each pump and on the land side of the wharf so that the pump can be stopped easily if the pipe hose fails.

• Develop and implement a fuel spill avoidance plan.

AVOIDING LAND CONTAMINATION

You must not allow any material, including hazardous substances or other chemicals to soak into the ground. For example, the ground should never be used as a means of disposing of unwanted substances. Chemicals can accumulate within the soil and may eventually seep into and degrade waterways or groundwater and may also affect people who come into direct contact with contaminated soil.

Leaking underground petroleum storage systems (including the tanks and pipework) are a significant potential source of soil and groundwater contamination. They often remain undetected until expensive clean-up operations are required. To avoid costly loss of fuel, install leak prevention measures and leak detection devices with all underground storage tanks. For example:

• install double walled tanks and pipework

• implement primary leak detection systems (such as statistical inventory analysis)

• install groundwater monitoring wells.

For the full range of preventative measures refer to the following SANS Standards as amended:

- SANS 10400
- SANS 10108
- SANS 11535
- SANS 10131
- SANS 10089 (PARTS 2 & 3)

In recognition of Part 8 of the Waste Act, site assessment audits are commonly undertaken on industrial land before it is purchased and are likely to detect any contamination that is present. Any contamination will significantly reduce the value of the land, as clean-up costs are often substantial.

When soil and groundwater contamination is identified, special procedures need to be implemented to manage and remove the contamination. For further information refer to the National Norms and Standards for the Remediation of Contaminated Land and Department of Environmental Affairs Framework for the Management of Contaminated Land.

As tenants of TNPA, Clubs and Marinas that operate in the port can be held liable for committing any act that may lead to the contamination of land.

MANAGING HAZARDOUS WASTES

Storing hazardous liquid waste requires extra care. It should be stored in a bunded, covered and secure area so that any spillage cannot enter stormwater drains or gutters (see information on bunding).

If you are a generator of hazardous waste you are responsible for ensuring that it is transported to a facility that is licensed to receive and/or treat that type of waste. Your waste contractor should be able to provide advice on these issues.

To be accepted at a licensed liquid waste facility, hazardous waste must be assessed and classified according to the Waste Classification and Management Regulations (GN36784)

When sending hazardous waste for treatment or disposal, the holder of the waste make sure that:

• The transporter is appropriately licensed by TNPA to remove waste out of the port.

• The waste is being sent to a facility that can lawfully take it.

• You keep all waste manifest and certificates of safe disposal for a minimum of 5 years.

The movement of most hazardous waste must be tracked during its transport to a facility for treatment, recycling or disposal. Services providers disposing hazardous waste are required to provide details of the generator and waste disposed onto an online system called the South African Waste Information Centre (SAWIC).

Generally, if you store more than 80m^3 of hazardous waste you are required to conform the Norms and Standards for the Storage of Waste, 2013.

For more information see the Waste Management Plan for the Port of Durban.

DEALING WITH COMMON TYPES OF HAZARDOUS AND LIQUID WASTES

Marinas, boat clubs and boat maintenance facilities slipways can generate large quantities of hazardous and liquid wastes that are likely to have special storage, handling, transport and disposal requirements. To meet the requirements of the National Environmental Management: Waste Act and its regulations you should:

• Store used engine oils in a bunded tank for collection by a TNPA licensed contractor.

• Store used solvent from the workshop in a sealed drum, until collected, reused or recycled. The drum should be stored in a bunded, covered area. Under no circumstances should evaporation be used to dispose of spent solvents.

• Filter and reuse slipway or hardstand washdown water, or collect and store it for disposal by a waste contractor.

• Provide pump-out facilities to your members so they can dispose of sewage from their boats. You could increase your business by offering to do it for them during the week.

• Provide a covered and bunded area for the collection of batteries.

Contact the eThekwini Municipality to find out if any of your liquid wastes are suitable for disposal to the sewer under an effluent discharge permit (refer to section on water quality).

Liquid wastes that cannot be reused or recycled should be segregated by type. This will help your waste contractor to recycle liquid waste. Mixed waste is more difficult to handle and is usually more costly to treat.

