



Maritime safety incident statistics

Maritime Safety Victoria
July 2014 to April 2015

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Contents

Contents	3
Introduction.....	4
Reporting requirements in Victoria	4
Explanatory notes.....	4
Changes to data collected.....	4
Legislative changes	4
Marine incident definition.....	4
Data definitions.....	5
Additional incident data definitions	7
Maritime fatalities and serious injuries	9
Fatalities	9
Further information	9
Serious injuries.....	10
Further information	10
Marine incidents - recreational	12
Recreational incidents by incident type.....	13
Marine incidents - commercial.....	14
Commercial marine incidents by incident type	15
Recreational disablements	16
Recreational disablements by vessel type	17
Waterways incident analysis	18
Marine incidents by waterway type	18
Recreational marine incidents by waterway type	20
Commercial marine incidents by waterway type	22

Introduction

Reporting requirements in Victoria

Victoria's marine operators are required to report certain types of marine incidents to Victoria Water Police under the *Marine Safety Act 2010* (Vic) (MSA).

Under section 173(1)(i) of the *Transport Integration Act 2010* (Vic) one of the functions of the Director, Transport Safety, is to 'collect information and data about, and commission and sponsor research into, transport safety matters'. Transport Safety Victoria (TSV) uses the data it collects from marine operators to monitor trends and safety risks in the marine environment across Victoria, and identify regulatory interventions accordingly.

Under sections 88 and 89 of the *Marine Safety (Domestic Commercial Vessel) National Law Act 2012* (National Law) the owner or master of a domestic commercial vessel or regulated Australian vessel, other than a vessel that is a customs vessel, that is involved in a reportable incident must report, in writing and without delay, the full particulars of the incident to the Australian Maritime Safety Authority (AMSA), the national regulator, as soon as reasonably practicable.

Although not a specific requirement of this legislation, recreational incidents involving a request to Victoria Water Police for search and rescue assistance are reported to TSV by Victoria Water Police through the Marine Safety System.

Explanatory notes

Changes to data collected

This report is published quarterly. Data is adjusted to reflect new information that comes to light during the reporting period.

Legislative changes

The introduction of the MSA on 1 July 2012 has had the expected and desired result of an increase in marine incident reporting, due to the extension of reporting requirements.

The introduction of the National Law on 1 July 2013 has not had the same impact. In Victoria, masters and owners of commercial vessels were already familiar with the requirement to report marine incidents under section 94 of the MSA. Consequently it appears the introduction of the National Law has not been followed by an increase in domestic commercial vessel marine incident reporting.

Marine incident definition

The *National Marine Safety Data Collection Reference Manual: Data Standards and Definitions for Marine Incidents 18 December 2007* (Reference Manual), defines a marine incident as an event causing or involving any of the following in connection with the operation of a vessel:

1. the death of, or injury to, any person on board a vessel, or caused by a vessel
2. the loss of a person from a vessel
3. the abandonment, loss or presumed loss of a vessel
4. the collision of a vessel with another vessel or with an object
5. the grounding, sinking, flooding or capsizing of a vessel
6. a fire or explosion aboard a vessel
7. loss of stability affecting the safety of a vessel
8. structural failure of a vessel.

Data definitions

Incident data has been codified in accordance with the Reference Manual. For convenience, an extract of the incident type descriptors is included in this document. For full explanatory notes please read this report in conjunction with the Reference Manual.

This table (table 1) provides a description of the different types of marine incidents that may be reported to TSV.

Table 1: Marine incident data definitions

Type	Description
Collision	<p>A marine incident involving the collision of an operating vessel may include any of the following instances:</p> <ul style="list-style-type: none"> a) Collision of vessels Striking together of two or more vessels, at least one vessel must be in operation or operating; but does not include striking a permanently fixed man-made object. b) Collision with a fixed object A vessel striking a permanently fixed man-made object, for example: aid to navigation, overhead bridge, sea walls, or groynes; and does not include striking another vessel. c) Collision with a floating object A vessel striking an object that is waterborne and is free to move with tide, current or wind and is visible from the surface of the water; does not include living animals but does include carcasses and does not include striking another vessel. d) Collision with an animal Vessel striking a living animal which may or may not be normally found in a marine environment. e) Collision with overhead obstruction Any part of a vessel making contact with power lines, or other overhead obstructions suspended above a waterway. f) Collision with submerged object A vessel making contact with an object that is waterborne and may be free to move with tide or current and is not visible from the surface of the water e.g.: submerged container, submarine cable. This category does not include groundings. g) Collision with wharf A vessel making contact with a wharf/jetty/pontoon/boat ramp and causing damage to the vessel and/or wharf etc.
Grounding	<p>A marine incident involving an operating vessel grounding may include any of the following instances:</p> <ul style="list-style-type: none"> a) Grounding unintentional When a vessel unintentionally comes into contact with the bottom of a waterway so that the vessel ceases to be completely waterborne. This includes a vessel, either under command or not under command, running aground, striking or pounding on rocks, reefs or shoals, but not making contact with a beach or grounding intentionally. b) Grounding intentional A vessel, under command, is put aground intentionally by the operator. An intentional grounding of a vessel is not a reportable marine incident unless the vessel is damaged in some way that makes the incident reportable.
Capsizing	<p>Vessel overturns so that the keel becomes uppermost or the vessel may lie on its side.</p>
Sinking	<p>A vessel becomes submerged and settles below the surface of the water.</p>

