

South Australian recreational boating

Safety handbook

RESPECTING OUR WATERS



Government of South Australia

Department for Transport,
Energy and Infrastructure

The South Australian recreational boating safety handbook is published by the Department for Transport, Energy and Infrastructure (DTEI).

The information in the Handbook is based on the provisions of the *Harbors and Navigation Act 1993* (the Act) and associated regulations, which include reference to the *International Regulations for Preventing Collisions at Sea 1972* [also known as the Prevention of Collisions at Sea Regulations (COLREGS)], and *River Murray Traffic Regulations*. It is to be used only as a guide.

Copies of the Act and Regulations are available from:

Service SA, Telephone: 13 23 24
101 Grenfell Street, Adelaide

Or can be downloaded from:
www.legislation.sa.gov.au

Copies of this handbook are available from: any Service SA customer service centre (refer chapter 13).

Or can be downloaded from:
www.sa.gov.au/boatingmarine

DTEI is South Australia's marine authority responsible for many functions associated with the use of the State's navigable waters.

DTEI does not sponsor, endorse or necessarily approve any products or services advertised in this handbook.

DTEI gratefully acknowledges the support and assistance of: Primary Industries and Resources SA; Tourism SA; Transport Safety Victoria; Marine and Safety Tasmania; Western Australia Department of Transport; Maritime Safety Queensland; New South Wales Maritime; St John South Australia and Fire Protection Association Australia, in granting permission to use information and images contained within this handbook.

A fresh look at safe boating



Some people might say that being safe out on the water is hard work given all the rules and regulations in place—but with

this issue of the Recreational Boating Safety Handbook we have refreshed and redesigned the entire publication to make it easier to read and use than ever before.

The overriding theme to any law that regulates what you do on the water is safety; we just want you to be as safe as possible while you enjoy the many pleasures of recreational boating. Everyone is responsible for thinking about boating safely and knowing the rules while skippers also ensure vessels are properly registered and seaworthy.

To that end, we have completely updated this handbook with you, the recreational boater, in mind. It is now a simpler, clearer and more logical way for you to learn, remember and act on the many ways that skippers, passengers and other water users can think and act safe when out on the water.

Complementing this book is our website at www.sa.gov.au/boatingmarine and the online version of *On Deck* that will keep you up-to-date with the latest happenings and news in marine safety.

I encourage you to read this handbook regularly to keep its contents fresh in your mind and safe boating in your actions. We recommend that you stow it in your boat and have a flick through each time you go out—it's always going to be relevant and useful for your next boating trip.

Safe boating.



Government of South Australia
Department for Transport,
Energy and Infrastructure

Brian Hemming
Director, Transport Safety Regulation

Contents

Introduction	3
Common marine terms	4

1. Licensing & registration 11

Boat operator licensing	12
Motor vessel registration	15
Hire and drive business licensing	18
Chapter 1. Self-check questions	19

2. Planning & preparation 21

Choosing the right boat	22
Pre-season maintenance	23
Pre-trip checks	27
Towing and launching	29
Post-trip maintenance	30
Chapter 2. Self-check questions	30

3. Safety on the water 31

Let someone know	32
Your duty of care	33
Boating with children	34
Speed limits	35
Loading for stability	36
Fuelling and fire prevention	38
Alcohol and drugs	39
Chapter 3. Self-check questions	39

4. Safety equipment 41

Checklists - what you need to know and where	42
Required safety equipment	44
Standards and features	48
Chapter 4. Self-check questions	56

5. Weather & other potential hazards 57

Before you go out	58
On the water	59
Chapter 5. Self-check questions	61

6. Navigation 63

The international rules	65
Anchoring restrictions	67
Interacting with big ships	68
Navigating in restricted visibility	69
Chapter 6. Self-check questions	70

7. Buoys, marks, beacons, signals & signs 71	
Flags to watch for	72
Buoyage and navigation marks	73
Signals on vessels	78
Chapter 7. Self-check questions	87
8. Anchoring, mooring & berthing 89	
Anchoring & mooring	90
Berthing at a wharf or jetty	91
Chapter 8. Self-check questions	95
9. Emergency action 97	
Your obligations	98
Common situations	99
Abandoning your vessel	102
Distress signals	102
First aid afloat	105
Search and rescue (SAR)	107
Towing a vessel	109
Chapter 9. Self-check questions	109
10. Navigating South Australian rivers 111	
Local knowledge	112
Inland waters	113
Chapter 10. Self-check questions	116
11. Special activities 117	
Personal watercraft	118
Waterskiing	122
Chapter 11. Self-check questions	123
12. Protecting the environment 125	
Marine wildlife	126
Aquatic reserves and marine parks	127
Avoiding pollution	127
Historic shipwrecks	128
Riverbank erosion	128
Watching our borders	129
Chapter 12. Self-check questions	129
13. Customer service & further information 131	
Service SA customer service centres	132
For other enquiries	134
Publications	139
Answers to self-check questions	139
Index	140