KEEPING COSTS DOWN

The following ideas may help reduce your running costs:

• Mix only enough paint necessary for a job.

• Save excess or unused antifouling paint for future uses.

• To cut your waste bill, check with your chemical supplier to see if empty containers can be returned.

• Use the ‘first in first out’ procedure for chemical supplies. Date the chemicals you buy and use them in the order in which they arrive. This will conserve their quality and minimise waste from out-of-date chemicals.

• Collect used thinners and solvents in a suitable container and reuse them, or arrange for a liquid waste contractor to collect them from your site for recycling. Save money by purchasing recycled solvents for the general clean-up of spray equipment.

• If you use a lot of solvents, consider installing a solvent recycling unit on site.

• To avoid loss of fuel, ensure fuel pipes are adequately protected against accidental damage and are fitted with automatic shut-off equipment.

WHAT THE LAW SAYS

Environmental laws require that marina, boat club and boat maintenance facilities do not pollute waters or the land. In practice, this means you should:

• Ensure that pollutants from your operations and leaks or spills of chemicals are contained and cannot enter the bay, waterways and the stormwater system.

• Store oils and chemicals in properly maintained bunds.

• Report spills or leaks causing or threatening material harm to the environment to TNPA Environment Department.

• Ensure liquid waste is sent to a facility that can lawfully take it.

7. SOLID WASTE AND RESOURCE RECOVERY

Waste disposal can be expensive and businesses able to reduce the volume of waste sent to landfill enjoy considerable cost benefits.

MANAGING WASTES

The best way to manage waste is to minimise the quantities of waste generated in the first place.

AVOIDING WASTE

Waste is best avoided in the first place. To reduce waste in your club:

• Investigate how you can reduce the amount of raw materials you use.

• Avoid spoilage of raw materials. For example, consider whether savings from buying in bulk outweigh the costs of spoilage. Would ‘just-in-time’ purchasing yield similar savings? Could storage of raw materials be improved?

• Use chemicals on a first-in-first-out basis to reduce their chance of becoming out-of-date.

• Reduce waste disposal costs by purchasing products with less packaging.

• Service equipment regularly to reduce spoilage from equipment malfunction.

The best ideas for reducing use of materials will come from the people who know your club better than anyone else – you and your staff.

Encourage your staff to think about this and put forward their suggestions.

KEEP REUSING MATERIAL

When avoiding waste is not possible, consider reusing waste in your business.

• Reuse roller trays on your slipway. Use plastic trays and have one for each antifouling colour used. When you get a build-up of dried paint in the tray, flex the tray to break the bond between the paint and tray, remove the dry paint and start over again.

• Reuse paint brushes. Keep one for each colour. If you store the brush in a tin of water, the paint on the brush will not harden and the same brush can be reused time after time.

RECYCLING WASTE

There are companies like Collect-A-Can Consol and Mpact who will supply recycling bins for glass, paper, plastic and aluminium and collect them without charging you.

Your members will be in the habit of recycling at home so encourage them to do the same on the marina.

• Marinas with public access should consider providing waste and recycling bins with lids to avoid contamination of waterways.

Place recycling bins where they are easily accessible – on the way to the car park, where people get off their vessels, next to the general waste bin or close to places where people eat.

• Label litter bins to avoid contamination and ensure that bins are emptied regularly.

• Encourage staff to recycle by placing any money generated from recycling into a staff amenity fund and asking them what they would like it spent on.

