



# New Zealand Safer Boating Forum Position on the Carriage of Communications Equipment on Recreational Vessels

## Purpose

This paper sets out the NZ Safer Boating Forum's position on the carriage and use of communications equipment on board recreational vessels, and the policy rationale that supports it.

The Forum's position is as follows:

***“Recreational boaters shall always carry a minimum of two forms of waterproof communication that will work in the area where they are boating***

The grounds for this position, the evidence that supports it and how it aligns with the strategic focus of the Forum are covered in this document.

## Background

The Safer Boating Forum is a formal network representing a cross-section of national and regional government agencies, local body groups, boating safety organisations, and the marine industry, involved in promoting recreational boating safety in New Zealand. The group has been active since 2000.

At the highest level, the purpose of the Forum is to advance education and regulation focused on skipper responsibility and the key risk factors in fatal and non-fatal recreational boating accidents. Failure to be able to call for help in an emergency situation is one of the key risk factors for recreational craft<sup>1</sup>.

## Context

There are an estimated one and a half million recreational boat users in New Zealand, as follows:

Vessel type	Number of users
Kayaks	500,235
Power boats	439,601
Dinghies	166,745
Sail boats	75,793
Personal watercraft ('Jet skis')	145,000
Stand-Up Paddleboards	75,793
Other	136,428
<b>Total</b>	<b>1,515,864</b>

<sup>1</sup> The other three, in order of priority are: lifejackets, bad weather and sea conditions, and alcohol.



## Rationale

The Forum's position is premised on some fundamental certainties about the safety benefits of **carrying communications equipment** that is derived from available evidence, research and fatality statistics. These are as follows:

- Analysis of New Zealand recreational boating fatalities carried out in 2000, 2007 and again in 2014 showed conclusively that not being able to call for help in an emergency is a major risk factor contributing to the annual boating toll<sup>2</sup>.
- ***The 2007 review concluded that effective communications equipment, if available, would most likely have prevented 58% of the fatalities that occurred over the previous 6 years*** - the second highest risk factor after a failure to wear lifejackets.
- While communications equipment is not the only safety measure available to those involved in recreational boating - others include wearing a lifejacket, checking the weather forecast, avoiding alcohol and drugs, and using a vessel appropriately - the availability of an effective communication device to call for help can make a difference to the success of survival in a distress situation.
- Electronic communications devices - particularly marine radio – are now not just very affordable, but are small and comfortably carried on almost all types of craft. Many, including hand-held waterproof VHF radios, mobile phones (in a waterproof bag) and Personal Locator Beacons (PLBs) can be comfortably worn/attached to clothing or a lifejacket.
- With vessel capsizes (which usually happen very quickly and often without warning) being a factor in a majority of recreational boating fatal accidents (28% in vessel over 6 metres and 75% for vessels less than 6 metres in length<sup>3</sup>), it is very important that boaties have access to **waterproof** communication devices to call for help. These can be carried on one's person or in a readily accessible buoyant grab bag.
- Around 85% of fatalities occur on vessels less than 6 metres in length<sup>4</sup>.

## Current Usage and Attitudes

The reported carriage and attitudes of boaties towards the carriage of communications equipment is as follows<sup>5</sup>:

- In 2018, research showed that two thirds (69%) of all recreational vessel users reported that that it was very important to carry at least two forms of communication equipment in order to call for help.

---

<sup>2</sup> Pleasure Boat Safety Advisory Group Final report (1999); Review of the NZ Pleasure Boat Safety Strategy (2007); Review of the NZ Pleasure Boat Safety Strategy (2014).

<sup>3</sup> Review of the Pleasure Boat Safety Strategy (2007)

<sup>4</sup> Review of the Pleasure Boat Safety Strategy (2007)

<sup>5</sup> Source: IPSOS 2017 and 2018

- In 2018, only 43% of all recreational boat users actually carried two ways of calling for help every time they went boating, while around 10% stated that they never carried at least two forms of communication to call for help when out boating.
- Nearly all recreational users (95%) reported carrying at least one way of calling for help.
- A mobile phone in a waterproof bag was the most commonly carried device (55%), followed by flares and a waterproof torch (27%), marine VHF radio (25%), an EPIRB or PLB (25%), a mobile phone in a waterproof bag (19%), air horn (11%).
- Larger vessels users are significantly more likely to carry at least two forms of communication equipment than smaller vessels users (66% of power boat users more than 6 metres and 63% of sail boat users, compared with 46% of other vessel users and 28% of kayakers).