The South Australian recreational boating safety handbook is an essential reference for the leisure and pleasure boater in South Australia. It covers the things you have to know, from licences and registration, through safe vessel operation to dealing with emergencies afloat, and where to find more information to increase your boating knowledge and skill.

Introduction

The Handbook sets out the state's boating safety laws, which must be followed by everyone who goes out on the water in—or on—anything that can move through water—whether in a large cruiser, small dinghy, canoe, or on a personal watercraft, surfboard, surf kite or waterski.

Anyone who operates a vessel with an engine in South Australia, including a personal watercraft (PWC), needs a boat operator's licence. This applies regardless of the type or size of vessel or engine, or even if the engine is in use at the time. The Handbook contains all the information needed to pass the exam for your boat licence. Questions on the chapter content appear at the end of most chapters to help you learn. The answers are on page 139.

The recreational vessel operator—the 'skipper'—and the registered owner are both responsible for passenger safety and for ensuring that the vessel is seaworthy.

This starts before you go out on the water, in making sure the vessel is suitable for your trip, has the necessary safety equipment and meets all other regulatory requirements, and doesn't end until you and your passengers are safely back on shore. In between there are many things to consider, and this handbook has been written to cover them.

In South Australia, DTEI is responsible for marine safety education, advice and information, and enforcing boating safety laws.

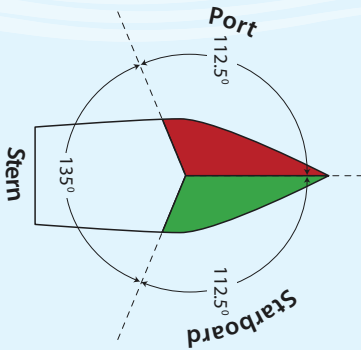
On water this is through the DTEI Transport Safety Compliance Officers, with contributions and support from local government officers, Primary Industries and Resources SA (PIRSA) Fisheries Compliance Officers, and South Australia Police.

These authorities aim to ensure that South Australia's waterways are safe and enjoyable for everyone.

Happy boating!

Common marine terms

This section contains definitions of the terms that are used in this handbook. Boating, like many other activities, has its own language: it's important that you understand some of the frequently used terms.



Abaft

A position towards the stern or rear of the vessel in relation to another object on the vessel. Not behind the vessel. For example, the stern is abaft the beam.

Abeam

Abreast of, or at right angles to, the fore and aft line of the vessel.

Adrift

Loose, not on moorings or a towline, or underway.

Aft

Towards the stern or rear of the vessel.

Astern

Behind or at the rear of the vessel.

Astern propulsion

Put the engine in reverse, to slow the vessel or go backwards.

Australian Builders Plate (ABP)

The Australian Builders Plate (ABP) has been adopted nationally to reduce the number of incidents caused by overloading vessels. Unless exempted by the *Harbors and Navigation Regulations 2009* recreational vessels built after 4 February 2008 must have an ABP affixed at the time of original sale (refer chapter 1, Licensing and registration, Motor vessel registration).

Authorised person

A person appointed by the Chief Executive Officer of the Department for Transport, Energy and Infrastructure (DTEI) to enforce the *Harbors and Navigation Act 1993* and associated regulations, or a police officer.

Bank

The sloping border (edge or shore) of the course of a river or lake.

Bar

A ridge of sand, silt, mud or gravel near the water's surface, which is caused by currents particularly at the entrance to a river, creek, lake or harbour. Bars can greatly change water and wave conditions, so extreme care is necessary when crossing them.

Basic flotation

A flotation system that meets Australian Builders Plate (ABP) requirements that means that the boat will float in some form if swamped. If the boat has capsized, it will remain afloat for you to possibly cling to the upturned hull. With basic flotation the swamped boat may float at any attitude.

Beam

Width at the widest point of the vessel.

Berth

- 1) A place where a vessel is secured alongside a jetty or wharf.
- 2) A space or bunk used by passengers or crew as sleeping accommodation on a vessel.

Bilge

The compartment at the bottom of the hull of a ship or boat where water collects so that it may be pumped out.