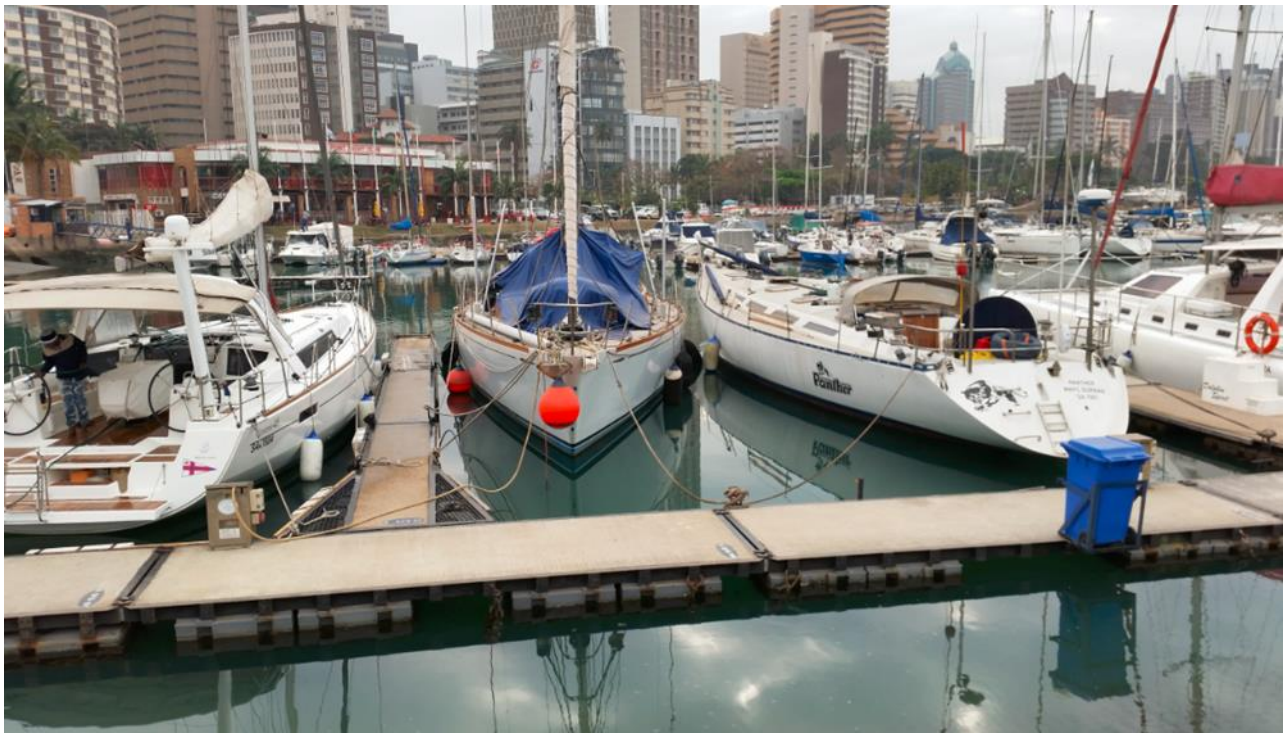
• Send a newsletter to your members telling them about your clubs commitment to the environment and asking them to help by using the recycling bins.

Investigate local recycling opportunities:

• Assess all wastes generated in your business, including paper, cardboard, toner cartridges, glass, plastic bottles and drink cans.

• Contact Durban Solid Waste about recycling services.

For more information see the Waste Management Plan for the Port of Durban.



DISPOSING OF WASTE

To keep costs down, consider waste disposal as a last resort.

• Material that you put in your waste bin will generally go to landfill. Place only dry, solid, inert wastes in general waste bins. Do not put liquid or hazardous waste in such bins.

• Collect all solid wastes that cannot be reused or recycled and dispose of them appropriately. These wastes may include scrapings of marine growth, rags that can't be cleaned, empty containers that cannot be reused, brushes and blasting material.

• Collect used abrasive blasting material and paint chips (particularly if they contain poisonous antifouling or lead-based paints) by sweeping or vacuuming, and reuse the abrasive material where possible.

• Solid wastes, such as sweepings, filters, spent abrasive material, containers and rags¸ contaminated with chemicals such as antifouling and paint, are generally classified as hazardous waste. They must be transported to a facility that is licensed to receive and/or treat that type of waste. For more information contact the Department of Environmental Affairs www.environment.gov.za

• Never burn wastes on site, not even timber wastes, unless you are expressly permitted to do so by TNPA and the Municipality. The vapours released during the burning of some forms of chemically treated wood is extremely harmful to human and the environment.

