



# Marine Rescue NSW Feedback Submission

## ACMA Draft Five-year spectrum outlook 2023-28

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This submission has been provided to the ACMA in good faith. Comments and submissions are made are based on consideration of available material. This submission is focused on MRNSW’s operational needs for effective VHF Marine Band communications.

Feedback on any errors/omissions in this submission will be positively received by MRNSW. Please send any communications to the author of this document [REDACTED]

## 1 Scope

Marine Rescue NSW (MRNSW) has developed this document in response to the ACMA Draft Five-year spectrum outlook 2023-28. MRNSW recognises the ACMA has a significant focus on the Spectrum above 160 MHz, especially for new and emerging technologies. This submission from MRNSW focusses on the spectrum between 148 MHz and 162 MHz, as this is the frequency of Marine VHF.

MRNSW is also a user of mobile data (4G-5G) for innovative applications. These include the MRNSW Log On/Off mobile phone app that enables the boating public to register a voyage with the nearest MRNSW radio base and DV Locate (Distress Vessel Locate), which enables the location of the distressed vessel, as determined by the boater's mobile phone, to be sent to a MRNSW radio base. Users are required to 'opt in' to share their location data.

## 2 Overview of Marine Rescue NSW

MRNSW saves lives on the water. This is our mission, 24 hours a day, every day. Our core purpose is to provide 24/7 volunteer marine search, rescue and communication service to support the 250,000 registered vessels and 500,000 vessel license holders in NSW.

Our services to the NSW boating community include:

- 24/7 emergency response capability with more than 100 purpose-built rescue craft
- Provision of the State's only Log On and vessel tracking service for recreational boaters, giving them the confidence of knowing a professional rescue service is keeping watch should a voyage encounter problems.
- Around-the-clock monitoring of marine radio for distress calls from boaters in trouble along the NSW coastline
- Boating safety education and advocacy, including boat and jet ski licence and marine radio courses for boaters

These services are provided by a team of more than 3,200 dedicated volunteers across 46 units located in most towns and cities along the NSW coastline supported by a small team of Headquarters staff.

MRNSW is an independent not-for-profit organisation. The organisation is a recognised Emergency Service and operates under the auspices of the NSW State Emergency and Rescue Management Act 1989, State Rescue Policy and Marine Safety (Domestic Commercial Vessel) National Law Act 2012 (the National Law).

MRNSW reports to the NSW Minister for Emergency Services and works closely with State and Federal operational and regulatory agencies and authorities to improve safety on the water.

Every year MRNSW radio bases manage more than 250,000 radio calls from vessels. These include routine vessel Log Ons and Log Offs, weather forecasts, situational and calls for assistance (often engine, fuel problems). Distress calls (MAYDAY or PAN PAN) will come at any time day or night, with 160 distress calls received in 2021-22. In the same year, MRNSW volunteers completed 3,905 rescue missions returning 8,518 boaters safely to shore.

MRNSW owns and operates an advanced VHF radio network along the NSW coast, with a number of remote radio sites on high points (mountains) near the coast. Frequentis and Omnitronics Dispatch Consoles are installed at most MRNSW units.

The reach of radio coverage provided by this network includes the many bays, rivers and inlets along the coast. Out to sea, radio coverage is provided to a minimum of 30nm, but with several sites in high position, calls are successful at far greater distances.

### 3 Feedback on Draft Five-year spectrum outlook 2023–28

MRNSW appreciates the opportunity to provide comment and feedback on the “Draft Five-year spectrum outlook 2023-28” on matters that are pertinent to the operation of MRNSW radio bases.

#### 3.1 27M radio

The Marine Radio operating on 27M using AM (amplitude modulation) has been in use for many years. However, the volume of calls to MRNSW radio bases on 27M has been significantly reducing year on year and many vessels are replacing 27M with a Marine Band VHF radio. MRNSW receives very few calls from 27M radios.

The limitations of the 27M radio is well documented.

As MRNSW invests in upgraded radio systems (including dispatch consoles used in MRNSW radio bases) the availability of 27M radios that can integrate into upgraded systems is very limited. Only one make and model has this capability, but requires significant design and engineering to integrate with contemporary dispatch systems.

MRNSW radio bases continue to monitor 27M radio during the bases operating hours, however as the radios are typically discrete devices they are not integrated into the dispatch consoles

#### **Recommendation 1**

MRNSW recommends a “sunset” clause be put in place to allow sufficient time for the industry to adapt (reduced market for 27M radios) and the community be encouraged via campaigns to switch over to a VHF Radio.

#### 3.2 VHF Marine radio “channel allocations”

The most prolific users of VHF Marine Band channels in NSW are MRNSW radio bases on calls with recreational boaters. In recent years, MRNSW radio bases have used Channels 71, 73, 19 and 78.

Changes made in the legislation “Radio communications – Maritime Omnibus Variation 2019 (No.1) **F2019L00835**” have removed CH19 (duplex) and inserted channels 1019 & 2019 simplex using the variously used duplex frequencies.

Use of duplex frequencies as working channels has been problematic for several years. The radio equipment at MRNSW radio bases required modification to ensure a duplex transmission from a vessel radio on CH19 could be received at the MRNSW radio base. Complexities are introduced because a vessel Marine Band radio must have the (international frequency table) “INT” correctly configured. More recently, there has been an increase in the number of unsuccessful calls on CH19. This could be due to vessels having new VHF radios with tables that conform to Schedule 6 of the above legislation. Schedule 6 shows CH19 is removed and CH1019 & CH2019 added to the schedule.