Type	Description
Swamping	A vessel fills with water particularly over the side (that is, water is filling from the upper part of the vessel) but retains sufficient buoyancy to remain waterborne. If the vessel does not retain sufficient buoyancy to remain waterborne, the incident type becomes a sinking.
Flooding	A breach of the vessel's watertight integrity (that is, water filling from the lowest part of the vessel) due to the ingress of water into the vessel. The vessel retains sufficient buoyancy to remain waterborne. If the vessel does not retain sufficient buoyancy to remain waterborne, the incident type becomes a sinking.
Loss or presumed loss of a vessel	A vessel has not returned as stated or intended prior to departure and may be considered to be missing at sea.
Structural failure	Damage to a vessel due to the structural failure of the vessel's hull, superstructure, engines, machinery or equipment due to such things as metal fatigue, corrosion, broken welds, wood rot, electrical faults, insufficient materials in the construction of the vessel and excessive stress or wear on any component. Examples include dismasting of sailing vessels due to the mast being broken. Does not include flooding or sinking due to a breach of the hull.
Loss of stability	The inadvertent movement of cargo, equipment or other materials which affects the vessel's ability to return to an upright position when laterally displaced but does not include loss of stability due to swamping or flooding.
Fire	Accidental burning of a vessel's fuels or their vapours or of any material onboard a vessel.
Explosion	Accidental explosion of any material onboard a vessel including vessel fuel or its vapours.
Person overboard	A person falls from a vessel into the water/sea/waterway.
Onboard injury	<p>A marine incident involving an operating vessel where the incident occurs onboard the vessel may include any of the following instances:</p> <ul style="list-style-type: none"> a) Falls within vessel Person onboard a vessel falls within the confines of the vessel. b) Crushing or pinching An incident where a person is crushed or pinched by any part of the vessel or vessel's machinery because of the operation of the vessel. c) Other onboard injury Any other incident onboard a vessel (for example, passenger, crew) due to the operation of the vessel; does not include a fall overboard, falls within vessel, or crushing or pinching.

Type	Description
Other personal injury	<p>A marine incident involving an operating vessel may include any of the following instances:</p> <ul style="list-style-type: none"> a) Hit by vessel or propeller Person not onboard a vessel is hit by a vessel or vessel's propeller, this does not include a fall overboard, skiing or diving incident. b) Skiing incident An incident when a person is engaged in waterskiing. Waterskiing includes aquaplaning, knee boarding, wake surfing and any similar towed activity carried out in association with a vessel. c) Parasailing incident An incident where a person is engaged in parasailing. Parasailing is an activity utilising a parachute towed by a vessel to enable a person to become airborne. d) Diving incident An incident involving an operating vessel and a person engaged in a diving related activity. For the purposes of this document, a diving activity includes diving using surface-supplied breathing apparatus, SCUBA diving, breath-hold diving (also known as free diving or skin diving) and snorkelling. e) Other incidents caused by an operating vessel Any other incident involving a person not onboard a vessel (for example, swimmer, surfboard rider) due to the operation of a vessel; does not include a fall overboard, falls within vessel, crushing or pinching, hit by a vessel or propeller, skiing or diving incident.

Additional incident data definitions

TSV collects data regarding three additional 'near miss' incident types that do not comply with the definition of a marine incident in the Reference Manual but are useful indicators of risk and decision making. The definition of a close quarters situation is the working definition used by TSV and is now included in both the MSA and National Law legislation. The definition of a disablement and person in trouble is a working definition only. Table 2 provides a description of the different types of marine incidents not included in Table 1 above.

Table 2: Additional incident data definitions

Type	Description
Close quarters situation	<ul style="list-style-type: none"> a) at least two vessels pass within proximity of each other such that a reasonable person would in all the circumstances conclude there was a risk of collision by those vessels b) one vessel passes within proximity of an object such that a reasonable person would in all the circumstances conclude there was a risk of collision by that vessel with that object.
Disablement	A vessel becoming disabled and requiring assistance.
Person in trouble	Person(s) who require assistance because they cannot continue in their vessel unassisted.

Table 3: Recreational and commercial vessel definitions

Vessel type	Description
Recreational vessel*	A vessel used solely for the purposes of recreational or sporting activities and not for hire or reward.
Commercial vessel *	Any vessel that is operated in connection with a commercial transaction of any kind; includes both domestic and foreign vessels.

* For a complete definition please refer to the Reference Manual.

Maritime fatalities and serious injuries

Fatalities

The table below contains data on fatalities that have occurred as a result of marine incidents in Victoria. It shows the number of fatalities that occurred in each month of each year since 1 July 2011. The last column shows the total for each boating season. The current year total is a year to date figure.