WHAT THE LAW SAYS

Under the National Environmental Management: Waste Act, penalties of up to R10 Million apply for unlawful disposal of waste. Both the person who dumps the waste and the person who owned the waste may be liable – so it's important that you make sure your waste is managed, transported and disposed of appropriately.

Other legal considerations include:

• Do not bury wastes or pour liquid wastes onto the ground.

• Wastes awaiting removal should be stored so that it cannot be blow away or washed into drains or the bay.

8. MANAGING NOISE

Noise generally becomes ‘pollution’ when it affects wildlife, contributes to hearing loss or if someone finds the noise offensive.

The majority of the boat clubs in the Port are located within the Port’s Industrial Zone where some level of noise is considered acceptable. However some clubs are located in close proximity to residential area such as those along the Victoria Embankment were noise levels should be controlled.

Typical noise issues for neighbours include:

• Overall noise from your operation – such as vehicle and boat movements, sanding,

grit blasting, shouting, public address, filling and emptying waste bins (especially if early in the morning) or machinery noise generated inside or outside buildings (grinding and cutting).

• Specific units or machines located outside buildings and close to neighbours, such as air conditioners, air compressors, extraction systems and fans.

• Rattling or ringing that can sometimes be generated from exhaust stack vibrations.

• Noise made by your members – such as idling and engine revving.

IMPROVING NOISE MANAGEMENT

To improve noise management:

• Consider your neighbours. Restrict your operating hours during the week to normal business hours. Remember that background noise levels can be reduced after normal business hours and the noise of your operation could therefore seem louder to neighbours.

• If there is a reason to work outside your normal work hours, call your immediate neighbours and let them know when it will happen and how long the job will take. If

neighbours know what is happening, and know that you have considered them, they are less likely to complain.

• If a particular job or machine generates noise, consider whether you are carrying out this activity in the right location and using all practical means to reduce the noise. Can the job be moved indoors to lessen the impact? Is there another machine you can use which is quieter?

• Make contact with your neighbours – build a working relationship so that any concerns about your operations that may arise in the future can be readily addressed.

However, agreement from affected neighbours does not mean that you can operate outside of the approved operating hours in relevant consents or licences.

• Avoid excessive idling and revving of engines.

• Where possible, carry out sanding and grinding activities in an area where noise can be muffled, but check occupational health and safety requirements first.

• Fit effective inlet and exhaust silencers to air compressors.

• Consider introducing noise reduction measures such as shielding or muffling for noisy equipment and machinery.

• Find out about low-noise options when purchasing new equipment.

• Educate your members about noise on the marina. Ask them to keep noise to a minimum after hours and to pass this on to their guests. Also encourage customers to avoid excessive idling and engine revving.

• Erect a simple sign on the land end of the marina saying something like ‘Consider our neighbours – please leave quietly’.

• Take a regular walk around your premises and the neighbouring area to monitor noise from your club activities.

KEEPING COSTS DOWN

Equipment that is making more noise than usual could be running inefficiently and using excess electricity or fuel. Make sure your equipment is regularly serviced – you'll benefit from safer, quieter and more efficient performance, and reduced energy costs.

WHAT THE LAW SAYS

Regulation and management of noise dealt with under the National Environmantal Management: Air Quality Act (NEM:AQA).

- In the NEM:AQA, the noise control provisions are mentioned in Section 34:

  "(1) The minister may prescribe essential national standards –

  (a) for the control of noise, either in general or by specific machinery or activities or in specified places or areas; or

  (b) for determining –

  (i) a definition of noise; and

  (ii) the maximum levels of noise.

To date, no national standards regulating noise have been prescribed, however noise levels are assessed against the South African National Standards (SANS 10103:2008)

Chapter 3 of the eThekwini Municipal Bylaws state that:

> A person commits an offence if in a street or public place or on premises he by act or omission causes or creates a nuisance or allows a nuisance to arise or exist in circumstances which are under his control; provided that the aforegoing shall not apply to the extent that a person acts lawfully in the exercise of a right or in the performance of a duty.
>
> (2) Without limiting the generality of the provisions of subsection (1) the following shall constitute nuisances thereunder:
>
> (a) the reproduction of noise or vibration which arises from or is caused by the operation or use of equipment or machinery;
>
> (b) the production of harmful, noisome or offensive dust, fumes, gases, smells or smoke which arises from or is caused by any act or activity, the operation or use of equipment or machinery or the condition of any property, movable or immovable;
>
> (c) the production of noise by or arising from or caused by the operation or use of any device which produces, reproduces or amplifies sound;
>
> (d) the production of noise by the striking of any object;

The eThekwini is responsible for dealing with noise complaints about your premises.