Bitt/s

A strong post of wood or metal projecting—usually as a pair—above the deck of a vessel, which is used to secure cables and towing or mooring lines.

Blood alcohol concentration (BAC)

A measurement of alcohol in the blood. A BAC of .05 means there is .05 grams of alcohol in each 100 millilitres of blood.

Boat

Any type and size of water craft or vessel used in South Australian waters. For the purposes of this handbook, a 'recreational boat' is one that is being used for recreational or non-commercial purposes.

Boat operator's licence

The licence that is required in South Australia to operate a recreational vessel that is fitted with an engine, of any type or size, whether or not the engine is being used.

Bombora

A shallow area where waves may break.

Bow

The front end of the vessel.

Capsize

Of a vessel, to overturn.

Cardinal points

The four main points of a compass, that is, north, south, east and west.

Channel

A navigable route through a body of water, or marked waterway.

Chart datum

The lowest predictable level that the tide is likely to fall to.

Cleat

A piece of wood or metal consisting of a bar with horizontal arms, around which ropes are wound to fasten them.

Coast

In this handbook, for safety equipment carriage purposes 'coast' refers only to the coast of the mainland or Kangaroo Island. No other island's coast in South Australia is used to measure the distance out to sea, for the requirement to carry safety equipment or for the operation of a vessel.

Current

The horizontal movement or flow of water. Currents can be either tidal or non-tidal.

Dead ahead

Directly or straight in front of a vessel's bow.

Device

For the purposes of this handbook, a device is an object that is attached by a rope or by other means, in or on which up to three people may sit to be towed directly behind a motorboat. Examples of devices include ski biscuits and tyre tubes, but not waterskis or kneeboards. Devices generally have little or no means of controlling the direction in which they travel.

Direct supervision

A boat licence holder directly watching over and accompanying a special permit holder or unlicensed person while that person operates a recreational motorboat. The licensed person must at all times be able to take over the control of the motorboat should the need arise. This is not possible when operating a personal watercraft (PWC).

Downstream

In the direction of the flow or current of a stream or river; towards the sea.

Draught

The minimum depth of water that a vessel needs to float.

DTEI

Department for Transport, Energy and Infrastructure.

Ebb tide

The falling or run out of the tide.

EPIRB

An EPIRB (Emergency Position Indicating Radio Beacon) is a radio distress beacon that, when activated, transmits a signal via satellite to a ground station to assist emergency services to locate a vessel in distress. In Australia, only a 406MHz EPIRB is acceptable.

Fairway

Navigable water in a channel, harbour or river.

Flood tide

The rising or run in of the tide.

Following sea

Sea travelling in the approximate direction as the vessel's course.

Fore

Situated at or towards the bow, or front, of a vessel.

Freeboard

The distance between the surface of the water and the gunwale.

Give way

Stop, slow, go astern or change course to keep clear of another vessel.

Go astern

To move stern-first, or backwards, through the water.

Gulf of St Vincent

The waters in that gulf north of a line drawn from Troubridge Point on Yorke Peninsula to Rapid Head on Fleurieu Peninsula.

Gunwale (Pronounced gunnel)

The top edge of a vessel's side.

Heading

The direction in which a ship's bow points at any given time.

Headway

The forward motion of a vessel.

Heave to

To steer into the wind and sea, making minimum headway.

Heel

Of a vessel, to stoop or lean to one side, usually as a result of wind or wave action. Also, action of a large vessel or smaller twin-hull vessel when changing course.

Helm

The wheel or tiller controlling the rudder.

Hire and drive business licence

A licence issued by DTEI that is required to run a business offering houseboats, personal watercraft (PWC) or dinghies (up to 5 metres long) for hire. Such vessels are referred to as hire and drive vessels.

Hire and drive vessel

A houseboat, personal watercraft (PWC) or dinghy (up to 5 metres long) that is offered for hire under a hire and drive business licence issued by DTEI.

Hull

The main body of a vessel.

Hull identification number (HIN)

A unique set of characters that is permanently linked to the hull of a vessel and performs a similar function to a vehicle identification number on a motor vehicle compliance plate.

Impeller

The rotating part of a centrifugal pump, turbine, etc.

Inadequate flotation

Vessel flotation that does not meet ABP requirements of either level flotation or basic flotation.

Inland waters

Any navigable waterways or bodies of water in the State that are not tidal; for example, the River Murray and Lake Eyre (when filled with water) are inland waters, but not the Coorong or Port River because they're tidal.