Table 4: Marine incident fatalities by month from 1 July 2011 to 30 April 2015

Year of incident	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total
2011-12	2	0	0	0	2	0	1	1	0	0	0	0	6
2012-13	0	0	0	0	0	2	0	0	1	1	1	0	5
2013-14	0	0	1	0	1	1	6	0	0	0	0	1	10
2014-15	0	1	0	0	1	2	0	1	0	1	*	*	6

Further information

- 8 August 2014: a 76 year old male was reported missing after he failed to return from a fishing trip on his kayak. The deceased and his kayak were located off Mount Martha, Port Phillip Bay.
- 10 November 2014: a 44 year old male was washed overboard from a 10.4 m yacht (keel boat) approximately 1 nautical mile south of Seaspray on Victoria's east coast. It has been confirmed the male was not wearing a life jacket.
- 3 December 2014: a 65 year old male failed to return from a fishing trip after launching from Werribee boat ramp. The 5.3 m vessel was located by Police Airwing submerged in water off Point Cook, Port Phillip Bay. The deceased was later located approximately two nautical miles from the vessel.
- 6 December 2014: a 24 year old male died after falling overboard from his kayak at Taylors Creek Weir.
- 20 February 2015: a 74 year old male died after he fell overboard from his kayak on the Mitta Mitta River near Tallangatta. The deceased was not wearing a personal floatation device at the time of the incident.
- 25 April 2015, a crew member onboard a 195 m foreign international ship collapsed and ambulance members were unable to revive him. The Coroners Court of Victoria are investigating as the ship was at Port of Melbourne anchorage at the time of the incident.

Serious injuries

Table 5 contains data on marine incidents that have resulted in serious injury in Victoria. It shows the number of incidents that occurred in each month of each year since 1 July 2011. The last column shows the total for each boating season. The current year total is a year to date figure, and includes serious injury incidents that have occurred up to 30 April 2015.

Table 5: Marine incident serious injury incidents by month from 1 July 2011 to 30 April 2015.

Year of incident	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total
2011-12	1	0	1	2	1	5	7	3	3	0	0	1	24
2012-13	1	1	0	1	0	6	11	2	1	0	1	1	25
2013-14	1	1	0	0	4	3	4	3	1	0	0	0	17
2014-15	1	2	3	0	1	4	7	1	6	1	*	*	26

Further information

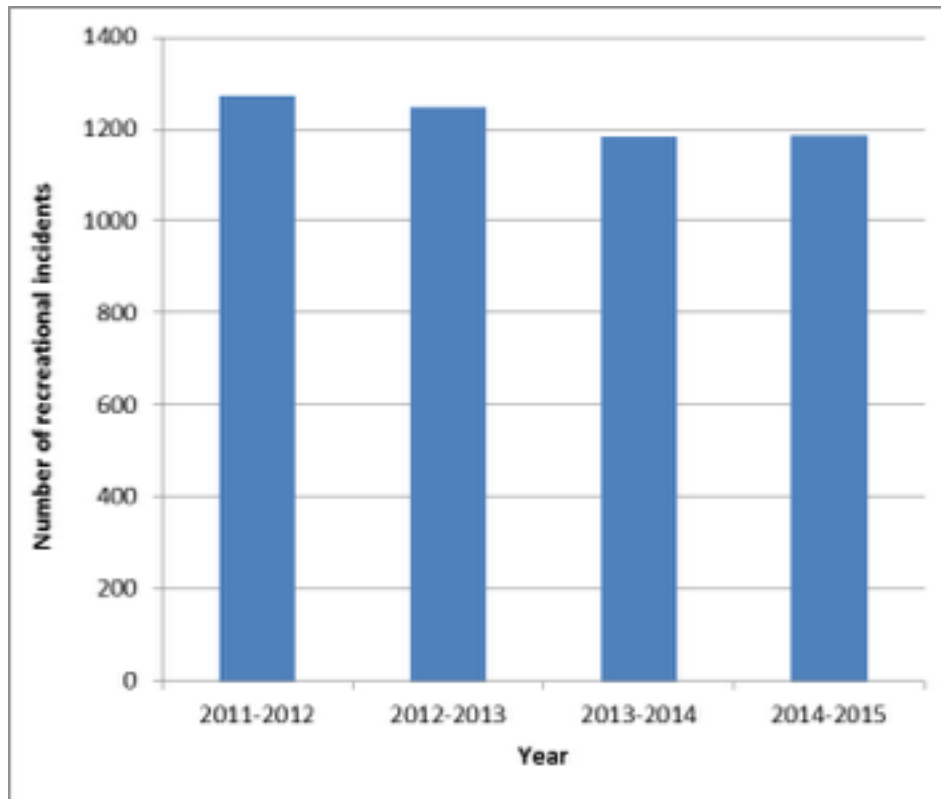
- 6 July 2014, one female was injured after the 6.4 m vessel she was operating ran aground and collided with a tree on the shore at Dawsons Cove, Paynesville.
- 21 August 2014, an explosion on a 25 m commercial fishing vessel injured two crew at Cunninghame Arm.
- 23 August 2014, two males were thrown overboard from their 4.2 m open vessel at Warneet Channel, Western Port. One of the males was seriously injured by the vessel's propeller.
- 4 September 2014, a 48 year old male fell through an open hatch onboard his commercial vessel at St. Kilda Harbour.
- 21 September 2014, a 4 m open vessel capsized off Indented Head, Port Phillip Bay sending three men into the water. One of the men was taken to hospital.
- 30 September 2014, a kayaker needed to be rescued and receive medical treatment after his kayak took on water off Portsea, Port Phillip Bay.
- 21 November 2014, a commercial fishing trawler collided with a recreational vessel on Port Phillip Bay, seriously injuring the operator of the recreational vessel.
- 12 December 2014, a 26 year old male was injured when he fell from his personal watercraft (PWC) west of St. Kilda, Port Phillip Bay.
- 13 December 2014, a 14 year old collided with stationary vessel while knee boarding behind a 6.1 m ski boat on Lake Hume.
- 28 December 2014, on Reeve Channel a female fell off the PWC she was operating and broke her lower leg.
- 28 December 2014, a 4.9 m half cabin vessel capsized off Kilcunda. The vessel dragged anchor into the wave break zone allowing large swell to capsize the vessel. The master onboard sustained head injuries.
- 3 January 2015, a master on board a 7 m trailer sailer vessel on Port Phillip Bay was taken to hospital with chest pains.
- 6 January 2015, an adult and six children, were injured in a ski boat explosion on Lake Nagambie.
- 7 January 2015, a 13 year old male fell off the bow of a 5.3 m vessel and was stuck by the propeller off Mount Martha on Port Phillip Bay.
- 9 January 2015, a low impact collision between a 7 year old boy on a canoe and a PWC on Lake Eildon saw the 7 year old airlifted to the hospital for precautionary observation.
- 16 January 2015, a 60 year old man was rescued, exhausted and semi-conscious 400 metres off Torquay beach after strong offshore winds blew him from his kayak.