Check your lease agreement and municipal bylaws for conditions relating to noise and hours of operation. If necessary, TNPA staff and municipal officials can work with you and your neighbours to help resolve noise issues. However, municipal officials can also issue notices and directions to reduce noise from your premises.

9. BRINGING IT ALL TOGETHER – PLANNING

This section is about the use of good planning to help you minimise risk and achieve best practice.

There are many steps along the path to best practice. Here are some suggestions:

• Make a commitment to yourself and your marina or club to consider the environmental impact of your activates in your day-to-day operations. This can apply to simple things such as the selection of lights, fitting sanding machines with dust bags or providing tarpaulins to capture debris from serviced vessels.

• Commit yourself to increasing your environmental awareness on this guide and providing staff with time to read it can help in this process.

• Create an environment team or committee to identify environmental issues and propose solutions, or identify someone as a ‘champion’ who can foster the adoption of good environmental practices.

• Make contact with your local municipality and industry association to tell them what you are doing. They may have some advice or may know of programs that could help you.

• Make contact with your neighbours. Build a working relationship so that any concerns about your operations that might arise in the future can be readily addressed.

DOCUMENTING YOUR PROGRESS

There are several advantages to planning and documenting measures to improve the environmental performance of your business.

• Directors and managers may have a defence in the event of an environmental pollution offence committed by their company, if they can demonstrate ‘due diligence’ to prevent the offence.

• Taking active steps to prevent pollution occurring means it is less likely that you will commit an environmental offence and may reduce your culpability if an offence does occur. If an environmental incident occurs on your site, providing documentation that shows that you have been acting responsibly and actively trying to avoid such incidents could reduce your culpability.

• Potential members or customers may have a preference for clubs that are able to demonstrate their environmental credentials.

• Planning and reviewing allows you to be systematic in improving your environmental performance and documenting your cost savings.

TYPES OF DOCUMENTS YOU CAN KEEP

If you are already considering environmental issues on your site, regularly checking and maintaining your equipment to minimise pollution, and planning improvements, then why not document it?

Helpful documents include:

• An environmental policy

• An environmental action plan

• Records of staff training, staff inductions, waste disposal records and maintenance and inspection schedules.

An environmental policy could be as simple as a one paragraph or one page statement that articulates your commitment to complying with environmental laws and implementing best practice wherever possible.

An environmental action plan sets out environmental risks and opportunities and what is being done to address them. It doesn't have to be a large document and could be part of your Occupational Health and Safety documentation. The important thing is that somewhere you have a document that:

• Contains actions for environmental improvement (both ongoing and planned).

• Indicates who is responsible for carrying out each action.

• Indicates when (by what date or how often) these actions will be carried out.

• Contains quantified reduction targets (in volume, weight or costs) for resource efficiency savings and other environmental impacts.

10. USEFUL CONTACTS

Port Control	031 308 8260/ 031 3088261
TNPA Fire Department	031 361 6463
eThekwini Municipality - All engineering complaints including Spills and Pollution	080 131 3013
TNPA Pollution Control Manager	031-361 6475 / 0834522986
State Ambulance	10177
KZN Wildlife Anti- Poaching Hotline	083 380 6298
KZN Wildlife District Conservation Manager	082 559 2845
Department of Environmental Affairs Environmental Crimes Hotline	080 020 5005
Illegal Dumping	031 303 1665/ 031 311 8804
TNPA Environment Department	031 361 8045 / 083 700 4085 031 361 8133 / 083 412 8388
SAMSA - All hours duty phone	076 133 7799
NSRI	082 990 5948 / 031 361 8567