Similar problems occur when using CH78 however that duplex channel is still valid in the most recent legislation.

For a MRNSW radio base to communicate successfully with vessels using working channels (71, 73, 19 and 78) sufficient distance is required between the vessel and the MRNSW radio base to minimise “cross talk”. As working channels are also “shared” with other legitimate bodies (sailing clubs, fishing clubs and individuals),



access to alternative working channels at each base is also essential to effective working. On a busy weekend it is often a challenge to successfully work a call.

Additional complexity is added because there are various VHF radios being used by recreational boaters. There are models that only have CH19, newer radios that have CH1019, CH2019 and CH19. Some new radios do not have CH19 in the channel table. This can easily result in confusion with vessels using for example CH1019, a vessel working on CH19 and a MRNSW radio base attempting to work a call.

### **Recommendation 2**

MRNSW recommends that consultations be held with all stakeholders who are users of VHF Marine Band channels to review all VHF Marine Band Channel allocations. In addition to the allocated calling, distress, DSC or other fixed channels, an agreement should be reached on all Channel allocations that ensure all stakeholders can effectively share the VHF Marine Band Channels.

## **3.3 Licencing (proficiency) of a VHF radio operator**

Aside from emergency situations, a person must hold a licence recognised by the ACMA in order to operate a VHF Marine Band Radio.

A VHF Marine Band Radio can be procured without a need to show proof of a licence to operate. A VHF radio operator is not issued with a “call sign”. A marine radio is usually associated with a vessel and most often the vessel’s name or vessel registration +is used as the call sign.

Requiring a licence to operate a VHF radio is a potential barrier to converting people to VHF radio, as it requires the user to invest additional time and money. Anecdotally, it would appear that VHF radios are being procured and used without the operator obtaining a licence.

### **Recommendation 3**

MRNSW recommends that consultation is undertaken with stakeholders (to be identified) with the view to removing the requirement to hold a licence to operate a Marine Band VHF radio.

## **3.4 Use of LMR equipment on VHF Marine Band channels**

During emergency situations, MRNSW has often been tasked to support a NSW combat agency (SES, RFS).

The standard operational mode is to use the NSW Telco Authority PSN to work with the other agencies. The NSW PSN being a P25 network does require suitable radio equipment. Whilst the NSW Telco Authority PSN potentially becomes congested, the Telco Authority manages those situations.

During emergency incidences, the day to day VHF Marine Band traffic continues and in some circumstances traffic may increase due to the emergency situation.

As discussed in section 3.2 VHF Marine Band channel allocations, it would be expected the use of VHF Marine Band channels allocated to distress, calling DSC and Search and Rescue calling would be unaffected by the use of VHF Marine Band frequencies by other emergency services. If so the frequencies (channels) that are available for usage during emergencies by LMR systems would be those channels

allocated to marine working channels, Port Authorities working channels, and other marine oriented bodies.

Given the shortage of VHF frequencies available for working (routine calls) marine channels some potential could exist to exacerbate the situation during an emergency and perhaps also during routine use of LMR equipment on Marine Band VHF frequencies (training etc).

In NSW, MRNSW has a deployed VHF Marine Band network that provides contiguous coverage along the state's coastline. The coverage extends out to sea often much further than the expected coverage of a VHF radio. This is due to the number of radio sites that are located on high points along the coast. During propagation events (ducting) it is not unusual to receive transmissions from distant transmitters.

#### **Recommendation 4**

MRNSW recommends that the use of marine band VHF frequencies for emergency situations be carefully considered, particularly in NSW, given the shortage of VHF frequencies and risk of potential congestion.

In addition, MRNSW recommends that further stakeholder consultation occurs to understand what would be the role of VHF in emergency situations.

### **3.5 Public Safety Mobile Broadband (PSMB)**

It is noted that the Draft Five-year spectrum outlook 2023-28 does not discuss the planned PSMB service. MRNSW is keen to understand the ACMA's position on the outcome of trials of this technology that were conducted last year by agreement between the state governments.

#### **Recommendation 5**

MRNSW recommends the ACMA shares its position on the outcomes of the 2022 PSMB trials.

## **4 Summary of recommendations**

### **1. 27M radio**

MRNSW recommends a "sunset" clause be put in place to allow sufficient time for the industry to adapt (reduced market for 27M radios) and the community be encouraged via campaigns to switch over to a VHF Radio.

### **2. VHF Marine radio "channel allocations"**

MRNSW recommends that consultations be held with all stakeholders who are users of VHF Marine Band channels to review all VHF Marine Band Channel allocations. In addition to the allocated calling, distress, DSC or other fixed channels, an agreement should be reached on all Channel allocations that ensure all stakeholders can effectivity share the VHF Marine Band Channels.

### **3. Licensing (proficiency of a VHF radio operator)**

MRNSW recommends that consultation is undertaken with stakeholders (to be identified) with the view to removing the requirement to hold a licence to operate a Marine Band VHF radio.

#### 4. Use of LMR equipment on VHF Marine Band channels

MRNSW recommends that the use of marine band VHF frequencies for emergency situations be carefully considered, particularly in NSW, given the shortage of VHF frequencies and risk of potential congestion.

In addition, MRNSW recommends that further stakeholder consultation occurs to understand what would be the role of VHF in emergency situations.

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#### 5. Public Safety Mobile Broadband (PSBM)

MRNSW recommends the ACMA shares its position on the outcomes of the 2022 PSMB trials.