- 25 January 2015, a 60 year old master was taken to hospital with a concussion after two yachts collided during an official yacht race on Corio Bay.
- 26 January 2015, at Lake Eildon an observer on board a 5.7 m ski boat was injured when the tow line of a water skier parted and snapped back toward the vessel.
- 18 February 2015, a 5.3 m open vessel hit low water on Marlo Bar, ejecting and injuring a 25 year old passenger.
- 7 March 2015, a 74 year old male had a heart attack on board a passenger cruise ship, Victoria Police and Volunteer Search and Rescue assisted with the transfer of the patient to Portland.
- 22 March 2015, a 7 m open ski boat collided with a submerged object on Lake Eildon injuring the two males onboard.
- 27 March 2015, a 64 year old female has suffered unknown cardiac problems on a passenger cruise ship. Victoria Police and Volunteer Search and Rescue assisted with the transfer of paramedics to the ship.
- 28 March 2015, a passenger on board a 8.5 m cabin cruiser suffered head injuries after falling from the vessel onto the jetty at Cunningham Arm, Lakes Entrance.
- 31 March 2015, a gas bottle explosion on board a house boat at Lake Eildon caused a large fire that injured a number of people, including children.
- 31 March 2015, three people were discovered unconscious with carbon monoxide poisoning onboard a 10.6 m cabin cruiser. The vessel was found by Victorian water police, out of control, doing circles 500m off St Leonards, Port Phillip Bay.
- 24 April 2015, a 6.3 m half cabin vessel with two people on board collided with a swimmer as the vessel was departing the boat ramp on Rye Channel, Port Phillip Bay.

Marine incidents - recreational

The column graph in Figure 1 shows the number of recreational marine incidents that occurred in the July to April period from 2011-12 to 2014-15. The data is also listed in the last row of the Table 6.

Figure 1: Recreational marine incidents for the July to April period in the 2011-12, 2012-13, 2013-14 and 2014-15 boating seasons



Recreational incidents by incident type

The following table (Table 6) contains data on marine incidents involving only recreational vessels. The first column shows the incident type and the adjacent columns show the number of incidents that occurred in each year in the July to April period. The last row shows the total for each year.

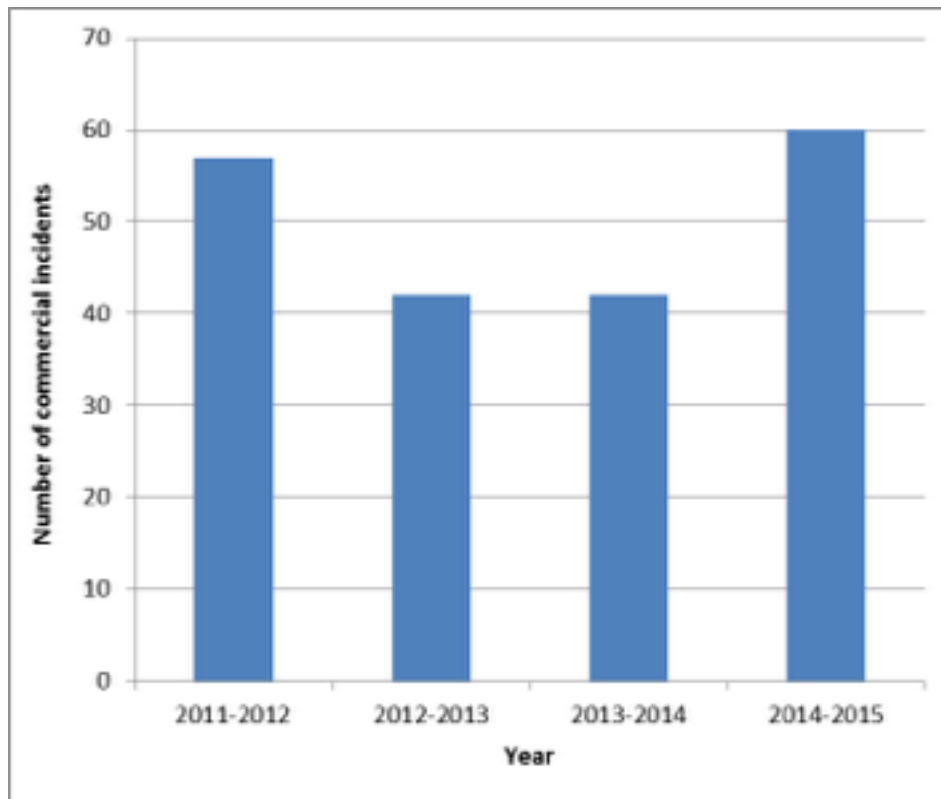
Table 6: Marine incidents involving recreational vessels for the July to April period in the 2011-12, 2012-13, 2013-14 and 2014-15 boating seasons.