Isophase

Of a navigation light, to flash on and off in equal measure; i.e. for the light and darkness periods to be of the same length.

Knot

A measurement of speed applied to wind or to vessels. One knot equals one nautical mile per hour (1.852 kilometres per hour).

Lanyard

A short rope or cord for securing or holding something, such as a bailer to a vessel.

Leads

Marks used in channels and entrances which, when in line, indicate the centre of the channel.

Lee shore

The shore onto which the wind blows.

Leeward

The side of the vessel opposite to that from which the wind blows; the downwind side.

Length of vessel

The hull length should be measured from the point of the bow to the transom (the flat stern of the vessel), excluding bowsprits, outboard motors and other attachments. Any part of the vessel that extends beyond these points and contributes to the vessel's buoyancy should, however, also be included in the vessel length, for example, pontoons on inflatable vessels or houseboats.

Level flotation

Vessel flotation that meets ABP requirements, meaning that the boat will continue to float in a level position if swamped and will be prevented from capsizing in calm water. This will allow you to remain in the boat and bail the vessel to remove the water. Level flotation does not provide a self-righting capacity.

Licence

This handbook refers to two licences: the South Australian recreational boat operator's licence (or interstate equivalent boat licence), and the hire and drive business licence. In South Australia a boat operator's licence allows the holder to operate any recreational vessel that is fitted with an engine.

Lifejacket

South Australian legislation (the *Harbors and Navigation Act 1993* and associated regulations) refers to a Personal Flotation Device (PFD) Type 1, Type 2 or Type 3. These devices may also be commonly known as lifejackets (PFD Type 1) or buoyancy vests (PFD Type 2 or 3).

Lock

An enclosed, gated chamber on a canal, river, etc. for raising or lowering a vessel from one waterway level to another. Most commonly associated with weirs and barrages on the River Murray.

Making way

A vessel underway and moving through the water, using sail or motor.

Marine radio

A radio designed for two-way communication on approved marine frequencies/channels, for example, VHF, MF/HF or 27 MHz.

Masthead light

A white light placed over the fore and aft centreline of the vessel showing an unbroken light over a 225 degree arc of the horizon and fixed so as to show the light from directly ahead to 22.5 degrees abaft the beam on either side of the vessel.

Moor

To secure a vessel to the shore, a buoy, wharf or jetty, or to anchor with two or more anchors.

Mooring

A pole, jetty, anchored chain or other structure to which a boat or vessel can be securely tied or anchored.

Motorboat

Any boat or vessel that is being propelled by an engine (irrespective of size), whether or not the engine is the main means of propulsion. A sailing boat being propelled by an auxiliary engine is regarded as a motorboat or motor vessel.

Nautical mile

The international unit of distance over water. One nautical mile is equal to 1.852 kilometres.

Navigation rules

The regulations governing the movement of vessels in relation to each other, otherwise known as steering or sailing rules. The 'rules of the road at sea'.

Occluding

Of a navigation light, to flash on and off, lighting for longer than the period of darkness; similar to a lighthouse light.

Operator

The person in charge (control) of a recreational vessel that is underway or at anchor, but not when the vessel is moored. Sometimes also referred to as the Skipper.

Personal flotation device (PFD)

Also known as a buoyancy vest or lifejacket, an approved PFD Type 1, Type 2 or Type 3 must be carried or worn for each person on board most types of recreational vessels ([refer chapter 4, Safety equipment](#)).

Personal watercraft (PWC)

A device that: is propelled by a motor; has a fully enclosed hull; is designed not to retain water if capsized; and is operated by a person who sits astride it or stands or kneels on it. PWC are often more commonly known by their brand names, including Jet Ski®, Sea-Doo®, and WaveRunner®. The minimum age for operating a PWC is 16 years.

Planing

A vessel is said to be planing, or 'operating on the plane' when it is essentially moving over the top of, rather than through, the water.

Port side

Looking forward from the stern, the left side of a vessel. A red sidelight is displayed on the port side when the vessel is operating at night or in poor visibility.

Power-driven vessel

Refer 'Motorboat'.

Protected waters

In South Australia, all inland waters excluding Lake Albert and Lake Alexandrina.

Recreational boat

For the purposes of this handbook, a recreational boat is one that is being used for recreational or non-commercial purposes, or for purposes that are not solely industrial or scientific.

Registrable vessel

Any vessel fitted with an engine that is used for recreational purposes. Also commonly referred to as a motorboat, motor vessel, motorised vessel, power-driven vessel or powerboat. These vessels must be registered and must only be operated by a person holding the appropriate boat operator's licence or special permit.