### **Communication Equipment Guidelines**

There are three broad categories of communication equipment:

1. Those that use **Satellites**— principally emergency locator beacons (EPIRBs, PLBs) and satellite phones
2. Those that use **Land Based** stations— principally marine radio and mobile phones
3. Those that rely on **Audio or Visual** signals— includes flares, lights, whistles, horns etc.

A decision by boaties as to which types of equipment to use will depend very much on the **nature of the boating** activity undertaken, and **the area** where the boating takes place.

While the need for all boaties to carry two forms of communication is universal, there are differences in the types of equipment that are best suited to the wide range of boating activities in New Zealand. For example, kayakers would ideally attach a hand held VHF and PLB to their lifejacket, while a yacht sailing offshore might have a vessel mounted radio and a PLB, flares and handheld VHF in a buoyant grab bag.

Similarly, some types of communication equipment will have limited range in some geographic areas. Mobile phones and VHF radio, for example, are limited in some inland areas or parts of the coast where there are no towers to broadcast a signal.

Boaties need to consider the capabilities of each piece of equipment. For example, land-based phone and marine radio provide two-way voice communication but may not work everywhere, while EPIRBs and PLBs provide universal coverage but no voice communication.

Whatever the communication equipment used, however, it is very important that a minimum of two forms are carried in case of malfunction. Equally, it is important that crew know where the communication equipment is located and how to operate it, as it is sometimes the skipper who needs rescuing.



## Recommended Communications Equipment

The benefits (and limitations) of the main types of communication equipment that are available in New Zealand are set out below. ***In all cases, boaties are strongly advised to seek expert advice as to what best suits their needs.*** This advice can be freely obtained by a wide range of organisations, including Coastguard, Maritime NZ, Regional Councils, Maritime Police, and specialist boating organisations such as the Kiwi Association of Sea Kayakers (KASK), Yachting New Zealand (YNZ), Jet Boating New Zealand (JBNZ), Waka Ama New Zealand (WANZ) etc.

### ***Satellite Emergency Distress Beacons***

EPIRBs or PLBs provide the most reliable way of signalling a distress situation. They provide a one-way indication of distress and a boat's location directly to SAR authorities anywhere in the world and are suitable for vessels at sea and on inland waterways. Other than the initial purchase, Emergency Distress Beacons are free. They must be registered at [www.beacons.org.nz](http://www.beacons.org.nz).

EPIRBs, being slightly bulkier, are designed specifically for boats, ships and other activities on water and can float with their antenna above the water. PLBs are designed more for land usage. While all PLBs are waterproof, most cannot float with their antenna out of the water and they have a shorter battery life than an EPIRB.

The Forum recommends that all boats carry an emergency locator beacon, particularly when venturing any distance from the coast or navigating remote inland lakes/ivers.

### ***Satellite Phones and Satellite Emergency Notification Devices (SEND) such as 'Spot', 'inReach', and 'Yellowbrick'***

Satellite phones are becoming increasingly affordable and can also be rented for short periods when heading into remote locations. It is important that boaties understand how to operate a satellite phone, know the coverage provided by the service provider, and ensure that it is either waterproof or kept in an appropriate container.

Some satellite phones consist of a 'base unit' that allows a boatie to connect to their mobile phone via Wi-Fi or Bluetooth. Users should give consideration as to how long a satellite phone battery will last if separated from the boat's power supply. In addition, users should think carefully about the battery capacity and waterproofness of any mobile phone that is linked to a base unit. Users of satellite phones must also identify the correct emergency number to call in advance. Standard emergency numbers such as 111, 911, 000 etc. will not work on a satellite phone.

A SEND is a portable emergency notification and locating device. SENDs use commercial satellites and require payment of a regular fee to a commercial provider to keep them active. A SEND typically offers two-way satellite communication, user tracking and an emergency alerting function. SENDs are normally waterproof, but will not float with their antenna out of the water.

### ***VHF Radios***

A VHF radio is designed to operate in the marine environment and is used extensively as a communications tool by the coastal boating community. A 24/7 distress and safety radio service is provided by Maritime NZ, which monitors the international Channel 16 distress



channel. Coastguard NZ also provides coverage around large parts of the coast, and there are a number of privately operated stations in different parts of the country.

A handheld waterproof VHF radio has the advantage of being able to be used following a vessel capsizes, and is portable and small enough to be attached to a person. Unlike some other forms of safety equipment, a VHF radio allows a boater to speak to both the rescue authorities and other boaters in the vicinity who have their radio on.