Incident type	2011-2012	2012-2013	2013-2014	2014-2015
Capsizing	40	42	36	30
Close quarters	2	1	0	0
Collision	20	15	22	15
Disablement of vessel	1041	1037	929	997
Explosion	2	5	3	2
Fire	6	7	7	8
Flooding	14	7	23	10
Grounding	81	66	84	57
Loss of stability	1	1		1
Loss or presumed loss of vessel	1	4	1	3
Onboard incident	7	6	6	3
Other personal injury	11	5	3	4
Person in trouble	21	25	42	34
Person overboard	13	16	13	14
Sinking	0	0	1	0
Structural failure	3	0	3	2
Swamping	9	10	9	6
Total	1272	1247	1182	1186

Marine incidents - commercial

Figure 2 below shows the number of commercial marine incidents that occurred in the July to April period each year from 1 July 2011. The data is also listed in the last row of Table 7.

Figure 2: Marine incidents involving commercial vessels for the July to April period in the 2011-12, 2012-13, 2013-14 and 2014-15 boating seasons



Commercial marine incidents by incident type

Table 7 below contains data on marine incidents involving only commercial vessels. The first column shows the incident type and the adjacent columns show the number of incidents that occurred in each year in the July to April period. The last row shows the total for each year.

Table 7: Marine incidents involving commercial vessels for the July to April period in the 2011-12, 2012-13, 2013-14 and 2014-15 boating seasons

Incident type	2011-12	2012-13	2013-14	2014-15
Capsizing	1	1	1	1
Close quarters	5	7	2	8
Collision	7	6	5	9
Disablement of vessel	22	19	18	19
Explosion	0	0	0	1
Fire	1	1	1	0
Flooding	0	3	0	1
Grounding	10	4	9	8
Onboard incident	6	1	2	9
Other personal injury	2	0	1	0
Person in trouble	0	0	1	0
Person overboard	0	0	1	3
Sinking	1	0	0	0
Structural failure	0	0	1	1
Swamping	2	0	0	0
Total	57	42	42	60

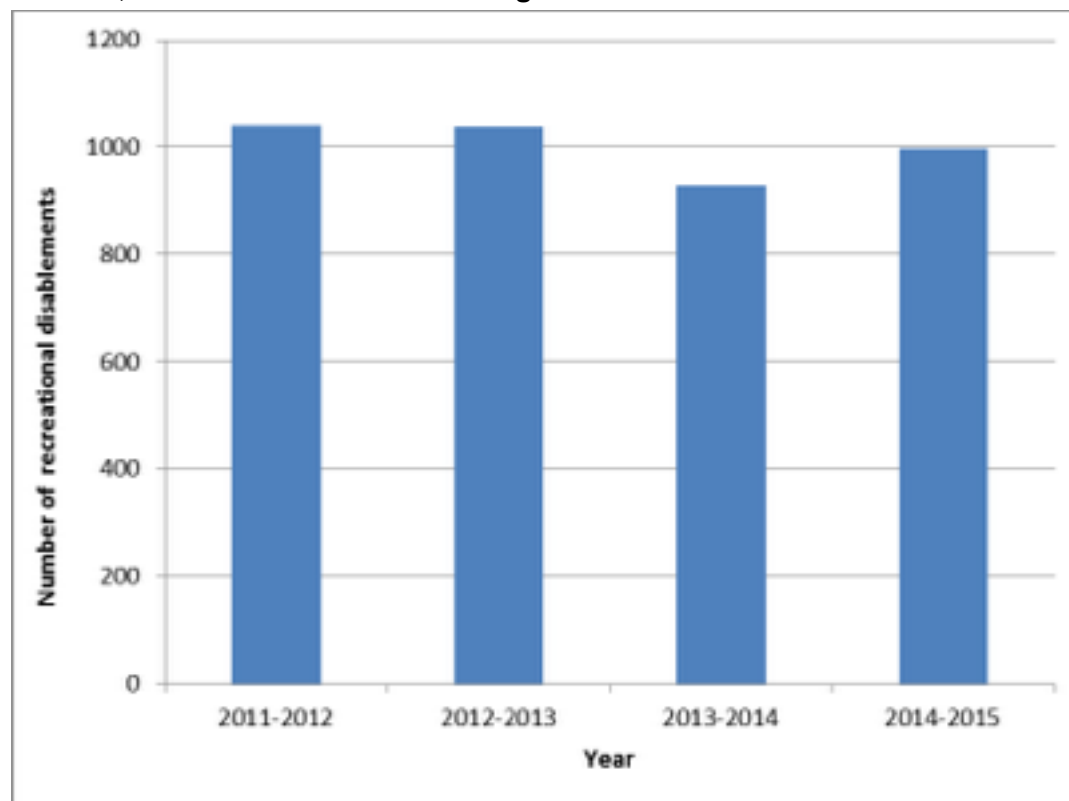
Recreational disablements

Table 8 shows the number of recreational disablement incidents that occurred during the July to April period, commencing 1 July 2011. This data is also represented in the accompanying figure below (Figure 3).