Note: some commercial vessels are commercially registered; however this registration doesn't allow them to be used for recreational purposes.

Sailing vessel

A vessel that is operating only under the power of sail.

Scope

The ratio between the length of anchor line let out and the depth of water.

Sea anchor

Anything that can act as a source of drag in the water, to stabilise a boat in heavy weather or offset the effects of wind, eg. a bucket or life raft dragged behind the vessel.

Seaworthy

Of a vessel, to be adequately and safely constructed and equipped to meet sea conditions, including safety equipment appropriate to where it's being operated.

Semi-protected waters

Waters inshore of a line 2 nautical miles seaward of the low water mark of the coast of the mainland or Kangaroo Island, or the banks of Lakes Alexandrina and Albert.

Shore/coast

The terms 'shore' or 'coast' in this handbook refer only to the coast or shore of the mainland or Kangaroo Island. No other island's shore or coast in South Australia is used to measure the distance out to sea for the use of safety equipment or the operation of a vessel.

Sidelights

Lights to be used at night when underway, showing an unbroken light over an arc of 112.5 degrees from directly ahead to 22.5 degrees abaft the beam.

Skier/waterskier

A person who is being towed in any way behind a powered vessel, other than a person on a device.

SOLAS

Acronym for 'Safety Of Life At Sea'. SOLAS lifejackets are those designed for use far out to sea.

Spar

A stout pole such as those used for masts, and upon which buoyage marks may be placed.

Special permit

The special permit authorises a person aged 12-15 years to operate a recreational vessel fitted with an engine, under certain conditions.

Speed

Speed is measured in knots. One knot equals one nautical mile/hour, or 1.852 kilometres/hour.

Spencer Gulf

The waters north of a line drawn from Cape Catastrophe on Eyre Peninsula to Waterhouse Point on Thistle Island and then to Corny Point on Yorke Peninsula.

Squall

Sudden, violent wind often accompanied by rain.

Standards

All equipment listed in this handbook must meet the standards listed in the *Harbors and Navigation Act 1993* and associated regulations ([refer chapter 13](#)).

Stand on

To maintain speed and course during a meeting, crossing, or overtaking situation.

Starboard side

Looking forward from the stern, the right hand side of a vessel. A green sidelight is displayed on the starboard side when the vessel is operating at night or in poor visibility.

Stem the tide

Go forward, against the current.

Stern

The back or rear of a vessel.

Sternlight

A white light placed as near as practicable to the stern, showing an unbroken light over a 135 degree arc of the horizon and fixed to show the light 67.5 degrees from directly aft on each side of the vessel.

Supervision

Refer 'Direct supervision'.

Swamping

Sinking or filling (a vessel) with water.

Tell-tale

Generally outboard motors—as well as some inboard motors—use the water through which the vessel is travelling to cool the motor and stop it overheating. The 'tell-tale' allows for a stream of water to be seen trailing (in most cases) from the engine as a sign that water is circulating through the engine cooling system.

Tender

A ship or boat used to attend a larger one, especially to supply goods and provisions, convey orders, or carry passengers to and from shore.

Transom

The stern cross-section of a square-stern boat.

Trim

The balance of a vessel, both fore and aft and laterally (that is, side to side), as it sits in the water. For example, 'equal trim' means evenly balanced fore and aft; 'trimmed by the stern' means the stern sits lower in the water than the bow.

Underway

Not at anchor, tied to shore or a buoy, or aground. If you are drifting you are underway.

Unprotected waters

Waters offshore of a line 2 nautical miles seaward of the low water mark of the coast of the mainland and Kangaroo Island, or the banks of Lakes Alexandrina and Albert.

Upstream

In the opposite direction to the flow, or current, of a river or stream; towards, or in, a higher part of the stream; towards inland.

V distress sheet

A fluorescent orange-red coloured sheet (1.8 metres by 1.2 metres) with a large black 'V' printed in the middle. Used for signalling distress.

Vessel

Any type of transportation on water, including small boats, large ships, sailboards, surfboards, surf kites, waterskis or other similar devices on which a person rides through the water.

Wake

The track left on the water's surface by a moving vessel.

Wash

The swell caused by a vessel moving through water.

Whistle

Any sound signalling device capable of producing the sound signals required by the *Harbors and Navigation Act 1993* and associated regulations (refer chapter 13).

Windward

The side of a vessel that is facing into the wind; the upwind side.

Yaw

To swing, swerve or steer off course.