While VHF radio coverage extends to most coastal areas of New Zealand, *it is not universal*. There are pockets around the coast where radio 'shadows' exist, and it is not available on most inland waters. While 'shadows' may preclude communicating with a land station, VHF radio will still work when communicating with other vessels nearby on Channel 16 and other simplex channels. It is therefore very important that boaters check to find out if the area they are boating in has VHF coverage. A call to the local Coastguard, Regional Council Harbourmaster or Maritime NZ office will help provide the answer.

The Forum strongly recommends that a VHF radio be carried by all boaters. Ideally, given that most fatalities occur following a sudden capsizes, a hand-held, waterproof VHF radio worn on the person is best.

VHF radio users are required to hold a Maritime Radio Operator's Certificate and have an individual call-sign, with courses and call-sign information available from [www.boatingeducation.org.nz](http://www.boatingeducation.org.nz) (these are not required, however, if making a distress or emergency call on channel 16). A call-sign allows the Search and Rescue sector to quickly access the contact details you have provided.

Many modern marine VHF radios offer **Digital Select Calling (DSC)** – most obviously in the form of an emergency button on the radio. While the DSC function may work between appropriately equipped vessels, DSC will **NOT** enable the communication of a distress message to search and rescue or other emergency authorities in New Zealand waters.

### **Single Side Band Radios using HF Band**

SSB (single side band) radios using an HF (high frequency) radio band are designed to operate over much longer distances than VHF radio, and do not generate the same "shadows" as VHF radio. However, SSB radios are much bulkier and more expensive to purchase than VHF radios and are best suited to use by larger boats making blue-water, ocean going voyages.

### **Mobile Phones**

Almost everyone carries a mobile phone these days, but geographic coverage can be limited, particularly on more remote inland waterways and at sea. Unlike maritime radio, a mobile phone does not allow a boater in distress to broadcast for help to other boaters that might be in the vicinity.

Phones are nevertheless a very useful safety communications back-up tool, particularly given their almost universal carriage. It is very important, however, that boaters ensure that they remain usable after immersion by keeping the cellphone dry in waterproof lanyard bags (although some waterproof phones are now available) and remain accessible by being carried on the person.

In some situations, text messages may work when voice calls are not viable.



## **Flares**

Pyrotechnic flares and waterproof torches are widely recognised and, where practical, may be considered for inclusion in an emergency communication kit.

The major limitations of flares is that they are dependent on other boaties in the vicinity (or people on shore) seeing them during the relatively short time they are alight, understanding what they mean, and knowing how to respond.

The choice and number of pyrotechnic flares depend on where boating takes place. The main types are red parachute, red handheld and orange smoke. Parachute flares will be seen from a greater distance than a handheld flare and an orange smoke flare is excellent for use in day time conditions or to assist in an aerial search. Flares must be kept in a waterproof container and boaties must be familiar with their operation. They also need to be replaced when they reach their expiry date.

Electronic flares are gaining in popularity and in time may replace traditional pyrotechnic flares. At present, however, electronic flares should be considered a supplementary signalling device – certainly worth carrying but they do not yet replace traditional flares.

## ***Whistles, Horns, Mirrors etc.***

There are a range of other signalling devices that can be used for communication, including a whistle, manual horn (aerosol canister, rechargeable, powered), mirror etc. Like flares, they are very reliant on someone being able to see or hear the distress signal, knowing what it means, and then being able to act on it.

## **Information and advice on communications equipment and training can be obtained from:**

- Maritime New Zealand
- Accident Compensation Corporation
- Auckland Transport Harbourmaster's Office
- Coastguard Boating Education
- Coastguard New Zealand
- Drowning Prevention NZ
- Environment Canterbury Regional Council Harbourmaster
- Greater Wellington Regional Council
- Jet Boating NZ
- Kiwi Association of Sea Kayakers
- New Zealand Marine Industry Association
- Ministry of Transport
- New Zealand Jet Sports Boating Association
- New Zealand Police
- New Zealand Search and Rescue Council



- NZSUP Safety
- New Zealand Underwater Association
- Queenstown-Lakes District Council Harbourmaster
- Surf Lifesaving New Zealand
- Waikato Regional Council
- Waka Ama New Zealand
- Water Safety
- WaterSafe Auckland
- Whitewater New Zealand
- Yachting New Zealand

***January 2019***