Table 8: Recreational disablements for the July to April period in the 2011-12, 2012-13, 2013-14 and 2014-15 boating seasons

Year	Number of recreational disablement incidents
2011-12	1041
2012-13	1037
2013-14	929
2014-15	997

Figure 3: Recreational disablements for the July to April period in the 2011-12, 2012-13, 2013-14 and 2014-15 boating seasons



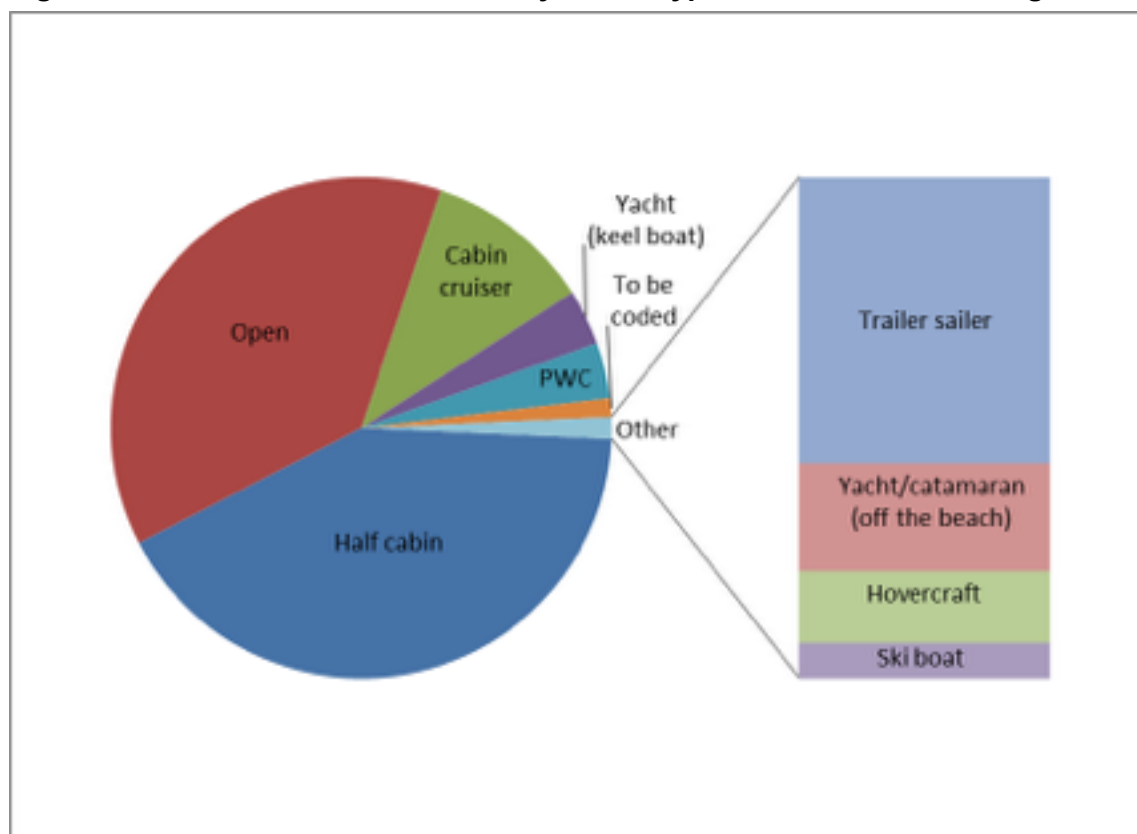
Recreational disablements by vessel type

Table 9: Recreational disablements by vessel type for the current boating season

Vessel type	Percentage of recreational disablement incidents
Half cabin	41.72%
Open	37.72%
Cabin cruiser	10.78%
Yacht (keel boat)	3.59%
Personal watercraft (PWC)	3.59%
To be coded	1.20%
Trailer sailer	0.80%
Yacht/catamaran (off the beach)	0.30%
Hovercraft	0.20%
Ski boat	0.10%

The pie-chart in Figure 4 shows the proportion of recreational disablements by vessel type for the current reporting period (1 July 2014 to 30 April 2015). The percentages are listed in Table 9 above.

Figure 4: Recreational disablements by vessel type for the current boating season



Waterways incident analysis

The following tables show a consolidation of both recreational and commercial incidents. Table 10 shows the top ten waterways for marine incidents for the current boating season, 1 July 2014 to 30 April 2015.

Table 10: Marine incident by waterway

Waterway name	Number of incidents
Port Phillip Bay	655
Western Port	229
Corio Bay	70
Lake Victoria	49
Bass Strait - Western	29
Bass Strait - Northern	28
Lake King	27
Bass Strait - Eastern	21
Yarra River	20
Corner Inlet	19

Marine incidents by waterway type

Table 11 shows the type of marine incidents that have occurred by waterway type. The last row shows the total for each waterway type. The data is for the current boating season, 1 July 2014 to 30 April 2015.

Table 11: Marine incidents by waterway type

Incident type	Coastal inshore	Coastal offshore	Enclosed	Inland
Capsizing	6	1	21	3
Close quarters	0	0	8	0
Collision	2	0	16	6
Disablement of vessel	63	18	911	24
Explosion	0	0	1	2
Fire	0	0	5	3
Flooding	0	1	9	1
Grounding	1	1	62	1
Loss of stability	0	0	0	1
Loss or presumed loss of vessel	0	0	2	1
Onboard incident	2	2	8	0
Other personal injury	0	0	2	2
Person in trouble	5	0	27	2

Incident type	Coastal inshore	Coastal offshore	Enclosed	Inland
Person overboard	3	0	9	5
Structural failure	0	0	3	0
Swamping	0	0	4	2
Total	82	23	1088	53

Recreational marine incidents by waterway type

Table 12 shows the percentage breakdown of recreational marine incidents by waterway type for the July to April period in the 2011-12, 2012-13, 2013-14 and 2014-15 boating seasons. Figures 5 and 6 show the proportion of recreational incidents to occur in each waterway type, the charts compare the 2011-12 to 2013-14 period with the 2014-15 period.

Table 12: Marine incidents involving recreational vessels by waterway type for July to April period commencing 2011-12 (values shown as percentage of total)

Waterway type	2011-12	2012-13	2013-14	2014-15
Coastal inshore	6.29%	6.58%	6.18%	6.58%
Coastal offshore	1.89%	2.57%	2.37%	1.77%
Enclosed	87.03%	87.33%	86.55%	87.61%
Inland	4.72%	3.45%	4.82%	4.05%
Unnavigable*	0.08%	0.08%	0.08%	0.00%

*Incidents where the waterway is noted as being unnavigable are either yet to be codified or occur outside Victorian waters and Victorian assets were used in a search and rescue response.

Figure 5: Marine incidents involving recreational vessels by waterway type - percentage of total 2011-12 to 2013-14 seasons

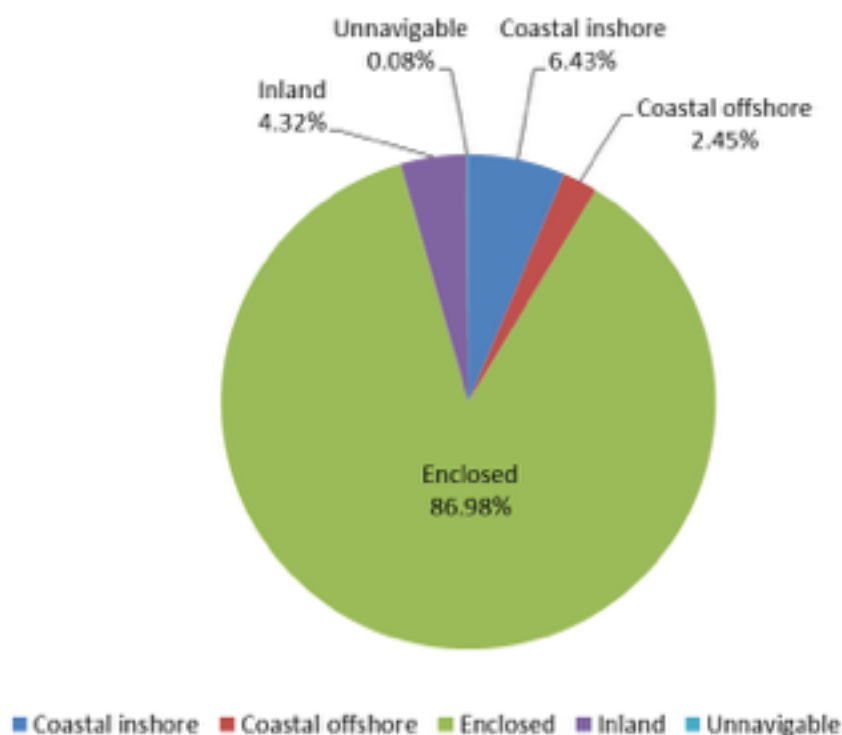
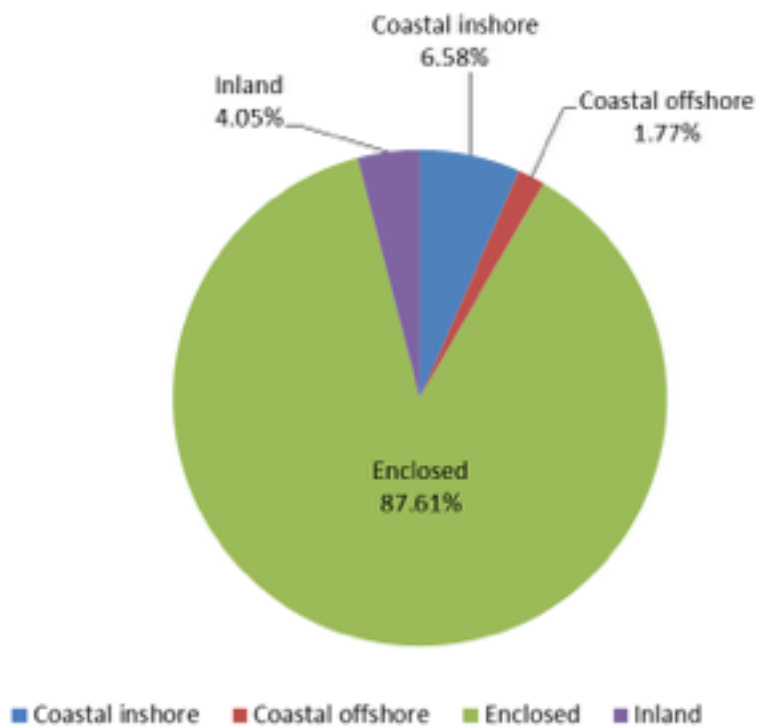


Figure 6: Marine incidents involving recreational vessels by waterway type - percentage of total 2014-15 season



Commercial marine incidents by waterway type

Table 13 shows the percentage breakdown of commercial marine incidents by waterway type for the July to April period in the 2011-12, 2012-13, 2013-14 and 2014-15 boating seasons. The pie charts shown in Figures 7 and 8 illustrate the proportion of commercial incidents to occur in each waterway type, the charts compare the 2011-12 to 2013-14 period with the 2014-15 period.

Table 13: Marine incidents involving commercial vessels by waterway type for July to April period commencing 2011-12 (values shown as percentage of total)

Waterway type	2011-12	2012-13	2013-14	2014-15
Coastal Inshore	14.04%	4.76%	4.76%	6.67%
Coastal Offshore	7.02%	7.14%	7.14%	3.33%
Enclosed	64.91%	78.57%	80.95%	81.67%
Inland	14.04%	9.52%	4.76%	8.33%
Unnavigable*	0.00%	0.00%	2.38%	0.00%

*Incidents where the waterway is noted as being unnavigable are either yet to be codified or occur outside Victorian waters and Victorian assets were used in a search and rescue response.

Figure 7: Marine incidents involving commercial vessels for July to April period by waterway type - percentage of total 2011-12 to 2013-14 seasons

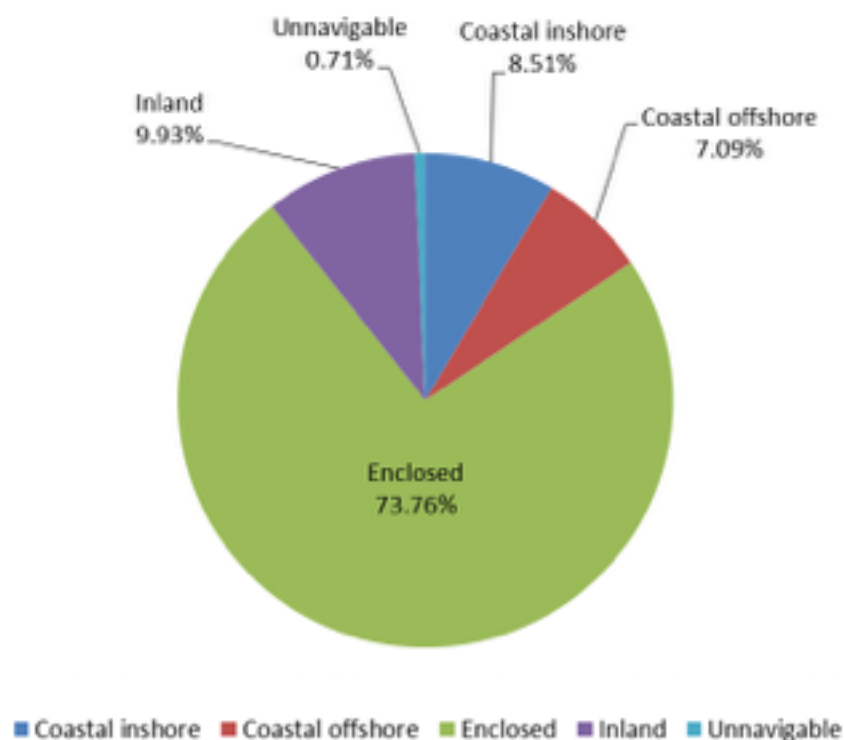
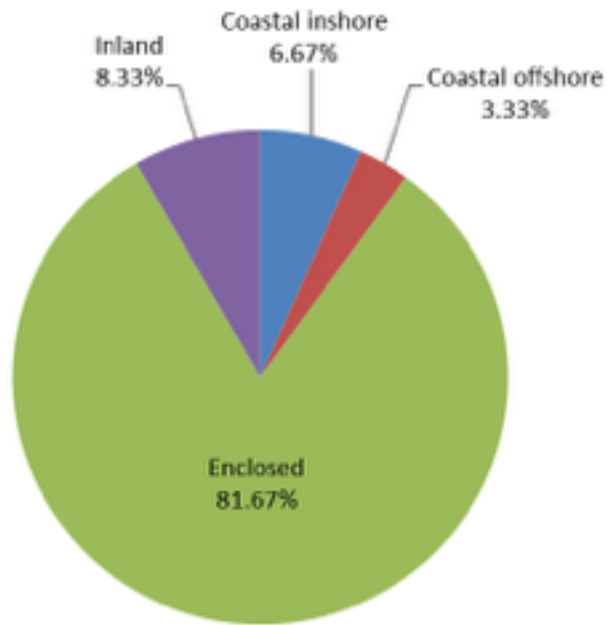


Figure 8: Marine incidents involving commercial vessels for July to April period by waterway type - percentage of total 2014-15 season



■ Coastal inshore ■ Coastal offshore ■ Enclosed ■ Inland